Datasheet for ABIN1607684

anti-AKT1 antibody (Internal Region)

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Overview

Quantity:	100 µg
Target:	AKT1
Binding Specificity:	Internal Region
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This AKT1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)

Product Details

Immunogen:	Anti-AKT1 Antibody was produced by repeated immunizations with a synthetic peptide corresponding to internal residues of human AKT1 protein. Immunogen Type: Peptide
Clone:	14E5-A2-B2-H9
Isotype:	IgG2a kappa
Cross-Reactivity (Details):	Cross reactivity with AKT1 from other species has not been determined, however, the sequence of the immunogen shows 85% identity to mouse and 92% identity with rat, therefore, cross reactivity is expected.
Purity:	Anti-AKT1 antibody is directed against human AKT1. The antibody detects both unphosphorylated and phosphorylated forms of the protein. Anti-AKT1 antibody was purified from ascites by Protein A chromatography.

Product Details

Endotoxin Level:	Low Endotoxin : No

Target Details

Target:	AKT1
Alternative Name:	AKT1 (AKT1 Products)
Background:	AKT1 Antibody detects AKT1 which 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 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-AKT1 Antibody is ideal for investigators involved in Cell Signaling, Neuroscience and Signal Transduction research. Synonyms: AKT 1 antibody, AKT-1, PKB antibody, PKB gamma antibody, PKBGAMMA antibody, PRKBG antibody, Protein kinase Akt 1 antibody, Protein kinase B gamma antibody, RAC-gamma serine/threonine-protein kinase, RAC-PK-gamma
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:	Anti-AKT1 Antibody is suitable for ELISA, immunohistochemistry, and western blotting. Expect a band approximately 56 kDa in size corresponding to AKT1 protein by western blotting in the appropriate cell lysate or extract. This monoclonal antibody reacts with human AKT. Specific

Application Details

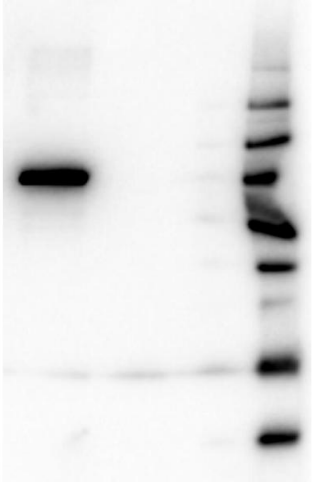
	conditions for reactivity should be optimized by the end user. For immunohistochemistry we recommend the use of fresh frozen tissues. Attempts at staining paraffin-embedded formalin fixed tissues were negative. No pre-treatment of sample is required. ELISA Dilution: 1:2.000 - 1:10.000 Immunohistochemistry Dilution: 20 µg/mL Western Blot Dilution: 1:1000
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Handling Advice:	Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Storage:	-20 °C
Storage Comment:	Store vial at -20 °C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below.
Expiry Date:	Expiration date is one (1) year from date of opening.

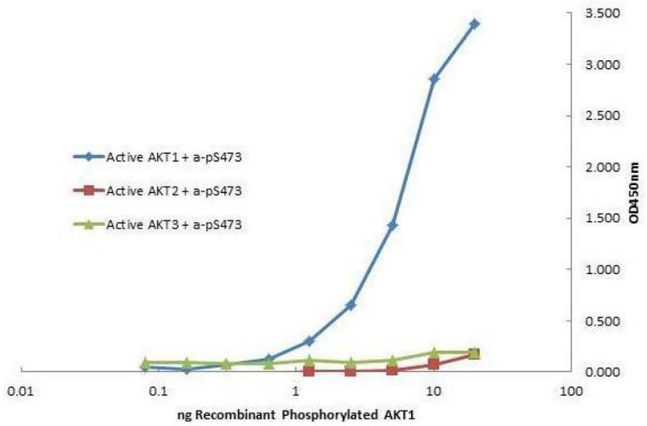
Publications

Product cited in:	Sikorski, Mehta, Inngjerdingen, Thakor, Kling, Kalina, Nyman, Stensland, Zhou, de Souza, Holden, Stuchly, Templin, Lund-Johansen: "A high-throughput pipeline for validation of antibodies." in: **Nature methods**, Vol. 15, Issue 11, pp. 909-912, (2019) (PubMed).



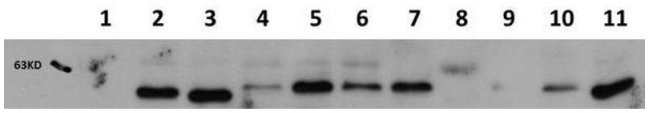
Western Blotting

Image 1. Western Blot of Mouse anti-AKT1 antibody. Lane 1: GST Tagged recombinant AKT1. Lane 2: GST Tagged recombinant AKT2. Lane 3: GST Tagged recombinant AKT3. Load: 25 ng per lane. Primary antibody: AKT1 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: ABIN925618 for 30 min at RT. Predicted/Observed size: 78 kDa for AKT2. Other band(s): none.



ELISA

Image 2. Plate was coated with monoclonal anti AKT1 antibody (capture antibody) followed by incubation with recombinant AKT1, AKT2, AKT3 proteins. Binding was detected with biotinylated monoclonal anti AKT pS473. The signal shows specificity of the monoclonal anti-AKT1 antibody to recombinant isoform AKT1 protein and not the isoform 2 and 3



Western Blotting

Image 3. Western Blot of Mouse anti-AKT1 antibody. Lane 1: AKT1 Null. Lane 2: WT. Lane 3: MEF #1. Lane 4 : A549. Lane 5: Calu-1. Lane 6: PC-3. Lane 7: HepG2. Lane 8: Jurkat. Lane 9: SKOV3. Lane 10: 293T. Lane 11: C2C12. Load: 20 ug per lane. Primary antibody: AKT1 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: ABIN925618 for 30 min at RT. Predicted/Observed size: 56 kDa for AKT1. Other band(s): none.

Please check the product details page for more images. Overall 4 images are available for ABIN1607684.