Recombinant CERS5 protein (His tag)

Catalog Number	543140
Synonyms	CerS5; LAG1 longevity assurance homolog 5; Sphingoid base N-palmitoyltransferase CERS5; Sphingosine N-acyltransferase CERS5
Species	Human
Expression System	E. coli
Accession	Q8N5B7
Molecular Weight	Predictes a molecular mass of 11.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	68-147
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 68-147 aa (Q8N5B7) 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 Ceramide Synthase 5 (CerS5) Fragment (residues 68-147) is a highly purified protein fragment designed for structural and biochemical studies. This 80-amino acid fragment represents a stable and soluble unit of CerS5, optimized for investigating the enzyme's role in sphingolipid metabolism and its specificity toward palmitoyl-CoA. Ceramide Synthase 5 (CerS5) is a key enzyme in sphingolipid biosynthesis, catalyzing the N-acylation of sphingoid bases using acyl-CoA donors with high selectivity for palmitoyl-CoA (C16:0-CoA). It functions in both de novo synthesis and salvage pathways, converting sphinganine to dihydroceramides and sphingosine to ceramides. CerS5 is localized to the endoplasmic reticulum membrane as a multi-pass membrane protein and plays a critical role in surfactant homeostasis in pulmonary epithelia. Its activity influences cellular processes such as signaling, apoptosis, and membrane integrity, making it a significant target for metabolic and disease research.