Phospho-PKCa (Thr497) (F1) rabbit mAb APC Conjugate

www.abwizbio.com
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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
Flow Cytometry	N/A	Monoclonal	Rabbit IgGk

Format: APC

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

Formulation: 1X PBS, 0.09% NaN3, 0.2% BSA

Preparation: Protein A+G

Reactivity: Human,Mouse,Rat

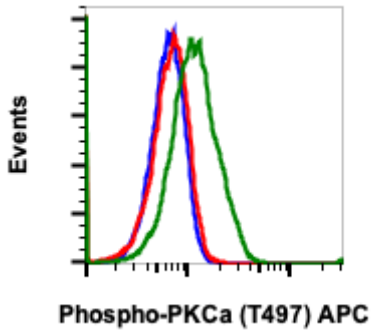
Recommended Usage: For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells or 5 µL per 100 µL of staining volume. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.

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, et al., (1993) JBC. 268:658-664.
Sim JH, et al., (2014) PLoS One. 9:e101753.
Martin EC, et al. (2012) Molecular Carcinogenesis. 53:38-48.



Flow cytometric analysis of NIH3T3 cells treated with imatinib and unstained as negative control (blue) or treated with imatinib (red) or treated with pervanadate (green) and stained using PKCα (T497) antibody PKCaT497-F1 APC conjugate. Cat. #2339.