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#4853

COX IV (3E11) Rabbit mAb (Alexa Fluor® 488 Conjugate)



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: IF-IC, FC-FP	Reactivity: H R Mk Z B Pg	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P13073	Entrez-Gene Id: 1327
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Product Usage Information	Application Immunofluorescence (Immunocytochemistry) Flow Cytometry (Fixed/Permeabilized)	Dilution 1:200 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.	
Specificity / Sensitivity	COX IV (3E11) Rabbit mAb (Alexa Fluor® 488 Conjugate) detects endogenous levels of total COX IV protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys29 of human COX IV. Antibodies were purified by protein A and peptide affinity chromatography. The antibody was conjugated to Alexa Fluor® 488 under optimal conditions with an F/P ratio of 2-6.	
Product Description	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometry and immunofluorescent analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated COX IV (3E11) Rabbit mAb #4850.	
Background	Cytochrome c oxidase (COX) is a hetero-oligomeric enzyme consisting of 13 subunits localized to the inner mitochondrial membrane (1-3). It is the terminal enzyme complex in the respiratory chain, catalyzing the reduction of molecular oxygen to water coupled to the translocation of protons across the mitochondrial inner membrane to drive ATP synthesis. The 3 largest subunits forming the catalytic core are encoded by mitochondrial DNA, while the other smaller subunits, including COX IV, are nuclear-encoded. Research studies have shown that deficiency in COX activity correlates with a number of human diseases (4). The COX IV antibody can be used effectively as a mitochondrial loading control in cell-based research assays.	
Background References	1. Ostermeier, C. et al. (1996) <i>Curr. Opin. Struct. Biol.</i> 6, 460-466. 2. Capaldi, R.A. et al. (1983) <i>Biochim. Biophys. Acta</i> 726, 135-148. 3. Kadenbach, B. et al. (2000) <i>Free Radic. Biol. Med.</i> 29, 211-221. 4. Barrientos, A. et al. (2002) <i>Gene</i> 286, 53-63.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	IF-IC: Immunofluorescence (Immunocytochemistry) FC-FP: Flow Cytometry (Fixed/Permeabilized)
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected
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