

## DESCRIPTION

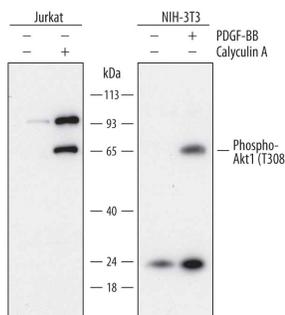
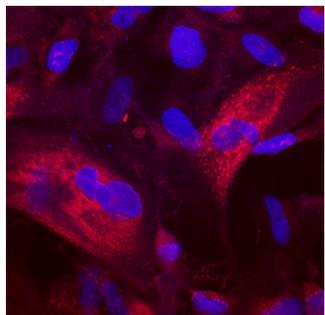
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human and mouse Akt1 when phosphorylated at T308.
<b>Source</b>	Monoclonal Mouse IgG <sub>3</sub> Clone # 658320
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Phosphopeptide containing the human Akt1 T308 site
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in Tris with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human and Mouse Phospho-Akt1 (T308) by Western Blot.</b> Western blot shows lysates of Jurkat human acute T cell leukemia cell line and NIH-3T3 mouse embryonic fibroblast cell line untreated (-) or treated (+) with 100 ng/mL Recombinant Human PDGF-BB (Catalog # 220-BB) for 20 minutes or 100nM Calyculin A for 30 minutes. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Phospho-Akt1 (T308) Monoclonal Antibody (Catalog # MAB7419) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Phospho-Akt1 (T308) at approximately 65 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunocytochemistry</b></p>  <p><b>Phospho-Akt1 (T308) in CCD-1070Sk Human Cell Line.</b> Akt1 phosphorylated at T308 was detected in immersion fixed CCD-1070Sk human foreskin fibroblast cell line stimulated with Recombinant Human PDGF-BB (Catalog # 220-BB) using Mouse Anti-Human Phospho-Akt1 (T308) Monoclonal Antibody (Catalog # MAB7419) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Akt, also known as protein kinase B (PKB), is a central kinase in such diverse cellular processes as glucose uptake, cell cycle progression, and apoptosis. Three highly homologous members define the Akt family: Akt1 (PKB $\alpha$ ), Akt2 (PKB $\beta$ ), and Akt3 (PKB $\gamma$ ). All three Akts contain an amino-terminal pleckstrin homology domain, a central kinase domain, and a carboxyl-terminal regulatory domain. Akt1 is the most widely expressed family member and is frequently activated in a number of carcinomas, including breast, prostate, lung, pancreatic, liver, ovarian, and colorectal cancer. Akt1 is activated in a multistep process that involves the sequential phosphorylation of Thr450 by JNK kinases, Thr308 by PDK1, and Ser473 by PDK2 or mTORC2. Activated Akt1 phosphorylates a wide variety of cytosolic, nuclear, and mitochondrial substrates. Human Akt1 shares 98% aa sequence identity with mouse and rat Akt1. MAB7419 also detects mouse Phospho-Akt1 (T308) in Western Blot.