

Recombinant Human B3GAT1 (N-6His)

Catalog Number: PKSH034055

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

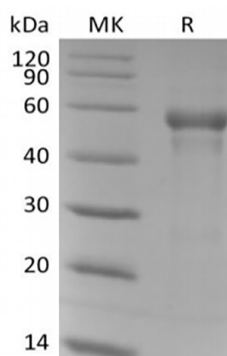
Description

Species	Human
Source	HEK293 Cells-derived Human B3GAT1 protein His25-Ile334, with an N-terminal His
Calculated MW	36.2 kDa
Observed MW	50-60 kDa
Accession	Q9P2W7
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20mM Citrate, 8% Sucrose, 100mM NaCl, 0.05% Tween 80, pH 6.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

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B3GAT1 is the key enzyme during the biosynthesis of the carbohydrate epitope HNK-1, which is present on a number of cell adhesion molecules important in neurodevelopment. It adds a glucuronic residue to the terminal lactosamine residue (Gal beta 1-4GlcNAc) 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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