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Datasheet for ABIN94784

anti-AKT1 antibody (C-Term, pSer473)

4 Images

1 Publication

Overview

Quantity:	100 µg
Target:	AKT1
Binding Specificity:	AA 460-480, C-Term, pSer473
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This AKT1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (Formalin-fixed Paraffin-embedded Sections) (IHC (fp))

Product Details

Immunogen:	This whole rabbit serum was prepared by repeated immunizations with a synthetic peptide corresponding to the aa 460-480 of human, mouse, rat and chicken AKT proteins conjugated to KLH.
Isotype:	IgG
Characteristics:	Concentration Definition: by UV absorbance at 280 nm
Purification:	Antiserum

Target Details

Target:	AKT1
Alternative Name:	AKT (AKT1 Products)

Target Details

Background: AKT is a component of the PI-3 kinase pathway and is activated by phosphorylation at Ser 473 and Thr 308. AKT is a cytoplasmic protein also known as AKT1, Protein Kinase B (PKB) and rac (related to A and C kinases). AKT is a key regulator of many signal transduction pathways. AKT Exhibits tight control over cell proliferation and cell viability. Overexpression or inappropriate activation of AKT is noted in many types of cancer. AKT mediates many of the downstream events of PI 3-kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI 3-kinase recruits AKT to the membrane, where it is activated by PDK1 phosphorylation. Once phosphorylated, AKT dissociates from the membrane and phosphorylates targets in the cytoplasm and the cell nucleus. AKT has two main roles: (i) inhibition of apoptosis; (ii) promotion of proliferation.

Synonyms: RAC-PK-alpha, Protein kinase B, PKB, C-AKT, RAC-alpha serine/threonine-protein kinase, Proto-oncogene c-Akt, AKT1, AKT 1, AKT-1

Gene ID: 207, 62241011

UniProt: [P31749](#)

Pathways: [PI3K-Akt Signaling](#), [RTK Signaling](#), [TCR Signaling](#), [AMPK Signaling](#), [Interferon-gamma Pathway](#), [TLR Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Response to Water Deprivation](#), [Regulation of Actin Filament Polymerization](#), [Carbohydrate Homeostasis](#), [Glycosaminoglycan Metabolic Process](#), [Cellular Glucan Metabolic Process](#), [Regulation of Muscle Cell Differentiation](#), [Cell-Cell Junction Organization](#), [Regulation of Cell Size](#), [Skeletal Muscle Fiber Development](#), [Regulation of Carbohydrate Metabolic Process](#), [Hepatitis C](#), [Protein targeting to Nucleus](#), [CXCR4-mediated Signaling Events](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Negative Regulation of intrinsic apoptotic Signaling](#), [Thromboxane A2 Receptor Signaling](#), [Signaling of Hepatocyte Growth Factor Receptor](#), [Positive Regulation of fat Cell Differentiation](#), [VEGFR1 Specific Signals](#), [VEGF Signaling](#), [Warburg Effect](#)

Application Details

Application Notes: This antibody is phospho specific for pS473 and is suitable for western blotting, immunohistochemistry (formalin-fixed paraffin-embedded sections), immunofluorescence and ELISA. By immunoblot a single band of the expected apparent molecular weight is observed. For immunohistochemistry no pre-treatment of sample is required.

Restrictions: For Research Use only

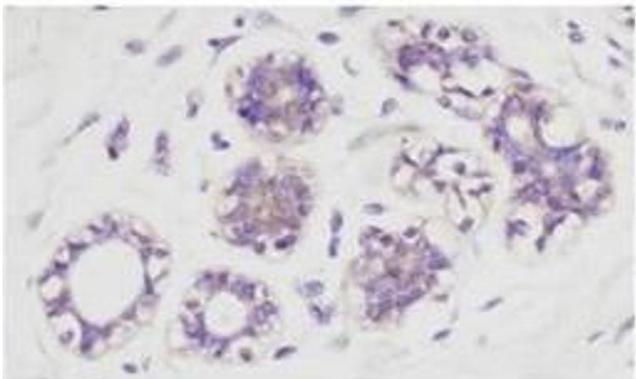
Handling

Format:	Liquid
Concentration:	1.02 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C

Publications

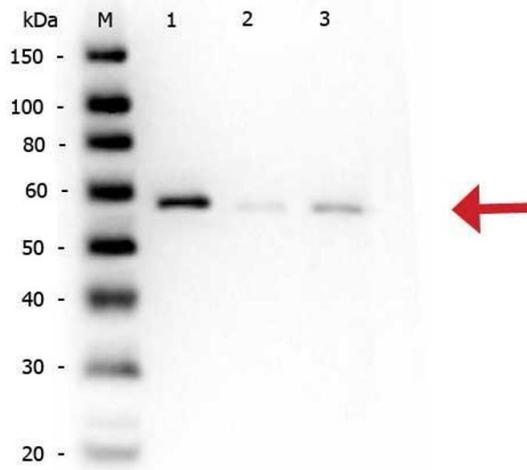
Product cited in: Henle, Wang, Liang, Wu, Poo, Henley: "Asymmetric PI(3,4,5)P3 and Akt signaling mediates chemotaxis of axonal growth cones." in: **The Journal of neuroscience : the official journal of the Society for Neuroscience**, Vol. 31, Issue 19, pp. 7016-27, (2011) ([PubMed](#)).

Images



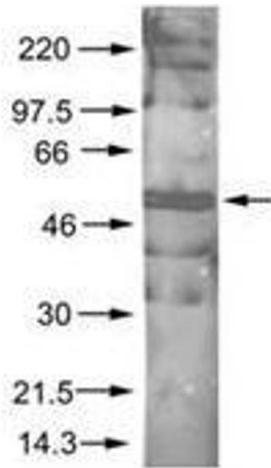
Immunohistochemistry

Image 1. Immunohistochemistry of Rabbit anti-AKT pS473 antibody. Tissue: human breast carcinoma. Fixation: formalin fixed paraffin embedded. Antigen retrieval: not required. Primary antibody: AKT pS473 antibody at 1:100 for 1 h at RT. Secondary antibody: Dako's Techmate streptavidin-biotin reagents at 1:10,000 for 45 min at RT. Localization: AKT pS473 is nuclear and occasionally cytoplasmic.



Western Blotting

Image 2. Western Blot of Rabbit anti-AKT pS473 antibody. Lane 1: AKT1 Recombinant Protein . Lane 2: AKT1 Mutant Human Recombinant Protein . Lane 3: AKT1 (phosphatase treated) Human Recombinant Protein . Load: 50 ng per lane. Primary antibody: AKT pS473 antibody at 1:1,000 for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody at 1:40,000 for 30 min at RT. Block: Blocking Buffer for Fluorescent Western Blotting (ABIN925618) for 30 min at RT. Predicted/Observed size: ~56 kDa for AKTpS473.



Western Blotting

Image 3. Immunohistochemistry. This image is a higher magnification of the breast tumor image above.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN94784.