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MIA40 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11528b

Specification

MIA40 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q8N4Q1
Other Accession	NP_001091972.1, NP_653237.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**15996**
Antigen Region	**101-129**

MIA40 Antibody (C-term) - Additional Information

Gene ID 131474

Other Names
Mitochondrial intermembrane space import and assembly protein 40, Coiled-coil-helix-coiled-coil-helix domain-containing protein 4, CHCHD4, MIA40

Target/Specificity
This MIA40 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 101-129 amino acids from the C-terminal region of human MIA40.

Dilution
WB~~1:1000
IHC-P~~1:10~50

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
MIA40 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

MIA40 Antibody (C-term) - Protein Information

Name CHCHD4

Synonyms MIA40

Function Central component of a redox-sensitive mitochondrial intermembrane space import machinery which is required for the biogenesis of respiratory chain complexes (PubMed:26004228). Functions as chaperone and catalyzes the formation of disulfide bonds in substrate proteins, such as COX17, COX19, MICU1 and COA7 (PubMed:16185709, PubMed:26387864, PubMed:19182799, PubMed:21059946, PubMed:23186364, PubMed:23676665, PubMed:30885959). Required for the import and folding of small cysteine-containing proteins (small Tim) in the mitochondrial intermembrane space (IMS). Required for the import of COA7 in the IMS (PubMed:30885959). Precursor proteins to be imported into the IMS are translocated in their reduced form into the mitochondria. The oxidized form of CHCHD4/MIA40 forms a transient intermolecular disulfide bridge with the reduced precursor protein, resulting in oxidation of the precursor protein that now contains an intramolecular disulfide bond and is able to undergo folding in the IMS (PubMed:16185709, PubMed:19182799, PubMed:21059946, PubMed:23676665). Reduced CHCHD4/MIA40 is then reoxidized by GFER/ERV1 via a disulfide relay system (PubMed:23186364). Mediates formation of disulfide bond in MICU1 in the IMS, promoting formation of the MICU1-MICU2 heterodimer that regulates mitochondrial calcium uptake (PubMed:26387864).

Cellular Location
Mitochondrion intermembrane space

Tissue Location
Expressed in all tissues tested, suggesting an ubiquitous expression.

MIA40 Antibody (C-term) - 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

MIA40 Antibody (C-term) - Images

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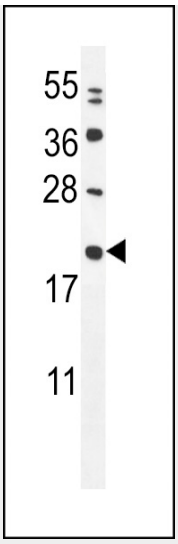
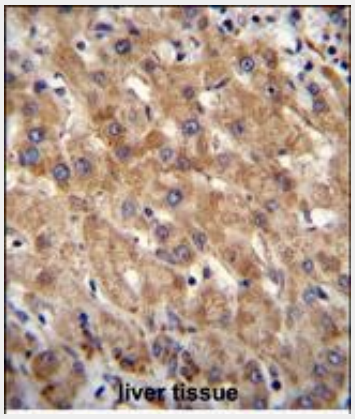


MIA40 Antibody (C-term) (Cat. #AP11528b) western blot analysis in MDA-MB231 cell line lysates (35ug/lane).This demonstrates the MIA40 antibody detected the MIA40 protein (arrow).



MIA40 Antibody (C-term) (Cat. #AP11528b)immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of MIA40 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

MIA40 Antibody (C-term) - Background

CHCHD4, a component of human mitochondria, belongs to a protein family whose members share 6 highly conserved cysteine residues constituting a -CXC-CX(9)C-CX(9)C- motif in the C terminus (Hofmann et al., 2005 [PubMed 16185709]).

MIA40 Antibody (C-term) - References

Daithankar, V.N., et al. Biochemistry 48(22):4828-4837(2009)
Chacinska, A., et al. J. Biol. Chem. 283(44):29723-29729(2008)
Terziyska, N., et al. FEBS Lett. 581(6):1098-1102(2007)
Hofmann, S., et al. J. Mol. Biol. 353(3):517-528(2005)