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B4GALT5 Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP5365b

Specification

B4GALT5 Blocking Peptide (C-term) - Product Information

Primary Accession	O43286
Other Accession	O9JMK0, NP_004767.1

B4GALT5 Blocking Peptide (C-term) - Additional Information

Gene ID 9334

Other Names
Beta-1, 4-galactosyltransferase 5, Beta-1, 4-GalTase 5, Beta4Gal-T5, b4Gal-T5, 241-, Beta-1, 4-GalT II, UDP-Gal:beta-GlcNAc beta-1, 4-galactosyltransferase 5, UDP-galactose:beta-N-acetylglucosamine beta-1, 4-galactosyltransferase 5, B4GALT5

Target/Specificity
The synthetic peptide sequence is selected from aa 339-350 of HUMAN B4GALT5

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

B4GALT5 Blocking Peptide (C-term) - Protein Information

Name B4GALT5 (HGNC:928)

Function

B4GALT5 Blocking Peptide (C-term) - Background

This gene is one of seven beta-1,4-galactosyltransferase (beta4GalT) genes. They encode type II membrane-bound glycoproteins that appear to have exclusive specificity for the donor substrate UDP-galactose; all transfer galactose in a beta1,4 linkage to similar acceptor sugars: GlcNAc, Glc, and Xyl. Each beta4GalT has a distinct function in the biosynthesis of different glycoconjugates and saccharide structures. As type II membrane proteins, they have an N-terminal hydrophobic signal sequence that directs the protein to the Golgi apparatus and which then remains uncleaved to function as a transmembrane anchor. By sequence similarity, the beta4GalTs form four groups: beta4GalT1 and beta4GalT2, beta4GalT3 and beta4GalT4, beta4GalT5 and beta4GalT6, and beta4GalT7. The function of the enzyme encoded by this gene is not clear. This gene was previously designated as B4GALT4 but was renamed to B4GALT5. In the literature it is also referred to as beta4GalT2. [provided by RefSeq].

B4GALT5 Blocking Peptide (C-term) - References

Kitayama, K., et al. J. Biol. Chem. 282(41):30085-30096(2007)
Sato, T., et al. J. Biol. Chem. 282(38):27702-27712(2007)
Jiang, J., et al. J. Biol. Chem. 281(14):9482-9489(2006)
Sato, T., et al. J. Biol. Chem. 279(38):39574-39583(2004)
Xu, S., et al. J. Exp. Clin. Cancer Res. 21(3):409-414(2002)

Catalyzes the synthesis of lactosylceramide (LacCer) via the transfer of galactose from UDP-galactose to glucosylceramide (GlcCer) (PubMed:24498430). LacCer is the starting point in the biosynthesis of all gangliosides (membrane-bound glycosphingolipids) which play pivotal roles in the CNS including neuronal maturation and axonal and myelin formation (By similarity). Plays a role in the glycosylation of BMPR1A and regulation of its protein stability (By similarity). Essential for extraembryonic development during early embryogenesis (By similarity).

Cellular Location
Golgi apparatus, Golgi stack membrane {ECO:0000250|UniProtKB:P15291}; Single-pass type II membrane protein Golgi apparatus {ECO:0000250|UniProtKB:A0A1S6M251}. Note=Trans cisternae of Golgi stack. {ECO:0000250|UniProtKB:P15291}

Tissue Location
Ubiquitously expressed.

Deloukas, P., et al. Nature 414(6866):865-871(2001)
Amado, M., et al. Biochim. Biophys. Acta 1473(1):35-53(1999)
Lo, N.W., et al. Glycobiology 8(5):517-526(1998)
Sato, T., et al. Biochem. Biophys. Res. Commun. 244(3):637-641(1998)
Sato, T., et al. Proc. Natl. Acad. Sci. U.S.A. 95(2):472-477(1998)

B4GALT5 Blocking Peptide (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides