Human/Mouse COX4 Antibody

Monoclonal Mouse IgG_{2B} Clone # 673803

Catalog Number: MAB6980

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human COX4-I2 in direct ELISAs. In Western blots, 100% cross-reactivity with recombinant human (rh) COX4-I1 and no cross-reactivity with rhCOX-1 or rhCOX-2 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 673803
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	E.coli-derived recombinant human COX4-I2 Asn39-Lys171 Accession # Q96KJ9
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

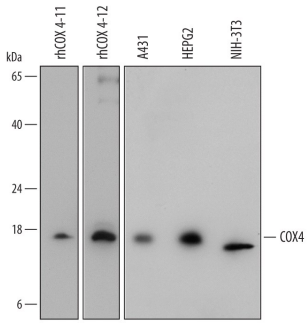
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below

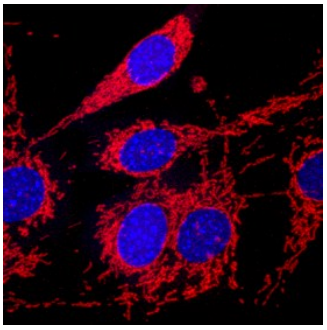
DATA

Western Blot



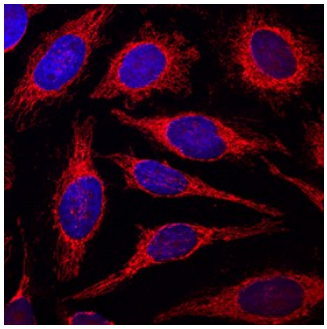
Detection of Human and Mouse COX4 by Western Blot. Western blot shows lysates of A431 human epithelial carcinoma cell line, HepG2 human hepatocellular carcinoma cell line, and NIH-3T3 mouse embryonic fibroblast cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human COX4 Monoclonal Antibody (Catalog # MAB6980) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). For addtional reference, recombinant human COX4-I1 (5 ng/lane) and recombinant human COX4-I2 (2.5 ng/lane) were included. A specific band was detected for COX4 at approximately 18 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

Immunocytochemistry



COX4 in NIH-3T3 Mouse Cell Line. COX4 was detected in immersion fixed NIH-3T3 mouse embryonic fibroblast cell line using Mouse Anti-Human/Mouse COX4 Monoclonal Antibody (Catalog # MAB6980) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to mitochondria. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunocytochemistry



COX4 in HeLa Human Cell Line. COX4 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human/Mouse COX4 Monoclonal Antibody (Catalog # MAB6980) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to mitochondria. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

COX4-I2 (Cytochrome c oxidase subunit 4) is a 21-22 kDa member of the Cytochrome c oxidase IV family of proteins and is predominantly expressed in lung. It is a component of COX, an inner mitochondrial membrane multimeric dimer that catalyzes the transfer of electrons from Cytochrome c to dioxygen. COX4-I2 is induced following blockade of mitochondrial respiration, leading to increased production of reactive oxygen species and necrosis. The ubiquitously expressed COX4-I1 is the product of a different gene and shares only 50% aa identity with COX4-I2. Within aa 39-171 (the oxidase domain), human COX4-I2 shares 84% and 81% aa sequence identity with mouse and rat COX4-I2, respectively.

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