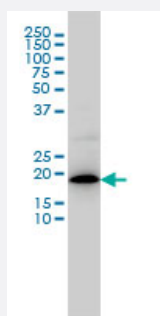


MRPL12 monoclonal antibody (M01), clone 3B12-1A3

Catalog # H00006182-M01

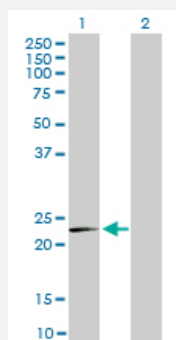
Size 100 ug

Applications



Western Blot (Cell lysate)

MRPL12 monoclonal antibody (M01), clone 3B12-1A3 Western Blot analysis of MRPL12 expression in COLO 320 HSR (Cat # L020V1).

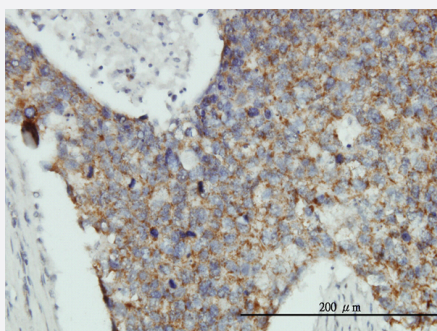


Western Blot (Transfected lysate)

Western Blot analysis of MRPL12 expression in transfected 293T cell line by MRPL12 monoclonal antibody (M01), clone 3B12-1A3.

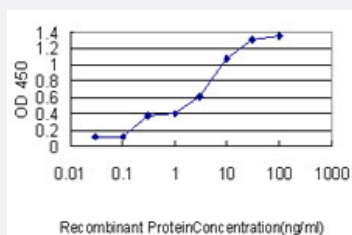
Lane 1: MRPL12 transfected lysate(21.3 KDa).

Lane 2: Non-transfected lysate.



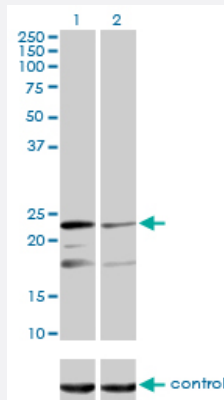
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to MRPL12 on formalin-fixed paraffin-embedded human breast cancer tissue. [antibody concentration 3 ug/ml]



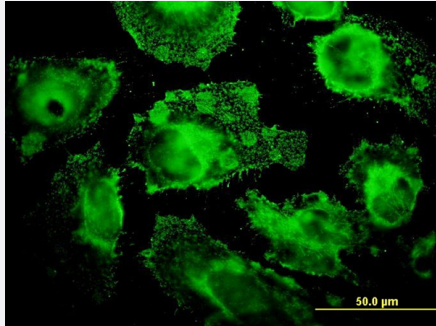
Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged MRPL12 is approximately 0.03ng/ml as a capture antibody.



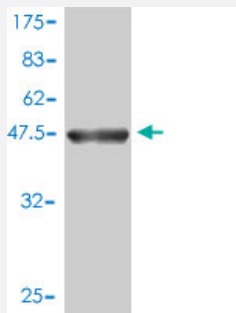
RNAi Knockdown (Antibody validated)

Western blot analysis of MRPL12 over-expressed 293 cell line, cotransfected with MRPL12 Validated Chimera RNAi (Cat # H00006182-R01V) (Lane 2) or non-transfected control (Lane 1). Blot probed with MRPL12 monoclonal antibody (M01), clone 3B12-1A3 (Cat # H00006182-M01). GAPDH (36.1 kDa) used as specificity and loading control.



Immunofluorescence

Immunofluorescence of monoclonal antibody to MRPL12 on HeLa cell.
[antibody concentration 10 ug/ml]



Western Blot detection against Immunogen (47.52 KDa) .

Specification

Product Description	Mouse monoclonal antibody raised against a full length recombinant MRPL12.
Immunogen	MRPL12 (AAH02344, 1 a.a. ~ 198 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Sequence	MLPAAARPLWGPCLGLRAAAFRLARRQVPCVCAVRHMRSSGHQRCEALAGAPLDNAPKEYPP KIQQLVQDIASLTLLLEISDLNELLKTKLQIDVGLVPMGGVMSGAVPAAAAQEAVEEDIPIAKERTHF TVRLTEAKPVDKVKLIKEIKNYQGINLVQAKKLVESLPQEIKANVAKAEAEKIKAALEAVGGTVVLE
Host	Mouse
Reactivity	Human
Isotype	IgG1 kappa

Quality Control Testing

Antibody Reactive Against Recombinant Protein.
Western Blot detection against Immunogen (47.52 KDa) .

Storage Buffer

In 1x PBS, pH 7.4

Storage Instruction

Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Applications

- Western Blot (Cell lysate)

MRPL12 monoclonal antibody (M01), clone 3B12-1A3 Western Blot analysis of MRPL12 expression in COLO 320 HSR (Cat # L020V1).

[Protocol Download](#)

- Western Blot (Transfected lysate)

Western Blot analysis of MRPL12 expression in transfected 293T cell line by MRPL12 monoclonal antibody (M01), clone 3B12-1A3.

Lane 1: MRPL12 transfected lysate(21.3 KDa).

Lane 2: Non-transfected lysate.

[Protocol Download](#)

- Western Blot (Recombinant protein)

[Protocol Download](#)

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunoperoxidase of monoclonal antibody to MRPL12 on formalin-fixed paraffin-embedded human breast cancer tissue.
[antibody concentration 3 ug/ml]

[Protocol Download](#)

- Sandwich ELISA (Recombinant protein)

Detection limit for recombinant GST tagged MRPL12 is approximately 0.03ng/ml as a capture antibody.

[Protocol Download](#)

- ELISA

- RNAi Knockdown (Antibody validated)

Western blot analysis of MRPL12 over-expressed 293 cell line, cotransfected with MRPL12 Validated Chimera RNAi (Cat # H00006182-R01V) (Lane 2) or non-transfected control (Lane 1). Blot probed with MRPL12 monoclonal antibody (M01), clone 3B12-1A3 (Cat # H00006182-M01). GAPDH (36.1 kDa) used as specificity and loading control.

[Protocol Download](#)

- Immunofluorescence

Immunofluorescence of monoclonal antibody to MRPL12 on HeLa cell. [antibody concentration 10 ug/ml]

Gene Info — MRPL12

Entrez GeneID [6182](#)

GeneBank Accession# [BC002344](#)

Protein Accession# [AAH02344](#)

Gene Name MRPL12

Gene Alias 5c5-2, FLJ60124, L12mt, MGC8610, MRP-L31/34, MRPL7, MRPL7/L12, RPML12

Gene Description mitochondrial ribosomal protein L12

Omim ID [602375](#)

Gene Ontology [Hyperlink](#)

Gene Summary Mammalian mitochondrial ribosomal proteins are encoded by nuclear genes and help in protein synthesis within the mitochondrion. Mitochondrial ribosomes (mitoribosomes) consist of a small 28 S subunit and a large 39S subunit. They have an estimated 75% protein to rRNA composition compared to prokaryotic ribosomes, where this ratio is reversed. Another difference between mammalian mitoribosomes and prokaryotic ribosomes is that the latter contain a 5S rRNA. Among different species, the proteins comprising the mitoribosome differ greatly in sequence, and sometimes in biochemical properties, which prevents easy recognition by sequence homology. This gene encodes a 39S subunit protein which forms homodimers. In prokaryotic ribosomes, two L7/L12 dimers and one L10 protein form the L8 protein complex. [provided by RefSeq]

Other Designations -

Publication Reference

- [The role of lysine acetylation in the function of mitochondrial ribosomal protein L12.](#)

Katelynn V Paluch, Karlie R Platz, Emma J Rudisel, Ryan R Erdmann, Taylor R Laurin, Kristin E Dittenhafer-Reed.

Proteins 2023 Dec; Epub.

Application: WB, Human, HeLa cells

- [CUL3 induces mitochondrial dysfunction via MRPL12 ubiquitination in renal tubular epithelial cells.](#)

Xingzhao Ji, Xiaoli Yang, Xia Gu, Lingju Chu, Shengnan Sun, Jian Sun, Peng Song, Qian Mu, Ying Wang, Xiaoming Sun, Dun Su, Tong Su, Shaoshuai Hou, Yao Lu, Chen Ma, Mingqiang Liu, Tianyi Zhang, Weiying Zhang, Yi Liu, Qiang Wan

The FEBS Journal 2023 Aug; [Epub]:0.

Application: IF, PLA, Human, HK-2 cells

- [MRPL12-ANT3 interaction involves in acute kidney injury via regulating MPTP of tubular epithelial cells.](#)

Xingzhao Ji, Lingju Chu, Dun Su, Jian Sun, Peng Song, Shengnan Sun, Ying Wang, Qian Mu, Yi Liu, Qiang Wan.

iScience 2023 Apr; 16(5):106656.

Application: WB-Ce, WB-Tr, Human, HK-2 cells

- [Serine palmitoyltransferase assembles at ER-mitochondria contact sites.](#)

Mari J Aaltonen, Irina Alecu, Tim König, Steffany Al Bennett, Eric A Shoubridge.

Life Science Alliance 2022 Feb; 5(2):e202101278.

Application: IF-Tr, African green monkey, COS-7 cells

- [A bifunctional protein regulates mitochondrial protein synthesis.](#)

Richman TR, Davies SM, Shearwood AM, Ermer JA, Scott LH, Hibbs ME, Rackham O, Filipovska A.

Nucleic Acids Research 2014 May; 42(9):5483.

Application: WB, Human, 143B cells

- [Oxygen Consumption Can Regulate the Growth of Tumors, a New Perspective on the Warburg Effect.](#)

Chen Y, Cairns R, Papandreou I, Koong A, Denko NC.

PLoS One 2009 Sep; 4(9):e7033.

Application: WB-Tr, Human, Miapaca2 cells

- [Human mitochondrial ribosomal protein MRPL12 interacts directly with mitochondrial RNA polymerase to modulate mitochondrial gene expression.](#)

Wang Z, Cotney J, Shadel GS.

The Journal of Biological Chemistry 2007 Mar; 282(17):12610.

Application: WB, Human, HeLa cells