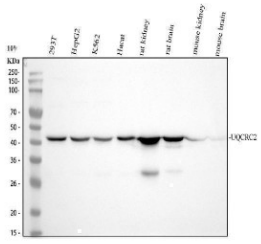
Complex III Core Protein 2 Antibody ADBG-21 / UQCRC2 Monoclonal Antibody [clone ADBG-21] (FY13712)

Catalog No.	Formulation	Size
FY13712	Rabbit IgG in stabilizing components, phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	ADBG-21
Purity	Affinity purified
UniProt	P22695
Applications	Western blot: 1:500
Limitations	This Complex III Core Protein 2 Antibody ADBG-21 / UQCRC2 Monoclonal Antibody is available for research use only.



Complex III Core Protein 2 Antibody ADBG-21 WB Analysis of Human, Mouse and Rat Samples. Western blot analysis using UQCRC2 Monoclonal Antibody clone ADBG-21. Samples include human 293T (lane 1), HepG2 (lane 2), K562 (lane 3), and HaCaT (lane 4) cell lysates, rat kidney (lane 5) and brain (lane 6) tissue lysates, and mouse kidney (lane 7) and brain (lane 8) tissue lysates. Samples were separated by 10% SDS-PAGE under reducing conditions, and the antibody was used at a dilution of 1:500 overnight at 4oC. An immunoreactive band is detected at approximately 48 kDa, consistent with the calculated molecular weight of UQCRC2.

Description

Complex III Core Protein 2 Antibody ADBG-21 / UQCRC2 Monoclonal Antibody targets ubiquinol-cytochrome c reductase core protein 2, a nuclear-encoded component of mitochondrial respiratory Complex III. Also known as UQCRC2 or cytochrome b-c1 complex subunit 2, this protein contributes to the structural organization and stability of the mitochondrial electron transport chain. Complex III is located within the inner mitochondrial membrane and plays an essential role in oxidative phosphorylation and cellular energy production.

UQCRC2 is one of two large core proteins associated with the cytochrome b-c1 complex, the other being UQCRC1. These proteins contribute to the structural framework of Complex III, which contains multiple subunits responsible for electron transfer between ubiquinol and cytochrome c. Although UQCRC2 is not directly responsible for the principal redox reactions, its presence is important for maintaining the organization and functional integrity of the respiratory complex.

During mitochondrial respiration, Complex III receives electrons from reduced coenzyme Q, also called ubiquinol, and transfers them to cytochrome c. This process occurs through the Q cycle, which couples electron transfer to the movement of protons across the inner mitochondrial membrane. The resulting electrochemical gradient provides the energy required by ATP synthase to generate ATP.

UQCRC2 contributes to the proper assembly and maintenance of Complex III, supporting efficient electron transport and mitochondrial respiration. Disruption of Complex III organization can impair oxidative phosphorylation, reduce ATP production, and alter cellular redox balance. Defects in mitochondrial respiratory activity may also increase the generation of reactive oxygen species, which can influence signaling pathways and cellular stress responses.

Because mitochondrial energy metabolism is essential for numerous physiological processes, UQCRC2 has relevance to studies of metabolic regulation, mitochondrial dysfunction, and respiratory chain disorders. Changes in Complex III abundance or activity can affect cellular adaptation to energy demands and contribute to disturbances in mitochondrial homeostasis.

Research involving Complex III Core Protein 2 Antibody ADBG-21 can help characterize UQCRC2 expression in the context of mitochondrial respiratory function. Understanding the organization of Complex III and its core subunits provides insight into oxidative phosphorylation, respiratory chain stability, and the mechanisms supporting cellular energy metabolism.

UQCRC2 is a core component of mitochondrial respiratory Complex III and contributes to the structural organization of the electron transport chain. Researchers investigating mitochondrial respiration and oxidative phosphorylation can also explore our UQCRC2 Antibody page, which features complementary polyclonal antibody data supporting western blotting, immunohistochemistry, immunofluorescence, and immunoprecipitation.

Application Notes

Optimal dilution of the Complex III Core Protein 2 Antibody ADBG-21 / UQCRC2 Monoclonal Antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human UQCRC2 was used as the immunogen for the Complex III Core Protein 2 Antibody ADBG-21.

Storage

The Complex III Core Protein 2 Antibody ADBG-21 can be stored at -20oC.

Alternate Names

UQCRC2 antibody, Cytochrome b-c1 complex core protein 2 antibody, Cytochrome b-c1 complex subunit 2 antibody, Ubiquinol-cytochrome c reductase core protein 2 antibody, Mitochondrial complex III core protein 2 antibody, QCR2 antibody

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