Recombinant SCD protein (His tag)

Catalog Number	546414
Synonyms	hSCD1; Acyl-CoA desaturase; Delta(9)-desaturase; Delta-9 desaturase; Fatty acid desaturase
Species	Human
Expression System	E. coli
Accession	O00767
Molecular Weight	Predictes a molecular mass of 13.53 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	119-217
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 119-217 aa (O00767) 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 Stearoyl-CoA Desaturase (hSCD1) Fragment (aa 119-217) - A high-purity, soluble protein fragment ideal for structural studies and biochemical characterization of this key lipid metabolism enzyme. This 99-amino acid fragment represents a stable domain optimized for research applications investigating fatty acid desaturase function. Human Stearoyl-CoA Desaturase (SCD, EC 1.14.19.1) is an endoplasmic reticulum membrane-bound enzyme that catalyzes the rate-limiting step in monounsaturated fatty acid synthesis. Using oxygen and electrons from reduced cytochrome b5, SCD introduces the first cis double bond at the delta-9 position into saturated fatty acyl-CoA substrates such as palmitoyl-CoA and stearoyl-CoA, generating 16:1 and 18:1 unsaturated fatty acids. This enzyme plays a crucial role in lipid biosynthesis, regulating genes involved in lipogenesis and mitochondrial fatty acid oxidation, and contributes significantly to body energy homeostasis. SCD is essential for the biosynthesis of membrane phospholipids, cholesterol esters, and triglycerides, making it a key regulator of cellular lipid composition and metabolic balance.