TTI1 (h2): 293 Lysate: sc-113814



The Power to Question

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-tanslationally modified at serine 459 and the gene encoding this protein maps to human chromosome 20q11.23.

REFERENCES

- Ishikawa, K., Nagase, T., Nakajima, D., Seki, N., Ohira, M., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 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., Blagoev, B., Gnad, F., Macek, B., Kumar, C., Mortensen, P. and Mann, M. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
- 3. Daub, H., Olsen, J.V., Bairlein, M., Gnad, F., Oppermann, F.S., Körner, R., Greff, Z., Kéri, G., Stemmann, O. and Mann, M. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. Mol. Cell 31: 438-448.
- 4. Hurov, K.E., Cotta-Ramusino, C. and Elledge, S.J. 2010. A genetic screen identifies the Triple T complex required for DNA damage signaling and ATM and ATR stability. Genes Dev. 24: 1939-1950.
- Takai, H., Xie, Y., de Lange, T. and Pavletich, N.P. 2010. TEL2 structure and function in the Hsp90-dependent maturation of mTOR and ATR complexes. Genes Dev. 24: 2019-2030.
- Kaizuka, T., Hara, T., Oshiro, N., Kikkawa, U., Yonezawa, K., Takehana, K., Iemura, S., Natsume, T. and Mizushima, N. 2010. TTI1 and TEL2 are critical factors in mammalian target of rapamycin complex assembly. J. Biol. Chem. 285: 20109-20116.
- Izumi, N., Yamashita, A., Iwamatsu, A., Kurata, R., Nakamura, H., Saari, B., Hirano, H., Anderson, P. and Ohno, S. 2010. AAA+ proteins RUVBL1 and RUVBL2 coordinate PIKK activity and function in nonsense-mediated mRNA decay. Sci. Signal. 3: ra27.
- 8. Burkard, T.R., Planyavsky, M., Kaupe, I., Breitwieser, F.P., Bürckstümmer, T., Bennett, K.L., Superti-Furga, G. and Colinge, J. 2011. Initial characterization of the human central proteome. BMC Syst. Biol. 5: 17.

CHROMOSOMAL LOCATION

Genetic locus: TTI1 (human) mapping to 20q11.23.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

TTI1 (h2): 293 Lysate represents a lysate of human KIAA0406 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TTI1 (h2): 293 Lysate is suitable as a Western Blotting positive control for human reactive KIAA0406 antibodies. Recommended use: 10-20 µl per lane.

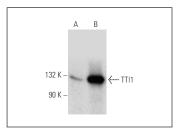
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

TTI1 (F-6): sc-271851 is recommended as a positive control antibody for Western Blot analysis of enhanced human TTI1 expression in TTI1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

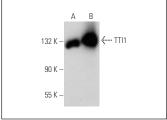
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA







TTI1 (H-1): sc-271638. Western blot analysis of TTI1 expression in non-transfected: sc-110760 (**A**) and human TTI1 transfected: sc-113814 (**B**) 293 whole cell lysates

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.