

Product datasheet for **SC117468**

FADS2 (NM_004265) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	FADS2 (NM_004265) Human Untagged Clone
Tag:	Tag Free
Symbol:	FADS2
Synonyms:	D6D; DES6; FADSD6; LLCDL2; SLL0262; TU13
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_004265, the custom clone sequence may differ by one or more nucleotides

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ATGGGGAAGGGAGGGAACCAAGGGCGAGGGGGCCGCCGAGCGGAGGTGTGCGGTGCCACCTTCAGCTGGG
AGGAGATTCAGAAGCATAACCTGCGCACCCAGGAGGCTGGTCAATTGACCGCAAGGTTTACAACATCAC
CAAATGGTCCATCCAGCACCCGGGGGGCCAGCGGGTCACTCGGCACTACGCTGGAGAAGATGCAACGGAT
GCCTTCCGCGCCTTCCACCCTGACCTGGAATTCGTGGCAAGTCTTGAAACCCCTGCTGATTGGTGAAC
TGGCCCCGGAGGAGCCCAGCCAGGACCAGGCAAGAACTCAAAGATCACTGAGGACTTCCGGGCCCTGAG
GAAGACGGCTGAGGACATGAACCTGTTCAAGACCAACCACGTGTTCTTCTCCTCCTCCTGGCCACATC
ATCGCCCTGGAGAGCATTGCATGGTTCCTGTCTTTACTTTGGCAATGGCTGGATTCTACCCCTCATCA
CGGCCTTTGTCCTTGCTACCTCTCAGGCCCAAGCTGGATGGCTGCAACATGATTATGGCCACCTGTCTGT
CTACAGAAAACCAAGTGAACCACTTGTCCACAAAATTCGTCAATTGGCCACTTAAAGGGTGCCTCTGCC
AACTGGTGAATCATCGCCACTTCCAGCACCCAGCCAAAGCCTAACATCTTCCACAAGGATCCCGATGTGA
ACATGTGTCACGTGTTTGTCTGGGCGAATGGCAGCCCATCGAGTACGGCAAGAAGAAGCTGAAATACCT
GCCCTACAATCACCAGCACGAATACTTCTTCTGATTGGGCCGCCGCTGCTCATCCCCATGATTTCCAG
TACCAGATCATCATGACCATGATCGTCCATAAAGAACTGGTGGACCTGGCCTGGGCCGTCAGCTACTACA
TCCGGTTCTTTCATCACCTACATCCCTTTCTACGGCATCCTGGGAGCCCTCCTTTTCTCAACTTCATCAG
GTTCTCTGGAGGCCACTGGTTTGTGGGTACACAGATGAATCACATCGTCATGGAGATTGACCCAGGAG
GCCCTACCGTGACTGGTTCAGTAGCCAGCTGACAGCCACCTGCAACGTGGAGCAGTCTTCTTCAACGACT
GGTTCAGTGGACACCTTAACTTCCAGATTGAGCACCCCTCTTCCCCACCATGCCCGGCACAACCTTACA
CAAGATCGCCCCGCTGGTGAAGTCTCTATGTGCCAAGCATGGCATTGAATACCAGGAGAAGCCGCTACTG
AGGGCCCTGCTGGACATCATCAGGTCCCTGAAGAAGTCTGGGAAGCTGTGGCTGGACGCCTACCTTACA
AATGA
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004265 unedited
 TTCATACTTTGTATACGACTCATATAGGCGGCACGCGAATTCGCACGAGGGTGCAGCGAG
 CAGCCGGCGCGGGGAGGCCGAGTGCACGGGGCGTACAGTCGGCAGGCAGCATGGGGAA
 GGGAGGGAACAGGGCGAGGGGGCCGCCGAGCGGAGGTGTCGGTGCCACCTTCAGCTG
 GGAGGAGATTAGAAAGCATAACCTGCGCACCGACAGGTGGCTGGTATTGACCGCAAGGT
 TTACAACATCACCAATGGTCCATCCAGCACCCGGGGGCCAGCGGGTCATCGGGCACTA
 CGCTGGAGAAGATGCAACGGATGCCTTCCGCGCCTTCCACCCTGACCTGGAATTCGTGGG
 CAAGTTCTTGAAACCCCTGCTGATTGGTGAAGTGGCCCCGGAGGAGCCCAGCCAGGACCA
 CGCAAGAAGTCAAAGATCACTGAGGACTTCCGGGCCCTGAGGAAGACGGCTGAGGACAT
 GAACCTGTTCAAGACCAACCACGTGTTCTTCTCCTCCTCCTGGCCCACATCATCGCCCT
 GGAGAGCATTGCATGGTTCAGTGTCTTTACTTTGGCAATGGCTGGATTCTACCCTCAT
 CACGGCCTTTGCTTGTACTCTCATGCCAAGCTGGATGGCTGCAACATGATTATGG
 CCACCTGTCTGTACAGAAAACCAAGTGAACACCTTGTCCACAAATTCGTATTGG
 CCACTTAAAGGGTGCCTCTGCCAAGTGGTGAATCATCGCCACTCCAGCACCGCCCA
 GCCTAACATCTGTACAAGGATCCCGATGTGAAGTCTGCNNNGGGTTTGTCTGGGG
 CGAATGGCANCCATCGAGTACGGCAGAAGAAATCTGAATACCTGCCCTACATCAGACGA
 CGATACCTCTTCTGATTGGCCGCGCTGCTATCCNCATGNTTTTTCAGTACAGATATCT
 GACCCTGATCGTCTT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_004265 unedited
 TAACCTTGNAAACCGCGCCGATNCTANGATCGAGTTTTTTTTTTTTTTTTTTTTTTTTT
 TTGAGAATAAAATTCCTTATTTTATTTCAAAAAGTAGGGGTGGGGAAGTAACATGATAA
 ACATTACGATCAGCTCCCTATGGGTTTCTTCTGCCTCTGCGGGGGTGGGGGCATACAGT
 AGCTGGGGGGCATGCCATTGCCATGGCAACCCAGATGCTTAGATGCAGGTCCCTCCTGGC
 TGCTTAAAGCTGGGGGACTAGGCGCCCTCCCCGAAAGCCCCATTCTGAGTTGTTGGTG
 CCTGCCCTTCCCCTGAATCTAAGAACTGATTAGTGGGTTAGACTGCAACAGCAGCTCAGG
 ATCCTCCCAGGACTTCCCCTCCCCTCTCACTTGCCTGCCCCCTCAGCTACCAGCACC
 TCCAGCCCCACCTCCTCCTTCTCAGCTCCACCCTGGTCTCATGAGGTACCCCTCC
 CCAGCCCCCAGGGCAGCCTCCTCCTGAGACTCCCTCCCGCTCTGCCNTCCCTGGCCCTC
 CCTGACAGTCAGGGCCACCGAGGCAAGGCCATGTGGTGAAGCAACAGTTTAAACCATAAAGG
 CAACCTGCCCCCCCCTCCTATCAAAATGCATCCTGAAGCAACAGTTTAAACCATAAAGG
 AGGTTCAAACAGGAAATGCCGAAGGAACCCCTTCAAACAAAACCCCAATGGGGAGGG
 CTGGAACAACACTTCAAACCTCAGTGCCCTCTTGAAGCGAAGGCCACTTCTGGGGCC
 CAAGGGCCAGGATTGCTGGACTTGCACCTTAAACACAACCTTTTGAAGGTACAATTGTCC
 AAAATTTAAACCAAGACCCCGAAAAACGGGAGTGGGTTGAAGTCCAGCAACCGGCCCT
 CCGAAAAGGCCCTGCCTGGTAA

Restriction Sites:

NotI-NotI

ACCN:

NM_004265

Insert Size:

3090 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_004265.2](#), [NP_004256.1](#)

RefSeq Size: 3149 bp

RefSeq ORF: 1335 bp

Locus ID: 9415

UniProt ID: [O95864](#)

Cytogenetics: 11q12.2

Domains: heme_1, FA_desaturase

Protein Families: Transmembrane

Protein Pathways: alpha-Linolenic acid metabolism, Biosynthesis of unsaturated fatty acids, PPAR signaling pathway

Gene Summary:

The protein encoded by this gene is a member of the fatty acid desaturase (FADS) gene family. Desaturase enzymes regulate unsaturation of fatty acids through the introduction of double bonds between defined carbons of the fatty acyl chain. FADS family members are considered fusion products composed of an N-terminal cytochrome b5-like domain and a C-terminal multiple membrane-spanning desaturase portion, both of which are characterized by conserved histidine motifs. This gene is clustered with family members at 11q12-q13.1; this cluster is thought to have arisen evolutionarily from gene duplication based on its similar exon/intron organization. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2013]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).