

Recombinant Mouse Fads2 Protein, Myc/DDK-tagged

Cat. No. Fads2-2905M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of mouse full-length fatty acid desaturase 2 (Fads2), with C-terminal MYC/DDK tag, expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	Involved in the 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, acting as a fatty acyl-coenzyme A (CoA) desaturase that introduces a cis double bond at carbon 6 of the fatty acyl chain. 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. Subsequently, in the biosynthetic pathway of HUFA n-3 series, it 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. It can also desaturate (11E)-octadecenoate (trans-vaccenoate) at carbon 6 generating (6Z,11E)-octadecadienoate. In addition to Delta-6 activity, this enzyme exhibits Delta-8 activity with slight biases toward n-3 fatty acyl-CoA substrates.
Molecular Mass	52.4 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Fads2 fatty acid desaturase 2 [Mus musculus (house mouse)]
Official Symbol	Fads2
Synonyms	FADS2; fatty acid desaturase 2; D6D; delta-6 desaturase; delta(6) desaturase; delta-6 fatty acid desaturase; delta(6) fatty acid desaturase; Fadsd2; 2900042M13Rik
Gene ID	56473
mRNA Refseq	NM_019699
Protein Refseq	NP_062673
UniProt ID	Q9Z0R9

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