

MRP-L3 (B-3): sc-514217



The Power to Question

BACKGROUND

Mammalian mitochondrial ribosomes (mitoribosomes) are responsible for protein synthesis within the mitochondrion. The mitoribosomes are composed of a 4:1 ratio of protein to RNA, with the proteins forming two subunits, the 28S subunit and the 39S subunit. Across species, the proteins that make up the mitoribosome subunits vary greatly in sequence, preventing easy recognition by sequence homology. MRP-L3 (mitochondrial 39S ribosomal protein L3), also known as L3mt, is a 348 amino acid protein belonging to the ribosomal protein L3P family. Localized to mitochondria, MRP-L3 is present in the 39S subunit of the mitoribosomes.

REFERENCES

1. Ou, J.H., et al. 1987. Cloning and characterization of a human ribosomal protein gene with enhanced expression in fetal and neoplastic cells. *Nucleic Acids Res.* 15: 8919-8934.
2. O'Brien, T.W., et al. 1999. Mammalian mitochondrial ribosomal proteins. Amino acid sequencing, characterization, and identification of corresponding gene sequences. *J. Biol. Chem.* 274: 36043-36051.
3. Simpson, J.C., et al. 2000. Systematic subcellular localization of novel proteins identified by large-scale cDNA sequencing. *EMBO Rep.* 1: 287-292.
4. 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.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607118. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Zhang, Z. and Gerstein, M. 2003. Identification and characterization of over 100 mitochondrial ribosomal protein pseudogenes in the human genome. *Genomics* 81: 468-480.

CHROMOSOMAL LOCATION

Genetic locus: MRPL3 (human) mapping to 3q22.1.

SOURCE

MRP-L3 (B-3) is a mouse monoclonal antibody raised against amino acids 47-155 mapping near the N-terminus of MRP-L3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MRP-L3 (B-3) is available conjugated to agarose (sc-514217 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514217 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514217 PE), fluorescein (sc-514217 FITC), Alexa Fluor® 488 (sc-514217 AF488), Alexa Fluor® 546 (sc-514217 AF546), Alexa Fluor® 594 (sc-514217 AF594) or Alexa Fluor® 647 (sc-514217 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514217 AF680) or Alexa Fluor® 790 (sc-514217 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

MRP-L3 (B-3) is recommended for detection of MRP-L3 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for MRP-L3 siRNA (h): sc-77897, MRP-L3 shRNA Plasmid (h): sc-77897-SH and MRP-L3 shRNA (h) Lentiviral Particles: sc-77897-V.

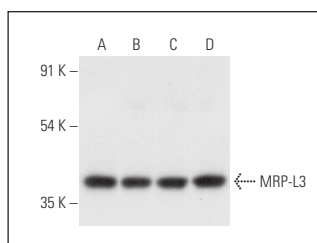
Molecular Weight of MRP-L3: 38 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

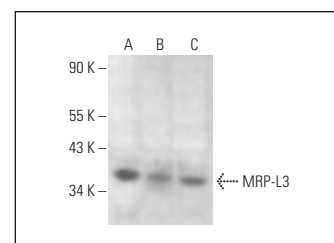
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MRP-L3 (B-3): sc-514217. Western blot analysis of MRP-L3 expression in HeLa (A), Hep G2 (B), A549 (C) and A-431 (D) whole cell lysates.



MRP-L3 (B-3): sc-514217. Western blot analysis of MRP-L3 expression in HeLa (A), HL-60 (B) and U-698-M (C) 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 for detailed protocols and support products.