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PRK2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1602a

Product Information

Application	WB, IHC, FC, E
Primary Accession	Q16513
Reactivity	Human, Mouse, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	1D1
Isotype	IgG1
Calculated MW	112035
Description	Protein-kinase-C-related kinases (PRKs) are part of the lipid-regulated protein kinases (PKC) which also include liver PAK & PKN. Human PRK1 and PRK2 share structurally similar catalytic domains, but less similar N-terminal regulatory regions suggesting different regulatory domain functions. PRK1 and PRK2, as well as a third member of this family, PRK3, show distinct patterns of expression in adult tissues. Additionally, the serine-threonine kinase PRK2 can be specifically cleaved by caspase-3 (and/or caspase-3-like subfamily members) during apoptosis.
Immunogen	Purified recombinant fragment of human PRK2 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	5586
Other Names	Serine/threonine-protein kinase N2, 2.7.11.13, PKN gamma, Protein kinase C-like 2, Protein-kinase C-related kinase 2, PKN2, PRK2, PRKCL2
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PRK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PKN2

Synonyms	PRK2, PRKCL2
Function	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 (PubMed:27104747).
Cellular Location	Cytoplasm. Nucleus Membrane {ECO:0000250|UniProtKB:Q8BWW9}. 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.
Tissue Location	Ubiquitous. Expressed in numerous tumor cell lines, especially in bladder tumor cells.

References

1. Cell. 2009 Jul 23;138(2):389-403. 2. Ann Intern Med. 2009 Apr 21;150(8):541-50.

Images

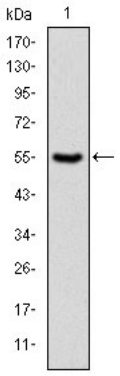
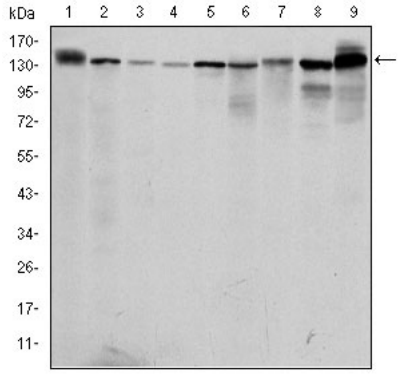


Figure 1: Western blot analysis using PRK2 mAb against human PRK2 (AA: 555-718) recombinant protein. (Expected MW is 43.9 kDa)

Figure 2: Western blot analysis using PRK2 mouse mAb against PC-12 (1), Cos7 (2), K562 (3), Jurkat (4), Hela (5), A431 (6), C6 (7), NIH/3T3 (8) and HEK293 (9) cell lysate.



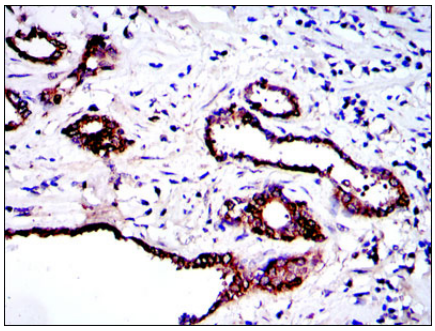


Figure 3: Immunohistochemical analysis of paraffin-embedded prostate tissues using PRK2 mouse mAb with DAB staining.

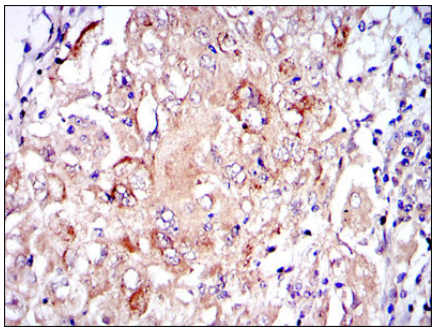


Figure 4: Immunohistochemical analysis of paraffin-embedded lung cancer tissues using PRK2 mouse mAb with DAB staining.

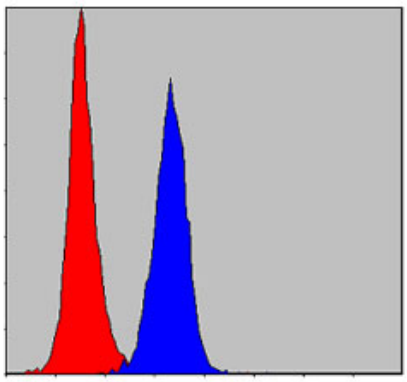


Figure 5: Flow cytometric analysis of NIH/3T3 cells using PRK2 mouse mAb (blue) and negative control (red).

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