Recombinant CERS3 protein (His tag)

Catalog Number	547667
Synonyms	CerS3; Dihydroceramide synthase 3; LAG1 longevity assurance homolog 3; Sphingosine N-acyltransferase CERS3; Ultra-long-chain ceramide synthase CERS3; Very-long-chain ceramide synthase CERS3
Species	Human
Expression System	E. coli
Accession	Q8IU89
Molecular Weight	Predictes a molecular mass of 12.05 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	53-138
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 53-138 aa (Q8IU89) 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 Ceramide Synthase 3 (CerS3) Fragment (residues 53-138) is a highly stable and soluble protein unit derived from human CERS3. This fragment is specifically designed for structural and biochemical studies, enabling researchers to investigate the mechanisms of very-long-chain and ultra-long-chain ceramide synthesis critical for epidermal homeostasis and cellular differentiation. Ceramide Synthase 3 (CerS3) is an endoplasmic reticulum membrane-bound enzyme that catalyzes the N-acylation of sphingoid bases using very-long-chain (C22+) and ultra-long-chain fatty acyl-CoAs as substrates. It plays an essential role in both de novo synthesis (producing dihydroceramides from sphinganine) and salvage pathways (producing ceramides from sphingosine). CerS3 is particularly crucial for maintaining epidermal lipid homeostasis and facilitating terminal differentiation through the production of ultra-long-chain ceramides. Its localization in the endoplasmic reticulum membrane underscores its integral role in lipid metabolism and membrane biology.