Anti-COX4I1 Antibody

Catalog Number: ***A05442-1***

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Basic Information

Product Name	Anti-COX4I1 Antibody
Gene Name	COX4I1
Source	Rabbit
Clonality	Polyclonal
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, IHC, ICC/IF, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	E. coli-derived human COX IV recombinant protein (Position: Q59-K169).
Purification	Immunogen affinity purified.
Observed MW	17 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Enzyme linked immunosorbent assay (ELISA): 1:100-1000 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied. 6 months 2 to 8℃ after reconstitution. Avoid repeated freezing and thawing.

Background Information

Cytochrome c oxidase subunit 4 isoform 1, mitochondrial is an enzyme that in humans is encoded by the COX4I1 gene. 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

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located on chromosomes 13 and 14.

Selected Validation Data

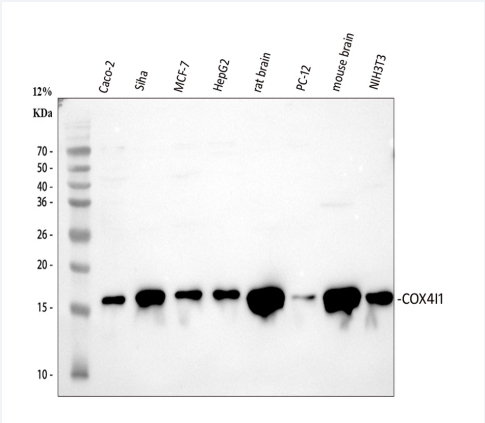

Figure 1. Western blot analysis of COX4I1 using anti-COX4I1 antibody (A05442-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Caco-2 whole cell lysates,
Lane 2: human SiHa whole cell lysates,
Lane 3: human MCF-7 whole cell lysates,
Lane 4: human HepG2 whole cell lysates,
Lane 5: rat brain tissue lysates,
Lane 6: rat PC-12 whole cell lysates,
Lane 7: mouse brain tissue lysates,
Lane 8: mouse NIH/3T3 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-COX4I1 antigen affinity purified polyclonal antibody (A05442-1) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for COX4I1 at approximately 17 kDa. The expected band size for COX4I1 is at 20 kDa.

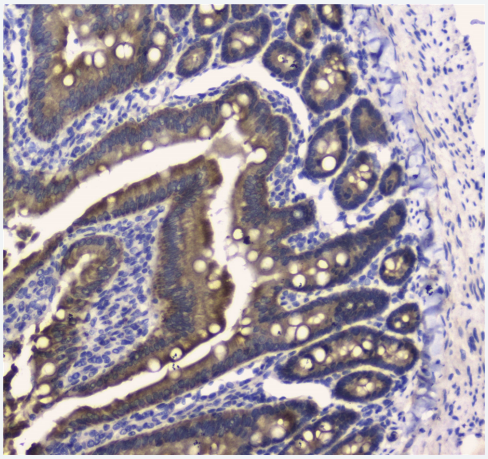

Figure 2. IHC analysis of COX IV using anti-COX IV antibody (A05442-1).COX IV was detected in paraffin-embedded section of mouse small intestine tissue. rabbit anti-COX IV Antibody (A05442-1) . Biotinylated goat anti-rabbit IgG was used as secondary antibody . The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

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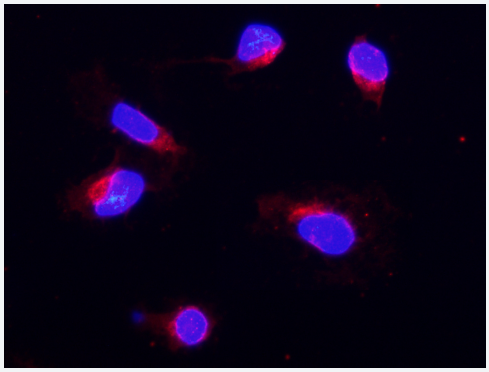

Figure 10. ICC analysis of anti-COX4I1 antibody (A05442-1).was detected in immunocytochemical section of U2OS cells. Cells were stained using the Dylight594-conjugated Anti-rabbit IgG Secondary Antibody (red)(Catalog#BA1142) and counterstained with DAPI (blue).

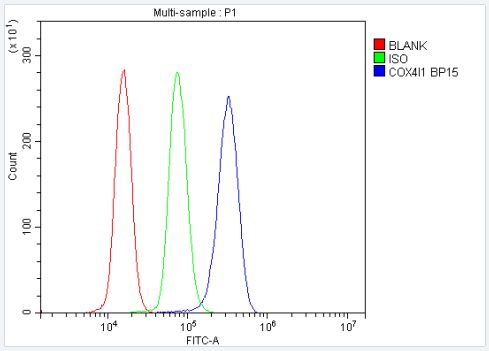

Figure 11. Flow Cytometry analysis of U937 cells using anti-COX4I1 antibody (A05442-1).
Overlay histogram showing U937 cells stained with A05442-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-COX4I1 Antibody (A05442-1) at 1:100 dilution for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.