Akt (pan) (PTR2314) Mouse mAb

CatalogNo: YM3618 Orthogonal Validated Comparable Abs

Key Features

Host Species
- Mouse

Reactivity
- Human,Mouse,Rat

Applications
- WB,IF,IP,ELISA

MW
- 60kD (Observed)

Isotype
- IgG3, Kappa

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA

Recommended Dilution Ratios

WB 1:500-2000
IF 1:100-500
ELISA 1:1000-5000

Basic Information

Clonality	Monoclonal
Clone Number	PTR2314

Immunogen Information

Immunogen	Synthetic Peptide of human AKT at AA range of human 400-480 AA range: 370-477
Specificity	This antibody detects endogenous levels of Akt 1/2/3 protein.

Target Information

Gene name AKT1/AKT2/AKT3

Protein Name RAC-alpha serine/threonine-protein kinase;RAC-beta serine/threonine-protein kinase;RAC-gamma serine/threonine-protein kinase

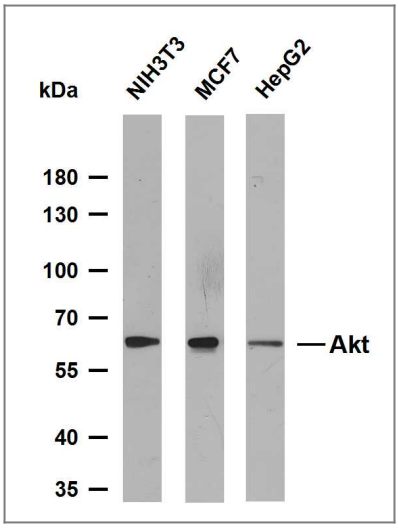
Organism	Gene ID	UniProt ID
Human	207; 208; 10000;	P31749; P31751; Q9Y243;
Mouse	11651; 11652; 23797;	P31750;
Rat	24185; 25233; 29414;	P47196; P47197; Q63484;

Cellular Localization Cytoplasm . Nucleus . Cell membrane . Nucleus after activation by integrin-linked protein kinase 1 (ILK1) . Nuclear translocation is enhanced by interaction with TCL1A. Phosphorylation on Tyr-176 by TNK2 results in its localization to the cell membrane where it is targeted for further phosphorylations on Thr-308 and Ser-473 leading to its activation and the activated form translocates to the nucleus. Colocalizes with WDFY2 in intracellular vesicles (PubMed:16792529) . .

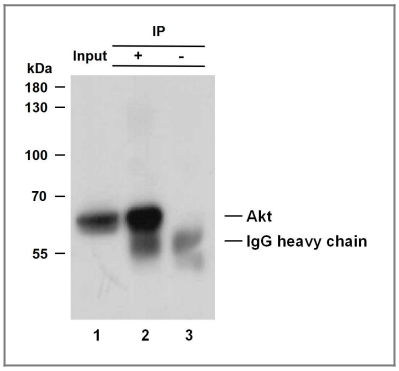
Tissue specificity Expressed in prostate cancer and levels increase from the normal to the malignant state (at protein level) . Expressed in all human cell types so far analyzed. The Tyr-176 phosphorylated form shows a significant increase in expression in breast cancers during the progressive stages i.e. normal to hyperplasia (ADH) , ductal carcinoma in situ (DCIS) , invasive ductal carcinoma (IDC) and lymph node metastatic (LNMM) stages.

Function Plays a role as a key modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis , including correct neuron positioning , dendritic development and synapse formation (By similarity) . General protein kinase capable of phosphorylating several known proteins. Phosphorylates TBC1D4. Signals downstream of phosphatidylinositol 3-kinase (PI (3) K) to mediate the effects of various growth factors such as platelet-derived growth factor (PDGF) , epidermal growth factor (EGF) , insulin and insulin-like growth factor I (IGF-I) . Plays a role in glucose transport by mediating insulin-induced translocation of the GLUT4 glucose transporter to the cell surface. Mediates the antiapoptotic effects of IGF-I. Mediates insulin-stimulated protein synthesis by phosphorylating TSC2 at 'Ser-939' and 'Thr-1462' , thereby activating mTORC1 signaling and leading to both phosphorylation of 4E-BP1 and in activation of RPS6KB1. Promotes glycogen synthesis by mediating the insulin-induced activation of glycogen synthase. The activated form can suppress FoxO gene transcription and promote cell cycle progression. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly.

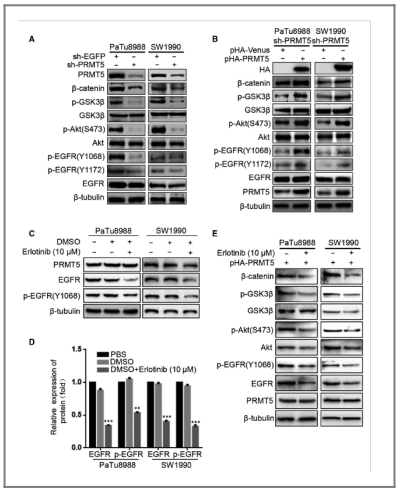
Validation Data



Various whole cell lysates were separated by 8% SDS-PAGE, and the membrane was blotted with anti-Akt (PTR2314) antibody. The HRP-conjugated Goat anti-Mouse IgG (H + L) antibody was used to detect the antibody. Lane 1: NIH-3T3 Lane 2: MCF7 Lane 3: HepG2



Akt was immunoprecipitated from HEK293 whole cell lysate with anti-Akt antibody. Western blot was performed on the immunoprecipitate using anti-Akt antibody, and followed by the HRP-conjugated Goat anti-Mouse IgG (H + L) antibody. Lane 1: HEK293 whole cell lysate Lane 2: anti-Akt antibody IP in HEK293 whole cell lysate Lane 3: Mouse monoclonal IgG (MNH209) in HEK293 whole cell lysate.



Ge, Lu, et al. "PRMT5 promotes epithelial-mesenchymal transition via EGFR-β-catenin axis in pancreatic cancer cells." Journal of cellular and molecular medicine 24.2 (2020): 1969-1979.

Contact information

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Please scan the QR code to access additional product information:
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