

Product Datasheet

Phospho-PKC (pan) (gamma Thr514) (PF4) rabbit mAb FITC conjugate Antibody (orb1946006)

Catalog Number orb1946006

Category Antibodies

Description Protein Kinase (PKC) is a 12 member family of serine/threonine kinases termed conventional or classical (α , β , γ), novel (δ , ϵ , and ζ), atypical (θ , ι) and PKN and PKC-related (PKN1, PKN2 and PKN3) playing significant role in several signaling processes involved in physiological and pathological setting (1). PKC activation translates into gene expression modulation, cell division, migration, proliferation, differentiation, and cell survival and apoptosis (2). PKC members are classified based on their distinct cofactor requirements and the extent of homology between their regulatory elements (3,4). PKC α , β I, β II, and γ constitute the conventional PKC isoforms, characterized by the presence of two cysteine-rich zinc finger domains, C1a and C1b (5,6) which bind to diacylglycerol (DAG) and phosphatidylserine (PS) (7). In addition, PKC contains a C2 domain, responsible for binding anionic phospholipids like phosphatidylinositol bisphosphate (PIP2) in a Ca^{2+} -dependent manner (8,9). The atypical PKC, PKC ζ and ι share ATP-binding domain and the catalytic domain with PKC. They contain a single C1 domain that lacks residues necessary for binding DAG (10). Association of PKC γ to the membrane enables a conformation that permits phosphoinositide-dependent protein kinase1 (PDK-1) (11) to bind and phosphorylate a site in the activation loop, Thr514. (12,13). Thr514 phosphorylation leads to a conformation change enabling phosphorylation of at two carboxyl-terminal sites namely, the turn motif and hydrophobic motif, as a result of which the fully phosphorylated conventional PKC is released from the membrane, and positioned in the cytoplasm as an inactive form (14,15). Binding of Ca^{2+} induces low-affinity interaction with the membrane, whereas the membrane imbedded cofactor DAG to PKC results in high-affinity interaction of PKC with the membrane (16).

Clonality Monoclonal

Species/Host Rabbit

Biorbyt Ltd.

7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom

Email: info@biorbyt.com, support@biorbyt.com

Phone: +44 (0)1223 859353 | Fax: +1 (415) 651-8558

Biorbyt LLC

68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713
United States

Email: info@biorbyt.com, support@biorbyt.com

Phone: +1 (415) 906-5211 | Fax: +1 (415) 651-8558

Isotype	Rabbit IgG1k
Conjugation	FITC
Reactivity	Human, Mouse, Rat
Form/Appearance	Liquid
Buffer/Preservatives	1X PBS, 0.09% NaN ₃ , 0.2% rAlbumin
Purification	Protein A+G
Immunogen	A synthetic phospho-peptide corresponding to residues surrounding Thr514 of human phospho PKC γ
UniProt ID	P05129, Q04759, P24723, Q02156, P17252, Q05655, P05771
Tested applications	FC
Dilution range	For flow cytometric staining, the suggested use of this reagent is 5 μ L per million cells or 5 μ L per 100 μ L of staining volume. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.
Cross Reactivity	Predicted to work with mouse, rat and other homologues.
Clone Number	PKC γ T514-PF4
Storage	2-8°C
Note	For research use only
Expiration Date	12 months from date of receipt.

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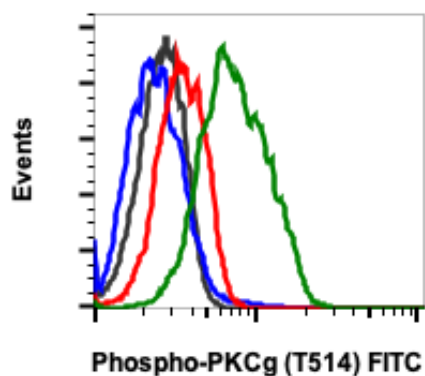
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Flow cytometric analysis of HT1080 cells treated with staurosporine (red) or untreated (green) using Phospho-PKCg (Thr514) (PF4) Rabbit mAb (FITC Conjugate) PKCgT514-PF4 #orb1946006, or concentration-matched Rabbit (G9) mAb IgG Isotype Control (FITC Conjugate) #orb1946239 for cells treated with staurosporine (black) or untreated (blue).

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