SANTA CRUZ BIOTECHNOLOGY, INC.

Blood Group Lewis x (P12): sc-59471

BACKGROUND

Glycosyltransferases that mediate the regio- and stereoselective transfer of sugars, such as the fucosyltransferases, determine cell surface-carbohydrate profiles, which is an essential interface for biological recognition processes. Fucosyltransferases catalyze the covalent association of fucose to different positional linkages in sugar acceptor molecules. The carbohydrate moieties generated and covalently attached to cell surfaces are necessary to ensure a surface contour that satisfies physiological roles, which are reliant on adhesion molecules such as selectins. Hematopoietic lineages rely on fucosyltransferases to confer a surface carbohydrate phenotype, which mediates proper cell adhesion molecule recruitment and cell trafficking. Blood Group Lewis x is a carbohydrate determinant carried on both glycolipids and glycoproteins.

REFERENCES

1. Richman, P.I., et al. 1987. Monoclonal antibodies to human colorectal epithelium: markers for differentiation and tumour characterization. Int. J. Cancer 39: 317-328.
2. Rouger, P.h., et al., eds. 1987. Proceedings of the first international workshop on monoclonal antibodies against human red blood cells and related antigens. Blood Transfus. Immunohaematology 30: 353-720.
3. Bara, J., et al. 1988. Immunochemical characterization of mucins. Poly-peptide (M1) and polysaccharide (A and Leb) antigens. Biochem. J. 254: 185-193.
4. Torrado, J., et al. 1992. Lewis antigen alterations in gastric cancer precursors. Gastroenterology 102: 424-430.
5. Creuzot-Garcher, C., et al. 1999. Alteration of sialyl Lewis epitope expression in pterygium. Invest. Ophthalmol. Vis. Sci. 40: 1631-1636.
6. Wagers, A.J. and Kansas, G.S. 2000. Potent induction of α(1,3)-fucosyltransferase VII in activated CD4$^+$ T cells by TGFβ1 through a p38 mitogen-activated protein kinase-dependent pathway. J. Immunol. 165: 5011-5016.
7. Huang, M.C., et al. 2000. P-selectin glycoprotein ligand-1 and E-selectin ligand-1 are differentially modified by fucosyltransferases Fuc-TIV and Fuc-TVII in mouse neutrophils. J. Biol. Chem. 275: 31353-31360.
8. Withers, D.A. and Hakomori, S.I. 2000. Human α(1,3)-fucosyltransferase IV (FUTIV) gene expression is regulated by Elk-1 in the U937 cell line. J. Biol. Chem. 275: 40588-40593.
9. Taniguchi, A., et al. 2000. Expression and transcriptional regulation of the human α1,3-fucosyltransferase 4 (FUT4) gene in myeloid and colon adenocarcinoma cell lines. Biochem. Biophys. Res. Commun. 273: 370-376.

SOURCE

Blood Group Lewis x (P12) is a mouse monoclonal antibody raised against a fresh placenta cell preparation of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

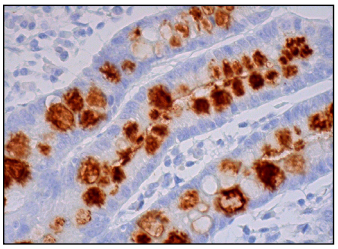
APPLICATIONS

Blood Group Lewis x (P12) is recommended for detection of Blood Group Lewis x (Type 2 chain) of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Blood Group Lewis x (P12): sc-59471. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Li, H. and Benghezal, M. 2017. Crude preparation of lipopolysaccharide from *Helicobacter pylori* for silver staining and Western Blot. Bio Protoc. 7: e2585.
2. Jin, C. and Teneberg, S. 2022. Characterization of novel non-acid glycosphingolipids as biomarkers of human gastric adenocarcinoma. J. Biol. Chem. 298: 101732.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.