

Table S1. List of DNA oligonucleotide primers used in RT-qPCR analysis.

| primer | Sequence 5' → 3' | Gene |
|----------|-----------------------|--------|
| gal1-F | GGTCCACGATGCCTTCTTC | gal1 |
| gal1-R | CAGCGTGCCTTGGTGATGT | |
| sar1-F | CAACGGTGTCTCTTCTCG | sar1 |
| sar1-R | GGTCGATCTTGTGCCAGG | |
| xyn2-F | GTCAACACGGCGAACCACT | xyn2 |
| xyn2-R | TGACGGTGATGGAAGCAGAG | |
| xyn1-F | GCCTGAGAGCAGTGCAACG | xyn1 |
| xyn1-R | AGCTGACTTGTCCGCCAGTT | |
| cel3C-F | GCTGCTGTACCGTCTTCT | cel3C |
| cel3C-R | TGTGGCTGAATAGCCGAAGA | |
| cel3A-F | ACGGTAACAATCGGCTCTGG | cel3A |
| cel3A-R | TGGCCTGTCAAGTACCATGC | |
| cel3B-F | CAAGACGGTTGACAGCCTCA | cel3B |
| cel3B-R | ATCGACGCCGTAGTTGACCT | |
| cel61A-F | TGTCAAGGCCGGAGACACTA | cel61A |
| cel61A-R | GTC AACGGTCTCGCAGTCAC | |
| cel12A-F | TAGCGTCGCAATGAAGTCC | cel12A |
| cel12A-R | GCTGACTGTGTAGCCGTTGC | |
| cel5A-F | AACAAGTCCGTGGCTCCATT | cel5A |
| cel5A-R | AATTCGTAGGTCGCTCCAA | |
| cel7B-F | TGGCAAGAAGTCTTCATCG | cel7B |
| cel7B-R | CGAGGAGAGACGCTGCTGTA | |
| cel6A-F | ATGATGTGCGATGGTGTGGT | cel6A |
| cel6A-R | GTATCGCTGGCAACAATCCA | |
| cel7A-F | GCTACGATGGCAACTTGG | cel7A |
| cel7A-R | GAGAGGCTGTTACCGCTCGT | |
| xyr1-F | GCCTTAGCGAAGACGTGGAT | xyr1 |
| xyr1-R | GGTGCCTGTCGACGATGTAA | |
| ace1-F | CTCTCGCAACGTGTCTACG | ace1 |
| ace1-R | CCGTAGGTAGCGAGCCAATC | |
| ace2-F | CCTTGAACCACAGCCATGAA | ace2 |
| ace2-R | ATGTTGAGGCTGGCCTTGTT | |
| cre1-F | CCAACCTCCTGAATCCAACG | cre1 |
| cre1-R | CTCGGTCGACTGTGTTCTCG | |

| | | | | | | | | | | | | |
|------------|---------|--|--|--------------------------|--------------------|--------|-----------------------------|----------------------------|-------------|--------|---|---------|
| KI911139.1 | 1180396 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGA | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA GAGAGAGAGAGA | M419DR AFT_135 365 | protein_c oding | rna334 | upstream_gene _variant | c.-3898_- 3897delT C | - - - | - - | Pkinase- domain- containing protein | 1 |
| KI911139.1 | 1331223 | ACTCTCTCTCTCT CTCTCTCTCTCTCT CTC | ACTCTCTCTCTCTCTCTCTCT CTCTCTC | M419DR AFT_941 76 | protein_c oding | rna372 | upstream_gene _variant | c.-902_- 901delTC | - - | - - | DSPc-domain- containing protein | 0.16038 |
| KI911139.1 | 1350251 | AAGAGAGAGAGA GAGAGAGAG | AAGAGAGAGAGAGAGAGA G | M419DR AFT_941 89 | protein_c oding | rna377 | upstream_gene _variant | c.-1389_- 1388delC T | - - | - - | serin endopeptidase | 0.12821 |
| KI911139.1 | 1364183 | GGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTG | GGTGTGTGTGTGTGTGTGTG TGTGTGTGTG | M419DR AFT_941 99 | protein_c oding | rna381 | 5_prime_UTR _variant | c.-200_- 199delCA | - - | - - | putative 6- phosphoglucon olactonase | 0.20952 |
| KI911139.1 | 1393830 | ATGTGTGTGTGTG TGTGTGTGTGTGT GTGT | ATGTGTGTGTGTGTGTGTGT GTGTGTGT | M419DR AFT_688 15 | protein_c oding | rna388 | upstream_gene _variant | c.-2952_- 2951delA C | - - | - - | WSC-domain- containing protein | 0.12 |
| KI911139.1 | 1396094 | CGAGAGAGAGAG AGAGAGAGAGAG AGAGAGAG | CGAGAGAGAGAGAGAGAGAGA GAGAGAGAGAG | M419DR AFT_942 23 | protein_c oding | rna389 | downstream_g ene_variant | c.*1652_* 1653delC T | - - | - - | hypothetical protein M419DRAFT _94223 | 0.21739 |
| KI911139.1 | 1462676 | TCCC | TCCCC | M419DR AFT_117 118 | protein_c oding | rna403 | 5_prime_UTR _variant | c.-41_- 40insG | - - | - - | hypothetical protein M419DRAFT _117118 | 0.33333 |
| KI911139.1 | 1495351 | GC | GAC | M419DR AFT_232 66 | protein_c oding | rna414 | upstream_gene _variant | c.-4220_- 4219insT | - - | - - | hypothetical protein M419DRAFT _23266 | 0 |
| KI911139.1 | 1522636 | ACTCTCTCTCTCT CTCTCTCT | ACTCTCTCTCTCTCTCTCT CTCTCTCT | M419DR AFT_942 65 | protein_c oding | rna424 | downstream_g ene_variant | c.*1572_* 1573delC T | - - | - - | hypothetical protein M419DRAFT _94265 | 0.11864 |

| | | | | | | | | | | | | |
|------------|---------|----------------|------------------------|---------|-----------|--------|---------------|-----------|---|---|-----------------|---------|
| KI911139.1 | 1546977 | ATCTCTCTCTCTCT | ATCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna436 | upstream_gene | c.-205_- | - | - | hypothetical | 1 |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | AFT_681 | oding | | _variant | 204insCT | | | protein | |
| | | CTCTCTCTCTCTCT | CTCTCTCTCTCTCTCTCTCTC | 64 | | | | CT | | | M419DRAFT | |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | | | | | | | | _68164 | |
| | | CTCTCTCTCTCTCT | CTCTCTCTCTCT | | | | | | | | | |
| KI911139.1 | 1549804 | CCTCTCTCTCTCT | CCTCTCTCTCTCTCTCTCTCT | M419DR | protein_c | rna440 | upstream_gene | c.-2953_- | - | - | hypothetical | 0.28788 |
| | | CTCTCTCTCTCTCT | CTCTCTC | AFT_232 | oding | | _variant | 2952delT | | | protein | |
| | | CTC | | 76 | | | | C | | | M419DRAFT | |
| | | | | | | | | | | | _23276 | |
| KI911139.1 | 1634034 | GACACACACACA | GACACACACACACACACAC | M419DR | protein_c | rna470 | upstream_gene | c.-4636_- | - | - | hypothetical | 0.24 |
| | | CACACACACACA | ACACACA | AFT_319 | oding | | _variant | 4635delC | | | protein | |
| | | CACA | | 24 | | | | A | | | M419DRAFT | |
| | | | | | | | | | | | _31924 | |
| KI911139.1 | 1634742 | GTTTTTTTTTTTTT | GTTTTTTTTTTTTTTTTTTTTT | M419DR | protein_c | rna470 | upstream_gene | c.-3915_- | - | - | hypothetical | 0.94737 |
| | | TTTTTTTTTTTTTT | TTTTTTTTTTTTTTTTTTTTT | AFT_319 | oding | | _variant | 3914insT | | | protein | |
| | | TTTTTTTTTTTT | | 24 | | | | TTT | | | M419DRAFT | |
| | | | | | | | | | | | _31924 | |
| KI911139.1 | 169402 | TCC | TC | M419DR | protein_c | rna42 | upstream_gene | c.- | - | - | general | 0 |
| | | | | AFT_682 | oding | | _variant | 3131delG | | | substrate | |
| | | | | 77 | | | | | | | transporter | |
| KI911139.1 | 1724785 | TG | T | M419DR | protein_c | rna498 | upstream_gene | c.- | - | - | TatD family | 0.21429 |
| | | | | AFT_491 | oding | | _variant | 569delC | | | hydrolase | |
| | | | | 4 | | | | | | | | |
| KI911139.1 | 1907857 | CGGG | CGG | M419DR | protein_c | rna553 | upstream_gene | c.- | - | - | fungus-specific | 0.19608 |
| | | | | AFT_944 | oding | | _variant | 2481delC | | | transcription | |
| | | | | 20 | | | | | | | factor domain- | |
| | | | | | | | | | | | containing | |
| | | | | | | | | | | | protein | |
| KI911139.1 | 1909786 | GTCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCT | M419DR | protein_c | rna553 | upstream_gene | c.-4428_- | - | - | fungus-specific | 0 |
| | | TCTCTCTCT | | AFT_944 | oding | | _variant | 4427delA | | | transcription | |
| | | | | 20 | | | | G | | | factor domain- | |
| | | | | | | | | | | | containing | |

| | | | | | | | | | | | | | protein | |
|------------|---------|---|--|--------------------------|--------------------|--------|-----------------------------|--|-------------|-------------|---|---------|---------|--|
| KI911139.1 | 2007508 | CTTTTTTTTTTT TTT | CTTTTTTTTTTTTTTT,CT TTTTTTTTTTTTTTTT | M419DR AFT_944 50 | protein_c oding | rna588 | upstream_gene _variant | c.-4887_- 4886insA A | - - - | - - - | TPR-like protein | 0 | | |
| KI911139.1 | 2007508 | CTTTTTTTTTTT TTT | CTTTTTTTTTTTTTTT,CT TTTTTTTTTTTTTTTT,CTTT TTTTTTTTTTTTTT | M419DR AFT_944 50 | protein_c oding | rna588 | upstream_gene _variant | c.-4887_- 4886insA A | - - - | - - - | TPR-like protein | 0.93023 | | |
| KI911139.1 | 2015901 | G | GGGTAAAAAGCGACTCAC | M419DR AFT_684 32 | protein_c oding | rna591 | downstream_g ene_variant | c.*454_*4 55insGGT TAAAAA GCGACT CAC | - - - | - - - | galactokinase | 1 | | |
| KI911139.1 | 2033420 | ATGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTGTGTG | ATGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGT GTGTGTG | M419DR AFT_499 7 | protein_c oding | rna593 | downstream_g ene_variant | c.*1219_* 1220delC A | - - - | - - - | hypothetical protein M419DRAFT _4997 | 0.19355 | | |
| KI911139.1 | 2038711 | ATCTCTCTCTCTCT CTCTCTCT | ATCTCTCTCTCTCTCTCT | M419DR AFT_499 7 | protein_c oding | rna593 | upstream_gene _variant | c.-3754_- 3753delA G | - - - | - - - | hypothetical protein M419DRAFT _4997 | 0.09901 | | |
| KI911139.1 | 2053801 | A | G | M419DR AFT_677 12 | protein_c oding | rna596 | upstream_gene _variant | c.- 3119T>C | - - | - - | CoA- transferase family III | 0.58333 | | |
| KI911139.1 | 2103092 | T | C | M419DR AFT_106 079 | protein_c oding | rna613 | upstream_gene _variant | c.- 4706A>G | - - | - - | HAD-like protein | 0.71429 | | |
| KI911139.1 | 2120035 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCT | CCTCTCTCTCTCTCTCTCT CTCTCTCT | M419DR AFT_502 2 | protein_c oding | rna620 | upstream_gene _variant | c.-4183_- 4182delA G | - - | - - | hypothetical protein M419DRAFT _5022 | 0.17347 | | |

| | | | | | | | | | | | | |
|------------|---------|---|--|--------------------------|--------------------|--------|--|------------------------------|---|---|---|---------|
| KI911139.1 | 2620820 | GCCCCCCCCCCC | GCCCCCCCCCCC,GCCCCC CCCCCCCC,GCCCCCCCCC | M419DR AFT_139 895 | protein_c oding | rna775 | upstream_gene _variant | c.-2527_- 2526delG G | - | - | cytochrome P450 | 0.90278 |
| KI911139.1 | 2655427 | A | ACCCC | M419DR AFT_687 57 | protein_c oding | rna790 | downstream_g ene_variant | c.*3130_* 3131insG GGG | - | - | hypothetical protein M419DRAFT _68757 | 0.47368 |
| KI911139.1 | 2655428 | ACCCCCCCCCCCC CCC | ACCCCCCCCCCCCCCCCCC | M419DR AFT_687 57 | protein_c oding | rna790 | downstream_g ene_variant | c.*3114_* 3115insG GG | - | - | hypothetical protein M419DRAFT _68757 | 0 |
| KI911139.1 | 2739021 | TAAAAAAAAAAAA AAAA | TAAAAAAAAAAAAAAAAAAAA | M419DR AFT_135 590 | protein_c oding | rna813 | upstream_gene _variant | c.-4217_- 4216insT | - | - | Pkinase- domain- containing protein | 0.83333 |
| KI911139.1 | 2826881 | CGTGTGTGTGTGT GTGTGTGTGTGT | CGTGTGTGTGTGTGTGTGTG TGT | M419DR AFT_498 20 | protein_c oding | rna837 | downstream_g ene_variant | c.*2668_* 2669delG T | - | - | hypothetical protein M419DRAFT _49820, partial | 0 |
| KI911139.1 | 2879708 | TGGGGGGGGGGG GGGGG | TGGGGGGGGGGGGGGGGGGG | M419DR AFT_947 84 | protein_c oding | rna853 | splice_region_ variant+intron _variant | c.156+6_ 156+7ins CC | - | - | 60S ribosomal protein l31 | 0 |
| KI911139.1 | 2923501 | GGTGTGTGTGTGT GTGTGTGTGTGTG | GGTGTGTGTGTGTGTGTGTG TGTG | M419DR AFT_658 03 | protein_c oding | rna865 | upstream_gene _variant | c.-32_- 31delCA | - | - | PHP domain- like protein, partial | 0.27869 |
| KI911139.1 | 3018189 | GTCTTCTTCTTCT CTTCTTCTTCTCT TCTTCTTCTTCTTC TTCTTCTTCTT | GTCTTCTTCTTCTTCTTCTTC TTCTTCTTCTTCTTCTTCTTC TTCTTCTTCTTCTTCTTCTTC TTCTTCTTCTT | M419DR AFT_677 19 | protein_c oding | rna896 | upstream_gene _variant | c.-1974_- 1972delA AG | - | - | hypothetical protein M419DRAFT _67719 | 0 |
| KI911139.1 | 3039278 | TAAAAAA | TAAAAA | M419DR AFT_234 | protein_c oding | rna903 | upstream_gene _variant | c.- 3418delT | - | - | hypothetical protein | 1 |

| | | | | | | | | | | | | |
|------------|---------|--|--|--------------------------|--------------------|---------|---------------------------|--|-------------|--------|---|---------|
| | | | | 73 | | | | | | | M419DRAFT _23473 | |
| KI911139.1 | 3039308 | TTATAATAAAATATT NTATAATAAAATATT | TTATAATAAAATATT | M419DR AFT_234 73 | protein_c oding | rna903 | upstream_gene _variant | c.-3469_- 3456delA ATATTT ATTATA N | - - - | - - | hypothetical protein M419DRAFT _23473 | 0 |
| KI911139.1 | 308657 | GTCTCTCTCTCTC TCTCTCTCTCTCTC TC | GTCTCTCTCTCTCTCTCTCTC TCTCTC | M419DR AFT_116 954 | protein_c oding | rna90 | 3_prime_UTR _variant | c.*83_*84 delGA | - - | - - | hypothetical protein M419DRAFT _116954 | 0 |
| KI911139.1 | 3227289 | ATCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTC | ATCTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCTCT C | M419DR AFT_534 6 | protein_c oding | rna981 | upstream_gene _variant | c.-3926_- 3923delT CTC | - - | - - | hypothetical protein M419DRAFT _5346 | 0 |
| KI911139.1 | 3227289 | ATCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTC | ATCTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCTCT CTC | M419DR AFT_534 6 | protein_c oding | rna981 | upstream_gene _variant | c.-3924_- 3923delT C | - - | - - | hypothetical protein M419DRAFT _5346 | 0.24615 |
| KI911139.1 | 3265592 | TACACACACACAC ACACACACACAC ACACACACACAC ACACACACACAC ACACACACACAC ACACACACACAC ACA | TACACACACACACACACACAC ACACACACACACACACACA CACACACACACACACACAC ACACACACACACACACACA CACACA | M419DR AFT_234 98 | protein_c oding | rna991 | upstream_gene _variant | c.-4689_- 4688insT GTGTG | - - | - - | threonine synthase | 1 |
| KI911139.1 | 3320938 | GGAGAGAGAGAGAG AGAGAGAGAGAGAG AG | GGAGAGAGAGAGAGAGAGAG AGAGAG | M419DR AFT_949 58 | protein_c oding | rna1012 | upstream_gene _variant | c.-1550_- 1549delC T | - - | - - | DUF1748- domain- containing protein | 0 |
| KI911139.1 | 3320989 | GAAAAAAAAAAAA AAAAAAAAA | GAAAAAAAAAAAAAAAAAAAA AAAA,GAAAAAAAAAAAAAAAA | M419DR AFT_949 | protein_c oding | rna1012 | upstream_gene _variant | c.-1596_- 1595insT | - - | - - | DUF1748- domain- | 0.94915 |

| | | | | | | | | | | | | |
|------------|---------|--|--|--------------------------|--------------------|---------|---------------------------|-------------------------------|---|---|---|---------|
| | | | AAAAAAAAA | 58 | | | | T | | | containing protein | |
| KI911139.1 | 3324286 | AGGGGGGGGGGG G | AGGGGGGGGGGGGG,AGG GGGGGGGGG | M419DR AFT_949 58 | protein_c oding | rna1012 | upstream_gene _variant | c.- 4885delC | - | - | DUF1748- domain- containing protein | 0 |
| KI911139.1 | 3404630 | GCACACACACAC ACACACACA | GCACACACACACACACACA | M419DR AFT_324 15 | protein_c oding | rna1039 | upstream_gene _variant | c.-3358_ 3357delT G | - | - | hypothetical protein M419DRAFT _32415 | 0.16364 |
| KI911139.1 | 3411986 | TC | TCCC | M419DR AFT_235 25 | protein_c oding | rna1041 | upstream_gene _variant | c.-4257_ 4256insG G | - | - | MFS general substrate transporter | 0.47368 |
| KI911139.1 | 3411988 | TCCCCCCCCCCC CC | TCCCCCCCCCCCCCCC,TC CCCCCCCCCCCCCCC,TTCAC AACCCCCCCCCCCCCC | M419DR AFT_235 25 | protein_c oding | rna1041 | upstream_gene _variant | c.-4258_ 4257insT TGTGA | - | - | MFS general substrate transporter | 0 |
| KI911139.1 | 3443013 | AGTGTGTGTGTGT GTGTGTGTGTGTG TGT | AGTGTGTGTGTGTGTGTGTG TGTGTGT | M419DR AFT_106 621 | protein_c oding | rna1056 | upstream_gene _variant | c.-2025_ 2024delA C | - | - | hypothetical protein M419DRAFT _106621 | 0.19643 |
| KI911139.1 | 34630 | CATATATATATATAT ATATATATAT | CATATATATATATATATATATAT | M419DR AFT_125 597 | protein_c oding | rna10 | upstream_gene _variant | c.-2059_ 2058delA T | - | - | hypothetical protein M419DRAFT _125597 | 0 |
| KI911139.1 | 3543520 | TGGGGGGGGGGG GGG | TGGGGGGGGGGGGGGGGG | M419DR AFT_950 59 | protein_c oding | rna1093 | upstream_gene _variant | c.-3774_ 3773insC C | - | - | hypothetical protein M419DRAFT _95059 | 0 |
| KI911139.1 | 387573 | AACACACACACA CACACACACACA CACACACA | AACACACACACACACACAC ACACACACACA | M419DR AFT_316 07 | protein_c oding | rna111 | upstream_gene _variant | c.-1810_ 1809delT G | - | - | hypothetical protein M419DRAFT _31607 | 0.20192 |

| | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|--------|--|------------------------------|-------------|--------|--|---------|
| KI911139.1 | 433319 | AGGGGGGGGGGG GGGGGG | AGGGGGGGGGGGGGGGGG GGGG,AGGGGGGGGGGGGG GGGGGG | M419DR AFT_938 29 | protein_c oding | rna121 | upstream_gene _variant | c.-3205_- 3204insC CCC | - - - | - - | 3-phytase precursor | A 1 |
| KI911139.1 | 573255 | G | A | M419DR AFT_676 27 | protein_c oding | rna162 | downstream_g ene_variant | c.*1657C >T | - - | - - | Mob1/phocein | 0.75 |
| KI911139.1 | 577328 | CGAGAGAGAGAG AGAGAGAGAGAG AG | CGAGAGAGAGAGAGAGAG GAGAG | M419DR AFT_676 27 | protein_c oding | rna162 | upstream_gene _variant | c.-1482_- 1481delC T | - - | - - | Mob1/phocein | 0.17857 |
| KI911139.1 | 659806 | GGAGAGAGAGAG AGAGAGAGAGA | GGAGAGAGAGAGAGAGAG AGA | M419DR AFT_231 58 | protein_c oding | rna193 | downstream_g ene_variant | c.*458_*4 59delGA | - - | - - | kinase-like protein | 0 |
| KI911139.1 | 678054 | AACACACACACA CACACACACACA CAC | AACACACACACACACACAC ACACAC | M419DR AFT_939 41 | protein_c oding | rna197 | downstream_g ene_variant | c.*3540_* 3541delA C | - - | - - | WD40 repeat- like protein | 0.12621 |
| KI911139.1 | 680425 | CATGATGATGATG ATGATGATGATGA TGATGATGATGAT GATGATGATGATG A | CATGATGATGATGATGATGAT GATGATGATGATGATGATGAT GATGATGA | M419DR AFT_125 783 | protein_c oding | rna200 | splice_region_ variant+intron _variant | c.143+6_ 143+8del TCA | - - | - - | inosine-uridine preferring nucleoside hydrolase | 0 |
| KI911139.1 | 686630 | TCCCCCCCCCCCC CCCC | TCCCCCCCCCCCCCCCCCCC, TCCCCCCCCCCCCCCCCCCC | M419DR AFT_125 785 | protein_c oding | rna202 | upstream_gene _variant | c.-3743_- 3742insC CC | - - | - - | hypothetical protein M419DRAFT _125785 | 0 |
| KI911139.1 | 686630 | TCCCCCCCCCCCC CCCC | TCCCCCCCCCCCCCCCCCCC, TCCCCCCCCCCCCCCCCCCC C | M419DR AFT_125 785 | protein_c oding | rna202 | upstream_gene _variant | c.-3743_- 3742insC CC | - - | - - | hypothetical protein M419DRAFT _125785 | 1 |
| KI911139.1 | 728319 | C | A | M419DR AFT_700 29 | protein_c oding | rna212 | upstream_gene _variant | c.- 4950G>T | - - | - - | hypothetical protein M419DRAFT | 0.2 |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|--------|-----------------------------|-------------------------------|--------|--------|---|---------|
| KI911139.1 | 794261 | GCACACACACAC ACACACACACAC ACACACAC | GCACACACACACACACACA CACACACACAC | M419DR AFT_317 13 | protein_c oding | rna232 | downstream_g ene_variant | c.*359_*3 60delAC | - - | - - | hypothetical protein M419DRAFT _31713 | 0.19512 |
| KI911139.1 | 833384 | AC | A | M419DR AFT_125 828 | protein_c oding | rna243 | upstream_gene _variant | c.- 2623delC | - - | - - | PLC-like phosphodiester ase | 0.26667 |
| KI911139.1 | 846500 | CGAGAGAGAGAG AGAGAGAGAGA | CGAGAGAGAGAGAGAGAGA GA | M419DR AFT_677 29 | protein_c oding | rna249 | upstream_gene _variant | c.-1566_ 1565delG A | - - | - - | hypothetical protein M419DRAFT _67729, partial | 0 |
| KI911139.1 | 846895 | GGAGAGAGAGAG AGAGAGAG | GGAGAGAGAGAGAGAGAG | M419DR AFT_677 29 | protein_c oding | rna249 | upstream_gene _variant | c.-1174_ 1173delA G | - - | - - | hypothetical protein M419DRAFT _67729, partial | 0 |
| KI911139.1 | 866502 | CCTACTACTACTA CTACTACTACTAC TACTACTACTACTA CTACTACTACTAC TACTACTACTACTA CTACTACTACTAC TACTACTACTACTAC | CCTACTACTACTACTACTACT ACTACTACTACTACTACTACT ACTACTACTACTACTACTACT ACTACTACTACTACTACTACT AC | M419DR AFT_687 83 | protein_c oding | rna253 | upstream_gene _variant | c.-4211_ 4206delG TAGTA | - - | - - | hypothetical protein M419DRAFT _68783 | 1 |
| KI911139.1 | 888205 | TTTCTTCTTCTTCT TCTTCTTCTTCTTC TTCTTCTTCTTCTT CTTCTTCTTCTTCT TCTTCTTCTTCTTC TTCTTCTTCT | TTTCTTCTTCTTCTTCTTCTT CTTCTTCTTCTTCTTCTTCTT CTTCTTCTTCTTCTTCTTCTT CTTCTTCTTCTTCTTCTTCTT CTTCTTCTTCTTCTTCTTCTT TTCTTCTTCTTCTTCTTCTT | M419DR AFT_700 44 | protein_c oding | rna259 | downstream_g ene_variant | c.*135_*1 37delTCT | - - | - - | hypothetical protein M419DRAFT _70044 | 0 |
| KI911139.1 | 899024 | GTA | G | M419DR AFT_105 | protein_c oding | rna261 | upstream_gene _variant | c.-5147_ 5146delT | - - | - - | tol protein | 0 |

| | | | | 626 | | | | A | | | | | |
|------------|--------|----------------|-----------------------|---------|-----------|--------|---------------|-----------|---|---|----------------|---------|--|
| KI911139.1 | 899024 | GTAA | G | M419DR | protein_c | rna261 | upstream_gene | c.-5148_- | - | - | tol protein | 0.28571 | |
| | | | | AFT_105 | oding | | _variant | 5146delT | | | | | |
| | | | | 626 | | | | TA | | | | | |
| KI911139.1 | 90339 | G | GGA | M419DR | protein_c | rna23 | upstream_gene | c.-4025_- | - | - | NDT80/PhoG | 0.2069 | |
| | | | | AFT_125 | oding | | _variant | 4024insG | | | like DNA- | | |
| | | | | 610 | | | | A | | | binding family | | |
| | | | | | | | | | | | protein | | |
| KI911139.1 | 906164 | GCACACACACAC | GCACACACACACACACACA | M419DR | protein_c | rna263 | upstream_gene | c.-4236_- | - | - | TPR-like | 0 | |
| | | ACACACACACAC | CACACAC | AFT_125 | oding | | _variant | 4235delG | | | protein | | |
| | | ACAC | | 875 | | | | T | | | | | |
| KI911139.1 | 907816 | A | AG | M419DR | protein_c | rna264 | downstream_g | c.*1497_* | - | - | DUF1751- | 0.4 | |
| | | | | AFT_701 | oding | | ene_variant | 1498insC | | | domain- | | |
| | | | | 78 | | | | | | | containing | | |
| | | | | | | | | | | | protein | | |
| KI911139.1 | 907817 | AGGGGGGGGGGG | AGGGGGGGGGGGGGGGGG | M419DR | protein_c | rna264 | downstream_g | c.*1496_* | - | - | DUF1751- | 0 | |
| | | GGGGG | GG,AAGGGGGGGGGGGGG | AFT_701 | oding | | ene_variant | 1497insC | | | domain- | | |
| | | | GGG | 78 | | | | T | | | containing | | |
| | | | | | | | | | | | protein | | |
| KI911139.1 | 920382 | ACCTCCC | ACC | M419DR | protein_c | rna265 | downstream_g | c.*1590_* | - | - | WD40 repeat- | 0 | |
| | | | | AFT_469 | oding | | ene_variant | 1593delT | | | like protein | | |
| | | | | 6 | | | | CCC | | | | | |
| KI911139.1 | 926789 | GTCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna267 | upstream_gene | c.-2655_- | - | - | hypothetical | 0.13253 | |
| | | TCTCTCTCTCTCTC | TCTCT | AFT_105 | oding | | _variant | 2654delA | | | protein | | |
| | | T | | 633 | | | | G | | | M419DRAFT | | |
| | | | | | | | | | | | _105633 | | |
| KI911139.1 | 941304 | GGAGAGAGAGAG | GGAGAGAGAGAGAGAGAG | M419DR | protein_c | rna273 | upstream_gene | c.-988_- | - | - | 26S | 0.3038 | |
| | | AGAGAGAGAGAG | AGAGAGAGAG | AFT_125 | oding | | _variant | 987delAG | | | proteasome | | |
| | | AGAGAG | | 859 | | | | | | | non-ATPase | | |
| | | | | | | | | | | | regulatory | | |
| | | | | | | | | | | | subunit 11 | | |

| | | | | | | | | | | | | |
|------------|---------|--|--|--------------------------|--------------------|---------|-----------------------------|---------------------------------------|---|---|--|---------|
| KI911139.1 | 951632 | ATCC | AC | M419DR AFT_317 54 | protein_c oding | rna274 | upstream_gene _variant | c.-1105_ 1104delG A | - | - | hypothetical protein M419DRAFT _31754 | 0 |
| KI911139.1 | 951633 | TCCCCCCCCCCC CCCC | TCCCCCCCCCCC,TCCCCC CCCCCCCCC,TCCCCCCCCC CC | M419DR AFT_317 54 | protein_c oding | rna274 | upstream_gene _variant | c.-1120_ 1117delG GGG | - | - | hypothetical protein M419DRAFT _31754 | 0.66667 |
| KI911140.1 | 1009033 | CC | CCGCGC | M419DR AFT_711 80 | protein_c oding | rna1410 | upstream_gene _variant | c.-1820_ 1819insG CGC | - | - | hypothetical protein M419DRAFT _71180 | 0 |
| KI911140.1 | 1060689 | TTGTGTGTGTGTG TGTTGTGTGTGTG GTGTGTGTGTGTG TGTTGTGTGTGTG GTGTGTGTGTGTG TGTTGTGTGTGTG | TTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTGT TGTTGTGTGTGTGTGTGTGT | M419DR AFT_575 2 | protein_c oding | rna1426 | upstream_gene _variant | c.-2376_ 2375insG TGTGTG TGT | - | - | hypothetical protein M419DRAFT _5752 | 1 |
| KI911140.1 | 1060731 | GTGTGTGTGT | GTGTGTGTGTATGTGTGTGT | M419DR AFT_575 2 | protein_c oding | rna1426 | upstream_gene _variant | c.-2394_ 2393insA TGTGTG TGT | - | - | hypothetical protein M419DRAFT _5752 | 0 |
| KI911140.1 | 1206413 | GACACACACACA CACACACACACA CACACACACA | GACACACACACACACACAC ACACACACACACA | M419DR AFT_237 06 | protein_c oding | rna1468 | downstream_g ene_variant | c.*2264_* 2265delT G | - | - | hypothetical protein M419DRAFT _23706 | 0.21053 |
| KI911140.1 | 1260049 | G | T | M419DR AFT_718 49 | protein_c oding | rna1483 | upstream_gene _variant | c.- 1261C>A | - | - | p53-like transcription factor | 0.66667 |
| KI911140.1 | 1331869 | A | ACC | M419DR AFT_127 053 | protein_c oding | rna1501 | upstream_gene _variant | c.-1740_ 1739insG G | - | - | Adaptor protein complex beta subunit | 0.6 |

| | | | | | | | | | | | | |
|------------|---------|---|---|--------------------------|--------------------|---------|-----------------------------|------------------------------|---------|---|---|---------|
| KI911140.1 | 1331869 | AA | ACCA | M419DR AFT_127 053 | protein_c oding | rna1501 | upstream_gene _variant | c.-1740_- 1739insG G | - | - | Adaptor protein complex beta subunit | 0 |
| KI911140.1 | 1405419 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GA | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA | M419DR AFT_237 40 | protein_c oding | rna1524 | upstream_gene _variant | c.-920_- 919delTC | - | - | putative ubiquitin conjugating enzyme | 0.1791 |
| KI911140.1 | 1549217 | ACCCCCCCCCC | ACCCCCCCCCC | M419DR AFT_710 23 | protein_c oding | rna1571 | upstream_gene _variant | c.-506_- 505insC | - | - | 5- aminolevulinat e synthase | 0.93939 |
| KI911140.1 | 1549217 | ACCCCCCCCCC | ACCCCCCCCCC,ACCCC CCCCCCCCC | M419DR AFT_710 23 | protein_c oding | rna1571 | upstream_gene _variant | c.-506_- 505insC | - | - | 5- aminolevulinat e synthase | 0 |
| KI911140.1 | 1556428 | GTATATATATATATA TATAT | GTATATATATATATATATATA T | M419DR AFT_710 23 | protein_c oding | rna1571 | downstream_g ene_variant | c.*4769_* 4770insA TAT | - | - | 5- aminolevulinat e synthase | 0.75 |
| KI911140.1 | 1558129 | TC | T | M419DR AFT_589 3 | protein_c oding | rna1573 | upstream_gene _variant | c.- 249delG | - | - | TMP-TENI- domain- containing protein | 0 |
| KI911140.1 | 1570725 | T | G | M419DR AFT_956 89 | protein_c oding | rna1577 | missense_vari ant | c.230A>C p.His77 Pro | cAc/cCc | | Isochorismatas e hydrolase | 0.29268 |
| KI911140.1 | 1638145 | CAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGAG | CAGAGAGAGAGAGAGAGAG AGAGAGAGAGAGAGAGAG AGAG | M419DR AFT_117 714 | protein_c oding | rna1595 | upstream_gene _variant | c.-2254_- 2253delA G | - | - | hypothetical protein M419DRAFT _117714 | 0 |
| KI911140.1 | 1654825 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAG | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA GAGAGAG | M419DR AFT_127 156 | protein_c oding | rna1598 | upstream_gene _variant | c.-4479_- 4478delC T | - | - | putative 3-oxo- 5-alpha-steroid 4- dehydrogenase | 0.16216 |

| | | | | | | | | | | | | |
|------------|---------|---|---|--------------------------|--------------------|---------|-----------------------------|----------------------------|--------|--------|--|---------|
| KI911140.1 | 1681001 | ACC | AC | M419DR AFT_127 163 | protein_c oding | rna1606 | upstream_gene _variant | c.- 121delG | - - | - - | putative PHD finger domain protein | 1 |
| KI911140.1 | 1745296 | ACTCTCTCTCTCT CTCTCTCTC | ACTCTCTCTCTCTCTCTCTC | M419DR AFT_708 06 | protein_c oding | rna1622 | upstream_gene _variant | c.-1637_ 1636delG A | - - | - - | AAA-domain- containing protein | 0.11957 |
| KI911140.1 | 1746184 | C | T | M419DR AFT_708 06 | protein_c oding | rna1622 | upstream_gene _variant | c.- 2504G>A | - - | - - | AAA-domain- containing protein | 1 |
| KI911140.1 | 1796678 | CCTGCTGCTGCTG CTGCTGCTGCTGC TGC | CCTGCTGCTGCTGCTGCTGC TGCTGC | M419DR AFT_708 52 | protein_c oding | rna1634 | upstream_gene _variant | c.-4759_ 4757delG CA | - - | - - | hypothetical protein M419DRAFT _70852 | 0.09524 |
| KI911140.1 | 1905700 | TGGGGGGGGGGG GG | TGGGGGGGGGGGGGGGGG,T GGGGGGGGGGGGGGG,TGG GGGGGGGGGGGG | M419DR AFT_597 9 | protein_c oding | rna1668 | upstream_gene _variant | c.-4424_ 4423insC CC | - - | - - | hypothetical protein M419DRAFT _5979 | 0 |
| KI911140.1 | 1914383 | AGGGGGGGGGGG G | AGGGGGGGGGGGGGG,AGG GGGGGGGGGGG | M419DR AFT_598 1 | protein_c oding | rna1670 | downstream_g ene_variant | c.*3877_* 3878insG G | - - | - - | hypothetical protein M419DRAFT _5981 | 0 |
| KI911140.1 | 1914383 | AGGGGGGGGGGG G | AGGGGGGGGGGGGGG,AGG GGGGGGGGGGG,AGGGGGG GGGGGGGGG | M419DR AFT_598 1 | protein_c oding | rna1670 | downstream_g ene_variant | c.*3877_* 3878insG G | - - | - - | hypothetical protein M419DRAFT _5981 | 0.96875 |
| KI911140.1 | 202734 | G | GTGT | M419DR AFT_951 98 | protein_c oding | rna1185 | upstream_gene _variant | c.-4292_ 4291insA CA | - - | - - | CBD9-like protein | 0.33333 |
| KI911140.1 | 2035542 | GTCTCTCTCTCTC TCTCTCTCTCTCTC TCTC | GTCTCTCTCTCTCTCTCTCTC TCTCTCTC | M419DR AFT_711 62 | protein_c oding | rna1704 | upstream_gene _variant | c.-2492_ 2491delG A | - - | - - | hypothetical protein M419DRAFT _71162 | 0.16667 |

| | | | | | | | | | | | | |
|------------|---------|---|--|--------------------------|--------------------|---------|-----------------------------|--|-------------|--------|--|---------|
| KI911140.1 | 2039840 | G | T | M419DR AFT_601 7 | protein_c oding | rna1707 | upstream_gene _variant | c.- 4250G>T | - - - | - - | PTPLA- domain- containing protein | 1 |
| KI911140.1 | 2088981 | TTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCTCT | TTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCTCT CTCTCTCTCTCTCTCTCTCT | M419DR AFT_712 38 | protein_c oding | rna1723 | upstream_gene _variant | c.-1610_ 1609delA G | - - | - - | Acylphosphata se, partial | 0.14063 |
| KI911140.1 | 2191372 | CAAAAAAAAAA AAAAAAAAAAAA AAA | CAAAAAAAAAAAAAAAAAAAAA AAAAAAAAAAAA,CAAAAAA AAAAAAAAAAAAAAAAAAAA AAAAA,CAAAAAAAAAAAAA AAAAAAAAAAAAAAAAAAAA AA | M419DR AFT_605 9 | protein_c oding | rna1750 | upstream_gene _variant | c.-3037_ 3036insT TT | - - | - - | hypothetical protein M419DRAFT _6059 | 0 |
| KI911140.1 | 2191372 | CAAAAAAAAAA AAAAAAAAAAAA AAA | CAAAAAAAAAAAAAAAAAAAAA AAAAAAAAAAAA,CAAAAAA AAAAAAAAAAAAAAAAAAAA AAAAA,CAAAAAAAAAAAAA AAAAAAAAAAAAAAAAAAAA AA | M419DR AFT_605 9 | protein_c oding | rna1750 | upstream_gene _variant | c.-3037_ 3036insT TTT | - - | - - | hypothetical protein M419DRAFT _6059 | 0.91304 |
| KI911140.1 | 2207524 | A | ACTT | M419DR AFT_107 563 | protein_c oding | rna1755 | upstream_gene _variant | c.-900_ 899insAA G | - - | - - | methylenetetra hydrofolate dehydrogenase | 1 |
| KI911140.1 | 2218257 | GTTTTTTTTTTTTT TTTTTTTTTTTTTT TTTTTTTTTTTTTT TTTT | GTTTTTTTTTTTTTTTTTTTTTTT TTTTTTTTTTTTTTTTTTTTTTT TTTTTTT,GTTTTTTTTTTTTTT TTTTTTTTTTTTTTTTTTTTTTT TTTTTTTTTTTTTTTTTTT | M419DR AFT_330 45 | protein_c oding | rna1758 | upstream_gene _variant | c.-1230_ 1229insT TTTT | - - | - - | hypothetical protein M419DRAFT _33045 | 1 |
| KI911140.1 | 2225377 | ATCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTC | ATCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCTCT CTCTCTCTCTCTCTCTCTCT CTCTCTCTCTCTCTCTCTCT | M419DR AFT_330 45 | protein_c oding | rna1758 | downstream_g ene_variant | c.*4934_* 4943delT CTCTCT CTC | - - | - - | hypothetical protein M419DRAFT _33045 | 0 |

| | | | | | | | | | | | | |
|------------|---------|-----------------------------|---------------------------|--------------------------|--------------------|---------|--|-------------------------------|-----------------|---------|--|---------|
| KI911140.1 | 2352624 | C | A | M419DR AFT_713 21 | protein_c oding | rna1798 | missense_vari ant | c.1739C> A | p.Pro58 0Gln | cCa/cAa | hypothetical protein M419DRAFT _71321 | 0.24771 |
| KI911140.1 | 238101 | TGGGGGGGGGGG GGGG | TGGGGGGGGGGGGGGGGG | M419DR AFT_703 12 | protein_c oding | rna1197 | upstream_gene _variant | c.-3248_- 3247insG G | - - | - - | hypothetical protein M419DRAFT _70312 | 1 |
| KI911140.1 | 2391585 | GAACAC | G | M419DR AFT_533 37 | protein_c oding | rna1810 | upstream_gene _variant | c.-1427_- 1423delA ACAC | - - | - - | HET-domain- containing protein, partial | 0.75 |
| KI911140.1 | 2451813 | GACACACACACA CACACACACAC | GACACACACACACACACAC AC | M419DR AFT_127 385 | protein_c oding | rna1832 | upstream_gene _variant | c.-7_- 6delAC | - - | - - | hypothetical protein M419DRAFT _127385 | 0.17073 |
| KI911140.1 | 2466968 | GAGA | GGA | M419DR AFT_122 262 | protein_c oding | rna1838 | splice_region_ variant+intron _variant | c.14+8del T | - | - | LSM domain- containing protein | 0.33333 |
| KI911140.1 | 248415 | GC | GCTC | M419DR AFT_704 89 | protein_c oding | rna1198 | upstream_gene _variant | c.-3348_- 3347insT C | - - | - - | Mechanosensit ive ion channel family protein | 0 |
| KI911140.1 | 248415 | GCGA | GCTCGA | M419DR AFT_704 89 | protein_c oding | rna1198 | upstream_gene _variant | c.-3348_- 3347insT C | - - | - - | Mechanosensit ive ion channel family protein | 1 |
| KI911140.1 | 2484292 | A | C | M419DR AFT_136 086 | protein_c oding | rna1842 | downstream_g ene_variant | c.*4413A >C | - - | - - | cellular morphogenesis protein | 0.27273 |
| KI911140.1 | 248430 | G | C | M419DR AFT_704 89 | protein_c oding | rna1198 | upstream_gene _variant | c.- 3334G>C | - - | - - | Mechanosensit ive ion channel family protein | 1 |

| | | | | | | | | | | | | |
|------------|--------|---|---|-----------|----------------|---------|-----------------------|---------|---|---|---|---|
| KI911140.1 | 248440 | T | G | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3324T>G | | | | |
| KI911140.1 | 248444 | A | G | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 0 |
| | | | | AFT_70489 | | | | 3320A>G | | | | |
| KI911140.1 | 248446 | G | T | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 0 |
| | | | | AFT_70489 | | | | 3318G>T | | | | |
| KI911140.1 | 248448 | G | C | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3316G>C | | | | |
| KI911140.1 | 248452 | A | G | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3312A>G | | | | |
| KI911140.1 | 248454 | G | T | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3310G>T | | | | |
| KI911140.1 | 248458 | A | G | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3306A>G | | | | |
| KI911140.1 | 248467 | A | T | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3297A>T | | | | |
| KI911140.1 | 248469 | C | G | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 0 |
| | | | | AFT_70489 | | | | 3295C>G | | | | |
| KI911140.1 | 248476 | T | G | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3288T>G | | | | |
| KI911140.1 | 248482 | G | T | M419DR | protein_coding | rna1198 | upstream_gene_variant | c.- | - | - | Mechanosensitive ion channel family protein | 1 |
| | | | | AFT_70489 | | | | 3282G>T | | | | |

| | | | | | | | | | | | | |
|------------|---------|---|---|--------------------------|--------------------|---------|-----------------------------|-------------------------------|--------|--------|---|---------|
| KI911140.1 | 248495 | AC | A | M419DR AFT_704 89 | protein_c oding | rna1198 | upstream_gene _variant | c.- 3268delC | - - | - - | Mechanosensit ive ion channel family protein | 0 |
| KI911140.1 | 2486727 | CGTAAT | C | M419DR AFT_122 268 | protein_c oding | rna1843 | downstream_g ene_variant | c.*1432_* 1436delA TTAC | - - | - - | hypothetical protein M419DRAFT _122268 | 0 |
| KI911140.1 | 249741 | TGGGGGGGGGGG G | TGGGGGGGGGGG,TGG GGGGGGGGGG | M419DR AFT_704 89 | protein_c oding | rna1198 | upstream_gene _variant | c.-2011_ 2010insG G | - - | - - | Mechanosensit ive ion channel family protein | 0 |
| KI911140.1 | 249741 | TGGGGGGGGGGG G | TGGGGGGGGGGG,TGG GGGGGGGGGG GGGGGGGGG | M419DR AFT_704 89 | protein_c oding | rna1198 | upstream_gene _variant | c.-2011_ 2010insG G | - - | - - | Mechanosensit ive ion channel family protein | 0.92593 |
| KI911140.1 | 260123 | CATATATATATATAT ATATATATAT | CATATATATATATATATAT,C ATATATATATATATATATAT | M419DR AFT_427 72 | protein_c oding | rna1200 | downstream_g ene_variant | c.*1656_* 1659delA TAT | - - | - - | hypothetical protein M419DRAFT _42772, partial | 1 |
| KI911140.1 | 260123 | CATATATATATATAT ATATATATAT | CATATATATATATATATATATAT | M419DR AFT_427 72 | protein_c oding | rna1200 | downstream_g ene_variant | c.*1658_* 1659delA T | - - | - - | hypothetical protein M419DRAFT _42772, partial | 0 |
| KI911140.1 | 29146 | ATGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGTGTGTG TGTG | ATGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTG | M419DR AFT_140 038 | protein_c oding | rna1122 | upstream_gene _variant | c.-4499_ 4496delC ACA | - - | - - | electron transfer flavo protein, alpha subunit | 0.14286 |
| KI911140.1 | 421655 | CATATATATATATA | CATATATATATA | M419DR AFT_705 36 | protein_c oding | rna1246 | upstream_gene _variant | c.-2431_ 2430delT A | - - | - - | hypothetical protein M419DRAFT _70536 | 0.09375 |
| KI911140.1 | 467244 | TGGGGGGGGGGG GGGG | TGGGGGGGGGGGGGGG | M419DR AFT_952 66 | protein_c oding | rna1256 | upstream_gene _variant | c.-659_ 658insC | - - | - - | hypothetical protein M419DRAFT _95266 | 1 |

| | | | | | | | | | | | | |
|------------|---------|--|--|--------------------------|--------------------|---------|---------------------------|------------------------------|--------|--------|---|---------|
| KI911140.1 | 972711 | TGGGGGGGGGGG G | TGGGGGGGGGGGGG,TGG GGGGGGGGGGGGG | M419DR AFT_236 79 | protein_c oding | rna1400 | upstream_gene _variant | c.-618_- 617insCC | - - | - - | ras-domain- containing protein | 1 |
| KI911141.1 | 1022008 | GGAGAGAGAGAG AGAGAGAGAGAG AGAG | GGAGAGAGAGAGAGAGAG AGAGAGAG | M419DR AFT_731 33 | protein_c oding | rna2181 | upstream_gene _variant | c.-3738_- 3737delC T | - - | - - | hypothetical protein M419DRAFT _73133 | 0 |
| KI911141.1 | 1025796 | TACACACACACAC ACACACACAC | TACACACACACACACACAC AC | M419DR AFT_964 50 | protein_c oding | rna2183 | upstream_gene _variant | c.-2866_- 2865delA C | - - | - - | tyrosinase 2 | 0.09756 |
| KI911141.1 | 1225684 | G | C | M419DR AFT_127 782 | protein_c oding | rna2245 | upstream_gene _variant | c.- 1011C>G | - - | - - | hypothetical protein M419DRAFT _127782 | 1 |
| KI911141.1 | 1225716 | AAG | AAGGGAG | M419DR AFT_127 782 | protein_c oding | rna2245 | upstream_gene _variant | c.-1046_- 1045insC TCC | - - | - - | hypothetical protein M419DRAFT _127782 | 1 |
| KI911141.1 | 1225717 | AG | AGG | M419DR AFT_127 782 | protein_c oding | rna2245 | upstream_gene _variant | c.-1046_- 1045insC | - - | - - | hypothetical protein M419DRAFT _127782 | 0 |
| KI911141.1 | 1236118 | CCTCTCTCTCTCT CTC | CCTCTCTCTCTCTC | M419DR AFT_118 003 | protein_c oding | rna2247 | upstream_gene _variant | c.-4902_- 4901delG A | - - | - - | hypothetical protein M419DRAFT _118003 | 0.14286 |
| KI911141.1 | 1325316 | CGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTGTGTGTG | CGTGTGTGTGTGTGTGTGTG TGTGTGTGTGTGTGTG | M419DR AFT_728 37 | protein_c oding | rna2270 | upstream_gene _variant | c.-4232_- 4231delC A | - - | - - | hypothetical protein M419DRAFT _72837 | 0.21212 |

| | | | | | | | | | | | | |
|------------|---------|--|--|-------------------------|--------------------|---------|---------------------------------------|--|----------------------------|-------------------------|--|---------|
| KI911141.1 | 1329240 | CCTGGTAGGGACA TGCGTGCTGGTAG GGACATGCGTGCT GGTAGGGACATGC GTGCTGGTAGGGA CATGCGTGCTGGT AGGGAC | CCTGGTAGGGACATGCGTGC TGGTAGGGACATGCGTGCTG GTAGGGACATGCGTGCTGGT AGGGAC | M419DR AFT_334 80 | protein_c oding | rna2273 | conservative_i nframe_deletio n | c.1054_10 71delGTC CCTACC AGCACG CAT | p.Val35 2_His3 57del | gtccctacca gcacgcat/ | hypothetical protein M419DRAFT _33480 | 0 |
| KI911141.1 | 1489811 | ATGTGTGTGTGTG TGTGTGTGTGTGT GTGTG | ATGTGTGTGTGTGTGTGTG GTGTGTGTG | M419DR AFT_335 20 | protein_c oding | rna2329 | upstream_gene _variant | c.-4949_- 4948delC A | - - | - - | hypothetical protein M419DRAFT _33520 | 0 |
| KI911141.1 | 1520084 | GCACACACACAC ACACACACACAC A | GCACACACACACACACACA CACA | M419DR AFT_723 95 | protein_c oding | rna2341 | upstream_gene _variant | c.-1734_- 1733delT G | - - | - - | DUF803- domain- containing protein | 0.10667 |
| KI911141.1 | 172587 | GGTGTGTGTGTGT GTGTGTGTGTGTG TGTGT | GGTGTGTGTGTGTGTGTG TGTGTGTGT | M419DR AFT_735 33 | protein_c oding | rna1914 | upstream_gene _variant | c.-3634_- 3633delG T | - - | - - | hypothetical protein M419DRAFT _73533 | 0.16883 |
| KI911141.1 | 179210 | GTGTGTGTGTGTG TGTGTGTGTGTGT GTTGTGTGTGTG TTGTGTGTGTG | GTGTGTGTGTGTGTGTGTT GTTGTGTGTGTGTGTGTGT GTTGTGTGTGTG TTGTGTGTGTG | M419DR AFT_961 50 | protein_c oding | rna1915 | conservative_i nframe_deletio n | c.2353_23 55delCA A | p.Gln78 5del | caa/ | hypothetical protein M419DRAFT _96150 | 0 |
| KI911141.1 | 1811588 | ATTTTTTTTTTTTT TTTTTTTTTTTTT TTTTTTTTTTTTT TTTTTTTTTTTTT TTT | ATTTTTTTTTTTTTTTTTTTTT TTTTTTTTTT,ATTTTTTTTTTT TTTTTTTTTTTTTTTTTTTT,ATTT TTTTTTTTTTTTTTTTTTTTTT TTT | M419DR AFT_668 2 | protein_c oding | rna2444 | upstream_gene _variant | c.-2961_- 2960insA AAAA | - - | - - | hypothetical protein M419DRAFT _6682 | 0 |
| KI911141.1 | 1811588 | ATTTTTTTTTTTTT TTTTTTTTTTTTT TTTTTTTTTTTTT TTTTTTTTTTTTT TTTTT | ATTTTTTTTTTTTTTTTTTTTT TTTTTTTTTT,ATTTTTTTTTTT TTTTTTTTTTTTTTTTTTTT,ATT TTTTTTTTTTTTTTTTTTTTTT TTTTT | M419DR AFT_668 2 | protein_c oding | rna2444 | upstream_gene _variant | c.-2961_- 2960insA AAAA | - - | - - | hypothetical protein M419DRAFT _6682 | 1 |

| | | | | | | | | | | | | |
|------------|---------|--|--|-------------------------|--------------------|---------|---------------------------|----------------------------|-------------|--------|--|---------|
| KI911141.1 | 1858624 | TC | TCCC | M419DR AFT_336 40 | protein_c oding | rna2462 | upstream_gene _variant | c.-2675_- 2674insG G | - - - | - - | hypothetical protein M419DRAFT _33640 | 0.4 |
| KI911141.1 | 1858626 | TCCCCCCCCCCC C | TCCCCCCCCCCCCC | M419DR AFT_336 40 | protein_c oding | rna2462 | upstream_gene _variant | c.-2689_- 2688insG G | - - | - - | hypothetical protein M419DRAFT _33640 | 0 |
| KI911141.1 | 1894159 | T | C | M419DR AFT_736 50 | protein_c oding | rna2476 | upstream_gene _variant | c.- 2041A>G | - - | - - | SET domain- containing protein | 0.6 |
| KI911141.1 | 1894214 | T | C | M419DR AFT_736 50 | protein_c oding | rna2476 | upstream_gene _variant | c.- 2096A>G | - - | - - | SET domain- containing protein | 0.61905 |
| KI911141.1 | 1894219 | A | G | M419DR AFT_736 50 | protein_c oding | rna2476 | upstream_gene _variant | c.- 2101T>C | - - | - - | SET domain- containing protein | 0.51429 |
| KI911141.1 | 269744 | AGGG | AGGGG | M419DR AFT_725 60 | protein_c oding | rna1944 | upstream_gene _variant | c.-4087_- 4086insC | - - | - - | hypothetical protein M419DRAFT _72560 | 0 |
| KI911141.1 | 288856 | CGGGGG | CGGGGGG | M419DR AFT_732 63 | protein_c oding | rna1952 | upstream_gene _variant | c.-3349_- 3348insC | - - | - - | putative sphingomyelin ase family protein | 0 |
| KI911141.1 | 297726 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGA | AAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGA GAGAGAGAGAGAGA | M419DR AFT_624 7 | protein_c oding | rna1957 | upstream_gene _variant | c.-2726_- 2725delT C | - - | - - | pyridoxine kinase | 0.2 |

| | | | | | | | | | | | | |
|------------|--------|-----------------|-----------------------|---------|-----------|---------|---------------|-----------|---|---|------------------|---------|
| KI911141.1 | 322143 | ATTCTTCTTCTCT | ATTCTTCTTCTTCTTCTTCTT | M419DR | protein_c | rna1962 | upstream_gene | c.-3254_- | - | - | hypothetical | 1 |
| | | TCTTCTTCTTCTTC | CTTCTTCTTCTTCTTCTTCTT | AFT_723 | oding | | _variant | 3252delG | | | protein | |
| | | TTCTTCTTCTTCTT | CTTCTTCTTC | 76 | | | | AA | | | M419DRAFT | |
| | | CTTCTTCTTCTTC | | | | | | | | | _72376, partial | |
| KI911141.1 | 349971 | GCC | GGGGCCC | M419DR | protein_c | rna1966 | upstream_gene | c.-3898_- | - | - | hypothetical | 0 |
| | | | | AFT_127 | oding | | _variant | 3897insG | | | protein | |
| | | | | 520 | | | | CCC | | | M419DRAFT | |
| | | | | | | | | | | | _127520 | |
| KI911141.1 | 361222 | AACACACACACA | AACACACACACACACACAC | M419DR | protein_c | rna1969 | upstream_gene | c.-60_- | - | - | Pkr1-domain- | 0.17808 |
| | | CACACACACACA | ACACACA | AFT_136 | oding | | _variant | 59delCA | | | containing | |
| | | CACA | | 151 | | | | | | | protein | |
| KI911141.1 | 412202 | C | T | M419DR | protein_c | rna1984 | upstream_gene | c.- | - | - | translocator | 1 |
| | | | | AFT_422 | oding | | _variant | 3898G>A | | | protein, partial | |
| | | | | 85 | | | | | | | | |
| KI911141.1 | 4358 | AN | AAAAAATTCTTAAATTTAAT | M419DR | protein_c | rna1855 | upstream_gene | c.-2538_- | - | - | Smr domain | 1 |
| | | | ATTAATTAAGTTTATTTTN | AFT_136 | oding | | _variant | 2537insA | | | protein | |
| | | | | 095 | | | | AAATAA | | | | |
| | | | | | | | | ACTTAA | | | | |
| | | | | | | | | TTAATA | | | | |
| | | | | | | | | TTAAAA | | | | |
| | | | | | | | | TTTAAG | | | | |
| | | | | | | | | AATTTT | | | | |
| | | | | | | | | T | | | | |
| KI911141.1 | 568144 | TTATATATATATATA | TTATATATATATATATAT | M419DR | protein_c | rna2042 | upstream_gene | c.-3997_- | - | - | hypothetical | 0 |
| | | TATAT | | AFT_632 | oding | | _variant | 3996delA | | | protein | |
| | | | | 2 | | | | T | | | M419DRAFT | |
| | | | | | | | | | | | _6322 | |
| KI911141.1 | 573601 | ACTCTCTCTCTCT | ACTCTCTCTCTCTCTCTCTCT | M419DR | protein_c | rna2041 | upstream_gene | c.-1992_- | - | - | hypothetical | 0.25352 |
| | | CTCTCTCTCTCTCT | CTCTCTCTCTC | AFT_332 | oding | | _variant | 1991delG | | | protein | |
| | | CTCTCTC | | 83 | | | | A | | | M419DRAFT | |
| | | | | | | | | | | | _33283 | |

| | | | | | | | | | | | | |
|------------|--------|--|--|--------------------------|--------------------|---------|--|-----------------------------|---|---|---|---------|
| KI911141.1 | 58256 | TAGAGAGAGAGA GAGAGAGAGAGA GA | TAGAGAGAGAGAGAGAGAG AGAGA | M419DR AFT_465 53 | protein_c oding | rna1878 | splice_region_ variant+intron _variant | c.177+8_ 177+9del TC | - | - | YTH-domain- containing protein, partial | 0 |
| KI911141.1 | 594231 | ACCATTGTGTTCC CGTGTCCCTTGC | AAACCCCATTTGTGTTCCCGT GTCCCTTGC,AC | M419DR AFT_136 187 | protein_c oding | rna2045 | downstream_g ene_variant | c.*969_*9 70insAA CC | - | - | hypothetical protein M419DRAFT _136187 | 0 |
| KI911141.1 | 594255 | CAAAA | CAAAAAA | M419DR AFT_136 187 | protein_c oding | rna2045 | downstream_g ene_variant | c.*997_*9 98insAA | - | - | hypothetical protein M419DRAFT _136187 | 0.75 |
| KI911141.1 | 612005 | GACACACACACA CACACACACACA C | GACACACACACACACACAC ACAC | M419DR AFT_107 938 | protein_c oding | rna2050 | upstream_gene _variant | c.-502_ 501delGT | - | - | hypothetical protein M419DRAFT _107938 | 0 |
| KI911141.1 | 664984 | GTATATATATATATA TATATATATAT | GTATATATATATATATATATAT | M419DR AFT_963 36 | protein_c oding | rna2061 | upstream_gene _variant | c.-1925_ 1922delA TAT | - | - | putative amino acid permease | 0.25 |
| KI911141.1 | 685247 | G | GCCCCC | M419DR AFT_122 363 | protein_c oding | rna2070 | upstream_gene _variant | c.-235_ 234insCC CCCC | - | - | hypothetical protein M419DRAFT _122363, partial | 0 |
| KI911141.1 | 76292 | TTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCT | TTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCTCT CTCT | M419DR AFT_728 21 | protein_c oding | rna1883 | upstream_gene _variant | c.-4461_ 4460delA G | - | - | putative Zn- dependent hydrolase/oxid oreductase family protein | 0.23913 |
| KI911141.1 | 988556 | GTATATATATATATA TATATAT | GTATATATATATATATATAT | M419DR AFT_108 042 | protein_c oding | rna2173 | upstream_gene _variant | c.-165_ 164delAT | - | - | cytosolic branched- chain amino | 0 |

| | | | | | | | | | | | | |
|------------|---------|---|---|--------------------------|--------------------|---------|-----------------------------|--------------------------------------|--------|--------|---|---------|
| | | | | | | | | | | | acid aminotransfera se | |
| KI911141.1 | 995984 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGA | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGA | M419DR AFT_964 37 | protein_c oding | rna2175 | upstream_gene _variant | c.-228_- 227delTC | - - | - - | chromatin regulatory protein sir2 | 0 |
| KI911142.1 | 1112766 | ATGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGT | ATGTGTGTGTGTGTGTGT GTGTGTGTGTGT | M419DR AFT_970 69 | protein_c oding | rna2837 | downstream_g ene_variant | c.*3034_* 3035delG T | - - | - - | succinate dehydrogenase | 0.16667 |
| KI911142.1 | 1157898 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTC | CCTCTCTCTCTCTCTCTCTCT CTCTCTCTC | M419DR AFT_741 56 | protein_c oding | rna2857 | upstream_gene _variant | c.-1317_- 1316delG A | - - | - - | hypothetical protein M419DRAFT _74156 | 0.20513 |
| KI911142.1 | 1295707 | TC | TCCCCCCCC | M419DR AFT_746 67 | protein_c oding | rna2893 | upstream_gene _variant | c.-1497_- 1496insG GGGGG GG | - - | - - | hypothetical protein M419DRAFT _74667, partial | 0 |
| KI911142.1 | 1354075 | A | C | M419DR AFT_128 405 | protein_c oding | rna2908 | downstream_g ene_variant | c.*3926A >C | - - | - - | UMP-CMP kinase | 1 |
| KI911142.1 | 1384823 | GTCTCTCTCTCTC TCTCTCTCTCTCTC TCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTC | M419DR AFT_108 795 | protein_c oding | rna2914 | downstream_g ene_variant | c.*1826_* 1827delT C | - - | - - | hypothetical protein M419DRAFT _108795 | 0.21818 |
| KI911142.1 | 1477261 | AC | ACCCCCCCC | M419DR AFT_747 28 | protein_c oding | rna2940 | upstream_gene _variant | c.-4814_- 4813insG GGGGG GG | - - | - - | UPF0287- domain- containing protein | 0.44444 |
| KI911142.1 | 1477262 | CT | CTT | M419DR AFT_747 28 | protein_c oding | rna2940 | upstream_gene _variant | c.-4815_- 4814insA | - - | - - | UPF0287- domain- containing protein | 0 |

| | | | | | | | | | | | | |
|------------|---------|--|---|--------------------------|--------------------|---------|-----------------------------|---------------------------------|-------------|--------|--|---------|
| KI911142.1 | 1496160 | CTTTTTTTTTTTT TTTTTTTTTT | CTTTTTTTTTTTTTTTTTTTT TTTT,CTTTTTTTTTTTTTTTTTT TTTTTTTTT | M419DR AFT_745 26 | protein_c oding | rna2945 | upstream_gene _variant | c.-2774_- 2773insA A | - - - | - - | putative regulator of reproduction dopa | 0 |
| KI911142.1 | 1496160 | CTTTTTTTTTTTT TTTTTTTTTT | CTTTTTTTTTTTTTTTTTTTT TTTT,CTTTTTTTTTTTTTTTTTT TTTTTTTTT,CTTTTTTTTTTTTTT TTTTTTT | M419DR AFT_745 26 | protein_c oding | rna2945 | upstream_gene _variant | c.-2773_- 2770delA AAA | - - - | - - | putative regulator of reproduction dopa | 1 |
| KI911142.1 | 1550534 | CAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGA | CAGAGAGAGAGAGAGAGAG AGAGAGAGAGAGA | M419DR AFT_122 636 | protein_c oding | rna2963 | 5_prime_UTR _variant | c.-62_- 61delTC | - - | - - | hypothetical protein M419DRAFT _122636 | 0 |
| KI911142.1 | 1552887 | TCC | TCCC | M419DR AFT_122 636 | protein_c oding | rna2963 | upstream_gene _variant | c.-2385_- 2384insG | - - | - - | hypothetical protein M419DRAFT _122636 | 0 |
| KI911142.1 | 242823 | ATCTCTCTCTCT CTCTCTCTCTCT CTCTCTCTC | ATCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTC | M419DR AFT_967 83 | protein_c oding | rna2555 | upstream_gene _variant | c.-1087_- 1086delT C | - - | - - | hypothetical protein M419DRAFT _96783 | 0.21429 |
| KI911142.1 | 263178 | ACCCCCCCC | ACCCCCCCCCCCCCC,AC CCCCCCCCCCCCCCC | M419DR AFT_108 401 | protein_c oding | rna2559 | upstream_gene _variant | c.-4943_- 4942insC CCCCCC | - - | - - | defective in cullin neddylation protein 1 | 0 |
| KI911142.1 | 350538 | CATATATATATAT ATATATATAT | CATATATATATATATATATAT ATATATATAT | M419DR AFT_751 04 | protein_c oding | rna2584 | upstream_gene _variant | c.-511_- 510delAT | - - | - - | hypothetical protein M419DRAFT _75104 | 0 |
| KI911142.1 | 485934 | TCCCCCCCCCCC C | TCCCCCCCCCCCCC,TCCCC CCCCCCC,TACCCCCCCCCC CCC | M419DR AFT_684 0 | protein_c oding | rna2631 | downstream_g ene_variant | c.*2822_* 2823insA C | - - | - - | hypothetical protein M419DRAFT _6840 | 0 |

| | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|---------|---------------------------|---------------------------------|-------------|--------|--|---------|
| KI911142.1 | 545487 | CTCTCCTNTCTCC T | CTCTCCT | M419DR AFT_128 166 | protein_c oding | rna2652 | upstream_gene _variant | c.-4566_- 4560delA GGAGAT | - - - | - - | hypothetical protein M419DRAFT _128166 | 1 |
| KI911142.1 | 580413 | AGGGGGGGGGGG GGGGGGGGGG | AGGGGGGGGGGGGGGG,AG GGGGGGGGGGGGGG | M419DR AFT_241 77 | protein_c oding | rna2667 | upstream_gene _variant | c.-3228_- 3223delC CCCCC | - - | - - | hypothetical protein M419DRAFT _24177 | 0 |
| KI911142.1 | 580429 | GGGGGGT | G | M419DR AFT_241 77 | protein_c oding | rna2667 | upstream_gene _variant | c.-3229_- 3224delA CCCCC | - - | - - | hypothetical protein M419DRAFT _24177 | 0.28571 |
| KI911142.1 | 582346 | GCTCTCTCTCTCT CTCTCTCTCTCTCT C | GCTCTCTCTCTCTCTCTCTCT CTCTC | M419DR AFT_241 77 | protein_c oding | rna2667 | upstream_gene _variant | c.-5167_- 5166delG A | - - | - - | hypothetical protein M419DRAFT _24177 | 0.28 |
| KI911142.1 | 593586 | G | C | M419DR AFT_128 185 | protein_c oding | rna2673 | upstream_gene _variant | c.- 2019C>G | - - | - - | hypothetical protein M419DRAFT _128185 | 0.33333 |
| KI911142.1 | 594543 | A | AAG | M419DR AFT_128 185 | protein_c oding | rna2673 | upstream_gene _variant | c.-2977_- 2976insC T | - - | - - | hypothetical protein M419DRAFT _128185 | 0.25926 |
| KI911142.1 | 603630 | ACG | A | M419DR AFT_968 78 | protein_c oding | rna2676 | upstream_gene _variant | c.-3351_- 3350delC G | - - | - - | heterotrimeric G protein beta subunit TGB1 | 0.5 |
| KI911142.1 | 625824 | CTTTTTTTTTTTT TTTTTTTTTTTTTT TTTTTTTTTTTT | CTTTTTTTTTTTTTTTTTTTTTT TTTTTTTTTTTTTTTTTTTTTTT, CTTTTTTTTTTTTTTTTTTTTT TTTTTTTTTTTTTTTTTTTTT | M419DR AFT_241 84 | protein_c oding | rna2681 | upstream_gene _variant | c.-1111_- 1110insT TTT | - - | - - | SAS complex, SAS5 subunit/transcr iption initiation factor IID, | 0.95 |

| | | | | | | | | | | | | |
|------------|---------|---|---|--------------------------|--------------------|---------|-----------------------------|----------------------------|---|---|---|---------|
| KI911143.1 | 1439638 | AGGGGGGGGGGG G | AGGGGGGGGGGGGG,AGG GGGGGGGGGGG | M419DR AFT_128 864 | protein_c oding | rna3398 | upstream_gene _variant | c.-34_- 33insCC | - | - | hypothetical protein M419DRAFT _128864 | 0.92857 |
| KI911143.1 | 1439653 | AGGG | AGGGGG | M419DR AFT_128 864 | protein_c oding | rna3398 | upstream_gene _variant | c.-40_- 39insCC | - | - | hypothetical protein M419DRAFT _128864 | 0 |
| KI911143.1 | 256247 | AGGGGGGGGGGG GG | AGGGGGGGGGGGGGGG | M419DR AFT_341 37 | protein_c oding | rna3052 | upstream_gene _variant | c.-1216_- 1215insC C | - | - | hypothetical protein M419DRAFT _34137 | 0.70588 |
| KI911143.1 | 282514 | T | C | M419DR AFT_t54 | | rna3058 | upstream_gene _variant | n- 4505A>G | - | - | - | 0 |
| KI911143.1 | 282535 | G | A | M419DR AFT_t54 | | rna3058 | upstream_gene _variant | n- 4526C>T | - | - | - | 0.28743 |
| KI911143.1 | 368262 | GCCCCCCCCCCC CCCC | GCCCCCCCCCCCCCCCCC | M419DR AFT_128 575 | protein_c oding | rna3087 | upstream_gene _variant | c.-745_- 744insCC C | - | - | hypothetical protein M419DRAFT _128575 | 0.8 |
| KI911143.1 | 397826 | CGGGGGGGGGGG G | CGGGGGGGGGGGGG,CGGG GGGGGGGGGGG | M419DR AFT_973 24 | protein_c oding | rna3094 | downstream_g ene_variant | c.*1303_* 1304insC | - | - | hypothetical protein M419DRAFT _97324 | 0.95238 |
| KI911143.1 | 509923 | ATCTCTCTCTCTCT CTCTCTC | ATCTCTCTCTCTCTCTC | M419DR AFT_108 979 | protein_c oding | rna3120 | upstream_gene _variant | c.-475_- 474delITC | - | - | hypothetical protein M419DRAFT _108979 | 0 |
| KI911143.1 | 517580 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCT | CCTCTCTCTCTCTCTCTCT CTCTCTCTCTCTCTCT | M419DR AFT_128 607 | protein_c oding | rna3121 | upstream_gene _variant | c.-3898_- 3897delA G | - | - | hypothetical protein M419DRAFT _128607 | 0.18519 |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|---------------------------|--------------------------------|-------------|--------|---|------|
| KI911143.1 | 53235 | GCCCCCCCCCCC CCCC | GCCCCCCCCCCCCCCCCC | M419DR AFT_128 479 | protein_c oding | rna2984 | upstream_gene _variant | c.-1909_- 1908insG G | - - - | - - | MFS general substrate transporter | 1 |
| KI911143.1 | 53235 | GCCCCCCCCCCC CCCC | GCCCCCCCCCCCCCCCCC C | M419DR AFT_128 479 | protein_c oding | rna2984 | upstream_gene _variant | c.-1909_- 1908insG GGG | - - - | - - | MFS general substrate transporter | 0 |
| KI911143.1 | 535871 | GCCCCCC | GCCCCCC | M419DR AFT_759 11 | protein_c oding | rna3132 | upstream_gene _variant | c.-2603_- 2602insC | - - | - - | DUF427- domain- containing protein | 1 |
| KI911143.1 | 576761 | CATATATATATATAT ATATATATATATA | CATATATATATATATATATATAT ATATATA | M419DR AFT_140 786 | protein_c oding | rna3141 | upstream_gene _variant | c.-796_- 795insTA | - - | - - | hypothetical protein M419DRAFT _140786 | 0 |
| KI911143.1 | 576761 | CATATATATATATAT ATATATATATATA | CATATATATATATATATATATAT ATATATA,CATATATATATATAT ATATATATATA | M419DR AFT_140 786 | protein_c oding | rna3141 | upstream_gene _variant | c.-797_- 796delTA | - - | - - | hypothetical protein M419DRAFT _140786 | 0.8 |
| KI911143.1 | 593459 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGACAGAGA GAGAGAGAGA | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA GAGACAGAGAGAGAGAGAG A | M419DR AFT_973 98 | protein_c oding | rna3145 | upstream_gene _variant | c.-249_- 248delTC | - - | - - | hypothetical protein M419DRAFT _97398 | 0.32 |
| KI911143.1 | 609224 | ACCG | A | M419DR AFT_128 637 | protein_c oding | rna3152 | upstream_gene _variant | c.-1930_- 1928delC GG | - - | - - | FMN-linked oxidoreductase | 0 |
| KI911143.1 | 796027 | CCAACAACAACA ACAACAACAACA ACAACAACAACA ACAACAACAACA ACAACAACAACA ACA | CCAACAACAACAACAACA CAACAACAACAACAACAAC AACAACAACAACAACA ACAACAACAACA | M419DR AFT_756 00 | protein_c oding | rna3217 | upstream_gene _variant | c.-4382_- 4377delT GTTGT | - - | - - | hypothetical protein M419DRAFT _75600 | 0 |

| | | | | | | | | | | | | |
|------------|---------|-------------------------------|------------------------------|--------------------------|--------------------|---------|--|--------------------------------|---|---|--|---------|
| KI911143.1 | 963876 | GAC | G | M419DR AFT_118 350 | protein_c oding | rna3267 | splice_region_ variant+intron _variant | c.106+7_ 106+8del AC | - | - | hypothetical protein M419DRAFT _118350 | 1 |
| KI911144.1 | 1043217 | A | C | M419DR AFT_781 1 | protein_c oding | rna3759 | downstream_g ene_variant | c.*4452T >G | - | - | general substrate transporter | 0.44444 |
| KI911144.1 | 1076744 | CA | C | M419DR AFT_980 34 | protein_c oding | rna3768 | upstream_gene _variant | c.- 3731delT | - | - | hypothetical protein M419DRAFT _98034 | 0 |
| KI911144.1 | 1076917 | GGTGTGTGTGTGT GTGTGTGTGTGT | GGTGTGTGTGTGTGTGTGTGT TGT | M419DR AFT_980 34 | protein_c oding | rna3768 | upstream_gene _variant | c.-3927_ 3926delA C | - | - | hypothetical protein M419DRAFT _98034 | 0 |
| KI911144.1 | 1155992 | AATATATATATATAT ATATATATA | AATATATATATATATATATATA | M419DR AFT_129 240 | protein_c oding | rna3792 | upstream_gene _variant | c.-3528_ 3527delT A | - | - | DUF862- domain- containing protein | 0.36364 |
| KI911144.1 | 1188745 | GGAGAGAGAGAG AGAGAGAGAGAG | GGAGAGAGAGAGAGAGAG AGAG | M419DR AFT_136 852 | protein_c oding | rna3806 | upstream_gene _variant | c.-579_ 578delAG | - | - | HAD-like protein | 0.10526 |
| KI911144.1 | 1368013 | G | A | M419DR AFT_479 14 | protein_c oding | rna3857 | upstream_gene _variant | c.- 678C>T | - | - | ORC2- domain- containing protein, partial | 1 |
| KI911144.1 | 281382 | AG | AGGG | M419DR AFT_109 361 | protein_c oding | rna3503 | upstream_gene _variant | c.-4013_ 4012insC C | - | - | NAD(P) transhydrogen ase precursor | 0 |
| KI911144.1 | 317049 | CTACTGCTGTTAC TGCTG | CTACTGCTG | M419DR AFT_770 33 | protein_c oding | rna3517 | upstream_gene _variant | c.-3954_ 3946delC AGCAGT | - | - | Formyltetrahy drofolate deformylase | 1 |

| | | | | | | | | | | | | |
|------------|--------|--|--|-------------------------|--------------------|---------|---------------------------|----------------------------|--------|--------|---|---------|
| KI911144.1 | 317058 | T | C | M419DR AFT_770 33 | protein_c oding | rna3517 | upstream_gene _variant | c.- 3946A>G | - - | - - | Formyltetrahy drofolate deformylase | 0 |
| KI911144.1 | 405555 | TTGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTGTG | TTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGT GTGTG | M419DR AFT_774 88 | protein_c oding | rna3547 | upstream_gene _variant | c.-548_- 547delCA | - - | - - | nagb/rpia/CoA transferase- like protein | 0.23333 |
| KI911144.1 | 475927 | GCCCC | GCCCCC | M419DR AFT_769 79 | protein_c oding | rna3570 | upstream_gene _variant | c.-142_- 141insGG | - - | - - | hypothetical protein M419DRAFT _76979, partial | 0.52632 |
| KI911144.1 | 534792 | GTATATATATATATA TATATAT | GTATATATATATATATATAT | M419DR AFT_765 6 | protein_c oding | rna3589 | upstream_gene _variant | c.-3232_- 3231delA T | - - | - - | putative NAD(P)H- dependent oxidoreductase | 0 |
| KI911144.1 | 561379 | AGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTGTG | AGTGTGTGTGTGTGTGTGTG TGTGTGTGTGTGTGTGTG TGTGTGTGTGTGTG | M419DR AFT_763 97 | protein_c oding | rna3595 | upstream_gene _variant | c.-803_- 800delCA CA | - - | - - | hypothetical protein M419DRAFT _76397 | 0 |
| KI911144.1 | 561379 | AGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGTGTGTG TGTGTGTG | AGTGTGTGTGTGTGTGTGTG TGTGTGTGTGTGTGTGTG TGTGTGTGTGTGTG | M419DR AFT_763 97 | protein_c oding | rna3595 | upstream_gene _variant | c.-803_- 802delCA | - - | - - | hypothetical protein M419DRAFT _76397 | 0.25641 |
| KI911144.1 | 608955 | T | TGG | M419DR AFT_768 75 | protein_c oding | rna3615 | upstream_gene _variant | c.-4638_- 4637insC C | - - | - - | terpenoid synthase | 0.44444 |
| KI911144.1 | 639827 | CAAAAAAAAAA AAAAAAAAA | CAAAAAAAAAAAAAAAAAA AAAAAAA,CAAAAAAAAAA | M419DR AFT_129 | protein_c oding | rna3629 | upstream_gene _variant | c.-4904_- 4903insT | - - | - - | transcription initiation | 0.92593 |

| | | | | | | | | | | | | |
|------------|--------|---------------|-----------------------|---------|-----------|---------|---------------|-----------|---|---|-----------------|---------|
| | | | AAAAAAAAAAAAAAAA,CAA | 087 | | | | TT | | | factor TFIIID | |
| | | | AAAAAAAAAAAAAAAA | | | | | | | | complex | 60 |
| | | | AAAAA | | | | | | | | kDa subunit | |
| KI911144.1 | 646072 | TTGTGTGTGTGTG | TTGTGTGTGTGTGTGTGT | M419DR | protein_c | rna3631 | upstream_gene | c.-3742_- | - | - | Opi1-domain- | 0.10909 |
| | | TGTGTGTGTG | G | AFT_346 | oding | | _variant | 3741delC | | | containing | |
| | | | | 19 | | | | A | | | protein | |
| KI911144.1 | 662134 | GAAAAAAAAAAAA | GAAAAAAAAAAAAAAAAAAAA | M419DR | protein_c | rna3636 | upstream_gene | c.-2780_- | - | - | UV- | 0 |
| | | AAAAAAAAAAAA | AAAAAAAAAAAA | AFT_772 | oding | | _variant | 2779insT | | | endonuclease | |
| | | | | 84 | | | | TTTTTT | | | UvdE | |
| KI911144.1 | 665823 | TC | T | M419DR | protein_c | rna3637 | upstream_gene | c.- | - | - | hypothetical | 0.3 |
| | | | | AFT_978 | oding | | _variant | 1485delC | | | protein | |
| | | | | 80 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _97880 | |
| KI911144.1 | 678914 | A | G | M419DR | protein_c | rna3641 | downstream_g | c.*4838A | - | - | hypothetical | 0 |
| | | | | AFT_140 | oding | | ene_variant | >G | | | protein | |
| | | | | 946 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _140946 | |
| KI911144.1 | 678924 | A | G | M419DR | protein_c | rna3641 | downstream_g | c.*4848A | - | - | hypothetical | 0 |
| | | | | AFT_140 | oding | | ene_variant | >G | | | protein | |
| | | | | 946 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _140946 | |
| KI911144.1 | 678927 | C | G | M419DR | protein_c | rna3641 | downstream_g | c.*4851C | - | - | hypothetical | 0 |
| | | | | AFT_140 | oding | | ene_variant | >G | | | protein | |
| | | | | 946 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _140946 | |
| KI911144.1 | 708172 | TTCTCTCTCTCT | TTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna3654 | upstream_gene | c.-3324_- | - | - | putative alpha- | 1 |
| | | CTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCT | AFT_346 | oding | | _variant | 3321delC | | | ketoglutarate- | |
| | | CTCTCTCTCTCT | CTCTCTCTCTCT | 38 | | | | TCT | | | dependent | |
| | | CTCTCTCTCTCT | | | | | | | | | sulfonate | |
| | | CT | | | | | | | | | dioxygenase | |

| | | | | | | | | | | | | |
|------------|---------|----------------|------------------------|---------|-----------|---------|-----------------|-----------|---------|---------|-------------------|---------|
| KI911144.1 | 708172 | TTCTCTCTCTCTCT | TTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna3654 | upstream_gene | c.-3322_- | - | - | putative alpha- | 0 |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | AFT_346 | oding | | _variant | 3321delC | | | ketoglutarate- | |
| | | CTCTCTCTCTCTCT | CTCTCTCTCTCTCT,TTCTCTC | 38 | | | | T | | | dependent | |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | | | | | | | | sulfonate | |
| | | CT | CTCTCTCTCTCTCTCTCTCTC | | | | | | | | dioxygenase | |
| | | | TCTCTCTCTCTCT | | | | | | | | | |
| KI911144.1 | 806459 | CNCAA | C | M419DR | protein_c | rna3680 | downstream_g | c.*4373_* | - | - | hypothetical | 0 |
| | | | | AFT_773 | oding | | ene_variant | 4376delA | | | protein | |
| | | | | 59 | | | | CAA | | | M419DRAFT | |
| | | | | | | | | | | | _77359 | |
| KI911144.1 | 909696 | A | G | M419DR | protein_c | rna3711 | stop_lost+splic | c.852A>G | p.Ter28 | tgA/tgG | UPF0029- | 0.6 |
| | | | | AFT_771 | oding | | e_region_varia | | 4Trpext | | domain- | |
| | | | | 71 | | | nt | | *? | | containing | |
| | | | | | | | | | | | protein | |
| KI911144.1 | 956379 | GAGAAGAAGAAG | GAGAAGAAGAAGAAGAAG | M419DR | protein_c | rna3725 | upstream_gene | c.-2732_- | - | - | hypothetical | 0.09195 |
| | | AAGAAGAAGAAG | AAGAAGAAGAAG | AFT_347 | oding | | _variant | 2730delC | | | protein | |
| | | AAGAAGAAG | | 00 | | | | TT | | | M419DRAFT | |
| | | | | | | | | | | | _34700 | |
| KI911144.1 | 983479 | GGAGAGAGAGAG | GGAGAGAGAGAGAGAGAG | M419DR | protein_c | rna3737 | upstream_gene | c.-154_- | - | - | hypothetical | 0 |
| | | AGAGAGAGAGAG | AGAGAGAGAGAGAGA | AFT_772 | oding | | _variant | 153delTC | | | protein | |
| | | AGAGAGAGAGA | | 42 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _77242 | |
| KI911145.1 | 1072686 | CAAAAAAAAAAAA | CAAAAAAAAAAAAAA,CAAA | M419DR | protein_c | rna4205 | downstream_g | c.*4621_* | - | - | hypothetical | 0.96364 |
| | | AAA | AAAAAAAAA | AFT_110 | oding | | ene_variant | 4622delA | | | protein | |
| | | | | 107 | | | | A | | | M419DRAFT | |
| | | | | | | | | | | | _110107 | |
| KI911145.1 | 1173625 | CTTTTTTTTTTTTT | CTTTTTTTTTTTTTTTTT,C | M419DR | protein_c | rna4238 | upstream_gene | c.-236_- | - | - | initiation | 0.94203 |
| | | TTTT | TTTTTTTTTTTTTTTT,CTTT | AFT_783 | oding | | _variant | 235insAA | | | factor 2, partial | |
| | | | TTTTTTTTTTTTTTTT | 63 | | | | | | | | |
| KI911145.1 | 1225528 | ATGTGTGTGTGTG | ATGTGTGTGTGTGTGTGTGT | M419DR | protein_c | rna4254 | upstream_gene | c.-796_- | - | - | hypothetical | 0 |
| | | TGTGTGTGTGTGT | GTGTGT | AFT_137 | oding | | _variant | 795delAC | | | protein | |
| | | GT | | 044 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _137044 | |

| | | | | | | | | | | | | |
|------------|---------|---|--|--------------------------|--------------------|---------|---------------------------|--------------------------------------|-------------|--------|---|---------|
| KI911145.1 | 1239831 | AGGGGGGGGGG | AGGGGGGGGGGGGGGGGGG G | M419DR AFT_137 048 | protein_c oding | rna4258 | upstream_gene _variant | c.-4262_- 4261insG GGGGG GG | - - - | - - | CDP- diacylglycerol- serine O- phosphatidyltr ansferase | 0.75 |
| KI911145.1 | 162015 | A | ACC | M419DR AFT_784 90 | protein_c oding | rna3924 | upstream_gene _variant | c.-3839_- 3838insG G | - - | - | L domain-like protein | 0.29412 |
| KI911145.1 | 170456 | T | G | M419DR AFT_348 78 | protein_c oding | rna3930 | upstream_gene _variant | c.- 520T>G | - - | - | alpha/beta- hydrolase | 0.9 |
| KI911145.1 | 170933 | GGAGAGAGAGAG AGAGAGAGAG | GGAGAGAGAGAGAGAGAG AG | M419DR AFT_348 78 | protein_c oding | rna3930 | upstream_gene _variant | c.-23_- 22delAG | - - | - | alpha/beta- hydrolase | 0.12821 |
| KI911145.1 | 172863 | TCTACTACTACTA CTACTACTACTAC TACTACTACTACTA CTA | TCTACTACTACTACTACTACT ACTACTACTACTACTACTA | M419DR AFT_782 28 | protein_c oding | rna3931 | upstream_gene _variant | c.-455_- 453delCT A | - - | - | hypothetical protein M419DRAFT _78228 | 0 |
| KI911145.1 | 237690 | TC | T | M419DR AFT_799 1 | protein_c oding | rna3952 | upstream_gene _variant | c.- 3462delC | - - | - | hypothetical protein M419DRAFT _7991 | 0 |
| KI911145.1 | 287081 | ATGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGT | ATGTGTGTGTGTGTGTGTGT GTGTGTGTGTGT | M419DR AFT_783 10 | protein_c oding | rna3963 | upstream_gene _variant | c.-498_- 497delAC | - - | - | membrane fusion mating protein FIG1 | 0.16832 |
| KI911145.1 | 349920 | TC | T | M419DR AFT_141 075 | protein_c oding | rna3983 | upstream_gene _variant | c.- 4992delG | - - | - | PAP2-domain- containing protein | 0.4375 |
| KI911145.1 | 371512 | G | A | M419DR AFT_136 933 | protein_c oding | rna3989 | upstream_gene _variant | c.- 4473C>T | - - | - | hypothetical protein M419DRAFT _136933 | 0.93243 |

| | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|---------|---------------------------------------|------------------------------|-----------------|----------------|--|--------------|
| KI911145.1 | 456054 | TACACACACACAC ACACACACACAC ACACACACACAC ACACACACACAC AC | TACACACACACACACACAC ACACACACACACACACACA CACACACAC CACACACAC | M419DR AFT_109 912 | protein_c oding | rna4015 | upstream_gene _variant | c.-1738_- 1735delA CAC | - - - | - - - | putative threonine aldolase | 0 |
| KI911145.1 | 493601 | T | TAATTATA | M419DR AFT_129 479 | protein_c oding | rna4029 | upstream_gene _variant | c.-22_- 21insTAT AATT | - - | - - | hypothetical protein M419DRAFT _129479 | 0 |
| KI911145.1 | 493601 | TT | TAATTATAT,TTAATTATAT | M419DR AFT_129 479 | protein_c oding | rna4029 | upstream_gene _variant | c.-22_- 21insTAT AATT | - - | - - | hypothetical protein M419DRAFT _129479 | 1 |
| KI911145.1 | 513606 | CCCTCCTCCTCCT CCTCCTCCTCCTC CTCCTCCTC | CCCTCCTCCTCCTCCTCCTCC TCCTCCTCCTC | M419DR AFT_778 20 | protein_c oding | rna4037 | conservative_i nframe_deletio n | c.1859_18 61delGA G | p.Gly62 1del | agagga/ag a | activating signal cointegrator complex subunit 2 | 0.10526 1 |
| KI911145.1 | 610988 | GTTTTTTTTTTTTT TTTTTTTTTTTT | GTTTTTTTTTTTTTTTTTTTT, GTTTTTTTTTTTTTTTTTTTT T,GTTTTTTTTTTTTTTTTTTTT TT | M419DR AFT_t72 | | rna4068 | upstream_gene _variant | n.-3988_- 3985delA AAA | - - | - - | - | 0 |
| KI911145.1 | 699390 | G | T | M419DR AFT_776 85 | protein_c oding | rna4096 | upstream_gene _variant | c.- 1953G>T | - - | - - | ATP- dependent RNA helicase DHH1 | 1 |
| KI911145.1 | 699399 | A | T | M419DR AFT_776 85 | protein_c oding | rna4096 | upstream_gene _variant | c.- 1944A>T | - - | - - | ATP- dependent RNA helicase DHH1 | 0 |
| KI911145.1 | 699405 | A | G | M419DR AFT_776 85 | protein_c oding | rna4096 | upstream_gene _variant | c.- 1938A>G | - - | - - | ATP- dependent RNA helicase | 1 |

| | | | | | | | | | | | DHH1 | |
|------------|--------|---|---|--------------------------|--------------------|---------|-----------------------------|-------------------------------|---|---|---|---------|
| KI911145.1 | 699423 | A | G | M419DR AFT_776 85 | protein_c oding | rna4096 | upstream_gene _variant | c.- 1920A>G | - | - | ATP- dependent RNA helicase DHH1 | 1 |
| KI911145.1 | 783729 | A | G | M419DR AFT_129 562 | protein_c oding | rna4120 | downstream_g ene_variant | c.*2431A >G | - | - | serine/threonin e-protein kinase Sgk2 | 0.36364 |
| KI911145.1 | 783912 | C | T | M419DR AFT_129 562 | protein_c oding | rna4120 | downstream_g ene_variant | c.*2614C >T | - | - | serine/threonin e-protein kinase Sgk2 | 0.44444 |
| KI911145.1 | 858250 | TAAAAAAAAA | TAAAAAAAAA | M419DR AFT_129 578 | protein_c oding | rna4137 | upstream_gene _variant | c.-2450_ 2449insT | - | - | hypothetical protein M419DRAFT _129578 | 0.9 |
| KI911145.1 | 898499 | CCACACACACAC ACACACACACAC ACACACACA | CCACACACACACACACACA CACACACACACACACA | M419DR AFT_507 02 | protein_c oding | rna4147 | upstream_gene _variant | c.-4448_ 4447insT G | - | - | hypothetical protein M419DRAFT _50702, partial | 0.7907 |
| KI911145.1 | 928396 | TCACACACACACA CACACACACACA CACAC | TCACACACACACACACACA CACACACAC | M419DR AFT_984 39 | protein_c oding | rna4158 | downstream_g ene_variant | c.*3506_ 3507delA C | - | - | RCC1/BLIP-II | 0.15584 |
| KI911145.1 | 936415 | CCCC | CCCCCGGCC | M419DR AFT_780 89 | protein_c oding | rna4159 | upstream_gene _variant | c.-1056_ 1055insG GGCCG | - | - | hypothetical protein M419DRAFT _78089 | 1 |
| KI911145.1 | 936415 | CCCC | CCCCCGGCC,CCCCGGCCC | M419DR AFT_780 89 | protein_c oding | rna4159 | upstream_gene _variant | c.-1056_ 1055insG GGCCG | - | - | hypothetical protein M419DRAFT _78089 | 0 |

| | | | | | | | | | | | | |
|------------|---------|--|--|--------------------------|--------------------|---------|-----------------------------|--------------------------------------|--------|--------|---|---------|
| KI911146.1 | 1035870 | AGG | AG | M419DR AFT_130 021 | protein_c oding | rna4594 | upstream_gene _variant | c.- 4157delC | - - | - - | hypothetical protein M419DRAFT _130021 | 0.83333 |
| KI911146.1 | 1035885 | AC | A | M419DR AFT_130 021 | protein_c oding | rna4594 | upstream_gene _variant | c.- 4171delG | - - | - - | hypothetical protein M419DRAFT _130021 | 0.42857 |
| KI911146.1 | 125544 | TC | TCCCCCCCCC | M419DR AFT_789 28 | protein_c oding | rna4355 | upstream_gene _variant | c.-3596_ 3595insG GGGGG GG | - - | - - | hypothetical protein M419DRAFT _78928 | 0.25 |
| KI911146.1 | 125544 | TC | TCCCCCCCCC | M419DR AFT_789 28 | protein_c oding | rna4355 | upstream_gene _variant | c.-3596_ 3595insG GGGGG GGG | - - | - - | hypothetical protein M419DRAFT _78928 | 0 |
| KI911146.1 | 132683 | G | GCCCC | M419DR AFT_987 54 | protein_c oding | rna4358 | downstream_g ene_variant | c.*2220_* 2221insG GGG | - - | - - | Zn(II)2Cys6 transcription factor | 0.23529 |
| KI911146.1 | 132915 | TCC | T | M419DR AFT_987 54 | protein_c oding | rna4358 | downstream_g ene_variant | c.*1987_* 1988delG G | - - | - - | Zn(II)2Cys6 transcription factor | 0.22222 |
| KI911146.1 | 192602 | CATATATATATATAT ATATATATATATATA TA | CATATATATATATATATATATATATATATATAT ATATATATATA | M419DR AFT_248 38 | protein_c oding | rna4374 | upstream_gene _variant | c.-1071_ 1070insT A | - - | - - | Metallo- dependent hydrolase | 0.75 |
| KI911146.1 | 242499 | GGCAGCAGCAGC AGCAGCAGCAGC AGCAGCA | GGCAGCAGCAGCAGCAGCA GCAGCAGCA | M419DR AFT_137 130 | protein_c oding | rna4385 | upstream_gene _variant | c.-1554_ 1552delT GC | - - | - - | putative lipase | 0.08333 |

| | | | | | | | | | | | | |
|------------|--------|----------------|-----------------------|---------|-----------|---------|---------------|-----------|-----------|-----------|---------------------|---------|
| KI911146.1 | 311920 | GACACACACACA | GACACACACACACACAC | M419DR | protein_c | rna4404 | upstream_gene | c.-3373_- | - | - | putative DNA | 1 |
| | | CACACACACACA | ACACACACACACACACACA | AFT_790 | oding | | _variant | 3370delA | | | repair protein | |
| | | CACACACACACA | CACACACACACACACAC | 76 | | | | CAC | | | NseI | |
| | | CACACACACACA | ACACACACACACACACACA | | | | | | | | | |
| | | CACACACACACA | CACAC | | | | | | | | | |
| | | CACACACACACA | | | | | | | | | | |
| | | CACACACACACA | | | | | | | | | | |
| KI911146.1 | 311920 | C | | | | | | | | | | |
| | | GACACACACACA | GACACACACACACACAC | M419DR | protein_c | rna4404 | upstream_gene | c.-3371_- | - | - | putative DNA | 0 |
| | | CACACACACACA | ACACACACACACACACACA | AFT_790 | oding | | _variant | 3370delA | | | repair protein | |
| | | CACACACACACA | CACACACACACACACAC | 76 | | | | C | | | NseI | |
| | | CACACACACACA | ACACACACACACACACACA | | | | | | | | | |
| | | CACACACACACA | CACACAC | | | | | | | | | |
| | | CACACACACACA | | | | | | | | | | |
| KI911146.1 | 560186 | C | | | | | | | | | | |
| | | CCCTCCTCCTCCT | CCCTCCTCCTCCTCCTCCTCC | M419DR | protein_c | rna4467 | upstream_gene | c.-2248_- | - | - | origin | 0.19231 |
| | | CCTCCTCCTCCTC | TCCTCCTCCTC | AFT_989 | oding | | _variant | 2246delG | | | recognition complex | |
| | | 23 | | | | AG | | | subunit 6 | | | |
| KI911146.1 | 56383 | TCAGCAGCAGCA | TCAGCAGCAGCAGCAGCAG | M419DR | protein_c | rna4331 | upstream_gene | c.-415_- | - | - | hypothetical | 0.07407 |
| | | GCAGCAGCAGCA | CAGCAGCAGCAGCAGC | AFT_141 | oding | | _variant | 413delAG | | | protein | |
| | | GCAGCAGCAGCA | | 225 | | | | C | | | M419DRAFT | |
| | | GC | | | | | | | | _141225 | | |
| KI911146.1 | 572968 | T | C | M419DR | protein_c | rna4473 | upstream_gene | c.- | - | - | hypothetical | 0.71429 |
| | | | | AFT_793 | oding | | _variant | 2948A>G | | | protein | |
| | | | | 78 | | | | | | M419DRAFT | | |
| | | | | | | | | | | _79378 | | |
| KI911146.1 | 58648 | GTCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna4329 | downstream_g | c.*3553_* | - | - | ribonuclease | 0.29545 |
| | | TCTCTCTCTCTCTC | TCTCTCTCTC | AFT_789 | oding | | ene_variant | 3554delT | | | H-like protein, | |
| | | TCTCTC | | 07 | | | | C | | | partial | |

| | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|---------|---------------------------------------|--------------------------------|---------|------|---|---------|
| KI911146.1 | 622778 | ACCCCCCCCCC CCCC | ACCCCCCCCCCCCCCCC C | M419DR AFT_794 71 | protein_c oding | rna4490 | upstream_gene _variant | c.-539_- 538insCC CC | - | - | ribonuclease H-like protein | 1 |
| KI911146.1 | 669312 | TCC | T | M419DR AFT_123 266 | protein_c oding | rna4498 | upstream_gene _variant | c.-1525_- 1524delG G | - | - | hypothetical protein M419DRAFT _123266 | 0 |
| KI911146.1 | 669313 | CCNC | CC | M419DR AFT_123 266 | protein_c oding | rna4498 | upstream_gene _variant | c.-1527_- 1526delG T | - | - | hypothetical protein M419DRAFT _123266 | 1 |
| KI911146.1 | 71834 | TCAGCAGCAGCA GCAGCAGCAGCA GCAGCAGCAGC | TCAGCAGCAGCAGCAGCAG CAGCAGCAGCAGC | M419DR AFT_788 41 | protein_c oding | rna4336 | conservative_i nframe_deletio n | c.706_708 delAGC 6del | p.Ser23 | agc/ | 60S ribosomal protein L3 | 0.08772 |
| KI911146.1 | 734173 | TCC | TC | M419DR AFT_788 16 | protein_c oding | rna4515 | upstream_gene _variant | c.- 2465delC | - | - | hypothetical protein M419DRAFT _78816 | 1 |
| KI911146.1 | 769605 | TT | TTTAT | M419DR AFT_353 91 | protein_c oding | rna4524 | upstream_gene _variant | c.-218_- 217insTA T | - | - | WD40 repeat- like protein | 1 |
| KI911146.1 | 792804 | CTATATATATATATA TATATATATATATA | CTATATATATATATATATATA | M419DR AFT_353 96 | protein_c oding | rna4532 | upstream_gene _variant | c.-4457_- 4452delT ATATA | - | - | putative kinetochore protein SPC25 | 0.22222 |
| KI911146.1 | 815478 | CTTTTTTTTTTTTT TTTT | CTTTTTTTTTTTTTTTTTT,C TTTTTTTTTTTTTTTTT,CTTT TTTTTTTTTTTTTTTTT | M419DR AFT_794 14 | protein_c oding | rna4540 | upstream_gene _variant | c.-2715_- 2714insT T | - | - | hypothetical protein M419DRAFT _79414 | 0.95455 |
| KI911146.1 | 815831 | GTCTCTCTCTCTC TCTCTCTCTCTCT | GTCTCTCTCTCTCTCTCTCTC TCT | M419DR AFT_794 14 | protein_c oding | rna4540 | upstream_gene _variant | c.-2355_- 2354delC T | - | - | hypothetical protein M419DRAFT _79414 | 0 |

| | | | | | | | | | | | | |
|------------|---------|--|---|--------------------------|--------------------|---------|---------------------------|---|-------------|--------|---|---------|
| KI911146.1 | 858657 | ACAGCCCAGCCN CAGCCCAGCC | ACAGCCCAGCC | M419DR AFT_354 17 | protein_c oding | rna4553 | upstream_gene _variant | c.-2161_- 2151delN CAGCCC AGCC | - - - | - - | kinase-like protein | 1 |
| KI911146.1 | 864050 | TCGC | T | M419DR AFT_788 29 | protein_c oding | rna4555 | upstream_gene _variant | c.-2244_- 2242delC GC | - - | - | xanthine dehydrogenase | 0 |
| KI911146.1 | 935172 | TTCTCTCTCTCTCT CTCTCTCTCTCTC | TTCTCTCTCTCTCTCTCTCTC TCTC | M419DR AFT_795 17 | protein_c oding | rna4570 | upstream_gene _variant | c.-1441_- 1440delG A | - - | - | MFS general substrate transporter | 0.10526 |
| KI911146.1 | 962447 | CTGTTGTTGTTGT TGTGTTGTTGTT GT | CTGTTGTTGTTGTTGTTGTTG TTGT | M419DR AFT_110 693 | protein_c oding | rna4576 | upstream_gene _variant | c.-694_- 692delTG T | - - | - | putative aminopeptidas e | 0.07843 |
| KI911147.1 | 1031246 | TGTGTGTGTGTG TGTGTGTGTGTGT GTGTGTGTGTGTG TG | TGTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTG | M419DR AFT_119 136 | protein_c oding | rna4931 | upstream_gene _variant | c.-5182_- 5181delC A | - - | - | hypothetical protein M419DRAFT _119136 | 0.2 |
| KI911147.1 | 1064099 | CAGAGAGAGAGA GAGAGAGAGAGA GAGAG | CAGAGAGAGAGAGAGAGAG AGAGAGAG | M419DR AFT_t84 | | rna4941 | upstream_gene _variant | n.-2572_- 2571delA G | - - | - | - | 0.13978 |
| KI911147.1 | 116186 | AGGGGGGGGGGG GGGGG | AGGGGGGGGGGGGGGGGGGG GGG,AGGGGGGGGGGGGGGG GGG | M419DR AFT_141 391 | protein_c oding | rna4673 | upstream_gene _variant | c.-2860_- 2859insG GGG | - - | - | hypothetical protein M419DRAFT _141391 | 0 |
| KI911147.1 | 159045 | T | TCGC | M419DR AFT_992 14 | protein_c oding | rna4682 | 5_prime_UTR _variant | c.-57_- 56insCGC | - - | - | adenylylsulfate kinase | 0.5 |
| KI911147.1 | 159046 | TCCCCCCCCCCC C | TCCCCCCCCCCCCCCC | M419DR AFT_992 14 | protein_c oding | rna4682 | 5_prime_UTR _variant | c.-44_- 43dupCC | - - | - | adenylylsulfate kinase | 0 |

| | | | | | | | | | | | | |
|------------|--------|---|---|-------------------------|--------------------|---------|-----------------------------|-------------------------------------|-------------|--------|---|---------|
| KI911147.1 | 166772 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAG | AAGAGAGAGAGAGAGAGA GAGAGAGAG | M419DR AFT_355 31 | protein_c oding | rna4684 | downstream_g ene_variant | c.*1171_* 1172delA G | - - - | - - | hypothetical protein M419DRAFT _35531 | 0.11429 |
| KI911147.1 | 169932 | ACCCCCCCCCC C | ACCCCCCCCCCCCCC,ACC CCCCCCCCCCCC | M419DR AFT_355 32 | protein_c oding | rna4685 | upstream_gene _variant | c.-867_- 866insGG | - - | - - | F-box protein | 0 |
| KI911147.1 | 169932 | ACCCCCCCCCC C | ACCCCCCCCCCCCCC,ACC CCCCCCCCCCCC | M419DR AFT_355 32 | protein_c oding | rna4685 | upstream_gene _variant | c.-867_- 866insGG | - - | - - | F-box protein | 0.875 |
| KI911147.1 | 181027 | GTCTCTCTCTC TCTCTCTCTCTC TCTCT | GTCTCTCTCTCTCTCTCTC TCTCTCTCT | M419DR AFT_799 09 | protein_c oding | rna4688 | upstream_gene _variant | c.-612_- 611delCT | - - | - - | hypothetical protein M419DRAFT _79909 | 0 |
| KI911147.1 | 182508 | CCACACACACAC ACACACACACAC ACACACACACAC ACA | CCACACACACACACACACA CACACACACACACACACA | M419DR AFT_513 16 | protein_c oding | rna4687 | upstream_gene _variant | c.-1152_- 1151delT G | - - | - - | hypothetical protein M419DRAFT _51316, partial | 0 |
| KI911147.1 | 182995 | GCTCTCTCTCTC CTCTCTCTCTCTC C | GCTCTCTCTCTCTCTCTCTC CTCTC | M419DR AFT_513 16 | protein_c oding | rna4687 | upstream_gene _variant | c.-1628_- 1627delG A | - - | - - | hypothetical protein M419DRAFT _51316, partial | 0 |
| KI911147.1 | 187940 | GCCCCCCCC | GCCCCCCCCCCCCCCCCC | M419DR AFT_992 27 | protein_c oding | rna4690 | upstream_gene _variant | c.-453_- 452insGG GGGGG GG | - - | - - | PLP- dependent transferase | 0 |
| KI911147.1 | 209390 | CGGGGGGGGGGG GG | CGGGGGGGGGGGGGGGG | M419DR AFT_797 23 | protein_c oding | rna4695 | downstream_g ene_variant | c.*4479_* 4480insG G | - - | - - | A/B/D/E cyclin | 0.875 |
| KI911147.1 | 209390 | CGGGGGGGGGGG GG | CGGGGGGGGGGGGGGGG,CG GGGGGGGGGGGGG | M419DR AFT_797 23 | protein_c oding | rna4695 | downstream_g ene_variant | c.*4479_* 4480insG G | - - | - - | A/B/D/E cyclin | 0 |

| | | | | | | | | | | | | |
|------------|--------|-------------------------------------|-------------------------------|--------------------------|--------------------|---------|---------------------------------------|--------------------------------|----------------|--------|---|---------|
| KI911147.1 | 262458 | ACTTCTTCTTCTTC TTCTTCTTCTTC | ACTTCTTCTTCTTCTTCTCT TC | M419DR AFT_141 408 | protein_c oding | rna4709 | conservative_i nframe_deletio n | c.232_234 delTTC | p.Phe78 del | ttc/ | hypothetical protein M419DRAFT _141408, partial | 0.10345 |
| KI911147.1 | 280582 | AACACACACACA CACACACACACA CAC | AACACACACACACACACAC ACACAC | M419DR AFT_355 55 | protein_c oding | rna4712 | downstream_g ene_variant | c.*552_*5 53delAC | - - | - - | hypothetical protein M419DRAFT _35555 | 0 |
| KI911147.1 | 393389 | ACC | A | M419DR AFT_119 034 | protein_c oding | rna4741 | downstream_g ene_variant | c.*2956_* 2957delC C | - - | - - | 60S ribosomal protein L33 | 0.31579 |
| KI911147.1 | 393390 | C | CAA | M419DR AFT_119 034 | protein_c oding | rna4741 | downstream_g ene_variant | c.*2956_* 2957insA A | - - | - - | 60S ribosomal protein L33 | 0 |
| KI911147.1 | 43734 | A | ACAACAGC | M419DR AFT_415 06 | protein_c oding | rna4646 | upstream_gene _variant | c.-2568_ 2567insC AACAGC | - - | - - | SRY protein, partial | 0 |
| KI911147.1 | 530871 | TGGGGG | TGGGGGGG | M419DR AFT_123 389 | protein_c oding | rna4775 | upstream_gene _variant | c.-2091_ 2090insG G | - - | - - | hypothetical protein M419DRAFT _123389 | 1 |
| KI911147.1 | 565774 | A | G | M419DR AFT_356 14 | protein_c oding | rna4785 | upstream_gene _variant | c.- 478T>C | - - | - - | hypothetical protein M419DRAFT _35614 | 0.27778 |
| KI911147.1 | 60026 | TCC | TCCCC | M419DR AFT_991 59 | protein_c oding | rna4650 | upstream_gene _variant | c.-1827_ 1826insG G | - - | - - | hypothetical protein M419DRAFT _99159 | 0.38095 |

| | | | | | | | | | | | | |
|------------|--------|---|---|-------------------------|--------------------|---------|-----------------------------|---|-------------|--------|--|--------|
| KI911147.1 | 60026 | TCC | TCCCC | M419DR AFT_991 59 | protein_c oding | rna4650 | upstream_gene _variant | c.-1827_- 1826insG GG | - - - | - - | hypothetical protein M419DRAFT _99159 | 0 |
| KI911147.1 | 6353 | A | ATTAATTATTTAG | M419DR AFT_991 26 | protein_c oding | rna4632 | upstream_gene _variant | c.-319_- 318insCT AAAATA ATTAA | - - - | - - | adenylate kinase | 0 |
| KI911147.1 | 6353 | AN | ATTAATTATTTAGN | M419DR AFT_991 26 | protein_c oding | rna4632 | upstream_gene _variant | c.-319_- 318insCT AAAATA ATTAA | - - - | - - | adenylate kinase | 1 |
| KI911147.1 | 682308 | T | C | M419DR AFT_994 03 | protein_c oding | rna4822 | downstream_g ene_variant | c.*3404T >C | - - | - - | neutral trehalase | 0.2381 |
| KI911147.1 | 82191 | AGGGGGGGGGGG GG | AGGGGGGGGGGGGGGGG,A GGGGGGGGGGGGGGGGG,A GGGGGGGGGGGGGGGGG | M419DR AFT_798 48 | protein_c oding | rna4660 | downstream_g ene_variant | c.*3116_* 3117insG GG | - - | - - | histone deacetylase domain- containing protein | 1 |
| KI911147.1 | 82207 | GCT | G | M419DR AFT_798 48 | protein_c oding | rna4660 | downstream_g ene_variant | c.*3120_* 3121delC T | - - | - - | histone deacetylase domain- containing protein | 0 |
| KI911147.1 | 874776 | TTGGTGGTGGTGG TGGTGGTGGTGGT GGTGGTGGTGG | TTGGTGGTGGTGGTGGTGGT GGTGGTGGTGGTGG | M419DR AFT_651 34 | protein_c oding | rna4889 | upstream_gene _variant | c.-1951_- 1949delT GG | - - | - - | cyclin-domain- containing protein, partial | 0 |

| | | | | | | | | | | | | |
|------------|--------|----------------|------------------------|---------|-----------|---------|---------------|-----------|---|---------------|---------------|---------|
| KI911147.1 | 942505 | CCTCTCTCTCTCT | CTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna4908 | upstream_gene | c.-4317_- | - | - | longevity | 1 |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | AFT_802 | oding | | _variant | 4316insA | | | assurance | |
| | | CTCTCTCTCTCTCT | CTCTCTCTCTCTCTCTCTCTC | 78 | | | | | | | proteins | |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCT,CCTCTC | | | | | | | | LAG1/LAC1 | |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | | | | | | | | | |
| | | CTCTCTCT | CTCTCTCTCTCTCTCTCTCTC | | | | | | | | | |
| KI911147.1 | 942505 | CCTCTCTCTCTCT | CTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna4908 | upstream_gene | c.-4317_- | - | - | longevity | 0 |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | AFT_802 | oding | | _variant | 4316insA | | | assurance | |
| | | CTCTCTCTCTCTCT | CTCTCTCTCTCTCTCTCTCTC | 78 | | | | | | | proteins | |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCT,CCTCTC | | | | | | | | LAG1/LAC1 | |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | | | | | | | | | |
| | | CTCTCTCT | CTCTCTCTCTCTCTCTCTCTC | | | | | | | | | |
| KI911147.1 | 948970 | CGAGAGAGAGAG | CGAGAGAGAGAGAGAGAGA | M419DR | protein_c | rna4911 | upstream_gene | c.-4892_- | - | - | hypothetical | 0.13433 |
| | | AGAGAGAGAGAG | GAGAGAGAGAGAGA | AFT_357 | oding | | _variant | 4891delT | | | protein | |
| | | AGAGAGAGAGA | | 25 | | | | C | | | M419DRAFT | |
| | | | | | | | | | | _35725 | | |
| KI911147.1 | 950370 | ANTATTAG | A,ATATTAG | M419DR | protein_c | rna4913 | upstream_gene | c.- | - | - | putative | 0 |
| | | | | AFT_886 | oding | | _variant | 1875delT | | | general amino | |
| | | | | 7 | | | | | | acid permease | | |
| KI911148.1 | 119629 | GCTCTCTCTCTCT | GCTCTCTCTCTCTCTCTCTCT | M419DR | protein_c | rna5000 | upstream_gene | c.-476_- | - | - | hypothetical | 0.21667 |
| | | CTCTCTCTCTCTCT | CTCTCTCTCTCTC | AFT_137 | oding | | _variant | 475delGA | | | protein | |
| | | CTCTCTCTC | | 414 | | | | | | | M419DRAFT | |
| | | | | | | | | | | _137414 | | |

| | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|---------|---------------------------------------|---------------------------|-----------------|----------------|--|---------|
| KI911148.1 | 120152 | A | G | M419DR AFT_137 414 | protein_c oding | rna5000 | upstream_gene _variant | c.- 964T>C | - | - | hypothetical protein M419DRAFT _137414 | 0 |
| KI911148.1 | 18175 | T | C | M419DR AFT_493 96 | protein_c oding | rna4968 | upstream_gene _variant | c.- 1589A>G | - | - | hypothetical protein M419DRAFT _49396, partial | 0.53333 |
| KI911148.1 | 192884 | GGAGAGAGAGAG AGAGAGAGAGAG AGAGAG | GGAGAGAGAGAGAGAGAG AGAGAGAGAG | M419DR AFT_810 75 | protein_c oding | rna5019 | upstream_gene _variant | c.-2981_ 2980delC T | - | - | patatin- domain- containing protein | 0.175 |
| KI911148.1 | 242546 | ATGCTGCTGCTGC TGCTGCTGCTGCT GCTGCTGCTGCTG C | ATGCTGCTGCTGCTGCT GCTGCTGCTGCTGCTGC | M419DR AFT_141 527 | protein_c oding | rna5037 | upstream_gene _variant | c.-383_ 381delTG C | - | - | hypothetical protein M419DRAFT _141527 | 0 |
| KI911148.1 | 25424 | AG | A | M419DR AFT_620 02 | protein_c oding | rna4970 | upstream_gene _variant | c.- 3890delC | - | - | pseudouridine synthase, partial | 0.3 |
| KI911148.1 | 278461 | CTGGTGGTGGTGG TGGTGGTGGTGGT GG | CTGGTGGTGGTGGTGGT GGTGG | M419DR AFT_626 27 | protein_c oding | rna5044 | conservative_i nframe_deletio n | c.1265_12 67delCC A | p.Thr42 3del | cccacc/cc c | hypothetical protein M419DRAFT _62627, partial | 0 |
| KI911148.1 | 423403 | GAGAAGAAGAAG AAGAAGAAGAAG AAGAAGAAGAAG AAGAAGAAGAA | GAGAAGAAGAAGAAGAAG AAGAAGAAGAAGAAGAAG AAGAAGAA | M419DR AFT_804 99 | protein_c oding | rna5083 | upstream_gene _variant | c.-351_ 349delTT C | - | - | fungal binuclear cluster domain- containing protein | Zn 0 |
| KI911148.1 | 436187 | GTATATATATATATA TATATA | GTATATATATATATATATA | M419DR AFT_996 72 | protein_c oding | rna5087 | upstream_gene _variant | c.-93_ 92delTA | - | - | hypothetical protein M419DRAFT _99672 | 0.4 |

| | | | | | | | | | | | | |
|------------|--------|--|--|--------------------------|--------------------|---------|-----------------------------|-----------------------------|---|---|--|---------|
| KI911148.1 | 476341 | GGAGAGAGAGAG AGAGAGAGAG | GGAGAGAGAGAGAGAGAG AG | M419DR AFT_805 08 | protein_c oding | rna5101 | upstream_gene _variant | c.-4554_- 4553delA G | - | - | hypothetical protein M419DRAFT _80508 | 0.2381 |
| KI911148.1 | 517057 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGA | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA GAGA | M419DR AFT_803 96 | protein_c oding | rna5113 | upstream_gene _variant | c.-3337_- 3336delT C | - | - | hypothetical protein M419DRAFT _80396 | 0.12195 |
| KI911148.1 | 58414 | TCTCC | TC | M419DR AFT_130 395 | protein_c oding | rna4982 | upstream_gene _variant | c.-2877_- 2875delG GA | - | - | hypothetical protein M419DRAFT _130395 | 0.33333 |
| KI911148.1 | 58414 | TCTCCC | TCC | M419DR AFT_130 395 | protein_c oding | rna4982 | upstream_gene _variant | c.-2877_- 2875delG GA | - | - | hypothetical protein M419DRAFT _130395 | 0 |
| KI911148.1 | 61713 | T | TAAA | M419DR AFT_805 23 | protein_c oding | rna4985 | upstream_gene _variant | c.-228_- 227insAA A | - | - | hypothetical protein M419DRAFT _80523 | 0.27778 |
| KI911148.1 | 628783 | TTGTGTGTGTGTG TGTGTGTGT | TTGTGTGTGTGTGTGTGTGT | M419DR AFT_123 529 | protein_c oding | rna5148 | upstream_gene _variant | c.-426_- 425delGT | - | - | hypothetical protein M419DRAFT _123529 | 0.11579 |
| KI911148.1 | 682533 | C | G | M419DR AFT_111 405 | protein_c oding | rna5171 | upstream_gene _variant | c.- 4487C>G | - | - | hypothetical protein M419DRAFT _111405 | 0.25 |
| KI911148.1 | 749793 | T | C | M419DR AFT_251 90 | protein_c oding | rna5192 | downstream_g ene_variant | c.*3753T >C | - | - | FAD/NAD(P)- binding domain- containing protein | 0.5 |

| | | | | | | | | | | | | |
|------------|--------|--|--|--------------------------|--------------------|---------|-----------------------------|---|---|---|--|---------|
| KI911148.1 | 749800 | A | C | M419DR AFT_251 90 | protein_c oding | rna5192 | downstream_g ene_variant | c.*3760A >C | - | - | FAD/NAD(P)- binding domain- containing protein | 0.29032 |
| KI911148.1 | 76355 | GC | GCCC | M419DR AFT_141 508 | protein_c oding | rna4988 | upstream_gene _variant | c.-2921_ 2920insG G | - | - | ribosomal protein S7e | 0.4 |
| KI911148.1 | 770687 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCT | CCTCTCTCTCTCTCTCTCTCT CTCTCTCT | M419DR AFT_998 25 | protein_c oding | rna5194 | upstream_gene _variant | c.-115_ 114delCT | - | - | hypothetical protein M419DRAFT _99825 | 0.12658 |
| KI911148.1 | 775541 | GGAGAGAGAGAG AGAGAGAGAGAG | GGAGAGAGAGAGAGAGAGAG AGAG | M419DR AFT_998 25 | protein_c oding | rna5194 | downstream_g ene_variant | c.*3116_ 3117delA G | - | - | hypothetical protein M419DRAFT _99825 | 0 |
| KI911148.1 | 776925 | CATATATATATATAT ATATA | CATATATATATATATATA | M419DR AFT_998 25 | protein_c oding | rna5194 | downstream_g ene_variant | c.*4496_ 4497delT A | - | - | hypothetical protein M419DRAFT _99825 | 0 |
| KI911148.1 | 785995 | GGAGAGAGAGAG AGAGAGAGAGAG AGAGAGAGAG | GGAGAGAGAGAGAGAGAGAG AGAGAGAGAGAGAG | M419DR AFT_998 29 | protein_c oding | rna5196 | downstream_g ene_variant | c.*2049_ 2050delC T | - | - | hypothetical protein M419DRAFT _99829 | 0.17021 |
| KI911148.1 | 797350 | NGCTGATGAGGG GCC | N | M419DR AFT_998 29 | protein_c oding | rna5196 | upstream_gene _variant | c.-4788_ 4775delG CCCCTC ATCAGC N | - | - | hypothetical protein M419DRAFT _99829 | 1 |
| KI911148.1 | 799257 | ATCTCTCTCTCTCT CTCTCTCTCTCTCT CTCT | ATCTCTCTCTCTCTCTCTCTC TCTCTCTCT | M419DR AFT_808 58 | protein_c oding | rna5198 | upstream_gene _variant | c.-3518_ 3517delC T | - | - | hypothetical protein M419DRAFT _80858 | 0.21154 |

| | | | | | | | | | | | | | _130681 |
|------------|--------|---------------------------------|---|--------------------------|--------------------|---------|---------------------------------------|-----------------------------|-----------------|--------------|---|---------|---------|
| KI911149.1 | 35314 | GGGAGGAGGAGG AGGAGG | GGGAGGAGGAGGAGG | M419DR AFT_130 681 | protein_c oding | rna5283 | conservative_i nframe_deletio n | c.1225_12 27delCCT | p.Pro40 9del | cct/ | hypothetical protein M419DRAFT _130681 | 0 | |
| KI911149.1 | 355595 | AGGGGGGGGGGG G | AGGGGGGGGGGGGGGGG | M419DR AFT_815 26 | protein_c oding | rna5380 | downstream_g ene_variant | c.*2213_* 2214insG GG | - - | - - | hypothetical protein M419DRAFT _81526 | 1 | |
| KI911149.1 | 355595 | AGGGGGGGGGGG G | AGGGGGGGGGGGGGGGG,AG GGGGGGGGGGGG,AGGGG GGGGGGGGG | M419DR AFT_815 26 | protein_c oding | rna5380 | downstream_g ene_variant | c.*2213_* 2214insG GG | - - | - - | hypothetical protein M419DRAFT _81526 | 0 | |
| KI911149.1 | 359715 | G | GCC | M419DR AFT_100 056 | protein_c oding | rna5381 | upstream_gene _variant | c.-833_- 832insGG | - - | - - | hypothetical protein M419DRAFT _100056 | 0.2 | |
| KI911149.1 | 359716 | ACCCCCCCCCC CCCCC | ACCCCCCCCCCCCCCCCC CCC | M419DR AFT_100 056 | protein_c oding | rna5381 | upstream_gene _variant | c.-853_- 852insGG G | - - | - - | hypothetical protein M419DRAFT _100056 | 0 | |
| KI911149.1 | 36237 | CNCG | CTTGTGGNCG,CTNCG,C | M419DR AFT_130 681 | protein_c oding | rna5283 | frameshift_var iant | c.455_456 insA | p.Asp1 53fs | gNg/gNA g | hypothetical protein M419DRAFT _130681 | 0 | |
| KI911149.1 | 36237 | CNCG | CTTGTGGNCG,CTNCG,CTGN CG | M419DR AFT_130 681 | protein_c oding | rna5283 | frameshift_var iant | c.455_456 insA | p.Asp1 53fs | gNg/gNA g | hypothetical protein M419DRAFT _130681 | 1 | |
| KI911149.1 | 422160 | ACTCTCTCTCTCT CTCTCTCTCTCTCT | ACTCTCTCTCTCTCTCTCTCT CTCTCTCTCTCT | M419DR AFT_130 | protein_c oding | rna5399 | upstream_gene _variant | c.-4087_- 4086delA | - - | - - | hypothetical protein | 0.20879 | |

| | | | | | | | | | | | | | |
|------------|--------|--|--|--------------------------|--------------------|---------|---------------------------------------|-----------------------------------|----------------------|-----------|--|---|--------|
| | | CTCTCTCT | | 794 | | | | G | | | | M419DRAFT _130794 | |
| KI911149.1 | 478561 | T | TG | M419DR AFT_816 48 | protein_c oding | rna5418 | upstream_gene _variant | c.-243_- 242insC | - | - | | hypothetical protein M419DRAFT _81648, partial | 0 |
| KI911149.1 | 519879 | AAGAGAGAGAGA GAGAGAGAGAGA GA | AAGAGAGAGAGAGAGAGA GAGAGA | M419DR AFT_100 119 | protein_c oding | rna5433 | upstream_gene _variant | c.-327_- 326delTC | - | - | | hypothetical protein M419DRAFT _100119 | 0.13 |
| KI911149.1 | 559532 | T | G | M419DR AFT_111 772 | protein_c oding | rna5445 | upstream_gene _variant | c.- 790T>G | - | - | | heme peroxidase | 1 |
| KI911149.1 | 559535 | T | A | M419DR AFT_111 772 | protein_c oding | rna5445 | upstream_gene _variant | c.- 787T>A | - | - | | heme peroxidase | 1 |
| KI911149.1 | 559547 | A | C | M419DR AFT_111 772 | protein_c oding | rna5445 | upstream_gene _variant | c.- 775A>C | - | - | | heme peroxidase | 1 |
| KI911149.1 | 587675 | TA | T | M419DR AFT_100 159 | protein_c oding | rna5452 | 3_prime_UTR _variant | c.*140del A | - | - | | WD40 repeat- like protein | 1 |
| KI911149.1 | 664782 | C | G | M419DR AFT_100 181 | protein_c oding | rna5474 | missense_vari ant | c.280G>C p.Val94 Leu | | Gtc/Ctc | | cysteine proteinase | 1 |
| KI911149.1 | 688760 | AAGAGAGAGAGA GAGAGAGAGAGA GAGA | AAGAGAGAGAGAGAGAGA GAGAGAGA | M419DR AFT_111 819 | protein_c oding | rna5480 | upstream_gene _variant | c.-3502_- 3501delT C | - | - | | F-actin- capping protein subunit beta | 0 |
| KI911149.1 | 753546 | CGTTGTTGTTGTT GTTGTTGTTGTTG TTGTTGTTGTTGTT | CGTTGTTGTTGTTGTTGTTGTT TGTTGTTGTTGTTGTTG TTGTTGTTGTTGTTGTT | M419DR AFT_111 856 | protein_c oding | rna5506 | conservative_i nframe_deletio n | c.477_479 delCAA 60del n | p.Asn1 60del c | gccaac/gc | | hypothetical protein M419DRAFT | 0.1068 |

| | | | | | | | | | | | TG | | | _111856 |
|------------|--------|--|--|--------------------------|--------------------|---------|-----------------------------|----------------------------|---|---|---|---------|--|---------|
| KI911149.1 | 768935 | T | C | M419DR AFT_818 17 | protein_c oding | rna5511 | upstream_gene _variant | c.- 2638T>C | - | - | hypothetical protein M419DRAFT _81817 | 0.53846 | | |
| KI911149.1 | 783633 | CGAGAGAGAGAG AGAGAGAGAGAG AGAGAGAGAGAG AGAGAG | CGAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA GAG | M419DR AFT_100 246 | protein_c oding | rna5514 | upstream_gene _variant | c.-4244_- 4243delC T | - | - | hypothetical protein M419DRAFT _100246 | 0.34615 | | |
| KI911149.1 | 78463 | G | GCC | M419DR AFT_252 36 | protein_c oding | rna5297 | upstream_gene _variant | c.-3333_- 3332insC C | - | - | hypothetical protein M419DRAFT _25236 | 0.5625 | | |
| KI911150.1 | 115615 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA G | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAG | M419DR AFT_825 21 | protein_c oding | rna5603 | upstream_gene _variant | c.-2428_- 2427delA G | - | - | hypothetical protein M419DRAFT _82521 | 0 | | |
| KI911150.1 | 175380 | AT | A | M419DR AFT_119 450 | protein_c oding | rna5619 | upstream_gene _variant | c.- 719delA | - | - | hypothetical protein M419DRAFT _119450 | 0.4 | | |
| KI911150.1 | 204970 | A | AGT | M419DR AFT_137 718 | protein_c oding | rna5624 | downstream_g ene_variant | c.*4227_* 4228insA C | - | - | hypothetical protein M419DRAFT _137718 | 0 | | |

| | | | | | | | | | | | | | |
|------------|--------|--|---|--------------------------|--------------------|---------|-----------------------------|------------------------------|-------------|-------------|---|---------|--------|
| KI911150.1 | 211547 | GNNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN NNNNNNNNNNN | GNNNNNNNNNNNNNNNNN | M419DR AFT_131 003 | protein_c oding | rna5625 | upstream_gene _variant | c.-4783_- 4781delA AA | - - - | - - - | hypothetical protein M419DRAFT _131003 | 0 | |
| KI911150.1 | 240422 | GA | GAAAA | M419DR AFT_820 54 | protein_c oding | rna5632 | upstream_gene _variant | c.-4862_- 4861insT TT | - - - | - - - | family glycosyltransfe rase | 32 | 0 |
| KI911150.1 | 240424 | CAAAAAAAAAA AAAAAAAAA | CAAAAAAAAAAAAAAAAAA AAAAAAA,CAAAAAAAAA AAAAAAAAAAAAAAAA,CAAA AAAAAAAAAAAAAAAA AAAAA | M419DR AFT_820 54 | protein_c oding | rna5632 | upstream_gene _variant | c.-4885_- 4884insT TT | - - - | - - - | family glycosyltransfe rase | 32 | 0.9697 |
| KI911150.1 | 241211 | GCTTT | G | M419DR AFT_594 38 | protein_c oding | rna5634 | upstream_gene _variant | c.-2065_- 2062delC TTT | - - - | - - - | hypothetical protein M419DRAFT _59438, partial | 0 | |
| KI911150.1 | 326608 | AGGGGGGGGGG GGGGG | AGGGGGGGGGGGGGGGG GG | M419DR AFT_141 790 | protein_c oding | rna5658 | upstream_gene _variant | c.-4191_- 4190insC CC | - - - | - - - | dihydrodipicol inate synthetase family protein | 0.69231 | |
| KI911150.1 | 37091 | AAGAGAGAGAGA GAGAGAGAGA | AAGAGAGAGAGAGAGAGA GA | M419DR AFT_100 342 | protein_c oding | rna5588 | downstream_g ene_variant | c.*4318_* 4319delG A | - - - | - - - | putative transcriptional regulator Ngg1 | 0.08537 | |
| KI911150.1 | 469329 | GCACACACACAC ACACACACACAC | GCACACACACACACACA CAC | M419DR AFT_100 | protein_c oding | rna5700 | upstream_gene _variant | c.-1520_- 1519delG | - - | - - | NAD(P)- binding protein | 0 | |

| | | | | 485 | | | | | T | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|-----------------------------|------------------------------|-------------|--------|---|---------|
| KI911150.1 | 47859 | CATGTATGTATGTA TGTATGTATGTATG TATGTATGTATGTA TGTATGTATGTATG TATGTATGTATGTA TGT | CATGTATGTATGTATGTATGT ATGTATGTATGTATGTATGTAT GTATGTATGTATGTATGTATG TATGT | M419DR AFT_363 00 | protein_c oding | rna5592 | upstream_gene _variant | c.-2664_- 2661delA TGT | - - - | - - | hypothetical protein M419DRAFT _36300 | 1 |
| KI911150.1 | 481960 | AGGGGGGGGGGG GGG | AGGGGGGGGGGGGGGGGG | M419DR AFT_254 18 | protein_c oding | rna5707 | upstream_gene _variant | c.-1066_- 1065insG G | - - | - - | putative isopenicillin N synthetase | 0 |
| KI911150.1 | 482113 | AG | A | M419DR AFT_254 18 | protein_c oding | rna5707 | upstream_gene _variant | c.- 926delG | - - | - - | putative isopenicillin N synthetase | 0.35 |
| KI911150.1 | 66863 | TCCCCCCCCCCC | TCCCCCCCCCCCCC | M419DR AFT_253 71 | protein_c oding | rna5596 | upstream_gene _variant | c.-4982_- 4981insG | - - | - - | calcium/proton exchanger | 0.82927 |
| KI911150.1 | 66863 | TCCCCCCCCCCC | TCCCCCCCCCCCCC,TCCCC CCCCCCCC | M419DR AFT_253 71 | protein_c oding | rna5596 | upstream_gene _variant | c.-4982_- 4981insG | - - | - - | calcium/proton exchanger | 0 |
| KI911150.1 | 670440 | CAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAG | CAGAGAGAGAGAGAGAGAG AGAGAGAGAGAGAGAGAG GAGAGAGAGAGAGA GAG | M419DR AFT_100 547 | protein_c oding | rna5751 | upstream_gene _variant | c.-3853_- 3852delC T | - - | - - | hypothetical protein M419DRAFT _100547 | 0.30952 |
| KI911150.1 | 67385 | AC | ACC | M419DR AFT_824 65 | protein_c oding | rna5597 | downstream_g ene_variant | c.*1054_* 1055insG | - - | - - | kinase-like protein | 0.57143 |
| KI911150.1 | 676803 | GCACACACACAC ACACACACACAC ACACACACACAC ACACACACACAC AC | GCACACACACACACACACA CACACACACACACACACAC ACACACACACAC AC | M419DR AFT_131 127 | protein_c oding | rna5754 | upstream_gene _variant | c.-3420_- 3419delA C | - - | - - | hypothetical protein M419DRAFT _131127 | 0.22222 |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|-----------------------------|--|---|---|---|---------|
| KI911150.1 | 685611 | A | G | M419DR AFT_131 127 | protein_c oding | rna5754 | downstream_g ene_variant | c.*4687A >G | - | - | hypothetical protein M419DRAFT _131127 | 0.37838 |
| KI911150.1 | 685629 | GCAGCAGCAGAG ACAGCAGCAG | GCAGCAGCAG | M419DR AFT_131 127 | protein_c oding | rna5754 | downstream_g ene_variant | c.*4715_* 4726delA GACAGC AGCAG | - | - | hypothetical protein M419DRAFT _131127 | 0.38889 |
| KI911150.1 | 738857 | TGGGGGGGGG | TGGGGGGGGGGGGGGG | M419DR AFT_824 44 | protein_c oding | rna5768 | upstream_gene _variant | c.-3686_- 3685insC CCCC | - | - | UEV-domain- containing protein | 1 |
| KI911150.1 | 738857 | TGGGGGGGGG | TGGGGGGGGGGGGGGG,TG GGGGGGGGGGGGGGG | M419DR AFT_824 44 | protein_c oding | rna5768 | upstream_gene _variant | c.-3686_- 3685insC CCCC | - | - | UEV-domain- containing protein | 0 |
| KI911150.1 | 745676 | GGGTGGTGGTGGT GGTGGTGGTGGTG GTGGTGGT | GGGTGGTGGTGGTGGTGGT GGTGGTGGTGGT | M419DR AFT_t104 | | rna5770 | upstream_gene _variant | n.-4825_- 4823delA CC | - | - | - | 0.07692 |
| KI911150.1 | 75040 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAGAGAGAGA GAGAG | AAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAG GAGAGAGAGAGA | M419DR AFT_824 65 | protein_c oding | rna5597 | upstream_gene _variant | c.-3257_- 3256delC T | - | - | kinase-like protein | 0 |
| KI911151.1 | 124864 | T | G | M419DR AFT_829 98 | protein_c oding | rna5863 | upstream_gene _variant | c.- 2936A>C | - | - | vacuolar iron transporter | 0.38596 |
| KI911151.1 | 15591 | NC | NCATC | M419DR AFT_100 621 | protein_c oding | rna5829 | upstream_gene _variant | c.-935_- 934insAT C | - | - | hypothetical protein M419DRAFT _100621 | 0.88889 |
| KI911151.1 | 172222 | CA | C | M419DR AFT_112 322 | protein_c oding | rna5880 | upstream_gene _variant | c.- 3133delA | - | - | WD40 repeat- like protein | 1 |

| | | | | | | | | | | | | |
|------------|--------|-----|----------------|--------------------------|--------------------|---------|-----------------------------|--|-------------|--------|---|---------|
| KI911151.1 | 172248 | A | G | M419DR AFT_112 322 | protein_c oding | rna5880 | upstream_gene _variant | c.- 3108A>G | - - - | - - | WD40 repeat- like protein | 0.14286 |
| KI911151.1 | 187008 | T | TTC | M419DR AFT_119 542 | protein_c oding | rna5883 | upstream_gene _variant | c.-1814_ 1813insT C | - - - | - - | hypothetical protein M419DRAFT _119542, partial | 0.28 |
| KI911151.1 | 33363 | G | GA | M419DR AFT_829 46 | protein_c oding | rna5835 | upstream_gene _variant | c.-1836_ 1835insA | - - | - - | cytochrome P450 | 0.46667 |
| KI911151.1 | 449597 | T | TCC | M419DR AFT_831 03 | protein_c oding | rna5961 | upstream_gene _variant | c.-3416_ 3415insG G | - - | - - | hypothetical protein M419DRAFT _83103 | 0 |
| KI911151.1 | 488084 | T | A | M419DR AFT_100 822 | protein_c oding | rna5970 | downstream_g ene_variant | c.*3463A >T | - - | - - | terpenoid cyclases/Protei n prenyltransfera se | 0.71429 |
| KI911151.1 | 488084 | T | A,G | M419DR AFT_100 822 | protein_c oding | rna5970 | downstream_g ene_variant | c.*3463A >T | - - | - - | terpenoid cyclases/Protei n prenyltransfera se | 0 |
| KI911151.1 | 513050 | TCC | TCCCCCCCCCCCCC | M419DR AFT_830 94 | protein_c oding | rna5976 | upstream_gene _variant | c.-1261_ 1260insC CCCCC CCCCC | - - | - - | hypothetical protein M419DRAFT _83094 | 0.25 |
| KI911151.1 | 571313 | T | TTCCC | M419DR AFT_830 15 | protein_c oding | rna5995 | upstream_gene _variant | c.-4711_ 4710insT CCC | - - | - - | hypothetical protein M419DRAFT _83015 | 0 |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|-----------------------------|--------------------------------|-------------|--------|---|---------|
| KI911151.1 | 571313 | TC | TTTCCCC | M419DR AFT_830 15 | protein_c oding | rna5995 | upstream_gene _variant | c.-4711_- 4710insT TCCC | - - - | - - | hypothetical protein M419DRAFT _83015 | 0.46154 |
| KI911151.1 | 610177 | CTGTGTGTGTGTG TGTTGTGTGTGTG GTGTGTGTGTGTG TGTTGTGTGTGTG GTGTG | CTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTGT GTGTGTGTGTG | M419DR AFT_561 34 | protein_c oding | rna6006 | upstream_gene _variant | c.-1086_- 1081delT GTGTG | - - - | - - | hypothetical protein M419DRAFT _56134, partial | 0 |
| KI911151.1 | 610177 | CTGTGTGTGTGTG TGTTGTGTGTGTG GTGTGTGTGTGTG TGTTGTGTGTGTG GTGTG | CTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTGTGTGTGT GTGTGTGTGTGTG | M419DR AFT_561 34 | protein_c oding | rna6006 | upstream_gene _variant | c.-1084_- 1081delT GTG | - - - | - - | hypothetical protein M419DRAFT _56134, partial | 1 |
| KI911151.1 | 622660 | CCACACACACAC ACACACACACAC AC | CCACACACACACACACACA CACAC | M419DR AFT_100 875 | protein_c oding | rna6009 | 5_prime_UTR _variant | c.-187_- 186delAC | - - | - - | amino-acid permease inda1 | 0.13333 |
| KI911151.1 | 632482 | CGGGGGGGGGGG GGGG | CGGGGGGGGGGGGGGGGGGG GGG,CGGGGGGGGGGGGG | M419DR AFT_137 900 | protein_c oding | rna6014 | upstream_gene _variant | c.-1264_- 1263delG G | - - | - - | transporter protein smf2 | 0 |
| KI911151.1 | 668507 | GTTTTTTTTTTTTT TTTTTTTTTTTTTT TTTT | GTTTTTTTTTTTTTTTTTTTTT TTTTTTTTTTTTTT,GTTTTTT TTTTTTTTTTTTTTTTTTTTTT TTTTTTTTT,GTTTTTTTTTTT TTTTTTTTTTTTTTTTTTTTTT T | M419DR AFT_131 384 | protein_c oding | rna6024 | downstream_g ene_variant | c.*1902_* 1903insT TTT | - - | - - | glycoside hydrolase | 0 |
| KI911151.1 | 673111 | AGGGGGGGGGGG GGGG | AGGGGGGGGGGGGGGGGGG | M419DR AFT_827 28 | protein_c oding | rna6026 | upstream_gene _variant | c.-2531_- 2530insG G | - - | - - | putative finger domain protein | C6 1 |
| KI911151.1 | 673111 | AGGGGGGGGGGG GGGG | AGGGGGGGGGGGGGGGGGG, G,AGGGGGGGGGGGGGGGGG | M419DR AFT_827 28 | protein_c oding | rna6026 | upstream_gene _variant | c.-2531_- 2530insG G | - - | - - | putative finger domain protein | C6 0 |

| | | | | | | | | | | | | |
|------------|--------|--|--------------------------------------|--------------------------|--------------------|---------|---------------------------|--------------------------------|---|---|---|---------|
| KI911151.1 | 735623 | GCACACACACAC ACACACAC | GCACACACACACACACAC | M419DR AFT_100 921 | protein_c oding | rna6046 | upstream_gene _variant | c.-3355_- 3354delG T | - | - | hypothetical protein M419DRAFT _100921 | 0 |
| KI911151.1 | 99113 | ATCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCT | ATCTCTCTCTCTCTCTCTCTC TCTCTCTCTCT | M419DR AFT_828 49 | protein_c oding | rna5852 | upstream_gene _variant | c.-1026_- 1025delC T | - | - | hypothetical protein M419DRAFT _82849 | 0.13699 |
| KI911152.1 | 201943 | CATATATATATATAT ATATATA | CATATATATATATATATATATAT A | M419DR AFT_101 041 | protein_c oding | rna6145 | upstream_gene _variant | c.-1936_- 1935insT A | - | - | hypothetical protein M419DRAFT _101041 | 1 |
| KI911152.1 | 227024 | A | C | M419DR AFT_839 02 | protein_c oding | rna6153 | upstream_gene _variant | c.- 1725A>C | - | - | stomatin family protein | 0 |
| KI911152.1 | 253780 | AATATATATATATAT ATA | AATATATATATATATA | M419DR AFT_256 15 | protein_c oding | rna6160 | upstream_gene _variant | c.-74_- 73delTA | - | - | glycosyl hydrolase | 0 |
| KI911152.1 | 286446 | CTGCTGNTGCTG | CTGCTG | M419DR AFT_101 067 | protein_c oding | rna6175 | upstream_gene _variant | c.-3145_- 3140delA TGCTG | - | - | zf-DHHC- domain- containing protein | 1 |
| KI911152.1 | 409170 | A | T | M419DR AFT_256 40 | protein_c oding | rna6213 | upstream_gene _variant | c.- 388A>T | - | - | elongation factor 3 | 0 |
| KI911152.1 | 409171 | A | C | M419DR AFT_256 40 | protein_c oding | rna6213 | upstream_gene _variant | c.- 387A>C | - | - | elongation factor 3 | 1 |
| KI911152.1 | 409178 | A | T | M419DR AFT_256 40 | protein_c oding | rna6213 | upstream_gene _variant | c.- 380A>T | - | - | elongation factor 3 | 1 |

| | | | | | | | | | | | | |
|------------|--------|-----------------|-----------------------------------|---------|-----------|---------|---------------|-----------|---|---|------------------|---------|
| KI911152.1 | 409225 | A | AGAGAG | M419DR | protein_c | rna6213 | upstream_gene | c.-333_- | - | - | elongation | 0.64706 |
| | | | | AFT_256 | oding | | _variant | 332insGA | | | factor 3 | |
| | | | | 40 | | | | GAG | | | | |
| KI911152.1 | 409225 | A | AGAGAG,AGAG | M419DR | protein_c | rna6213 | upstream_gene | c.-333_- | - | - | elongation | 0 |
| | | | | AFT_256 | oding | | _variant | 332insGA | | | factor 3 | |
| | | | | 40 | | | | GAG | | | | |
| KI911152.1 | 432479 | GGTGTGTGTGTGT | GGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT | M419DR | protein_c | rna6216 | downstream_g | c.*112_*1 | - | - | FAS1 domain- | 0 |
| | | GTGTGTGTGT | T | AFT_142 | oding | | ene_variant | 13delGT | | | containing | |
| | | | | 028 | | | | | | | protein | |
| KI911152.1 | 438043 | GTCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna6217 | upstream_gene | c.-2681_- | - | - | RNA-binding | 0.14118 |
| | | TCTCTCTCTCTCTC | TCTCT | AFT_368 | oding | | _variant | 2680delA | | | domain- | |
| | | T | | 36 | | | | G | | | containing | |
| | | | | | | | | | | | protein | |
| KI911152.1 | 490525 | T | A | M419DR | protein_c | rna6221 | upstream_gene | c.- | - | - | CHY zinc | 0 |
| | | | | AFT_112 | oding | | _variant | 2493A>T | | | finger domain | |
| | | | | 768 | | | | | | | protein | |
| KI911152.1 | 557304 | AATATATATATATAT | AATATATATATATATATATA | M419DR | protein_c | rna6243 | upstream_gene | c.-3919_- | - | - | NAD(P)- | 0.15385 |
| | | ATATATA | | AFT_835 | oding | | _variant | 3918delT | | | binding protein | |
| | | | | 70 | | | | A | | | | |
| KI911152.1 | 651904 | AGGGGGGGGGGG | AGGGGGGGGGGG,AGGGG | M419DR | protein_c | rna6276 | upstream_gene | c.-3437_- | - | - | laccase | 0.80263 |
| | | | GGGGGGGGG | AFT_368 | oding | | _variant | 3436insC | | | | |
| | | | | 85 | | | | | | | | |
| KI911152.1 | 675102 | AGGGGGGGGGGG | AGGGGGGGGGGGGGGGGG | M419DR | protein_c | rna6284 | upstream_gene | c.-834_- | - | - | phospholipid- | 1 |
| | | GGG | | AFT_837 | oding | | _variant | 833insCC | | | binding | |
| | | | | 17 | | | | | | | protein, partial | |
| KI911152.1 | 75262 | AGGGGGGGGGGG | AGGGGGGGGGGG,AGGGGG | M419DR | protein_c | rna6108 | upstream_gene | c.-2413_- | - | - | Sybindin-like | 0 |
| | | | GGGGGGG | AFT_838 | oding | | _variant | 2412insG | | | protein | |
| | | | | 39 | | | | | | | | |
| KI911153.1 | 116668 | A | T | M419DR | protein_c | rna6354 | downstream_g | c.*4479A | - | - | hypothetical | 1 |
| | | | | AFT_101 | oding | | ene_variant | >T | | | protein | |
| | | | | 63 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _10163 | |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|-----------------------------|--------------------------------|---|---------|--|---------|
| KI911153.1 | 117782 | GGTGTGTGTGTGT GTGTGTGTGTGTG TGTGT | GGTGTGTGTGTGTGTGTG TGTGTGTGT | M419DR AFT_840 13 | protein_c oding | rna6355 | downstream_g ene_variant | c.*3097_* 3098delA C | - | - | hypothetical protein M419DRAFT _84013 | 0.12821 |
| KI911153.1 | 144103 | CCCACTTCCACTT CCACTTCCACTTC CACTTCCACTTCC ACTTCCACTTCCA CTTCC | CCCACTTCCACTTCCACTTC CACTTCCACTTCCACTTCCA CTTCCACTTCC | M419DR AFT_138 075 | protein_c oding | rna6360 | upstream_gene _variant | c.-2027_- 2022delG GAAGT | - | - | Annexin | 1 |
| KI911153.1 | 167098 | C | T | M419DR AFT_841 42 | protein_c oding | rna6366 | missense_vari ant | c.103C>T p.Arg3 5Cys | | Cgc/Tgc | MFS general substrate transporter | 1 |
| KI911153.1 | 243617 | C | G | M419DR AFT_101 349 | protein_c oding | rna6383 | upstream_gene _variant | c.- 1364G>C | - | - | intramembrane protease | 0 |
| KI911153.1 | 243618 | T | G | M419DR AFT_101 349 | protein_c oding | rna6383 | upstream_gene _variant | c.- 1365A>C | - | - | intramembrane protease | 1 |
| KI911153.1 | 24567 | ACCCCCCCCCC CCC | ACCCCCCCCCCCCCCCCC C,ACCCCCCCCCCCCCCCCC CCC | M419DR AFT_101 284 | protein_c oding | rna6331 | upstream_gene _variant | c.-3571_- 3570insG GGGG | - | - | 2-oxoglutarate dehydrogenase E1 component | 0.66667 |
| KI911153.1 | 24907 | CCTCTCTCTCT CTCTCTCTCTCT CTCTCTCTCTCT CTCTCTCTCTCT CTCTCTCTCT | CTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCT CTCTCTCTCTCTCTCTCTC TCTCT,CTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCT CTCTCTCTCTCTCTCTCTC TCTCTCTCTCT | M419DR AFT_101 284 | protein_c oding | rna6331 | upstream_gene _variant | c.-3896_- 3895insA | - | - | 2-oxoglutarate dehydrogenase E1 component | 1 |
| KI911153.1 | 258699 | T | C | M419DR AFT_131 737 | protein_c oding | rna6388 | upstream_gene _variant | c.- 2958A>G | - | - | major facilitator superfamily transporter | 0 |

| | | | | | | | | | | | | |
|------------|--------|--------------------|---------------------------------------|--------------------------|--------------------|---------|---------------------------|-----------------------------|---------|------|---|---------|
| KI911153.1 | 258705 | T | C | M419DR AFT_131 737 | protein_c oding | rna6388 | upstream_gene _variant | c.- 2964A>G | - | - | major facilitator superfamily transporter | 0 |
| KI911153.1 | 258733 | C | T | M419DR AFT_131 737 | protein_c oding | rna6388 | upstream_gene _variant | c.- 2992G>A | - | - | major facilitator superfamily transporter | 0 |
| KI911153.1 | 258736 | G | A | M419DR AFT_131 737 | protein_c oding | rna6388 | upstream_gene _variant | c.- 2995C>T | - | - | major facilitator superfamily transporter | 0 |
| KI911153.1 | 258756 | A | G | M419DR AFT_131 737 | protein_c oding | rna6388 | upstream_gene _variant | c.- 3015T>C | - | - | major facilitator superfamily transporter | 0 |
| KI911153.1 | 258794 | C | T | M419DR AFT_131 737 | protein_c oding | rna6388 | upstream_gene _variant | c.- 3053G>A | - | - | major facilitator superfamily transporter | 0 |
| KI911153.1 | 259380 | TAA | TAATAAA | M419DR AFT_131 737 | protein_c oding | rna6388 | upstream_gene _variant | c.-3642_ 3641insT TTA | - | - | major facilitator superfamily transporter | 1 |
| KI911153.1 | 318929 | ACCCCCCCCCC CCC | ACCCCCCCCCCCCCC,A CCCCCCCCCCCCCCCC | M419DR AFT_553 99 | protein_c oding | rna6414 | upstream_gene _variant | c.-1026_ 1025insG G | - | - | NADH:ubiqui none oxidoreductase 10.5kD subunit, partial | 1 |
| KI911153.1 | 362044 | GA | G | M419DR AFT_840 86 | protein_c oding | rna6426 | frameshift_var iant | c.978delA 7fs | p.Glu32 | aga/ | hypothetical protein M419DRAFT _84086 | 0.63636 |

| | | | | | | | | | | | | |
|------------|--------|-----------------------------|-----------------------|--------------------------|--------------------|---------|---------------------------|---|----------------|---------------|---|---------|
| KI911153.1 | 362059 | A | AGG | M419DR AFT_840 86 | protein_c oding | rna6426 | frameshift_var iant | c.992_993 insGG | p.Gly33 2fs | gaa/gaGG a | hypothetical protein M419DRAFT _84086 | 0.36842 |
| KI911153.1 | 383191 | CCCCCCCCCCCC | CCCCCCCCCCCCCCCC | M419DR AFT_102 33 | protein_c oding | rna6433 | upstream_gene _variant | c.-904_- 903insGG GG | - - | - - | phosphatidyl inositol 3- kinase | 1 |
| KI911153.1 | 392014 | CGGGGGGGGGGG | CGGGGGGGGGGGGGGG | M419DR AFT_101 402 | protein_c oding | rna6437 | upstream_gene _variant | c.-363_- 347delCC CCCCCC CCCCCC CCC | - - | - - | methylcrotono yl-CoA carboxylase alpha chain | 0.42857 |
| KI911153.1 | 432682 | CGGGGGGGGGGG | CGGGGGGGGGGGGGGGGG | M419DR AFT_844 57 | protein_c oding | rna6450 | upstream_gene _variant | c.-1365_- 1364insC CCC | - - | - - | hypothetical protein M419DRAFT _84457 | 0 |
| KI911153.1 | 45119 | CTATATATATATATA TATATATA | CTATATATATATATATATA | M419DR AFT_124 069 | protein_c oding | rna6338 | upstream_gene _variant | c.-3026_- 3023delT ATA | - - | - - | ATP synthase F1, beta subunit | 0.42857 |
| KI911153.1 | 45119 | CTATATATATATATA TATATATA | CTATATATATATATATATATA | M419DR AFT_124 069 | protein_c oding | rna6338 | upstream_gene _variant | c.-3026_- 3025delT A | - - | - - | ATP synthase F1, beta subunit | 0 |
| KI911153.1 | 487593 | GATATATATATATAT AT | GATATATATATATAT | M419DR AFT_102 67 | protein_c oding | rna6467 | upstream_gene _variant | c.-4615_- 4614delA T | - - | - - | hypothetical protein M419DRAFT _10267 | 0.15385 |
| KI911153.1 | 515236 | AGGGGGGGGGGG | AGGGGGGGGGGGGGGGGG | M419DR AFT_101 459 | protein_c oding | rna6478 | upstream_gene _variant | c.-4171_- 4170insC CCC | - - | - - | hypothetical protein M419DRAFT _101459 | 1 |
| KI911153.1 | 515259 | A | G | M419DR AFT_101 459 | protein_c oding | rna6478 | upstream_gene _variant | c.- 4179T>C | - - | - - | hypothetical protein M419DRAFT | 0.5 |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|--|----------------------------|---|---|---|---------|
| KI911153.1 | 562332 | GTATATATATATATA TATA | GTATATATATATATATA | M419DR AFT_102 87 | protein_c oding | rna6493 | splice_accepto r_variant+splic e_region_varia nt+intron_vari ant | c.276- 3_276- 2delTA | - | - | hypothetical protein M419DRAFT _10287 | 0.16667 |
| KI911153.1 | 564959 | GCTCTCTCTCTCT CTCTCTCTCTCTC | GCTCTCTCTCTCTCTCTCTCTCT CTC | M419DR AFT_257 63 | protein_c oding | rna6494 | upstream_gene _variant | c.-887_ 886delGA | - | - | PEBP-like protein | 0 |
| KI911153.1 | 655516 | GGAGAGAGAGAG AGAGAGAGAGAG AG | GGAGAGAGAGAGAGAGAGAG AGAGAG | M419DR AFT_844 69 | protein_c oding | rna6519 | downstream_g ene_variant | c.*4452_* 4453delA G | - | - | hypothetical protein M419DRAFT _84469 | 0.14583 |
| KI911153.1 | 682757 | T | C | M419DR AFT_493 79 | protein_c oding | rna6526 | upstream_gene _variant | c.- 3142A>G | - | - | hypothetical protein M419DRAFT _49379, partial | 0.25926 |
| KI911153.1 | 682796 | GCACACACACAC ACACACACACAC ACACACACACAC ACACA | GCACACACACACACACACA CACACACACACACACACAC A | M419DR AFT_493 79 | protein_c oding | rna6526 | upstream_gene _variant | c.-3221_ 3220delT G | - | - | hypothetical protein M419DRAFT _49379, partial | 0.17073 |
| KI911153.1 | 696501 | GGATGATGATGAT GATGATGATGATG ATGATGATG | GGATGATGATGATGATGATG ATGATGATGATG | M419DR AFT_131 868 | protein_c oding | rna6530 | upstream_gene _variant | c.-2555_ 2553delA TG | - | - | hypothetical protein M419DRAFT _131868 | 0.16438 |
| KI911153.1 | 713601 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCT | CCTCTCTCTCTCTCTCTCTCTCT CTCTCTCTCTCT | M419DR AFT_371 03 | protein_c oding | rna6534 | upstream_gene _variant | c.-661_ 660delCT | - | - | hypothetical protein M419DRAFT _37103 | 0.27119 |

| | | | | | | | | | | | | |
|------------|--------|---|-------------------------------------|--------------------------|--------------------|---------|---------------------------|------------------------------|---|---|---|---------|
| KI911154.1 | 111716 | AGGAC | A | M419DR AFT_103 78 | protein_c oding | rna6599 | upstream_gene _variant | c.-3836_- 3833delG TCC | - | - | hypothetical protein M419DRAFT _10378 | 0.16667 |
| KI911154.1 | 129532 | AAGAGAGAGAGA GAGAGAGAGAGA GAGAGA | AAGAGAGAGAGAGAGAGA GAGAGAGAGA | M419DR AFT_131 937 | protein_c oding | rna6605 | upstream_gene _variant | c.-3492_- 3491delT C | - | - | alpha/beta- hydrolase | 0 |
| KI911154.1 | 147884 | A | AG | M419DR AFT_371 64 | protein_c oding | rna6612 | upstream_gene _variant | c.-3038_- 3037insC | - | - | hypothetical protein M419DRAFT _37164 | 0 |
| KI911154.1 | 147894 | AGG | A | M419DR AFT_371 64 | protein_c oding | rna6612 | upstream_gene _variant | c.-3049_- 3048delC C | - | - | hypothetical protein M419DRAFT _37164 | 1 |
| KI911154.1 | 281816 | TC | T | M419DR AFT_131 985 | protein_c oding | rna6654 | upstream_gene _variant | c.- 4160delG | - | - | hypothetical protein M419DRAFT _131985 | 1 |
| KI911154.1 | 439289 | GGAGAGAGAGAG AGAGAGAGAGAG AGAGA | GGAGAGAGAGAGAGAGAG AGAGAGAGA | M419DR AFT_101 698 | protein_c oding | rna6703 | upstream_gene _variant | c.-802_- 801delTC | - | - | hypothetical protein M419DRAFT _101698 | 0.15 |
| KI911154.1 | 473258 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCT | CCTCTCTCTCTCTCTCTCTCT CTCTCTCTCT | M419DR AFT_104 83 | protein_c oding | rna6712 | upstream_gene _variant | c.-1977_- 1976delA G | - | - | RNA-binding domain- containing protein | 0 |
| KI911154.1 | 476601 | CGAGAGAGAGAG AGAGAGAGAGAG AGAG | CGAGAGAGAGAGAGAGAGA GAGAGAG | M419DR AFT_124 237 | protein_c oding | rna6714 | upstream_gene _variant | c.-4000_- 3999delC T | - | - | hypothetical protein M419DRAFT _124237 | 0.19737 |

| | | | | | | | | | | | | |
|------------|--------|--------------------------------------|------------------------------|--------------------------|--------------------|---------|-----------------------------|-------------------------------|---|---|--|---------|
| KI911154.1 | 55007 | TN | TAATTAN,T | M419DR AFT_101 557 | protein_c oding | rna6583 | upstream_gene _variant | c.-3531_- 3530insT AATT | - | - | hypothetical protein M419DRAFT _101557 | 1 |
| KI911154.1 | 651944 | ATCTCTCTCTCTCT CTCTCTCTC | ATCTCTCTCTCTCTCTCTCTC | M419DR AFT_138 254 | protein_c oding | rna6764 | upstream_gene _variant | c.-4699_- 4698delG A | - | - | hypothetical protein M419DRAFT _138254 | 0 |
| KI911154.1 | 692717 | A | G | M419DR AFT_373 02 | protein_c oding | rna6778 | downstream_g ene_variant | c.*709A> G | - | - | DNA polymerase delta catalytic subunit | 0.90476 |
| KI911154.1 | 701284 | AGTC | A | M419DR AFT_113 448 | protein_c oding | rna6780 | upstream_gene _variant | c.-2761_- 2759delG AC | - | - | acetylglutamat e kinase | 1 |
| KI911154.1 | 723572 | CAGAAAA | CAGAAAAGAAAA | M419DR AFT_113 461 | protein_c oding | rna6787 | upstream_gene _variant | c.-2246_- 2245insG AAAA | - | - | hypothetical protein M419DRAFT _113461 | 0.85185 |
| KI911155.1 | 132583 | AACACACACACA CACACACACACA CACA | AACACACACACACACAC ACACACA | M419DR AFT_101 907 | protein_c oding | rna6840 | 5_prime_UTR _variant | c.-16_- 15delCA | - | - | iron/manganes e superoxide dismutase domain- containing protein | 0.13592 |
| KI911155.1 | 342966 | G | GGC | M419DR AFT_854 29 | protein_c oding | rna6897 | upstream_gene _variant | c.-3773_- 3772insG C | - | - | hypothetical protein M419DRAFT _85429 | 0.38462 |
| KI911155.1 | 357355 | GACACACACACA CACACACAC | GACACACACACACACAC | M419DR AFT_132 231 | protein_c oding | rna6901 | upstream_gene _variant | c.-4474_- 4473delG T | - | - | hypothetical protein M419DRAFT _132231 | 0.13253 |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|-----------------------------|---------------------------------|-------------|--------|---|---------|
| KI911155.1 | 362528 | CCAACAACAACA ACAACAACAACA ACAACAACAACA ACAACAACA | CCAACAACAACAACAACA CAACAACAACAACAACAAC AACA | M419DR AFT_101 932 | protein_c oding | rna6903 | upstream_gene _variant | c.-4446_- 4444delT GT | - - - | - - | hypothetical protein M419DRAFT _101932 | 0.09589 |
| KI911155.1 | 393214 | GTATATATATATATA TATA | GTATATATATATATATA | M419DR AFT_132 246 | protein_c oding | rna6916 | upstream_gene _variant | c.-1377_- 1376delT A | - - | - | NAD(P)- binding protein | 0 |
| KI911155.1 | 39759 | GTTGAAGC | G | M419DR AFT_258 97 | protein_c oding | rna6810 | upstream_gene _variant | c.-1220_- 1214delG CTTCAA | - - | - | serine/threonin e-protein kinase MAK | 0 |
| KI911155.1 | 406408 | GCCCCCCCCCCC | GCCCCCCCCCCCCC,GCCC CCCCCCCCCCC | M419DR AFT_855 98 | protein_c oding | rna6922 | upstream_gene _variant | c.-2468_- 2467insG G | - - | - | hypothetical protein M419DRAFT _85598 | 1 |
| KI911155.1 | 406408 | GCCCCCCCCCCC | GCCCCCCCCCCCCCCC | M419DR AFT_855 98 | protein_c oding | rna6922 | upstream_gene _variant | c.-2468_- 2467insG GGG | - - | - | hypothetical protein M419DRAFT _85598 | 0 |
| KI911155.1 | 470369 | TA | TAA | M419DR AFT_132 274 | protein_c oding | rna6948 | upstream_gene _variant | c.-2745_- 2744insT | - - | - | hypothetical protein M419DRAFT _132274 | 1 |
| KI911155.1 | 489297 | AGGGGGGGGGGG GGGGG | AGGGGGGGGGGGGGGGGG GGG,AGGGGGGGGGGGGGGG GGGGG | M419DR AFT_853 04 | protein_c oding | rna6952 | downstream_g ene_variant | c.*929_*9 30insGG GG | - - | - | hypothetical protein M419DRAFT _85304 | 1 |
| KI911155.1 | 534029 | GTCTCTCTCTCTC TCTCTCTCTCTCTC TCTCTCTCTCTCT | GTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCT TCTCTCTCTCTCTCTCTCT | M419DR AFT_120 040 | protein_c oding | rna6963 | upstream_gene _variant | c.-3246_- 3245delA G | - - | - | hypothetical protein M419DRAFT _120040 | 0 |
| KI911155.1 | 554928 | GACACACACACA CACACACACACA CAC | GACACACACACACACACAC ACACAC | M419DR AFT_854 99 | protein_c oding | rna6968 | upstream_gene _variant | c.-678_- 677delAC | - - | - | hypothetical protein M419DRAFT | 0.13333 |

| | | | | | | | | | | | | |
|------------|--------|--|--------------------------------------|--------------------------|--------------------|---------|---------------------------|--|--------|--------|---|---------|
| KI911155.1 | 568250 | C | T | M419DR AFT_142 313 | protein_c oding | rna6970 | upstream_gene _variant | c.- 2557G>A | - - | - - | OPT-domain- containing protein | 0 |
| KI911155.1 | 568254 | A | G | M419DR AFT_142 313 | protein_c oding | rna6970 | upstream_gene _variant | c.- 2561T>C | - - | - - | OPT-domain- containing protein | 0 |
| KI911155.1 | 568443 | G | A | M419DR AFT_142 313 | protein_c oding | rna6970 | upstream_gene _variant | c.- 2750C>T | - - | - - | OPT-domain- containing protein | 0 |
| KI911155.1 | 642505 | TTCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCT | TTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCT | M419DR AFT_259 41 | protein_c oding | rna6985 | upstream_gene _variant | c.-2455_ 2454delA G | - - | - - | hypothetical protein M419DRAFT _25941 | 0.1358 |
| KI911155.1 | 683026 | AA | AATATTATTATTATTATTATA ATA | M419DR AFT_132 317 | protein_c oding | rna6995 | upstream_gene _variant | c.-616_ 615insTA TTATTAT TATTATT TATAAT A | - - | - - | hypothetical protein M419DRAFT _132317 | 1 |
| KI911156.1 | 148116 | CTGCCT | C | M419DR AFT_132 396 | protein_c oding | rna7073 | upstream_gene _variant | c.-4486_ 4482delA GGCA | - - | - - | hypothetical protein M419DRAFT _132396 | 0 |
| KI911156.1 | 148118 | GCCTCTNCCTCT | GCCTCT | M419DR AFT_132 396 | protein_c oding | rna7073 | upstream_gene _variant | c.-4494_ 4489delA GAGGT | - - | - - | hypothetical protein M419DRAFT _132396 | 1 |
| KI911156.1 | 299191 | CAGAGAGAGAGA GAGAGAGAGAGA G | CAGAGAGAGAGAGAGAGAG AGAG | M419DR AFT_132 428 | protein_c oding | rna7110 | upstream_gene _variant | c.-2419_ 2418delC T | - - | - - | hypothetical protein M419DRAFT | 0.09302 |

| | | | | | | | | | | | | |
|------------|--------|---|---|--------------------------|--------------------|---------|---------------------------|------------------------------|-------------|--------|--|---------|
| KI911156.1 | 389058 | AGGGGGG | A | M419DR AFT_260 05 | protein_c oding | rna7131 | upstream_gene _variant | c.-975_- 970delCC CCCC | - - - | - - | hypothetical protein M419DRAFT _26005 | 0.3125 |
| KI911156.1 | 389248 | GGTGTGTGTGTGT GTGTGTG | GGTGTGTGTGTGTGTGTG | M419DR AFT_260 05 | protein_c oding | rna7131 | upstream_gene _variant | c.-1178_- 1177delC A | - - | - - | hypothetical protein M419DRAFT _26005 | 0.13793 |
| KI911156.1 | 389557 | GGTGTGTGTGTGT GTGTGTGTG | GGTGTGTGTGTGTGTGTG | M419DR AFT_260 05 | protein_c oding | rna7131 | upstream_gene _variant | c.-1489_- 1488delC A | - - | - - | hypothetical protein M419DRAFT _26005 | 0.13542 |
| KI911156.1 | 392141 | GTACATACATACAT ACATACATACATA CATACATACATAC ATACA | GTACATACATACATACATACA TACATACATACATACATACA | M419DR AFT_260 05 | protein_c oding | rna7131 | upstream_gene _variant | c.-4096_- 4093delT GTA | - - | - - | hypothetical protein M419DRAFT _26005 | 0.07692 |
| KI911156.1 | 406695 | A | G | M419DR AFT_260 08 | protein_c oding | rna7136 | upstream_gene _variant | c.- 4128A>G | - - | - - | major facilitator superfamily transporter | 0.26316 |
| KI911156.1 | 407843 | AGGG | AGGGGGGG | M419DR AFT_260 08 | protein_c oding | rna7136 | upstream_gene _variant | c.-2977_- 2976insG GGG | - - | - - | major facilitator superfamily transporter | 1 |
| KI911156.1 | 413019 | CTATATATATATATA TATATATATAT | CTATATATATATATATATATATA T | M419DR AFT_113 813 | protein_c oding | rna7135 | upstream_gene _variant | c.-3732_- 3731delA T | - - | - - | 3-oxoacid CoA- transferase | 0.6 |
| KI911156.1 | 419472 | TCCCCCCCCCCCC | TCCCCCCCCCCCC | M419DR AFT_859 42 | protein_c oding | rna7138 | upstream_gene _variant | c.-3244_- 3243insG | - - | - - | sedoheptulose- 1,7- bisphosphatase | 0 |

| | | | | | | | | | | | | |
|------------|--------|----------------|-------------------------|---------|-----------|---------|----------------|-----------|---------|------------|-----------------|---------|
| KI911156.1 | 543902 | TTCTCTCTCTCTCT | TTCTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna7182 | 5_prime_UTR | c.-142_- | - | - | hypothetical | 0.18919 |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTC | AFT_102 | oding | | _variant | 141delGA | | | protein | |
| | | CTCTCTCTC | | 248 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _102248 | |
| KI911156.1 | 609094 | GGAAGAAGAAGA | GGAAGAAGAAGAAGAAGA | M419DR | protein_c | rna7210 | conservative_i | c.2120_21 | p.Ser70 | acttct/act | hypothetical | 0 |
| | | AGAAGAAGAAGA | AGAAG | AFT_376 | oding | | nframe_deletio | 22delCTT | 8del | | protein | |
| | | AG | | 53 | | | n | | | | M419DRAFT | |
| | | | | | | | | | | | _37653 | |
| KI911157.1 | 158501 | T | C | M419DR | protein_c | rna7284 | downstream_g | c.*2047T | - | - | hypothetical | 0.375 |
| | | | | AFT_866 | oding | | ene_variant | >C | | | protein | |
| | | | | 08 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _86608 | |
| KI911157.1 | 201382 | GCCCCCCCCCCC | GCCCCCCCCCCCCCCC,GCC | M419DR | protein_c | rna7298 | downstream_g | c.*2522_* | - | - | Di-copper | 0 |
| | | C | CCCCCCCCCCCC,GCCCCCCC | AFT_142 | oding | | ene_variant | 2523delG | | | centre- | |
| | | | CCCC | 431 | | | | G | | | containing | |
| | | | | | | | | | | | protein | |
| KI911157.1 | 22000 | TAAAAAAAAAAAA | TAAAAAAAAAAAAAAAAAAAAA | M419DR | protein_c | rna7241 | upstream_gene | c.-309_- | - | - | hypothetical | 0.33333 |
| | | AAAAAAAAAAAAA | AAAAAAAAAAAAAAAAAAAAA | AFT_120 | oding | | _variant | 295delAA | | | protein | |
| | | AAAAAAAAAAAAA | AAAAAA | 145 | | | | AAAAA | | | M419DRAFT | |
| | | AAAAAAAAAAAAA | | | | | | AAAAA | | | _120145 | |
| | | AAAAAAAAAAAAA | | | | | | AAA | | | | |
| KI911157.1 | 22000 | TAAAAAAAAAAAA | TAAAAAAAAAAAAAAAAAAAAA | M419DR | protein_c | rna7241 | upstream_gene | c.-308_- | - | - | hypothetical | 0 |
| | | AAAAAAAAAAAAA | AAAAAAAAAAAAAAAAAAAAA | AFT_120 | oding | | _variant | 295delAA | | | protein | |
| | | AAAAAAAAAAAAA | AAAAAA | 145 | | | | AAAAA | | | M419DRAFT | |
| | | AAAAAAAAAAAAA | | | | | | AAAAA | | | _120145 | |
| | | AAAAAAAAAAAAA | | | | | | AA | | | | |
| KI911157.1 | 225493 | CGAGAGAGAGAG | CGAGAGAGAGAGAGAGAGA | M419DR | protein_c | rna7303 | upstream_gene | c.-553_- | - | - | family | 17 |
| | | AGAGAGAGAGAG | GAGAGAGAGAGAGA | AFT_132 | oding | | _variant | 552delTC | | | glycosyltransfe | 0.25926 |
| | | AGAGAGAGAGA | | 604 | | | | | | | rase | |
| KI911157.1 | 574769 | GN | G | M419DR | protein_c | rna7414 | upstream_gene | c.- | - | - | general | 1 |
| | | | | AFT_138 | oding | | _variant | 3160delT | | | substrate | |
| | | | | 519 | | | | | | | transporter | |

| | | | | | | | | | | | | |
|------------|--------|--|--|--------------------------|--------------------|---------|---------------------------|------------------------------------|-----------------|---------|---|---------|
| KI911158.1 | 131041 | A | C | M419DR AFT_132 786 | protein_c oding | rna7486 | missense_vari ant | c.585T>G | p.Asp1 95Glu | gaT/gaG | hypothetical protein M419DRAFT _132786 | 0 |
| KI911158.1 | 136587 | TCCCCCCCCCCC CCCC | TCCCCCCCCCCCCCCCCC | M419DR AFT_132 786 | protein_c oding | rna7486 | upstream_gene _variant | c.-4980_- 4979insG G | - - | - - | hypothetical protein M419DRAFT _132786 | 1 |
| KI911158.1 | 141723 | ATCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCTCTCTCTC | ATCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTC | M419DR AFT_869 34 | protein_c oding | rna7488 | upstream_gene _variant | c.-1686_- 1685delG A | - - | - - | acid protease | 0.24074 |
| KI911158.1 | 142088 | AATATATATATATAT ATATA | AATATATATATATATATA | M419DR AFT_869 34 | protein_c oding | rna7488 | upstream_gene _variant | c.-2032_- 2031delT A | - - | - - | acid protease | 0 |
| KI911158.1 | 148070 | A | ACCCCCCCCC | M419DR AFT_261 38 | protein_c oding | rna7490 | upstream_gene _variant | c.-88_- 87insGG GGGGG GGG | - - | - - | hypothetical protein M419DRAFT _26138 | 0 |
| KI911158.1 | 148071 | GCCCCCCCCC | GCCCCCCCCCCCCCCCCC | M419DR AFT_261 38 | protein_c oding | rna7490 | upstream_gene _variant | c.-99_- 98insGG GGGGG GG | - - | - - | hypothetical protein M419DRAFT _26138 | 1 |
| KI911158.1 | 200829 | TGAGAGAGAGAG AGAGAGAGAGAG AGAGAGAGAGAG AGAG | TGAGAGAGAGAGAGAGAGA GAGAGAGAGAGAGAGAGA G | M419DR AFT_261 44 | protein_c oding | rna7507 | upstream_gene _variant | c.-3485_- 3484delC T | - - | - - | hypothetical protein M419DRAFT _26144 | 0.2625 |
| KI911158.1 | 201936 | G | GGGGC | M419DR AFT_102 595 | protein_c oding | rna7509 | 5_prime_UTR _variant | c.-121_- 120insGC CC | - - | - - | putative histidine phosphotransfe rase HPT1p | 0.53333 |
| KI911158.1 | 215148 | GGGGG | GAGGGGGAGGGG | M419DR AFT_132 812 | protein_c oding | rna7512 | upstream_gene _variant | c.-1099_- 1098insT CCCCCT | - - | - - | hypothetical protein M419DRAFT | 1 |

| | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|---------|-----------------------------|--------------------------------------|--------|---|--|---------|
| KI911158.1 | 230427 | C | G | M419DR AFT_132 816 | protein_c oding | rna7516 | upstream_gene _variant | c.- 1797G>C | - - | - | putative actin- interacting protein AIP3 | 1 |
| KI911158.1 | 318432 | NG | NGCCCGGGGGGG | M419DR AFT_869 49 | protein_c oding | rna7545 | upstream_gene _variant | c.-694_- 693insCC CGGGG GGG | - - | - | hypothetical protein M419DRAFT _86949 | 1 |
| KI911158.1 | 345038 | CT | CTTTT | M419DR AFT_112 35 | protein_c oding | rna7555 | upstream_gene _variant | c.-1833_- 1832insT TT | - - | - | hypothetical protein M419DRAFT _11235 | 0.29787 |
| KI911158.1 | 345040 | CTTTTTTTTTTTT TTTTTTTTTTTTT TTTTT | CTTTTTTTTTTTTTTTTTTTT TTTTTTTTTTTTTTT,CTTTTTTT TTTTT TTTTTT | M419DR AFT_112 35 | protein_c oding | rna7555 | upstream_gene _variant | c.-1800_- 1799insT TT | - - | - | hypothetical protein M419DRAFT _11235 | 0 |
| KI911158.1 | 356508 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCT | CCTCTCTCTCTCTCTCTCTCT CTCTCTCT | M419DR AFT_132 855 | protein_c oding | rna7558 | upstream_gene _variant | c.-917_- 916delAG | - - | - | CAF1-domain- containing protein | 0 |
| KI911158.1 | 427660 | AACACACACACA CACACACACACA CACACACACACA CACAC | AACACACACACACACACAC ACACACACACACACACACA C | M419DR AFT_138 585 | protein_c oding | rna7578 | downstream_g ene_variant | c.*2053_* 2054delG T | - - | - | ornithine aminotransfera se | 0.18033 |
| KI911158.1 | 428266 | ACTCTCTCTCTCT CTCTCTCTCTCTCT C | ACTCTCTCTCTCTCTCTCTCT CTCTC | M419DR AFT_102 669 | protein_c oding | rna7579 | upstream_gene _variant | c.-4853_- 4852delT C | - - | - | putative mannosyltrans ferase, partial | 0.15625 |
| KI911158.1 | 469722 | CGAGAGAGAGAG AGAGAGAGAGA | CGAGAGAGAGAGAGAGAGA GA | M419DR AFT_868 40 | protein_c oding | rna7592 | upstream_gene _variant | c.-1571_- 1570delG A | - - | - | DUF1771- domain- containing protein | 0 |

| | | | | | | | | | | | | |
|------------|--------|----------------|-----------------------|---------|-----------|---------|-----------------|-----------|---------|------|------------------|---------|
| KI911158.1 | 504136 | GGAGAGAGAGAG | GGAGAGAGAGAGAGAGAG | M419DR | protein_c | rna7599 | upstream_gene | c.-640_- | - | - | putative | 1 |
| | | AGAGAGAGAGAG | AGAGAGAGAGAGAGAGAG | AFT_142 | oding | | _variant | 639insCT | | | ceramide | |
| | | AGAGAGAGAGAG | AGAGAGAGAGAGAGAGAG | 544 | | | | | | | synthase | |
| | | AGAGAGAGAGAG | AGAGAGAG | | | | | | | | membrane | |
| | | AGAGAGAGAGAG | | | | | | | | | component | |
| KI911158.1 | 508863 | TGAGAGAGAGAG | TGAGAGAGAGAGAGAGAGA | M419DR | protein_c | rna7600 | upstream_gene | c.-579_- | - | - | PalH-domain- | 0.14493 |
| | | AGAGAGAGAGAG | GAGAGAG | AFT_433 | oding | | _variant | 578delCT | | | containing | |
| | | AGAG | | 66 | | | | | | | protein, partial | |
| KI911158.1 | 547052 | GTGCTGCTGCTGC | GTGCTGCTGCTGCTGCTGCT | M419DR | protein_c | rna7607 | upstream_gene | c.-1383_- | - | - | hypothetical | 1 |
| | | TGCTGCTGCTGCT | GCTGCTGCTGCTGCTGCTGC | AFT_871 | oding | | _variant | 1381delC | | | protein | |
| | | GCTGCTGCTGCTG | TGCTGCTGCTG | 91 | | | | AG | | | M419DRAFT | |
| | | CTGCTGCTGCTGC | | | | | | | | | _87191 | |
| | | TG | | | | | | | | | | |
| KI911158.1 | 586000 | GTCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna7617 | upstream_gene | c.-1517_- | - | - | sodium/hydrog | 0.33333 |
| | | TCTCTCTCTCTCTC | TCTCTCTCTCTCTCTCT | AFT_138 | oding | | _variant | 1516delA | | | en exchanger | |
| | | TCTCTCTCTCTCT | | 604 | | | | G | | | | |
| KI911158.1 | 61250 | C | T | M419DR | protein_c | rna7467 | upstream_gene | c.- | - | - | putative | 1 |
| | | | | AFT_261 | oding | | _variant | 2833G>A | | | histone | |
| | | | | 30 | | | | | | | deacetylase A | |
| KI911159.1 | 129190 | GTCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna7666 | upstream_gene | c.-3334_- | - | - | hypothetical | 0 |
| | | TCTCTCTCTCTCT | TCT | AFT_875 | oding | | _variant | 3333delA | | | protein | |
| | | | | 80 | | | | G | | | M419DRAFT | |
| | | | | | | | | | | | _87580 | |
| KI911159.1 | 162042 | GACAACAACAAC | GACAACAACAACAACAACA | M419DR | protein_c | rna7679 | frameshift_var | c.- | p.Met1f | atg/ | methylated- | 0.10577 |
| | | AACAACAACAAC | ACAACAACAACAACA | AFT_875 | oding | | iant+start_lost | 2_1delAC | s | | DNA--cysteine | |
| | | AACAACAACAAC | | 32 | | | | A | | | S-met | |
| | | A | | | | | | | | | | |
| KI911159.1 | 16583 | T | TC | M419DR | protein_c | rna7634 | upstream_gene | c.-4320_- | - | - | HisG-domain- | 0.5 |
| | | | | AFT_114 | oding | | _variant | 4319insG | | | containing | |
| | | | | 352 | | | | | | | protein, partial | |

| | | | | | | | | | | | | |
|------------|--------|----------------|-------------------------|---------|-----------|---------|---------------|-----------|---|---|--------------|-----|
| KI911161.1 | 41594 | CTTG | C | M419DR | protein_c | rna7978 | upstream_gene | c.-773_- | - | - | alpha/beta- | 0.5 |
| | | | | AFT_883 | oding | | _variant | 771delCA | | | hydrolase | |
| | | | | 62 | | | | A | | | | |
| KI911162.1 | 108826 | TCA | T | M419DR | protein_c | rna8141 | upstream_gene | c.-4068_- | - | - | hypothetical | 0 |
| | | | | AFT_888 | oding | | _variant | 4067delT | | | protein | |
| | | | | 34 | | | | G | | | M419DRAFT | |
| | | | | | | | | | | | _88834 | |
| KI911162.1 | 115906 | TTCTCTCTCTCTCT | TTCTCTCTCTCTCTCTCTCTCTC | M419DR | protein_c | rna8145 | 3_prime_UTR | c.*32_*33 | - | - | hypothetical | 0 |
| | | CTCTCTCTCTCTCT | TCTCTCTCTCTCTCTCTCTCT | AFT_124 | oding | | _variant | delAG | | | protein | |
| | | CTCTCTCTCTCTCT | CTCTCTCT | 792 | | | | | | | M419DRAFT | |
| | | CTCTCTCTCT | | | | | | | | | _124792 | |
| KI911162.1 | 12430 | GCC | GCCCC | M419DR | protein_c | rna8108 | upstream_gene | c.-977_- | - | - | hypothetical | 0 |
| | | | | AFT_888 | oding | | _variant | 976insCC | | | protein | |
| | | | | 14 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _88814 | |
| KI911162.1 | 150220 | ACC | ACCCCCC | M419DR | protein_c | rna8151 | upstream_gene | c.-2980_- | - | - | P-loop | 0.6 |
| | | | | AFT_103 | oding | | _variant | 2979insG | | | containing | |
| | | | | 323 | | | | GGGG | | | nucleoside | |
| | | | | | | | | | | | triphosphate | |
| | | | | | | | | | | | hydrolase | |
| | | | | | | | | | | | protein | |
| KI911162.1 | 150223 | A | ACCCCC | M419DR | protein_c | rna8151 | upstream_gene | c.-2981_- | - | - | P-loop | 0 |
| | | | | AFT_103 | oding | | _variant | 2980insG | | | containing | |
| | | | | 323 | | | | GGGG | | | nucleoside | |
| | | | | | | | | | | | triphosphate | |
| | | | | | | | | | | | hydrolase | |
| | | | | | | | | | | | protein | |
| KI911162.1 | 206602 | GGTGTGTGTGTGT | GGTGTGTGTGTGTGTGTGTGTG | M419DR | protein_c | rna8173 | upstream_gene | c.-945_- | - | - | hypothetical | 0 |
| | | GTGTGTGTGTGTG | TGTGTGTGTGT | AFT_133 | oding | | _variant | 944delGT | | | protein | |
| | | TGTGTGT | | 441 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _133441 | |

| | | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|---------|---------------------------------------|-------------------------------|-----------------|--------|---|----|---------|
| KI911162.1 | 254942 | AGGGGGGGGGGG GG | AGGGGGGGGGGGGGGGG,A GGGGGGGGGGGGGGGGG G,AGGGGGGGGGGGGGGGG G | M419DR AFT_384 90 | protein_c oding | rna8188 | upstream_gene _variant | c.-920_- 919insCC C | - - - | - - | putative methyltransfer ase | O- | 1 |
| KI911162.1 | 254942 | AGGGGGGGGGGG GG | AGGGGGGGGGGGGGGGGGG GGG | M419DR AFT_384 90 | protein_c oding | rna8188 | upstream_gene _variant | c.-920_- 919insCC CCCCC | - - | - - | putative methyltransfer ase | O- | 0 |
| KI911162.1 | 367168 | CATATATATATATAT ATATAT | CATATATATATATATATAT | M419DR AFT_103 382 | protein_c oding | rna8236 | upstream_gene _variant | c.-4703_- 4702delA T | - - | - - | SMN family protein Snn1 | | 0.35294 |
| KI911162.1 | 381789 | CTGTTGTTGTTGT TGTGTTGTTGTT GTTGTTGTTGTTG TGTGTTGTTGTTG TG | CTGTTGTTGTTGTTGTTGTTG TTGTTGTTGTTGTTGTTGTTG TTGTTGTTG | M419DR AFT_118 47 | protein_c oding | rna8245 | conservative_i nframe_deletio n | c.1681_16 83delCA A | p.Gln56 1del | caa/ | hypothetical protein M419DRAFT _11847 | | 0 |
| KI911162.1 | 468292 | CCTCTCTCTCTCT CTCTCTCTCTCTCT CTCTCT | CCTCTCTCTCTCTCTCTCTCT CTCTCTCTCT | M419DR AFT_120 576 | protein_c oding | rna8262 | upstream_gene _variant | c.-936_- 935delCT | - - | - - | hypothetical protein M419DRAFT _120576 | | 0 |
| KI911162.1 | 470492 | C | T,G | M419DR AFT_115 020 | protein_c oding | rna8264 | upstream_gene _variant | c.- 4004C>T | - - | - - | KOW motif- containing protein | | 1 |
| KI911162.1 | 91950 | CATATATATATATAT ATATATA | CATATATATATATATATATA | M419DR AFT_263 95 | protein_c oding | rna8135 | downstream_g ene_variant | c.*4731_* 4732delT A | - - | - - | hypothetical protein M419DRAFT _26395 | | 0.12 |
| KI911163.1 | 101346 | TTCTCTCTCTCTCT CTCTCTCTCTCTCT C | TTCTCTCTCTCTCTCTCTCTC TCTCTC | M419DR AFT_385 85 | protein_c oding | rna8306 | upstream_gene _variant | c.-3766_- 3765delT C | - - | - - | hypothetical protein M419DRAFT _38585 | | 0.20225 |

| | | | | | | | | | | | | |
|------------|--------|--------------|---------------------|---------|-----------|---------|---------------|-----------|---|---|--------------|---------|
| KI911163.1 | 204776 | CCACACACACAC | CCACACACACACACACACA | M419DR | protein_c | rna8321 | downstream_g | c.*2224_* | - | - | hypothetical | 0 |
| | | ACACACACACAC | CACACACACACACACACAC | AFT_264 | oding | | ene_variant | 2229delC | | | protein | |
| | | ACACACACACAC | ACACACACACACACACACA | 44 | | | | ACACA | | | M419DRAFT | |
| | | ACACACACACAC | CACACACACACA | | | | | | | | _26444 | |
| | | ACACACACACAC | | | | | | | | | | |
| | | ACACACACACAC | | | | | | | | | | |
| | | ACA | | | | | | | | | | |
| KI911163.1 | 204776 | CCACACACACAC | CCACACACACACACACACA | M419DR | protein_c | rna8321 | downstream_g | c.*2229_* | - | - | hypothetical | 1 |
| | | ACACACACACAC | CACACACACACACACACAC | AFT_264 | oding | | ene_variant | 2230insC | | | protein | |
| | | ACACACACACAC | ACACACACACACACACACA | 44 | | | | ACA | | | M419DRAFT | |
| | | ACACACACACAC | CACACACACACACACACAC | | | | | | | | _26444 | |
| | | ACACACACACAC | ACA | | | | | | | | | |
| | | ACACACACACAC | | | | | | | | | | |
| | | ACA | | | | | | | | | | |
| KI911163.1 | 237017 | CAGAGAGAGAGA | CAGAGAGAGAGAGAGAGAG | M419DR | protein_c | rna8326 | upstream_gene | c.-3761_- | - | - | putative MFS | 0.1875 |
| | | GAGAGAGAGAGA | AGAGAGAGAG | AFT_386 | oding | | _variant | 3760delC | | | transporter | |
| | | GAGAGAG | | 02 | | | | T | | | | |
| KI911163.1 | 245957 | GACACACACACA | GACACACACACACACACAC | M419DR | protein_c | rna8329 | upstream_gene | c.-4722_- | - | - | hypothetical | 0.16216 |
| | | CACACACACACA | ACACACACA | AFT_892 | oding | | _variant | 4721delT | | | protein | |
| | | CACACA | | 54 | | | | G | | | M419DRAFT | |
| | | | | | | | | | | | _89254 | |
| KI911163.1 | 58 | C | A | M419DR | protein_c | rna8273 | downstream_g | c.*3292G | - | - | hypothetical | 0.66667 |
| | | | | AFT_133 | oding | | ene_variant | >T | | | protein | |
| | | | | 534 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _133534 | |
| KI911164.1 | 193128 | G | A | M419DR | protein_c | rna8452 | upstream_gene | c.- | - | - | hypothetical | 1 |
| | | | | AFT_120 | oding | | _variant | 1206C>T | | | protein | |
| | | | | 21 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _12021 | |
| KI911164.1 | 193182 | T | G | M419DR | protein_c | rna8452 | upstream_gene | c.- | - | - | hypothetical | 1 |
| | | | | AFT_120 | oding | | _variant | 1260A>C | | | protein | |
| | | | | 21 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | _12021 | |

| | | | | | | | | | | | | |
|------------|--------|--|---|--------------------------|--------------------|---------|---------------------------|---|--|--|---|--------------|
| KI911164.1 | 193186 | CTTTTTTTTTTTT CTTCTTTTTTCATT GGTTTGGTTTTT TTTTTTTTTTTTT | CTTTTTTTTTTTT | M419DR AFT_120 21 | protein_c oding | rna8452 | upstream_gene _variant | c.-1318_- 1278delA AAAAA AAAAA AAAAA AAACCA AAACCA ATGAAA AAGAA AG | - - - - - - - - - - | - - - - - - - - - - | hypothetical protein M419DRAFT _12021 | 0 |
| KI911164.1 | 202811 | CGAGAGAGAGAG AGAGAGAGAGAG AGAG | CGAGAGAGAGAGAGAGAGA GAGAGAG | M419DR AFT_894 64 | protein_c oding | rna8455 | upstream_gene _variant | c.-37_- 36delAG | - - - | - - - | hypothetical protein M419DRAFT _89464 | 0.12941 |
| KI911164.1 | 27133 | GTCTCTCTCTCTC TCTCTCTCTCTCTC TCTCTCTCTCTCTC | GTCTCTCTCTCTCTCTCTCTC TCTCTCTCTCTCTCTCTCTC | M419DR AFT_142 825 | protein_c oding | rna8400 | upstream_gene _variant | c.-2573_- 2572delG A | - - - | - - - | tripeptidyl- peptidase precursor | 1 0.33333 |
| KI911164.1 | 344920 | G | T | M419DR AFT_103 678 | protein_c oding | rna8504 | upstream_gene _variant | c.- 3745C>A | - - | - - | cyclophilin- like protein | 1 |
| KI911164.1 | 75228 | GCCCCCCCCC | GCCCCCCCCCCCCCCCCC CC | M419DR AFT_103 584 | protein_c oding | rna8414 | upstream_gene _variant | c.-4072_- 4071insG GGGGG GGGGG | - - - | - - - | Rho activation protein | 1 GTPase |
| KI911164.1 | 77620 | GCCCCCCCC | GCCCCCCCCCCCCC,GCCC CCCCCCCCC | M419DR AFT_120 667 | protein_c oding | rna8416 | upstream_gene _variant | c.-692_- 691insCC CCCC | - - | - - | hypothetical protein M419DRAFT _120667, partial | 0 |
| KI911164.1 | 77625 | CCCC | CCCCCTCCC | M419DR AFT_120 667 | protein_c oding | rna8416 | upstream_gene _variant | c.-692_- 691insCC TCCC | - - | - - | hypothetical protein M419DRAFT _120667, | 0.5 |

| | | | | | | | | | | | | partial | |
|------------|--------|--|---|--------------------------|--------------------|---------|-----------------------------|---------------------------------------|----------------|---------|---|---------|--|
| KI911165.1 | 104114 | G | T | M419DR AFT_897 93 | protein_c oding | rna8564 | missense_vari ant | c.148C>A | p.Leu5 0Met | Ctg/Atg | hypothetical protein M419DRAFT _89793 | 0.125 | |
| KI911165.1 | 11 | G | A | M419DR AFT_590 75 | protein_c oding | rna8536 | upstream_gene _variant | c.- 4376G>A | - - | - | hypothetical protein M419DRAFT _59075, partial | 1 | |
| KI911165.1 | 166924 | CGATGATGATGAT GATGATGATGATG ATGATGATGATGA TGATGATG | CGATGATGATGATGATGATG ATGATGATGATGATGATGATG ATG | M419DR AFT_589 73 | protein_c oding | rna8577 | upstream_gene _variant | c.-4514_- 4512delC AT | - - | - | hypothetical protein M419DRAFT _58973, partial | 0 | |
| KI911165.1 | 212461 | CCATCATCATCATC ATCATCATCATCAT CATCATCATCATCA TCATCATCATCATC ATCATCATCAT | CCATCATCATCATCATCATCA TCATCATCATCATCATCATCA TCATCATCATCATCATCATCA T | M419DR AFT_142 901 | protein_c oding | rna8592 | downstream_g ene_variant | c.*3020_* 3022delC AT | - - | - | membrane transporter | 1 | |
| KI911165.1 | 213310 | GTATATATATATATA TATATAT | GTATATATATATATATATAT | M419DR AFT_265 59 | protein_c oding | rna8595 | 3_prime_UTR _variant | c.*143_*1 44delAT | - - | - | 5'- nucleotidase | 0.2 | |
| KI911165.1 | 385056 | GA | GCCCA,GCCA | M419DR AFT_133 915 | protein_c oding | rna8658 | upstream_gene _variant | c.-3459_- 3458insG GG | - - | - | hypothetical protein M419DRAFT _133915 | 0 | |
| KI911166.1 | 109796 | CTCTTCTTCTTCT CTTCTTCTTCTTCT TCTTCTTCTTCTC TTCTTCTTCTTCT CTTCTTCTTCTTCT TCTTCTTCTTCTC | CTCTTCTTCTTCTTCTTCTC TTCTTCTTCTTCTTCTTCTC TTCTTCTTCTTCTTCTTCTC TTCTTCTTCTTCT | M419DR AFT_484 02 | protein_c oding | rna8711 | upstream_gene _variant | c.-2588_- 2580delA GAAGA AGA | - - | - | hypothetical protein M419DRAFT _48402, partial | 0 | |

T

| | | | | | | | | | | | | |
|------------|--------|---|--|--------------------------|--------------------|---------|---------------------------|--|--------|--------|---|---------|
| KI911166.1 | 218571 | TG | T | M419DR AFT_903 99 | protein_c oding | rna8750 | upstream_gene _variant | c.- 1291delC | - - | - - | hypothetical protein M419DRAFT _90399 | 0.19231 |
| KI911166.1 | 233031 | GCAACAACAACA ACAACAACAACA ACAACAAC | GCAACAACAACAACAACA CAACAACAAC | M419DR AFT_103 981 | protein_c oding | rna8755 | upstream_gene _variant | c.-1224_- 1222delG TT | - - | - - | Med5-domain- containing protein | 0 |
| KI911166.1 | 279981 | A | ACCCC | M419DR AFT_134 025 | protein_c oding | rna8772 | upstream_gene _variant | c.-2715_- 2714insC CCC | - - | - - | putative histone acetyltransfera se complex component Epl1 | 0.46154 |
| KI911166.1 | 290795 | GGTAGTAGTAGTA GTAGTAGTAGTAG TAGTAGTAGTAGT AGTAGTAGTA | GGTAGTAGTAGTAGTAGTAG TAGTAGTAGTAGTAGTAGTA GTAGTA | M419DR AFT_104 002 | protein_c oding | rna8774 | upstream_gene _variant | c.-425_- 423delTA C | - - | - - | AMPKBI- domain- containing protein | 0.12857 |
| KI911166.1 | 316053 | GTATATATATANAT ATATATATATATATA | GTATATATATATATATATATATA TATANATATATATATATATATA | M419DR AFT_142 972 | protein_c oding | rna8780 | upstream_gene _variant | c.-4451_- 4450insT ATATATA TATATAT A | - - | - - | Septin | 1 |
| KI911166.1 | 362384 | ACCCCCCCCC | ACCCCCCCCCCCCCCCC,AC CCCCCCCCCCCCCCCC | M419DR AFT_104 044 | protein_c oding | rna8795 | upstream_gene _variant | c.-5081_- 5080insC CCCCC | - - | - - | hypothetical protein M419DRAFT _104044 | 1 |

| | | | | | | | | | | | utilization | |
|------------|--------|-------------------------------|-----------------------------|--------------------------|--------------------|---------|-----------------------------|--------------------------------|---|---|---|---------|
| KI911167.1 | 96404 | A | G | M419DR AFT_104 093 | protein_c oding | rna8832 | downstream_g ene_variant | c.*4505T >C | - | - | Spc98 family protein | 0.26667 |
| KI911167.1 | 96421 | GAGCCCNAGCCC | GAGCCC | M419DR AFT_104 093 | protein_c oding | rna8832 | downstream_g ene_variant | c.*4477_* 4482delG GGCTT | - | - | Spc98 family protein | 0.95652 |
| KI911168.1 | 271288 | AACACACACACA CACACACACAC | AACACACACACACACACAC AC | M419DR AFT_120 965 | protein_c oding | rna9007 | upstream_gene _variant | c.-661_- 660delGT | - | - | hypothetical protein M419DRAFT _120965 | 0.125 |
| KI911168.1 | 299955 | GATATATATATATAT ATATATA | GATATATATATATATATATA | M419DR AFT_909 34 | protein_c oding | rna9018 | upstream_gene _variant | c.-4601_- 4600delT A | - | - | periplasmic binding protein-like II | 0.3125 |
| KI911168.1 | 359068 | CCTCTCTCTCTCT CTCTCTCTCTCT | CCTCTCTCTCTCTCTCTCTCT CT | M419DR AFT_134 282 | protein_c oding | rna9042 | upstream_gene _variant | c.-2653_- 2652delA G | - | - | hypothetical protein M419DRAFT _134282 | 0 |
| KI911170.1 | 210758 | A | G | M419DR AFT_139 269 | protein_c oding | rna9204 | upstream_gene _variant | c.- 4174T>C | - | - | MFS general substrate transporter | 0.36047 |
| KI911170.1 | 210785 | T | C | M419DR AFT_139 269 | protein_c oding | rna9204 | upstream_gene _variant | c.- 4201A>G | - | - | MFS general substrate transporter | 0.34831 |
| KI911173.1 | 139726 | T | C | M419DR AFT_919 31 | protein_c oding | rna9383 | upstream_gene _variant | c.- 919A>G | - | - | hypothetical protein M419DRAFT _91931 | 0.40909 |

| | | | | | | | | | | | | |
|------------|--------|--|---|--------------------------|--------------------|---------|---------------------------|----------------------------|----------------|---------|---|---------|
| KI911173.1 | 159096 | C | A | M419DR AFT_128 45 | protein_c oding | rna9388 | upstream_gene _variant | c.- 3722G>T | - | - | hypothetical protein M419DRAFT _12845 | 0.25 |
| KI911173.1 | 159100 | C | A | M419DR AFT_128 45 | protein_c oding | rna9388 | upstream_gene _variant | c.- 3726G>T | - | - | hypothetical protein M419DRAFT _12845 | 0 |
| KI911173.1 | 2988 | C | T | M419DR AFT_919 27 | protein_c oding | rna9341 | upstream_gene _variant | c.- 2496C>T | - | - | hypothetical protein M419DRAFT _91927, partial | 0.33333 |
| KI911173.1 | 3018 | C | T | M419DR AFT_919 27 | protein_c oding | rna9341 | upstream_gene _variant | c.- 2466C>T | - | - | hypothetical protein M419DRAFT _91927, partial | 0.33333 |
| KI911173.1 | 3071 | T | C | M419DR AFT_919 27 | protein_c oding | rna9341 | upstream_gene _variant | c.- 2413T>C | - | - | hypothetical protein M419DRAFT _91927, partial | 0.71429 |
| KI911173.1 | 41639 | A | G | M419DR AFT_919 14 | protein_c oding | rna9351 | missense_vari ant | c.58T>C | p.Ser20 Pro | Tcc/Ccc | hypothetical protein M419DRAFT _91914 | 0.41176 |
| KI911174.1 | 48519 | AGGGGGGGGGGG GG | AGGGGGGGGGGGGGGGG | M419DR AFT_116 279 | protein_c oding | rna9411 | upstream_gene _variant | c.-973_- 972insCC | - | - | WD40 repeat- like protein | 0 |
| KI911174.1 | 48519 | AGGGGGGGGGGG GG | AGGGGGGGGGGGGGGGG,AG GGGGGGGGGGGGGGG | M419DR AFT_116 279 | protein_c oding | rna9411 | upstream_gene _variant | c.-973_- 972insCC | - | - | WD40 repeat- like protein | 1 |
| KI911174.1 | 49882 | GCACACACACAC ACACACACACAC ACACACAC | GCACACACACACACACACA CACACACACAC | M419DR AFT_116 279 | protein_c oding | rna9411 | upstream_gene _variant | c.-2353_- 2352delG T | - | - | WD40 repeat- like protein | 0.17722 |

| | | | | | | | | | | | | |
|------------|-------|---|--|--------------------------|--------------------|---------|---------------------------|---------------------------|--------|--------|--|---------|
| KI911180.1 | 18623 | G | C | M419DR AFT_125 434 | protein_c oding | rna9697 | upstream_gene _variant | c.- 4998C>G | - - | - - | CCAAT- binding protein subunit HAP5 | 0 |
| KI911180.1 | 26462 | AACACACACACA CACACACACACA CACACACACA | AACACACACACACACACAC ACACACACACACA | M419DR AFT_269 80 | protein_c oding | rna9701 | upstream_gene _variant | c.-3283_ 3282delT G | - - | - - | TPR-like protein | 0 |
| KI911180.1 | 56689 | GACACACACACA CACACACACACA CACACACAC | GACACACACACACACACAC ACACACACACAC | M419DR AFT_134 910 | protein_c oding | rna9712 | upstream_gene _variant | c.-1413_ 1412delA C | - - | - - | hypothetical protein M419DRAFT _134910 | 0.19298 |
| KI911182.1 | 43344 | TACACACACACAC ACACACACACAC ACACACACACAC AC | TACACACACACACACACAC ACACACACACACACACAC | M419DR AFT_929 40 | protein_c oding | rna9780 | upstream_gene _variant | c.-4071_ 4070delG T | - - | - - | L-ascorbate oxidase | 0.27143 |
| KI911183.1 | 78173 | CTATATATATATATA TATATATATATATAT | CTATATATATATATATATATATA TATATATAT | M419DR AFT_930 01 | protein_c oding | rna9817 | upstream_gene _variant | c.-4552_ 4551insA T | - - | - - | PGAP1- domain- containing protein | 1 |
| KI911184.1 | 29757 | C | G | M419DR AFT_931 28 | protein_c oding | rna9831 | upstream_gene _variant | c.- 3645G>C | - - | - - | hypothetical protein M419DRAFT _93128 | 0 |
| KI911185.1 | 2088 | TCCCCCCCCCCCC C | TCCCCCCCCCCCCCCCC,TCCC CCCCCCCCCCCC | M419DR AFT_135 036 | protein_c oding | rna9851 | upstream_gene _variant | c.-2960_ 2959insC C | - - | - - | P-loop containing nucleoside triphosphate hydrolase protein | 0 |
| KI911185.1 | 2088 | TCCCCCCCCCCCC C | TTCGAGCCCCCCCCCCCCCCC CC,TCCCCCCCCCCCCCCC,TTA | M419DR AFT_135 | protein_c oding | rna9851 | upstream_gene _variant | c.-2973_ 2972insT | - - | - - | P-loop containing | 0.82353 |

| | | | | | | | | | | | | | |
|------------|-------|----------------|-------------------------|--------------|---------|-----------|---------|---------------|-----------|---|---|---------------|---------|
| | | | | GCCCCCCCCCCC | 036 | | | | CGAGCC | | | nucleoside | |
| | | | | | | | | | C | | | triphosphate | |
| | | | | | | | | | | | | hydrolase | |
| | | | | | | | | | | | | protein | |
| KI911185.1 | 41278 | T | C | | M419DR | protein_c | rna9860 | downstream_g | c.*4600T | - | - | hypothetical | 0.21622 |
| | | | | | AFT_931 | oding | | ene_variant | >C | | | protein | |
| | | | | | 85 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | | _93185 | |
| KI911185.1 | 41364 | C | T | | M419DR | protein_c | rna9860 | downstream_g | c.*4686C | - | - | hypothetical | 0.28696 |
| | | | | | AFT_931 | oding | | ene_variant | >T | | | protein | |
| | | | | | 85 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | | _93185 | |
| KI911185.1 | 56036 | AG | A | | M419DR | protein_c | rna9864 | upstream_gene | c.- | - | - | hypothetical | 0.15217 |
| | | | | | AFT_931 | oding | | _variant | 4102delC | | | protein | |
| | | | | | 39 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | | _93139 | |
| KI911185.1 | 58782 | ATTTTTTTTTTTT | ATTTTTTTTTTTTTTTT,AT | | M419DR | protein_c | rna9866 | upstream_gene | c.-3932_- | - | - | hypothetical | 0.94545 |
| | | TTTT | TTTTTTTTTTTTTTTTT,ATTTT | | AFT_931 | oding | | _variant | 3931insA | | | protein | |
| | | | TTTTTTTTTTTTTTTTT | | 38 | | | | A | | | M419DRAFT | |
| | | | | | | | | | | | | _93138 | |
| KI911186.1 | 25257 | CTTTTTTTTTTTT | CTTTTTTTTTTTTTTTTTTTT | | M419DR | protein_c | rna9877 | upstream_gene | c.-3382_- | - | - | putative | 0 |
| | | TTTTTTTTTTTTTT | TTTTTTTTTT,CTTTTTTTTTTT | | AFT_143 | oding | | _variant | 3381insA | | | transcription | |
| | | T | TTTTTTTTTTTTTTTTTTT | | 366 | | | | AA | | | factor btf3 | |
| KI911186.1 | 25257 | CTTTTTTTTTTTT | CTTTTTTTTTTTTTTTTTTTT | | M419DR | protein_c | rna9877 | upstream_gene | c.-3382_- | - | - | putative | 0.96552 |
| | | TTTTTTTTTTTTTT | TTTTTTTTTT,CTTTTTTTTTTT | | AFT_143 | oding | | _variant | 3381insA | | | transcription | |
| | | T | TTTTTTTTTTTTTTTTTTTTT,C | | 366 | | | | AA | | | factor btf3 | |
| | | | TTTTTTTTTTTTTTTTTTTTT | | | | | | | | | | |
| | | | TTTTTTTT | | | | | | | | | | |
| KI911186.1 | 33401 | CGAGAGAGAGAG | CGAGAGAGAGAGAGAGAGA | | M419DR | protein_c | rna9879 | upstream_gene | c.-4_- | - | - | hypothetical | 0.14286 |
| | | AGAGAGAGAGAG | GAG | | AFT_932 | oding | | _variant | 3delAG | | | protein | |
| | | | | | 33 | | | | | | | M419DRAFT | |
| | | | | | | | | | | | | _93233 | |

| | | | | | | | | | | | | |
|------------|-------|------|-----|--------------------------|--------------------|---------|-----------------------------|-----------------|---|---|--|---------|
| KI911187.1 | 16206 | GCCC | GCC | M419DR AFT_135 082 | protein_c oding | rna9899 | upstream_gene _variant | c.- 1427delC | - | - | P-loop containing nucleoside triphosphate hydrolase protein | 1 |
| KI911188.1 | 17 | G | A | M419DR AFT_933 41 | protein_c oding | rna9918 | downstream_g ene_variant | c.*301C> T | - | - | oligopeptide transporter protein | 0.66667 |
| KI911188.1 | 19 | C | T | M419DR AFT_933 41 | protein_c oding | rna9918 | downstream_g ene_variant | c.*299G> A | - | - | oligopeptide transporter protein | 0 |
| KI911188.1 | 29 | G | A | M419DR AFT_933 41 | protein_c oding | rna9918 | downstream_g ene_variant | c.*289C> T | - | - | oligopeptide transporter protein | 0 |
| KI911188.1 | 31 | C | T | M419DR AFT_933 41 | protein_c oding | rna9918 | downstream_g ene_variant | c.*287G> A | - | - | oligopeptide transporter protein | 0 |
| KI911188.1 | 36 | T | C | M419DR AFT_933 41 | protein_c oding | rna9918 | downstream_g ene_variant | c.*282A> G | - | - | oligopeptide transporter protein | 0 |
| KI911188.1 | 41 | G | A | M419DR AFT_933 41 | protein_c oding | rna9918 | downstream_g ene_variant | c.*277C> T | - | - | oligopeptide transporter protein | 0 |
| KI911188.1 | 96 | C | T | M419DR AFT_933 41 | protein_c oding | rna9918 | downstream_g ene_variant | c.*222G> A | - | - | oligopeptide transporter protein | 0.2 |

| | | | | | | | | | | | | |
|------------|-------|----|---|-------------------------|--------------------|----------|-----------------------------|-----------------|-----------------|---------|---|---------|
| KI911189.1 | 45202 | T | C | M419DR AFT_934 02 | protein_c oding | rna9960 | synonymous_v ariant | c.2286A> G | p.Gly76 2Gly | ggA/ggG | hypothetical protein M419DRAFT _93402 | 0.27273 |
| KI911191.1 | 20524 | TN | T | M419DR AFT_934 85 | protein_c oding | rna9985 | upstream_gene _variant | c.- 4525delA | - | - | hypothetical protein M419DRAFT _93485 | 1 |
| KI911195.1 | 14639 | G | A | M419DR AFT_935 80 | protein_c oding | rna10024 | upstream_gene _variant | c.- 2147C>T | - | - | hypothetical protein M419DRAFT _93580, partial | 0 |
| KI911195.1 | 17898 | A | G | M419DR AFT_935 83 | protein_c oding | rna10025 | downstream_g ene_variant | c.*1815T >C | - | - | hypothetical protein M419DRAFT _93583, partial | 0 |
| KI911196.1 | 10118 | G | A | M419DR AFT_935 94 | protein_c oding | rna10026 | upstream_gene _variant | c.- 587G>A | - | - | hypothetical protein M419DRAFT _93594, partial | 0.6875 |
| KI911196.1 | 10121 | A | G | M419DR AFT_935 94 | protein_c oding | rna10026 | upstream_gene _variant | c.- 584A>G | - | - | hypothetical protein M419DRAFT _93594, partial | 0.33333 |
| KI911196.1 | 10140 | G | T | M419DR AFT_935 94 | protein_c oding | rna10026 | upstream_gene _variant | c.- 565G>T | - | - | hypothetical protein M419DRAFT _93594, partial | 1 |
| KI911196.1 | 10161 | G | A | M419DR AFT_935 94 | protein_c oding | rna10026 | upstream_gene _variant | c.- 544G>A | - | - | hypothetical protein M419DRAFT _93594, partial | 0 |

| | | | | | | | | | | | | | |
|------------|-------|----|---|--|--------------------------|--------------------|----------|---------------------------|--|---|---|---|---------|
| KI911196.1 | 10164 | TA | | TAGGTTGCTCTAAAAAAAAA ,TAGGTTGCTCTAAAAAAAAA, TAGGTTGCTCTAAAAAAAAA | M419DR AFT_935 94 | protein_c oding | rna10026 | upstream_gene _variant | c.-540_- 539insGG TTGCTC TAAAAA AAAA | - | - | hypothetical protein M419DRAFT _93594, partial | 1 |
| KI911196.1 | 10199 | G | A | | M419DR AFT_935 94 | protein_c oding | rna10026 | upstream_gene _variant | c.- 506G>A | - | - | hypothetical protein M419DRAFT _93594, partial | 0.47059 |
| KI911196.1 | 10225 | G | A | | M419DR AFT_935 94 | protein_c oding | rna10026 | upstream_gene _variant | c.- 480G>A | - | - | hypothetical protein M419DRAFT _93594, partial | 0.40909 |
| KI911198.1 | 160 | G | T | | M419DR AFT_125 581 | protein_c oding | rna10029 | upstream_gene _variant | c.- 3033G>T | - | - | redoxin, partial | 0 |
| KI911200.1 | 16 | T | C | | M419DR AFT_600 36 | protein_c oding | rna10033 | upstream_gene _variant | c.- 705T>C | - | - | hypothetical protein M419DRAFT _60036, partial | 0.21429 |
| KI911200.1 | 26 | C | T | | M419DR AFT_600 36 | protein_c oding | rna10033 | upstream_gene _variant | c.- 695C>T | - | - | hypothetical protein M419DRAFT _60036, partial | 0.375 |
| KI911200.1 | 35 | T | C | | M419DR AFT_600 36 | protein_c oding | rna10033 | upstream_gene _variant | c.- 686T>C | - | - | hypothetical protein M419DRAFT _60036, partial | 0 |
| KI911200.1 | 45 | C | T | | M419DR AFT_600 36 | protein_c oding | rna10033 | upstream_gene _variant | c.- 676C>T | - | - | hypothetical protein M419DRAFT _60036, partial | 0 |

| | | | | | | | | | | | | |
|------------|-----|---|---|-------------------------|--------------------|----------|-----------------------------|---------------|---|---|---|---------|
| KI911200.1 | 57 | G | A | M419DR AFT_600 36 | protein_c oding | rna10033 | upstream_gene _variant | c.- 664G>A | - | - | hypothetical protein M419DRAFT _60036, partial | 0 |
| KI911229.1 | 966 | G | A | M419DR AFT_484 35 | protein_c oding | rna10043 | downstream_g ene_variant | c.*501G> A | - | - | hypothetical protein M419DRAFT _48435, partial | 0 |
| KI911229.1 | 987 | G | A | M419DR AFT_484 35 | protein_c oding | rna10043 | downstream_g ene_variant | c.*522G> A | - | - | hypothetical protein M419DRAFT _48435, partial | 0 |
| KI911240.1 | 819 | C | T | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*35C>T | - | - | hypothetical protein M419DRAFT _93668, partial | 0.22807 |
| KI911240.1 | 837 | C | T | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*53C>T | - | - | hypothetical protein M419DRAFT _93668, partial | 0.25 |
| KI911240.1 | 874 | T | C | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*90T>C | - | - | hypothetical protein M419DRAFT _93668, partial | 0 |
| KI911240.1 | 904 | A | G | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*120A> G | - | - | hypothetical protein M419DRAFT _93668, partial | 0.65854 |
| KI911240.1 | 911 | C | T | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*127C> T | - | - | hypothetical protein M419DRAFT _93668, partial | 0.71795 |

| | | | | | | | | | | | | |
|------------|-----|---|---|-------------------------|--------------------|----------|-----------------------------|---------------|---|---|---|---------|
| KI911240.1 | 925 | C | T | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*141C> T | - | - | hypothetical protein M419DRAFT _93668, partial | 0.5641 |
| KI911240.1 | 928 | A | G | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*144A> G | - | - | hypothetical protein M419DRAFT _93668, partial | 0.67647 |
| KI911240.1 | 948 | C | T | M419DR AFT_936 68 | protein_c oding | rna10045 | downstream_g ene_variant | c.*164C> T | - | - | hypothetical protein M419DRAFT _93668, partial | 0.4375 |
| KI911242.1 | 11 | A | G | M419DR AFT_936 70 | protein_c oding | rna10046 | downstream_g ene_variant | c.*568T> C | - | - | hypothetical protein M419DRAFT _93670, partial | 0 |