

MFN2 Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8840c**Specification**

MFN2 Antibody (Center) - Product Information

| | |
|-------------------|---|
| Application | WB, FC, IHC-P,E |
| Primary Accession | O95140 |
| Other Accession | O8R500 , O80U63 |
| Reactivity | Human, Mouse |
| Predicted | Rat |
| Host | Rabbit |
| Clonality | Polyclonal |
| Isotype | Rabbit IgG |
| Antigen Region | 447-476 |

MFN2 Antibody (Center) - Additional Information**Gene ID** 9927**Other Names**

Mitofusin-2, 365-, Transmembrane GTPase MFN2, MFN2, CPRP1, KIAA0214

Target/Specificity

This MFN2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 447-476 amino acids from the Central region of human MFN2.

Dilution

WB~~1:1000

FC~~1:10~50

IHC-P~~1:25

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

MFN2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

MFN2 Antibody (Center) - 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

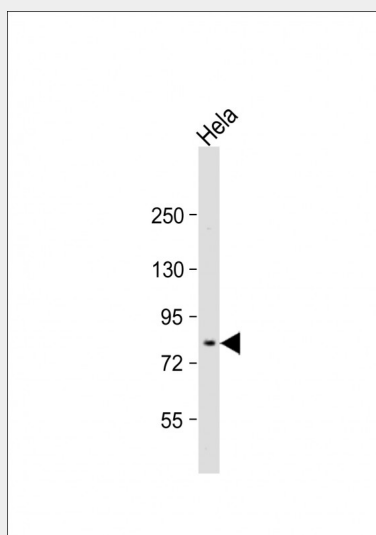
Ubiquitous; expressed at low level. Highly expressed in heart and kidney.

MFN2 Antibody (Center) - Protocols

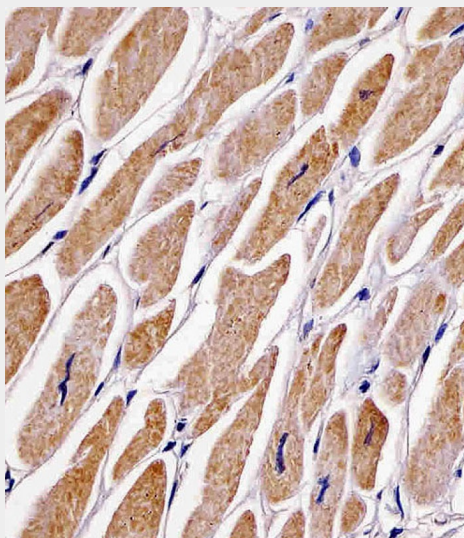
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

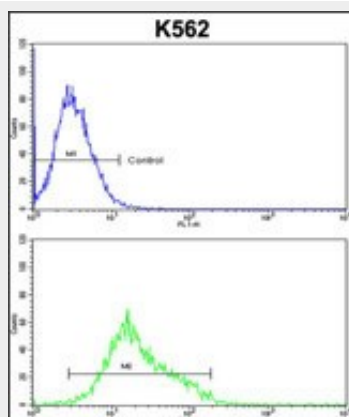
MFN2 Antibody (Center) - Images



Anti-MFN2 Antibody (Center) at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 86 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AP8840C staining MFN2 in human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



MFN2 Antibody (Center)(Cat. #AP8840c) flow cytometric analysis of k562 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

MFN2 Antibody (Center) - Background

MFN2 is a mitochondrial membrane protein that participates in mitochondrial fusion and contributes to the maintenance and operation of the mitochondrial network. This protein is involved in the regulation of vascular smooth muscle cell proliferation, and it may play a role in the pathophysiology of obesity. Mutations in this gene cause Charcot-Marie-Tooth disease type 2A2, and hereditary motor and sensory neuropathy VI, which are both disorders of the peripheral nervous system.

MFN2 Antibody (Center) - References

Calvo, J., et al., Arch. Neurol. 66 (12), 1511-1516 (2009)

MFN2 Antibody (Center) - Citations

- [MCCC2 is a novel mediator between mitochondria and telomere and functions as an oncogene in colorectal cancer](#)
- [Downregulation of mitochondrial cyclooxygenase-2 inhibits the stemness of nasopharyngeal carcinoma by decreasing the activity of dynamin-related protein 1.](#)