

Akt (pan) (Phospho Tyr315) Rabbit pAb

CatalogNo: YP1035

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- IHC, IF, WB, ELISA

MW

- 56kD (Observed)

Isotype

- IgG

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 1:500-2000

IHC 1:100-1:300

ELISA 1:20000

IF 1:50-200

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from human AKT1/2/3 around the phosphorylation site of Tyr315/316/312. AA range:281-330

Specificity

Phospho-Akt (Y315) Polyclonal Antibody detects endogenous levels of Akt protein only when phosphorylated at Y315. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):PEyLA

| 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) . .

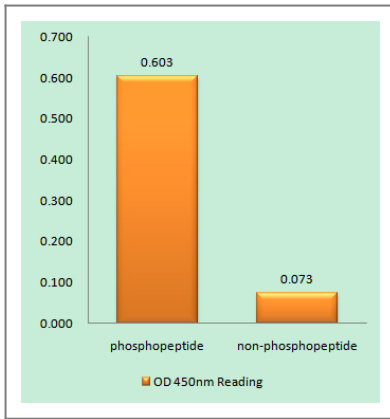
Tissue specificity

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.

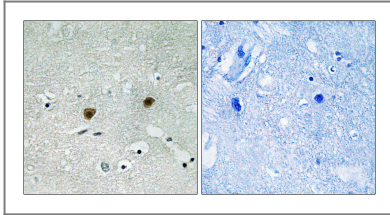
Function

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



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using AKT1/2/3 (Phospho-Tyr315/316/312) Antibody



Immunohistochemistry analysis of paraffin-embedded human brain, using AKT1/2/3 (Phospho-Tyr315/316/312) Antibody. The picture on the right is blocked with the phospho peptide.

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Akt (pan) (Phospho Tyr315) Rabbit pAb

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