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KD-Validated Anti-PKN1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2234

Specification

KD-Validated Anti-PKN1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q16512
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 104 kDa; observed, 120 kDa KDa**
Gene Name	**PKN1**
Aliases	**PKN1; Protein Kinase N1; PRK1; PAK1; PKN; Protein Kinase C-Like 1; PRKCL1; DBK; Serine/Threonine-Protein Kinase N1; Protease-Activated Kinase 1; Protein Kinase C-Like PKN; Protein Kinase PKN-Alpha; EC 2.7.11.13; MGC46204; PAK-1; Protein Kinase C-Related Kinase 1; Serine/Threonine Protein Kinase N; Protein-Kinase C-Related Kinase 1; Serine-Threonine Protein Kinase N; Serine-Threonine Kinase N; PKN-ALPHA; EC 2.7.11**
Immunogen	**A synthesized peptide derived from human PKN1**

KD-Validated Anti-PKN1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**5585**

Other Names
Serine/threonine-protein kinase N1, 2.7.11.13, Protease-activated kinase 1, PAK-1, Protein kinase C-like 1, Protein kinase C-like PKN, Protein kinase PKN-alpha, Protein-kinase C-related kinase 1, Serine-threonine protein kinase N, PKN1, PAK1, PKN, PRK1, PRKCL1

KD-Validated Anti-PKN1 Rabbit Monoclonal Antibody - Protein Information

Name PKN1

Synonyms PAK1, PKN, PRK1, PRKCL1

Function
PKC-related serine/threonine-protein kinase involved in various processes such as regulation of the intermediate filaments of the actin cytoskeleton, cell migration, tumor cell invasion and transcription regulation. Part of a signaling cascade that begins with the activation of the adrenergic receptor ADRA1B and leads to the activation of MAPK14. Regulates the cytoskeletal

network by phosphorylating proteins such as VIM and neurofilament proteins NEFH, NEFL and NEFM, leading to inhibit their polymerization. Phosphorylates 'Ser-575', 'Ser-637' and 'Ser-669' of MAPT/Tau, lowering its ability to bind to microtubules, resulting in disruption of tubulin assembly. Acts as a key coactivator of androgen receptor (AR)-dependent transcription, by being recruited to AR target genes and specifically mediating phosphorylation of 'Thr-11' of histone H3 (H3T11ph), a specific tag for epigenetic transcriptional activation that promotes demethylation of histone H3 'Lys-9' (H3K9me) by KDM4C/JMJD2C. Phosphorylates HDAC5, HDAC7 and HDAC9, leading to impair their import in the nucleus. Phosphorylates 'Thr-38' of PPP1R14A, 'Ser-159', 'Ser-163' and 'Ser-170' of MARCKS, and GFAP. Able to phosphorylate RPS6 in vitro.

Cellular Location
Cytoplasm. Nucleus Endosome. Cell membrane {ECO:0000250|UniProtKB:Q63433}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q63433}. Cleavage furrow. Midbody Note=Associates with chromatin in a ligand-dependent manner Localization to endosomes is mediated via its interaction with RHOB Association to the cell membrane is dependent on Ser-377 phosphorylation. Accumulates during telophase at the cleavage furrow and finally concentrates around the midbody in cytokinesis {ECO:0000250|UniProtKB:Q63433, ECO:0000269|PubMed:17332740}

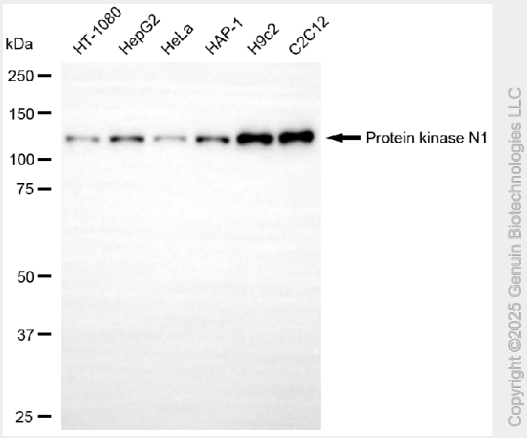
Tissue Location
Found ubiquitously. Expressed in heart, brain, placenta, lung, skeletal muscle, kidney and pancreas. Expressed in numerous tumor cell lines, especially in breast tumor cells

KD-Validated Anti-PKN1 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-PKN1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-protein kinase N1 antibody (Cat#AGI2234). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated

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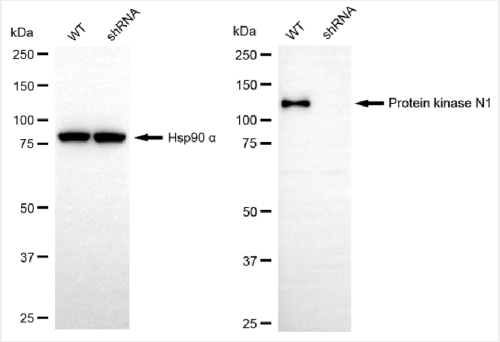
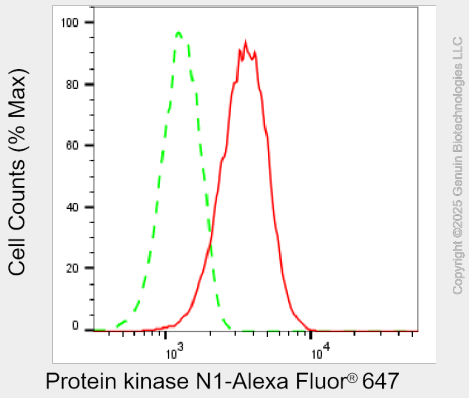
with anti-protein kinase N1 antibody (Cat#AGI2234, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-protein kinase N1 antibody (Cat#AGI2234). Protein kinase N1A expression in wild-type (WT) and protein kinase N1 (PKN1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-protein kinase N1 antibody (Cat#AGI2234, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Protein kinase N1 expression in C2C12 cells using anti-Protein kinase N1 antibody (Cat#AGI2234, 1:2,000). Green, isotype control; red, Protein kinase N1.