

MTUS1 (T-12): sc-98019

BACKGROUND

MTUS1 (mitochondrial tumor suppressor 1), also known as ATIP (Angiotensin II type 2 receptor (AT₂)-interacting protein), MP44, GK1 or MTSG1, is a ubiquitously expressed protein with highest expression in brain tissues. MTUS1 is predominantly hydrophilic and contains a large coiled-coil domain and two leucine zippers. It interacts with the C-terminal tail of AT₂ and cooperates with this receptor to mediate the inhibition of growth factor-induced ERK 2 activation and cell proliferation. MTUS1 functions as a tumor suppressor and mutations in the gene encoding MTUS1 may result in hepatocellular carcinoma (HCC). Five transcript variants of MTUS1 are produced by alternative splicing events, namely ATIP1, ATIP2, ATIP3a, ATIP3b and ATIP4. ATIP1 exhibits cytosolic localization and ATIP4 localizes to the plasma membrane. ATIP2, ATIP3a and ATIP3b localize to the nucleus and are highly conserved throughout evolution, implying an important function for each in cellular homeostasis.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609589. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Ohi, R., et al. 2003. An inner centromere protein that stimulates the microtubule depolymerizing activity of a Kln1 kinesin. *Dev. Cell* 5: 309-321.
3. Nouet, S., et al. 2004. *Trans*-inactivation of receptor tyrosine kinases by novel Angiotensin II AT₂ receptor-interacting protein, ATIP. *J. Biol. Chem.* 279: 28989-28997.
4. Di Benedetto, M., et al. 2006. Structural organization and expression of human MTUS1, a candidate 8p22 tumor suppressor gene encoding a family of Angiotensin II AT₂ receptor-interacting proteins, ATIP. *Gene* 380: 127-136.
5. Lee, S., et al. 2006. Differential expression in normal-adenoma-carcinoma sequence suggests complex molecular carcinogenesis in colon. *Oncol. Rep.* 16: 747-754.

CHROMOSOMAL LOCATION

Genetic locus: MTUS1 (human) mapping to 8p22; Mtus1 (mouse) mapping to 8 A4.

SOURCE

MTUS1 (T-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MTUS1 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-98019 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MTUS1 (T-12) is recommended for detection of MTUS1 of mouse and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with MTUS1-3, MTUS1-4, or MTUS1-6.

MTUS1 (T-12) is also recommended for detection of MTUS1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for MTUS1 siRNA (h): sc-77687, MTUS1 siRNA (m): sc-149696, MTUS1 shRNA Plasmid (h): sc-77687-SH, MTUS1 shRNA Plasmid (m): sc-149696-SH, MTUS1 shRNA (h) Lentiviral Particles: sc-77687-V and MTUS1 shRNA (m) Lentiviral Particles: sc-149696-V.

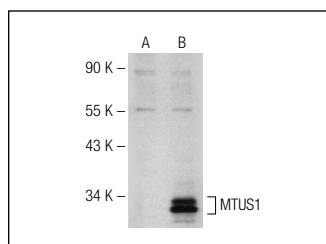
Molecular Weight of MTUS1: 141 kDa.

Positive Controls: MTUS1 (h): 293T Lysate: sc-115006.

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



MTUS1 (T-12): sc-98019. Western blot analysis of MTUS1 expression in non-transfected: sc-117752 (A) and human MTUS1 transfected: sc-115006 (B) 293T whole cell lysates.

RESEARCH USE

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

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Try **MTUS1 (E-8): sc-393121** or **MTUS1 (A-4): sc-393120**, our highly recommended monoclonal alternatives to MTUS1 (T-12).