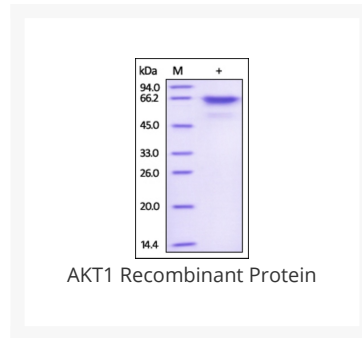




AKT1 Recombinant Protein

Cat. No.: 96-020



Ψ Specifications

SPECIES:	Human
SOURCE SPECIES:	HEK293 cells
SEQUENCE:	Met 1 - Ala 480
FUSION TAG:	C-His, C-Twin Strep Tag
TESTED APPLICATIONS:	WB
APPLICATIONS:	This recombinant protein can be used for WB. For research use only.
PREDICTED MOLECULAR WEIGHT:	59.5 kDa

Ψ Properties

PURITY:	>92% as determined by reduced SDS-PAGE. Less than 1.0 EU per µg by the LAL method.
PHYSICAL STATE:	Lyophilized
BUFFER:	20 mM tris, 150 mM NaCl, pH8.0

STORAGE CONDITIONS:	Lyophilized Protein should be stored at -20°C or lower for long term storage. Upon reconstitution, working aliquots should be stored at -20°C or -70°C. Avoid repeated freeze-thaw cycles.
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Ψ Additional Info

OFFICIAL SYMBOL:	AKT1
ALTERNATE NAMES:	AKT1, PKB, RAC, RAC-PK-alpha, PKB alpha
ACCESSION NO.:	AAH00479
GENE ID:	207

Ψ Background and References

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).
REFERENCES:	1) Jones P.F., et al., 1991, Proc. Natl. Acad. Sci. U.S.A. 88:4171-4175.
	2) Goshima N., et al., 2008 Nat. Methods 5:1011-1017.
	3) Delcommenne M., et al., 1998, Proc. Natl. Acad. Sci. U.S.A. 95:11211-11216.

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