

| PFC | Dist to 3' gene | Length | Sequence |
|--|-----------------|--------|--|
| | | | CTGGTCAAAATGACCCATACATCCTTCCGATCCCGAGATGTC ATTCATCAAAAAGTAGCGCCCGCTCGTCATTAAGGTACGAAT GACGCTGTTTGAATAATCATTATTATTGTAACAGGTTTATAAGCA AATAAATACACCCTCCTGTTCAGTGGGTAATGAAGGCAGCTTC AGAGCAGACAAATAGATCCAGGTAGGAGGCGAGAAGAGACA AGTGAGGAGGAAGGCTCCGGTCTTTGCCCGCTCCGAGCCAG TTCTGCTCGCCCGGGGTTTGGCCTCGGGGTGAAATTGACA GTCTGATTAATAGAGCGCGCCGCGGCACATTTCCCCCTTCATT |
| HsaD _{AC} 1 _{ab} * | 8,977 | 339 | TA TAATGCACCCACACACAAACACAAGGCTTGGTCTGTGTTCTCT |
| HsaD _{AC} 3 | 3,006 | 55 | GGCCACCTAAAGA |
| HsaD _{CD} 5 | 2,973 | 26 | TTGAGGGGGAGGGACAGAGACAGAGA |
| HsaD _{CD} 6 | 783 | 39 | TTGGCCACGATTGGTGGATCGAGCTGATGGGTTCCCTGG |
| HsaD _{DE} 8 | 4,835 | 25 | ATGTTTTGGATTCCACCTTAATGTT CTTGCAAGTCTAGTGTCT |
| HsaD _{DE} 10 _{abcde} * | 3,031 | 142 | GGTCAAGTCTAGTGTCT |
| HsaD _{EF} 11 _{ab} * | 6,554 | 28 | TGTTTACAAAACCTTGAAGTGTCTAGAC |
| HsaD _{EF} 12 | 6,463 | 32 | CCCAAAAGAGATTTCGCAATGTGCAATAAAC TTTGAAGTTCACAAAATGTCAAGGTCATCACCTTTAACCTTTCT |
| HsaD _{EF} 13 | 6,226 | 49 | GAATAA |
| HsaD _{EF} 14 | 5,739 | 39 | GGAAACAAAAGGAAATATAGTTATAATGCTTTTAAAAGCA |
| HsaD _{EF} 15 | 5,278 | 25 | TGAGAAGTTGTATAGAGACAGAAAA TGCAAAAAGAATACCTTGGTATAACCAGATGGTGTGGAGCAGA |
| HsaD _{EF} 16 | 5,360 | 43 | G |
| HsaD _{EF} 17 | 3,266 | 29 | TTTATTCCATTTGTCTCACCTCAGCCTTA ATTTGTATTAATAACAAAATGACCTTCTTGGTTAGCAGCGAA GGGAAAAAATCAATAGTATAATTTTCAATAATTCATAAAGC GAACGCCATTATGGTAAATTTAACTATTAATCTTATCCTTTAC AAAGTCTCGATTGATTTGTTAATAAAAGTATCTTCCCGTGTGTG GCAACAGCGGGCATAACTCTTTAAAACCTTCAGAAGCAAGA AAATTACCAAGTAGCCCAAGAATGTAGATGAGAATTTTATTG ATCGCCCTGATTCTTCTTAATATGTATTAATAAAATCCACAAC CTTTGTACCTTGCCTTGTGAGAAACAGTGTCTTTACAAAA TCCATAAAAAGGAAAACATTTTCTTTGAGAAAGCAAAAAT GACAC |
| HsaD _{EF} 18 | 1,464 | 387 | GTCGCTGTTGTCCGTGCTTACCCGGCCGCGCCAGGCTCT GGAGCACGTGACCCGAGAGAGGCTGCGGCTCAAGGCCATTT TCAAATCTCATTGGCTTGGTTGTATGTGGTCCGAGAGGCAT CCACAATTACACGGGAATGTTTTCTTAGAGATGTCAGCCTA CAAAGGACA |
| HsaD _{EF} 19 _{abc} * | 208 | 178 | CAAAGGACA |
| HsaD _{FG} 20* | 2,906 | 33 | TGCATGTTCTGGTCGCATGTATAATGCAATAAA TTTTATTAGGGACACATTAATCTATAATCAAATACACCTCATA |
| HsaD _{FG} 21 _{ab} * | 691 | 46 | AAA AGCGGACTGATTTACTCCCGTATTGGTAAATATGATCACGT GGGCCGCGGACCAATGGTGGAGGCTGCAGCCTGCGAACTA GTCGGTGGCTCGGGCGCCGGGGAGCTGCTCGGCGCGG |
| HsaD _{FG} 23 _{abe} * | 162 | 133 | ACAGTGTA |

| | | | |
|--|--------|-----|---|
| HsaD _{GH} 24 | 6,120 | 23 | TTTGGTGCCTTGATTTCAGAAAC GAAGGTGCTGCGCACCCCTGCCACTGTGGCCAGCTGGGTACC TAGGGCTCTTTGAAAACAGGAAGAGCCGAGGTGCATAAAGC CATCTAGCGGGCCAGACGTCTGGAGGTAATGAGTTTACGACA GGCCAGTGCTTTGCTTTGAAACCATCTCAATTTGATGTTTGT GTTTGTGGGAGAAAAGGAAAAATGCAGACAAAACCTGGGTCTT |
| HsaD _{GH} 25 | 4,591 | 228 | AAAATCTAGACAATAAA |
| HsaD _{GH} 26 | 4,157 | 17 | TAGAAACAAACAAACAA |
| HsaD _{GH} 27 | 3,022 | 19 | CTATTAATTTCTGTGTTTG |
| HsaD _{GH} 28 | 2,631 | 31 | AAAATCCACTCATTTATCCAGGGTTCAAACA |
| HsaD _{HL} 30 | 17,402 | 29 | ATGTGTCAACATCCAAGCATTGAGGCAAC |
| HsaD _{HL} 31 | 16,788 | 34 | TAATTTAAAATATTGTTTTATTCTGTAACACAGA |
| HsaD _{HL} 33 | 15,895 | 31 | GTATTTCCGAGAGGTTGACAAGTACCTAAAA |
| HsaD _{HL} 34 | 15,588 | 40 | AGCTGTGGGGATCGCTTCCCCAGAGCGTGAGCAGTACATT AAATCCGCAAGGAATTGCAGTAAATTCCTTTTTGTTTGAAGAA AATTTACAACCTTGTAATAGACCTTTTTATGACCTATTTGCGG TCGTCAATTGGCTGCGGCTGGTCATGTGCAGGCGCCGCTCGCC TTCACGGCCTTTTTCTGATTTCCCCGGCGAATTTCCCCCGC |
| HsaD _{HL} 35 _{abcd} * | 15,223 | 177 | ATTCTG |
| HsaD _{HL} 36 | 13,285 | 33 | AATAAGAACTTGAGTGATTGTTATTTTATTTG CACGTGATTCCAATAAACTTTGTTTTATGGCTTGAGAGTTGAC |
| HsaD _{HL} 37 _{bc} * | 5,380 | 60 | AAGCCAAAATATAATTC |
| HsaD _{HL} 39 | 12,554 | 27 | GAGAAAAGACGAAGCTCGAAATTATAAA GAACAAAGACAGTATTTACCCCTGGGCTGGCAGGCAGCTGTT |
| HsaD _{HL} 40 _{ab} * | 12,419 | 73 | AGAGGTATTTACGGCCTTGCCGCAAGTGGGGC |
| HsaD _{HL} 41 | 9,512 | 18 | AAAAGACCCCTGGTTCAC |
| HsaD _{HL} 42 | 6,519 | 22 | CGTTTTTACACTGTTTGGTGGC |
| HsaD _{HL} 46 _{abcde} * | 2,614 | 83 | AATAACTCGTTGGCTTTGACCTGTCTGAACAAGTCGAGCAAT AAGGTGAAATGCAGGTCACAGCGTCTAACAAATATGAAAAAT |
| HsaD _{HL} 47 _{abc} * | 2,005 | 86 | TGAACTTTTGTACTCTTGTGTGCTGCTGTGCGCAAAGCAAAAA TAATGAAAGTTTGTGATATGTTTGTAAATGATTTGCAATGACC |
| HsaD _{HL} 48 _{abcde} | 1,314 | 82 | GTCTATATATACCCTGTAGAACCGAATTTGTGTGGTATCCGTA TAGTCACAGATTTCGATTCTAGGGGAATATATGGTTCGATG TGATAAACTTGCTCCCTCGCCATTGGCTGGCCTGGTACATGG CTGCCCAACTTTATTCAGTTGACAGCAAGTAGGAGGGCCCTA TGGAAAGGAGAAAAAAGACAACACGAGAAAAAATTAGTATTTT |
| HsaD _{HL} 49 _{abc} * | 143 | 143 | CTACCTTCTGAAATTA |
| HsaD _{LM} 56 _{abcde} * | 14,261 | 203 | ATTGTTTCTATGACAAAAAGCACAGAGTTCATACATAGTCAA GACGTCTTTTTCTGACGCCCTCACGTTGAGAAGCTGAAAAG GTATTTTACCGAAGTTCGGGTAAATTACAGAATCAGGTTTCATC CAGAGGACAAATTTCTATTTGATTAGCTGTATTTACAGCCGGG AGGACTGACCTCTAAACCCCTAACCTTTTGGAC |

| | | | |
|--|--------|-----|--|
| HsaD _{LM} 57 | 13,480 | 372 | <p>CCACTTAGGGCAGGGAAGGAAATGGGTTTCCATCTGAGAACG TGCTTTGGAGAAAGCTAGGTGTGGAAAAGCTCCAATGCCAT TTGCTATTATTTGTTTCCAGTTTGTTCCTTTAAATATGAGCCAG AAGTGTTTGTGTTGGTGTTTTAAAAACAAAAACAAAAACCGT GTTGGGGTCCTGACTGGGGGAGGGGAGAGTGAAGTGTTCG TGAGGACATTGCTCCTCTGACTCCCATCTCACTTTGTCCATCG CAGCCTTTTGTGGGAGATGACACTGTCAGTCAGCCCATGAT GTCTGTTACACGAGATGCTTTTTTAATAGAATTGACCAATGT TTTGCTGCCACTGATTAAGTATTATTATAC</p> |
| HsaD _{LM} 58 _{bd} * | 11,855 | 198 | <p>CACGTGATTGGCGAAATAATTAATTCAGCACGTCCCTTAAGA AACACGGAGTCGTCATTAATCTGCCACGCAAAGGGCTCTCTC CGACTTGAAAAGTGCAGGGATCCCAAGAATATACCCCGTCCA GGGGGGCCGCGCGGTGCCCGGGCCCTCCACCCCGGCCCGCC GGCGGGCGCGGAGCGCGGCCGCAGGTAAG GTTCAATTAAGGGGTGAGTTATTGCGGTGCGAGCCAAAGGTCA</p> |
| HsaD _{LM} 61 _{abc} * | 5,973 | 57 | <p>CTTCAAAGGCTTATG GTCATAAATTTTGTACAAACCACAATGACAGGTGCATTGAT</p> |
| HsaD _{LM} 62 _{ab} * | 3,899 | 45 | <p>ATG</p> |
| HsaD _{LM} 64 | 11,225 | 149 | <p>GAACAATGGTCGCTGTACGGCATCTGCCGCCTATTCTTAAA CCGGTGAGAAAAGGCCCTGGCCCTCTTTTCAAGCGAGGGTGC TAAATTTTTCTTTGCGTCATAATAGAAGGCTATAAAATCGAGT TGAAATTTTACCCAGGCAGGT</p> |
| HsaD _{LM} 65 | 10,461 | 151 | <p>AAAGTTTCCCCATTATGAATTATACATTCAAACAATAACAC ATTAATTCAATTATTCAAAGATGACAAATGTTTATGTGCTTTG CGAGTGACTCGGGCGCAGATTCCAGGCGCTTCTCTGAGCTG CTTGCAATTTTCTCAATGAGAATC</p> |
| HsaD _{LM} 66 | 10,176 | 24 | <p>CGGCTTGCGGGCACTGGCCCGGG</p> |
| HsaD _{LM} 67 _{abc} * | 10,138 | 119 | <p>TGACAATTGCCCGGGTTGGTGTGATAAATCATCGTAAGTAATT CCTGAAAGGGTGCAGACTGTTGGGGGCCGGGCGAGGACTGT AAATCTTTCCGGTTTATTGCTCTATGAACATATG</p> |
| HsaD _{LM} 68 | 9,398 | 17 | <p>ATATTTCTAAAATATAA CTCAATCAGTACAAGCTTCCCTCGGGGTCACGTGAACAAATA TGCTTGCAATTTGAAGGCAGCGTCTGTATTTCCCGACTATGAGG</p> |
| HsaD _{LM} 69 _{abd} | 8,541 | 94 | <p>GGGTTTCCG</p> |
| HsaD _{LM} 70 _a * | 8,233 | 204 | <p>TTTATTGGTAGTTGAACCTCAGCCTGGTTCCGTTCTACCGGA ATCCGTGTGCTCGAGTATATGGCCGTGTCTGCGAGCGCGCA AGACCAGGGTTGGGACAGTGTGTCTGCAGACAAAGGGGGAA GGCTAGCTCTGCCCCCACTGGCGCCCACTCTGAGGCCGAGG ACACCAGGTTTATGATAAATTGGGATCCAGGTAAG</p> |

TTAATTTATATTCTCCTTCCTGTGCCGTAAGGATTGCATCGGA
 CTAAACTATCTGTATTTATTATTTGAAGCGAGTCATTTTCGTTT
 CCTGATTATTTATCCTTGTCTGAATGTATTIATGTGTATATTTG
 TAGATTTATCCAGCCGAGCTTAGGAAITTCGCTTCCAGGCCGT
 GGGGGCCACATTTACCTCCTTAGTCCCCCTGGTCTGAACTA
 GTTGAGAGAGTAGTTTTGAACAGTCGTAACCGTGGCTGGTGTT
 TGTAGTTGACATAAAGGATTAAGACCGCAAATGTCCTTCAT
 GGGTAGAGTCAGGAAGCCCGGTGGCGTGGCACAACACACTTT
 GGTCATTTCTCAAAAACCACAGTCCTCACCACAGTTTATTGAT
 TTCAAATGTCTGGTACTATTGGAACAAATATTTAGAATAAAA
 AAATTTCCAGTCGGAACGTATCTGTGTTAATCATGCACACT

| | | | |
|-----------------------|--------|-----|------------------------------|
| HsaD _{MO} 71 | 16,143 | 491 | TGCAAGCAGATCACTATGCCT |
| HsaD _{MO} 72 | 6,777 | 25 | AAAAATAAAAGAAGTCGGGCACAGT |
| HsaD _{MO} 73 | 4,912 | 27 | AAAAAAAAAATTCCTGAGTCAGACTATT |
| HsaD _{MO} 74 | 2,912 | 18 | AAAACAAAACAAAACAAA |