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Anti-OPA1 Picoband Antibody
Catalog # ABO12417

Specification

Anti-OPA1 Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	O60313
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Dynamin-like 120 kDa protein, mitochondrial(OPA1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-OPA1 Picoband Antibody - Additional Information

Gene ID 4976

Other Names
Dynamin-like 120 kDa protein, mitochondrial, 3.6.5.5, Optic atrophy protein 1, Dynamin-like 120 kDa protein, form S1, OPA1, KIAA0567

Calculated MW
111631 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat

Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Mitochondrion inner membrane ; Single-pass membrane protein . Mitochondrion intermembrane space .

Tissue Specificity
Highly expressed in retina. Also expressed in brain, testis, heart and skeletal muscle. Isoform 1 expressed in retina, skeletal muscle, heart, lung, ovary, colon, thyroid gland, leukocytes and fetal brain. Isoform 2 expressed in colon, liver, kidney, thyroid gland and leukocytes. Low levels of all isoforms expressed in a variety of tissues. .

Protein Name
Dynamin-like 120 kDa protein, mitochondrial

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human OPA1 (919-955aa EDGEKKIKLLTGKRVQLAEDLKKVREIQEKLDAFIEA), different from the related mouse and rat sequences by one amino acid.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins.

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-OPA1 Picoband Antibody - Protein Information

Name OPA1

Function
Dynamin-related GTPase that is essential for normal mitochondrial morphology by regulating the equilibrium between mitochondrial fusion and mitochondrial fission (PubMed:16778770, PubMed:17709429, PubMed:20185555, PubMed:24616225, PubMed:28746876). Coexpression of isoform 1 with shorter alternative products is required for optimal activity in promoting mitochondrial fusion (PubMed:17709429). Binds lipid membranes enriched in negatively charged phospholipids, such as cardiolipin, and promotes membrane tubulation (PubMed:20185555). The intrinsic GTPase activity is low, and is strongly increased by interaction with lipid membranes (PubMed:20185555). Plays a role in remodeling cristae and the release of cytochrome c during apoptosis (By similarity). Proteolytic processing in response to intrinsic apoptotic signals may lead to disassembly of OPA1 oligomers and release of the caspase activator cytochrome C (CYCS) into the mitochondrial intermembrane space (By similarity). Plays a role in mitochondrial genome maintenance (PubMed:20974897, PubMed:18158317).

Cellular Location
Mitochondrion inner membrane; Single-pass membrane protein. Mitochondrion intermembrane space {ECO:0000250|UniProtKB:P58281}. Mitochondrion membrane. Note=Detected at contact sites between endoplasmic reticulum and mitochondrion membranes

Tissue Location
Highly expressed in retina. Also expressed in brain, testis, heart and skeletal muscle. Isoform 1 expressed in retina, skeletal muscle, heart, lung, ovary, colon, thyroid gland, leukocytes and fetal brain. Isoform 2 expressed in colon, liver, kidney, thyroid gland and leukocytes. Low levels of all isoforms expressed in a variety of tissues.

Anti-OPA1 Picoband Antibody - Protocols

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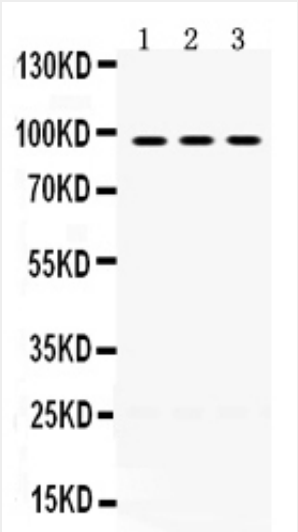
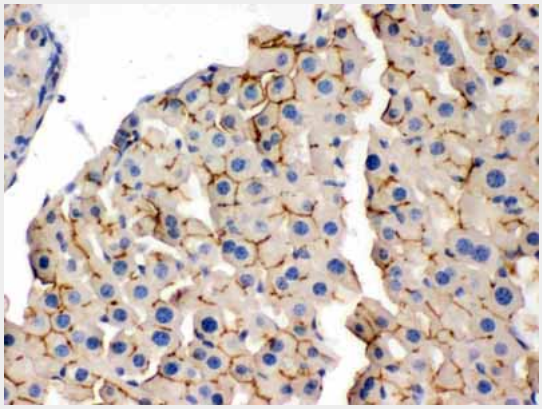
Provided below are standard protocols that you may find useful for product applications.

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

Anti-OPA1 Picoband Antibody - Images



Anti- OPA1 Picoband antibody, ABO12417, Western blottingAll lanes: Anti OPA1 (ABO12417) at 0.5ug/mlLane 1: A549 Whole Cell Lysate at 40ugLane 2: SKOV Whole Cell Lysate at 40ugLane 3: SW620 Whole Cell Lysate at 40ugPredicted bind size: 110KDObserved bind size: 95KD



Anti- OPA1 Picoband antibody, ABO12417, IHC(P)IHC(P): Mouse Liver Tissue

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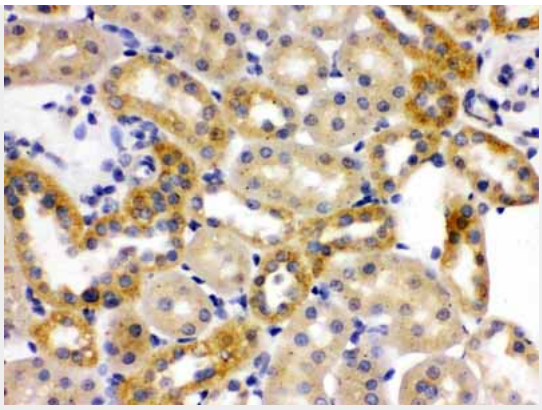
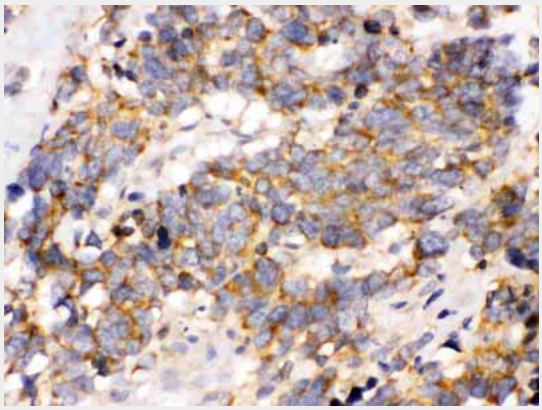


Anti- OPA1 Picoband antibody, ABO12417, IHC(P)IHC(P): Rat Kidney Tissue



Anti- OPA1 Picoband antibody, ABO12417, IHC(P)IHC(P): Human Lung Cancer Tissue

Anti-OPA1 Picoband Antibody - Background

Dynamin-like 120 kDa protein, mitochondrial is a protein that in humans is encoded by the OPA1 gene. It is mapped to 3q29. This protein regulates mitochondrial fusion and cristae structure in the inner mitochondrial membrane (IMM) and contributes to ATP synthesis and apoptosis. This gene product is a nuclear-encoded mitochondrial protein with similarity to dynamin-related GTPases. It is a component of the mitochondrial network. Mutations in this gene have been associated with optic atrophy type 1, which is a dominantly inherited optic neuropathy resulting in progressive loss of visual acuity, leading in many cases to legal blindness. Multiple transcript variants encoding different isoforms have been found for this gene.