

# 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.  $\alpha$ -(1,6)-fucosyltransferase or fucosyltransferase 8 (FucT-VIII) catalyzes the addition of fucose in  $\alpha$  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  $\mu$ g IgG<sub>1</sub> 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271244 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271244 PE), fluorescein (sc-271244 FITC), Alexa Fluor<sup>®</sup> 488 (sc-271244 AF488), Alexa Fluor<sup>®</sup> 546 (sc-271244 AF546), Alexa Fluor<sup>®</sup> 594 (sc-271244 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-271244 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-271244 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-271244 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## 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  $\mu$ g per 100-500  $\mu$ 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.

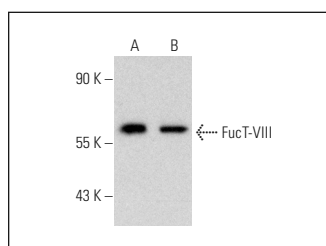
Molecular Weight of FucT-VIII: 67 kDa.

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

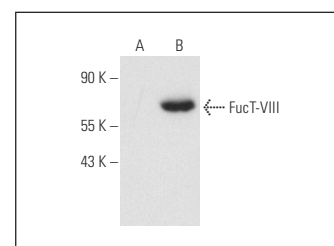
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## 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  $\alpha$  (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 $\gamma$ . *Cancer Sci.* 112: 3190-3204.
- Munteanu, C.V.A., et al. 2022. Defining the altered glycoproteomic space of the early secretory pathway by class I mannosidase pharmacological inhibition. *Front. Mol. Biosci.* 9: 1064868.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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