

Datasheet for ABIN3110233

**CHST1 Protein (AA 1-411) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

Quantity:	1 mg
Target:	CHST1
Protein Characteristics:	AA 1-411
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CHST1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

## Product Details

Sequence:	<p>MQCSWKAVLL LALASIAIQY TAIRFTAKS FHTCPGLAEA GLAERLCEES PTFAYNLSRK THILILATTR SGSSFVGQLF NQHLDVFYLF EPLYHVQNTL IPRFTQ GKSP ADRRV MLGAS RDLLRSLYDC DLYFLENYIK PPPVNHTTDR IFRRGASRVL CSRPVCDPPG PADLVLEEGD CVRKCGLLNL TVAAEACRER SHVAIKTVRV PEVNDLRALV EDPRLNLKVI QLVRDPRGIL ASRSETFRDT YRLWRLWYGT GRKPYNL DVT QLTTVCEDFS NSVSTGLMRP PWLKGKYM LV RYEDLARNPM KKTEEIYGFL GIPLDSHVAR WIQNNTRGDP TLGKH KYGT V RNAATAEKW RFRLSYDIVA FAQNACQQVL AQLGYKIAAS EEELKNPSVS LVEERDFRPF S</p> <p><b>Sequence without tag. The proposed Strep-Tag is based on experience s 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></p>
Characteristics:	Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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 will ensure that you receive a correctly folded protein.

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.

### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

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### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

## Product Details

Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

## Target Details

Target:	CHST1
Alternative Name:	CHST1 ( <a href="#">CHST1 Products</a> )
Background:	<p>Carbohydrate sulfotransferase 1 (Galactose/N-acetylglucosamine/N-acetylglucosamine 6-O-sulfotransferase 1) (GST-1) (Keratan sulfate Gal-6 sulfotransferase) (KS6ST) (KSGal6ST) (KSST) (EC 2.8.2.21),FUNCTION: Sulfotransferase that utilizes 3'-phospho-5'-adenylyl sulfate (PAPS) as sulfonate donor to catalyze the transfer of sulfate to position 6 of internal galactose (Gal) residues of keratan. Cooperates with B4GALT4 and B3GNT7 glycosyltransferases and CHST6 sulfotransferase to construct and elongate disulfated disaccharide unit [-&gt;3(6-sulfoGalbeta)1-&gt;4(6-sulfoGlcNAcbeta)1-&gt;] within keratan sulfate polymer (PubMed:17690104, PubMed:9405439, PubMed:10642612). Has a preference for sulfating keratan sulfate, but it also transfers sulfate to the unsulfated polymer (PubMed:9405439). Involved in biosynthesis of phosphacan, a major keratan sulfate proteoglycan in the developing brain (By similarity). Involved in biosynthesis of 6-sulfoGalbeta-containing O-linked glycans in high endothelial venules of lymph nodes. May act in a synergistic manner with CHST4 to generate sialyl 6',6'-disulfo Lewis X motif, a recognition determinant for immune cell receptors implicated in leukocyte trafficking (PubMed:10330415). Catalyzes sulfation of N-acetylglucosamine (LacNAc) oligosaccharides with highest efficiency for sialylated LacNAc structures (PubMed:10642612). {ECO:0000250 UniProtKB:Q9EQC0, ECO:0000269 PubMed:10330415, ECO:0000269 PubMed:10642612, ECO:0000269 PubMed:17690104, ECO:0000269 PubMed:9405439}.</p>
Molecular Weight:	46.7 kDa
UniProt:	<a href="#">O43916</a>
Pathways:	<a href="#">Glycosaminoglycan Metabolic Process</a>

## Application Details

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
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Application Details

	guarantee though.
Comment:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.</p> <p>During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!</p>
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)



**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process