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MRPL12 Antibody (monoclonal) (M01)

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

Product Information

Application	WB, IHC, IF, E
Primary Accession	P52815
Other Accession	BC002344
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG1 kappa
Clone Names	3B12-1A3
Calculated MW	21348

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.

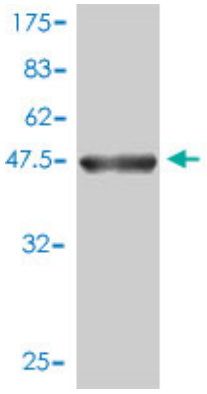
Background

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.

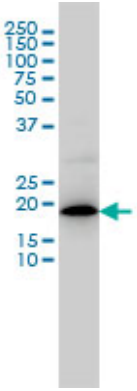
References

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.

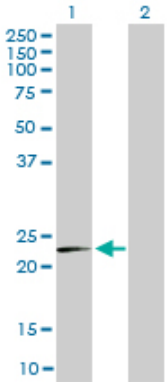
Images



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



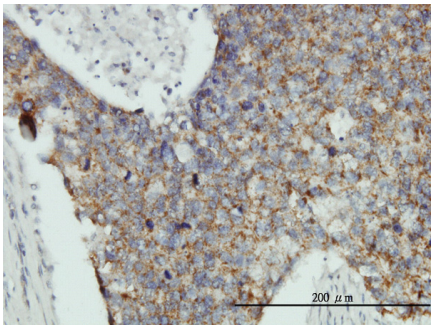
MRPL12 monoclonal antibody (M01), clone 3B12-1A3 Western Blot analysis of MRPL12 expression in COLO 320 HSR ((Cat # AT2902a)

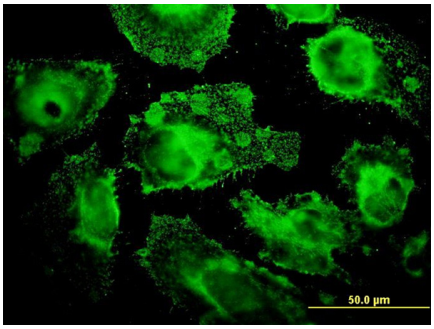


Western Blot analysis of MRPL12 expression in transfected 293T cell line by MRPL12 monoclonal antibody (M01), clone 3B12-1A3.

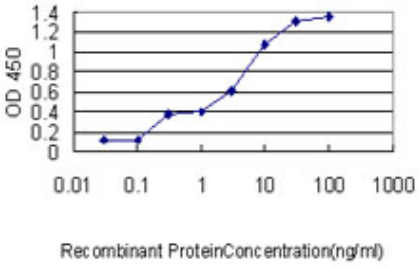
Lane 1: MRPL12 transfected lysate(21.3 KDa).
Lane 2: Non-transfected lysate.

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

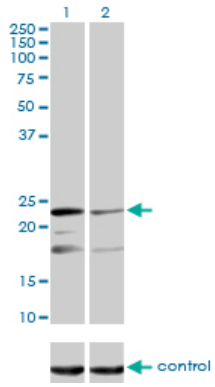




Immunofluorescence of monoclonal antibody to MRPL12 on HeLa cell. [antibody concentration 10 ug/ml]



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



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