

p60TRP (E-14): sc-168881

BACKGROUND

Basic helix-loop-helix (bHLH) proteins are a group of transcription factors that influence the regulation of neurogenesis, cardiogenesis, myogenesis, differentiation and cell proliferation. p60TRP (p60-transcription-regulator-protein), also known as BHLHb9 (basic helix-loop-helix domain containing, class B, 9) or p60-like protein, is a 547 amino acid cytoplasmic and nuclear protein that belongs to the GPRASP family. A few members of the GRASP family are considered G protein-coupled receptors that play a role in many different stimulus-response pathways. Highly expressed in brain, p60TRP may be involved in the control of cellular aging and survival. In colon cancer cells, p60TRP is down regulated due to CpG hypermethylation of its promoter, and patients suffering from Alzheimer disease have low levels of p60TRP. p60TRP binds to karyopherin β 3, also known as Ran BP-5, and protein-phosphatase-2A (PP2A), and is encoded by a gene located on human chromosome Xq22.1.

REFERENCES

1. Chaudhary, J., Cupp, A.S. and Skinner, M.K. 1997. Role of basic-helix-loop-helix transcription factors in Sertoli cell differentiation: identification of an E-box response element in the transferrin promoter. *Endocrinology* 138: 667-675.
2. Narumi, O., Mori, S., Boku, S., Tsuji, Y., Hashimoto, N., Nishikawa, S. and Yokota, Y. 2000. OUT, a novel basic helix-loop-helix transcription factor with an Id-like inhibitory activity. *J. Biol. Chem.* 275: 3510-3521.
3. Tachibana, M., Narumi, O., Muguruma, K., Yamamoto, I., Shinkai, Y. and Yokota, Y. 2001. Genomic organization and chromosomal mapping of the basic helix-loop-helix factor OUT (Tcf23/TCF23). *Cytogenet. Cell Genet.* 94: 23-25.
4. McLellan, A.S., Langlands, K. and Kealey, T. 2002. Exhaustive identification of human class II basic helix-loop-helix proteins by virtual library screening. *Gene Expr. Patterns* 2: 329-335.
5. Heese, K., Yamada, T., Akatsu, H., Yamamoto, T., Kosaka, K., Nagai, Y. and Sawada, T. 2004. Characterizing the new transcription regulator protein p60TRP. *J. Cell. Biochem.* 91: 1030-1042.
6. Simonin, F., Karcher, P., Boeuf, J.J., Matifas, A. and Kieffer, B.L. 2004. Identification of a novel family of G protein-coupled receptor associated sorting proteins. *J. Neurochem.* 89: 766-775.
7. Jacinto, F.V., Ballestar, E., Roperio, S. and Esteller, M. 2007. Discovery of epigenetically silenced genes by methylated DNA immunoprecipitation in colon cancer cells. *Cancer Res.* 67: 11481-11486.
8. Wang, Y., Chen, K.P. and Yao, Q. 2008. Progress of studies on bHLH transcription factor families. *Yi Chuan* 30: 821-830.
9. Skinner, M.K., Rawls, A., Wilson-Rawls, J. and Roalson, E.H. 2010. Basic helix-loop-helix transcription factor gene family phylogenetics and nomenclature. *Differentiation* 80: 1-8.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: BHLHB9 (human) mapping to Xq22.1; Bhlhb9 (mouse) mapping to X F1.

SOURCE

p60TRP (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of p60TRP of human origin.

PRODUCT

Each vial contains 200 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-168881 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p60TRP (E-14) is recommended for detection of p60TRP of human origin and Bhlhb9 of mouse origin 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).

Suitable for use as control antibody for p60TRP siRNA (h): sc-90971, p60TRP shRNA Plasmid (h): sc-90971-SH and p60TRP shRNA (h) Lentiviral Particles: sc-90971-V.

Molecular Weight of p60TRP: 60 kDa.

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.