

Product Datasheet

Pyruvate Dehydrogenase Kinase 1/PDK1 Antibody - BSA Free NB100-2383

Unit Size: 0.1 ml

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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NB100-2383**Pyruvate Dehydrogenase Kinase 1/PDK1 Antibody - BSA Free**

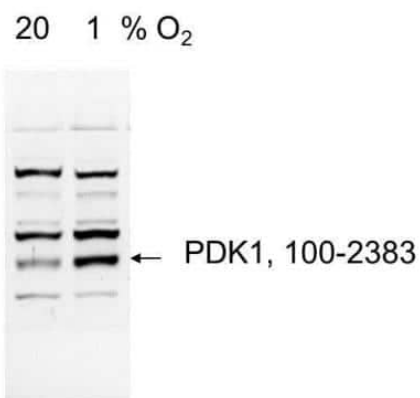
Product Information	
Unit Size	0.1 ml
Concentration	1.0 mg/ml
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.05% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris-Glycine and 0.15M NaCl
Target Molecular Weight	49 kDa

Product Description	
Host	Rabbit
Gene ID	5163
Gene Symbol	PDK1
Species	Human
Reactivity Notes	Predicted to react with mouse and rat based on 100% sequence homology. Immunogen displays the following percentage of sequence identity for non-tested species: chicken (93%).
Immunogen	A synthetic peptide made to a C-terminal portion of the human PDK1 protein sequence (between residues 350-436). [Swiss-Prot Q15118]

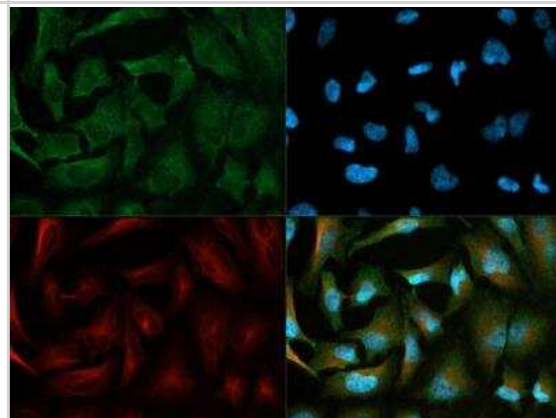
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence
Recommended Dilutions	Western Blot 2 ug/ml, Immunocytochemistry/ Immunofluorescence 1:1000-1:2000
Application Notes	By Western blot a band is seen at ~49 kDa, representing PDK1 protein. There are also two higher and one lower non-specific molecular weight bands. In ICC/IF, mitochondrial staining was observed in HeLa cells. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

Images

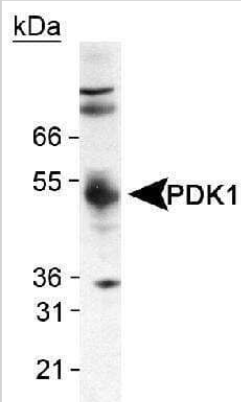
Western Blot: PDK-1 Antibody [NB100-2383] - Analysis of HeLa lysates using NB100-2383. Image courtesy of Gregg Semenza - publication number 21620138 (PMID).



Immunocytochemistry/Immunofluorescence: PDK-1 Antibody [NB100-2383] - Antibody was tested in HeLa cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).



Western Blot: PDK-1 Antibody [NB100-2383] - Detection of PDK-1 in human heart lysate using NB 100-2383 at 2 ug/ml.



Publications

Hallows KR, Althouse AD, Li H et al. Association of Baseline Urinary Metabolic Biomarkers with ADPKD Severity in TAME-PKD Clinical Trial Participants *Kidney360* 2021-07-28 [PMID: 34316721] (Western Blot)

Dey P, Kundu A et al. PKM2 Knockdown Induces Autophagic Cell Death via AKT/mTOR Pathway in Human Prostate Cancer Cells. *Cell Physiol Biochem* 2019-05-29 [PMID: 31135122] (WB, Human)

Sung WW, Chen PR, Liao MH, Lee JW. Enhanced aerobic glycolysis of nasopharyngeal carcinoma cells by Epstein-Barr virus latent membrane protein 1 *Exp. Cell Res.* 2017-08-04 [PMID: 28827059] (WB, Human)

Tsoi H, Li L, Chen ZS et al. The SARS-Coronavirus Membrane protein induces apoptosis via interfering PDK1-PKB/Akt signaling. *Biochem. J.* 2014-10-01 [PMID: 25271362] (ICC/IF, Human)

Details:

PDK-1 peptide NB100-2383PEP used for blocking PDK-1 antibody NB100-2383 in ICC-IF staining assay of HEK (human embryonic kidney)-293FT cells transfected or not with M protein (Figure 2 A).

Luo W, Chang R, Zhong J, Pandey A, Semenza GL. Histone demethylase JMJD2C is a coactivator for hypoxia-inducible factor 1 that is required for breast cancer progression. *Proc Natl Acad Sci U S A.* 2012-12-04 [PMID: 23129632]

Luo W, Hu H, Chang R et al. Pyruvate Kinase M2 is a PHD3-Stimulated Coactivator for Hypoxia-Inducible Factor 1. *Cell*;145(5):732-44. 2011-05-27 [PMID: 21620138]



Procedures

Protocol specific for PDK1 Antibody (NB100-2383)

Pyruvate Dehydrogenase Kinase 1/PDK1 Antibody: Western Blot Protocol

1. Perform SDS-PAGE (4-12%) on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.
3. Rinse membrane with dH₂O and then stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.
4. Rinse the blot in TBS for approximately 5 minutes.
5. Block the membrane using 5% non-fat dry milk + 1% BSA in TBS for 1 hour at room temperature (RT).
6. Rinse the membrane in dH₂O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
7. Dilute the rabbit anti-PDK1 primary antibody (NB 100-2383) in blocking buffer and incubate 1 hour at RT.
8. Rinse the membrane in dH₂O and then wash the membrane in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each.
9. Apply the diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer [TBS + 0.1% Tween] 3 times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturer's instructions (we used BioFX Super Plus ECL).

Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.





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Products Related to NB100-2383

NB820-59217	Human Heart Whole Tissue Lysate (Adult Whole Normal)
NB100-2383PEP	Pyruvate Dehydrogenase Kinase 1/PDK1 Antibody Blocking Peptide
HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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