

Recombinant Human AKT1/PKB alpha Kinase

Catalog No.: RP03396LQ

Sequence Information

Species **Gene ID**
Human 207

Swiss Prot **Tags**
P31749 N-GST

Synonyms

AKT1; PKB; RAC; Protein kinase B
alpha; PKB alpha; RAC-PK-alpha;
c-Akt; RAC-alpha serine
/threonine-protein kinase

Product Information

Source **Purification**
Baculovirus- ≥ 90 % as
Insect Cells determined by
SDS-PAGE; ≥ 90
% as determined
by HPLC.

Calculated MW **Observed MW**
82.2 kDa 70-85 kDa

Endotoxin
< 1 EU/μg of the protein by LAL
method.

Formulation

Supplied as a 0.22 μm filtered
solution in 50 mM Tris-HCl, 150
mM NaCl, 20% glycerol. (pH 7.5).
Contact us for customized product
form or formulation.

Reconstitution

Please use running water to thaw
it quickly.

Background

RAC(Rho family)-alpha serine/threonine-protein kinase is an enzyme that in humans is encoded by the AKT1 gene. This enzyme belongs to the AKT subfamily of serine/threonine kinases that contain SH2 (Src homology 2-like) protein domains. It is commonly referred to as PKB, or by both names as "Akt /PKB". The serine-threonine protein kinase AKT1 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. Mice lacking Akt1 display a 25% reduction in body mass, indicating that Akt1 is critical for transmitting growth-promoting signals, most likely via the IGF1 receptor. Mice lacking Akt1 are also resistant to cancer: They experience considerable delay in tumor growth initiated by the large T antigen or the Neu oncogene. A single-nucleotide polymorphism in this gene causes Proteus syndrome.

Basic Information

Description

Recombinant Human AKT1/PKB alpha Kinase is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Met1-Ala480) of Human AKT1 (Accession #P31749) fused with a N-GST tag.

Activity

The activity of AKT1 is based on the MSA technology, and the content and ratio of the substrate and the product are directly separated and detected in real time and dynamically by the different migration rates of the substrate and the product after the enzymatic reaction.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -70°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

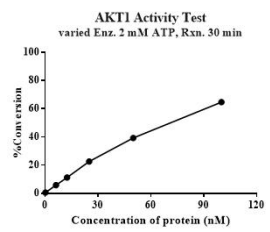
Contact

☎ | 400-999-6126

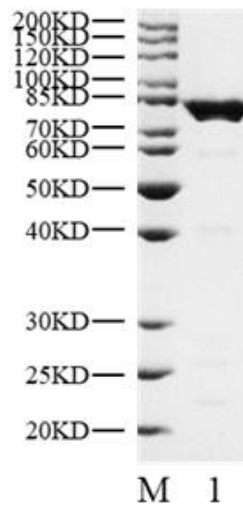
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Validation Data



The activity of AKT1 is based on the MSA technology, and the content and ratio of the substrate and the product are directly separated and detected in real time and dynamically by the different migration rates of the substrate and the product after the enzymatic reaction.



Recombinant Human AKT1/PKB alpha Kinase was resolved with SDS-PAGE under reducing (Lane 1) conditions.