Product datasheet

Anti-AKT (phospho T308) antibody ab38449

5 Abreviews  221 References  3 Images

Overview

Product name Anti-AKT (phospho T308) antibody
Description Rabbit polyclonal to AKT (phospho T308)
Host species Rabbit
Specificity ab38449 recognises endogenous levels of AKT (pT308), AKT2 (pT309) and AKT3 (pT305) only when phosphorylated at those residues.

Tested applications Suitable for: WB, ELISA, IHC-P
Species reactivity Reacts with: Mouse, Rat, Human
Immunogen Synthetic peptide corresponding to Human AKT aa 276-325.
Database link: P31749
Positive control WB: HeLa treated with Insulin. IHC-P: human lung carcinoma tissue

Properties

Form Liquid
Storage instructions Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer pH: 7.40
Preservative: 0.02% Sodium azide
Constituents: 0.87% Sodium chloride, 50% Glycerol, PBS
Purity Immunogen affinity purified
Clonality Polyclonal
Isotype IgG

Applications

Our Abpromise guarantee covers the use of ab38449 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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.

**Cellular localization**

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/500 - 1/1000. Predicted molecular weight: 56 kDa. Block with BSA.</td>
</tr>
<tr>
<td>ELISA</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/10000.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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**Western blot - Anti-AKT (phospho T308) antibody (ab38449)**

All lanes: Anti-AKT (phospho T308) antibody (ab38449) at 1/1000 dilution

Lane 1: HeLa cells
Lane 2: HeLa cells treated with 0.01 U/mL Insulin for 15 minutes

Lysates/proteins at 20 µg per lane.

**Secondary**

All lanes: Goat Anti-Rabbit IgG (H+L) HRP at 1/10000 dilution

**Predicted band size:** 56 kDa

10% gel.  
Running conditions: 60v, 30min; 120v 60min  
Transfer conditions: 150mA 120min Nitrocellulose membrane.  
Blocking conditions: 5% non-fat milk in TBST, RT, 90min.  
Primary antibody incubation: 4?, overnight  
Secondary antibody incubation: room temperature for 45 minutes  
Washing condition: 5 ml TBST, 4 x 5min

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AKT (phospho T308) antibody (ab38449)**

Immunohistochemical analysis of AKT (phospho T308) expression in paraffin embedded human lung carcinoma tissue, using ab38449 (1/50). Right-hand panel represents a negative control where ab38449 was pre-incubated with the immunizing (blocking) peptide.
Western blot - Anti-AKT (phospho T308) antibody (ab38449)

All lanes: Anti-AKT (phospho T308) antibody (ab38449) at 1/500 dilution

Lane 1: 293 cell lysate - untreated
Lane 2: 293 cell lysate - treated with insulin

Lysates/proteins at 30 µg per lane.

Predicted band size: 56 kDa
Observed band size: 56 kDa

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