

MRP-S36 (C-14): sc-107264

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-S36 (mitochondrial ribosomal protein S36), is a 103 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. The gene encoding MRP-S36 maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. O'Brien, T.W., Liu, J., Sylvester, J.E., Mougey, E.B., Fischel-Ghodsian, N., Thiede, B., Wittmann-Liebold, B. and Graack, H.R. 2000. Mammalian mitochondrial ribosomal proteins. Amino acid sequencing, characterization, and identification of corresponding gene sequences. *J. Biol. Chem.* 275: 18153-18159.
2. Kenmochi, N., Suzuki, T., Uechi, T., Magoori, M., Kuniba, M., Higa, S., Watanabe, K. and Tanaka, T. 2001. The human mitochondrial ribosomal protein genes: mapping of 54 genes to the chromosomes and implications for human disorders. *Genomics* 77: 65-70.
3. Cavdar Koc, E., Burkhart, W., Blackburn, K., Moseley, A. and Spremulli, L.L. 2001. The small subunit of the mammalian mitochondrial ribosome. Identification of the full complement of ribosomal proteins present. *J. Biol. Chem.* 276: 19363-19374.
4. Suzuki, T., Terasaki, M., Takemoto-Hori, C., Hanada, T., Ueda, T., Wada, A. and Watanabe, K. 2001. Proteomic analysis of the mammalian mitochondrial ribosome. Identification of protein components in the 28 S small subunit. *J. Biol. Chem.* 276: 33181-33195.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611996. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Zhang, Z. and Gerstein, M. 2003. Identification and characterization of over 100 mitochondrial ribosomal protein pseudogenes in the human genome. *Genomics* 81: 468-480.

CHROMOSOMAL LOCATION

Genetic locus: MRPS36 (human) mapping to 5q13.2; Mrps36 (mouse) mapping to 13 D1.

SOURCE

MRP-S36 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MRP-S36 of human origin.

STORAGE

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

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-107264 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRP-S36 (C-14) is recommended for detection of MRP-S36 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); non cross-reactive with other MRP-S family members.

MRP-S36 (C-14) is also recommended for detection of MRP-S36 in additional species, including equine and porcine.

Suitable for use as control antibody for MRP-S36 siRNA (h): sc-91857, MRP-S36 siRNA (m): sc-149633, MRP-S36 shRNA Plasmid (h): sc-91857-SH, MRP-S36 shRNA Plasmid (m): sc-149633-SH, MRP-S36 shRNA (h) Lentiviral Particles: sc-91857-V and MRP-S36 shRNA (m) Lentiviral Particles: sc-149633-V.

Molecular Weight of MRP-S36: 11 kDa.

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) 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.

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.