Akt (pan) (Phospho Ser473) (PT0470R) PT™ Rabbit mAb

CatalogNo: YM8304 Recombinant

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat,Chicken,Goat,Geese

Applications
- WB,IHC,IF,ELISA

MW
- 55kD (Calculated)

60kD (Observed)

Isotype
- IgG, 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

IHC 1:200-1:500
WB 1:1000-1:5000
IF 1:200-1:1000
ELISA 1:5000-1:20000

Basic Information

Clonality	Monoclonal
Clone Number	PT0470R

Immunogen Information

Immunogen	The specific immunogen used to produce this antibody is proprietary information.
Specificity	This antibody detects endogenous levels of Phospho Akt1 only when phosphorylated at Ser473. This antibody also recognizes Akt2 and Akt3 when phosphorylated at the corresponding sites.

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

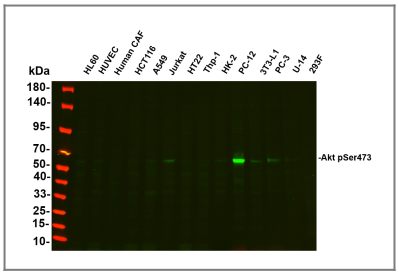
Organism	Gene ID	UniProt ID
Human	207; 208; 10000;	P31749; P31751; Q9Y243;
Mouse	11651; 11652; 23797;	P31750;
Rat	24185; 25233; 29414;	P47196; P47197; Q63484;

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) . .

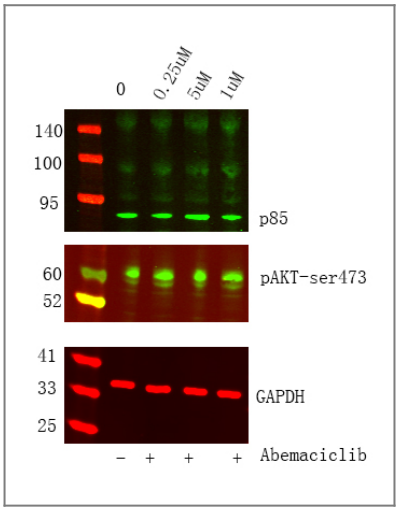
Tissue specificity Expressed in prostate cancer and levels increase from the normal to the malignant state (at protein level) . Expressed in all human cell types so far analyzed. The Tyr-176 phosphorylated form shows a significant increase in expression in breast cancers during the progressive stages 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.

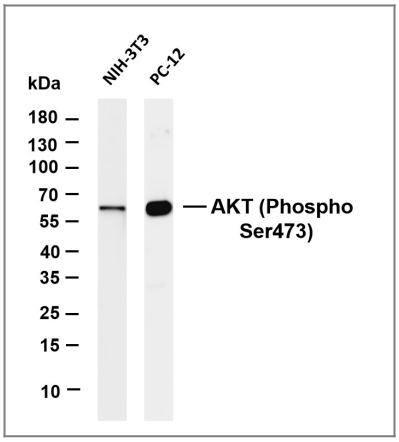
Validation Data



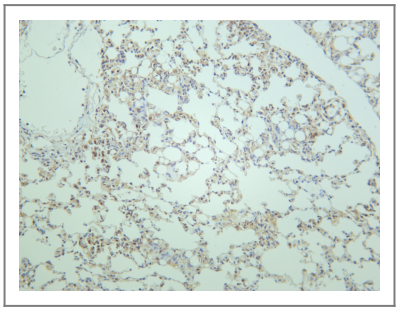
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4℃ over night with a 1:5000 dilution . The Dilight 800-conjugated Goat anti-Rabbit antibody (Cat:RS23920) was used to detect the antibody. Lane1: HL60 - Human promyelocytic leukemia cell Lane2: HUVEC - Human umbilical vein endothelial cell Lane3: Human CAF - Human cancer-associated fibroblast Lane4: HCT116 - Human colorectal carcinoma Lane5: A549 - Human lung carcinoma Lane6: Jurkat - Human T lymphocyte leukemia Lane7: HT22 - Mouse hippocampal neuronal Lane8: Thp-1 - Human monocytic leukemia Lane9: HK-2 - Human proximal tubular epithelial Lane10: PC-12 - Rat adrenal pheochromocytoma Lane11: 3T3-L1 - Mouse embryonic fibroblast Lane12: PC-3 - Human prostate adenocarcinoma Lane13: U-14 - Mouse cervical carcinoma Lane14: 293F - HEK293 derivative, adapted for suspension culture Predicted band size: 60kDa Observed band size: 60kDa



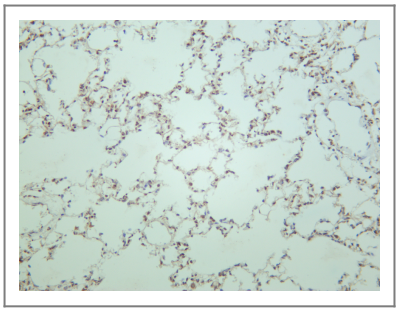
Western Blot analysis using HepG2 whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PI3-Kinase p85 α rabbit mAb (YM8045) diluted at 1:2000. anti-AKT (Phospho Ser473) Rabbit mAb (YM8304) diluted at 1:2000. Loading contrl: Mouse anti GAPDH (YM8394 1:5000) Secondary : Dilight 800, Goat Anti Rabbit IgG (RS23920 1:10000) Dilight 680, Goat Anti Rabbit IgG (RS23720 1:10000)



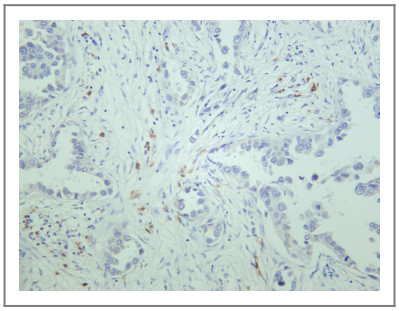
Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-AKT (Phospho Ser473) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: NIH-3T3 Lane 2: PC-12 Predicted band size: 55kDa Observed band size: 60kDa



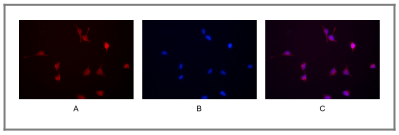
Mouse lung was stained with anti-AKT (Phospho Ser473) rabbit antibody



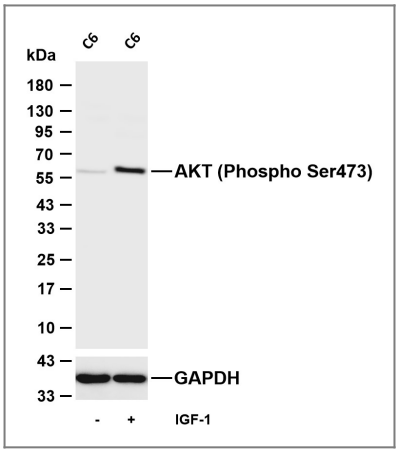
Rat lung was stained with anti-AKT (Phospho Ser473) rabbit antibody



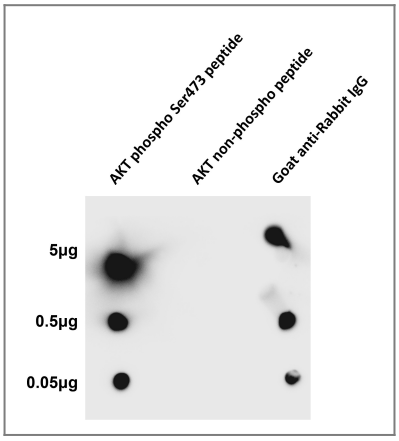
Human lung carcinoma was stained with anti-AKT (Phospho Ser473) rabbit antibody



Immunofluorescence analysis of HEK293. Picture A: AKT antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-AKT (Phospho Ser473) (PT0470R) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: C6 Lane 2: C6 was treated with IGF-1 (50ng/mL) for 5 minutes Predicted band size: 55kDa Observed band size: 60kDa



The membrane was incubated with anti-AKT (Phospho Ser473) (PT0470R) antibody at a dilution of 1:2000. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody.

Contact information

Orders: order@immunoway.com
Support: tech@immunoway.com
Telephone: 877-594-3616 (Toll Free), 408-747-0185
Website: http://www.immunoway.com
Address: 2200 Ringwood Ave San Jose, CA 95131 USA

Please scan the QR code to access additional product information:
Akt (pan) (Phospho Ser473) (PT0470R) PT™ Rabbit mAb

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