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Anti-CD174 Antibody

Catalog # AP51773

Product Information

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

Additional Information

Gene ID	2525
Other Names	FT3B; LE; Galactoside 3(4)-L-fucosyltransferase; Blood group Lewis alpha-4-fucosyltransferase; Lewis FT; Fucosyltransferase 3; Fucosyltransferase III; FucT-III
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human CD174. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
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

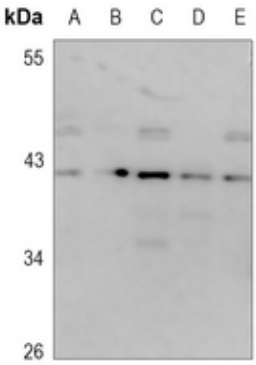
Tissue Location

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

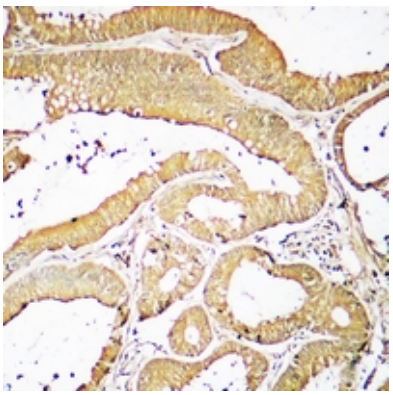
References

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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



Western blot analysis of CD174 expression in H1792 (A), H1688 (B), mouse testis (C), mouse kidney (D), rat testis (E) whole cell lysates. (Predicted band size: 42 kD; Observed band size: 42 kD)



Immunohistochemical analysis of CD174 staining in human colon cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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