

## AKT3 Protein, Mouse (sf9, His-GST)

Cat. No.:	HY-P75518
Synonyms:	RAC-gamma serine/threonine-protein kinase; Protein kinase Akt-3; PKB gamma; Akt3
Species:	Mouse
Source:	Sf9 insect cells
Accession:	Q9WUA6-1 (A106-E479)
Gene ID:	23797
Molecular Weight:	Approximately 65 kDa

### PROPERTIES

Biological Activity	No Kinase Activity.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

AKT3, a member of the AKT kinase family alongside AKT1 and AKT2, is a serine/threonine-protein kinase that orchestrates a myriad of essential cellular processes, including metabolism, proliferation, cell survival, growth, and angiogenesis. Its influence is exerted through the phosphorylation of numerous downstream substrates, with over 100 potential candidates identified, though most lack reported isoform specificity. Despite being the least studied isoform, AKT3 emerges as a pivotal player in brain development and proves indispensable for the viability of malignant glioma cells. Notably, it may serve as a central mediator in the up-regulation and down-regulation of MMP13 via IL13. Moreover, AKT3 plays a crucial role in coordinating mitochondrial biogenesis with heightened cellular energy demands triggered by growth factors. Silencing AKT3 expression through RNA interference down-regulates the phosphorylated form of BAD, culminating in the induction of caspase-dependent apoptosis, underscoring its multifaceted and significant regulatory functions.

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

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