

PTP-MEG2 (G-18): sc-32670

BACKGROUND

Protein tyrosine phosphatases (PTPs) and protein tyrosine kinases (PTKs) play a ubiquitous role in the regulation of tyrosine phosphorylation-mediated signaling pathways. Tyrosine-phosphorylated proteins can be dephosphorylated through the action of PTPs, which therefore are likely to play a regulatory role in the control of cellular growth and differentiation. PTP-MEG2 (also known as PTPN9) is a cytoplasmic nonreceptor protein involved in the transfer of hydrophobic ligands and possibly in functions of the Golgi apparatus. It is involved in the development of erythroid cells and has an N-terminal Sec14p homology domain. The human gene for PTP-PEST, another cytoplasmic nonreceptor protein, maps to chromosome 7q11.23 and encodes a 780 amino acid cytosolic nonreceptor protein. PTP-PEST is expressed abundantly in a wide variety of hemopoietic cell types, including B cells and T cells.

REFERENCES

- Gu, M., et al. 1992. Cloning and expression of a cytosolic megakaryocyte protein-tyrosine-phosphatase with sequence homology to retinaldehyde-binding protein and yeast Sec14p. *Proc. Natl. Acad. Sci. USA* 89: 2980-2984.
- Qi, Y., et al. 2002. Purification and characterization of protein tyrosine phosphatase PTP-MEG2. *J. Cell. Biochem.* 86: 79-89.
- Wang, X., et al. 2002. Enlargement of secretory vesicles by protein tyrosine phosphatase PTP-MEG2 in rat basophilic leukemia mast cells and Jurkat T cells. *J. Immunol.* 168: 4612-4619.
- Huynh, H., et al. 2003. Homotypic secretory vesicle fusion induced by the protein tyrosine phosphatase MEG2 depends on polyphosphoinositides in T cells. *J. Immunol.* 171: 6661-6671.
- Xu, M.J., et al. 2003. PTP-MEG2 is activated in polycythemia vera erythroid progenitor cells and is required for growth and expansion of erythroid cells. *Blood* 102: 4354-4360.

CHROMOSOMAL LOCATION

Genetic locus: PTPN9 (human) mapping to 15q24.2; Ptpn9 (mouse) mapping to 9 B.

SOURCE

PTP-MEG2 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PTP-MEG2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-32670 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PTP-MEG2 (G-18) is recommended for detection of PTP-MEG2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PTP-MEG2 (G-18) is also recommended for detection of PTP-MEG2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PTP-MEG2 siRNA (h): sc-44670, PTP-MEG2 siRNA (m): sc-44671, PTP-MEG2 shRNA Plasmid (h): sc-44670-SH, PTP-MEG2 shRNA Plasmid (m): sc-44671-SH, PTP-MEG2 shRNA (h) Lentiviral Particles: sc-44670-V and PTP-MEG2 shRNA (m) Lentiviral Particles: sc-44671-V.

Molecular Weight (predicted) of PTP-MEG2: 68 kDa.

Molecular Weight (observed) of PTP-MEG2: 79 kDa.

Positive Controls: A549 cell lysate: sc-2413.

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) 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.

RESEARCH USE

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

PROTOCOLS

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


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Try **PTP-MEG2 (D-5): sc-271052**, our highly recommended monoclonal alternative to PTP-MEG2 (G-18).