Datasheet for ABIN1043752

anti-AKT1 antibody (pSer473) (Biotin)

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Overview

Quantity:	50 µg
Target:	AKT1
Binding Specificity:	pSer473
Reactivity:	Human, Mouse, Rat, Monkey
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This AKT1 antibody is conjugated to Biotin
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Flow Cytometry (FACS), Immunoprecipitation (IP), Fluorescence Microscopy (FM)

Product Details

Purpose:	AKT phospho S473 Antibody Biotin Conjugated
Immunogen:	Immunogen: Anti-AKT pS473 (MOUSE) Monoclonal Antibody was produced by repeated immunizations with a synthetic peptide corresponding to residues surrounding S473 of human AKT1 protein. Immunogen Type: Conjugated Peptide
Clone:	17F6-B11
Isotype:	IgG1 kappa
Cross-Reactivity (Details):	This antibody is specific for human and mouse AKT protein phosphorylated at S473.
Characteristics:	Synonyms: mouse anti-AKT pS473 biotin conjugated Antibody, biotin conjugated mouse anti-AKT pS473 Antibody, phospho AKT, RAC-PK-alpha, Protein kinase B, PKB, C-AKT, RAC-alpha

Product Details

	serine/threonine-protein kinase, Proto-oncogene c-Akt, AKT1, AKT 1, AKT-1, phospho AKT antibody, Anti-AKT pS473 Antibody Biotin Conjugated
Purification:	Anti-AKT pS473 (MOUSE) Monoclonal Antibody Biotin Conjugated was purified from concentrated tissue culture supernate by Protein A chromatography.
Labeling Ratio:	10-20

Target Details

Target:	AKT1
Alternative Name:	AKT1 (AKT1 Products)
Background:	Background: AKT phospho 473 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. Anti-AKT pS473 (MOUSE) Monoclonal Antibody is ideal for investigators involved in Cell Signaling, Cancer, Neuroscience, Signal Transduction research.
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:	Flow Cytometry Dilution: User Optimized Immunohistochemistry Dilution: 20 µg/mL Application Note: Biotin Conjugated Anti-AKT pS473 (MOUSE) Monoclonal Antibody Biotin Conjugated is tested for ELISA, immunohistochemistry, immunoprecipitation and western blotting. Expect a band approximately 56 kDa in size corresponding to phosphorylated AKT protein by western blotting in the appropriate cell lysate or extract. This phospho-specific monoclonal antibody reacts with human and mouse AKT pS473 and shows minimal reactivity by ELISA against the non-phosphorylated form of the immunizing peptide. Specific conditions for reactivity should be optimized by the end user. For immunohistochemistry use formalin-fixed paraffin-embedded sections. No pre-treatment of sample is required. Western Blot Dilution: 1:500-1:3,000 Immunoprecipitation Dilution: User Optimized ELISA Dilution: 1:20,000 IF Microscopy Dilution: 1:500-1:3,000 Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Reconstitution Volume: 100 µL Reconstitution Buffer: Restore with deionized water (or equivalent)
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: 10 mg/mL Bovine Serum Albumin (BSA) - Immunoglobulin and Protease free Preservative: 0.01 % (w/v) Sodium Azide
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:	4 °C,-20 °C
Storage Comment:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted

Handling

	liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

Product cited in:

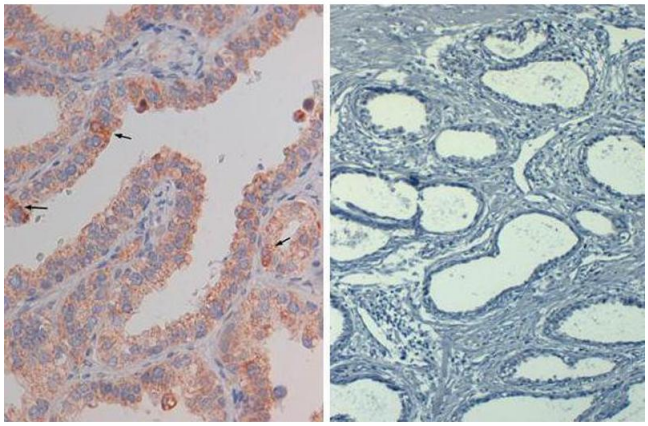
Lawlor, Alessi: "PKB/Akt: a key mediator of cell proliferation, survival and insulin responses?" in: **Journal of cell science**, Vol. 114, Issue Pt 16, pp. 2903-10, (2001) (PubMed).

Alessi: "Discovery of PDK1, one of the missing links in insulin signal transduction. Colworth Medal Lecture." in: **Biochemical Society transactions**, Vol. 29, Issue Pt 2, pp. 1-14, (2001) (PubMed).

Jones, Jakubowicz, Pitossi, Maurer, Hemmings: "Molecular cloning and identification of a serine/threonine protein kinase of the second-messenger subfamily." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 88, Issue 10, pp. 4171-5, (1991) (PubMed).

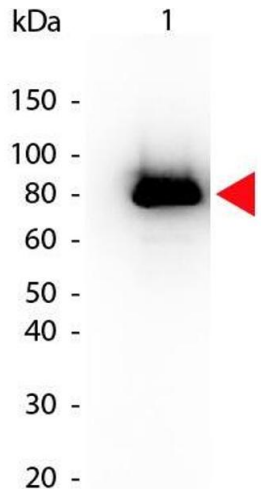
Staal: "Molecular cloning of the akt oncogene and its human homologues AKT1 and AKT2: amplification of AKT1 in a primary human gastric adenocarcinoma." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 84, Issue 14, pp. 5034-7, (1987) (PubMed).

Images



Immunohistochemistry

Image 1. Immunohistochemistry of mouse Anti-AKT pS473 (MOUSE) Biotin Conjugated at 40X Tissue: prostate Fixation: FFPE buffered formalin 10% conc Antigen retrieval: Heat, Citrate pH 6.2. Pressure Cooker (pH 9 shown on right as negative control) Primary antibody: 20 µg/mL for 1 h at RT Secondary antibody: Streptavidin Conj. HRP 10 ug/ml Localization: nuclear and occasionally cytoplasmic Staining: antibody as precipitated red signal with a hematoxylin purple nuclear counterstain.



Western Blotting

Image 2. Western Blot of Mouse anti-Akt phospho S473 Biotin Conjugated antibody. Lane 1: GST tagged AKT1 active recombinant protein. Lane 2: none. Load: 25 ng per lane. Primary antibody: Akt phospho S473 Biotin Conjugated antibody at 1:1,000 for overnight at 4°C. Secondary antibody: HRP Streptavidin secondary antibody at 1:40,000 for 30 min at RT. Block: ABIN925618 for 30 min at RT. Predicted/Observed size: 79 kDa, 79 kDa for Akt phospho S473. Other band(s): none