



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant Human Protein Kinase B (PKB) / AKT1, Baculovirus/Sf9-expressed

Catalog No.

228-10042

Source

Baculovirus, SF9 insect cells

Synonyms

RAC-alpha serine/threonine-protein kinase, EC 2.7.11.1, RAC-PK-alpha, Protein kinase B, C-AKT, AKT, PKB, RAC, PRKBA, MGC99656, RAC-ALPHA.

Introduction

The serine-threonine protein kinase encoded by the AKT1 gene is catalytically inactive in serum-starved primary and immortalized fibroblasts. AKT1 and the related AKT2 are activated by platelet-derived growth factor. The activation is rapid and specific, and it is abrogated by mutations in the pleckstrin homology domain of AKT1. It was shown that the activation occurs through phosphatidylinositol 3-kinase. In the developing nervous system AKT is a critical mediator of growth factor-induced neuronal survival. Survival factors can suppress apoptosis in a transcription-independent manner by activating the serine/threonine kinase AKT1, which then phosphorylates and inactivates components of the apoptotic machinery. Multiple alternatively spliced transcript variants have been found for this gene.

Description

AKT1 Human Recombinant produced in SF9 is a glycosylated, polypeptide chain containing 481 amino acids and having a molecular mass of 60 KD. This protein is the full-length form of the protein with a N-terminal His-tag.

AKT1 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered clear solution.

Formulation

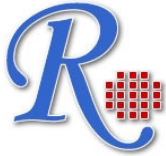
AKT1 (0.1mg/ml) is supplied in 50mM Tris pH 7.5, 0.15M NaCl, 0.27M sucrose, 10mM beta-mercaptoethanol, 1mM EGTA. Carrier-free.

Unit Definition

250 units/mg. One unit of Akt1 activity is equal to 1 nanomole of phosphate transferred to crosstide substrate per minute at 30°C with a final ATP concentration of 100µM. The optimal concentration should be determined for each specific application.

Please Note: Kinase activity may vary depending on the substrate and reaction conditions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Storage Conditions

Store at 4°C if entire vial will be used within 1-2 weeks. Store frozen at -20°C to -80°C for longer periods of time.

Avoid multiple freeze-thaw cycles.

Purity

Greater than 95% as determined by SDS-PAGE.

Mass spectrometry of tryptic digest products for identity determination.

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