

Datasheet for ABIN7504950

**AKT1 Protein (AA 1-480) (His tag)**[Go to Product page](#)

## Overview

Quantity:	100 µg
Target:	AKT1
Protein Characteristics:	AA 1-480
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This AKT1 protein is labelled with His tag.
Application:	Immunogen (Imm)

## Product Details

Sequence:	Met1-Ala480
Characteristics:	A DNA sequence encoding the Human pan-AKT (P31749-1) (401S-683F) was expressed with a polyhistidine tag at the N-terminus.
Purity:	> 90 % as determined by reducing SDS-PAGE.

## Target Details

Target:	AKT1
Alternative Name:	pan-AKT ( <a href="#">AKT1 Products</a> )
Background:	Abbreviation: pan-AKT Target Synonym: AKT 1,AKT,AKT1_HUMAN,MGC99656,PKB,PKB-ALPHA,PRKBA,Protein Kinase B Alpha,Protein kinase B,Proto-oncogene c-Akt,RAC Alpha,RAC,RAC-alpha serine/threonine-

protein kinase,RAC-PK-alpha

Background: downstream of phosphatidylinositol 3-kinase (PI3K) to mediate the effects of various growth factors such as platelet-derived growth factor (PDGF), epidermal growth factor (EGF), insulin and insulin-like growth factor I (IGF-I) . AKT mediates the antiapoptotic effects of IGF-I. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly . May be involved in the regulation of the placental development.

Phosphorylates STK4/MST1 at 'Thr-120' and 'Thr-387' leading to inhibition of its: kinase activity, nuclear translocation, autophosphorylation and ability to phosphorylate FOXO3 .

Phosphorylates STK3/MST2 at 'Thr-117' and 'Thr-384' leading to inhibition of its: cleavage, kinase activity, autophosphorylation at Thr-180, binding to RASSF1 and nuclear translocation.

Phosphorylates SRPK2 and enhances its kinase activity towards SRSF2 and ACIN1 and promotes its nuclear translocation. Phosphorylates RAF1 at 'Ser-259' and negatively regulates its activity. Phosphorylation of BAD stimulates its pro-apoptotic activity . Phosphorylates KAT6A at 'Thr-369' and this phosphorylation inhibits the interaction of KAT6A with PML and negatively regulates its acetylation activity towards p53/TP53. Phosphorylates palladin (PALLD), modulating cytoskeletal organization and cell motility. Phosphorylates prohibitin (PHB), playing an important role in cell metabolism and proliferation. Phosphorylates CDKN1A, for which phosphorylation at 'Thr-145' induces its release from CDK2 and cytoplasmic relocation.

Molecular Weight: Calculated MW: 55.7 kDa  
Observed MW: 53-58 kDa

UniProt: [P31749-1](#)

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

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Application Notes: Optimal working dilution should be determined by the investigator.

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Restrictions: For Research Use only

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## Handling

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Format: Lyophilized

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Buffer: Lyophilized from sterile PBS, pH 7.4., 5 % trehalose, 5 % mannitol, 0.01 % tween-80.  
Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization.

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Storage: 4 °C,-20 °C,-80 °C

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Storage Comment: Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C.  
Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

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Expiry Date: 12 months

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