# Active Recombinant Human HS2ST1, His-tagged

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

## SPECIFICATION

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| **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 μm 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/μg, 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

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| **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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