

# COX4 (F-8): sc-376731

## BACKGROUND

Cytochrome c oxidase (COX) functions as the terminal oxidase of the respiratory chain that uses cytochrome c as an electron donor to drive a proton gradient across the inner mitochondrial membrane. The mammalian COX apoenzyme is a heteromer consisting of three mitochondrial encoded catalytic subunits and several nuclear gene encoded structural subunits. COX contains two iron-coordination sites and two copper-coordination sites. Cytochrome c oxidase IV (COX4) is a nuclear-encoded subunit of COX that may play a role in regulating COX activity. COX4 is expressed ubiquitously in adult human tissue with the strongest levels of expression in the pancreas and moderate expression levels in heart, skeletal muscle and placenta.

## CHROMOSOMAL LOCATION

Genetic locus: COX4I1 (human) mapping to 16q24.1.

## SOURCE

COX4 (F-8) is a mouse monoclonal antibody raised against amino acids 86-169 mapping at the C-terminus of COX4 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

COX4 (F-8) is available conjugated to agarose (sc-376731 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376731 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376731 PE), fluorescein (sc-376731 FITC), Alexa Fluor® 488 (sc-376731 AF488), Alexa Fluor® 546 (sc-376731 AF546), Alexa Fluor® 594 (sc-376731 AF594) or Alexa Fluor® 647 (sc-376731 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376731 AF680) or Alexa Fluor® 790 (sc-376731 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

COX4 (F-8) is recommended for detection of COX4 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for COX4 siRNA (h): sc-72074, COX4 shRNA Plasmid (h): sc-72074-SH and COX4 shRNA (h) Lentiviral Particles: sc-72074-V.

Molecular Weight of COX4: 17 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, MOLT-4 cell lysate: sc-2233 or Raji whole cell lysate: sc-364236.

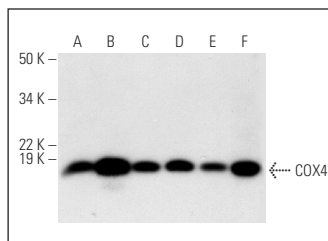
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

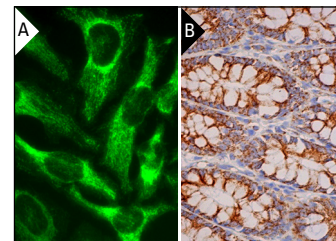
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



COX4 (F-8): sc-376731. Western blot analysis of COX4 expression in A-431 (A), MOLT-4 (B), Raji (C), MCF7 (D) and A-673 (E) whole cell lysates and human skeletal muscle tissue extract (F).



COX4 (F-8): sc-376731. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Wang, Z., et al. 2014. Tissue kallikrein protects rat hippocampal CA1 neurons against cerebral ischemia/reperfusion-induced injury through the B2R-Raf-MEK1/2-ERK1/2 pathway. *J. Neurosci. Res.* 92: 651-657.
- Fan, S., et al. 2015. Mitochondrial fission determines cisplatin sensitivity in tongue squamous cell carcinoma through the BRCA1-miR-593-5p-MFF axis. *Oncotarget* 6: 14885-14904.
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- Leão, M., et al. 2015. Enhanced cytotoxicity of prenylated chalcone against tumour cells via disruption of the p53-MDM2 interaction. *Life Sci.* 142: 60-65.
- Park, C., et al. 2016. Ethanol extract of *Kalopanax septemlobus* leaf induces caspase-dependent apoptosis associated with activation of AMPK in human hepatocellular carcinoma cells. *Int. J. Oncol.* 48: 261-270.
- Wang, S., et al. 2016. Propofol protects against the neurotoxicity of 1-methyl-4-phenylpyridinium. *Mol. Med. Rep.* 13: 309-314.
- Jia, J., et al. 2016. Artemisinin inhibits gallbladder cancer cell lines through triggering cell cycle arrest and apoptosis. *Mol. Med. Rep.* 13: 4461-4468.
- Soares, J., et al. 2016. Reactivation of wild-type and mutant p53 by tryptophan-derived oxazoloindolinone SLMP53-1, a novel anticancer small-molecule. *Oncotarget* 7: 4326-4343.
- Deng, M., et al. 2017. Combination of celecoxib and PD184161 exerts synergistic inhibitory effects on gallbladder cancer cell proliferation. *Oncol. Lett.* 13: 3850-3858.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.