10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FUT3 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP9410b

Specification

FUT3 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession P21217

FUT3 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 2525

Other Names
Galactoside 3(4)-L-fucosyltransferase, Blood group Lewis alpha-4-fucosyltransferase, Lewis FT, Fucosyltransferase 3, Fucosyltransferase III, FucT-III, FUT3, FT3B, LE

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.

FUT3 Antibody (C-term) Blocking Peptide - Protein Information

Name FUT3 (HGNC:4014)

Synonyms FT3B, LE

Function
Catalyzes the transfer of L-fucose, from a guanosine diphosphate-beta-L-fucose, to both the subterminal N-acetyl glucosamine (GlcNAc) of type 1 chain (beta-D-Gal-(1->3)-beta-D-GlcNAc) glycolipids and oligosaccharides via an alpha(1,4) linkage, and the subterminal glucose (Glc) or GlcNAc of type 2 chain (beta-D-Gal-(1->4)-beta-D- GlcNAc) oligosaccharides via an alpha(1,3) linkage, independently of the presence of terminal alpha-L-fucosyl-(1,2) moieties on the terminal galactose of these acceptors (PubMed:12668675, PubMed:1977660, PubMed:11058871). Through its catalytic activity, participates in the synthesis of antigens of the Lewis blood group system, i.e. Lewis a (Le(a)), lewis b (Le(b)), Lewis x/SSEA-1 (Le(x)) and lewis y (Le(y)) antigens (PubMed:12668675, PubMed:1977660, PubMed:11058871). Also catalyzes the transfer of L-fucose to subterminal GlcNAc of sialyl- and disialyl-lactotetraosylceramide to produce sialyl Lewis a (sLe(a)) and disialyl Lewis a via

an alpha(1,4) linkage and therefore may regulate cell surface sLe(a) expression and consequently regulates adhesive properties to E-selectin, cell proliferation and migration (PubMed:12668675, PubMed:11058871, PubMed:27453266). Catalyzes the transfer of an L-fucose to 3'-sialyl-N-acetyllactosamine by an alpha(1,3) linkage, which allows the formation of sialyl-Lewis x structure and therefore may regulate the sialyl-Lewis x surface antigen expression and consequently adhesive properties to E-selectin (PubMed:11058871, PubMed:29593094). Prefers type 1 chain over type 2 acceptors (PubMed:7721776). Type 1 tetrasaccharide is a better acceptor than type 1 disaccharide suggesting that a beta anomeric configuration of GlcNAc in the substrate is preferred (PubMed:7721776). Lewis- positive (Le(+)) individuals have an active enzyme while Lewis-negative (Le(-)) individuals have an inactive enzyme (PubMed:1977660).

Cellular Location
Golgi apparatus, Golgi stack membrane; Single- pass type II membrane protein
Note=Membrane-bound form in trans cisternae of Golgi

Tissue Location
Highly expressed in stomach, colon, small intestine, lung and kidney and to a lesser extent in salivary gland, bladder, uterus and liver.

FUT3 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

FUT3 Antibody (C-term) Blocking Peptide - Images

FUT3 Antibody (C-term) Blocking Peptide - Background

FUT3 comprises a set of fucosylated glycosphingolipids that are synthesized by exocrine epithelial cells and circulate in body fluids. The glycosphingolipids function in embryogenesis, tissue differentiation, tumor metastasis, inflammation, and bacterial adhesion. They are secondarily absorbed to red blood cells giving rise to their Lewis phenotype. This protein is a member of the fucosyltransferase family, which catalyzes the addition of fucose to precursor polysaccharides in the last step of Lewis antigen biosynthesis. It encodes an enzyme with alpha(1,3)-fucosyltransferase and alpha(1,4)-fucosyltransferase activities.

FUT3 Antibody (C-term) Blocking Peptide - References

Park, H.D., et al. Korean J Lab Med 30(1):51-57(2010)Matzhold, E.M., et al. Transfusion 49(10):2097-2108(2009)Norden, R., et al. Glycobiology 19(7):776-788(2009)Liu, J., et al. J. Exp. Clin. Cancer Res. 28, 154 (2009) Isla Larrain, M., et al. J. Exp. Clin. Cancer Res. 28, 121 (2009) Holmes, E.H., et al. J. Biol. Chem. 275(32):24237-24245(2000)