

## MRPL12 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a full length recombinant MRPL12. Catalog # AT2902a

#### Specification

### MRPL12 Antibody (monoclonal) (M01) - Product Information

Application Primary Accession Other Accession Reactivity Host Clonality Isotype Calculated MW

WB, IHC, IF, E <u>P52815</u> <u>BC002344</u> Human mouse Monoclonal IgG1 kappa 21348

### MRPL12 Antibody (monoclonal) (M01) - Additional Information

Gene ID 6182

Other Names 39S ribosomal protein L12, mitochondrial, L12mt, MRP-L12, 5c5-2, MRPL12, RPML12

**Target/Specificity** MRPL12 (AAH02344, 1 a.a. ~ 198 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.

**Dilution** WB~~1:500~1000 IHC~~1:100~500 IF~~1:50~200 E~~N/A

**Format** Clear, colorless solution in phosphate buffered saline, pH 7.2 .

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

**Precautions** MRPL12 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

### MRPL12 Antibody (monoclonal) (M01) - Protocols

Provided below are standard protocols that you may find useful for product applications.

<u>Western Blot</u>



- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

# MRPL12 Antibody (monoclonal) (M01) - Images



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



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





MRPL12 monoclonal antibody (M01), clone 3B12-1A3 Western Blot analysis of MRPL12 expression in COLO 320 HSR ( (Cat # AT2902a )



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.



Western blot analysis of MRPL12 over-expressed 293 cell line, cotransfected with MRPL12 Validated Chimera RNAi ( (Cat # AT2902a )





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





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

## MRPL12 Antibody (monoclonal) (M01) - Background

Mammalian mitochondrial ribosomal proteins are encoded by nuclear genes and help in protein synthesis within the mitochondrion. Mitochondrial ribosomes (mitoribosomes) consist of a small 28S 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.

## MRPL12 Antibody (monoclonal) (M01) - References

1.A bifunctional protein regulates mitochondrial protein synthesis.Richman TR, Davies SM, Shearwood AM, Ermer JA, Scott LH, Hibbs ME, Rackham O, Filipovska ANucleic Acids Res. 2014 Mar 5.2.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 15;4(9):e7033.3.Human mitochondrial ribosomal protein MRPL12 interacts directly with mitochondrial RNA polymerase to modulate mitochondrial gene expression.Wang Z, Cotney J, Shadel GS.J Biol Chem. 2007 Apr 27;282(17):12610-8. Epub 2007 Mar 2.