

TMTC3 (C-13): sc-139094

BACKGROUND

The tetratricopeptide repeat (TPR) motif is a degenerate, 34 amino acid sequence found in many proteins that 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. TMTC3 (transmembrane and tetratricopeptide repeat containing 3), also known as SMILE, is a 915 amino acid multi-pass membrane protein belonging to the TMTC family and contains ten TPR repeats. Existing as two alternatively spliced isoforms, TMTC3 is encoded by a gene located on human chromosome 12q21.32. Encoding over 1,100 genes within 132 million bases, chromosome 12 makes up about 4.5% of the human genome.

REFERENCES

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3. Cliff, M.J., Williams, M.A., Brooke-Smith, J., Barford, D. and Ladbury, J.E. 2005. Molecular recognition via coupled folding and binding in a TPR domain. *J. Mol. Biol.* 346: 717-732.
4. Cortajarena, A.L. and Regan, L. 2006. Ligand binding by TPR domains. *Protein Sci.* 15: 1193-1198.
5. Kajander, T., Cortajarena, A.L., Mochrie, S. and Regan, L. 2007. Structure and stability of designed TPR protein superhelices: unusual crystal packing and implications for natural TPR proteins. *Acta Crystallogr. D Biol. Crystallogr.* 63: 800-811.
6. Karpenahalli, M.R., Lupas, A.N. and Söding, J. 2007. TPRpred: a tool for prediction of TPR-, PPR- and SEL1-like repeats from protein sequences. *BMC Bioinformatics* 8: 2.

CHROMOSOMAL LOCATION

Genetic locus: TMTC3 (human) mapping to 12q21.32; Tmtc3 (mouse) mapping to 10 D1.

SOURCE

TMTC3 (C-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of TMTC3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-139094 P, (100 µg 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

TMTC3 (C-13) is recommended for detection of TMTC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with TMTC1, TMTC2 or TMTC4.

Suitable for use as control antibody for TMTC3 siRNA (h): sc-95711, TMTC3 siRNA (m): sc-154534, TMTC3 shRNA Plasmid (h): sc-95711-SH, TMTC3 shRNA Plasmid (m): sc-154534-SH, TMTC3 shRNA (h) Lentiviral Particles: sc-95711-V and TMTC3 shRNA (m) Lentiviral Particles: sc-154534-V.

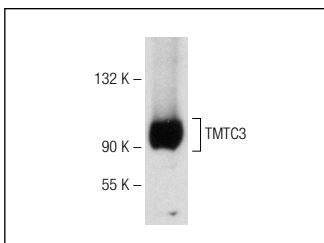
Molecular Weight of TMTC3: 104 kDa.

Positive Controls: ES-DS whole cell lysate.

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

DATA



TMTC3 (C-13): sc-139094. Western blot analysis of TMTC3 expression in ES-DS whole cell lysate.

STORAGE

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

MONOS
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Try **TMTC3 (G-9): sc-398137**, our highly recommended monoclonal alternative to TMTC3 (C-13).