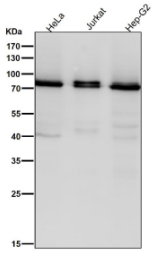
Pan-PKC Antibody / PRKCA/PRKCB/PRKCZ [clone 32P76] (FY12835)

Catalog No.	Formulation	Size
FY12835	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

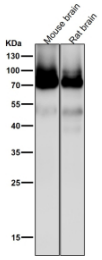
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32P76
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q05513, P05771, P17252
Applications	Western Blot : 1:500-1:2000 Immunohistochemistry : 1:50-1:200 Immunocytochemistry/Immunofluorescence : 1:50-1:200 Immunoprecipitation : 1:50 Flow Cytometry : 1:50
Limitations	This Pan-PKC antibody is available for research use only.



All lanes use the Pan-PKC antibody at 1:2000 dilution for 1 hour at room temperature.
Expected molecular weight: 68-77 kDa.



All lanes use the Pan-PKC antibody at 1:2000 dilution for 1 hour at room temperature.
Expected molecular weight: 68-77 kDa.

Description

Pan-PKC antibody detects protein kinase C isoforms alpha, beta, and zeta, encoded by the PRKCA, PRKCB, and PRKCZ genes. PKC proteins are a family of serine/threonine kinases activated by diacylglycerol, calcium, and phospholipids. They regulate diverse processes including proliferation, apoptosis, migration, and secretion. The PKC family is divided into conventional, novel, and atypical subgroups based on activation requirements. PKC alpha belongs to the conventional subgroup requiring both calcium and diacylglycerol, PKC beta has two splice variants beta I and beta II, while PKC zeta is atypical and functions independently of calcium and diacylglycerol. By detecting multiple isoforms simultaneously, Pan-PKC antibody provides a broad tool for studying PKC biology.

Pan-PKC antibody is widely applied in cancer biology, immunology, and neuroscience. PKC alpha regulates proliferation and apoptosis in many cell types, PKC beta is critical for B cell receptor signaling, and PKC zeta participates in NF-kappaB signaling and polarity regulation. Together, these isoforms integrate signaling from growth factors, immune receptors, and stress pathways. By applying Pan-PKC antibody, researchers can examine global PKC expression and activity across diverse systems.

Applications for Pan-PKC antibody include western blotting, immunohistochemistry, immunofluorescence, and ELISA. Western blot assays detect multiple PKC isoforms in cell and tissue lysates, immunohistochemistry maps distribution in tumors and immune organs, and immunofluorescence reveals subcellular localization at membranes, cytoskeleton, and nuclei. These approaches allow characterization of PKC biology at multiple levels.

Dysregulation of PKC isoforms contributes to cancer, autoimmunity, diabetes, and cardiovascular disease. Overactivation of PKC promotes tumor growth, invasion, and angiogenesis, while loss of function impairs immune signaling and metabolic regulation. By detecting PKC isoforms broadly, Pan-PKC antibody supports research into how kinase networks contribute to disease. In leukemia, aberrant PKC activity modulates drug sensitivity, while in diabetes, PKC activation contributes to vascular complications.

PKC isoforms also play roles in neuronal signaling, where they regulate neurotransmitter release and plasticity. By applying Pan-PKC antibody, scientists can study PKC activity in synaptic function and memory. Therapeutically, PKC inhibitors are under investigation for oncology and metabolic disorders. Monitoring PKC expression with antibody-based assays provides biomarkers for drug development and clinical research.

NSJ Bioreagents provides Pan-PKC antibody with validated specificity for multiple isoforms. Its performance supports reliable detection of PKC alpha, beta, and zeta across cancer, immunology, and neuroscience applications.

Application Notes

Optimal dilution of the Pan-PKC antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human PKC was used as the immunogen for the Pan-PKC antibody.

Storage

Store the Pan-PKC antibody at -20oC.