

FucT-VI (G-16): sc-14877

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.

REFERENCES

- Wagers, A.J. and Kansas, G.S. 2000. Potent induction of α 1,3-fucosyltransferase VII in activated CD4⁺ T cells by TGF- β 1 through a p38 mitogen-activated protein kinase-dependent pathway. *J. Immunol.* 165: 5011-5016.
- 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.
- 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.
- 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.
- Taniguchi, A., et al. 2000. Expression and transcriptional regulation of the human α 1, 3-Fucosyltransferase 4 (FUT4) gene in myeloid and colon adenocarcinoma cell lines. *Biochem. Biophys. Res. Commun.* 273: 370-376.
- Nakayama, F., et al. 2001. CD15 expression in mature granulocytes is determined by α 1,3-Fucosyl-transferase IX, but in promyelocytes and monocytes by α 1,3-Fucosyl-transferase IV. *J. Biol. Chem.* 276: 16100-16106.

CHROMOSOMAL LOCATION

Genetic locus: FUT6 (human) mapping to 19p13.3.

SOURCE

FucT-VI (G-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of FucT-VI of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-14877 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

FucT-VI (G-16) is recommended for detection of FucT-VI of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

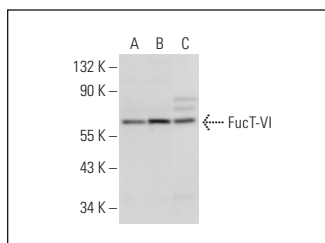
Suitable for use as control antibody for FucT-VI siRNA (h): sc-40587, FucT-VI shRNA Plasmid (h): sc-40587-SH and FucT-VI shRNA (h) Lentiviral Particles: sc-40587-V.

Positive Controls: NCI-H292 whole cell lysate: sc-364179, HEK293 whole cell lysate: sc-45136 or Hs 181 Tes whole cell lysate: sc-364779.

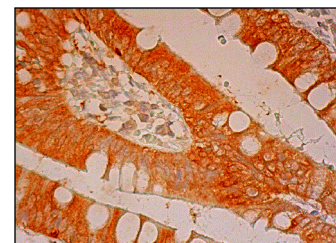
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



FucT-VI (G-16): sc-14877. Western blot analysis of FucT-VI expression in NCI-H292 (A), HEK293 (B) and Hs 181 Tes (C) whole cell lysates.



FucT-VI (G-16): sc-14877. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Chiu, P.C., et al. 2007. Glycodelin-A interacts with fucosyltransferase on human sperm plasma membrane to inhibit spermatozoa-zona pellucida binding. *J. Cell Sci.* 120: 33-44.

STORAGE

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