



MRP-S5 (E-13): sc-132373

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-S5 (mitochondrial ribosomal protein S5), alternatively known as S5mt, is a 430 amino acid mitochondrial protein belonging to the ribosomal protein S5P family. A component of the 28S subunit, MRP-S5 contains one S5 DRBM domain and exists as two alternatively spliced isoforms. The gene encoding MRP-S5 maps to human chromosome 2, which consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2 including Harlequin ichthyosis, Sitosterolemia and Alström syndrome.

REFERENCES

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2. 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.
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4. Suzuki, T., et al. 2001. Proteomic analysis of the mammalian mitochondrial ribosome. Identification of protein components in the 28S small subunit. *J. Biol. Chem.* 276: 33181-33195.
5. Hearn, T., et al. 2002. Mutation of ALMS1, a large gene with a tandem repeat encoding 47 amino acids, causes Alström syndrome. *Nat. Genet.* 31: 79-83.
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CHROMOSOMAL LOCATION

Genetic locus: MRPS5 (human) mapping to 2q11.1; Mrps5 (mouse) mapping to 2 F1.

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.

SOURCE

MRP-S5 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MRP-S5 of human 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-132373 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRP-S5 (E-13) is recommended for detection of MRP-S5 isoforms 1 and 2 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.

Suitable for use as control antibody for MRP-S5 siRNA (h): sc-94717, MRP-S5 siRNA (m): sc-149634, MRP-S5 shRNA Plasmid (h): sc-94717-SH, MRP-S5 shRNA Plasmid (m): sc-149634-SH, MRP-S5 shRNA (h) Lentiviral Particles: sc-94717-V and MRP-S5 shRNA (m) Lentiviral Particles: sc-149634-V.

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.

PROTOCOLS

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