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Datasheet for ABIN3094049
NDST1 Protein (AA 40-882) (His tag)

Overview

Quantity:	1 mg
Target:	NDST1
Protein Characteristics:	AA 40-882
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NDST1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

Product Details

Sequence: GWKRGLEPSA DAPEPDCGDP PPVAPSRLLP LKPVQAATPS RTDPLVLVVFV ESLYSQLGQE
VVAILESSRF KYRTEIAPGK GDMPTLTDKG RGRFALIYE NILKYVNLDA WNRELLDKYC
VAYGVGIIGF FKANENSLLS AQLKGFPLFL HSNLGLKDCS INPKSPLLYV TRPSEVEKGV
LPGEDWTVFQ SNHSTYEPVL LAKTRSSSESI PHLGADAGLH AALHATVVQD LGLHDGIQRV
LFGNNLNFWL HKLVFVDAVA FLTGKRLSLP LDRYILVDID DIFVGKEGTR MKVEDVKALF
DTQNELRAHI PNFTFNLGYS GKFFHTGTNA EDAGDDLILLS YVKEFWWFPH MWSHMQPHLF
HNQSVLAEQM ALNKKFAVEH GIPTDMGYAV APHHSGVYPV HVQLYEAWKQ VWSIRVTSTE
EYPHLKPARY RRGFIHNGIM VLPRQTCGLF THTIFYNEYF GGSSELDKII NGGELFLTVL
LNPISIFMTH LSNYGNDRLG LYTFKHLVRF LHSWTNLRLQ TLPPVQLAQK YFQIFSEEKD
PLWQDPCEDK RHKDIWSKEK TCDRFPKLLI IGPQKTGTTA LYLFLGMHPD LSSNYPSET
FEEIQFFNGH NYHKGIDWYM EFFPIPSNTT SDFYFEKSAN YFDSEVAPRR AAALLPKAKV
LTILINPADR AYSWYQHQR A HDDPVALKYT FHEVITAGSD ASSKLRLALQN RCLVPGWYAT

HIERWLSAYH ANQILVLDGK LLRTEPAKVM DMVQKFLGVT NTIDYHKTLA FDPKKGFWCQ
LLEGGKTKCL GKSKGRKYPE MDLDSRAFLK DYYRDHNIEL SKLLYKMGQT LPTWLREDLQ NTR

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human NDST1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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.

Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Protein is endotoxin free.

Product Details

Grade: Crystallography grade

Target Details

Target: NDST1

Alternative Name: NDST1 ([NDST1 Products](#))

Background: Essential bifunctional enzyme that catalyzes both the N-deacetylation and the N-sulfation of glucosamine (GlcNAc) of the glycosaminoglycan in heparan sulfate. Modifies the GlcNAc-GlcA disaccharide repeating sugar backbone to make N-sulfated heparosan, a prerequisite substrate for later modifications in heparin biosynthesis (PubMed:10758005, PubMed:12634318). Plays a role in determining the extent and pattern of sulfation of heparan sulfate. Compared to other NDST enzymes, its presence is absolutely required. Participates in biosynthesis of heparan sulfate that can ultimately serve as L-selectin ligands, thereby playing a role in inflammatory response (PubMed:10758005, PubMed:12634318). Required for the exosomal release of SDCBP, CD63 and syndecan (PubMed:22660413). {ECO:0000269|PubMed:10758005, ECO:0000269|PubMed:12634318, ECO:0000269|PubMed:22660413}.

Molecular Weight: 97.3 kDa Including tag.

UniProt: [P52848](#)

Pathways: [Regulation of Systemic Arterial Blood Pressure by Hormones, Glycosaminoglycan Metabolic Process](#)

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 guarantee though.

Comment: In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Handling

Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)