

MRP-S18A (P-13): sc-132357

BACKGROUND

Mitochondrial ribosomes consist of a large 39S subunit and a small 28S subunit, both of which are comprised of multiple mitochondrial ribosomal proteins (MRPs) that are encoded by nuclear genes and are essential for protein synthesis within mitochondria. MRP-S18A (mitochondrial ribosomal protein S18A), also known as MRPS18-3, is a 196 amino acid protein that localizes to the mitochondrion, where it exists as a component of the 28S ribosomal subunit and works in conjunction with other MRPs to mediate protein synthesis. MRP-S18A is a member of the ribosomal protein S18P family, which also includes MRP-S18B and MRP-S18C. The gene encoding MRP-S18A maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome.

REFERENCES

1. Kenmochi, N., et al. 2001. The human mitochondrial ribosomal protein genes: mapping of 54 genes to the chromosomes and implications for human disorders. *Genomics* 77: 65-70.
2. Cavdar Koc, E., et al. 2001. The small subunit of the mammalian mitochondrial ribosome. Identification of the full complement of ribosomal proteins present. *J. Biol. Chem.* 276: 19363-19374.
3. Suzuki, T., et al. 2001. Proteomic analysis of the mammalian mitochondrial ribosome. Identification of protein components in the 28 S small subunit. *J. Biol. Chem.* 276: 33181-33195.
4. Zhang, Z. and Gerstein, M. 2003. Identification and characterization of over 100 mitochondrial ribosomal protein pseudogenes in the human genome. *Genomics* 81: 468-480.
5. Mungall, A.J., et al. 2004. Molecular hierarchy in neurons differentiated from mouse ES cells containing a single human chromosome 21. *Biochem. Biophys. Res. Commun.* 314: 335-350.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611981. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: MRPS18A (human) mapping to 6p21.1; Mrps18a (mouse) mapping to 17 C.

SOURCE

MRP-S18A (P-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MRP-S18A of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132357 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

MRP-S18A (P-13) is recommended for detection of MRP-S18A of mouse, rat 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 MRP-S18B or MRP-S18C.

Suitable for use as control antibody for MRP-S18A siRNA (h): sc-95289, MRP-S18A siRNA (m): sc-149619, MRP-S18A shRNA Plasmid (h): sc-95289-SH, MRP-S18A shRNA Plasmid (m): sc-149619-SH, MRP-S18A shRNA (h) Lentiviral Particles: sc-95289-V and MRP-S18A shRNA (m) Lentiviral Particles: sc-149619-V.

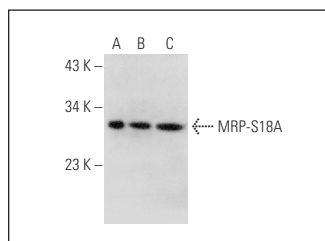
Molecular Weight of MRP-S18A: 22 kDa.

Positive Controls: Ramos cell lysate: 2216, Raji whole cell lysate: sc-364236 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



MRP-S18A (P-13): sc-132357. Western blot analysis of MRP-S18A expression in Ramos (A), Raji (B) and Hep G2 (C) 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.

PROTOCOLS

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