

## NDST1 Protein, Human, Recombinant (His &amp; SUMO)

## General Information

Synonyms:	HSST;HSST1;Bifunctional heparan sulfate N-deacetylase/N-sulfotransferase 1;NDST1; Glucosaminyl N-deacetylase/N-sulfotransferase 1 (NDST-1);[Heparan sulfate]-glucosamine N-sulfotransferase 1 (HSNST 1);N-heparan sulfate sulfotransferase 1 (N-HSST 1)
Protein Construction:	40-556 aa
Species:	Human
Expression Host:	E. coli
Accession:	P52848
Molecular Weight:	73.5 kDa (predicted)
AA Sequence:	GWKRGLEPSADAPEPDCGDPVAPSRLLPLKPVQAATPSRTDPLVLFVESLYSQLGQEVVAILESSRFKYRT EIAPGKGDMPRTLTDKGRGRFALIYENILKYVNLDAWNRELLDKYCVAYGVGIIFFKANENSLLSAQLKGFPLF LHSNLGLKDCSINPKSPLLYVTRPSEVEKGVLPGEDWTVFQSNHSTYEPVLLAKTRSESIPHLGADAGLHAAL HATVVQDLGLHDGIQRVLFGNLNFVWLHKLVDVAFLTGKRLSLPLDRYILVDIDDIFVGKEGTRMKVEDV KALFDTQNELRAHIPNFTFNLGYSKGFHTGTNAEDAGDLLLLSYVKEFWWFPHMWSHMOPHLFHNQSVL AEQMALNKKFAVEHGIPDTMGYAVAPHHSGVYPVHVQLYEAWKQVWSIRVTSTEEYPHLKPARYRRGFIHN GIMVLPRTQGLFTHTIFYNEYPGGSELDKIINGGELFLTVLLNPVSAPQPMAAGEKGLLHLSAADTGFLPEP KGGEA

## QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

## Preparation and Storage

## Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

## Stability &amp; Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

## Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein 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. 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. Required for the exosomal release of SDCBP, CD63 and syndecan.

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