

Anti-COX5A antibody, mouse monoclonal (3F9)

Product code	74-300
Size	100 µg
Storage	-20°C
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 COX5A (full length).
Isotype	mouse IgG1κ
Reactivity	Human, Rat
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: 1/10-1/100) 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 P20674 · COX5A_HUMAN
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

Data Images: 74-300 Anti-human COX5A antibody, mouse monoclonal (3F9)

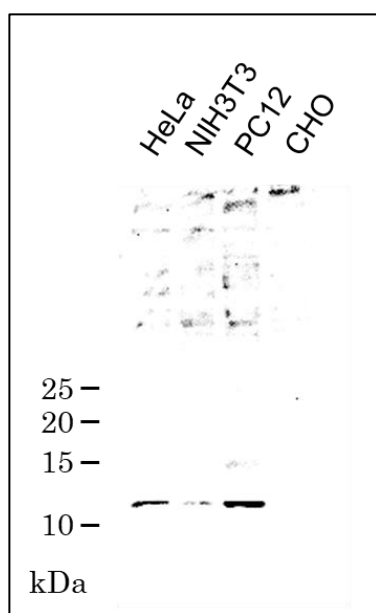


Fig 1. Western blotting with anti-COX5A antibody (3F9)

10 μ g of indicated cell lysates were electrophoresed in a 15% PAAG and transferred to a PVDF membrane with a semi-dry blotter. This filter was masked with 5% skim milk and 1 μ g/ml anti-COX5A antibody (3F9) in CANGET signal Sol.1, 0.2 μ g/ml anti-mIgG-H+L-HRP (ab205719) in CANGET signal Sol.2 and Immunostar zeta.

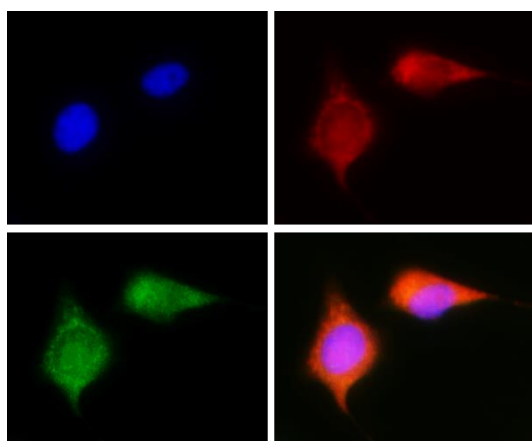


Fig 2. Immunofluorescence staining with anti-COX5A antibody (3F9)

HeLa cells were stained with mitochondria-specific fluorescent dye (red) (MT15, Dojindo) and fixed by 4% PFA. Anti-COX5A antibody (3F9) was reacted at 1/10 dilution as primary antibody and anti-IgG (HL) Alexa 488 conjugate was reacted at 1/10 dilution as secondary antibody (green). Nuclei were stained by DAPI (blue).