

TTI1 (L-19): sc-85604

BACKGROUND

TTI1 (TELO2-interacting protein 1 homolog), also known as SMG10, is a 1,089 amino acid protein that is widely expressed and belongs to the TTI1 family. TTI1 functions as a regulator of the DNA damage response (DDR) and is a component of the TTT complex, which is necessary for the stabilization of protein levels of the phosphatidylinositol 3-kinase (PIKK) family. The TTT complex is a part of the cellular resistance to DNA damage stresses such as ionizing radiation (IR), ultraviolet (UV) and mitomycin C (MMC). In combination with the TTT complex and HSP90, TTI1 may play a role in the proper folding of newly synthesized PIKKs. TTI1 also is involved in the assembly of mTORC1 and mTORC2 complexes, as well as their stabilization and maintenance. TTI1 is post-translationally modified at serine 459 and the gene encoding this protein maps to human chromosome 20.

REFERENCES

1. Ishikawa, K., et al. 1997. Prediction of the coding sequences of unidentified human genes. VIII. 78 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 4: 307-313.
2. Olsen, J.V., et al. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
3. Daub, H., et al. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. Mol. Cell 31: 438-448.
4. Hurov, K.E., et al. 2010. A genetic screen identifies the Triple T complex required for DNA damage signaling and ATM and ATR stability. Genes Dev. 24: 1939-1950.
5. Takai, H., et al. 2010. Tel2 structure and function in the Hsp90-dependent maturation of mTOR and ATR complexes. Genes Dev. 24: 2019-2030.
6. Kaizuka, T., et al. 2010. Tti1 and Tel2 are critical factors in mammalian target of rapamycin complex assembly. J. Biol. Chem. 285: 20109-20116.
7. Izumi, N., et al. 2010. AAA⁺ proteins RUVBL1 and RUVBL2 coordinate PIKK activity and function in nonsense-mediated mRNA decay. Sci. Signal. 3: ra27.

CHROMOSOMAL LOCATION

Genetic locus: TTI1 (human) mapping to 20q11.23; Tti1 (mouse) mapping to 2 H1.

SOURCE

TTI1 (L-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of TTI1 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-85604 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TTI1 (L-19) is recommended for detection of TTI1 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).

TTI1 (L-19) is also recommended for detection of TTI1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TTI1 siRNA (h): sc-75381, TTI1 siRNA (m): sc-146444, TTI1 shRNA Plasmid (h): sc-75381-SH, TTI1 shRNA Plasmid (m): sc-146444-SH, TTI1 shRNA (h) Lentiviral Particles: sc-75381-V and TTI1 shRNA (m) Lentiviral Particles: sc-146444-V.

Molecular Weight of TTI1: 122 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-N-MC cell lysate: sc-2237 or NTERA-2 cl.D1 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) 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.

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.