

MRP-L39 (F-10): sc-271743

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-L39 (mitochondrial ribosomal protein L39), also known as MRP-L5, L39mt or L5mt, is a 338 amino acid mitochondrial protein that exists as a component of the 39S ribosomal subunit and works in conjunction with other MRPs to mediate protein synthesis. MRP-L39 exists as two isoforms produced by alternative splicing. Isoform one of MRP-L39 is ubiquitously expressed while isoform two is specifically expressed in heart. The gene encoding MRP-L39 maps to chromosome 21q21.3, which makes up about 1.5% of the human genome. Chromosome 21 contains nearly 300 genes and 47 million base pairs. Down syndrome, also known as trisomy 21, is the disease most commonly associated with chromosome 21. Alzheimer's disease, Jervell and Lange-Nielsen syndrome and amyotrophic lateral sclerosis are also associated with chromosome 21.

REFERENCES

1. Spirina, O., et al. 2000. Heart-specific splice-variant of a human mitochondrial ribosomal protein (mRNA processing; tissue specific splicing). *Gene* 261: 229-234.
2. Müller, S., et al. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
3. 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.

CHROMOSOMAL LOCATION

Genetic locus: MRPL39 (human) mapping to 21q21.3; Mrpl39 (mouse) mapping to 16 C3.3.

SOURCE

MRP-L39 (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 179-213 within an internal region of MRP-L39 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-L39 (F-10) is available conjugated to agarose (sc-271743 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271743 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271743 PE), fluorescein (sc-271743 FITC), Alexa Fluor[®] 488 (sc-271743 AF488), Alexa Fluor[®] 546 (sc-271743 AF546), Alexa Fluor[®] 594 (sc-271743 AF594) or Alexa Fluor[®] 647 (sc-271743 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271743 AF680) or Alexa Fluor[®] 790 (sc-271743 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271743 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MRP-L39 (F-10) is recommended for detection of MRP-L39 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

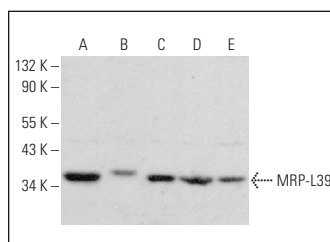
MRP-L39 (F-10) is also recommended for detection of MRP-L39 in additional species, including bovine.

Suitable for use as control antibody for MRP-L39 siRNA (h): sc-91409, MRP-L39 siRNA (m): sc-149600, MRP-L39 shRNA Plasmid (h): sc-91409-SH, MRP-L39 shRNA Plasmid (m): sc-149600-SH, MRP-L39 shRNA (h) Lentiviral Particles: sc-91409-V and MRP-L39 shRNA (m) Lentiviral Particles: sc-149600-V.

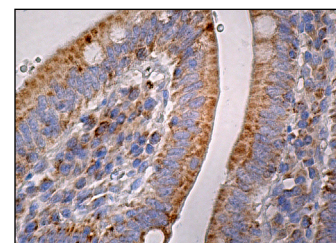
Molecular Weight of MRP-L39: 39 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, 3T3-L1 cell lysate: sc-2243 or COLO 205 whole cell lysate: sc-364177.

DATA



MRP-L39 (F-10): sc-271743. Western blot analysis of MRP-L39 expression in Caco-2 (A), Ca Ski (B), COLO 205 (C), 3T3-L1 (D) and F9 (E) whole cell lysates.



MRP-L39 (F-10): sc-271743. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Hou, X., et al. 2019. Testosterone disruptor effect and gut microbiome perturbation in mice: early life exposure to doxycycline. *Chemosphere* 222: 722-731.

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.

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