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## COX IV (3E11) Rabbit mAb (Alexa Fluor® 594 Conjugate)

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-IC	H R Mk Z B Pg	Endogenous	Rabbit IgG	#P13073	1327
<b>Product Usage Information</b>	<b>Application</b>			<b>Dilution</b>	
	Immunofluorescence (Immunocytochemistry)			1:50	
<b>Storage</b>	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.				
<b>Specificity/Sensitivity</b>	COX IV (3E11) Rabbit mAb (Alexa Fluor® 594 Conjugate) recognizes endogenous levels of total COX IV protein.				
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys29 of human COX IV protein. Antibodies are purified by protein A and peptide affinity chromatography.				
<b>Description</b>	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 594 fluorescent dye and tested in-house for direct immunofluorescent analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated COX IV (3E11) Rabbit mAb #4850.				
<b>Background</b>	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.				
<b>Background References</b>	<ol style="list-style-type: none"> <li>Ostermeier, C. et al. (1996) <i>Curr. Opin. Struct. Biol.</i> 6, 460-466.</li> <li>Capaldi, R.A. et al. (1983) <i>Biochim. Biophys. Acta</i> 726, 135-148.</li> <li>Kadenbach, B. et al. (2000) <i>Free Radic. Biol. Med.</i> 29, 211-221.</li> <li>Barrientos, A. et al. (2002) <i>Gene</i> 286, 53-63.</li> </ol>				

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Applications Key

**IF-IC:** Immunofluorescence (Immunocytochemistry)

### Cross-Reactivity Key

**H:** Human **R:** Rat **Mk:** Monkey **Z:** Zebrafish **B:** Bovine **Pg:** Pig

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