

PTP-MEG2 (D-5): sc-271052

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.
- Zhao, R., et al. 2003. Specific interaction of protein tyrosine phosphatase-MEG2 with phosphatidylserine. *J. Biol. Chem.* 278: 22609-22614.

CHROMOSOMAL LOCATION

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

SOURCE

PTP-MEG2 (D-5) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of PTP-MEG2 of human origin.

PRODUCT

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

PTP-MEG2 (D-5) is available conjugated to agarose (sc-271052 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271052 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271052 PE), fluorescein (sc-271052 FITC), Alexa Fluor® 488 (sc-271052 AF488), Alexa Fluor® 546 (sc-271052 AF546), Alexa Fluor® 594 (sc-271052 AF594) or Alexa Fluor® 647 (sc-271052 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271052 AF680) or Alexa Fluor® 790 (sc-271052 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PTP-MEG2 (D-5) is recommended for detection of PTP-MEG2 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).

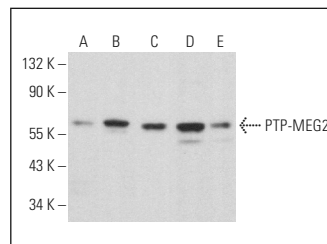
Suitable for use as control antibody for PTP-MEG2 siRNA (h): sc-44670, PTP-MEG2 siRNA (m): sc-44671, PTP-MEG2 shRNA Plasmid (h): sc-44670-SH, PTP-MEG2 shRNA Plasmid (m): sc-44671-SH, PTP-MEG2 shRNA (h) Lentiviral Particles: sc-44670-V and PTP-MEG2 shRNA (m) Lentiviral Particles: sc-44671-V.

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

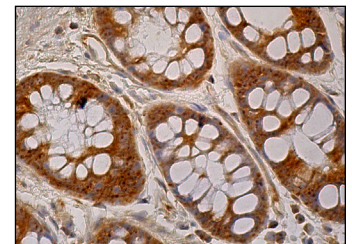
Molecular Weight (observed) of PTP-MEG2: 79 kDa.

Positive Controls: 3T3-L1 cell lysate: sc-2243, A-10 cell lysate: sc-3806 or RT-4 whole cell lysate: sc-364257.

DATA



PTP-MEG2 (D-5): sc-271052. Western blot analysis of PTP-MEG2 expression in RT-4 (A), 3T3-L1 (B), EOC 20 (C), A-10 (D) and RPE-J (E) whole cell lysates.



PTP-MEG2 (D-5): sc-271052. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Glal, D., et al. 2018. ATF3 sustains IL-22-induced Stat3 phosphorylation to maintain mucosal immunity through inhibiting phosphatases. *Front. Immunol.* 9: 2522.

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.

PROTOCOLS

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

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