



Datasheet for ABIN744668

## anti-PDPK1 antibody (pSer241)



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6 Images

1 Publication

### Overview

Quantity:	100 µL
Target:	PDPK1
Binding Specificity:	pSer241
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PDPK1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunofluorescence (Cultured Cells) (IF (cc)), Immunohistochemistry (Frozen Sections) (IHC (fro))

### Product Details

Immunogen:	KLH conjugated synthetic phosphopeptide derived from human PDK1 around the phosphorylation site of Ser241
Isotype:	IgG
Specificity:	This phosphorylation site is homologous to Ser244 in Mouse and Rat.
Cross-Reactivity:	Human, Mouse, Rat
Predicted Reactivity:	Cow,Pig,Chicken,Rabbit
Purification:	Purified by Protein A.

## Target Details

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Target: PDPK1

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Alternative Name: PDK1 ([PDPK1 Products](#))

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Background: Synonyms: PDK1, PDPK2, PDPK2P, PRO0461, 3-phosphoinositide-dependent protein kinase 1, hPDK1, PDPK1

Background: Serine/threonine kinase which acts as a master kinase, phosphorylating and activating a subgroup of the AGC family of protein kinases. Its targets include: protein kinase B (PKB/AKT1, PKB/AKT2, PKB/AKT3), p70 ribosomal protein S6 kinase (RPS6KB1), p90 ribosomal protein S6 kinase (RPS6KA1, RPS6KA2 and RPS6KA3), cyclic AMP-dependent protein kinase (PRKACA), protein kinase C (PRKCD and PRKCZ), serum and glucocorticoid-inducible kinase (SGK1, SGK2 and SGK3), p21-activated kinase-1 (PAK1), protein kinase PKN (PKN1 and PKN2). Plays a central role in the transduction of signals from insulin by providing the activating phosphorylation to PKB/AKT1, thus propagating the signal to downstream targets controlling cell proliferation and survival, as well as glucose and amino acid uptake and storage. Negatively regulates the TGF-beta-induced signaling by: modulating the association of SMAD3 and SMAD7 with TGF-beta receptor, phosphorylating SMAD2, SMAD3, SMAD4 and SMAD7, preventing the nuclear translocation of SMAD3 and SMAD4 and the translocation of SMAD7 from the nucleus to the cytoplasm in response to TGF-beta. Activates PPARG transcriptional activity and promotes adipocyte differentiation. Activates the NF-kappa-B pathway via phosphorylation of IKKB. The tyrosine phosphorylated form is crucial for the regulation of focal adhesions by angiotensin II. Controls proliferation, survival, and growth of developing pancreatic cells. Participates in the regulation of Ca(2+) entry and Ca(2+)-activated K(+) channels of mast cells. Essential for the motility of vascular endothelial cells (ECs) and is involved in the regulation of their chemotaxis. Plays a critical role in cardiac homeostasis by serving as a dual effector for cell survival and beta-adrenergic response. Plays an important role during thymocyte development by regulating the expression of key nutrient receptors on the surface of pre-T cells and mediating Notch-induced cell growth and proliferative responses.

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Gene ID: 5170

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UniProt: [O15530](#)

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Pathways: [PI3K-Akt Signaling](#), [TCR Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Cell-Cell Junction Organization](#), [Regulation of Cell Size](#), [Skeletal Muscle Fiber Development](#), [CXCR4-mediated Signaling Events](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [VEGFR1 Specific Signals](#)

## Application Details

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Application Notes:           WB 1:300-5000  
                                  ELISA 1:500-1000  
                                  IHC-P 1:200-400  
                                  IHC-F 1:100-500  
                                  IF(IHC-P) 1:50-200  
                                  IF(IHC-F) 1:50-200  
                                  IF(ICC) 1:50-200

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Restrictions:                 For Research Use only

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## Handling

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Format:                       Liquid

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Concentration:               1 µg/µL

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Buffer:                       0.01M TBS( pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.

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Preservative:                ProClin

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Precaution of Use:         This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

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Storage:                      4 °C,-20 °C

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Storage Comment:           Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

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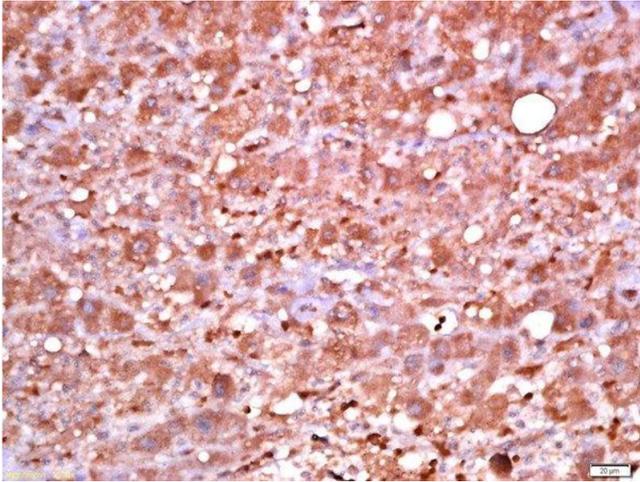
Expiry Date:                 12 months

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## Publications

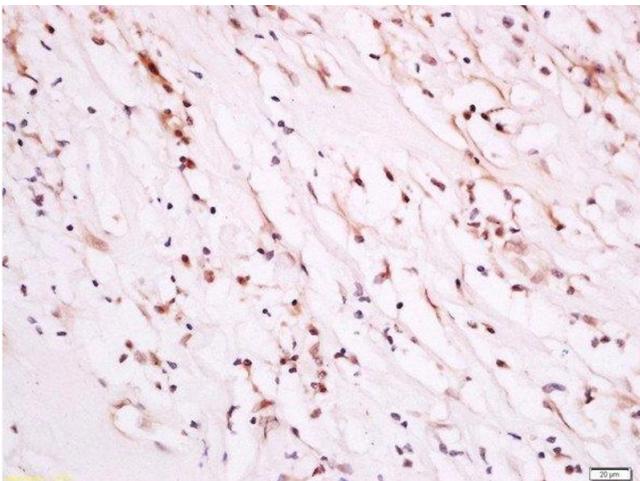
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Product cited in:            Lin, Lin, Kang, Liu, Wang, Zheng, Yu, Lin: "Similar PDK1-AKT-mTOR pathway activation in balloon cells and dysmorphic neurons of type II focal cortical dysplasia with refractory epilepsy." in: **Epilepsy research**, Vol. 112, pp. 137-49, (2015) ([PubMed](#)).



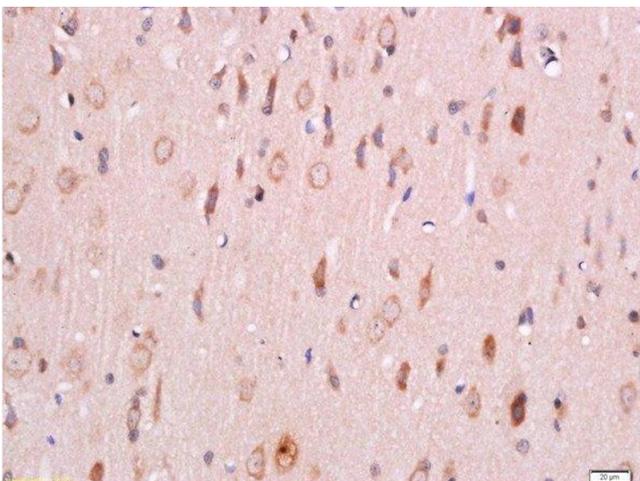
#### Immunohistochemistry (Paraffin-embedded Sections)

**Image 1.** paraformaldehyde-fixed, paraffin embedded human liver carcinoma tissue, Antigen retrieval by boiling in sodium citrate buffer(pH6) for 15min, Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes, Blocking buffer (normal goat serum) at 37°C for 20min, Antibody incubation with Rabbit Anti-PDK1 (Ser241) Polyclonal Antibody, Unconjugated at 1:500 overnight at 4°C, followed by a conjugated secondary and DAB staining



#### Immunohistochemistry (Paraffin-embedded Sections)

**Image 2.** paraformaldehyde-fixed, paraffin embedded human breast carcinoma tissue, Antigen retrieval by boiling in sodium citrate buffer(pH6) for 15min, Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes, Blocking buffer (normal goat serum) at 37°C for 20min, Antibody incubation with Rabbit Anti-PDK1 (Ser241) Polyclonal Antibody, Unconjugated at 1:500 overnight at 4°C, followed by a conjugated secondary and DAB staining



#### Immunohistochemistry (Paraffin-embedded Sections)

**Image 3.** Paraformaldehyde-fixed, paraffin embedded rat brain tissue, Antigen retrieval by boiling in sodium citrate buffer (pH6) for 15min, Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes, Blocking buffer (normal goat serum) at 37°C for 20min, Antibody incubation with Rabbit Anti-PDK1(Ser241) Polyclonal Antibody, Unconjugated at 1:200 overnight at 4°C, followed by a conjugated secondary antibody and DAB staining.

Please check the [product details page](#) for more images. Overall 6 images are available for ABIN744668.