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NDST2 Antibody

Catalog # ASC11818

Product Information

Application	WB, IF, E
Primary Accession	P52849
Other Accession	NP_003626, 4505353
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	100875
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NDST2 antibody can be used for detection of PDCL by Western blot at 1 - 2 g/ml. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	8509
Other Names	Bifunctional heparan sulfate N-deacetylase/N-sulfotransferase 2, 2.8.2.8, Glucosaminyl N-deacetylase/N-sulfotransferase 2, NDST-2, N-heparan sulfate sulfotransferase 2, N-HSST 2, Heparan sulfate N-deacetylase 2, 3.-.-.-, Heparan sulfate N-sulfotransferase 2, 2.8.2.-, NDST2, HSST2
Target/Specificity	NDST2; NDST2 antibody is human, mouse and rat reactive. At least two isoforms of NDST2 are known to exist; this antibody will only detect the larger isoform. NDST2 antibody is predicted not to cross-react with other members of the NDST protein family.
Reconstitution & Storage	NDST2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	NDST2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NDST2
Synonyms	HSST2
Function	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. Required for the exosomal release of SDCBP, CD63 and syndecan (PubMed:22660413).
Cellular Location	Golgi apparatus membrane; Single- pass type II membrane protein

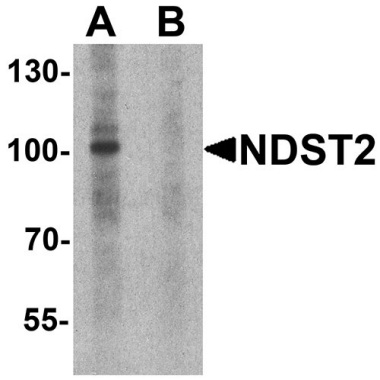
Background

The N-deacetylase/N-sulfotransferase (heparan glucosaminyl) 2 (NDST2) protein, also known as N-heparan sulfate sulfotransferase 2, and the highly related protein NDST1 have key roles in the sulfation of heparan sulfate proteoglycans, molecules that are present of cell surfaces and the extracellular matrix (1,2). NDST1 and NDST2 are dispensable for mesodermal differentiation into osteoblasts but necessary for induction of adipocytes and neural cells (3).

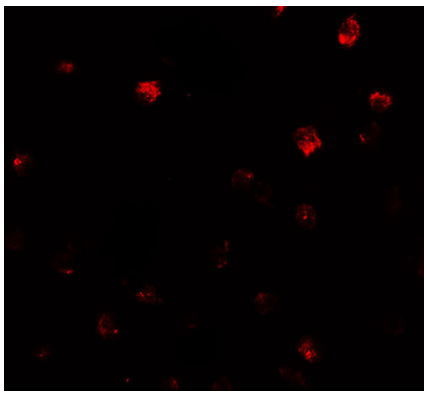
References

Humphries DE, Lanciotti J, and Karlinsky JB. cDNA cloning, genomic organization and chromosomal localization of human heparan glucosaminyl N-deacetylase/N-sulphotransferase-2. Biochem. J. 1998; 332:303-7.
Esko JD and Selleck SB. Order out of chaos. Assembly of ligand binding sites in heparan sulfate. Annu. Rev. Biochem. 2002; 71:435-71.
Forsberg M, Holmborn K, Kundu S, et al. Undersulfation of heparan sulfate restricts differentiation potential of mouse embryonic stem cells. J. Biol. Chem. 2012; 287:10853-62.

Images



Western blot analysis of NDST2 in A-20 cell lysate with NDST2 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunofluorescence of NDST2 in Daudi cells with NDST2 antibody at 20 µg/ml.