

MRP-L10 (P-14): sc-107760

BACKGROUND

Mitochondria have their own translation machinery for production of thirteen proteins that are required for oxidative phosphorylation. MRP-L10 (39S ribosomal protein L10, mitochondrial), also known as MRP-L8, is a 261 amino acid protein that is a component of the large ribosomal subunit of the mitochondria. MRP-L10 is one of the 70 protein components of mitochondrial ribosomes that are encoded by the nuclear genome. MRP-L10 is deacetylated in a NAD⁺-dependent manner by SIRT3, which is an event that contributes to the regulation of mitochondrial protein synthesis. The gene encoding MRP-L10 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1.

REFERENCES

1. 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.
2. 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.
3. Wang, C.C., 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.
4. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). *Genome Res.* 14: 2121-2127.
5. Zody, M.C., et al. 2006. DNA sequence of human chromosome 17 and analysis of rearrangement in the human lineage. *Nature* 440: 1045-1049.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611825. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Yang, Y., et al. 2009. NAD⁺-dependent deacetylase SIRT3 regulates mitochondrial protein synthesis by deacetylation of the ribosomal protein MRP-L10. *J. Biol. Chem.* 285: 7417-7429.

CHROMOSOMAL LOCATION

Genetic locus: MRPL10 (human) mapping to 17q21.32; Mrpl10 (mouse) mapping to 11 D.

SOURCE

MRP-L10 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MRP-L10 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-107760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MRP-L10 (P-14) is recommended for detection of MRP-L10 of mouse, rat and 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)], 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).

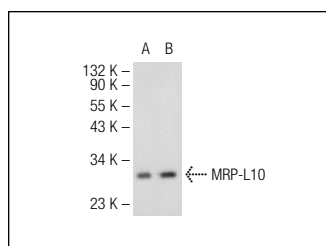
MRP-L10 (P-14) is also recommended for detection of MRP-L10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MRP-L10 siRNA (h): sc-93589, MRP-L10 siRNA (m): sc-149578, MRP-L10 shRNA Plasmid (h): sc-93589-SH, MRP-L10 shRNA Plasmid (m): sc-149578-SH, MRP-L10 shRNA (h) Lentiviral Particles: sc-93589-V and MRP-L10 shRNA (m) Lentiviral Particles: sc-149578-V.

Molecular Weight of MRP-L10: 29 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207 or Ramos cell lysate: sc-2216.

DATA



MRP-L10 (P-14): sc-107760. Western blot analysis of MRP-L10 expression in BJAB (A) and Ramos (B) whole cell lysates.

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.


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Try **MRP-L10 (E-9): sc-377196**, our highly recommended monoclonal alternative to MRP-L10 (P-14).