

Recombinant Full Length Human AKT1 Protein, His&Twin-WSHPQFEK tagged

Cat. No. AKT1-10994H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human Akt1, His, WSHPQFEK II Tag is expressed from human 293 cells (HEK293). It contains AA Met 1 - Ala 480 (Accession # AAH00479). This protein carries a polyhistidine tag at the C-terminus, followed by a twin-WSHPQFEK tag. Predicted N-terminus: Met
Species	Human
Source	HEK293
ProteinLength	1-480 aa
Description	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

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	mechanism by which cell proliferation is driven. AKT regulates also cell survival via the phosphorylation of MAP3K5 (apoptosis signal-related kinase).
Form	Lyophilized from 0.22 µm filtered solution in 20 mM Tris, 150 mM NaCl, pH8.0 with trehalose as protectant.
Molecular Mass	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.
Endotoxin	Less than 1.0 EU/µg by the LAL method/rFC method.
Purity	>92% as determined by SDS-PAGE.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 µg/µL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

Gene Name	AKT1 v-akt murine thymoma viral oncogene homolog 1 [Homo sapiens (human)]
Official Symbol	AKT1
Synonyms	AKT1; v-akt murine thymoma viral oncogene homolog 1; RAC-alpha serine/threonine-protein kinase; AKT; PKB; PRKBA; RAC; PKB alpha; RAC-PK-alpha; proto-oncogene c-Akt; protein kinase B alpha; rac protein kinase alpha; PKB-ALPHA; RAC-ALPHA;

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	MGC99656;
Gene ID	207
mRNA Refseq	NM_001014431
Protein Refseq	NP_001014431
MIM	164730
UniProt ID	P31749

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