Anti-NDUFV2 Antibody [PSH02-86]

HA721869

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Cell
Molecular Wt:	Predicted band size: 27 kDa
Clone number:	PSH02-86

Description: The NADH-ubiquinone oxidoreductase complex (complex I) of the mitochondrial respiratory chain catalyzes the transfer of electrons from NADH to ubiquinone, and consists of at least 43 subunits. The complex is located in the inner mitochondrial membrane. This gene encodes the 24 kDa subunit of complex I, and is involved in electron transfer. Mutations in this gene are implicated in Parkinson's disease, bipolar disorder, schizophrenia, and have been found in one case of early onset hypertrophic cardiomyopathy and encephalopathy. A non-transcribed pseudogene of this locus is found on chromosome 19.

Immunogen: Recombinant protein within human NDUFV2 aa 1-249 / 249.

Positive control: A549 cell lysate, HeLa cell lysate, Jurkat cell lysate, Ramos cell lysate, Raji cell lysate, K-562 cell lysate, A431 cell lysate, NIH/3T3 cell lysate, RAW264.7 cell lysate, PC-12 cell lysate, mouse heart tissue lysate, rat heart tissue lysate, human kidney tissue lysate, mouse kidney tissue lysate, RAW264.7, human heart tissue, human kidney tissue, mouse heart tissue, mouse kidney tissue, rat heart tissue, rat kidney tissue.

Subcellular location: Mitochondrion inner membrane.

Database links: SwissProt: P19404 Human | Q9D6J6 Mouse | P19234 Rat

Recommended Dilutions:

WB	1:2,000
IHC-P	1:2,000-1:5,000
IF-Cell	1:2,000

Storage Buffer: PBS (pH7.4), 0.1% 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

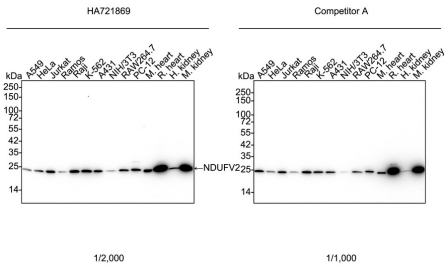

Fig1: Western blot analysis of NDUFV2 on different lysates with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/1,000 dilution.

Lane 1: A549 cell lysate (20 µg/Lane)
Lane 2: HeLa cell lysate (20 µg/Lane)
Lane 3: Jurkat cell lysate (20 µg/Lane)
Lane 4: Ramos cell lysate (20 µg/Lane)
Lane 5: Raji cell lysate (20 µg/Lane)
Lane 6: K-562 cell lysate (20 µg/Lane)
Lane 7: A431 cell lysate (20 µg/Lane)
Lane 8: NIH/3T3 cell lysate (20 µg/Lane)
Lane 9: RAW264.7 cell lysate (20 µg/Lane)
Lane 10: PC-12 cell lysate (20 µg/Lane)
Lane 11: Mouse heart tissue lysate (40 µg/Lane)
Lane 12: Rat heart tissue lysate (40 µg/Lane)
Lane 13: Human kidney tissue lysate (40 µg/Lane)
Lane 14: Mouse kidney tissue lysate (40 µg/Lane)

Predicted band size: 27 kDa
Observed band size: 24 kDa

Exposure time: 1 minute 59 seconds; ECL: K1801;
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 (HA721869) at 1/2,000 dilution and competitor's antibody at 1/1,000 dilution were 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.

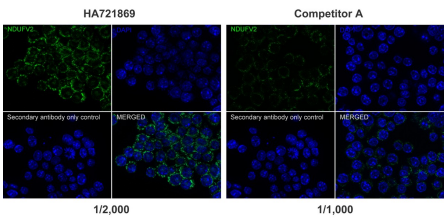

Fig2: Immunocytochemistry analysis of RAW264.7 cells labeling NDUFV2 with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/1,000 dilution.

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-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/1,000 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.

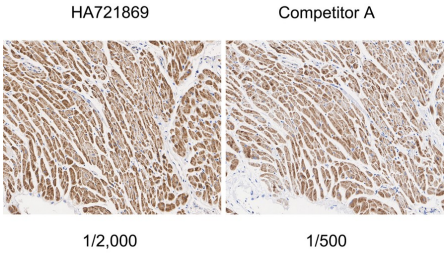

Fig3: Immunohistochemical analysis of paraffin-embedded human heart tissue with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/500 dilution.

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 (HA721869) at 1/2,000 dilution and competitor's antibody 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.

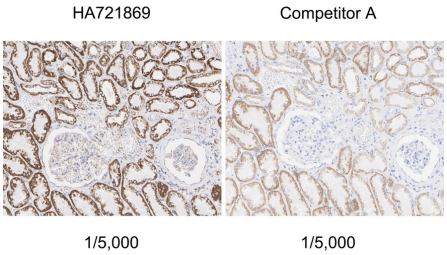

Fig4: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-NDUFV2 antibody (HA721869) at 1/5,000 dilution and competitor's antibody at 1/5,000 dilution.

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 (HA721869) at 1/5,000 dilution and competitor's antibody at 1/5,000 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.

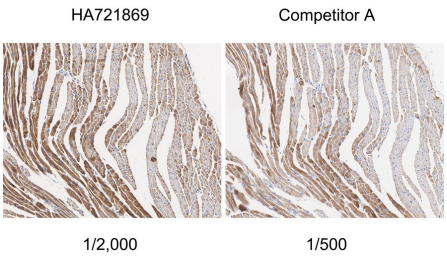

Fig5: Immunohistochemical analysis of paraffin-embedded mouse heart tissue with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/500 dilution.

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 (HA721869) at 1/2,000 dilution and competitor's antibody 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.

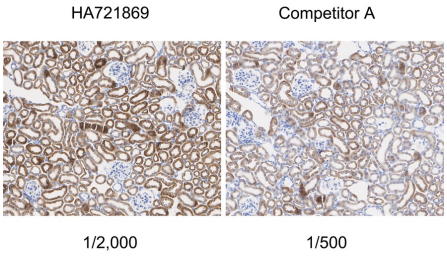

Fig6: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/500 dilution.

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 (HA721869) at 1/2,000 dilution and competitor's antibody 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.

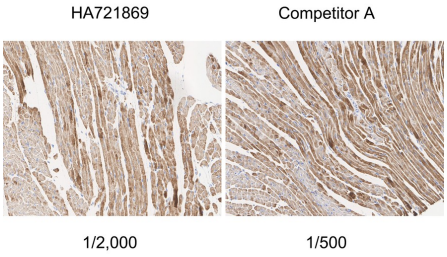

Fig7: Immunohistochemical analysis of paraffin-embedded rat heart tissue with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/500 dilution.

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 (HA721869) at 1/2,000 dilution and competitor's antibody 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.

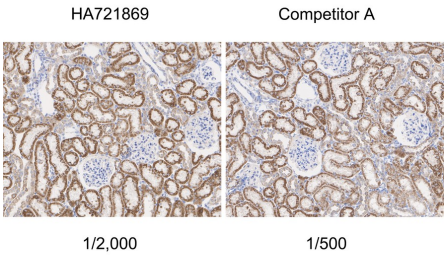

Fig8: Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution and competitor's antibody at 1/500 dilution.

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 (HA721869) at 1/2,000 dilution and competitor's antibody 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.

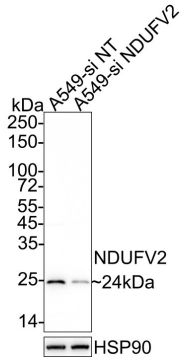

Fig9: Western blot analysis of NDUFV2 on different lysates with Rabbit anti-NDUFV2 antibody (HA721869) at 1/2,000 dilution.

Lane 1: A549-si NT cell lysate
Lane 2: A549-si NDUFV2 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 27 kDa
Observed band size: 24 kDa

Exposure time: 16 seconds; ECL: K1801;

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 (HA721869) at 1/2,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/100,000 dilution was used for 1 hour at room temperature.

Background References

1. Pamplona R et al. Is the NDUFV2 subunit of the hydrophilic complex I domain a key determinant of animal longevity? FEBS J. 2021 Dec
2. Chella Krishnan K et al. Sex-specific genetic regulation of adipose mitochondria and metabolic syndrome by Ndufv2. Nat Metab. 2021 Nov