

Datasheet for ABIN7565178  
**SYT7 Protein (AA 1-403) (His tag)**



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## Overview

Quantity:	1 mg
Target:	SYT7
Protein Characteristics:	AA 1-403
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SYT7 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Purpose:	Custom-made recombinat Syt7 Protein expressed in mammalien cells.
Sequence:	MYRDPEAASP GAPTRDVLLV SAIITVSLSV TIVLCGLCHW CQRKLGKRYK NSLETVGTPD SGRGRGEKKA IKLPAGGKAV NTAPVPGQTP HDESDRRTET RSSVSDLVNS LTSEMLMLSP GSEEDAHEG CSRENLGRIQ FSVGYNFQES TLTVKVMKAQ ELPAKDFSGT SDPFVKIYLL PDKKHKLETK VKRKNLNPHW NETFLFEGFP YEKVVQRVLY LQVLDYDRFS RNDPIGEVSI PLNKVDLTQM QTFWKDLKPC SDGSGSRGEL LLSLCYNPSA NSIIVNIIKA RNLKAMDIGG TSDPYVKVWL MYKDKRVEKK KTVTKRNLN PIFNESFAFD IPTEKLRETT IIITVMDKDK LSRNDVIGKI YLSWKSGPGE VKHWKDMIAR PRQPVAQWHQ LKA <b>Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.</b>
Characteristics:	Key Benefits:

## Product Details

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- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

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Purity: > 90 % as determined by Bis-Tris Page, Western Blot

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Grade: custom-made

## Target Details

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Target: SYT7

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Alternative Name: Syt7 ([SYT7 Products](#))

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Background: Synaptotagmin-7 (Synaptotagmin VII) (SytVII),FUNCTION: Ca(2+) sensor involved in Ca(2+)-dependent exocytosis of secretory and synaptic vesicles through Ca(2+) and phospholipid binding to the C2 domain. Ca(2+) induces binding of the C2-domains to phospholipid membranes and to assembled SNARE-complexes, both actions contribute to triggering exocytosis. SYT7 binds Ca(2+) with high affinity and slow kinetics compared to other synaptotagmins (PubMed:26738595). Involved in Ca(2+)-triggered lysosomal exocytosis, a major component of the plasma membrane repair (By similarity). Ca(2+)-regulated delivery of lysosomal membranes to the cell surface is also involved in the phagocytic uptake of particles by macrophages (PubMed:16982801, PubMed:21041449). Ca(2+)-triggered lysosomal exocytosis also plays a role in bone remodeling by regulating secretory pathways in osteoclasts and osteoblasts (PubMed:18539119). Involved in cholesterol transport from lysosome to peroxisome by promoting membrane contacts between lysosomes and peroxisomes: probably acts by promoting vesicle fusion by binding phosphatidylinositol-4,5-bisphosphate on peroxisomal membranes (PubMed:25860611). Acts as a key mediator of synaptic facilitation, a

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## Target Details

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process also named short-term synaptic potentiation: synaptic facilitation takes place at synapses with a low initial release probability and is caused by influx of Ca(2+) into the axon terminal after spike generation, increasing the release probability of neurotransmitters (PubMed:24569478, PubMed:26738595). Probably mediates synaptic facilitation by directly increasing the probability of release (PubMed:26738595). May also contribute to synaptic facilitation by regulating synaptic vesicle replenishment, a process required to ensure that synaptic vesicles are ready for the arrival of the next action potential: SYT7 is required for synaptic vesicle replenishment by acting as a sensor for Ca(2+) and by forming a complex with calmodulin (PubMed:24569478). Also acts as a regulator of Ca(2+)-dependent insulin and glucagon secretion in beta-cells (PubMed:18308938, PubMed:19171650). Triggers exocytosis by promoting fusion pore opening and fusion pore expansion in chromaffin cells (PubMed:20956309). Also regulates the secretion of some non-synaptic secretory granules of specialized cells (By similarity). {ECO:0000250|UniProtKB:Q62747, ECO:0000269|PubMed:16982801, ECO:0000269|PubMed:18308938, ECO:0000269|PubMed:18539119, ECO:0000269|PubMed:19171650, ECO:0000269|PubMed:20956309, ECO:0000269|PubMed:21041449, ECO:0000269|PubMed:24569478, ECO:0000269|PubMed:25860611, ECO:0000269|PubMed:26738595}.

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Molecular Weight: 45.5 kDa

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UniProt: [Q9R0N7](#)

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Pathways: [Synaptic Vesicle Exocytosis](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: The buffer composition is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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## Handling

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months