

## AKT3 Protein, Human (sf9, GST)

Cat. No.:	HY-P75519
Synonyms:	RAC-gamma serine/threonine-protein kinase; Protein kinase Akt-3; PKB gamma; Akt3
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9Y243 (M1-E479)
Gene ID:	10000
Molecular Weight:	Approximately 81 kDa

### PROPERTIES

Biological Activity	No Kinase Activity.
Appearance	Solution.
Formulation	Supplied as sterile 50 mM Tris, 100 mM NaCl, 20% Glycerol, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

### DESCRIPTION

#### Background

AKT2, a crucial member of the AKT kinase family along with AKT1 and AKT3, orchestrates a myriad of cellular processes, including metabolism, proliferation, cell survival, growth, and angiogenesis. Operating through the phosphorylation of numerous downstream substrates, AKT2 influences over 100 reported targets, exhibiting remarkable functional diversity. It governs insulin-induced glucose uptake by facilitating SLC2A4/GLUT4 translocation and intricately regulates insulin signaling pathways. Additionally, AKT2 modulates glycogen storage, inhibits GSK3 kinase activity, and plays a pivotal role in the AKT-mTOR signaling pathway, influencing neurogenesis and cellular migration dynamics. AKT2's involvement in phosphorylating FOXO factors, CREB1, and multiple targets related to metabolism underscores its pivotal position in cellular homeostasis. Notably, AKT2 exhibits isoform-specific functions, with a significant role in regulating glucose uptake and participating in intricate processes such as skeletal muscle differentiation. The recent identification of specific substrates like PITX2 and ANKRD2 further delineates AKT2's nuanced and intricate cellular regulatory roles.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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