Active Recombinant Human B3GAT1 Protein, His-tagged

Cat. No. B3GAT1-19H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human B3GAT1(His25-Ile334) fused with His tag at the N-terminus was produced in CHO.
Species	Human
Source	CHO
ProteinLength	His25-Ile334
Description	B3GAT1 is a key enzyme involved in human natural killer1 (HNK1) epitope synthesis. It adds a glucuronic residue to the terminal lactosamine residue (Gal beta 14GlcNAc) of a glycoprotein or glycolipid, which can be further sulfated to become the HNK1 epitope, a unique trisaccharide structure, HSO3-3GlcA beta 1-3Gal beta 1-4GlcNAc. The enzyme activity was found to be enhanced in the presence of sphingomyelin and phosphatidylinositol. The HNK1 carbohydrate epitope is characteristically expressed on a series of cell adhesion molecules in addition to some glycolipids in the extracellular matrix and on the cell surface in the nervous system, where it is involved in cell-cell and cell-substratum interaction and recognition during the development of the nervous system. Like most known glycosyltransferases, B3GAT1 is a type II Golgi-resident transmembrane protein with a short N-terminal cytoplasmic domain and a single pass transmembrane domain followed by an enzymatic domain in the lumen of Golgi apparatus. The enzyme activity was assayed using a phosphatase-coupled 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 GlcA from UDP-GlcA to lactose. The specific activity is >750 pmol/min/μg, as measured under the described conditions.
Molecular Mass	Predicted Molecular Mass: 36 kDa; SDS-PAGE: 50-59 kDa, reducing conditions.
Endotoxin	<0.01 EU per 1 μg of the protein by the LAL method.
Purity	>85%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain at 5 μg per lane
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

GENE INFORMATION

Gene Name	B3GAT1 beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P) [Homo sapiens]
Official Symbol	B3GAT1
Synonyms	B3GAT1; beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P); CD57, CD57 antigen , LEU7; galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 1;

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	GlcAT P; HNK 1; NK 1; glcUAT-P; LEU7 antigen; glucuronosyltransferase P; UDP-GlcUA:glycoprotein beta-1,3-glucuronyltransferase; NK1; CD57; HNK1; LEU7; NK-1; GLCATP; GLCUATP;
Gene ID	27087
mRNA Refseq	NM_018644
Protein Refseq	NP_061114
MIM	151290
UniProt ID	Q9P2W7

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