

PPTC7 (D-17): sc-169022

BACKGROUND

PPTC7 (PTC7 protein phosphatase homolog), also known as TA-PP2C (T-cell activation protein phosphatase 2C), is a 304 amino acid protein that belongs to the PP2C family. Highly conserved, PPTC7 contains one PP2C-like domain and is up-regulated during lymphocyte activation. PPTC7 is known to dephosphorylate NCoA-3, a master growth coactivator and oncogene. PPTC7 also participates in metal ion binding, using magnesium or manganese as a cofactor. The gene that encodes PPTC7 maps to human chromosome 12, which encodes over 1,100 genes within 132 million bases and makes up approximately 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12, including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Chromosome 12 is also linked to a homeobox gene cluster, which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster that encodes C-type lectin proteins, which mediate the NK cell response to MHC I interaction.

REFERENCES

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2. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. *Immunol. Rev.* 181: 20-38.
3. Mao, M., et al. 2004. T lymphocyte activation gene identification by coregulated expression on DNA microarrays. *Genomics* 83: 989-999.
4. Kelley, J., et al. 2005. Comparative genomics of natural killer cell receptor gene clusters. *PLoS Genet.* 1: 129-139.
5. van der Burgt, I. 2007. Noonan syndrome. *Orphanet. J. Rare Dis.* 2: 4.
6. Li, C., et al. 2008. Essential phosphatases and a phospho-degron are critical for regulation of SRC-3/AIB1 coactivator function and turnover. *Mol. Cell.* 31: 835-849.
7. Yang, T., et al. 2010. Mutation analysis of PTPN11 gene in Noonan syndrome. *Zhonghua Yi Xue Yi Chuan Xue Za Zhi* 27: 554-558.

CHROMOSOMAL LOCATION

Genetic locus: PPTC7 (human) mapping to 12q24.11; Pptc7 (mouse) mapping to 5 F.

SOURCE

PPTC7 (D-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PPTC7 of human origin.

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.

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-169022 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PPTC7 (D-17) is recommended for detection of PPTC7 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).

PPTC7 (D-17) is also recommended for detection of PPTC7 in additional species, including equine.

Suitable for use as control antibody for PPTC7 siRNA (h): sc-96125, PPTC7 siRNA (m): sc-152429, PPTC7 shRNA Plasmid (h): sc-96125-SH, PPTC7 shRNA Plasmid (m): sc-152429-SH, PPTC7 shRNA (h) Lentiviral Particles: sc-96125-V and PPTC7 shRNA (m) Lentiviral Particles: sc-152429-V.

Molecular Weight of PPTC7: 33 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.