

Rabbit PRK1/2 Polyclonal Antibody | anti-PRK1/2 antibody

Phospho-PRK1/2 (Thr774/Thr816) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329855	Rabbit	Human, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Sheep (100%), Dog (88%), Xenopus (100%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

PRK1/2; Polyclonal Antibody; Phospho-PRK1/2 (Thr774/Thr816) Antibody; DBK; PAK 1; PAK-1; PAK1; PKC1; PKN ALPHA; PKN; Pkn1; PKN1_HUMAN; PRK1; PRKCL1; Protease activated kinase 1; Protease-activated kinase 1; Protein kinase C like 1; Protein kinase C like PKN; Protein kinase C related kinase 1; Protein kinase C-like 1; Protein kinase C-like PKN; Protein kinase N1; Protein kinase PKN alpha; Protein kinase PKN-alpha; Protein-kinase C-related kinase 1; Serine threonine kinase N; Serine threonine protein kinase N; Serine-threonine protein kinase N; Serine/threonine protein kinase N1; Serine/threonine-protein kinase N1; Cardiolipin activated protein kinase Pak2; MGC150606; MGC71074; PAK 2; PAK2; PKN gamma; PKN2; PKN2_HUMAN; PRK2; PRKCL2; PRO2042; Protein kinase C like 2; Protein kinase C related kinase 2; Protein kinase C-like 2; Protein kinase N2; Protein-kinase C-related kinase 2; Serine/threonine-protein kinase N2; anti-PRK1/2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Sheep (100%), Dog (88%), Xenopus (100%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-PRK1/2 (Thr774/Thr816) Antibody detects endogenous levels of PRK1/2 only when phosphorylated at Thr774/816. Tissue Specificity: Ubiquitous. Expressed in numerous tumor cell lines, especially in bladder tumor cells.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-PRK1/2 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PRK1/2 around the phosphorylation site of Thr774/816.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Autophosphorylated. Phosphorylated during mitosis. Phosphorylated by CDK10. Activated by limited proteolysis with trypsin (By similarity). Proteolytically cleaved by caspase-3 during the induction of apoptotic cell death.
Subunit Structure	Interacts (via the REM repeats) with RHOA (GTP-bound form preferentially) and interacts (via the REM repeats) with RAC1 (GTP-bound form preferentially); the interactions induce its autophosphorylation. Interacts with RHOC. Interacts with NCK1 and NCK2. Interacts with NCK1 (via SH3 domains) (By similarity). Interacts with CD44. Interacts (via C-terminal kinase domain) with PDKP1; the interaction stimulates PDKP1 kinase activity. Interacts with MAP3K2; the interaction activates PRK2 kinase activity in a MAP3K2-independent kinase activity. Interacts (via C-terminal domain) with AKT1; the interaction occurs with the C-terminal cleavage product of PRK2 in apoptotic cells. Interacts (via C-terminus) with PTPN13 (via PDZ 3 domain). Interacts with CDK10. (Microbial infection) Interacts with HCV NS5B (via N-terminal finger domain).

Similarity	The N-terminal regioninterferes with the interaction between AKT1 and the C-terminal regionof PKN2.The C1 domain does not bind the diacylglycerol (DAG).The apoptotic C-terminal cleavage product inhibits EGF-induced kinase activity of AKT1 phosphorylation at 'Thr-308' and 'Ser-473' sites, PDPK1 autophosphorylation and kinases PRKCD and PRKCZ phosphorylations.Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily.
Subcellular Location	Cytoplasm. Nucleus. Membrane. Cell projection>Lamellipodium. Cytoplasm>Cytoskeleton. Cleavage furrow. Midbody. Cell junction. Note: Colocalizes with PTPN13 in lamellipodia-like structures, regions of large actin turnover. Accumulates during telophase at the cleavage furrow and concentrates finally around the midbody in cytokinesis. Recruited to nascent cell-cell contacts at the apical surface of cells. In the course of viral infection, colocalizes with HCV NS5B at perinuclear region in the cytoplasm.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohiostchemistry)

Staining Rat heart tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4 degree C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of PRK1/2 (Phospho-Thr774/816) using Na2VO3 treated HepG2 whole cell lysates.-/+ means absence or presence of N peptidei¼non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-PRK1/2 antibody	PKC-related serine/threonine-protein kinase and Rho/Rac effector protein that participates in specific signal transduction responses in the cell. Plays a role in the regulation of cell cycle progression, actin cytoskeleton assembly, cell migration, cell adhesion, tumor cell invasion and transcription activation signaling processes. Phosphorylates CTTN in hyaluronan-induced astrocytes and hence decreases CTTN ability to associate with filamentous actin. Phosphorylates HDAC5, therefore lead to impair HDAC5 import. Direct RhoA target required for the regulation of the maturation of primordial junctions into apical junction formation in bronchial epithelial cells. Required for G2/M phases of the cell cycle progression and abscission during cytokinesis in a ECT2-dependent manner. Stimulates FYN kinase activity that is required for establishment of skin cell-cell adhesion during keratinocytes differentiation. Regulates epithelial bladder cells speed and direction of movement during cell migration and tumor cell invasion. Inhibits Akt pro-survival-induced kinase activity. Mediates Rho protein-induced transcriptional activation via the c-fos serum response factor (SRF). Involved in the negative regulation of ciliogenesis. (Microbial infection) Phosphorylates HCV NS5B leading to stimulation of HCV RNA replication.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	47132589
NCBI GeneID	5585
NCBI Accession #	NP_002732.3
NCBI GenBank Nucleotide #	NM_002741.3
UniProt Accession #	Q16512; Q16513
Molecular Weight	103,932 Da
NCBI Official Full Name	serine/threonine-protein kinase N1 isoform 2
NCBI Official Synonym Full Names	protein kinase N1
NCBI Official Symbol	PKN1
NCBI Official Synonym Symbols	DBK; PKN; PAK1; PRK1; PAK-1; PRKCL1; PKN-ALPHA

NCBI Protein Information	serine/threonine-protein kinase N1; protein kinase C-like 1; protein kinase PKN-alpha; protein kinase C-like PKN; serine-threonine kinase N; protease-activated kinase 1; protein kinase C-related kinase 1; protein-kinase C-related kinase 1; serine-threonin
UniProt Protein Name	Serine/threonine-protein kinase N1
UniProt Gene Name	PKN1
UniProt Synonym Gene Names	PAK1; PKN; PRK1; PRKCL1; PAK-1
UniProt Entry Name	PKN1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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