

Product Name: KD-Validated COX IV Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA01829**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 19.6kDa

Antigen Information

Gene Name	COX4I1
Alternative Names	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
Gene ID	1327.0
SwissProt ID	P13073
Immunogen	A synthesized peptide derived from human COX IV

Background

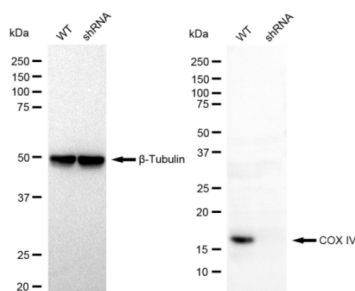
Cytochrome c oxidase (COX) is the terminal enzyme of the mitochondrial respiratory chain. It is a multi-subunit enzyme

complex that couples the transfer of electrons from cytochrome c to molecular oxygen and contributes to a proton electrochemical gradient across the inner mitochondrial membrane. The complex consists of 13 mitochondrial- and nuclear-encoded subunits. The mitochondrially-encoded subunits perform the electron transfer and proton pumping activities. The functions of the nuclear-encoded subunits are unknown but they may play a role in the regulation and assembly of the complex. This gene encodes the nuclear-encoded subunit IV isoform 1 of the human mitochondrial respiratory chain enzyme. It is located at the 3' of the NOC4 (neighbor of COX4) gene in a head-to-head orientation, and shares a promoter with it. Pseudogenes related to this gene are located on chromosomes 13 and 14. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jan 2016]

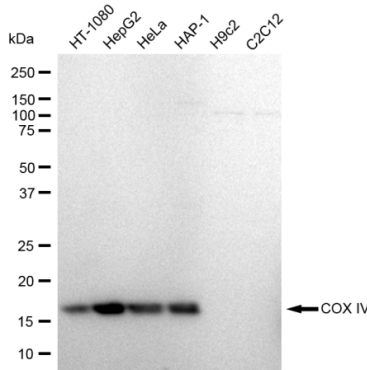
Research Area

Tags & Cell Markers, Signal Transduction, Isotype/Loading Controls, Cancer, Metabolism

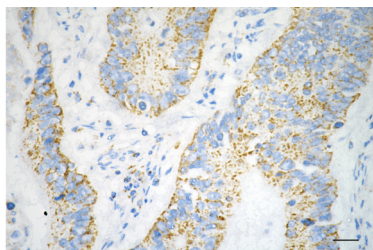
Image Data

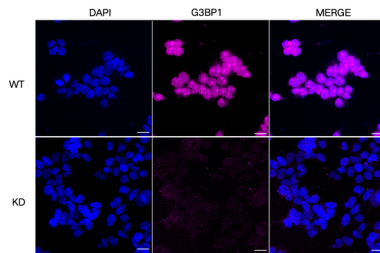


Western blotting analysis using COX IV antibody (KVA01829). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with COX IV antibody (KVA01829, 1:5,000) and HRP-conjugated goat anti rabbit secondary antibody (APS0635, 1:10,000) respectively.

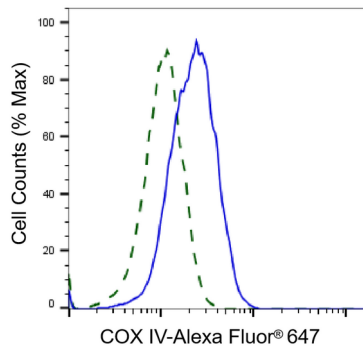


Immunohistochemistry was performed on paraffin-embedded human sigmoid colon carcinoma using COX IV antibody (KVA01829, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.

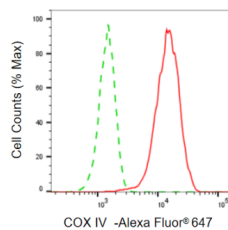




Immunocytochemical staining of Hela cells using COXIV antibody (KVA01829, 1:1,000), Top panel: wild-type (WT); Bottom panel: COXIV shRNA knockdown (KD). Nuclei were stained blue with DAPI; COXIV was stained magenta with Alexa Fluor® 647. Scale bar, 20 μm.



Validation of COX IV knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HT-1080 cells were stained with COX IV antibody (KVA01829, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of COX IV expression in HepG2 cells using COX IV antibody (KVA01829, 1:2,000). Green, isotype control; red, COX IV.