Recombinant SCAP protein (His tag)

Catalog Number	542587
Synonyms	SCAP; SREBP cleavage-activating protein
Species	Human
Expression System	E. coli
Accession	Q12770
Molecular Weight	Predictes a molecular mass of 29.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	40-279
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 40-279 aa (Q12770) 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 SCAP (Sterol regulatory element-binding protein cleavage-activating protein) fragment (amino acids 40-279) is a high-purity, stable protein designed for structural and biochemical studies. This soluble fragment supports research into cholesterol homeostasis and SREBP pathway regulation, offering a reliable tool for investigating lipid metabolism mechanisms. SCAP is an essential escort protein in cholesterol and lipid homeostasis, regulating the transport of the SCAP-SREBP complex from the endoplasmic reticulum to the Golgi apparatus under low cholesterol conditions. This process enables the proteolytic activation of sterol regulatory element-binding proteins (SREBF1/SREBP1 and SREBF2/SREBP2), leading to nuclear translocation and upregulation of genes involved in cholesterol synthesis and uptake, such as LDLR and INSIG1. SCAP's activity is sterol-dependent: high sterol levels promote ER retention through INSIG binding, while low sterol levels trigger conformational changes, COPII vesicle recruitment, and Golgi transport. The protein localizes to endoplasmic reticulum, Golgi apparatus, and COPII-coated vesicle membranes as a multi-pass membrane protein, with its movement between compartments critical for maintaining lipid balance.