

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human $\beta$ -1,3-Glucuronyltransferase 1/B3GAT1 in direct ELISAs.                                                                                                                                                                                                 |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 1002707                                                                                                                                                                                                                          |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Chinese Hamster Ovary cell line, CHO-derived human $\beta$ -1,3-Glucuronyltransferase 1/B3GAT1 His25-Ile334<br>Accession # Q9P2W7                                                                                                                                           |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

**Immunohistochemistry** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

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 (1, 2). The enzyme activity was found to be enhanced in the presence of sphingomyelin and phosphatidylinositol (3). 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 (4). 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 (5).

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