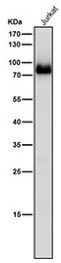
Pan-PKC Antibody / PRKCA/PRKCB/PRKCD/PRKCE/PRKCG/PRKCZ [clone 32P28] (FY12989)

Catalog No.	Formulation	Size
FY12989	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

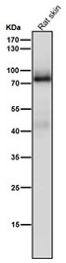
Recombinant RABBIT MONOCLONAL

Bulk quote request

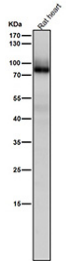
Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32P28
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P05129, P05771, P17252, Q02156, Q05513, Q05655, P23298
Applications	Western Blot : 1:500-1:2000
Limitations	This Pan-PKC antibody is available for research use only.



Western blot testing of human Jurkat cell lysate using the Pan-PKC antibody at 1:5000 dilution for 1 hour at room temperature.



Western blot testing of rat skin tissue lysate using the Pan-PKC antibody at 1:5000 dilution for 1 hour at room temperature.



Western blot testing of rat heart tissue lysate using the Pan-PKC antibody at 1:5000 dilution for 1 hour at room temperature.

Description

Pan-PKC antibody detects multiple isoforms of Protein kinase C, including PRKCA, PRKCB, PRKCD, PRKCE, PRKCG, and PRKCZ. Protein kinase C represents a family of serine threonine kinases that play central roles in transducing signals from membrane receptors to diverse downstream pathways. These kinases regulate processes such as cell growth, differentiation, apoptosis, immune responses, and neurotransmission. Pan-PKC antibody provides a broad detection tool for studying Protein kinase C activity across its isoforms, enabling researchers to assess general pathway activation in cellular models and tissues.

The Protein kinase C family is divided into conventional, novel, and atypical classes based on their structural domains and activation requirements. Conventional isoforms such as PRKCA, PRKCB, and PRKCG require calcium and diacylglycerol for activation, while novel isoforms including PRKCD and PRKCE are calcium independent but still activated by diacylglycerol. Atypical isoforms such as PRKCZ do not respond to either calcium or diacylglycerol but are regulated by other lipid derived second messengers. Research using Pan-PKC antibody has shown that this kinase family integrates multiple extracellular signals, allowing cells to adapt rapidly to changing environments.

Aberrant Protein kinase C signaling is implicated in cancer, diabetes, cardiovascular disease, and neurological disorders. Overexpression or mutation of individual isoforms alters cell cycle progression, apoptosis thresholds, and stress responses. For example, PRKCA is frequently upregulated in breast cancer, while PRKCD contributes to apoptosis in lymphoid cells. Using Pan-PKC antibody allows researchers to detect total family expression or activation states, providing a comprehensive readout when isoform specificity is not required. This broad recognition is especially valuable in screening studies where pathway activity is assessed across multiple tissues and disease contexts.

Pan-PKC antibody is widely applied in western blotting, immunohistochemistry, and immunofluorescence. Western blotting enables detection of multiple isoforms in complex lysates, while immunohistochemistry highlights expression patterns across tissues such as brain, liver, and immune organs. Immunofluorescence demonstrates localization of Protein kinase C to membranes, cytoplasm, or nucleus depending on isoform activation state. Functional studies with Pan-PKC antibody reveal dynamic translocation patterns following receptor stimulation, underscoring the central role of this kinase family in signaling.

By supplying validated Pan-PKC antibody reagents, NSJ Bioreagents supports research into cell signaling, disease mechanisms, and therapeutic development. Detection of multiple Protein kinase C isoforms with a single reagent ensures broad coverage of this essential kinase family and facilitates studies where general PKC activity is the focus.

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.