abcam

ab251194

Anti-MRPL48 antibody [EPR16328] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR16328
Purification technique	Affinity purification Protein A

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information MRPL48

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251194 is the carrier-free version of ab194826.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For

details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	MRPL48 also known as mitochondrial ribosomal protein L48 is a component of the mitochondrial ribosome. This protein has a mass of approximately 18.7 kDa and plays a role in protein synthesis within mitochondria. MRPL48 locates itself mostly in the mitochondria of cells across various tissues with higher expression levels observed in tissues with high energy demands such as muscle and liver.
Biological function summary	MRPL48 contributes to the formation and function of the mitochondrial ribosome which is responsible for synthesizing proteins that are essential for mitochondrial respiration and energy production. This protein is part of the large subunit of the mitochondrial ribosome which includes many other mitochondrial ribosomal proteins. Together they form a complex responsible for translating mitochondrial mRNA into functional proteins.
Pathways	MRPL48 is actively engaged in mitochondrial translation a critical pathway for maintaining mitochondrial function and energy production. In this pathway it associates with other mitochondrial ribosomal proteins to produce enzymes necessary for the electron transport chain and ATP synthesis. MRPL48 also relates to oxidative phosphorylation where it plays a part in generating cellular energy linking it to proteins such as cytochrome c oxidase subunit IV.
Associated diseases and disorders	Defects in MRPL48 could relate to mitochondrial dysfunctions which may contribute to disorders like mitochondrial myopathy and mitochondrial complex I deficiency. These conditions often manifest muscle weakness neurological problems and metabolic disturbances. In these disorders MRPL48's interaction

with other mitochondrial ribosomal proteins is important as impaired mitochondrial protein synthesis can cause decreased energy production and increased oxidative stress within cells.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

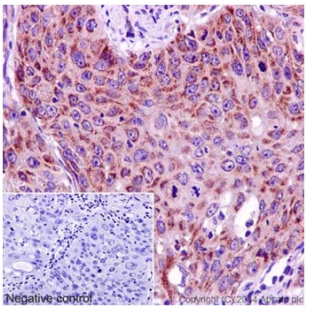
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images

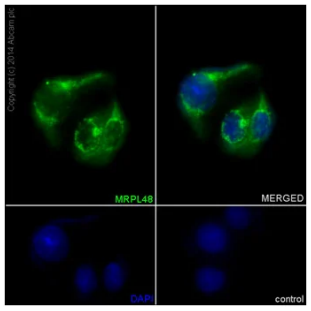


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MRPL48 antibody [EPR16328] - BSA and Azide free (ab251194)

MRPL48 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MRPL48 antibody

This data was developed using ab194826, the same antibody clone in a different buffer formulation.
Immunohistochemical analysis of paraffin-embedded Human cervix carcinoma tissue labeling MRPL48 with ab194826 at 1/150 dilution. A Goat Anti-Rabbit IgG H&L (HRP) at 1/500 dilution was used as secondary (ab97051). Counterstain: Hematoxylin.
Inset image: negative control obtained using PBS instead of ab194826. Cytoplasm staining on human cervix carcinoma tissue was observed.

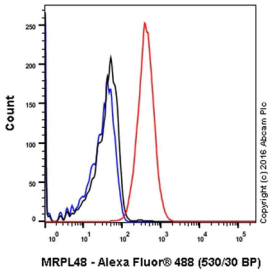
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-MRPL48 antibody [EPR16328] - BSA and Azide free (ab251194)

MRPL48 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MRPL48 antibody

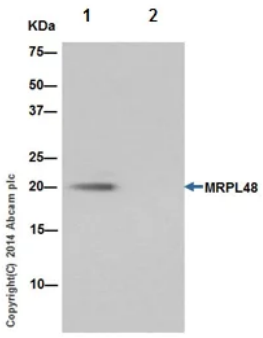
This data was developed using ab194826, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of A431 cells labeling MRPL48 with ab194826 at 1/50 dilution. A Goat anti rabbit IgG (Alexa Fluor488) at 1/400 dilution (ab150077) was used as secondary antibody. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% triton X-100. Counterstain: DAPI. Cytoplasm staining on HepG2 cell line was observed.



Flow Cytometry (Intracellular) - Anti-MRPL48 antibody [EPR16328] - BSA and Azide free (ab251194)

MRPL48 Flow Cytometry (Intracellular) staining using rabbit Anti-MRPL48 antibody

This data was developed using ab194826, the same antibody clone in a different buffer formulation.
Intracellular Flow Cytometry analysis of HeLa cells labelling MRPL48 (red) with purified ab194826 at dilution of 1/60. The secondary antibody used was Alexa Fluor® 488 goat-anti-rabbit IgG (1/2000). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Isotype control antibody was Rabbit monoclonal IgG (black). The blue line shows cells without incubation with primary antibody and secondary antibody.



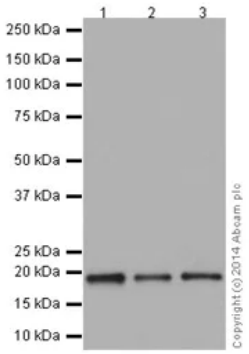
Immunoprecipitation - Anti-MRPL48 antibody [EPR16328] - BSA and Azide free (ab251194)

This data was developed using ab194826, the same antibody clone in a different buffer formulation.
Western blot analysis of immunoprecipitation pellet from HepG2 cell lysate immunoprecipitated using ab194826 at 1/30 dilution (lane 1) or PBS control (lane 2)

For Western blot: ab194826 was used at 1/1000 dilution (0.6µg/ml). Secondary: Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1500 dilution.

All lanes:
Immunoprecipitation - Anti-MRPL48 antibody [EPR16328] (ab194826)

Predicted band size: 24 kDa



Western blot - Anti-MRPL48 antibody [EPR16328] - BSA and Azide free (ab251194)

MRPL48 Western blot staining using rabbit Anti-MRPL48 antibody

This data was developed using ab194826, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-MRPL48 antibody [EPR16328] (ab194826) at 1/10000 dilution

Lane 1:
HepG2 cell lysate at 20 µg

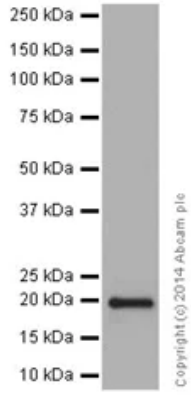
Lane 2:
HeLa cell lysate at 20 µg

Lane 3:
Jurkat cell lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 24 kDa



Western blot - Anti-MRPL48 antibody [EPR16328] - BSA and Azide free (ab251194)

MRPL48 Western blot staining of Human fetal heart tissue lysate using rabbit Anti-MRPL48 antibody

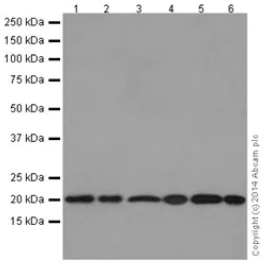
This data was developed using ab194826, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-MRPL48 antibody [EPR16328] (ab194826) at 1/2000 dilution

All lanes:
Human fetal heart tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 24 kDa



Western blot - Anti-MRPL48 antibody [EPR16328] - BSA and Azide free (ab251194)

MRPL48 Western blot staining using rabbit Anti-MRPL48 antibody

This data was developed using ab194826, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-MRPL48 antibody [EPR16328] (ab194826) at 1/2000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Rat brain lysate at 10 µg

Lane 4:
Rat heart lysate at 10 µg

Lane 5:
PC12 cell lysate at 10 µg

Lane 6:
NIH 3T3 cell lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 24 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.