MRP-S21 (D-14): sc-104415



The Power to Question

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-S21 (mitochondrial ribosomal protein S21), also known as RPMS21, is an 87 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-S21 maps to human chromosome 1, which spans about 260 million base pairs and comprises nearly 8% of the human genome.

REFERENCES

- 1. 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.
- 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.
- 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.
- Zhang, Z. and Gerstein, M. 2003. Identification and characterization of over 100 mitochondrial ribosomal protein pseudogenes in the human genome. Genomics 81: 468-480.
- Mungall, A.J., Palmer, S.A., Sims, S.K., Edwards, C.A., Ashurst, J.L., Wilming, L., Jones, M.C., Horton, R., Hunt, S.E., Scott, C.E., Gilbert, J.G., Clamp, M.E., Bethel, G., Milne, S., Ainscough, R., 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: 611984. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: MRPS21 (human) mapping to 1q21.2.

SOURCE

MRP-S21 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MRP-S21 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 lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-104415 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRP-S21 (D-14) is recommended for detection of MRP-S21 of 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.

Suitable for use as control antibody for MRP-S21 siRNA (h): sc-88723, MRP-S21 shRNA Plasmid (h): sc-88723-SH and MRP-S21 shRNA (h) Lentiviral Particles: sc-88723-V.

Molecular Weight of MRP-S21: 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) 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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**