

Akt (pan) (Phospho Ser473) (7F9) Mouse mAb

CatalogNo: YP1881 **Orthogonal Validated** 

Key Features

Host Species

- Mouse

Reactivity

- Human

Applications

- WB,IHC,IF

MW

- 56kD (Observed)

Storage

Storage* -15°C to -25°C/1 year(Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:1000-2000

IHC 1:100-200

IF 1:50-200

Basic Information

Clonality Monoclonal

Clone Number 7F9

Immunogen Information

Immunogen Synthetic Peptide of Phospho-Akt (S473) at AA range of 410-490

Specificity Phospho-Akt (S473) protein detects endogenous levels of AKT1

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). .

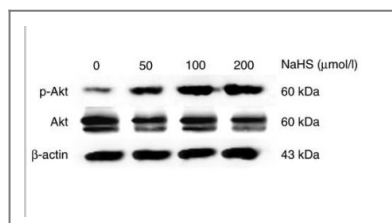
Tissue specificity

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.

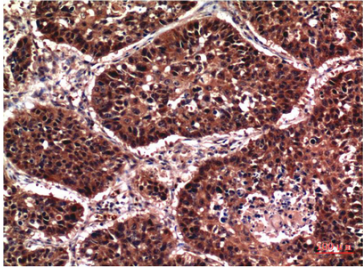
Function

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.

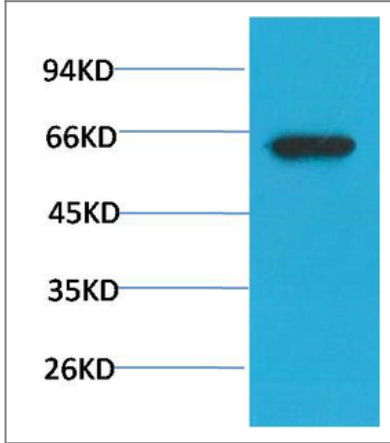
Validation Data



Xiao, Jun, et al. "Hydrogen sulfide inhibits PCSK9 expression through the PI3K/Akt-SREBP-2 signaling pathway to influence lipid metabolism in HepG2 cells." *International journal of molecular medicine* 43.5 (2019): 2055-2063.



Immunohistochemical analysis of paraffin-embedded Human Lung Carcinoma Tissue using Phospho-Akt Ser473 Mouse mAb diluted at 1:200.



Western blot analysis of PC3 Cell Lysate using Phospho-Akt Ser473 Mouse mAb diluted at 1:1000.

Contact information

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Akt (pan) (Phospho Ser473) (7F9) Mouse mAb

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