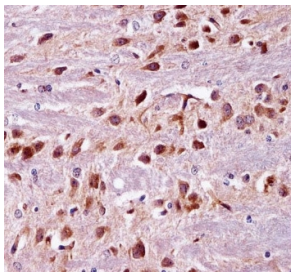
Protein Kinase C alpha Antibody / PRKCA Rabbit Polyclonal Antibody (F54688)

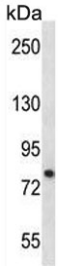
Catalog No.	Formulation	Size
F54688-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F54688-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
UniProt	P20444
Localization	Cytoplasmic, nuclear
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:25 Flow cytometry: 1:25 (1x10e6 cells)
Limitations	This Protein Kinase C alpha Antibody / PRKCA Rabbit Polyclonal Antibody is available for research use only.



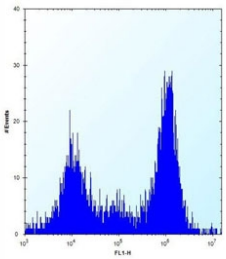
Protein Kinase C alpha Antibody by IHC in mouse brain tissue. Immunohistochemistry of formalin-fixed, paraffin-embedded mouse brain using PRKCA Rabbit Polyclonal Antibody demonstrates brown immunoreactivity in neuronal cell bodies and surrounding tissue. Staining is particularly evident in the cytoplasm of several large cells, with additional immunoreactivity distributed throughout the section. Hematoxylin counterstaining highlights cell nuclei. Heat-induced epitope retrieval was performed by steaming the section in citrate buffer, pH 6.0, for 20 minutes, followed by cooling before antibody incubation. The staining illustrates PKC alpha expression in mouse brain tissue.



Protein Kinase C alpha Antibody by WB in mouse Neuro-2a cells. Western blot analysis of mouse Neuro-2a neuroblastoma cell lysate using PRKCA Rabbit Polyclonal Antibody demonstrates a distinct immunoreactive band migrating near 77 kDa, consistent with the predicted molecular weight of protein kinase C alpha. The blot contains a single sample lane, with the principal band positioned slightly above the 72 kDa molecular weight marker and below the 95 kDa marker. This migration pattern is consistent with detection of full-length PRKCA. The result demonstrates recognition of the endogenous kinase in a mouse neuronal cell model commonly used to investigate cellular signaling, differentiation, and neurobiological processes.



Protein Kinase C alpha Antibody by WB in human Jurkat cells. Western blot analysis of human Jurkat T lymphocyte cell lysate using PRKCA Rabbit Polyclonal Antibody demonstrates a prominent immunoreactive band near the predicted molecular weight of approximately 77 kDa. The single sample lane shows a distinct band migrating between the 72 and 95 kDa molecular weight markers, consistent with detection of full-length protein kinase C alpha. The observed signal supports recognition of PRKCA in a human lymphoid cell line. This result complements the mouse Neuro-2a western blot and illustrates antibody reactivity with the kinase in cellular models representing different species and tissue origins.



Protein Kinase C alpha Antibody by FACS in mouse Neuro-2a cells. Flow cytometry analysis of mouse Neuro-2a cells using PRKCA Rabbit Polyclonal Antibody demonstrates two distinct fluorescence distributions. The antibody-stained population appears at higher fluorescence intensity than the isotype control, indicating detectable PKC alpha immunoreactivity in the tested cells. The histogram shows separation between the lower-intensity control population and the higher-intensity antibody-stained population. This result supports recognition of PRKCA in mouse Neuro-2a cells under the reported flow cytometry conditions.

Description

Protein Kinase C alpha Antibody / PRKCA Rabbit Polyclonal Antibody targets protein kinase C alpha (PKC alpha), a calcium-dependent serine/threonine kinase encoded by the PRKCA gene. As a member of the conventional protein kinase C family, PKC alpha coordinates intracellular responses to receptor activation and lipid-derived second messengers. Its activity influences cell proliferation, differentiation, migration, adhesion, apoptosis, and inflammatory signaling. The enzyme is broadly expressed and participates in pathways that connect extracellular stimuli with changes in cellular behavior.

PRKCA contains an N-terminal regulatory region and a C-terminal catalytic domain. The regulatory region includes tandem C1 domains that bind diacylglycerol and a C2 domain that mediates calcium-dependent membrane association. Following phospholipase C activation, increased intracellular calcium and diacylglycerol promote recruitment of PKC alpha to cellular membranes, where interactions with phospholipids facilitate kinase activation. The enzyme also undergoes regulatory phosphorylation events that support its maturation, stability, and catalytic competence. These mechanisms enable PRKCA to respond dynamically to changes in cellular signaling conditions.

Protein kinase C alpha phosphorylates multiple substrates involved in growth factor signaling, cytoskeletal regulation, and cell survival. Reported targets include RAF1, BCL2, CSPG4, and cardiac troponin T. Through these interactions, PKC alpha can influence MAPK signaling, cell adhesion, and contractile responses. Its biological effects depend on tissue context and interactions with other signaling proteins. In some cellular environments, PRKCA promotes proliferation and migration, while in others it contributes to growth inhibition or differentiation.

Dysregulated PKC alpha activity has been investigated in tumor progression, cardiac hypertrophy, angiogenesis, and inflammatory disorders. The kinase also participates in platelet signaling and vascular responses, making it relevant to

cardiovascular research. Its sensitivity to phorbol esters, which mimic diacylglycerol, has contributed to its importance as a model for studying lipid-dependent signaling mechanisms.

NSJ Bioreagents provides the Protein Kinase C alpha Antibody for research into the expression and distribution of this signaling enzyme. The antibody was generated against a peptide corresponding to amino acids 1-30 of mouse PRKCA, distinguishing its immunogen from antibodies targeting other regions of the protein. This PRKCA Rabbit Polyclonal Antibody supports investigations of kinase abundance and tissue distribution in studies of cellular signaling and disease-associated pathways.

Explore our PKC alpha Antibody for additional research into PRKCA expression and calcium-dependent signaling pathways.

Application Notes

The stated application concentrations are suggested starting points. Titration of the Protein Kinase C alpha Antibody / PRKCA Rabbit Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 1-30 from the mouse protein was used as the immunogen for the Protein Kinase C alpha Antibody.

Storage

Aliquot the Protein Kinase C alpha Antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

PKC alpha antibody, PRKCA antibody, PKCA antibody, Protein Kinase C alpha polyclonal antibody, PKC alpha rabbit polyclonal antibody

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