

DESCRIPTION

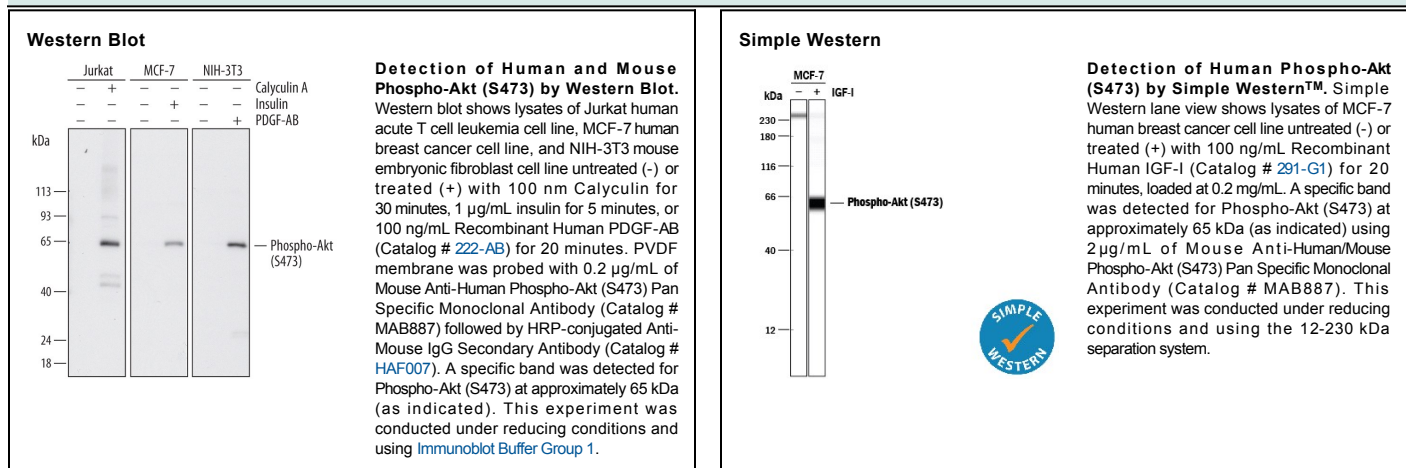
Species Reactivity	Human/Mouse
Specificity	Detects human and mouse Akt1, Akt2 and Akt3, when phosphorylated at S473, S474 and S472, respectively.
Source	Monoclonal Mouse IgG ₁ Clone # 545007
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Phosphopeptide containing the human Akt (S473) site
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS 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
Western Blot	0.2 µg/mL	See Below
Simple Western	2 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 α), Akt2 (PKB β), and Akt3 (PKB γ). 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.