SANTA CRUZ BIOTECHNOLOGY, INC.

POFUT2 (G-1): sc-271239

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. POFUT2 (peptide-O-fucosyltransferase 2), also known as FUT13 or O-FucT-2, is a fucosyltransferase responsible for transferring fucose to serine or threonine residues in properly folded thrombospondin repeats (TSRs) through an O-glycosidic linkage. POFUT2 localizes to the endoplasmic reticulum and exists in three isoforms (designated A, B and C) which exhibit different patterns of expression. In addition, POFUT2 may have chaperone-like activity and function in quality control and protein folding.

REFERENCES

1. Nagase, T., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 63-70.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610249. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Martinez-Duncker, I., et al. 2003. A new superfamily of protein-O-fucosyltransferases, α2-fucosyltransferases, and α6-fucosyltransferases: phylogeny and identification of conserved peptide motifs. Glycobiology 13: 1C-5C.

CHROMOSOMAL LOCATION

Genetic locus: POFUT2 (human) mapping to 21q22.3; Pofut2 (mouse) mapping to 10 C1.

SOURCE

POFUT2 (G-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 198-237 within an internal region of POFUT2 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.

POFUT2 (G-1) is available conjugated to agarose (sc-271239 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271239 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271239 PE), fluorescein (sc-271239 FITC), Alexa Fluor® 488 (sc-271239 AF488), Alexa Fluor® 546 (sc-271239 AF546), Alexa Fluor® 594 (sc-271239 AF594) or Alexa Fluor® 647 (sc-271239 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271239 AF680) or Alexa Fluor® 790 (sc-271239 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271239 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

POFUT2 (G-1) is recommended for detection of POFUT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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).

POFUT2 (G-1) is also recommended for detection of POFUT2 in additional species, including equine and bovine.

Suitable for use as control antibody for POFUT2 siRNA (h): sc-76186, POFUT2 siRNA (m): sc-76187, POFUT2 shRNA Plasmid (h): sc-76186-SH, POFUT2 shRNA Plasmid (m): sc-76187-SH, POFUT2 shRNA (h) Lentiviral Particles: sc-76186-V and POFUT2 shRNA (m) Lentiviral Particles: sc-76187-V.

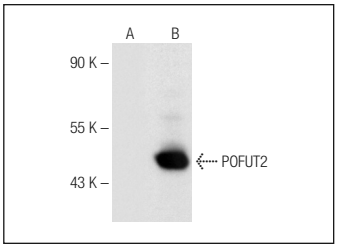
Molecular Weight of POFUT2: 50 kDa.

Positive Controls: POFUT2 (m2): 293T Lysate: sc-122676.

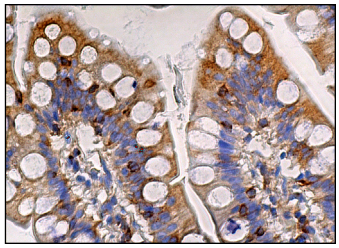
RECOMMENDED SUPPORT REAGENTS

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



POFUT2 (G-1): sc-271239. Western blot analysis of POFUT2 expression in non-transfected: sc-117752 (**A**) and mouse POFUT2 transfected: sc-122676 (**B**) 293T whole cell lysates.



POFUT2 (G-1): sc-271239. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

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.