

**PDPK1 (phospho Tyr9) Polyclonal Antibody**

<b>Catalog No :</b>	YP1032
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	IHC;IF;ELISA
<b>Target :</b>	PDPK1
<b>Fields :</b>	>>Platinum drug resistance;>>PPAR signaling pathway;>>FoxO signaling pathway;>>Sphingolipid signaling pathway;>>Autophagy - animal;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>AMPK signaling pathway;>>Apoptosis;>>Axon guidance;>>Focal adhesion;>>T cell receptor signaling pathway;>>Fc epsilon RI signaling pathway;>>Neurotrophin signaling pathway;>>Insulin signaling pathway;>>Thyroid hormone signaling pathway;>>Insulin resistance;>>Aldosterone-regulated sodium reabsorption;>>Toxoplasmosis;>>Proteoglycans in cancer;>>Chemical carcinogenesis - reactive oxygen species;>>Endometrial cancer;>>Prostate cancer;>>Non-small cell lung cancer;>>Choline metabolism in cancer;>>Lipid and atherosclerosis
<b>Gene Name :</b>	PDPK1
<b>Protein Name :</b>	3-phosphoinositide-dependent protein kinase 1
<b>Human Gene Id :</b>	5170
<b>Human Swiss Prot No :</b>	O15530
<b>Mouse Gene Id :</b>	18607
<b>Mouse Swiss Prot No :</b>	Q9Z2A0
<b>Rat Gene Id :</b>	81745
<b>Rat Swiss Prot No :</b>	O55173
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human PDK1 around the phosphorylation site of Tyr9. AA range:1-50

<b>Specificity :</b>	Phospho-PDK1 (Y9) Polyclonal Antibody detects endogenous levels of PDK1 protein only when phosphorylated at Y9.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IHC 1:100 - 1:300. ELISA: 1:40000.. IF 1:50-200
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Molecularweight :</b>	63kD
<b>Cell Pathway :</b>	Akt_PKB;PPAR;mTOR;Focal adhesion;Insulin_Receptor;Aldosterone-regulated sodium reabsorption;Endometrial cancer;Prostate cancer;Non-small cell lung cancer;
<b>Background :</b>	<p>catalytic activity:ATP + a protein = ADP + a phosphoprotein.,function:Phosphorylates and activates not only PKB/AKT , but also PKA, PKC-zeta, RPS6KA1 and RPS6KB1. May play a general role in signaling processes and in development (By similarity). Isoform 3 is catalytically inactive.,PTM:Phosphorylated on tyrosine and serine/threonine. Phosphorylation on Ser-241 in the activation loop is required for full activity. PDK1 itself can autophosphorylate Ser-241, leading to its own activation.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PDK1 subfamily.,similarity:Contains 1 PH domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Membrane-associated after cell stimulation leading to its translocation. Tyrosine phosphorylation seems to occur only at the plasma membrane.,subunit:Interacts with TUSC4.,tissue specificity:Appears to be expressed ubiquitously.,</p>
<b>Function :</b>	<p>catalytic activity:ATP + a protein = ADP + a phosphoprotein.,function:Phosphorylates and activates not only PKB/AKT , but also PKA, PKC-zeta, RPS6KA1 and RPS6KB1. May play a general role in signaling processes and in development (By similarity). Isoform 3 is catalytically inactive.,PTM:Phosphorylated on tyrosine and serine/threonine. Phosphorylation on Ser-241 in the activation loop is required for full activity. PDK1 itself can autophosphorylate Ser-241, leading to its own activation.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PDK1 subfamily.,similarity:Contains 1 PH domain.,similarity:Contains 1 protein kinase domain.,subcellular</p>

location:Membrane-associated after cell stimulation leading to its translocation. Tyrosine phosphorylation seems to occur only at the plasma membrane.,subunit:ln

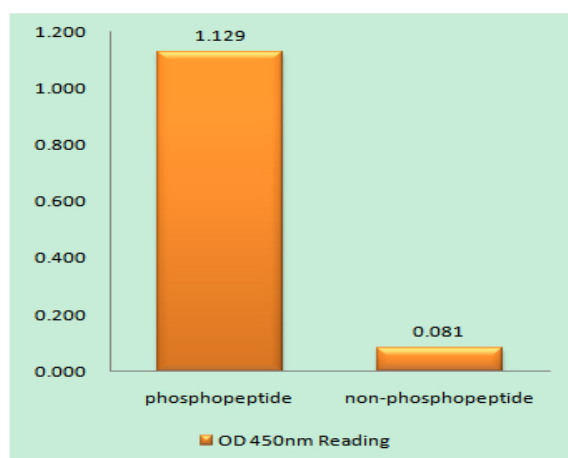
### Subcellular Location :

Cytoplasm. Nucleus. Cell membrane; Peripheral membrane protein. Cell junction, focal adhesion. Tyrosine phosphorylation seems to occur only at the cell membrane. Translocates to the cell membrane following insulin stimulation by a mechanism that involves binding to GRB14 and INSR. SRC and HSP90 promote its localization to the cell membrane. Its nuclear localization is dependent on its association with PTPN6 and its phosphorylation at Ser-396. Restricted to the nucleus in neuronal cells while in non-neuronal cells it is found in the cytoplasm. The Ser-241 phosphorylated form is distributed along the perinuclear region in neuronal cells while in non-neuronal cells it is found in both the nucleus and the cytoplasm. IGF1 transiently increases phosphorylation at Ser-241 of neuronal PDK1, resul

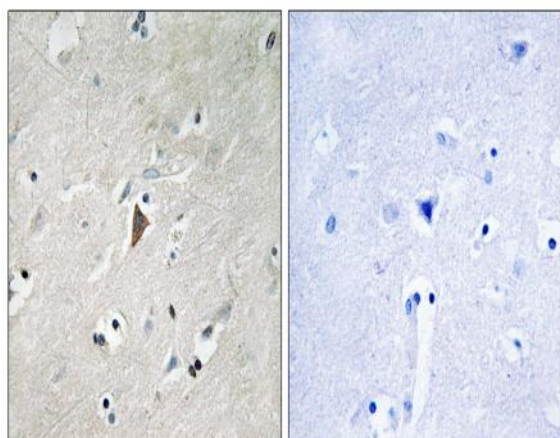
### Expression :

Appears to be expressed ubiquitously. The Tyr-9 phosphorylated form is markedly increased in diseased tissue compared with normal tissue from lung, liver, colon and breast.

## Products Images



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using PDK1 (Phospho-Tyr9) Antibody



Immunohistochemistry analysis of paraffin-embedded human brain, using PDK1 (Phospho-Tyr9) Antibody. The picture on the right is blocked with the phospho peptide.