## Description

<table>
<thead>
<tr>
<th><strong>Product Name</strong></th>
<th>AKT1/AKT2/AKT3(phospho-Tyr315/316/312) Antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Host Species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Polyclonal</td>
</tr>
<tr>
<td><strong>Purification</strong></td>
<td>Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.</td>
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<tr>
<td><strong>Applications</strong></td>
<td>WB IHC IF</td>
</tr>
<tr>
<td><strong>Species Reactivity</strong></td>
<td>Hu Ms Rt</td>
</tr>
<tr>
<td><strong>Specificity</strong></td>
<td>The antibody detects endogenous level of AKT1/AKT2/AKT3 only when phosphorylated at tyrosine 315/316/312.</td>
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<tr>
<td><strong>Immunogen Type</strong></td>
<td>Peptide-KLH</td>
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<tr>
<td><strong>Immunogen Description</strong></td>
<td>Peptide sequence around phosphorylation site of tyrosine 315/316/312 (P-E-Y(p)-L-A) derived from Human AKT1/AKT2/AKT3.</td>
</tr>
<tr>
<td><strong>Target Name</strong></td>
<td>AKT1/AKT2/AKT3</td>
</tr>
<tr>
<td><strong>Modification</strong></td>
<td>Phospho-Tyr315/316/312</td>
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<tr>
<td><strong>Other Names</strong></td>
<td>RAC-PK-alpha; Protein kinase B;</td>
</tr>
<tr>
<td><strong>Accession No.</strong></td>
<td>Swiss-Prot: P31749 P31751 Q9Y243NCBI Protein: NP_001014431.1 NP_001617.1 NP_005456.1</td>
</tr>
<tr>
<td><strong>Concentration</strong></td>
<td>1.0mg/ml</td>
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<tr>
<td><strong>Formulation</strong></td>
<td>Supplied at 1.0mg/mL in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Store at -20°C for long term preservation (recommended). Store at 4°C for short term use.</td>
</tr>
</tbody>
</table>

## Application Details

<table>
<thead>
<tr>
<th><strong>Predicted MW:</strong></th>
<th>60kd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western blotting:</td>
<td>1:500~1:1000</td>
</tr>
<tr>
<td>Immunohistochemistry:</td>
<td>1:50~1:100</td>
</tr>
<tr>
<td>Immunofluorescence:</td>
<td>1:100~1:200</td>
</tr>
</tbody>
</table>

## Images
Western blot analysis of extracts from HepG2 cells untreated or treated with EGF using AKT1/AKT2/AKT3 (phospho-Tyr315/316/312) Antibody #11501.

Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using AKT1/AKT2/AKT3 (Phospho-Tyr315/316/312) Antibody #11501 (left) or the same antibody preincubated with blocking peptide (right).

Immunofluorescence staining of methanol-fixed Hela cells using AKT1/AKT2/AKT3 (phospho-Tyr315/316/312) Antibody #11501.

Western blot analysis of extracts from 3T3 cells, treated with EGF or calf intestinal phosphatase (CIP), using AKT1/AKT2/AKT3 (phospho-Tyr315/316/312) Antibody #11501.

Background

General protein kinase capable of phosphorylating several known proteins. Phosphorylates TBC1D4. Signals downstream of phosphatidylinositol 3-kinase (PI3K) 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. General protein kinase capable of phosphorylating several known proteins. IGF-1 leads to the activation of AKT3, which may play a role in regulating cell survival. Capable of phosphorylating several known proteins.
Truncated isoform 2/PKB gamma 1 without the second serine phosphorylation site could still be stimulated but to a lesser extent.


Note: This product is for in vitro research use only and is not intended for use in humans or animals.