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Datasheet for ABIN7504950 **AKT1 Protein (AA 1-480) (His tag)**

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.

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 (AKT1 Products)
Background:	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 (By similarity). Essential for the SPATA13-mediated regulation of cell migration and

Target Details

adhesion assembly and disassembly . May be involved in the regulation of the placental development (By similarity). 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 . These recent findings indicate that the AKT1 isoform has a more specific role in cell motility and proliferation. Phosphorylates CLK2 thereby controlling cell survival to ionizing radiation . Phosphorylates PCK1 at 'Ser-90', reducing the binding affinity of PCK1 to oxaloacetate and changing PCK1 into an atypical protein kinase activity using GTP as donor.

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

Molecular Weight:	55.7 kDa
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

Restrictions: For Research Use only

Handling

Format:	Lyophilized
Buffer:	Lyophilized from sterile PBS, pH 7.4., 5 % trehalose, 5 % mannitol, 0.01 % tween-80.
Storage:	4 °C,-20 °C,-80 °C
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.
Expiry Date:	12 months