

# MRP-L2 (D-11): sc-398473

## 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-L2 (mitochondrial ribosomal protein L2), also known as CGI-22 or RPML14, is a 305 amino acid protein that belongs to the ribosomal protein L2P family. The gene encoding MRP-L2 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

## REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. *Hum. Mol. Genet.* 3: 1561-1564.
2. Graack, H.R. and Wittmann-Liebold, B. 1998. Mitochondrial ribosomal proteins (MRPs) of yeast. *Biochem. J.* 329: 433-448.
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.
4. 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.

## CHROMOSOMAL LOCATION

Genetic locus: MRPL2 (human) mapping to 6p21.1; Mrpl2 (mouse) mapping to 17 C.

## SOURCE

MRP-L2 (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 88-99 within an internal region of MRP-L2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MRP-L2 (D-11) is available conjugated to agarose (sc-398473 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398473 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398473 PE), fluorescein (sc-398473 FITC), Alexa Fluor® 488 (sc-398473 AF488), Alexa Fluor® 546 (sc-398473 AF546), Alexa Fluor® 594 (sc-398473 AF594) or Alexa Fluor® 647 (sc-398473 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398473 AF680) or Alexa Fluor® 790 (sc-398473 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398473 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

MRP-L2 (D-11) is recommended for detection of MRP-L2 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-L2 siRNA (h): sc-95468, MRP-L2 siRNA (m): sc-149588, MRP-L2 shRNA Plasmid (h): sc-95468-SH, MRP-L2 shRNA Plasmid (m): sc-149588-SH, MRP-L2 shRNA (h) Lentiviral Particles: sc-95468-V and MRP-L2 shRNA (m) Lentiviral Particles: sc-149588-V.

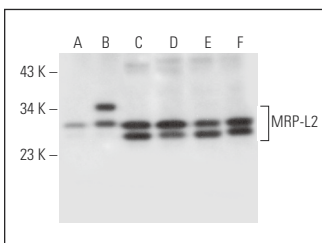
Molecular Weight of MRP-L2: 33 kDa.

Positive Controls: MRP-L2 (h): 293T Lysate: sc-117158, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

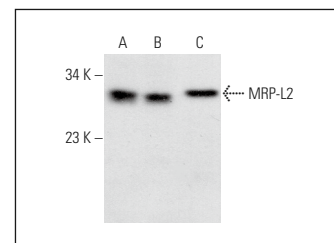
## RECOMMENDED SUPPORT REAGENTS

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-L2 (D-11): sc-398473. Western blot analysis of MRP-L2 expression in non-transfected 293T: sc-117752 (A), human MRP-L2 transfected 293T: sc-117752 (B), MCF7 (C), T-47D (D), DU 145 (E) and HeLa (F) whole cell lysates.



MRP-L2 (D-11): sc-398473. Western blot analysis of MRP-L2 expression in MCF7 (A), Jurkat (B) and c4 (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.

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