

Anti-PDK1 Antibody [JA67-30] - BSA and Azide free

HA750419



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Tissue, IP
Molecular Wt:	Predicted band size: 49 kDa
Clone number:	JA67-30

Description: Mitochondrial pyruvate dehydrogenase (PDH) catalyzes the oxidative decarboxylation of pyruvate and plays a central role in the regulation of homeostasis of carbohydrate fuels in mammals. PDH activity is controlled by a phosphorylation/dephosphorylation cycle, phosphorylation leading to inactivation and dephosphorylation leading to reactivation of PDH. The phosphorylation of PDH is catalyzed by pyruvate dehydrogenase kinase (PDK), the activity of which is stimulated by the products of PDH catalysis. PDK1 consists of alpha and beta subunits; the kinase activity resides in the alpha subunit. Three PDK isoenzymes have been identified in humans (PDK1, 2 and 3) and two have been identified in rodent (PDK1 and 2).

Immunogen: Synthetic peptide within Human PDK1 aa 16-65 / 436.

Positive control: HepG2 cell lysate, HEK-293 cell lysate, LNCaP cell lysate, NIH/3T3 cell lysate, PC-12 cell lysate, Mouse heart tissue lysate, Rat heart tissue lysate, mouse heart tissue, rat heart tissue.

Subcellular location: Mitochondrion matrix.

Database links: SwissProt: Q15118 Human | Q8BFP9 Mouse | Q63065 Rat

Recommended Dilutions:

WB	1:5,000
IHC-P	1:2,000
IF-Tissue	1:200-1:400
IP	1-2µg/sample

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Orders:0086-571-88062880

Technical:0086-571-89986345

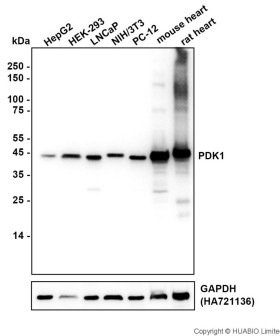
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Images

Fig1: Western blot analysis of PDK1 on different lysates with Rabbit anti-PDK1 antibody (HA750419) at 1/5,000 dilution.

Lane 1: HepG2 cell lysate (15 µg/Lane)
 Lane 2: HEK-293 cell lysate (15 µg/Lane)
 Lane 3: LNCaP cell lysate (15 µg/Lane)
 Lane 4: NIH/3T3 cell lysate (15 µg/Lane)
 Lane 5: PC-12 cell lysate (15 µg/Lane)
 Lane 6: Mouse heart tissue lysate (30 µg/Lane)
 Lane 7: Rat heart tissue lysate (30 µg/Lane)



Predicted band size: 49 kDa
 Observed band size: 45 kDa

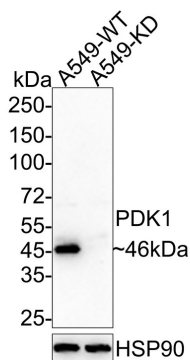
Exposure time: 10 seconds; ECL: K1801;

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 (HA750419) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C 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 PDK1 on different lysates with Rabbit anti-PDK1 antibody (HA750419) at 1/1,000 dilution.

Lane 1: A549-WT cell lysate
 Lane 2: A549-KD PDK1 cell lysate



Lysates/proteins at 10 µg/Lane.

Predicted band size: 49 kDa
 Observed band size: 46 kDa

Exposure time: 3 minutes; 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 (HA750419) at 1/1,000 dilution was used in primary antibody diluent at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

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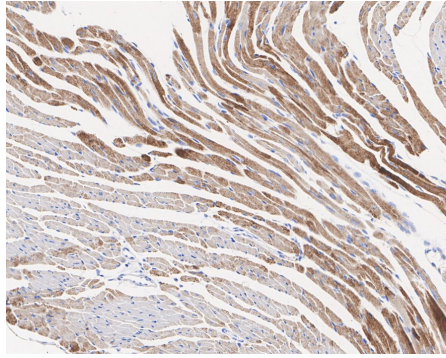


Fig3: Immunohistochemical analysis of paraffin-embedded mouse heart tissue with Rabbit anti-PDK1 antibody (HA750419) at 1/2,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA750419) 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.

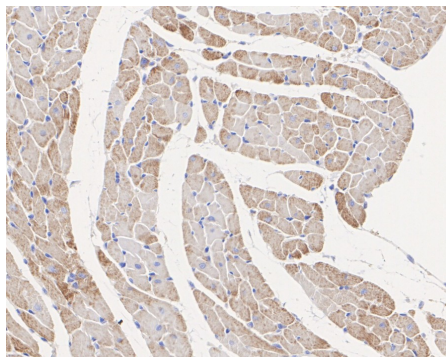


Fig4: Immunohistochemical analysis of paraffin-embedded rat heart tissue with Rabbit anti-PDK1 antibody (HA750419) at 1/2,000 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA750419) 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.

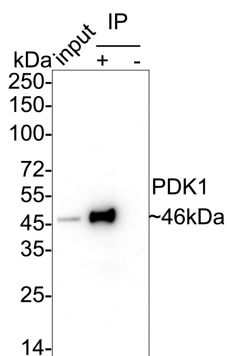


Fig5: PDK1 was immunoprecipitated from 0.2 mg mouse heart tissue lysate with HA750419 at 2 μ g/10 μ l beads. Western blot was performed from the immunoprecipitate using HA750419 at 1/2,000 dilution. Anti-Rabbit IgG for IP Nano-secondary antibody (NBI01H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: Mouse heart tissue lysate (input)
 Lane 2: HA750419 IP in mouse heart tissue lysate
 Lane 3: Rabbit IgG instead of HA750419 in mouse heart tissue lysate

Blocking/Dilution buffer: 5% NFDm/TBST
 Exposure time: 3 minutes; ECL: K1801

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

Background References

1. Du L et al. Overexpression of PIK3CA in murine head and neck epithelium drives tumor invasion and metastasis through PDK1 and enhanced TGF signaling. *Oncogene* 35:4641-52 (2016).
2. Lelliott CJ et al. Monoclonal antibody targeting of fibroblast growth factor receptor 1c ameliorates obesity and glucose intolerance via central mechanisms. *PLoS One* 9:e112109 (2014).

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