

POFUT2 (h): 293T Lysate: sc-116920

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, α 2-fucosyltransferases, and α 6-fucosyltransferases: phylogeny and identification of conserved peptide motifs. Glycobiology 13: 1C-5C.
4. Dong, S., et al. 2005. Histology-based expression profiling yields novel prognostic markers in human glioblastoma. J. Neuropathol. Exp. Neurol. 64: 948-955.
5. Loriol, C., et al. 2006. Molecular evolution of protein O-fucosyltransferase genes and splice variants. Glycobiology 16: 736-747.
6. Sato, T., et al. 2006. Molecular cloning and characterization of a novel human β 1,3-glucosyltransferase, which is localized at the endoplasmic reticulum and glucosylates O-linked fucosylglycan on thrombospondin type 1 repeat domain. Glycobiology 16: 1194-1206.
7. Luo, Y., et al. 2006. Protein O-fucosyltransferase 2 adds O-fucose to thrombospondin type 1 repeats. J. Biol. Chem. 281: 9393-9399.
8. Ricketts, L.M., et al. 2007. O-fucosylation is required for ADAMTS-13 secretion. J. Biol. Chem. 282: 17014-17023.
9. Wang, L.W., et al. 2007. O-fucosylation of thrombospondin type 1 repeats in ADAMTS-like-1/punctin-1 regulates secretion: implications for the ADAMTS superfamily. J. Biol. Chem. 282: 17024-17031.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: POFUT2 (human) mapping to 21q22.3.

PRODUCT

POFUT2 (h): 293T Lysate represents a lysate of human POFUT2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

POFUT2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive POFUT2 antibodies. Recommended use: 10-20 μ l per lane.

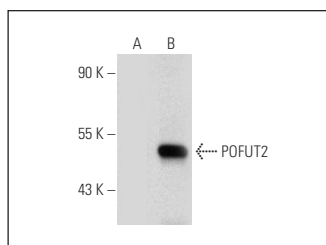
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

POFUT2 (G-1): sc-271239 is recommended as a positive control antibody for Western Blot analysis of enhanced human POFUT2 expression in POFUT2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



POFUT2 (G-1): sc-271239. Western blot analysis of POFUT2 expression in non-transfected: sc-117752 (A) and human POFUT2 transfected: sc-116920 (B) 293T whole cell lysates.

RESEARCH USE

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