SANTA CRUZ BIOTECHNOLOGY, INC.

MRP-L41 (P-16): sc-107254

SANTA CRUZ BIOTECHNOLOGY

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-L41 (mitochondrial ribosomal protein L41), also known as cell proliferation-inducing gene 3 protein and BMRP (Bcl-2-interacting mitochondrial ribosomal protein L41), is a 137 amino acid protein that localizes to the mitochondrion, where it exists as a component of the 39S ribosomal subunit and works in conjunction with other MRPs to mediate protein synthesis. Expressed in liver, testis, kidney and thymus, MRP-L41 is involved in the cell cycle and apoptosis. Possibly by stabilizing p21 and p27, MRP-L41 has the ability to arrest the cell cycle in the G_1 phase. MRP-L41 also enhances p53 stability, therefore contributing to p53-induced apoptosis in response to growth-inhibitory conditions.

REFERENCES

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4. Koc, E.C., et al. 2001. The large subunit of the mammalian mitochondrial ribosome. Analysis of the complement of ribosomal proteins present. J. Biol. Chem. 276: 43958-43969.
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6. O'Brien, T.W., et al. 2005. Nuclear MRP genes and mitochondrial disease. Gene 354: 147-151.
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CHROMOSOMAL LOCATION

Genetic locus: MRPL41 (human) mapping to 9q34.3.

STORAGE

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

SOURCE

MRP-L41 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MRP-L41 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-107254 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRP-L41 (P-16) is recommended for detection of MRP-L41 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-L family members.

Suitable for use as control antibody for MRP-L41 siRNA (h): sc-92716, MRP-L41 shRNA Plasmid (h): sc-92716-SH and MRP-L41 shRNA (h) Lentiviral Particles: sc-92716-V.

Molecular Weight of MRP-L41: 15 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.