Anti-COX5B antibody, mouse monoclonal (3F10)

Product code	74-302
Size	100 µg
Storage	-20℃
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from hybridoma cell culture medium
Immunogen	Purified recombinant His tag (N terminal)-human COX5B (full length).
Isotype	mouse IgG1κ
Reactivity	human
Special notes	Specificity has been validated by Immunofluorescence staining with mitochondria-specific fluorescent dye (Fig. 2)
Application	1. Western blotting (dilution: 1/1000) Fig.1 2. Immunofluorescence staining (dilution: 1/10-1/1000) Fig. 2
Background	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.
Data Link	UniProt P10606 (COX5B_HUMAN)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

BioAcademia,Inc. Tel. 81-6-6877-2335 Fax. 81-6-6877-2336 info@bioacademia.co.jp https://www.bioacademia.co.jp/en/

Data Images: 74-302 Anti-human COX5B antibody, mouse monoclonal (3F10)

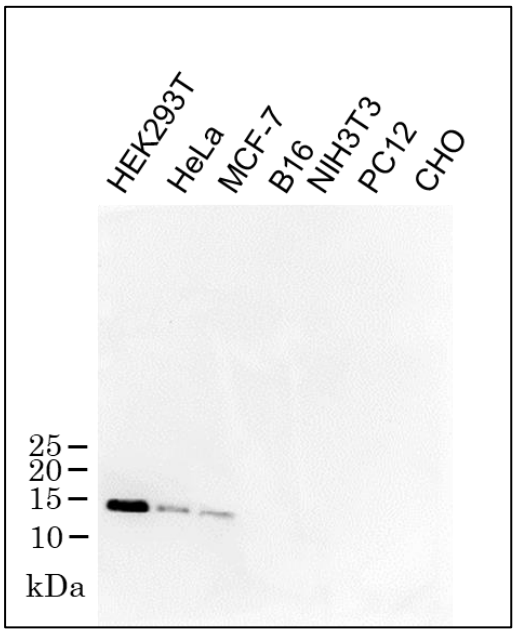

Fig 1. Western blotting with anti-COX5B antibody (3F10)

10 µg of indicated cell lysates was electrophoresed in a gradient PAAG and transferred to a PVDF membrane with a wet blotter. This filter was masked with 5% skim milk and 1µg/ml anti-COX5B antibody (3F10), 0.2 µg/ml anti-mIgG-H+L-HRP (ab205719) and Immunostar zeta.

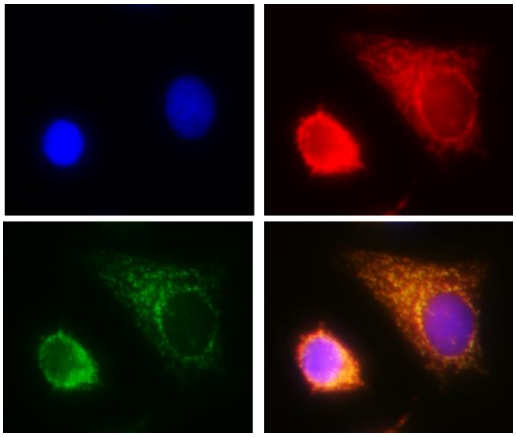

Fig 2. Immunofluorescence staining with anti-COX5B antibody (3F10)

MCF-7 cells were stained with mitochondria-specific fluorescent dye (red) (MT15, Dojindo) and fixed by 4% PFA. Anti-COX5B antibody (3F10) was reacted at 1/10 dilution as primary antibody and anti-IgG (HL) Alexa 488 conjugate was reacted at 1/2000 dilution as secondary antibody (green). Nuclei were stained by DAPI (blue).

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