

Active Recombinant Human Heparan Sulfate (glucosamine) 3-O-Sulfotransferase 1, His-tagged

Cat. No. HS3ST1-1970H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HS3ST1 protein was expressed in Chinese Hamster Ovary cell line. Arg21-His307, with an N-terminal 6-His tag.
Species	Human
Source	CHO
Protein Length	21-307 a.a.
Description	Heparan sulfate is a highly sulfated polysaccharide that can be found on cell surface and within extracellular matrix. It is typically covalently attached to the protein core of proteoglycans, such as syndecans and glypicans. Heparin, on the other hand, can be considered as a highly sulfated version of heparan sulfate that is detached from the protein core and is predominantly found in mast cells. Both heparin and heparan sulfate contain disaccharide repeats of uronic acid and N-acetylglucosamine and are modified by the same sulfotransferases. The uronic acid residues can be sulfated at 2-O position by heparan sulfate 2-O sulfotransferase (HS2ST). The N-acetylglucosamine residues can be sulfated at N, 3-O, and 6-O positions by N-deacetylase/N-sulfotransferases (NDSTs), heparan sulfate 3-O sulfotransferases (HS3STs) and heparan sulfate 6-O sulfotransferases (HS6STs) respectively.
Form	Supplied as a 0.2 umfiltered solution in TrisHCl and NaCl.
N-terminal Sequence	His

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MolecularWeight	35 kDa
Activity	Measuredby its ability to transfer sulfate from PAPS to heparan sulfate. The specificactivity is > 4 pmoles/min/μg, as measured under the described conditions.
Endotoxin Level	<1.0EU per 1μg of the protein by the LAL method.
SDS-PAGE	38-50kDa, reducing conditions.
Purity	>90%,by SDS-PAGE under reducing conditions and visualized by silver stain.
Storage	Use a manualdefrost freezer and avoid repeated freezethaw cycles. 6 monthsfrom date of receipt, -20 to -70°C as supplied. 3 months,-20to-70°C under sterile conditions after opening.

GENE INFORMATION

Gene Name	HS3ST1 heparan sulfate(glucosamine) 3-O-sulfotransferase 1 [Homo sapiens]
Official Symbol	HS3ST1
Synonyms	HS3ST1; heparan sulfate(glucosamine) 3-O-sulfotransferase 1; heparan sulfate glucosamine3-O-sulfotransferase 1; 3OST1; 3-OST-1; 3OST; EC 2.8.2.23; h3OST 1; h3-OST-1;Heparan sulfate 3 O sulfotransferase 1; Heparan sulfate D glucosaminyI 3 Osulfotransferase 1; Heparin glucosamine 3 O sulfotransferase; heparan sulfate3-O-sulfotransferase 1; heparin-glucosamine 3-O-sulfotransferase; heparansulfate D-glucosaminyI 3-O-sulfotransferase 1
Gene ID	9957
mRNA Refseq	NM_005114

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Protein Refseq	NP_005105
MIM	603244
UniProt ID	O14792
Chromosome Location	4p16
Pathway	Glycosaminoglycanbiosynthesis - heparan sulfate
Function	[heparansulfate]-glucosamine 3-sulfotransferase 1 activity; sulfotransferase activity;transferase activity
PDB rendering basedon 1vkj.	