

# UQCRC2 (G-10): sc-390378

## BACKGROUND

Cytochrome c is a well characterized, mobile electron transport protein that is essential to energy conversion in all aerobic organisms. Cytochrome b associates with cytochrome c subunit 1 and the rieske protein to form complex III (also designated cytochrome bc<sub>1</sub> complex), which is involved in cellular respiration. Ubiquinol cytochrome c reductase (UQCRC1), also referred to as rieske iron-sulfur protein, represents an important subunit of complex III of the mitochondrial respiratory chain that transfers electrons from ubiquinol to cytochrome c. The UQCRC1 complex is made up of three respiratory subunits (cytochrome b, cytochrome c<sub>1</sub>, rieske protein), two core proteins, and six low-molecular weight proteins. Ubiquinol cytochrome-c reductase complex core protein 2 (UQCRC2) represents one of the core proteins of UQCRC1, and it is required for the assembly of the complex.

## CHROMOSOMAL LOCATION

Genetic locus: UQCRC2 (human) mapping to 16p12.2; Uqcrc2 (mouse) mapping to 7 F2.

## SOURCE

UQCRC2 (G-10) is a mouse monoclonal antibody raised against amino acids 319-453 mapping at the C-terminus of UQCRC2 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.

UQCRC2 (G-10) is available conjugated to agarose (sc-390378 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390378 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390378 PE), fluorescein (sc-390378 FITC), Alexa Fluor<sup>®</sup> 488 (sc-390378 AF488), Alexa Fluor<sup>®</sup> 546 (sc-390378 AF546), Alexa Fluor<sup>®</sup> 594 (sc-390378 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-390378 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-390378 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-390378 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

UQCRC2 (G-10) is recommended for detection of UQCRC2 of mouse, rat and 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 UQCRC2 siRNA (h): sc-72021, UQCRC2 siRNA (m): sc-72022, UQCRC2 shRNA Plasmid (h): sc-72021-SH, UQCRC2 shRNA Plasmid (m): sc-72022-SH, UQCRC2 shRNA (h) Lentiviral Particles: sc-72021-V and UQCRC2 shRNA (m) Lentiviral Particles: sc-72022-V.

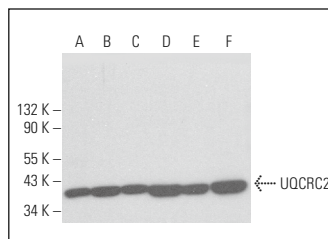
Molecular Weight of UQCRC2: 48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-673 cell lysate: sc-2414 or A2058 whole cell lysate: sc-364178.

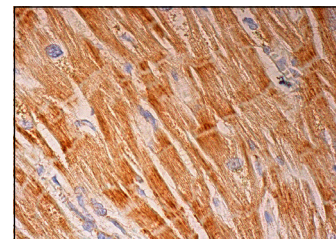
## STORAGE

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

## DATA



UQCRC2 (G-10): sc-390378. Western blot analysis of UQCRC2 expression in Jurkat (A), A-673 (B), A2058 (C), Neuro-2A (D), WEHI-231 (E) and BYDP (F) whole cell lysates.



UQCRC2 (G-10): sc-390378. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

## SELECT PRODUCT CITATIONS

- Kim, Y.R., et al. 2018. *Toxoplasma gondii* GRA8 induces ATP5A1-SIRT3-mediated mitochondrial metabolic resuscitation: a potential therapy for sepsis. *Exp. Mol. Med.* 50: e464.
- Kalainayakan, S.P., et al. 2019. Cyclopamine tartrate, a modulator of hedgehog signaling and mitochondrial respiration, effectively arrests lung tumor growth and progression. *Sci. Rep.* 9: 1405.
- Kim, M., et al. 2020. Sestrins are evolutionarily conserved mediators of exercise benefits. *Nat. Commun.* 11: 190.
- Huang, J., et al. 2021. NBR1 is a critical step in the repression of thermogenesis of p62-deficient adipocytes through PPAR $\gamma$ . *Nat. Commun.* 12: 2876.
- Chen, C.L., et al. 2021. Reperfusion mediates heme impairment with increased protein cysteine sulfonation of mitochondrial complex III in the post-ischemic heart. *J. Mol. Cell. Cardiol.* 161: 23-38.
- Ha, J., et al. 2021. Callyspongolide kills cells by inducing mitochondrial dysfunction via cellular iron depletion. *Commun. Biol.* 4: 1123.
- Lu, X., et al. 2021. AMPK protects against alcohol-induced liver injury through UQCRC2 to up-regulate mitophagy. *Autophagy* 17: 3622-3643.
- Kim, J.S., et al. 2021. Mito-TIPTP increases mitochondrial function by repressing the Rubicon-p22phox interaction in colitis-induced mice. *Antioxidants* 10: 1954.
- Wang, T., et al. 2021. Heme sequestration as an effective strategy for the suppression of tumor growth and progression. *Mol. Cancer Ther.* 20: 2506-2518.

## RESEARCH USE

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

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