

## Anti-MRPS12 Antibody Picoband®

Catalog Number: A12643-1

### About MRPS12

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 28S subunit protein that belongs to the ribosomal protein S12P family. The encoded protein is a key component of the ribosomal small subunit and controls the decoding fidelity and susceptibility to aminoglycoside antibiotics. The gene for mitochondrial seryl-tRNA synthetase is located upstream and adjacent to this gene, and both genes are possible candidates for the autosomal dominant deafness gene (DFNA4). Splice variants that differ in the 5' UTR have been found for this gene; all three variants encode the same protein.

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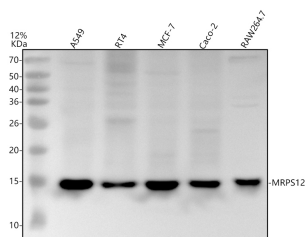
### Overview

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name         | Anti-MRPS12 Antibody Picoband®                                                                                                                                                                                                                                                                                                                                                                                                          |
| Reactive Species     | Human, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Description          | Boster Bio Anti-MRPS12 Antibody Picoband® catalog # A12643-1. Tested in WB, IHC, ICC, IF, ELISA applications. This antibody reacts with Human, Mouse. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application          | ELISA, IF, IHC, ICC, WB                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Clonality            | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Formulation          | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .                                                                                                                                                                                                                                                                                                                                               |
| Storage Instructions | At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.                                                                                                                                                                                                                                       |
| Host                 | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Uniprot ID           | O15235                                                                                                                                                                                                                                                                                                                                                                                                                                  |

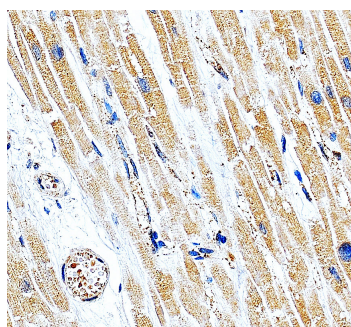
### Technical Details

|                     |                                                                                                                                                                                                   |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunogen           | E.coli-derived human MRPS12 recombinant protein (Position: A31-K138).                                                                                                                             |
| Form                | Lyophilized                                                                                                                                                                                       |
| Concentration       | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.                                                                                                                         |
| Purification        | Immunogen affinity purified.                                                                                                                                                                      |
| Suggested Dilutions | Western blot, 0.25-0.5 ug/ml, Human, Mouse<br>Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human<br>Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human<br>ELISA, 0.1-0.5 ug/ml |

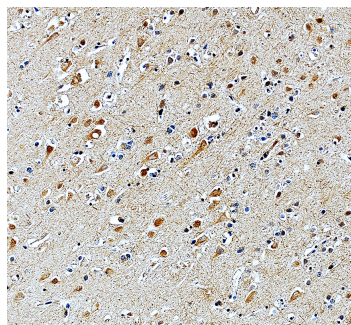
## Anti-MRPS12 Antibody Picoband® (A12643-1) Images



Western blot analysis of MRPS12 using anti-MRPS12 antibody (A12643-1). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human A549 whole cell lysates, Lane 2: human RT4 whole cell lysates, Lane 3: human MCF-7 whole cell lysates, Lane 4: human Caco-2 whole cell lysates, Lane 5: mouse RAW264.7 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MRPS12 antigen affinity purified polyclonal antibody (A12643-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for MRPS12 at approximately 15 kDa. The expected band size for MRPS12 is at 15 kDa.

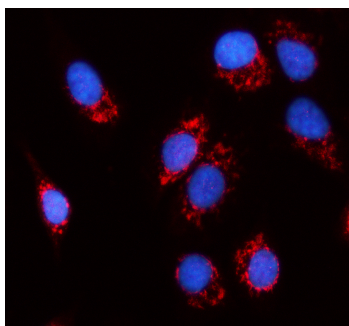


IHC analysis of MRPS12 using anti-MRPS12 antibody (A12643-1). MRPS12 was detected in a paraffin-embedded section of human heart tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MRPS12 Antibody (A12643-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of MRPS12 using anti-MRPS12 antibody (A12643-1). MRPS12 was detected in a paraffin-embedded section of human brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-MRPS12 Antibody (A12643-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IF analysis of MRPS12 using anti-MRPS12 antibody (A12643-1). MRPS12 was detected in an immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval



reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-MRPS12 Antibody (A12643-1) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

[Anti-MRPS12 Antibody](#)

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