Datasheet for ABIN964561

anti-AKT1 antibody (pSer473)

6 Images

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Overview

Quantity:	1 mg
Target:	AKT1
Binding Specificity:	pSer473
Reactivity:	Human, Mouse
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF), Flow Cytometry (FACS), Fluorescence Microscopy (FM)

Product Details

Purpose:	AKT phospho S473 Antibody
Immunogen:	Immunogen: This 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 Antibody, RAC-PK-alpha, Protein kinase B, PKB, C-AKT, RAC-alpha serine/threonine-protein kinase, Proto-oncogene c-Akt, AKT1, AKT 1, AKT-1
Purification:	This product was purified from concentrated tissue culture supernate by Protein A chromatography.

Product Details

Sterility:	Sterile filtered

Target Details

Target:	AKT1
Alternative Name:	AKT1 (AKT1 Products)
Background:	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. 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

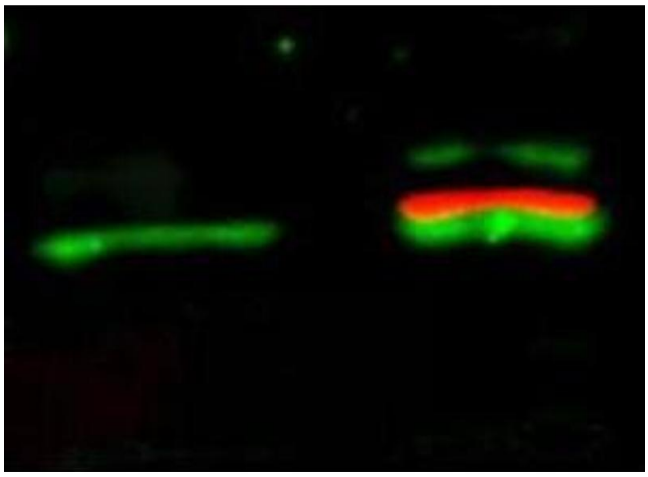
Application Notes:	Flow Cytometry Dilution: User Optimized Immunohistochemistry Dilution: 20 µg/mL

Application Details

	Application Note: This monoclonal antibody is tested in ELISA, immunohistochemistry, immunofluorescent microscopy, 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. Cell Signaling, Cancer, Neuroscience, Signal Transduction research. Western Blot Dilution: 1:500 - 1:3,000 ELISA Dilution: 1:20,000 IF Microscopy Dilution: 1:500 - 1:3,000 Other: User Optimized
Restrictions:	For Research Use only

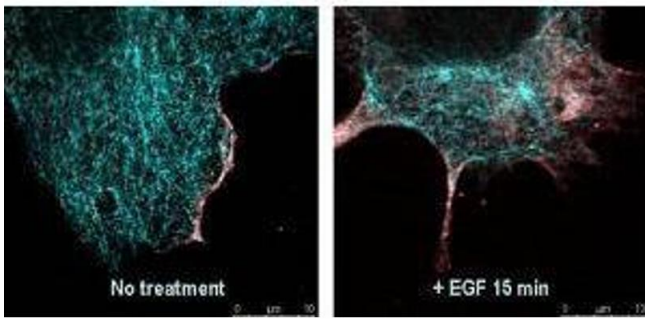
Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None 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 -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. 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 liquid. Dilute only prior to immediate use.
Expiry Date:	12 months



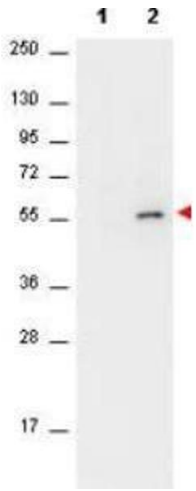
Western Blotting

Image 1. Western Blot of Mouse Anti-Akt pS473 antibody. Lane 1: unstimulated NIH/3T3 lysates contain inactive unphosphorylated Akt1, green band. Lane 2: PDGF stimulated NIH/3T3 lysate contains both inactive (green band) and activated phosphorylated Akt1 (red band). Load: 10 µg per lane. Primary antibody: rabbit anti-Akt (pan) and mouse anti-Akt pS473 specific antibodies at 1:400 for overnight at 4°C. Secondary antibody: 549 conjugated anti-rabbit IgG (green) and 649 conjugated anti-mouse IgG (red) secondary antibodies at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C.



Immunofluorescence

Image 2. Immunofluorescence confocal microscopy of Mouse Anti-AKT pS473 antibody. Tissue: EGF treated A431 cells. Fixation: 0.5% PFA. Antigen retrieval: EGF 15 min. Primary antibody: AKT pS473 antibody at 10 µg/mL for 1 h at RT. Secondary antibody: DyLight Goat anti-Rabbit IgG, MAb anti-AKT pS473, atto-647N anti-Mouse IgG (Active Motif). at 1:10,000 for 45 min at RT. Localization: AKT pS473 is nuclear and occasionally cytoplasmic. Staining: AKT pS473 as red signal with tubulin (cyan).



Western Blotting

Image 3. Western Blot of Mouse anti-AKT antibody. Lane 1: unstimulated NIH/3T3 cell lysates. Lane 2: PDGF stimulated NIH/3T3 cell lysates. Load: 10 µg per lane. Primary antibody: AKT antibody at 1:400 for overnight at 4°C. Secondary antibody: HRP conjugated Gt-a-Mouse IgG was used at a 1:40,000 dilution for 1 h at 4° C with enhanced chemiluminescent reagent . Block: 5% BLOTTO in TBS for 2h at RT. Observed size: ~56 kDa for AKT. Other band(s): none.

Please check the product details page for more images. Overall 6 images are available for ABIN964561.