Recombinant AKT3 protein

Catalog No: 31147
Expressed In: Baculovirus

Quantity: 20 µg
Concentration: 1 µg/µl
Source: Human

Buffer Contents: 20 µg of Recombinant AKT3 protein in 50 mM Tris-HCl, 100 mM NaCl, 1 mM DTT, and 50% glycerol, pH 8.5. Protein is supplied at 1 µg/µl.

Background: AKT3 (V-Akt Murine Thymoma Viral Oncogene Homolog 3) 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. This is mediated through serine and/or threonine phosphorylation of a range of downstream substrates. Over 100 substrate candidates have been reported so far, but for most of them, no isoform specificity has been reported. AKT3 is the least studied AKT isoform. It plays an important role in brain development and is crucial for the viability of malignant glioma cells. AKT3 isoform may also be the key molecule in up-regulation and down-regulation of MMP13 via IL13. Required for the coordination of mitochondrial biogenesis with growth factor-induced increases in cellular energy demands. Down-regulation by RNA interference reduces the expression of the phosphorylated form of BAD, resulting in the induction of caspase-dependent apoptosis.

Protein Details: Recombinant human AKT3 kinase is highly active and is suitable for labeling AKT3 kinase substrates. This kinase is phosphorylated at Thr305 and Ser472. The accession number is AF135794. This protein has an amino terminal polyhistidine tag and had been purified by Ni-NTA agarose chromatography to > 95% by SDS-PAGE.

Application Notes: Recombinant AKT3 is suitable for kinase assays. The molecular weight of the protein is ~60.508 kDa. The activity of the protein is ~ 467,100 units/mg with 1 unit defined as the amount of enzyme that will catalyze the transfer of 1 pmol phosphate to synthetic peptide substrate RPRAATF per minute at 30°C.

Recommended Enzyme Dilution Buffer: 50 mM Tris pH 7.5, 0.1 mM EGTA, 10 mM DTT and 1 mg/ml BSA

Kinase activity may vary depending on the substrate and reaction conditions used.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.