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KD-Validated Anti-COX IV Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1216

Specification

KD-Validated Anti-COX IV Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P13073
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 20 kDa, observed, 20 kDa KDa**
Gene Name	**COX4I1**
Aliases	**COX4I1; Cytochrome C Oxidase Subunit 4I1; COXIV-1; COX4-1; COXIV; COX4; Cytochrome C Oxidase Subunit 4 Isoform 1, Mitochondrial; Cytochrome C Oxidase Subunit IV Isoform 1; Cytochrome C Oxidase Polypeptide IV; Cytochrome C Oxidase Subunit IV; COX IV-1; MC4DN16**
Immunogen	**A synthesized peptide derived from human COX IV**

KD-Validated Anti-COX IV Rabbit Monoclonal Antibody - Additional Information

Gene ID **1327**

Other Names
Cytochrome c oxidase subunit 4 isoform 1, mitochondrial, Cytochrome c oxidase polypeptide IV, Cytochrome c oxidase subunit IV isoform 1, COX IV-1, COX4I1 (HGNC:2265)

KD-Validated Anti-COX IV Rabbit Monoclonal Antibody - Protein Information

Name COX4I1 (HGNC:2265)

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; Single-pass membrane protein

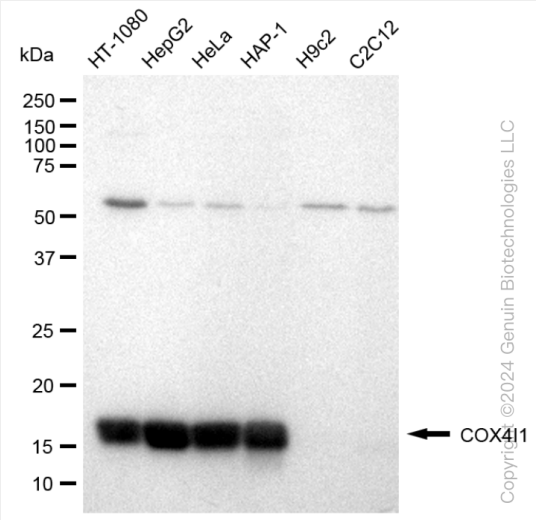
Tissue Location
Ubiquitous.

KD-Validated Anti-COX IV 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

KD-Validated Anti-COX IV Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-COX IV antibody (Cat#AGI1216). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-COX IV antibody (Cat#AGI1216, 1:5,000) and HRP-conjugated goat anti rabbit secondary antibody respectively.

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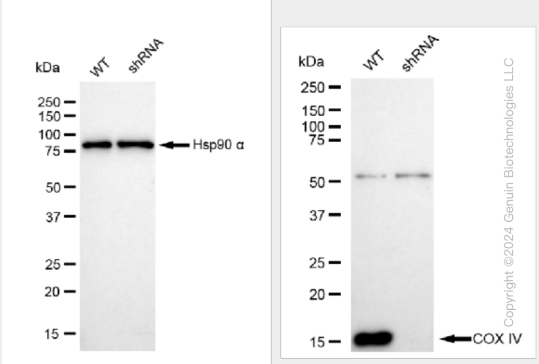
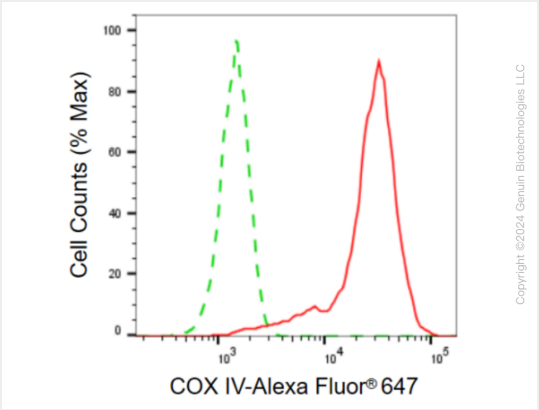
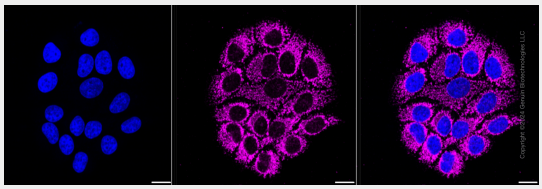


Western blotting analysis using anti-COX IV antibody (Cat#AGI1216). COX IV expression in wild type (WT) and COX IV shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-COX IV antibody (Cat#AGI1216,1:5,000) and HRP-conjugated goat anti rabbit secondary antibody respectively.



Flow cytometric analysis of COX IV expression in HepG2 cells using COX IV antibody (Cat#AGI1216,1:2,000). Green, isotype control; red, COX IV.



Immunocytochemical staining of HepG2 cells with COX IV antibody (Cat#AGI1216, 1:1,000). Nuclei were stained blue with DAPI; COX IV was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.