

TIMAP (G-20): sc-79618

BACKGROUND

TIMAP (protein phosphatase 1 regulatory inhibitor subunit), protein phosphatase 1 regulatory inhibitor subunit 16B, TGF β -inhibited membrane-associated protein, CAAX box protein TIMAP, ankyrin repeat domain-containing protein 4, ANKRD4, PPP1R16B or KIAA0823, is a novel 567 amino acid CAAX box protein that is a positive regulator of pulmonary endothelial barrier function and likely acts as a downstream target in endothelial cells for the TGF β 1 signaling cascade. TIMAP localizes to the cell membrane and is highly expressed in CNS, lung, vascular endothelium, spleen, kidney and testis. TIMAP contains five ANK repeats, a protein phosphatase-1-interacting domain, and a carboxy-terminal CAAX box domain. TIMAP is inhibited by TGF β 1, and potentially serves a signaling function through interaction with protein phosphatase-1. The gene encoding TIMAP maps to human chromosome 20q11.23.

REFERENCES

1. Cao, W., Mattagajasingh, S.N., Xu, H., Kim, K., Fierlbeck, W., Deng, J., Lowenstein, C.J. and Ballermann, B.J. 2002. TIMAP, a novel CAAX box protein regulated by TGF β 1 and expressed in endothelial cells. *Am. J. Physiol., Cell Physiol.* 283: C327-C337.
2. Yong, J., Tan, I., Lim, L. and Leung, T. 2006. Phosphorylation of myosin phosphatase targeting subunit 3 (MYPT3) and regulation of protein phosphatase 1 by protein kinase A. *J. Biol. Chem.* 281: 31202-31211.
3. Adyshev, D.M., Kolosova, I.A. and Verin, A.D. 2006. Potential protein partners for the human TIMAP revealed by bacterial two-hybrid screening. *Mol. Biol. Rep.* 33: 83-89.
4. Browne, G.J., Fardilha, M., Oxenham, S.K., Wu, W., Helps, N.R., da Cruz E Silva, O.A., Cohen, P.T. and da Cruz E Silva, E.F. 2007. SARP, a new alternatively spliced protein phosphatase 1 and DNA interacting protein. *Biochem. J.* 402: 187-196.
5. Csontos, C., Czikora, I., Bogatcheva, N.V., Adyshev, D.M., Poirier, C., Olah, G. and Verin, A.D. 2008. TIMAP is a positive regulator of pulmonary endothelial barrier function. *Am. J. Physiol. Lung Cell Mol. Physiol.* 295: L440-L450.

CHROMOSOMAL LOCATION

Genetic locus: PPP1R16B (human) mapping to 20q11.23; Ppp1r16b (mouse) mapping to 2 H1.

SOURCE

TIMAP (G-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TIMAP of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79618 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

TIMAP (G-20) is recommended for detection of TIMAP 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).

TIMAP (G-20) is also recommended for detection of TIMAP in additional species, including equine.

Suitable for use as control antibody for TIMAP siRNA (h): sc-76669, TIMAP siRNA (m): sc-76670, TIMAP shRNA Plasmid (h): sc-76669-SH, TIMAP shRNA Plasmid (m): sc-76670-SH, TIMAP shRNA (h) Lentiviral Particles: sc-76669-V and TIMAP shRNA (m) Lentiviral Particles: sc-76670-V.

Molecular Weight of TIMAP: 63 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.