

TTC9 (P-14): sc-165825

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. TTC9 (tetratricopeptide repeat domain 9), also known as TTC9A, is a 222 amino acid protein containing 3 TPR repeats. TTC9 is encoded by a gene located on human chromosome 14q24.2. Chromosome 14 houses over 700 genes and comprises nearly 3.5% of the human genome. Chromosome 14 encodes the presenilin 1 (PSEN1) gene, which is one of the three key genes associated with the development of Alzheimer's disease (AD). The SERPINA1 gene is also located on chromosome 14 and, when defective, leads to the genetic disorder α 1-antitrypsin deficiency, which is characterized by severe lung complications and liver dysfunction.

REFERENCES

- Blatch, G.L., et al. 1999. The tetratricopeptide repeat: a structural motif mediating protein-protein interactions. *Bioessays* 21: 932-939.
- Andrade, M.A., et al. 2001. Protein repeats: structures, functions, and evolution. *J. Struct. Biol.* 134: 117-131.
- Smith, D.F. 2004. Tetratricopeptide repeat cochaperones in steroid receptor complexes. *Cell Stress Chaperones* 9: 109-121.
- Banerjee, A., et al. 2008. Control of glucocorticoid and progesterone receptor subcellular localization by the ligand-binding domain is mediated by distinct interactions with tetratricopeptide repeat proteins. *Biochemistry* 47: 10471-10480.
- Wilson, J.B., et al. 2010. Several tetratricopeptide repeat (TPR) motifs of FANCG are required for assembly of the BRCA2/D1-D2-G-X3 complex, FANCD2 monoubiquitylation and phleomycin resistance. *Mutat. Res.* 689: 12-20.
- Schülke, J.P., et al. 2010. Differential impact of tetratricopeptide repeat proteins on the steroid hormone receptors. *PLoS ONE* 5: e11717.
- Krachler, A.M., et al. 2010. Self-association of TPR domains: Lessons learned from a designed, consensus-based TPR oligomer. *Proteins* 78: 2131-2143.

CHROMOSOMAL LOCATION

Genetic locus: TTC9 (human) mapping to 14q24.2.

SOURCE

TTC9 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TTC9 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-165825 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TTC9 (P-14) is recommended for detection of TTC9 of human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with TTC9B or TTC9C.

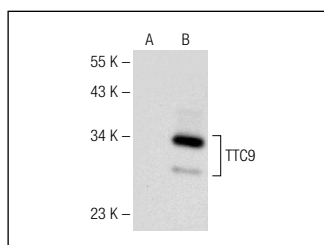
Suitable for use as control antibody for TTC9 siRNA (h): sc-92297, TTC9 shRNA Plasmid (h): sc-92297-SH and TTC9 shRNA (h) Lentiviral Particles: sc-92297-V.

Positive Controls: TTC9 (h): 293T Lysate: sc-174137 or rat brain extract: sc-2392.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



TTC9 (P-14): sc-165825. Western blot analysis of TTC9 expression in non-transfected: sc-117752 (A) and human TTC9 transfected: sc-174137 (B) 293T 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 or our catalog for detailed protocols and support products.