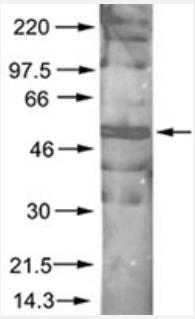
AKT1 (phospho S473) polyclonal antibody

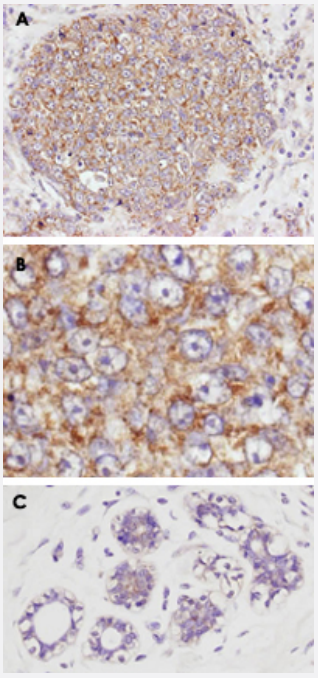
Catalog # PAB10323 Size 100 ug

Applications



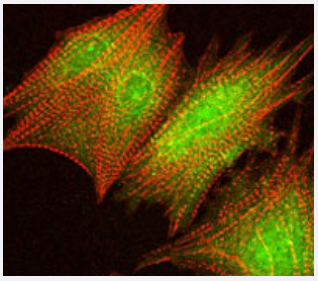
Western Blot (Cell lysate)

Immunoblotting of AKT1 (phospho S473) polyclonal antibody (Cat # PAB10323) was used at a 1:200 dilution to detect phosphorylated AKT1 by Western blot. A nuclear extract from cells infected with adenovirus expressing nuclear-targeted AKT1 kinase was used.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

AKT1 (phospho S473) polyclonal antibody (Cat # PAB10323) was used at a 1 : 100 dilution to detect AKT1 by immunohistochemistry of formalin-fixed and paraffin embedded in (A) human breast tumor tissue, (B) a higher magnification and (C) normal human breast tissue of the breast tumor.
The staining is much stronger than the weak basal level of phosphorylation in normal breast.
AKT1 (phospho S473) polyclonal antibody (Cat # PAB10323) was used with no pretreatment of tissue.
Signal was developed using Dako's Techmate streptavidin-biotin reagents.



Immunofluorescence

Immunofluorescence microscopy.
Confocal image using AKT1 (phospho S473) polyclonal antibody (Cat # PAB10323) at a 1 : 40 dilution to detect phosphorylated AKT1 (green) in rat cardiomyocytes infected with adenovirus expressing with wild-type AKT1 in conjunction with a texas-red conjugated phalloidin (red) to label filamentous actin.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic phosphopeptide of AKT1.
Immunogen	Synthetic phosphopeptide (conjugated with KLH) corresponding to residues surrounding S473 of human AKT1.
Host	Rabbit
Reactivity	Chicken, Human, Mouse, Rat
Specificity	This antibody is specific to phosphorylated human AKT. Minimal reactivity occurs against non-phosphorylated AKT.
Form	Liquid
Quality Control Testing	Antibody Reactive Against Synthetic Peptide.
Recommend Usage	ELISA (1:15000-1:60000) Western Blot (1:200-1:1000) Immunohistochemistry (1:100-1:500) The optimal working dilution should be determined by the end user.
Storage Buffer	In 20 mM KH_2PO_4, 150 mM NaCl, pH 7.2 (0.01% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Applications

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- Enzyme-linked Immunoabsorbent Assay

Gene Info — AKT1

Entrez GeneID	207
Protein Accession#	P31749;AAH00479
Gene Name	AKT1
Gene Alias	AKT, MGC99656, PKB, PKB-ALPHA, PRKBA, RAC, RAC-ALPHA
Gene Description	v-akt murine thymoma viral oncogene homolog 1
Omim ID	164730 181500
Gene Ontology	Hyperlink
Gene Summary	The serine-threonine protein kinase encoded by the AKT1 gene is catalytically inactive in serum-starved primary and immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidyl inositol 3-kinase. In the developing nervous system AKT is a critical mediator of growth factor-induced neuronal survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery. Multiple alternatively spliced transcript variants have been found for this gene. [provided by RefSeq

Other Designations	RAC-alpha serine/threonine-protein kinase|murine thymoma viral (v-akt) oncogene homolog-1|protein kinase B|rac protein kinase alpha

Publication Reference

- Cacao powder supplementation attenuates oxidative stress, cholinergic impairment, and apoptosis in D-galactose-induced aging rat brain.

  Hyoeun Yoo, Hyun-Sook Kim.

  Scientific Reports 2021 Sep; 11(1):17914.

  Application: WB, Rat, Rat Brain

- PKB/Akt: a key mediator of cell proliferation, survival and insulin responses?

  Lawlor MA, Alessi DR.

  Journal of Cell Science 2001 Aug; 114(Pt 16):2903.

  Application: IHC, WB-Tr, Human, Cancers, Mammalian cells

Pathway

- Acute myeloid leukemia
- Adipocytokine signaling pathway
- Apoptosis
- B cell receptor signaling pathway
- Chemokine signaling pathway
- Chronic myeloid leukemia
- Colorectal cancer
- Endometrial cancer
- ErbB signaling pathway
- Fc epsilon RI signaling pathway
- Fc gamma R-mediated phagocytosis
- Focal adhesion
- Glioma

- Insulin signaling pathway
- Jak-STAT signaling pathway
- MAPK signaling pathway
- Melanoma
- mTOR signaling pathway
- Neurotrophin signaling pathway
- Non-small cell lung cancer
- Pancreatic cancer
- Pathways in cancer
- Prostate cancer
- Renal cell carcinoma
- Small cell lung cancer
- T cell receptor signaling pathway
- Tight junction
- Toll-like receptor signaling pathway
- VEGF signaling pathway

Disease

- Adenocarcinoma
- Alzheimer disease
- Amphetamine-Related Disorders
- Atherosclerosis
- Basal Ganglia Diseases
- Bipolar Disorder
- Breast Neoplasms
- Calcinosis

- Carcinoma
- Cardiovascular Diseases
- Cognition
- Colonic Neoplasms
- Colorectal Neoplasms
- Coronary Artery Disease
- Depressive Disorder
- Diabetes Complications
- Diabetes Mellitus
- Disease Progression
- Disease Susceptibility
- Dominance
- Drug Toxicity
- Dyskinesia
- Edema
- Endometrial Neoplasms
- Endometriosis
- Esophageal Neoplasms
- Genetic Predisposition to Disease
- HIV Infections
- Leukemia
- Liver Cirrhosis
- Lung Neoplasms
- Memory
- Metabolic Syndrome X
- Necrosis

- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Neuropsychological Tests
- Obesity
- Osteoporosis
- Ovarian Failure
- Ovarian Neoplasms
- Parkinson disease
- Polycystic Ovary Syndrome
- Precursor T-Cell Lymphoblastic Leukemia-Lymphoma
- Prostatic Neoplasms
- Psychiatric Status Rating Scales
- Psychoses
- Psychotic Disorders
- Puberty
- Pulmonary Disease
- Rectal Neoplasms
- Retinal Neoplasms
- Retinoblastoma
- Schizophrenia
- Space Perception
- Thrombophilia
- Thyroid Neoplasms
- Tobacco Use Disorder
- Tuberculosis

- Urinary Bladder Neoplasms
- Verbal Learning
- Werner syndrome