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Product datasheet for RN213635

Fads2 (NM_031344) Rat Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Fads2 (NM_031344) Rat Untagged Clone
Tag:	Tag Free
Symbol:	Fads2
Synonyms:	Fadsd6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>RN213635 representing NM_031344
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGGAAGGGAGGTAACCAGGGAGAGGGGAGCACCGAGCTCCAGGCTCCGATGCCCACCTTCCGCTGGG
AGGAGATTCAGAAGCACAACCTGCGCACCGACCGGTGGCTCGTCATCGACCGCAAGGTCTACAACGTTAC
CAAATGGTCCCAGCGGCACCCAGGGGGGCACCGTGTCATCGGACACTATTCGGGAGAAGATGCTACGGAT
GCCTTCCGTGCCTTCCACCTGGACCTGGATTTCGTGGGCAAGTTCTTGAAGCCCCTGCTGATTGGTGAGC
TGGCCCCAGAGGAGCCCAGCCTGGACCGGGGCAAAAGCTCTCAGATCACCGAGGACTTCAGGGCCCTGAA
GAAGACTGCTGAGGACATGAACCTTTTCAAAACCAACCACCTGTTCTTCTTTCTCCTCCTGTCCCACATC
ATCGTCATGGAAAGCATCGCCTGGTTCATCCTCTCGTACTTCGGCAATGGCTGGATTCCCACCGTCATCA
CGGCCTTTGTCCTTGCTACCTCCCAGGCCCAAGCTGGATGGCTACAACATGATTATGGCCACCTTTCTGT
CTATAAGAAATCCATATGGAACCACATTGTCCACAAGTTTGTCATTGGCCACTTAAAGGGTGCCTCCGCC
AACTGGTGGAACCATCGACATTTCCAGCACCATGCGAAGCCCAACATCTTCCACAAGGACCCCGACATAA
AGAGCCTGCACGTGTTTGTCCTTGGAGAGTGGCAGCCCCTCGAGTATGGCAAGAAGAAGCTGAAATATCT
GCCCTACAACCACCAGCATGAATACTTCTTCCTGATCGGACCACCGCTGCTCATCCCTATGTACTTCCAG
TACCAGATCATCATGACCATGATCAGACGCAGAGACTGGGTGGACTTGGCCTGGGCCATCAGCTACTATG
CACGTTTCTTCTACACCTATATCCCTTTCTATGGCATCTTGGGAGCCCTGGTTTTCCTCAACTTTATCAG
GTTCCTGGAGAGCCACTGGTTTGTGTGGGTCACACAGATGAACCACATTGTCATGGAGATTGATCTTGAT
CACTACCGGGACTGGTTCAGCAGCCAGCTGGCAGCCACCTGCAATGTGGAGCAGTCCTTCTTCAATGACT
GGTTCAGCGGGCACCTCAATTTCCAGATTGAGCACCACCTCTTCCCCACTATGCCAAGACACAACTTGCA
CAAGATTGCCCCACTGGTGAAGTCTCTCTGCGCCAAGCATGGCATTGAATACCAAGAGAAGCCGCTGCTG
AGGGCCCTGCTCGACATTGTGAGTTCACTGAAGAAGTCTGGGGAGCTGTGGCTGGATGCCTACCTCCACA
AATGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Chromatograms: https://cdn.origene.com/chromatograms/ja2702_f07.zip

Restriction Sites: SgfI-MluI

ACCN: NM_031344

Insert Size: 1335 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_031344.2, NP_112634.1
RefSeq Size:	1706 bp
RefSeq ORF:	1335 bp
Locus ID:	83512
UniProt ID:	Q9Z122
Cytogenetics:	1q43
Gene Summary:	Acts as a fatty acyl-coenzyme A (CoA) desaturase that introduces a cis double bond at carbon 6 of the fatty acyl chain. Involved in biosynthesis of highly unsaturated fatty acids (HUFA) from the essential polyunsaturated fatty acids (PUFA) linoleic acid (LA) (18:2n-6) and alpha-linolenic acid (ALA) (18:3n-3) precursors. Catalyzes the first and rate limiting step in this pathway which is the desaturation of LA (18:2n-6) and ALA (18:3n-3) into gamma-linoleate (GLA) (18:3n-6) and stearidonate (18:4n-3), respectively (PubMed:10049752, PubMed:14563830, PubMed:22216341, PubMed:11988075). Subsequently, in the biosynthetic pathway of HUFA n-3 series, desaturates tetracosapentaenoate (24:5n-3) to tetracosahexaenoate (24:6n-3), which is then converted to docosahexaenoate (DHA)(22:6n-3), an important lipid for nervous system function (PubMed:11988075). Also desaturates (11E)-octadecenoate (trans-vaccenoate)(18:1n-9), a metabolite in the biohydrogenation pathway of LA (18:2n-6) (PubMed:24070791).[UniProtKB/Swiss-Prot Function]