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Anti-Mitofusin 2 MFN2 Rabbit Monoclonal Antibody

Catalog # ABO14096

Specification

Anti-Mitofusin 2 MFN2 Rabbit Monoclonal Antibody - Product Information

Application	**WB, IHC, IF, ICC**
Primary Accession	O95140
Host	**Rabbit**
Isotype	**Rabbit IgG**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-Mitofusin 2 MFN2 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Anti-Mitofusin 2 MFN2 Rabbit Monoclonal Antibody - Additional Information

Gene ID 9927

Other Names
Mitofusin-2, 3.6.5.-, Transmembrane GTPase MFN2, MFN2 {ECO:0000303|PubMed:12598526, ECO:0000312|HGNC:HGNC:16877}

Calculated MW
86402 MW KDa

Application Details
WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200

Subcellular Localization
Mitochondrion outer membrane ; Multi- pass membrane protein. Colocalizes with BAX during apoptosis.

Tissue Specificity
Ubiquitous; expressed at low level. Highly expressed in heart and kidney..

Contents
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen
A synthesized peptide derived from human Mitofusin 2

Purification
Affinity-chromatography

Storage	**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for**

up to one month. Avoid repeated freeze-thaw cycles.

Anti-Mitofusin 2 MFN2 Rabbit Monoclonal Antibody - Protein Information

Name MFN2 {ECO:0000303|PubMed:12598526, ECO:0000312|HGNC:HGNC:16877}

Function
Mitochondrial outer membrane GTPase that mediates mitochondrial clustering and fusion (PubMed:11181170, PubMed:11950885, PubMed:19889647, PubMed:26214738, PubMed:28114303). Mitochondria are highly dynamic organelles, and their morphology is determined by the equilibrium between mitochondrial fusion and fission events (PubMed:28114303). Overexpression induces the formation of mitochondrial networks (PubMed:28114303). Membrane clustering requires GTPase activity and may involve a major rearrangement of the coiled coil domains (Probable). Plays a central role in mitochondrial metabolism and may be associated with obesity and/or apoptosis processes (By similarity). Plays an important role in the regulation of vascular smooth muscle cell proliferation (By similarity). Involved in the clearance of damaged mitochondria via selective autophagy (mitophagy) (PubMed:23620051). Is required for PRKN recruitment to dysfunctional mitochondria (PubMed:23620051). Involved in the control of unfolded protein response (UPR) upon ER stress including activation of apoptosis and autophagy during ER stress (By similarity). Acts as an upstream regulator of EIF2AK3 and suppresses EIF2AK3 activation under basal conditions (By similarity).

Cellular Location
Mitochondrion outer membrane; Multi-pass membrane protein Note=Colocalizes with BAX during apoptosis

Tissue Location
Ubiquitous; expressed at low level. Highly expressed in heart and kidney.

Anti-Mitofusin 2 MFN2 Rabbit Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Mitofusin 2 MFN2 Rabbit Monoclonal Antibody - Images

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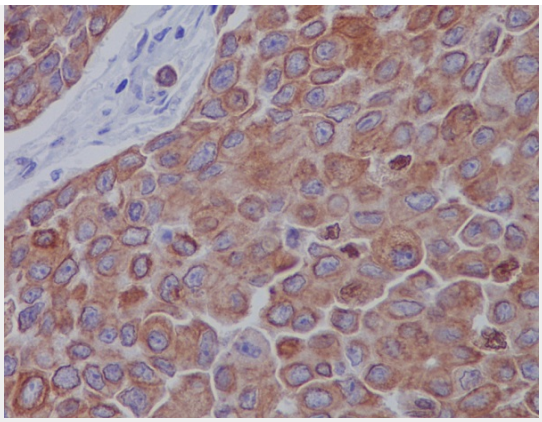
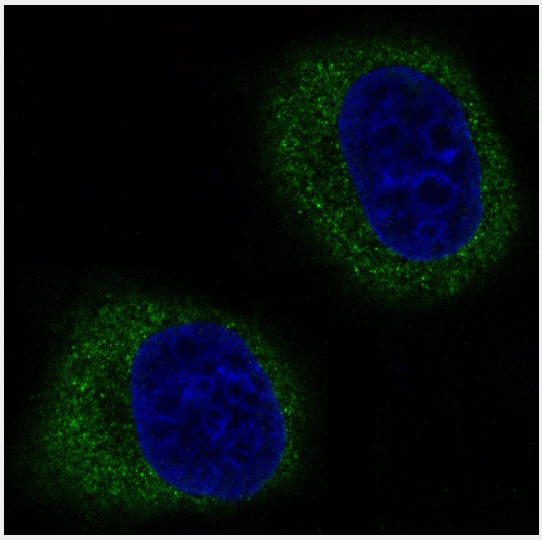


Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using Mitofusin 2 Antibody.



Immunofluorescent analysis of Hela cells, using Mitofusin 2 Antibody.

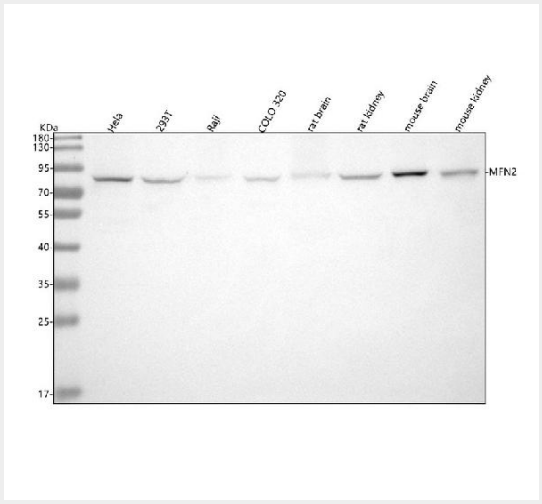


Figure 1. Western blot analysis of MFN2 using anti-MFN2 antibody (M00461).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,

Lane 2: human 293T whole cell lysates,
Lane 3: human Raji whole cell lysates,
Lane 4: human COLO 320 whole cell lysates,
Lane 5: rat brain tissue lysates,
Lane 6: rat kidney tissue lysates,
Lane 7: mouse brain tissue lysates,
Lane 8: mouse kidney tissue 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-MFN2 antigen affinity purified monoclonal antibody (Catalog # M00461) at 1:500 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 Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for MFN2 at approximately 80 kDa. The expected band size for MFN2 is at 86 kDa.