

Product Specification Sheet

Human Recombinant AKT2 (RAC-PK beta) Protein

□ **Cat.** AKT25-R-10 Recombinant purified, human Akt-2/PKB-beta protein, active **SIZE:** 10 ug

Putative human homologs of the protooncogene v-akt of the acutely transforming retrovirus AKT8 have been cloned. These protein-serine/threonine kinase proteins have a catalytic domain closely related to both PKA and PKC and have been designated rac (related to A and C kinases), pkb (Protein kinase B) or Akt. AKT2 (RAC-PK-b) has been shown to be amplified and over-expressed in some human carcinoma cell lines and primary tumors suggesting that it may contribute to the development of common epithelial tumors of the ovary. It has been reported that anti-sense AKT2 can greatly inhibit the expression of AKT2 protein and suppress the tumorigenic phenotype of PANC1 cells inoculated s.c. in nude mice. This effect was restricted to cells that over-express AKT2. It is postulated that over-expression of AKT2 could upregulate the mediation of growth signals that may contribute to cell proliferation.

Source of Antigen

Human AKT2 protein (protein accession #NM_001626) was expressed in sf9 cells as NT-his tag fusion protein (~60 Kda) and purified >95%. It is supplied in 50 mM Tris-HCl, 100 mM NaCl, 1 mM DTT and 50% glycerol, pH 8.5 (see lot specific conc on the vial). Recombinant human AKT2 kinase is highly active and is suitable for labeling AKT2 kinase substrates. The accession number is NM_001626.

Suggested Application

Recombinant AKT2 is suitable for kinase assays. The molecular weight of the protein is ~60.44 kDa. The activity of the protein is ~4000 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 Kinase Reaction Buffer: 20 mM MOPS, 25 mM β-glycerolphosphate, 5 mM EGTA, 1 mM sodium orthovanadate and 1 mM DTT, pH 7.2. Kinase activity may vary depending on the substrate and reaction conditions used.

Lyophilized proteins can be stored at 4°C, preferably desiccated. 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 arrival.

Stability: 6-12 months at -20oC or below.

Shipping: dry ice for solutions and 4oC for powder

General References: (1) Konishi H (1999) BBRC 205, 817; Cheng JQ 1992) PNAS 89, 9267; Jones PF (1991) Cell Regulation 2, 1001; Marte BM J (1997) TIBS, 22, 355.

**This product is for in vitro research use only.*

AKT25-R-10

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