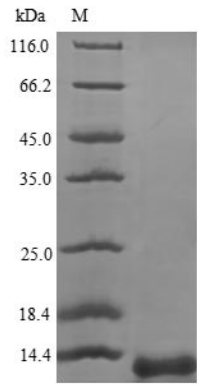
Recombinant Human Prosaposin (PSAP), partial

Product Code	CSB-YP018836HU
Relevance	Saposin-A and saposin-C stimulate the hydrolysis of glucosylceramide by beta-glucosylceramidase and galactosylceramide by beta-galactosylceramidase. Saposin-C apparently acts by combining with the enzyme and acidic lipid to form an activated complex, rather than by solubilizing the substrate. Saposin-B stimulates the hydrolysis of galacto-cerebroside sulfate by arylsulfatase A, GM1 gangliosides by beta-galactosidase and globotriaosylceramide by alpha-galactosidase A. Saposin-B forms a solubilizing complex with the substrates of the sphingolipid hydrolases. Saposin-D is a specific sphingomyelin phosphodiesterase activator. Prosaposin: Behaves as a myelinotrophic and neurotrophic factor, these effects are mediated by its G-protein-coupled receptors, GPR37 and GPR37L1, undergoing ligand-mediated internalization followed by ERK phosphorylation signaling. Saposins are specific low-molecular mass non-enzymic proteins, they participate in the lysosomal degradation of sphingolipids, which takes place by the sequential action of specific hydrolases.
Abbreviation	Recombinant Human PSAP protein, partial
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P07602
Alias	Proactivator polypeptide
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SDVYCEVCEFLVKEVTKLIDNNKTEKEILDAFDKMCSKLPKSLSEECQEVVDTY GSSILSILLEEVSPELVCSMLHLCSGT
Research Area	Signal Transduction
Source	Yeast
Target Names	PSAP
Protein Names	Recommended name: Proactivator polypeptide Cleaved into the following 5 chains: 1. Saposin-A Alternative name(s): Protein A Saposin-B-Val Saposin-B Alternative name(s): Cerebroside sulfate activator Short name= CSA
Expression Region	311-391aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	11.1kDa

Protein Length	Partial

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The recombinant human PSAP protein is a fusion protein consists of the human PSAP protein (311-391aa) partnered with the N-terminal 6xHis tag. It was produced in the yeast. This recombinant PSAP protein's purity is greater than 90% determined by SDS-PAGE. After electrophoresis, there is a 12 kDa protein band presented on the gel.

Mutations in this gene have been associated with Gaucher disease and metachromatic leukodystrophy. Alternative splicing results in multiple transcript variants, at least one of which encodes an isoform that is proteolytically processed. Moreover, PSAP variants in Parkinson's disease have also been reported in a large cohort study in Chinese mainland population. PSAP encodes a prosaposin protein that degrades into four active saposins (A–D). Saposins A-D localize primarily to the lysosomal compartment where they facilitate the catabolism of glycosphingolipids with short oligosaccharide groups. It has been identified that prosaposin, as closely related with mTOR signaling, mediating inflammation in atherosclerosis. Additionally, PGRN binding to PSAP facilitated lysosomal trafficking of each other. The loss of lysosomal protein PSAP-mediated neuronal death OR or nonthermal plasma-activated Ringer's lactate-triggered ferroptosis.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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