

Datasheet for ABIN2180576

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

Overview

Quantity:	25 µg
Target:	AKT1
Protein Characteristics:	AA 1-480
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This AKT1 protein is labelled with His tag, Strep Tag.

Product Details

Sequence:	AA 1-480
Characteristics:	This protein carries a polyhistidine tag at the C-terminus, followed by a twin strep tag. The protein has a calculated MW of 59.5 kDa. The protein migrates as 60-66 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Purity:	>92 % as determined by reduced SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	AKT1
Alternative Name:	Akt1 (AKT1 Products)

Target Details

Background: RAC-alpha serine/threonine-protein kinase (AKT1) is also known PKB, Protein kinase B alpha, PKB alpha, Proto-oncogene c-Akt and RAC-PK-alpha, which belongs to the protein kinase superfamily, AGC Ser/Thr protein kinase family and RAC subfamily and is expressed in prostate cancer and levels increase from the normal to the malignant state (at protein level). AKT1 is one of 3 closely related serine/threonine-protein kinases (AKT1, AKT2 and AKT3) called the AKT kinase, and which regulate many processes including metabolism, proliferation, cell survival, growth and angiogenesis. AKT is responsible of the regulation of glucose uptake by mediating insulin-induced translocation of the SLC2A4/GLUT4 glucose transporter to the cell surface. AKT regulates also the storage of glucose in the form of glycogen by phosphorylating GSK3A at 'Ser-21' and GSK3B at 'Ser-9', resulting in inhibition of its kinase activity. Phosphorylation of GSK3 isoforms by AKT is also thought to be one mechanism by which cell proliferation is driven. AKT regulates also cell survival via the phosphorylation of MAP3K5 (apoptosis signal-related kinase).

Molecular Weight: 59.5 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: 20 mM Tris, 150 mM NaCl, pH 8.0

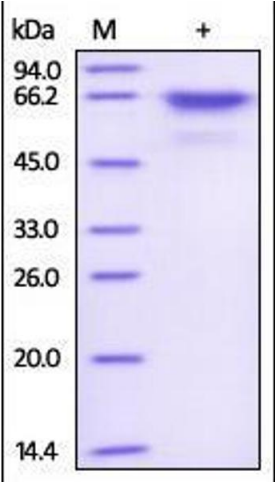
Handling Advice: Please avoid repeated freeze-thaw cycles.

Storage: -20 °C

Handling

Storage Comment: No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C), After reconstitution under sterile conditions for 3 months (-70 °C).

Images



SDS-PAGE

Image 1. Human Akt1, His Tag & Strep Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 92%.