SANTA CRUZ BIOTECHNOLOGY, INC.

Blood Group Lewis a (7LE): sc-51512

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 a is a carbohydrate determinant carried on both glycolipids and glycoproteins.

REFERENCES

1. Richman, P.I. and Bodmer, W.F. 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 (Paris). Blood Transfus. Immunohaematology 30: 353-720.

SOURCE

Blood Group Lewis a (7LE) is a mouse monoclonal antibody raised against Mucin isolated from ovarian cyst fluid of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blood Group Lewis a (7LE) is available conjugated to agarose (sc-51512 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-51512 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-51512 PE), fluorescein (sc-51512 FITC), Alexa Fluor® 488 (sc-51512 AF488), Alexa Fluor® 546 (sc-51512 AF546), Alexa Fluor® 594 (sc-51512 AF594) or Alexa Fluor® 647 (sc-51512 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-51512 AF680) or Alexa Fluor® 790 (sc-51512 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Blood Group Lewis a (7LE) is recommended for detection of Lewis a blood group antigen of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

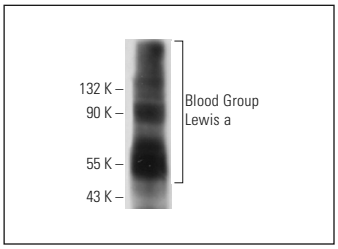
Molecular Weight of Blood Group Lewis a: 45 kDa.

Positive Controls: WiDr cell lysate: sc-24779.

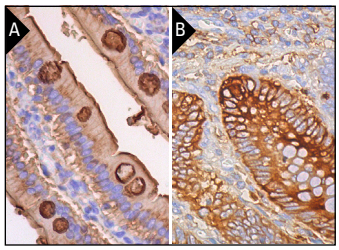
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) 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 a (7LE): sc-51512. Western blot analysis of Blood Group Lewis a expression in WiDr whole cell lysate.



Blood Group Lewis a (7LE): sc-51512. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and membrane staining of glandular cells and goblet cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic and membrane staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216 (**B**).

SELECT PRODUCT CITATIONS

1. Matsumoto, S., et al. 2015. A cytotoxic antibody recognizing lacto-N-fucopentaose I (LNFP I) on human induced pluripotent stem (hiPS) cells. J. Biol. Chem. 290: 20071-20085.
2. Hu, D., et al. 2016. Association of ulcerative colitis with FUT2 and FUT3 polymorphisms in patients from southeast china. PLoS ONE 11: e0146557.
3. Li, H. and Benghezal, M. 2017. Crude preparation of lipopolysaccharide from *Helicobacter pylori* for silver staining and Western blot. Bio Protoc. 7: e2585.
4. Jia, N., et al. 2020. The human lung glycome reveals novel glycan ligands for Influenza A virus. Sci. Rep. 10: 5320.
5. Lindesmith, L.C., et al. 2020. Virus-host interactions between non-secretors and human norovirus. Cell. Mol. Gastroenterol. Hepatol. 10: 245-267.
6. Radziejewska, I., et al. 2021. Anti-cancer potential of afzelin towards AGS gastric cancer cells. Pharmaceuticals 14: 973.

STORAGE

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