

MTUS1 (E-8): sc-393121

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 Kin 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.

SOURCE

MTUS1 (E-8) is a mouse monoclonal antibody raised against amino acids 836-1135 mapping near the C-terminus of MTUS1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MTUS1 (E-8) is available conjugated to agarose (sc-393121 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393121 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393121 PE), fluorescein (sc-393121 FITC), Alexa Fluor[®] 488 (sc-393121 AF488), Alexa Fluor[®] 546 (sc-393121 AF546), Alexa Fluor[®] 594 (sc-393121 AF594) or Alexa Fluor[®] 647 (sc-393121 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393121 AF680) or Alexa Fluor[®] 790 (sc-393121 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MTUS1 (E-8) is recommended for detection of MTUS1 of human origin by Western Blotting (starting dilution 1:100, 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).

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

Molecular Weight of MTUS1: 141 kDa.

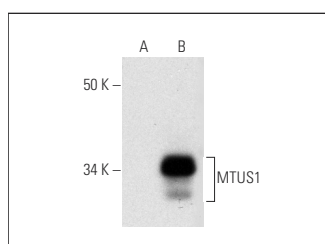
Positive Controls: MTUS1 (h): 293T Lysate: sc-115006.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



MTUS1 (E-8): sc-393121. Western blot analysis of MTUS1 expression in non-transfected: sc-117752 (A) and human MTUS1 transfected: sc-115006 (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 for detailed protocols and support products.

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