

AKT Activity Assay Kit ab65786

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製品の概要

製品名	AKT Activity Assay Kit
サンプルの種類	Cell Lysate
アッセイタイプ	Enzyme activity
製品の概要	<p>Abcam's AKT Activity Assay Kit utilizes an Akt-specific antibody to immunoprecipitate Akt from cell lysate. Activity of the Akt is then determined in a kinase reaction using recombinant GSK-3α as substrate. Phosphorylation of the GSK-3α can be analyzed by Western blot analysis using the phospho-GSK-3α specific antibody included in the kit. The kit specifically detects Akt1, Akt2, and Akt3 activities, other kinase activities would not be detected.</p> <p>Visit our FAQs page for tips and troubleshooting.</p>

特記事項

The AKT Specific Antibody reacts with human, mouse, and rat.

This product is manufactured by BioVision, an Abcam company and was previously called K435 Akt Activity Assay Kit, KinaseSTAR. K435-40 is the same size as the 40 test size of ab65786.

Akt is a protein kinase that can be activated by insulin and various growth factors and functions in a pathway involving PI3 kinase. Recent evidence suggests that Akt functions to promote cell survival by actively inhibiting apoptosis.

製品の特性

保存方法 Store at -20°C. Please refer to protocols.

内容	40 tests
Akt Specific Antibody	1 x 80µl
GSK-3α Protein/ATP Mixture	1 x 80µl
Kinase Assay Buffer	1 x 25ml
Kinase Extraction Buffer	1 x 80ml

内容	40 tests
Phospho-GSK-3α Specific Antibody	1 x 50µl
Protein A Sepharose	1 x 2ml

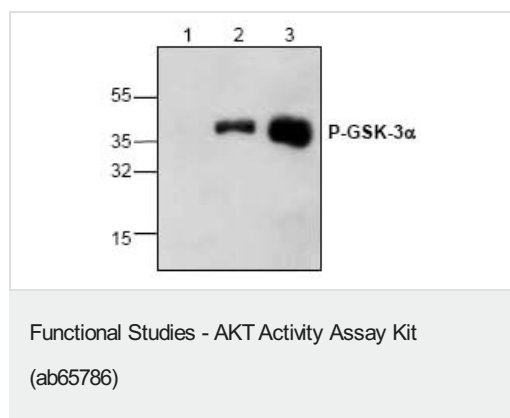
関連性

AKT, also known as protein kinase B (PKB), is a serine/threonine protein kinase. There are three mammalian isoforms of AKT: AKT1 (PKB alpha), AKT2 (PKB beta) and AKT3 (PKB gamma) with AKT2 and AKT3 being approximately 82% identical with the AKT1 isoform. Each isoform has a pleckstrin homology (PH) domain, a kinase domain and a carboxy terminal regulatory domain. AKT was originally cloned from the retrovirus AKT8, and is a key regulator of many signal transduction pathways. Its tight control over cell proliferation and cell viability are manifold; overexpression or inappropriate activation of AKT has been seen in many types of cancer. AKT mediates many of the downstream events of phosphatidylinositol 3 kinase (a lipid kinase activated by growth factors, cytokines and insulin). PI3 kinase recruits AKT to the membrane, where it is activated by PDK1 phosphorylation. Once phosphorylated, AKT dissociates from the membrane and phosphorylates targets in the cytoplasm and the cell nucleus. AKT has two main roles: (i) inhibition of apoptosis; (ii) promotion of proliferation. AKT has been shown to play a role in such metabolic processes as glucose transport, glycogen synthesis, glycolysis, and protein synthesis. It had also been shown to promote cell survival by inhibiting apoptosis through its ability to phosphorylate and inactivate several targets, including Bad, Forkhead transcription factors, and caspase 9. Activity of AKT has been associated with the phosphorylation of two sites: T308, in the activation loop of the kinase, and S473, at the carboxyl terminus. Phosphorylation of both sites contributes to AKT activity, however phosphorylation of T308 has been shown to be absolutely essential for AKT activation.

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Cell Membrane, Cytoplasmic and Nuclear. Note=Nucleus after activation by integrin-linked protein kinase 1 (ILK1).

画像



Western blot analysis of phospho-GSK-3 alpha in AKT negative (Lane 1) and AKT positive (Lane 2,3) Jurkat cell lysates using AKT Activity Assay Kit (ab65786).

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