SANTA CRUZ BIOTECHNOLOGY, INC.

MRP-L24 (B-6): sc-393858

SANTA CRUZ BIOTECHNOLOGY

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-L24 (mitochondrial ribosomal protein L24), is a 216 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. MRP-L24 contains a KOW (Kyprides, Ouzounis, Woese) domain, which is a motif that is commonly found in a variety of ribosomal proteins. The gene encoding MRP-L24 maps to human chromosome 1, which spans about 260 million base pairs and comprises nearly 8% of the human genome.

REFERENCES

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2. Kenmochi, N., Suzuki, T., Uechi, T., Magoori, M., Kuniba, M., Higa, S., Watanabe, K. and Tanaka, T. 2001. The human mitochondrial ribosomal protein genes: mapping of 54 genes to the chromosomes and implications for human disorders. Genomics 77: 65-70.
3. Ota, T., Suzuki, Y., Nishikawa, T., Otsuki, T., Sugiyama, T., Wakamatsu, A., Irie, R., Hayashi, K., Sato, H., Nagai, K., Kimura, K., Makita, H., Sekine, M., Obayashi, M., Nishi, T., Shibahara, T., Tanaka, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
4. Gregory, S.G., Barlow, K.F., McLay, K.E., Kaul, R., Swarbreck, D., Dunham, A., Scott, C.E., Howe, K.L., Woodfine, K., Spencer, C.C., Jones, M.C., Gillson, C., Searle, S., Zhou, Y., Kokocinski, F., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
5. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611836. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: MRPL24 (human) mapping to 1q23.1.

SOURCE

MRP-L24 (B-6) is a mouse monoclonal antibody raised against amino acids 4-216 mapping at the C-terminus of MRP-L24 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MRP-L24 (B-6) is recommended for detection of MRP-L24 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-L24 siRNA (h): sc-78575, MRP-L24 shRNA Plasmid (h): sc-78575-SH and MRP-L24 shRNA (h) Lentiviral Particles: sc-78575-V.

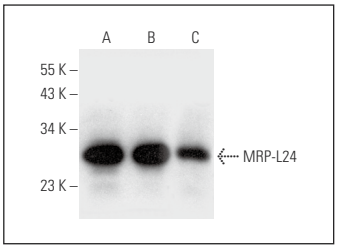
Molecular Weight of MRP-L24: 25 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or human heart extract: sc-363763.

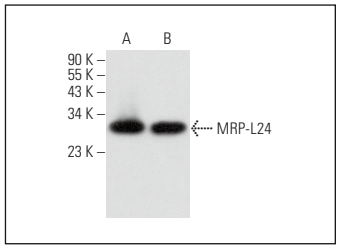
RECOMMENDED SUPPORT REAGENTS

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-L24 (B-6): sc-393858. Western blot analysis of MRP-L24 expression in HeLa (**A**) and Hep G2 (**B**) whole cell lysates and human heart tissue extract (**C**).



MRP-L24 (B-6): sc-393858. Western blot analysis of MRP-L24 expression in HeLa (**A**) and SK-BR-3 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Tan, J.L., Li, F., Yeo, J.Z., Yong, K.J., Bassal, M.A., Ng, G.H., Lee, M.Y., Leong, C.Y., Tan, H.K., Wu, C.S., Liu, B.H., Chan, T.H., Tan, Z.H., Chan, Y.S., Wang, S., Lim, Z.H., Toh, T.B., Hooi, L., Low, K.N., Ma, S., et al. 2019. New high-throughput screening identifies compounds that reduce viability specifically in liver cancer cells that express high levels of SALL4 by inhibiting oxidative phosphorylation. Gastroenterology 157: 1615-1629.e17.

RESEARCH USE

For research use only, not for use in diagnostic procedures.