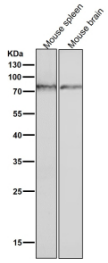
Phospho-PKC (pSer729) Antibody / PRKCA/PRKCB/PRKCE [clone 32P75] (FY12683)

Catalog No.	Formulation	Size
FY12683	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, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32P75
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	Q02156, P05771, P17252
Applications	Western Blot : 1:500-1:2000
Limitations	This Phospho-PKC (pSer729) antibody is available for research use only.



Western blot testing of mouse tissue lysate using the Phospho-PKC (pSer729) antibody at 1:3000 dilution for 1 hour at room temperature. Expected molecular weight: 77-84 kDa.

Description

Phospho-PKC (pSer729) antibody detects protein kinase C when phosphorylated at serine 729. Protein kinase C belongs to a family of serine threonine kinases encoded by multiple genes including PRKCA, PRKCB, and PRKCG. Phosphorylation at Ser729 occurs within the hydrophobic motif of PKC alpha and related isoforms, a modification essential for stability and full catalytic activity. This phosphorylation is typically mediated by kinases such as PDK1 and

mTORC2, which regulate PKC maturation and downstream signaling capacity.

Phospho-PKC (pSer729) antibody is widely applied in cancer biology, signal transduction, and neuroscience. PKC enzymes regulate cell proliferation, differentiation, apoptosis, and cytoskeletal remodeling. Phosphorylation at Ser729 serves as a marker for mature active PKC isoforms and is required for proper subcellular localization and substrate phosphorylation. By detecting phospho Ser729, researchers can measure activation status of PKC pathways and how they change in disease states.

Western blot assays reveal distinct phospho-PKC bands corresponding to activated isoforms. Immunohistochemistry maps Ser729 phosphorylation in tissues such as brain, heart, and tumors. Immunofluorescence highlights dynamic translocation of PKC from cytosol to plasma membrane or other compartments upon stimulation. These methods allow precise characterization of PKC activation at the molecular and cellular level.

PKC activity is critical for oncogenic signaling. Dysregulation of phosphorylation at Ser729 is associated with altered PKC stability and oncogenic transformation. Certain cancers show reduced PKC activity due to mutations preventing proper phosphorylation, while others display hyperactivation that promotes tumor growth. By applying Phospho-PKC (pSer729) antibody, scientists can study how phosphorylation events regulate tumor biology and therapeutic response.

PKC enzymes are also central to neuronal signaling and plasticity. Phosphorylation at Ser729 supports synaptic transmission, long term potentiation, and memory formation. Altered PKC activity has been implicated in neurodegenerative diseases such as Alzheimer disease and Parkinson disease. With phospho specific antibody tools, researchers can dissect how PKC phosphorylation influences brain function and pathology.

In cardiology, PKC phosphorylation regulates cardiac hypertrophy, contractility, and response to ischemia. The Ser729 site provides a biomarker for assessing PKC function in cardiac stress and adaptation. This makes Phospho-PKC (pSer729) antibody relevant not only for molecular signaling studies but also for translational research into heart disease.

Phospho-PKC (pSer729) antibody from NSJ Bioreagents provides strong specificity for detecting active phosphorylated PKC isoforms. Its reliable performance across multiple applications ensures accurate monitoring of kinase activity in health and disease.

Application Notes

Optimal dilution of the Phospho-PKC (pSer729) antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human Phospho-PKC (pS729) was used as the immunogen for the Phospho-PKC (pSer729) antibody.

Storage

Store the Phospho-PKC (pSer729) antibody at -20oC.