

Active Recombinant Human HS2ST1, His-tagged

Cat. No. HS2ST1-105H Lot. No. (See product label)

SPECIFICATION

Product Overview	Chinese Hamster Ovary cell line, CHO-derived, Met59-Asn356, with an N-terminal human CD33 signal sequence and 6-His tag.
Species	Human
Source	CHO
ProteinLength	59-356 a.a.
Description	Heparan sulfate is a highly sulfated polysaccharide found on the cell surface and within the extracellular matrix. Typically, it is 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 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 are either glucuronic acid or iduronic acid and maybe sulfated at the 2-O position by heparan sulfate 2-O sulfotransferase 1 (HS2ST1). HS2ST1 physically interacts in the Golgi apparatus with glucuronyl c5-epimerase, which catalyzes the conversion of glucuronic acid to iduronic acid. As a consequence, 2-O sulfation predominantly occurs on iduronic acids naturally and overexpression of HS2ST1 alone causes an increase in 2-O sulfation on glucuronic acid. Our recombinant HS2ST1 was expressed in CHO cells, and the enzyme activity was assayed using an SDS-PAGE-based method.

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Predicted N Terminal	His
Form	Supplied as a 0.2 µ filtered solution in Tris and NaCl.
Bio-activity	Measured by its ability to transfer sulfate from PAPS to heparan sulfate. The specific activity is >75 pmol/min/g, as measured under the described conditions.
Molecular Mass	36 kDa, 38-40 kDa, reducing SDS-PAGE conditions.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -70 °C as supplied. 3 months, -70 °C under sterile conditions after opening.

GENE INFORMATION

Gene Name	HS2ST1 heparan sulfate 2-O-sulfotransferase 1 [Homo sapiens]
Official Symbol	HS2ST1
Synonyms	HS2ST1; heparan sulfate 2-O-sulfotransferase 1; KIAA0448; 2OST; 2-O-sulfotransferase; dJ604K5.2; FLJ11317; MGC131986;
Gene ID	9653
mRNA Refseq	NM_001134492
Protein Refseq	NP_001127964
MIM	604844
UniProt ID	Q7LGA3

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Chromosome Location	1p22.3
Pathway	Glycosaminoglycan biosynthesis - heparan sulfate, organism-specific biosystem; Glycosaminoglycan biosynthesis - heparan sulfate, conserved biosystem;
Function	heparan sulfate 2-O-sulfotransferase activity; sulfotransferase activity; transferase activity;

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