

## 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, HSO<sub>3</sub>-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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<b>Predicted N Terminal</b>	His
<b>Form</b>	Supplied as a 0.2 µm filtered solution in Tris and NaCl.
<b>Bio-activity</b>	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.
<b>Molecular Mass</b>	Predicted Molecular Mass: 36 kDa; SDS-PAGE: 50-59 kDa, reducing conditions.
<b>Endotoxin</b>	<0.01 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>85%, by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie® Blue stain at 5 µg per lane
<b>Storage</b>	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.
<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

## GENE INFORMATION

<b>Gene Name</b>	B3GAT1 beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P) [ Homo sapiens ]
<b>Official Symbol</b>	B3GAT1
<b>Synonyms</b>	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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