Phospho-PKCa (Thr497) (F1) rabbit mAb

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Catalog: #2336 **Store at:** -20ºC

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
Flow Cytometry,WB	Anti-Rabbit IgG	Monoclonal	Rabbit IgGk

Format: Unconjugated

Cross Reactivity: Predicted to work with mouse, rat and other homologues.

Formulation: 1X PBS, 0.02% NaN3, 50% Glycerol, 0.1% BSA

Preparation: Protein A+G

Reactivity: Human,Mouse,Rat

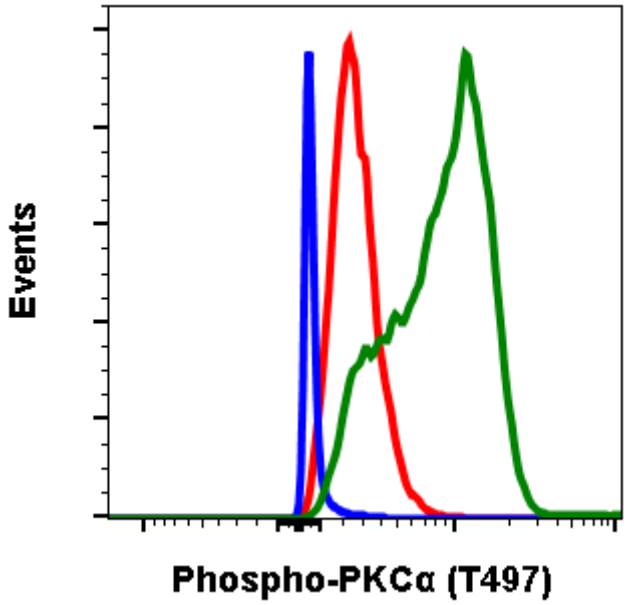
Recommended Usage: 1µg/mL – 0.001µg/mL. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.

Immunogen: A synthetic phospho-peptide corresponding to residues surrounding Thr497 of human phospho PKCα

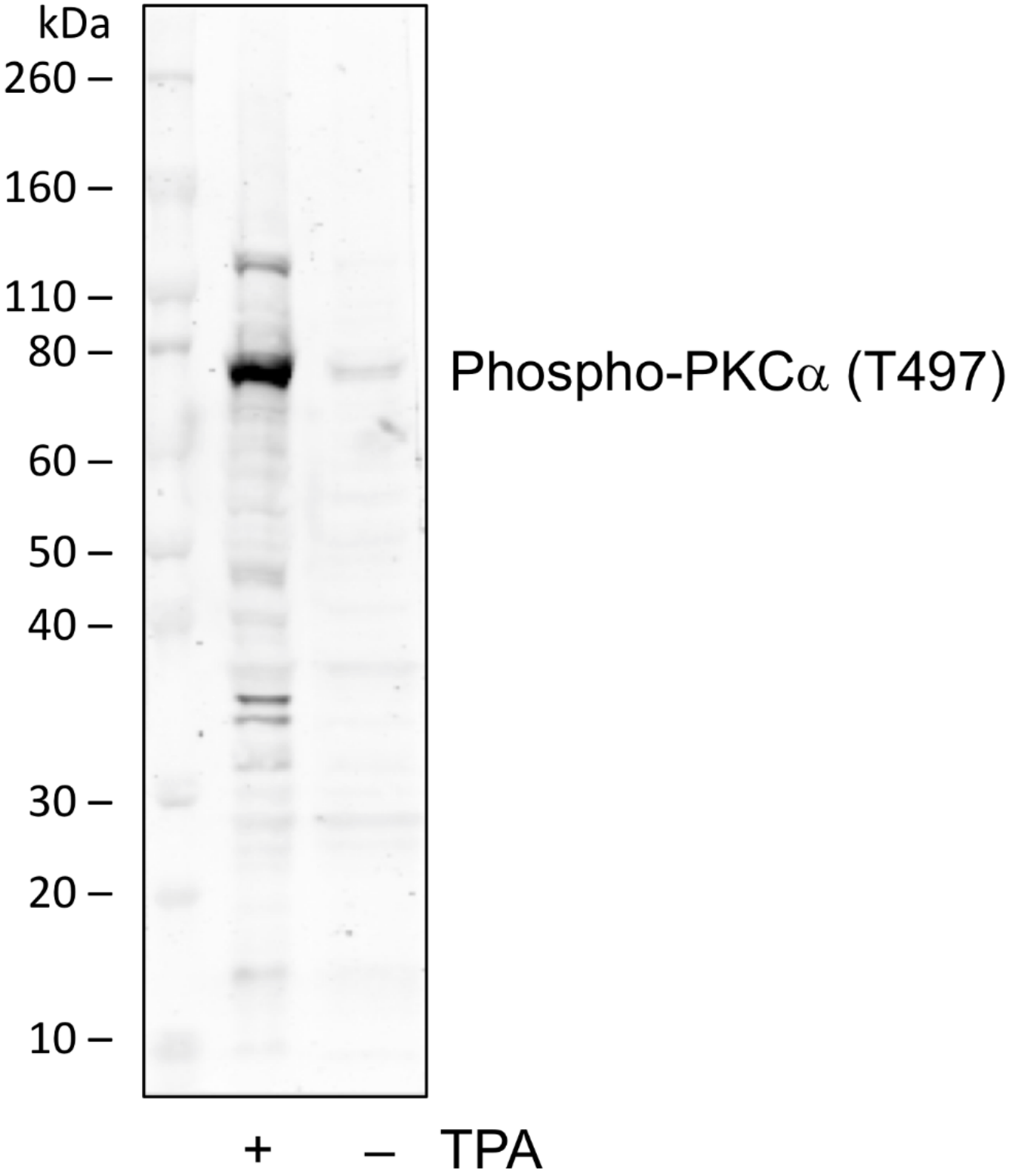
Description: PKCα is a calcium-dependent isozyme of the PKC family that phosphorylates serine/threonine residues in apoptosis and cellular proliferation and differentiation pathways, including the MAPK cascade. PKCα directly phosphorylated Raf-1, inducing survival genes. An increase in PKCα is associated with multi-drug resistance in cancer cell lines, and increased expression in breast cancers is noted as causing a particularly malignant phenotype. Thus PKCα has been the target of novel cancer therapeutics, with some promising developments in microRNA inhibitors. PKCα is itself phosphorylated by mTOR. PKCα also plays an important role in water regulator and solute absorption in the cell, where it regulates aquaporin 2 by initiating AQP2 ubiquination and lysosomal degradation.

References:

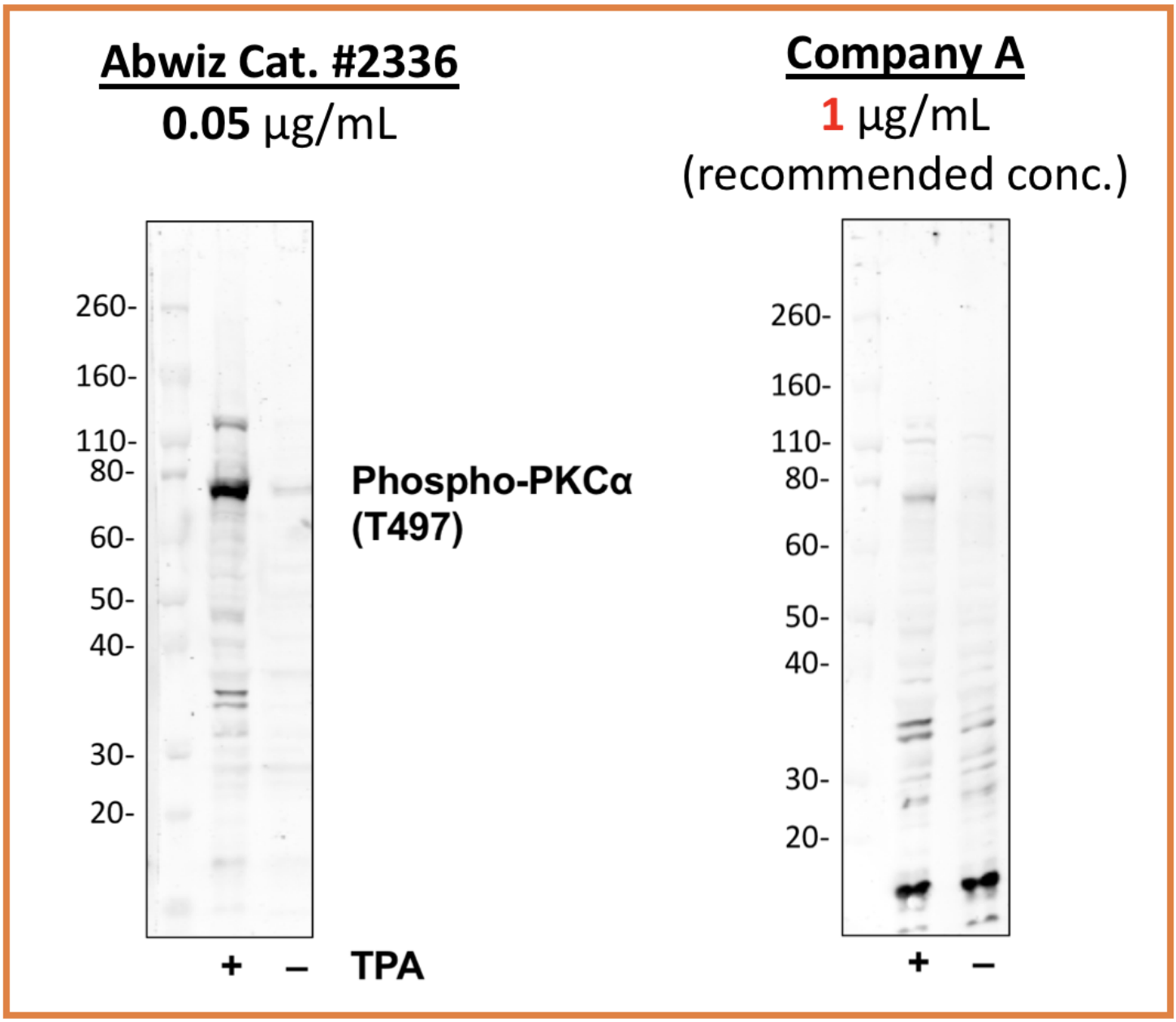
Blobe GC, Sachs CW, Khan WA, Fabbro D, Stabel S, Wetsel WC, Obeid LM, Fine RL, and Hannun YA. (1993) Journal of Biological Chemistry. 268:658-664.
Sim JH, Himmel NJ, Redd SK, Pulous FE, Rogers RT, Black LN, Hong SM, von Bergen TN, and Blount MA. (2014) PLoS One. 9:e101753.
Martin EC, Elliott S, Rhodes LV, et al. (2012) Molecular Carcinogenesis. 53:38-48.



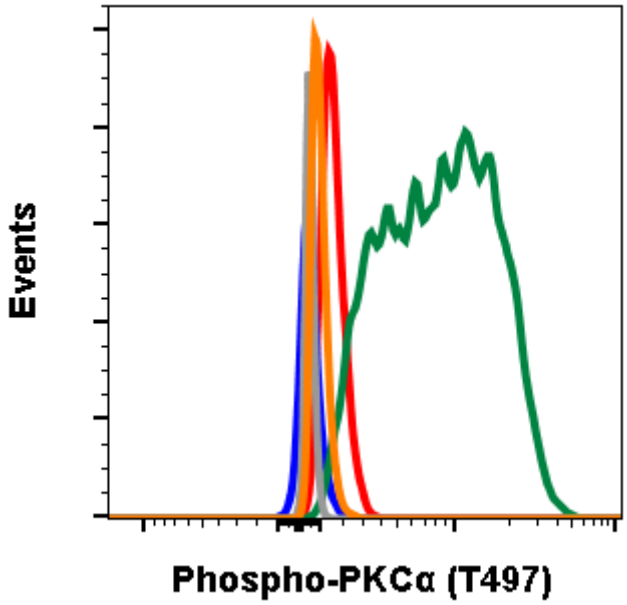
Flow cytometric analysis of K562 cells secondary antibody only negative control (blue) or untreated (red) or treated with EGF + pervanadate (green) using PKCα (T497) antibody PKCaT497-F1 at 0.1 µg/mL. Cat. #2336.



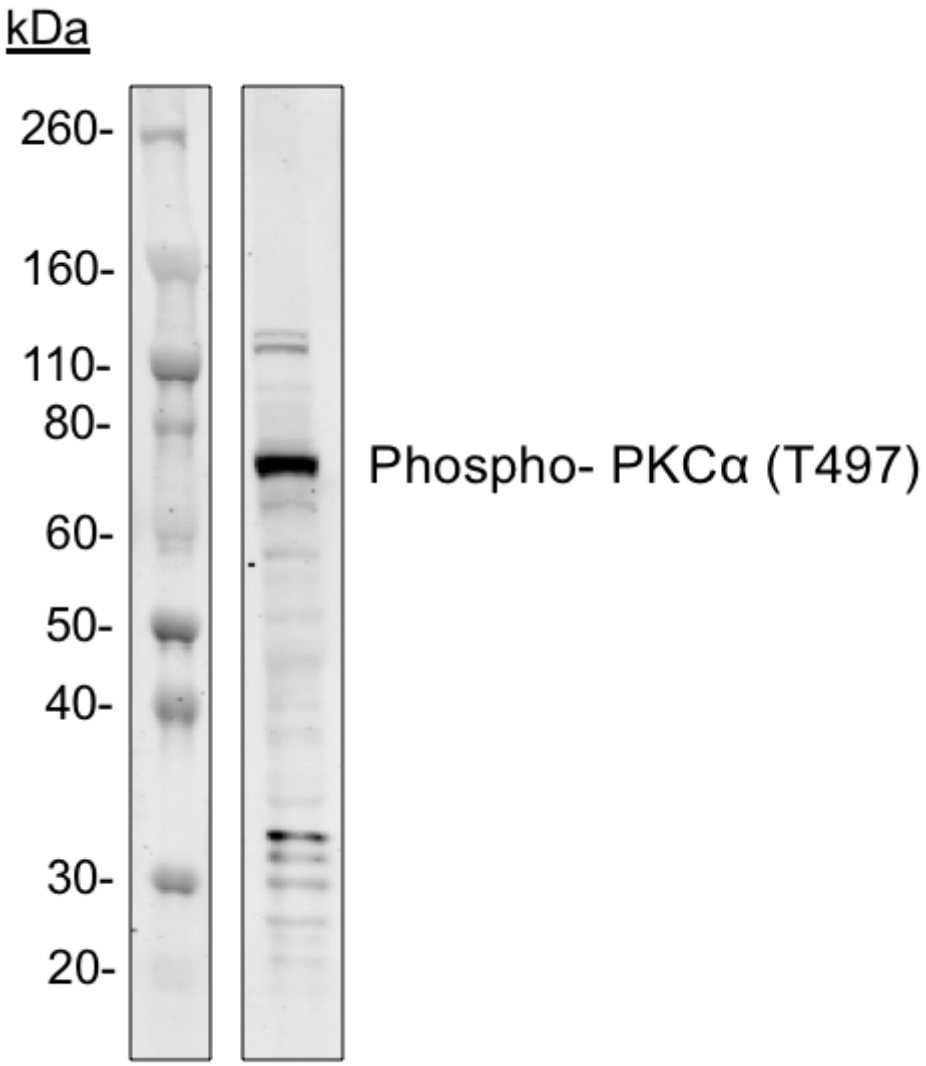
Western blot analysis of HT1080 cell extract, untreated or treated with TPA using 0.05 ug/mL Phospho-PKCa (Thr497) antibody AWBPKCAT497-F1. Cat. #2336



Western blot analysis of HT1080 cell extract untreated or treated with TPA using 0.05 µg/mL Phospho-PKCα (Thr497) antibody PKCaT497-F1 Cat. #2336 or Company A antibody at 1 µg/mL (manufacturer's recommended concentration) developed using the same exposure.



Flow cytometric analysis of 3T3 cells, secondary antibody only negative control (blue) or treated with imatinib (grey) or with pervanadate (orange) using 0.1 µg/mL isotype control Cat. #2141, or imatinib (red) or pervanadate (green) using PKCα (T497) antibody PKCaT497-F1 at 0.1µg/mL Cat. #2336.



Western blot analysis of C6 cell extract treated with Anisomycin using 0.1 µg/mL PKCα (T497) antibody PKCaT497-F1. Cat. #2336.