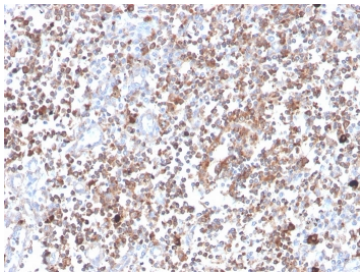
PKC alpha Monoclonal Antibody 133 / PRKCA Monoclonal Antibody [clone 133] (V8687)

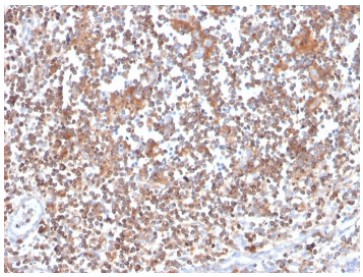
Catalog No.	Formulation	Size
V8687-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8687-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8687SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	133
Purity	Protein G affinity chromatography
UniProt	P17252
Localization	Cytoplasm, cell membrane, nucleus
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This PKC alpha Monoclonal Antibody 133 / PRKCA Monoclonal Antibody is available for research use only.



PKC alpha Monoclonal Antibody by IHC in human tonsil lymphoid tissue. Immunohistochemistry of formalin-fixed, paraffin-embedded human tonsil using PRKCA Monoclonal Antibody demonstrates brown immunoreactivity in numerous cells distributed throughout the lymphoid tissue. Staining is predominantly cytoplasmic, with variable intensity among individual cells and intervening regions showing comparatively little signal. Hematoxylin counterstaining highlights cell nuclei. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM Tris containing 1 mM EDTA, pH 9.0, for 20 minutes, followed by cooling before antibody incubation. The observed staining illustrates PKC alpha expression in human tonsillar tissue.



PKC alpha Monoclonal Antibody by IHC showing extensive staining in human tonsil. Immunohistochemistry of formalin-fixed, paraffin-embedded human tonsil using PRKCA Monoclonal Antibody demonstrates widespread brown immunoreactivity within a densely cellular region of the tissue. Positive staining is visible in numerous closely arranged cells, with differences in intensity across the field. Hematoxylin counterstaining provides nuclear contrast. Sections underwent heat-induced epitope retrieval by boiling in 10 mM Tris containing 1 mM EDTA, pH 9.0, for 20 minutes before cooling and antibody staining. This image provides an additional view of PKC alpha immunoreactivity in human tonsillar tissue.

Description

PKC alpha Monoclonal Antibody 133 / PRKCA Monoclonal Antibody recognizes protein kinase C alpha (PKC alpha), a conventional protein kinase C family member encoded by the PRKCA gene. This serine/threonine kinase participates in intracellular signaling pathways that regulate cell proliferation, differentiation, migration, adhesion, and survival. PKC alpha is activated by calcium and diacylglycerol, allowing it to coordinate cellular responses to receptor stimulation and changes in membrane-associated second messengers.

PRKCA contains an N-terminal regulatory region and a C-terminal catalytic domain. Its regulatory region includes tandem C1 domains that bind diacylglycerol and a C2 domain that facilitates calcium-dependent membrane association. Following activation of phospholipase C, increased intracellular calcium and diacylglycerol promote recruitment of PKC alpha to cellular membranes. These interactions relieve autoinhibition and permit phosphorylation of downstream substrates. Additional phosphorylation events regulate kinase maturation, stability, and catalytic activity.

PKC alpha contributes to cytoskeletal organization, cell junction maintenance, receptor trafficking, and responses to growth factors. Its substrates and interacting proteins participate in signaling networks involving MAPK, RAF1, and other regulators of cellular behavior. In epithelial tissues, PRKCA influences differentiation and adhesion, while in cardiovascular tissues it participates in pathways affecting contractility and remodeling. The kinase also contributes to immune cell signaling and inflammatory responses, reflecting its broad physiological importance.

Altered PRKCA activity has been investigated in several malignancies, including breast, lung, and prostate cancers. Depending on cellular context, PKC alpha signaling may promote proliferation and migration or contribute to growth inhibition and differentiation. Its sensitivity to phorbol esters, which mimic diacylglycerol, has also made it an important model for investigating lipid-dependent signaling and tumor-promoting mechanisms.

The PKC alpha Monoclonal Antibody from NSJ Bioreagents is a mouse monoclonal reagent, clone 133, directed against the C-terminal PRKCA epitope PQFVHPILQSAV. This defined epitope distinguishes it from polyclonal antibodies generated against larger or different regions of the protein. The PRKCA Monoclonal Antibody provides a targeted approach to examining protein kinase C alpha expression and distribution in research involving cellular signaling and disease-associated pathways.

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

Application Notes

Optimal dilution of the PKC alpha Monoclonal Antibody 133 / PRKCA Monoclonal Antibody should be determined by the researcher.

Immunogen

Full-length protein was used as the immunogen for the PKC alpha Monoclonal Antibody 133. The epitope has been mapped to amino acids PQFVHPILQSAV at the C terminus.

Storage

Store the PKC alpha Monoclonal Antibody 133 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Protein Kinase C alpha monoclonal antibody, PKC alpha antibody, PRKCA antibody, PKCA antibody, Protein Kinase C alpha antibody

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