

Product datasheet for **MR207139**

Fads1 (NM_146094) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Fads1 (NM_146094) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Fads1
Synonyms:	0710001O03Rik; A930006B21Rik; AI317215; DSD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR207139 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCTCCCGACCCGGTCCGACCCTGGCCCGCCTCCGCCAGCTCCGCCAAACGCGCTACTTTACTT
 GGGAGGAGGTGGCGCAGCGCTCCGGGCGGAGAAGGAGCGATGGCTCGTGATCGACCGGAAGGTGTACAA
 CATCAGCGACTTCAGCCGCCACCCTGGGGGCTCCCGGTCATCAGCCACTACCGGGTCAGGATGCC
 ACGGATCCTTTTGTGGCATTCCACATCAACAAGGGTCTTGTGAGAAAGTATATGAACTCTTCTGATTG
 GAGAGTGGCTCCGGAGCAACCCAGCTTTGAACCCACCAAGAATAAAGCGCTAACTGATGAATCCGGGA
 GCTGCGGGCCACAGTAGAGCGAATGGCCCTCATGAAGGCCAACCCCTCTTCTTCTGGTCTACCTGCTT
 CACATCCTGCTGGATGTGGTGCCTGGCTCACCTTTGGATCTTTGGAATTCCTTGGTGCCCTTCA
 TCCTCTGTGCAGTACTGCTCAGTACAGTTCAGGCTCAGGCAGGTTGGCTACAGCATGACTTTGGCACCT
 GTCAGTCTTTGGCACCTCGACATGGAATCACCTGCTACATCATTTTGTGATTGGCCACCTGAAGGGGGCC
 CCCGCCAGCTGGTGAACCACATGCATTTCCAGCACCATGCCAAGCCTAACTGCTCCGCAAGGACCCCG
 ATATCAACATGCACCCCTCTTCTTCGCCCTGGGGAAGGTCTTCTGTGGAGCTCGGGAGGGAAAAGAA
 GAAGCACATGCCATACAACCATCAGCACAACTTCTTCTCATCGGACCCCGAGCCTTGTGCCTCTA
 TACTTCCAGTGGTATATTTTCTATTTTGTGGTTACGCGGAAGAAATGGCTGGACTTGGCCTGGATGCTCA
 GCTTCTATGCCCGCATCTTCTCACTTACATGCCGCTGCTGGGGCTGAAAGGCTTCTGGGCCTTTTCTT
 CATTGTGAGGTTCTGAAAGCAACTGGTTTGTGTGGTGACACAGATGAACCATATCCCATGCACATT
 GATCACGACCGAATGTGGACTGGTCTCCACCAGCTGCAGGCAACCTGCAACATTACCAATCAGCCT
 TCAACAACCTGGTTCAGTGGCCACCTAAATTTCCAGATTGAACACCACCTTCTCCACCATGCCCGGCA
 CAACTACCACAAGGTGGCACCCCTAGTACAATCCCTGTGCGCCAAGTACGGCATCAAGTATGAGTCCAAG
 CCCCTGCTCACAGCCTTCGCGGACATTGTTTACTCCCTGAAGGAGTCAGGGCAACTCTGGTTGGACGCTT
 ACCTTCACCAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR207139 protein sequence
 Red=Cloning site Green=Tags(s)

MAPDPVPTPGPASAQLRQTRYFTWEEVAQRSGREKERWLVIDRKVYNI SDFSRRHPPGSRVISHYAGQDA
 TDPFVAFHINKGLVRKYMNSLLIGELAPEQPSFEPTKNKALTDEFREL RATVERMGLMKANHLFFLVYLL
 HILLLLDVAAWLTLWIFGTSLVPFILCAVLLSTVQAQAGWLQHDFGHL SVFGTSTWNHLLHHFVIGHLKGA
 PASWNNMHMFQHHAKPNCFRKDPDINMHPLFFALGKVLPEL GREKKKHMPYNHQHYFFLIGPPALLPL
 YFQWYIFYFVVQRKKWLDLAWMLSFYARIFFTYMPLLGLKGFLGLFFIVRFLESNWFVWVTQMNHIPMHI
 DHDRNVDWYSTQLQATCNIHQSAFNWFSGHLNFQIEHHLFPTMPRHNYHKVAPLVQSLCAKYGIKYESK
 PLLTAFADIVYSLKESQLWLDAYLHQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_146094

ORF Size: 1344 bp

OTI Disclaimer: 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](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_146094.1](#), [NM_146094.2](#), [NP_666206.1](#)
RefSeq Size: 3474 bp

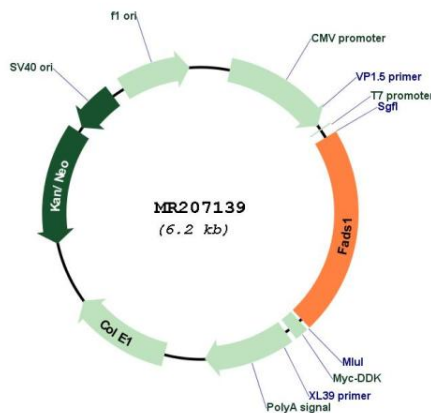
RefSeq ORF: 1344 bp

Locus ID: 76267

UniProt ID: [Q920L1](#)

Cytogenetics:	19 A
MW:	52.4 kDa
Gene Summary:	<p>Acts as a front-end fatty acyl-coenzyme A (CoA) desaturase that introduces a cis double bond at carbon 5 located between a preexisting double bond and the carboxyl end 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. Specifically, desaturates dihomo-gamma-linoleoate (DGLA) (20:3n-6) and eicosatetraenoate (ETA) (20:4n-3) to generate arachidonate (AA) (20:4n-6) and eicosapentaenoate (EPA) (20:5n-3), respectively (Probable). As a rate limiting enzyme for DGLA (20:3n-6) and AA (20:4n-6)-derived eicosanoid biosynthesis, controls the metabolism of inflammatory lipids like prostaglandin E2, critical for efficient acute inflammatory response and maintenance of epithelium homeostasis. Contributes to membrane phospholipid biosynthesis by providing AA (20:4n-6) as a major acyl chain esterified into phospholipids. In particular, regulates phosphatidylinositol-4,5-bisphosphate levels, modulating inflammatory cytokine production in T-cells (PubMed:22534642). Also desaturates (11E)-octadecenoate (trans-vaccenoate)(18:1n-9), a metabolite in the biohydrogenation pathway of LA (18:2n-6) (By similarity).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR207139