

# UQCRC1 (A-20): sc-69060

## BACKGROUND

UQCRC1, or Ubiquinol-cytochrome-c reductase complex core protein 1, is a core subunit of the mitochondrial respiratory complex III. It is the largest nuclear encoded subunit of the complex. UQCRC1 plays a key role in mitochondria-to-nucleus retrograde response and is involved in the mitochondrial proton gradient formation. It has also shown to interact with Nogo, an inhibitor of neurite growth after spinal cord injury. UQCRC1 has been found at high expression levels in breast and ovarian tumors, positively correlating with Cox-2 expression. Transcription of UQCRC1 is repressed by the nuclear protein methyl-CpG-binding protein-2 (MeCP2). A mutation in the gene for MeCP2 (associated with Rett syndrome) can result in the overexpression of UQCRC1, leading to increased activity of complex III.

## REFERENCES

- Hoffman, G.G., et al. 1993. Complete coding sequence, intron/exon organization and chromosomal location of the gene for the core I protein of human Ubiquinol-cytochrome c reductase. *J. Biol. Chem.* 268: 21113-21119.
- Islam, M.M., et al. 1994. A complete cDNA sequence for core I protein subunit of human Ubiquinol-cytochrome c reductase. *Biochem. Mol. Biol. Int.* 32: 797-805.
- Valnot, I., et al. 1999. A mitochondrial cytochrome b mutation but no mutations of nuclearly encoded subunits in Ubiquinol cytochrome c reductase (complex III) deficiency. *Hum. Genet.* 104: 460-466.
- Hu, W.H., et al. 2002. Identification and characterization of a novel Nogo-interacting mitochondrial protein (NIMP). *J. Neurochem.* 81: 36-45.

## CHROMOSOMAL LOCATION

Genetic locus: UQCRC1 (human) mapping to 3p21.31; Uqcrc1 (mouse) mapping to 9 F2.

## SOURCE

UQCRC1 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UQCRC1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69060 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

UQCRC1 (A-20) is recommended for detection of UQCRC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

UQCRC1 (A-20) is also recommended for detection of UQCRC1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for UQCRC1 siRNA (h): sc-72154, UQCRC1 siRNA (m): sc-72155, UQCRC1 siRNA (r): sc-270407, UQCRC1 shRNA Plasmid (h): sc-72154-SH, UQCRC1 shRNA Plasmid (m): sc-72155-SH, UQCRC1 shRNA Plasmid (r): sc-270407-SH, UQCRC1 shRNA (h) Lentiviral Particles: sc-72154-V, UQCRC1 shRNA (m) Lentiviral Particles: sc-72155-V and UQCRC1 shRNA (r) Lentiviral Particles: sc-270407-V.

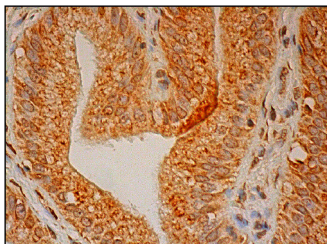
Molecular Weight of UQCRC1: 53 kDa.

Positive Controls: mouse heart extract: sc-2254, mouse brain extract: sc-2253 or HeLa whole cell lysate: sc-2200.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



UQCRC1 (A-20): sc-69060. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells.

## RESEARCH USE

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