Recombinant FADS2 protein (His tag)

Catalog Number	544250
Synonyms	Delta(6) fatty acid desaturase; D6D; Delta(6) desaturase; Delta-6 desaturase; Fatty acid desaturase 2
Species	Human
Expression System	E. coli
Accession	O95864
Molecular Weight	Predictes a molecular mass of 16.55 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	1-131
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-131 aa (O95864) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Acyl-CoA 6-Desaturase (FADS2) Fragment (residues 1-131) is a high-purity protein designed for targeted research on the cytochrome b5 heme-binding domain. This fragment enables focused investigation into the catalytic mechanisms of this key enzyme in highly unsaturated fatty acid biosynthesis. The full-length Acyl-CoA 6-desaturase (FADS2) is an endoplasmic reticulum membrane protein that catalyzes the first and rate-limiting step in the biosynthesis of highly unsaturated fatty acids (HUFA). It introduces cis double bonds at carbon 6 of fatty acyl chains, converting linoleic acid and alpha-linolenic acid precursors into gamma-linoleate and stearidonate, respectively. This enzyme also participates in docosahexaenoate (DHA) synthesis for nervous system function and generates sapienate, a human-specific sebum component with potential antibacterial properties. The protein demonstrates both Delta-6 and Delta-8 desaturase activities and processes various fatty acid substrates including trans-vaccenoate.