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Product datasheet for TP726756

CD57 (B3GAT1) Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant Human B3GAT1 (N-6His)
Species:	Human
Expression cDNA Clone or AA Sequence:	His25-Ile334
Tag:	N-6His
Buffer:	Lyophilized from a 0.2 um filtered solution of 20mM Tris HCl, 150mM NaCl, pH8.0.
Note:	Recombinant Human Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 1 is produced by our Mammalian expression system and the target gene encoding His25-Ile334 is expressed with a 6His tag at the N-terminus.
Storage:	Lyophilized protein should be stored at ≤ -20°C, stable for one year after receipt. Reconstituted protein solution can be stored at 2-8°C for 2-7 days. Aliquots of reconstituted samples are stable at ≤ -20°C for 3 months.
Stability:	12 months from date of despatch
Locus ID:	27087
UniProt ID:	Q9P2W7
Synonyms:	B3GAT1; beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P); CD57; GlcAT-P; HNK1; NK1; NK-1

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Summary: 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 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.

Protein Families: Transmembrane

Protein Pathways: Chondroitin sulfate biosynthesis, Heparan sulfate biosynthesis, Metabolic pathways