SANTA CRUZ BIOTECHNOLOGY, INC.

MRP-S12 (E-23): sc-133793

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-S12 (mitochondrial ribosomal protein S12) is a 138 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. In response to mitochondrial stress, bidirectional MRP-S12 promoter activity is strongly stimulated, an event that happens to correlate with mitochondrial reactive oxidative species (ROS) production. Due to its specific location on human chromosome 19, the gene encoding MRP-S12 may be a candidate gene for susceptibility to aminoglycoside ototoxicity and for the autosomal dominant deafness gene DFNA4.

REFERENCES

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8. Zanotto, E., et al. 2008. Modulation of MRP-S12/Sarsm promoter activity in response to mitochondrial stress. Biochim. Biophys. Acta 1783: 2352-2362.
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CHROMOSOMAL LOCATION

Genetic locus: MRPS12 (human) mapping to 19q13.2.

SOURCE

MRP-S12 (E-23) is an affinity purified rabbit polyclonal antibody raised against synthetic MRP-S12 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

MRP-S12 (E-23) is recommended for detection of MRP-S12 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MRP-S12 siRNA (h): sc-97863, MRP-S12 shRNA Plasmid (h): sc-97863-SH and MRP-S12 shRNA (h) Lentiviral Particles: sc-97863-V.

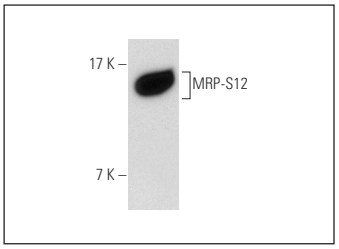
Molecular Weight of MRP-S12: 12 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

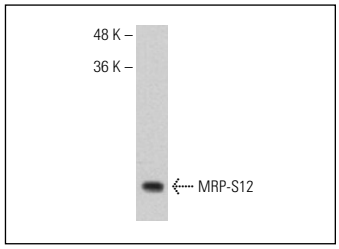
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



MRP-S12 (E-23): sc-133793. Western blot analysis of MRP-S12 expression in HeLa whole cell lysate.



MRP-S12 (E-23): sc-133793. Western blot analysis of MRP-S12 expression in Jurkat whole cell lysate.

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.

PROTOCOLS

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