

# Cox IV Blocking Peptide

✓ 100 µg (100 sections)



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For Research Use Only. Not For Use In Diagnostic Procedures.

**Description:** This peptide is used to block COX IV Antibody #4844.

**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.

**Source/Purification:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks COX IV Antibody #4844 by peptide dot blot.

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks COX IV Antibody #4844 by peptide dot blot.

**Directions for Use:** Use as a blocking reagent to evaluate the specificity of antibody reactivity in peptide dot blot protocols. Recommended antibody dilutions can be found on the relevant product data sheet.

**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.

Entrez-Gene ID #203068  
UniProt ID #P07437

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA, 5% glycerol, and 1% DMSO. Store at -20°C.

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.