Anti-Ndufs4 Antibody [JE40-47]

ET7109-09

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, FC, IP
Molecular Wt:	Predicted band size: 20 kDa
Clone number:	JE40-47

Description: Complex 1 (also known as NADH dehydrogenase) of the electron transport chain (respiratory chain) is an enzymatic complex that catalyzes the transfer of electrons from NADH to ubiquinone. Free energy from the reaction is conserved in the transfer of protons into the intermembrane space to create an electrochemical proton gradient, a driving force for ATP synthesis. Complex 1 is a complicated, multi-protein, L-shaped complex composed of at least 45 different subunits and located in the mitochondrial inner membrane. NDUFS4 (NADH dehydrogenase (ubiquinone) Fe-S protein 4), also known as AQDQ or CI-18 (Complex I-18kDa protein), belongs to the Complex I NDUFS4 subunit family. NDUFS4 localizes to the matrix side of the inner membrane of the mitochondrion and functions as an accessory subunit of Complex I. Mutations in the gene encoding NDUFS4 can result in Complex I mitochondrial respiratory chain deficiency. Patients with this deficiency may exhibit cardiomyopathy, myopathy, liver failure and neurological disorders.

Immunogen: Recombinant protein within Human Ndufs4 aa 1-140 / 175.

Positive control: HCT 116 cell lysate, rat heart tissue lysates, human kidney tissue, mouse kidney tissue, rat kidney tissue, SH-SY5Y.

Subcellular location: Mitochondrion.

Database links: SwissProt: O43181 Human | Q9CXZ1 Mouse | Q5XIF3 Rat

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:1,000
FC	1:50-1:100
IP	1:10-1:50

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

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

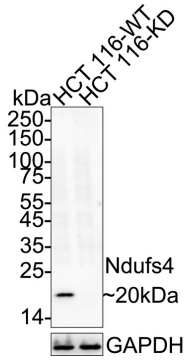

Fig1: Western blot analysis of Ndufs4 on different lysates with Rabbit anti-Ndufs4 antibody (ET7109-09) at 1/2,000 dilution.

Lane 1: HCT 116-si NT cell lysate
Lane 2: HCT 116-si Ndufs4 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 20 kDa
Observed band size: 20 kDa

Exposure time: 1 minute; ECL: K1802;

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 (ET7109-09) 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.

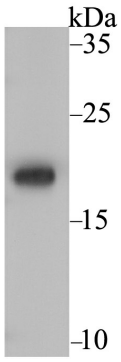

Fig2: Western blot analysis of Ndufs4 on rat heart tissue lysate using anti-Ndufs4 antibody at 1/1,000 dilution.

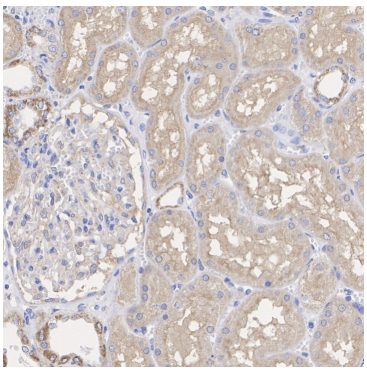

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-Ndufs4 antibody (ET7109-09) at 1/1,000 dilution.

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 (ET7109-09) at 1/1,000 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.

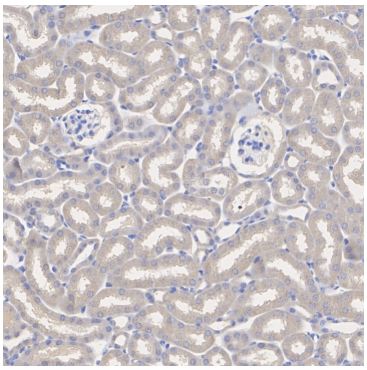

Fig4: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-Ndufs4 antibody (ET7109-09) at 1/1,000 dilution.

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 (ET7109-09) at 1/1,000 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.

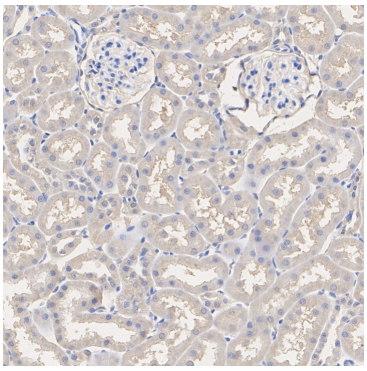

Fig5: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Rabbit anti-Ndufs4 antibody (ET7109-09) at 1/1,000 dilution.

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 (ET7109-09) at 1/1,000 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.

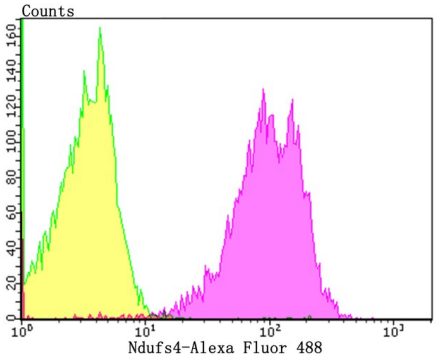

Fig6: Flow cytometric analysis of SH-SY5Y cells with Ndufs4 antibody at 1/100 dilution (purple) compared with an unlabelled control (cells without incubation with primary antibody; yellow). Alexa Fluor 488-conjugated goat anti-rabbit IgG was used as the secondary antibody.

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

Background References

1. van den Heuvel L et al. Demonstration of a new pathogenic mutation in human complex I deficiency: a 5-bp duplication in the nuclear gene encoding the 18-kD (AQDQ) subunit. Am J Hum Genet 62:262-268 (1998).
2. Murray J et al. The subunit composition of the human NADH dehydrogenase obtained by rapid one-step immunopurification. J Biol Chem 278:13619-13622 (2003).