

MRP-L50 (H-10): sc-390487



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-L50 (mitochondrial ribosomal protein L50), is a 158 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. The gene encoding MRP-L50 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

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.
3. Suzuki, T., et al. 2001. Structural compensation for the deficit of rRNA with proteins in the mammalian mitochondrial ribosome. Systematic analysis of protein components of the large ribosomal subunit from mammalian mitochondria. *J. Biol. Chem.* 276: 21724-21736.
4. Gan, X., et al. 2002. Tag-mediated isolation of yeast mitochondrial ribosome and mass spectrometric identification of its new components. *Eur. J. Biochem.* 269: 5203-5214.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: MRPL50 (human) mapping to 9q31.1; Mrpl50 (mouse) mapping to 4 B1.

SOURCE

MRP-L50 (H-10) is a mouse monoclonal antibody raised against amino acids 1-159 representing full length MRP-L50 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MRP-L50 (H-10) is available conjugated to agarose (sc-390487 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390487 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390487 PE), fluorescein (sc-390487 FITC), Alexa Fluor® 488 (sc-390487 AF488), Alexa Fluor® 546 (sc-390487 AF546), Alexa Fluor® 594 (sc-390487 AF594) or Alexa Fluor® 647 (sc-390487 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390487 AF680) or Alexa Fluor® 790 (sc-390487 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MRP-L50 (H-10) is recommended for detection of MRP-L50 of mouse, rat and 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-L50 siRNA (h): sc-92796, MRP-L50 siRNA (m): sc-149611, MRP-L50 shRNA Plasmid (h): sc-92796-SH, MRP-L50 shRNA Plasmid (m): sc-149611-SH, MRP-L50 shRNA (h) Lentiviral Particles: sc-92796-V and MRP-L50 shRNA (m) Lentiviral Particles: sc-149611-V.

Molecular Weight (predicted) of MRP-L50: 18 kDa.

Molecular Weight (observed) of MRP-L50: 16-37 kDa.

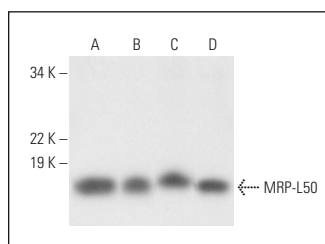
Positive Controls: NIH/3T3 whole cell lysate: sc-2210, F9 cell lysate: sc-2245 or P19 cell lysate: sc-24760.

RECOMMENDED SUPPORT REAGENTS

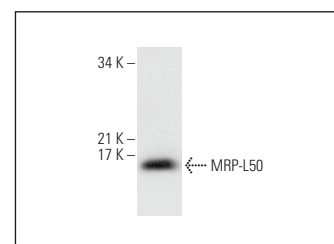
To ensure optimal results, the following support reagents are recommended:

- 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-L50 (H-10): sc-390487. Western blot analysis of MRP-L50 expression in CSML0 (A), C3H/10T1/2 (B), P19 (C) and F9 (D) whole cell lysates.



MRP-L50 (H-10): sc-390487. Western blot analysis of MRP-L50 expression in NIH/3T3 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.

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