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Product datasheet

Anti-pan-AKT antibody ab8805

11 Abreviews 687 References 画像数 5

製品の概要

製品名	Anti-pan-AKT antibody
製品の詳細	Rabbit polyclonal to pan-AKT
由来種	Rabbit
アプリケーション	**適用あり:** IHC-P, WB, ICC/IF
種交差性	**交差種:** Mouse, Rat, Human **交差が予測される動物種:** Chicken
免疫原	Synthetic peptide: CRPHFPQFSYSASGTA conjugated to KLH, corresponding to amino acids 466-480 of Human pan-AKT (100% similar to Rat, Chicken and Mouse AKT sequences). (Peptide available as **ab9041**.) Run BLAST with Run BLAST with
特記事項	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
バッファー	Preservative: 0.01% Sodium azide Constituents: 0.42% Potassium phosphate, 0.87% Sodium chloride 0.02M Potassium phosphate, 0.15M Sodium chloride
精製度	Whole antiserum
ポリ/モノ	ポリクローナル
アイソタイプ	IgG

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab8805の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご検討ください。

アプリケーション	Abreviews	特記事項
IHC-P	★★★★☆ (1)	1/1000 - 1/1500.
WB	★★★★☆ (9)	1/500. Detects a band of approximately 60 kDa (predicted molecular weight: 56 kDa).
ICC/IF	★★★★★ (1)	Use at an assay dependent concentration.

ターゲット情報

機能

Plays a role as a key modulator of the AKT-mTOR signaling pathway controlling the tempo of the process of newborn neurons integration during adult neurogenesis, including correct neuron positioning, dendritic development and synapse formation (By similarity). General protein kinase capable of phosphorylating several known proteins. Phosphorylates TBC1D4. Signals downstream of phosphatidylinositol 3-kinase (PI(3)K) to mediate the effects of various growth factors such as platelet-derived growth factor (PDGF), epidermal growth factor (EGF), insulin and insulin-like growth factor I (IGF-I). Plays a role in glucose transport by mediating insulin-induced translocation of the GLUT4 glucose transporter to the cell surface. Mediates the antiapoptotic effects of IGF-I. Mediates insulin-stimulated protein synthesis by phosphorylating TSC2 at 'Ser-939' and 'Thr-1462', thereby activating mTORC1 signaling and leading to both phosphorylation of 4E-BP1 and in activation of RPS6KB1. Promotes glycogen synthesis by mediating the insulin-induced activation of glycogen synthase. The activated form can suppress FoxO gene transcription and promote cell cycle progression. Essential for the SPATA13-mediated regulation of cell migration and adhesion assembly and disassembly.

組織特異性

Expressed in all human cell types so far analyzed. The Tyr-176 phosphorylated form shows a significant increase in expression in breast cancers during the progressive stages i.e. normal to hyperplasia (ADH), ductal carcinoma in situ (DCIS), invasive ductal carcinoma (IDC) and lymph node metastatic (LNMM) stages.

関連疾患

Defects in AKT1 are a cause of susceptibility to breast cancer (BC) [MIM:114480]. A common malignancy originating from breast epithelial tissue. Breast neoplasms can be distinguished by their histologic pattern. Invasive ductal carcinoma is by far the most common type. Breast cancer is etiologically and genetically heterogeneous. Important genetic factors have been indicated by familial occurrence and bilateral involvement. Mutations at more than one locus can be involved in different families or even in the same case.
Defects in AKT1 are associated with colorectal cancer (CRC) [MIM:114500].
Defects in AKT1 are associated with susceptibility to ovarian cancer [MIM:604370]; also called susceptibility to familial breast-ovarian cancer type 1 (BROVCA1).

配列類似性

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. RAC subfamily.
Contains 1 AGC-kinase C-terminal domain.
Contains 1 PH domain.
Contains 1 protein kinase domain.

ドメイン

Binding of the PH domain to the phosphatidylinositol 3-kinase alpha (PI(3)K) results in its targeting to the plasma membrane. The PH domain mediates interaction with TNK2 and Tyr-176 is also essential for this interaction.
The AGC-kinase C-terminal mediates interaction with THEM4.

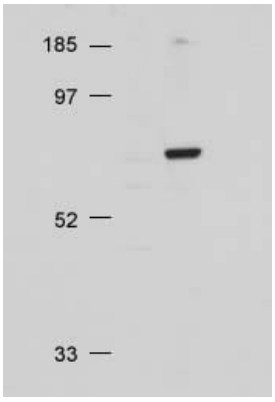
翻訳後修飾

Phosphorylation on Thr-308, Ser-473 and Tyr-474 is required for full activity. Activated TNK2 phosphorylates it on Tyr-176 resulting in its binding to the anionic plasma membrane phospholipid PA. This phosphorylated form localizes to the cell membrane, where it is targeted by PDPK1 and PDPK2 for further phosphorylations on Thr-308 and Ser-473 leading to its activation. Ser-473 phosphorylation by mTORC2 favors Thr-308 phosphorylation by PDPK1. Ser-473 phosphorylation is enhanced by interaction with AGAP2 isoform 2 (PIKE-A). Ser-473 phosphorylation is enhanced in focal cortical dysplasias with Taylor-type balloon cells. Ubiquitinated; undergoes both 'Lys-48'- and 'Lys-63'-linked polyubiquitination. TRAF6-induced 'Lys-63'-linked AKT1 ubiquitination is critical for phosphorylation and activation. When ubiquitinated, it translocates to the plasma membrane, where it becomes phosphorylated. When fully phosphorylated and translocated into the nucleus, undergoes 'Lys-48'-polyubiquitination catalyzed by TTC3, leading to its degradation by the proteasome.

細胞内局在

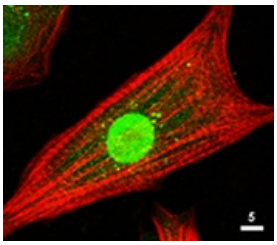
Cytoplasm. Nucleus. Cell membrane. Nucleus after activation by integrin-linked protein kinase 1 (ILK1). Nuclear translocation is enhanced by interaction with TCL1A. Phosphorylation on Tyr-176 by TNK2 results in its localization to the cell membrane where it is targeted for further phosphorylations on Thr-308 and Ser-473 leading to its activation and the activated form translocates to the nucleus.

画像



Western blot - Anti-pan-AKT antibody (ab8805)

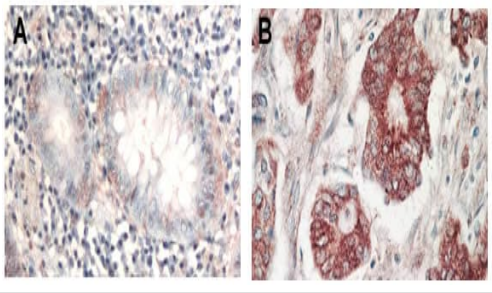
Western blot using Akt antibody ab8805 at 1/500, Goat anti-rabbit IgG peroxidase conjugate at 1/10,000. 20 ug NIH/3T3 whole cell lysate, Gel type 10% NuPage with MOPS buffer developed with Substrate Pierce SuperSignal™ West Pico.



Immunocytochemistry/ Immunofluorescence - Anti-pan-AKT antibody (ab8805)

This image is courtesy of Mark Sussman, Cincinnati, USA

The Akt antibody (ab8805) is used at 1/80 on cultured neonatal rat cardiomyocytes that express a nuclear-targeted Akt construct. The green is Akt antibody, the red is Texas-red™ phalloidin that labels actin filaments.

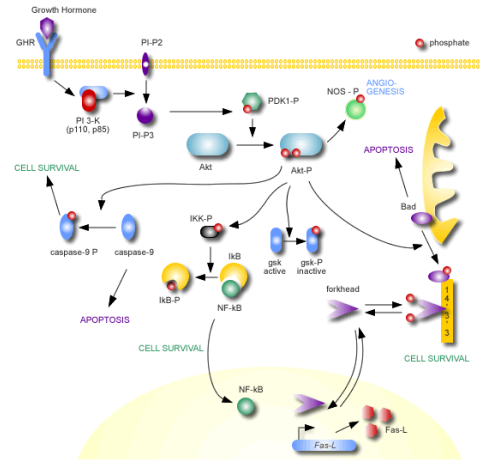


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-pan-AKT antibody (ab8805)

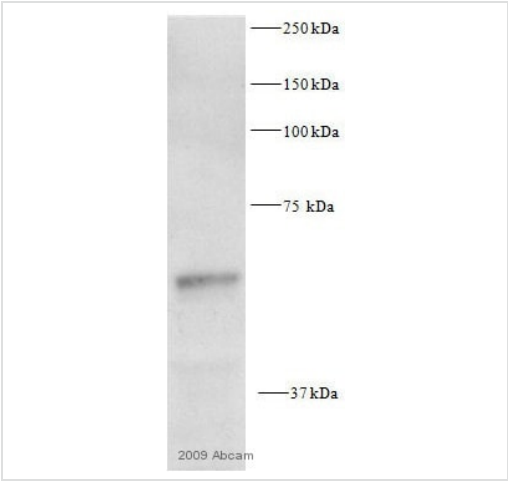
A: Normal colon tissue

B: Tumour tissue

Akt antibody (ab8805) used at 1/1000 on formalin-fixed paraffin embedded tissue.



Anti-pan-AKT antibody (ab8805)



Western blot - Anti-pan-AKT antibody (ab8805)

This image is a courtesy of Anonymous Abreview

Anti-pan-AKT antibody (ab8805) at 1/500 dilution + Lysate prepared from human HT1080 cell line at 10 µg

Secondary

HRP-conjugated donkey polyclonal to rabbit IgG at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 56 kDa

Observed band size: 57 kDa

Exposure time: 6 minutes

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