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CD174 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51773

Product Information

Application	WB
Primary Accession	P21217
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42117

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
Target/Specificity	KLH conjugated synthetic peptide derived from human CD174
Dilution	WB~~ 1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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:11058871, PubMed:12668675, PubMed:1977660). 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:11058871, PubMed:12668675, PubMed:1977660). 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:11058871, PubMed:12668675, 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.

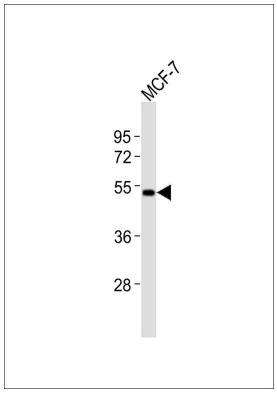
Background

May catalyze alpha-1,3 and alpha-1,4 glycosidic linkages involved in the expression of Vim-2, Lewis A, Lewis B, sialyl Lewis X and Lewis X/SSEA-1 antigens. May be involved in blood group Lewis determination; Lewis-positive (Le(+)) individuals have an active enzyme while Lewis-negative (Le(-)) individuals have an inactive enzyme. Also acts on the corresponding 1,4-galactosyl derivative, forming 1,3-L-fucosyl links.

References

Kukowska-Latallo J.F.,et al.Genes Dev. 4:1288-1303(1990).
Cameron H.S.,et al.J. Biol. Chem. 270:20112-20122(1995).
Rahim I.,et al.Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.
Matzhold E.M.,et al.Submitted (SEP-2008) to the EMBL/GenBank/DDBJ databases.
Grimwood J.,et al.Nature 428:529-535(2004).

Images



Anti-CD174 Antibodyat 1:1000 dilution + MCF-7 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.