Revision 1

Store at +4C

#7561

COX IV (3E11) Rabbit mAb (Alexa Fluor® 647 Conjugate)

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-IC, FC-FP	H R Mk Z B Pg	Endogenous	Rabbit IgG	#P13073	1327

Product Usage Information

Application	Dilution
Immunofluorescence (Immunocytochemistry)	1:200
Flow Cytometry (Fixed/Permeabilized)	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® 647 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 protein.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 647 fluorescent dye and tested in-house for direct flow cytometric and 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.

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) *Curr. Opin. Struct. Biol.* 6, 460-466.
2. Capaldi, R.A. et al. (1983) *Biochim. Biophys. Acta* 726, 135-148.
3. Kadenbach, B. et al. (2000) *Free Radic. Biol. Med.* 29, 211-221.
4. Barrientos, A. et al. (2002) *Gene* 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 **R:** Rat **Mk:** Monkey **Z:** Zebrafish **B:** Bovine **Pg:** Pig

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