

TTC12 (C-9): sc-393493

BACKGROUND

The tetratricopeptide repeat (TPR) motif is a degenerate, 34 amino acid sequence found in many proteins and acts to mediate protein-protein interactions in various pathways. At the sequence level, there can be up to 16 tandem TPR repeats, each of which has a helix-turn-helix shape that stacks on other TPR repeats to achieve ligand binding specificity. TTC12 (tetratricopeptide repeat domain 12), also known as TPARM, is a 705 amino acid cytoplasmic protein containing a TPR repeat domain and three armadillo repeat motifs. TTC12 is expressed in testis, prostate, lung, germinal center B cells, neuroblastoma, teratocarcinoma, colon cancer and gastric cancer. The gene encoding TTC12 is located in a region of human chromosome 11 that is commonly deleted in a variety of cancers, therefore, it is considered a candidate tumor suppressor gene. Human chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Katoh, M., et al. 2003. Identification and characterization of TPARM gene in silico. *Int. J. Oncol.* 23: 1213-1217.
2. Gelernter, J., et al. 2006. Haplotype spanning TTC12 and ANKK1, flanked by the DRD2 and NCAM1 loci, is strongly associated to nicotine dependence in two distinct American populations. *Hum. Mol. Genet.* 15: 3498-3507.
3. Yang, B.Z., et al. 2007. Association of haplotypic variants in DRD2, ANKK1, TTC12 and NCAM1 to alcohol dependence in independent case control and family samples. *Hum. Mol. Genet.* 16: 2844-2853.
4. Wattanawaraporn, R., et al. 2007. Hypermethylation of TTC12 gene in acute lymphoblastic leukemia. *Leukemia* 21: 2370-2373.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610732. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Korkola, J.E., et al. 2008. *In vivo* differentiation and genomic evolution in adult male germ cell tumors. *Genes Chromosomes Cancer* 47: 43-55.
7. David, S.P., et al. 2010. Sex differences in TTC12/ANKK1 haplotype associations with daily tobacco smoking in Black and White Americans. *Nicotine Tob. Res.* 12: 251-262.

CHROMOSOMAL LOCATION

Genetic locus: TTC12 (human) mapping to 11q23.2; Ttc12 (mouse) mapping to 9 A5.3.

SOURCE

TTC12 (C-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 56-79 near the N-terminus of TTC12 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.

Blocking peptide available for competition studies, sc-393493 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TTC12 (C-9) is recommended for detection of TTC12 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TTC12 siRNA (h): sc-96505, TTC12 siRNA (m): sc-154750, TTC12 shRNA Plasmid (h): sc-96505-SH, TTC12 shRNA Plasmid (m): sc-154750-SH, TTC12 shRNA (h) Lentiviral Particles: sc-96505-V and TTC12 shRNA (m) Lentiviral Particles: sc-154750-V.

Molecular Weight of TTC12: 79 kDa.

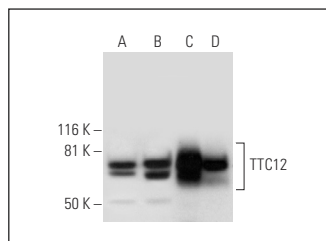
Positive Controls: rat testis extract: sc-2400, human testis extract: sc-363781 or U-251-MG whole cell lysate: sc-364176.

RECOMMENDED SUPPORT REAGENTS

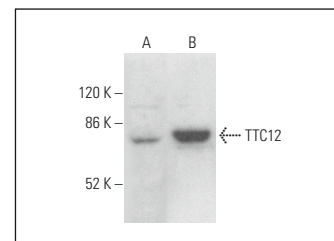
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TTC12 (C-9): sc-393493. Western blot analysis of TTC12 expression in U-251-MG (A) and MDA-MB-435 (B) whole cell lysates and rat testis (C) and human testis (D) tissue extracts.



TTC12 (C-9): sc-393493. Western blot analysis of TTC12 expression in TT (A) and F9 (B) whole cell lysates.

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.