

The codon-optimized gene sequence of OleT_{JH}. *NdeI* and *XhoI* restriction sites are underlined. Start and stop codons are shown in red.

CAT**ATG**ATGGCGAGCCTGAAACGCGATAAAGGCCTGGATAACACCCTGAAAGTGATG
AAACAGGGCTATCTGTATACCACCAACCAGCGCAACCGCTTAAACACCACCGTGT
GAAACCAAAGCGCTGGGCGGCAAACCTTTTGCAGTTGTGACCGGTAAAGAAGGCGCG
GAAATGTTTTATAACAACGACATTGTGCAGCGCGAAGGCATGCTGCCGAAACGCATT
GTGAACACCCTGTTTGGCAAAGGCGCGATTTCATACCATTGATGGCAAAAAACACGTG
GATCGCAAAGCGCTGTTTATGAGCCTGATGACCGAAGGCAACCTGAACTATGTGCGC
GAACTGACCCGCACCTTATGGCAAGCAAACACCCAGCGCATGGAAAGCATGGATGAG
GTGAACATTTACCGCGAAAGCATTGTGCTGCTGACCAAAGTTGGTACTCGCTGGGCG
GGTGTTC AAGCACCTCCTGAACAGATTGAACGCATTGCGACCGATATGGACATTATG
ATCGACAGCTTTAAAGGCCTGGGCGGCGTGTTTAAAGGCTATAAGGAAAGCAAAGCG
GCGCGCCGTCTGTGTTGAAGATTGGCTGGAAGATCAGATTCTGGAAACCCGCAAAGGC
AACATTCATCCGCCTGAAGGCACCGCGCTGTATGAATTTGCGCACTGGGAAGATTATC
TGGGCAACCCGATGGATTCACGCAACTGCGCGATTGATCTGATGAACACCTTTCGCCC
GCTGATTGCGATTAACCGCTTTGTGAGCTTTGGCCTGCTGGCGATGCATGATAATCCG
GTGAGCCGCGAAAAAATTAAAGCGAGCCGGATTACGCGTATAAATTTGCGCAGGAA
GTGCGCCGCTATTATCCGTTTGTGCCGTTTTTACCGGGCAAAGCGAAAAACCGATATTG
ATTTTCAGGGCGTGACCATTCTGCGGGTCATGGCTTAGCGATTGATGTGTATGGCAC
CCTGCATGATGAAAGCCTGTGGGAAGATCCGAACGAATTTGCCCCGGAACGCTTTGA
AGGTTGGGATGGCAGCCCGTTTGATCTGATTCTCAGGGCGGCGGCGATTATTGGACC
AACCATCGCTGTGCGGGCGAATGGATTACCGTGATTATCATGGAGGAAACCATGAAA
TATTTGCGGAGAAAGGTGACCTATGATGTGCCGGAACAGGATCTGACCGTGGATCTG
AACAGCATTCCGGGCTATGTGAAAAGCGGCTTCGTGATTAAAAACGTGCAGGAAGTG
GTGGATCGCCGCT**TA**CTCGAG

The codon-optimized gene sequence of OleT_{SQ}. *NdeI* and *XhoI* restriction sites are underlined. Start and stop codons are shown in red.

CAT**ATG**GCGACCATTAACGCGATAAAGGCCTGGATAACAGCGTGAAAGTGATGAAAC
AGGGCTATCTGTATACCACCAACCAGCGCGAACGCTTAGGTGTGACCGATGGCGTTTTT
GAAACCCGTGCGCTGGGCGGTAAACGCATTATTGTGCTGAGCGGCAAAGATGGCGCG
GAACTGTTTTATGATAACGACAAGATTGAACGCAGCGGCACCTTACCTAAACGTGTGG
TGAACACCCTGTTTGGCAAAGGCGCGATTTCATACCACCACCGGCAAAGTGCATATTGA
TCGCAAAGCGCTGTTTATGAGCCTGATGACCGAAGGCAACCTGAAATATCTGCGCGAA
CTGACCCGCAACCTGTGGTTTTGCAAACACCCAGCGCATGGAAAGCATGGATCAGGTG
AACGTGTATCGCGAAAGCATTATTGTGCTGACCAAAGTGGGTACTCGTTGGGCAGGCG
TTCAAGCGCCGGA AAAAGAAATTGAAAACATCGCGACCGACATGGATATTATGATCGA
CAGCTTCAAAGCGATTGGCAGCGCGTTTAAAGGCTATCGCGAAGCGAAAGCGGCGCG
TCGCCGTGTTGAAGATTGGCTGGAGGATCAGATTATTCAGACCCGCAAGGGCAAAATT
CATCCGCCGAAAGGCACCGCGCTGTATGAATTTGCGCACTGGAAAGATTATAAAGGCG
AACCGATGGATAGCCGCTGTGCGGCATTGATCTGATGAACACCTTTCGCCCCGCTGATT
GCGATTAACCGCTTTGTGGCGTTTGGCGCGCTGGCGATGTATGAAAATCCGGTGGCGC
GCGAAAAAATTAAACAGGATGACGACTACGCGTATATGTTTTCGCGAGGAAGTGCGCCG
CTTTTATCCGTTTGTGCCGTATTTACCGGGCAAAGCGAAAGTGGACTTTCAGTACAAAG

GCTACGAGATTGAGAAAGACACCATGCTGGCGCTGGATATTTATGGCACCATGCATGAT
CCGAACGTGTGGGAAGATCCGAACGAATTTTATCCGGAGCGCTTCAAAGATTGGGATG
GCAGCCCCTTTGATTTAATTCCGCAGGGCGGCGGCGATTATCATACCAACCATCGCTGT
GCGGGCGAATGGATGACCGTGATTATTATGGAAGAAACCATGAAATATTTTGCAGGCCG
CATTAACATATGATGTGCCGGAACAGGATCTGACCGTGGATCTGAATAGCCTGCCGGGCT
ATATTAAGCGGCTTCGTGATTGAAAACGTGCAGGAAAACGTGGATCGCACCTAACT
CGAG

The codon-optimized gene sequence of OleT_{SA}. *Nde*I and *Xho*I restriction sites are underlined.
Start and stop codons are shown in red.

CATATGGGCAAACAGATTCCGAAAGATCGCGGCTTAGATAGCACCCCTGAAAGTGCTGA
AAGAGGGCTATAAATATGTGCCGAACCGCCTGGAAAAATTTGACACCAACATCTTTGA
ACTGCGCGCTTAGGTGGTCGTCGTACCGTTGTGTTTAGCGGCAAAGAAGCGGCGGAA
ATCTTTTATAACAACGAGCTGATTGAACGCCAGGGCACCTTACCTAAACGCGTGGTGA
ACACCCTGTTTGGCAAAGGCGCGATTTCATACCACCGGCGGCAAAAAACATATTGATCG
CAAGGCGCTGTTTATGAGCCTGATGACCGAAGAAAACCTGGAATATCTGCGCGAACTG
ACCCGTAGCACCTGGTTTATGAACACCGAACGCATGGAACGCATGGATGAAGTGAACG
TGTAACAAGAGAGCATTATCCTGCTGACCAAAGTGGGTTTTTCGCTGGGCGGGTATTATT
GCGAGCCCGGAAGAAATTGAAAGCTGCGCGAAAGATATGGATACCATGATCGACAGCT
TCAAAAACATTGGCACCGCGTTTAAAGGCTATCGCGAAGCGAAAAAAGCACGCGATC
GCGTGGAACCTTTCTGGAGAACCAGATTATTGCGGTGCGCGAAGGTAAACTGACCCC
TCCTCAAGGTACCGCGCTGCATGAATTTAGCCACTGGGAAGATTTTGAAGGCAACCTG
ATGGATAGCCGCTGTGCGCGATTGATCTGATGAACGTGGTGGTCCGCTGGTTGCGAT
TAACCGCTTTGTGAGCTTTGGCGTGAAAGCGCTGCATGATTATCCGGGCGAAGCGGAA
AAAGTGTTTAACAACGAGAACGACTACGCGTATAAATTCGTGCAGGAAGTGCGCCGCT
TTTATCCGTTTGTGCCGTTTCTGCCGGGTAAAGCGGCGGTGGATATTGAATTTGACGGC
TACAAGATCGAAAAGGATACCTTCCTGGTGCTGGATATTTATGGCACCCCTGCATCGTGA
AGGCCTGTGGGAAAACCCGGAACGCTTTTATCCGAACCGCTTTAGCGATTGGGATGGC
AGCCCGTTTGATTTAATTCCGCAGGGCGGCGGCGATTATTATACCAACCATCGCTGCGC
GGGTGAATGGATGACCATTCATCATGGAGGAGAGCATGAAATATTTTGCAGCGCAACA
TCAGCTATGACATGAAGAAGGATCAGGATCTGAGCGTGAACCTGAACAAACTGCCGG
GCCGTGTTGTTAGCGGCACCATATTGAAAACGTGAACGCGCTGGTGAACCGCAATGT
GGAAAGCGTGTAACTCGAG

Amino acid sequences of OleT_{JH}, OleT_{SQ} and OleT_{SA}.

1) OleT_{JH} (WP_092595307):

MMASLKRDKGLDNTLKVMKQGYLYTTNQRNRLNTTVFETKALGGKPFVVTGKEGAE
MFYNNDIVQREGMLPKRIVNTLFGKGAIHTIDGKKHVDRKALFMSLMTEGNLNYVRELT
RTLWQANTQRMESMDEVNIYRESIVLLTKVGTRWAGVQAPPEQIERIATDMDIMIDSFKGL
GGVFKGYKESKAARRRVEDWLEDQILETRKGNHPPEGTALYEFahwedYLGNPMDSRN
CAIDLMNTFRPLIAINRFVSFGLLAMHDNPVSREKIKSEPDYAYKFAQEVRRYYPFVPFLPG
KAKTDIDFQGV TIPAGHGLAIDVYGT LHDESLWEDPNEFRPERFEGWDGSPFDLIPQGGGD
YWTNHRCAGEWITVIIMEETMKYFAEKVTYDVPEQDLTVDLNSIPGYVKSGFVIKNVQEV
VDRR

2) OleT_{SQ} (WP_092983663):

MATIKRDKGLDNSVKVMKQGYLYTTNQRERLGVTDGVFETRALGGKRIIVLSGKDGAEL
FYDNDKIERSGTLPKRVVNTLFGKGAIHTTTGKVHIDRKALFMSLMTEGNLKYRELTRN
LWFANTQRMESMDQVNVYRESIIVLTKVGTRWAGVQAPEKEIENIATDMDIMIDSFKAIG
SAFKGYREAKAARRRVEDWLEDQIIQTRKGKIHPKGTALYEFahWKDYKGEPMDSRCLC
GIDLMNTFRPLIAINRFVAFGALAMYENPVAREKIKQDDDYAYMFAQEVRRFYFPVYPYLP
AKAKVDFQYKGYEIEKDTMLALDIYGTMHDPNVWEDPNEFYPERFKDWDGSPFDLIPQG
GGDYHTNHRCAGEWMTVIIMEETMKYFASRINYDVPEQDLTVDLNSLPGYIKSGFVIENV
QENVDR

3) OleT_{SA} (WP_049319149):

MGKQIPKDRGLDSTLKVLEKGYKYVPNRLEKFDTNIFELRALGGRRTVVFSGKEAAEIFY
NNELIERQGTLPKRVVNTLFGKGAIHTTGKKHIDRKALFMSLMTEENLEYLRELTRSTW
FMNTERMERMDEVNVYKESIILLTKVGFRWAGIIASPEEIESCAKDMDTMIDSFKNIGTAF
KGYREAKKARDRVETFLENQIIAVREGKLTPPQGTALHEFSHWEDFEGNLMDSRCAIDL
MNVVRPLVAINRFVSFGVKALHDYPGEAEKVFNNDYAYKFVQEVRRFYFPVYPFLPGK
AAVDIEFDGYKIEKDTFLVLDIYGT LHREGLWENPERFYPNRFSWDGSPFDLIPQGGGD
YYTNHRCAGEWMTIIIMEESMKYFARNISYDMKKDQDL SVNLNKLPGRVVSgtIiENVN
ALVNRNVESV