

>HpDGAT2D (original sequence)

ATGCCGGCCTTGCCCTAGGCCATTACGGGCTCTGCCGTTAGGGGTGTTTGTACTCGCAATCAACGCAAATGCGGCGCT
CACTGGGCTAACGCTGTACCGGCTTGTGTGCCACGGTCTGACGGACCTCATTGGGCTCGTGCTGTTGACATCGCTTT
TGTGCGCTGCTTTCGTCCCTTTGACGTTGACCGAGGGACCGCGGACAAAAGCGTTTGTAAGATGGATCTGCAGAACA
GCCGGCGAGTACTTTCCATGCCGTGTAGTTGTGGAAGATGAGGATGGCTTGAAGCCCAACACAGCCTATGTGTTTGG
ATATGAGCCGCACTCAGCTCTGCCCCTGCGGCATACCAACTGTCTTTGCCACGCACTCCCCCTGCTGCCAAAGCAGC
TGCAGGGCAACCTGCACGGCATGGCGTCCTCCGTGTGCTTTGCGGTGCCCTTCGTCCGGCAGCTGTGGTGGTGGCTA
GGCCTGAGGCCGGTGAGTCGGCAGCTGATGACTGGGCTGCTGGCGGCGGGCAAGGCCGTGGTCTCAACCCCGGG
GGGATCCAGGAGTGCATGGGCATGCAACACGGCAGCGAGACAGTGTTCTGCGCAAGCGCCATGGCTTTGTCCGCC
TGGCGATACAGCAGGGCGCACCCCTGGTGCCAGTCTTTGCTTTTGGTCAGAGTGCCACCTACAGCTGGTTTCGCCCC
AAGCCTGACTGGCTGGTTCGCTGGATTAGCAGAAAGGTGGGCGCCGTGCCCTGGCCATGTGGGGGGTGTGGGGCT
CCCCCATCCCCACCAGCGCCCTGTACGGTGGTGATTGGGCAGCCCATCCAGGTCCCCACCAGGCCCATCCCGCG
CCTGAGCTGGTGCAGCAGTACTTGACCGCTTCATACACGACATGGCGGCGTTGTTTGAGCGACACAAGGCCGCGTG
TGCCAGGCGGGATGCGAGTTGCGCATCTTGTA

>HpDGAT2D-Cr (new sequence after codon optimization for *Chlamydomonas reinhardtii*)

ATGCCCGCCCTGCCCGCCCCCTGCGCGCCCTGCCCTGGGCGTGTTCTGTGCTGGCCATCAACGCCAACGCCGCCCT
GACCGGCCTGACCTGTACCGCCTGGTGTGCCACGGCCTGACCGACCTGATCGGCCTGGTGCTGCTGACCAAGCCTGC
TGTGCGCGCGCTTCGTGCCCTGACCTGACCGAGGGCCCCCGCACCAAGGCCCTTCGTGCGCTGGATCTGCCGCACC
GCCGGCGAGTACTTCCCCTGCCCGCTGGTGGTGGAGGACGAGGACGGCCTGAAGCCCAACACCGCCTACGTGTTCTG
GTACGAGCCCCACAGCGCCCTGCCCGTGGGCATCCCCACCGTGTTGCGCACCCACAGCCCCCTGCTGCCCAAGCAG
CTGCAGGGCAACCTGCACGGCATGGCCAGCAGCGTGCTTCGCCGTGCCCTTCGTGCGCCAGCTGTGGTGGTGGC
TGGGCCTGCGCCCCGTGAGCCGCCAGCTGATGACCGGCCTGCTGGCCGCGGGCAAGGCCGTGGTGCTGAACCCCGG
CGGCATCCAGGAGTGCATGGGCATGCAGCACGGCAGCGAGACCGTGTTCTGCGCAAGCGCCAAGGCTTCGTGCGC
CTGGCCATCCAGCAGGGCGCCCCCTGGTGCCCGTGTTGCGCTTCGGCCAGAGCGCCACCTACAGCTGGTTCCGCCC
CAAGCCCGACTGGCTGGTGCGCTGGATCAGCCGCAAGGTGGGCGCCGTGCCCTGGCCATGTGGGGCGTGTTGGGGC
AGCCCCATCCCCACCAGCGCCCCGTGACCGTGTTGATCGGCCAGCCCATCCAGGTGCCCCACCAGGCCACCCCCG
CCCCGAGCTGGTGCAGCAGTACTTGACCGCTTCATCCACGACATGGCCGCGCTGTTGAGCGCCACAAGGCCGCGCT
GCGGCCAGGCCGGCTGCGAGCTGCGCATCTGTAA

Additional file 10: Figure S6 Original sequence of *HpDGAT2D* in *Haematococcus lacustris* and new sequence of *HpDGAT2D-Cr* after codon optimization for *Chlamydomonas reinhardtii*. Red color stands for the modified nucleotide sequence.