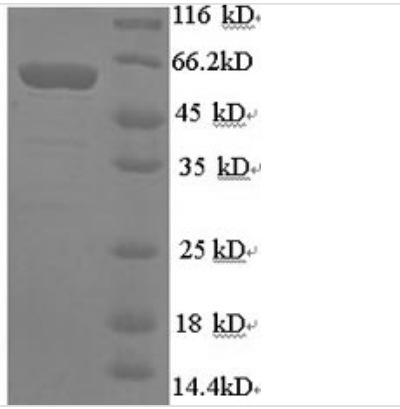
Recombinant Human Synapsin-1 (SYN1), partial

Product Code	CSB-EP023002HU
Relevance	Neuronal phosphoprotein that coats synaptic vesicles, binds to the cytoskeleton, and is believed to function in the regulation of neurotransmitter release. The complex formed with NOS1 and CAPON proteins is necessary for specific nitric-oxid functions at a presynaptic level.
Abbreviation	Recombinant Human SYN1 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.	P17600
Alias	Brain protein 4.1Synapsin I
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SRVLLVIDEPHTDWAKYFKGKKIHGEIDIKVEQAEFSDLNLVAHANGGFSVDME VLRNGVKVVRSLKPDFVLIRQHAFSMARNGDYRSLVIGLQYAGIPSVNSLHSVY NFCDKPWVFAQMVRLHKKLGTEEFPLIDQTFYPNHKEMLSSTTYPVVVKMGH AHSGMGKVKVDNQHDFQDIASVVALTKTYATAEPFIDAKYDVRVQKIGQNYKA YMRTSVSGNWKTNTGSAMLEQIAMSDRYKLWVDTCSEIFGGLDICAVEALHG KDGRDHIIEVVGSSMPLIGDHQDEDKQLIVELVVNKMAQALPR
Research Area	Neuroscience
Source	E.coli
Target Names	SYN1
Expression Region	113-420aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	61.6kDa
Protein Length	Partial
Image	



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

Description

The region for expressing recombinant Human SYN1 contains amino acids 113-420. This SYN1 protein is expected to have a theoretical molecular weight of 61.6 kDa. This SYN1 protein is produced using e.coli expression system. The SYN1 coding gene included the N-terminal GST tag, which simplifies the detection and purification processes of the recombinant SYN1 protein in following stages of expression and purification.

Synapsin-1 (SYN1) is a neuronal phosphoprotein that plays a crucial role in regulating neurotransmitter release and synaptic vesicle trafficking. It belongs to the synapsin family, which consists of three isoforms (I, II, and III) and is primarily associated with the presynaptic terminals of neurons. SYN1 is involved in the modulation of synaptic transmission by tethering synaptic vesicles to the cytoskeleton and regulating their availability for release. Phosphorylation of SYN1 by various protein kinases, including cAMP-dependent protein kinase (PKA) and calcium/calmodulin-dependent protein kinase II (CaMKII), is a key regulatory mechanism controlling its activity. Research on SYN1 encompasses investigations into synaptic plasticity, neurotransmitter release, and the molecular mechanisms underlying neurological and psychiatric disorders, as alterations in SYN1 function have been implicated in conditions such as epilepsy, schizophrenia, and bipolar disorder.

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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