10320 Camino Santa Fe, Suite G
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COX3 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58112

Specification

COX3 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, E**
Primary Accession	P00414
Reactivity	**Rat, Pig, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**30 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human COX3**
Epitope Specificity	**25-130/261**
Isotype	**IgG**
Purity	
affinity purified by Protein A	
Buffer	**0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.**
SUBCELLULAR LOCATION	**Mitochondrion inner membrane; Multi-pass membrane protein.**
SIMILARITY	**Belongs to the cytochrome c oxidase subunit 3 family.**
SUBUNIT	**Homodimer.**
DISEASE	**Leber hereditary optic neuropathy (LHON) [MIM:535000]: A maternally inherited disease resulting in acute or subacute loss of central vision, due to optic nerve dysfunction. Cardiac conduction defects and neurological defects have also been described in some patients. LHON results from primary mitochondrial DNA mutations affecting the respiratory chain complexes. Note=The disease is caused by mutations affecting the gene represented in this entry. Mitochondrial complex IV deficiency (MT-C4D) [MIM:220110]: A disorder of the mitochondrial respiratory chain with heterogeneous clinical manifestations, ranging from isolated myopathy to severe multisystem disease affecting several tissues and organs. Features include hypertrophic cardiomyopathy, hepatomegaly and liver dysfunction, hypotonia, muscle weakness, exercise intolerance, developmental delay, delayed motor development and mental retardation. Some affected individuals**

	manifest a fatal hypertrophic cardiomyopathy resulting in neonatal death. A subset of patients manifest Leigh syndrome. Note=The disease is caused by mutations affecting the gene represented in this entry. Recurrent myoglobinuria mitochondrial (RM-MT) [MIM:550500]: Recurrent myoglobinuria is characterized by recurrent attacks of rhabdomyolysis (necrosis or disintegration of skeletal muscle) associated with muscle pain and weakness, and followed by excretion of myoglobin in the urine. Note=The gene represented in this entry may be involved in disease pathogenesis.
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
MT-CO3 (Mitochondrially Encoded Cytochrome C Oxidase III) is a Protein Coding gene. Diseases associated with MT-CO3 include Leber Hereditary Optic Neuropathy and Genetic Recurrent Myoglobinuria. Among its related pathways are Gene Expression and Respiratory electron transport, ATP synthesis by chemiosmotic coupling, and heat production by uncoupling proteins.. Gene Ontology (GO) annotations related to this gene include cytochrome-c oxidase activity and heme-copper terminal oxidase activity.

COX3 Polyclonal Antibody - Additional Information

Gene ID 4514

Other Names
Cytochrome c oxidase subunit 3, 7.1.1.9, Cytochrome c oxidase polypeptide III, MT-CO3, COIII, COXIII, MTCO3

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>E~~N/A

Format
0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage
Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ℃.

COX3 Polyclonal Antibody - Protein Information

Name MT-CO3

Synonyms COIII, COXIII, MTCO3

Function
Component of the cytochrome c oxidase, the last enzyme in the mitochondrial electron transport chain which drives oxidative phosphorylation. The respiratory chain contains 3 multisubunit complexes succinate dehydrogenase (complex II, CII), ubiquinol- cytochrome c oxidoreductase (cytochrome b-c1 complex, complex III, CIII) and cytochrome c oxidase (complex IV, CIV), that cooperate to transfer electrons derived from NADH and succinate to molecular oxygen, creating an electrochemical gradient over the inner membrane that drives transmembrane transport and the ATP synthase. Cytochrome c oxidase is the component of the respiratory chain that catalyzes the reduction of oxygen to water. Electrons originating from reduced cytochrome c in the intermembrane space (IMS) are transferred via the dinuclear copper A center (CU(A)) of subunit 2 and heme A of subunit 1 to the active site in subunit 1, a binuclear center (BNC) formed by heme A3 and copper B (CU(B)). The BNC reduces molecular oxygen to 2 water molecules using 4 electrons from cytochrome c in the IMS and 4 protons from the mitochondrial matrix.

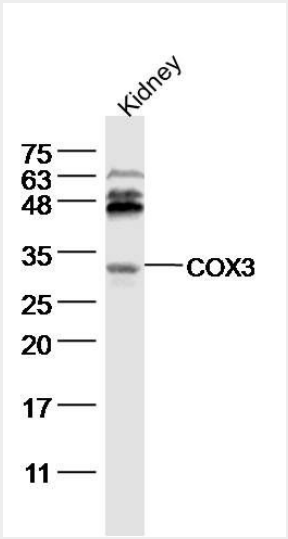
Cellular Location
Mitochondrion inner membrane; Multi-pass membrane protein

COX3 Polyclonal 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

COX3 Polyclonal Antibody - Images



Sample:
kidney(mouse)Lysate at 40 ug
Primary: Anti- COX3 (bs-3934R)at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 30kD

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Observed band size: 30 kD