Anti-UQCRC2 Antibody [JE32-56]

HA721872

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC
Molecular Wt:	Predicted band size: 48 kDa
Clone number:	JE32-56

Description: Cytochrome b-c1 complex subunit 2, mitochondrial (UQCRC2), also known as QCR2, UQCR2, or MC3DN5 is a protein that in humans is encoded by the UQCRC2 gene. The product of UQCRC2 is a subunit of the respiratory chain protein Ubiquinol Cytochrome c Reductase (UQCR, Complex III or Cytochrome bc1 complex), which consists of the products of one mitochondrially encoded gene, MTCYTB (mitochondrial cytochrome b) and ten nuclear genes: UQCRC1, UQCRC2, Cytochrome c1, UQCRFS1 (Rieske protein), UQCRB, "11kDa protein", UQCRH (cyt c1 Hinge protein), Rieske Protein presequence, "cyt. c1 associated protein", and "Rieske-associated protein." Defects in UQCRC2 are associated with mitochondrial complex III deficiency, nuclear, type 5.

Immunogen: Recombinant protein within Human UQCRC2 aa 285-384 / 453.

Positive control: HepG2 cell lysate, HEK-293 cell lysate, Jurkat cell lysate, C6 cell lysate, HepG2, human liver tissue, human kidney tissue, mouse kidney tissue, rat kidney tissue.

Subcellular location: Mitochondrion inner membrane.

Database links: SwissProt: P22695 Human | Q9DB77 Mouse | P32551 Rat

Recommended Dilutions:

WB	1:2,000
IF-Cell	1:100
IHC-P	1:500-1:2,000
FC	1:1,000

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

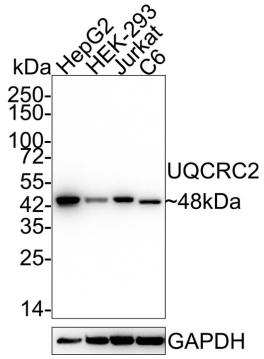

Fig1: Western blot analysis of UQCRC2 on different lysates with Rabbit anti-UQCRC2 antibody (HA721872) at 1/2,000 dilution.

Lane 1: HepG2 cell lysate
Lane 2: HEK-293 cell lysate
Lane 3: Jurkat cell lysate
Lane 4: C6 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 48 kDa
Observed band size: 48 kDa

Exposure time: 1 minute;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA721872) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

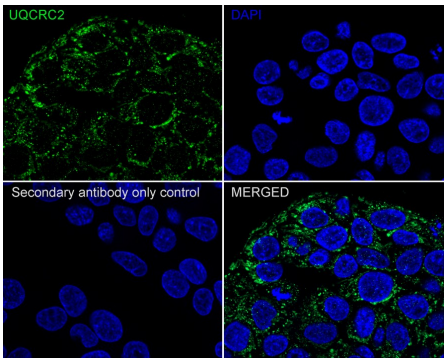

Fig2: Immunocytochemistry analysis of HepG2 cells labeling UQCRC2 with Rabbit anti-UQCRC2 antibody (HA721872) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-UQCRC2 antibody (HA721872) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

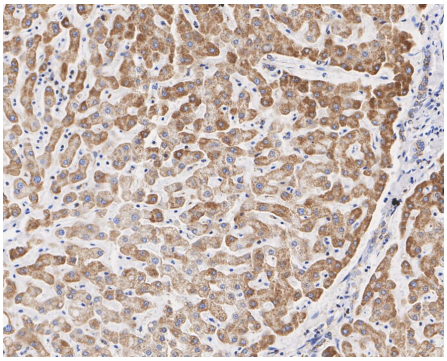

Fig3: Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-UQCRC2 antibody (HA721872) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721872) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

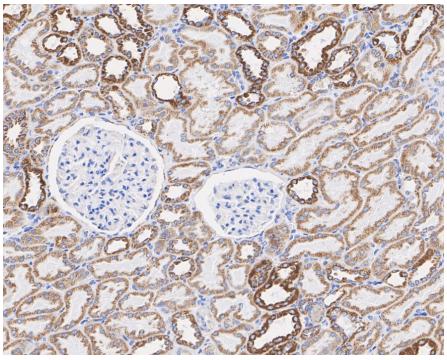

Fig4: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-UQCRC2 antibody (HA721872) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721872) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

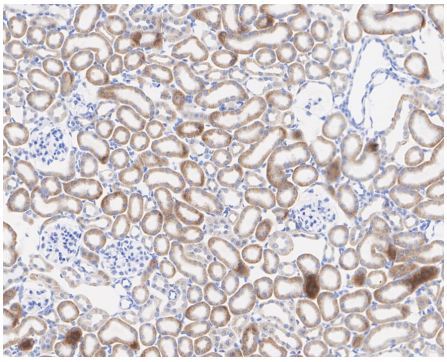

Fig5: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-UQCRC2 antibody (HA721872) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721872) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

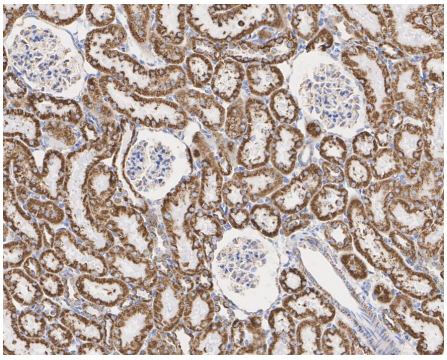

Fig6: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Rabbit anti-UQCRC2 antibody (HA721872) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA721872) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

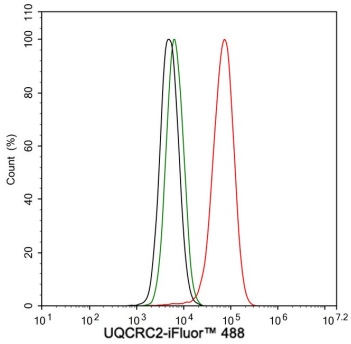

Fig7: Flow cytometric analysis of HepG2 cells labeling UQCRC2.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA721872, 1μg/mL) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Lu X et al. AMPK protects against alcohol-induced liver injury through UQCRC2 to up-regulate mitophagy. Autophagy. 2021 Nov
2. Bansept C et al. UQCRC2-related mitochondrial complex III deficiency, about 7 patients. Mitochondrion. 2023 Jan