Human β-1,4-Galactosyltransferase 1/B4GalT1 Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 394709

Catalog Number: FAB36091N

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human β-1,4-Galactosyltransferase 1/B4GalT1in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 394709
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human β-1,4-Galactosyltransferase 1/B4GalT1 Ala44-Ser398 Accession # P15291
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.*

Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

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

BACKGROUND

β4GalT1 is one of seven β1,4 galactosyltransferases that transfer galactose in a β1,4 linkage to acceptor sugars including GlcNAc, and Glc, and Xyl. By sequence similarity, the β4GalTs form four groups: β4GalT1 and β4GalT2, β4GalT3 and β4GalT4, β4GalT5 and β4GalT6, and β4GalT7 (1). β4GalT1 is unique among the seven enzymes because it can be expressed either as membrane associated form or secreted form (2). The secreted form is restricted to lactating mammary tissues where the enzyme forms a heterodimer with α-lactalbumin to catalyze the synthesis of lactose (3). The membrane form can reside either in the Golgi apparatus, where it adds galactose to N-acetylglucosamine residues, or on cell surface, where it functions as a recognition molecule during a variety of cell to cell and cell to matrix interactions, by binding to specific oligosaccharide ligands on opposing cells or in the extracellular matrix (4). The two enzymatic forms result from alternate transcription initiation sites and post-translational processing (5). Defects in β4GalT1 are the cause of congenital disorder of glycosylation type 2D (CDG2D) (6). The amino acid sequence of human B4GALT1 is 88%, 87% and 71% identical to that of rat, mouse/canine and chicken.

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