

FucT-VIII (B-10): sc-271244

BACKGROUND

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. α -(1,6)-fucosyltransferase or fucosyltransferase 8 (FucT-VIII) catalyzes the addition of fucose in α 1-6 linkage to the innermost GlcNAc residue of an N-linked oligosaccharide.

CHROMOSOMAL LOCATION

Genetic locus: FUT8 (human) mapping to 14q23.3; Fut8 (mouse) mapping to 12 C3.

SOURCE

FucT-VIII (B-10) is a mouse monoclonal antibody raised against amino acids 31-230 mapping near the N-terminus of FucT-VIII of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FucT-VIII (B-10) is available conjugated to agarose (sc-271244 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271244 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271244 PE), fluorescein (sc-271244 FITC), Alexa Fluor® 488 (sc-271244 AF488), Alexa Fluor® 546 (sc-271244 AF546), Alexa Fluor® 594 (sc-271244 AF594) or Alexa Fluor® 647 (sc-271244 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271244 AF680) or Alexa Fluor® 790 (sc-271244 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FucT-VIII (B-10) is recommended for detection of FucT-VIII isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FucT-VIII siRNA (h): sc-45757, FucT-VIII siRNA (m): sc-45758, FucT-VIII siRNA (r): sc-270051, FucT-VIII shRNA Plasmid (h): sc-45757-SH, FucT-VIII shRNA Plasmid (m): sc-45758-SH, FucT-VIII shRNA Plasmid (r): sc-270051-SH, FucT-VIII shRNA (h) Lentiviral Particles: sc-45757-V, FucT-VIII shRNA (m) Lentiviral Particles: sc-45758-V and FucT-VIII shRNA (r) Lentiviral Particles: sc-270051-V.

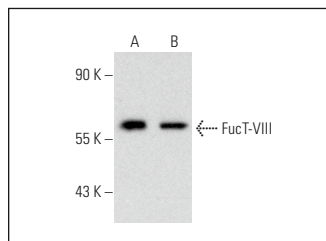
Molecular Weight of FucT-VIII: 67 kDa.

Positive Controls: FucT-VIII (m): 293T Lysate: sc-120336, COLO 320DM cell lysate: sc-2226 or ES-2 cell lysate: sc-24674.

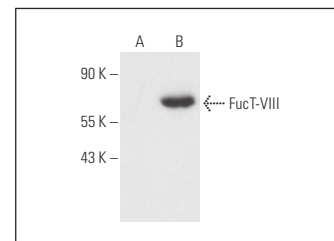
STORAGE

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

DATA



FucT-VIII (B-10): sc-271244. Western blot analysis of FucT-VIII expression in COLO 320DM (A) and ES-2 (B) whole cell lysates.



FucT-VIII (B-10): sc-271244. Western blot analysis of FucT-VIII expression in non-transfected: sc-117752 (A) and mouse FucT-VIII transfected: sc-120336 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wang, X., et al. 2014. Overexpression of α (1,6) fucosyltransferase associated with aggressive prostate cancer. *Glycobiology* 24: 935-944.
- Ng, B.G., et al. 2018. Biallelic mutations in FUT8 cause a congenital disorder of glycosylation with defective fucosylation. *Am. J. Hum. Genet.* 102: 188-195.
- Guo, D., et al. 2018. Enhanced motility and proliferation by miR-10b/FUT8/p-AKT axis in breast cancer cells. *Oncol. Lett.* 16: 2097-2104.
- Ma, M., et al. 2021. Fucosyltransferase 8 regulation and breast cancer suppression by transcription factor activator protein 2 γ . *Cancer Sci.* 112: 3190-3204.
- Chakraborty, S., et al. 2021. Structurally and functionally distinct early antibody responses predict COVID-19 disease trajectory and mRNA vaccine response. *bioRxiv* 27:2021.05.25.445649.
- Munteanu, C.V.A., et al. 2023. Defining the altered glycoproteomic space of the early secretory pathway by class I mannosidase pharmacological inhibition. *Front. Mol. Biosci.* 9: 1064868.
- Jiang, Y., et al. 2023. Core fucosylation regulates alveolar epithelial cells senescence through activating of transforming growth factor- β pathway in pulmonary fibrosis. *Aging* 15: 9572-9589.
- Ni, G., et al. 2024. Knockdown of LINC01128 downregulates FUT8 to inhibit OxLDL-induced vascular smooth muscle cell apoptosis in atherosclerosis. *Discov. Med.* 36: 571-580.

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.