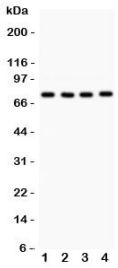
# PKC alpha Antibody / PRKCA Polyclonal Antibody (R31731)

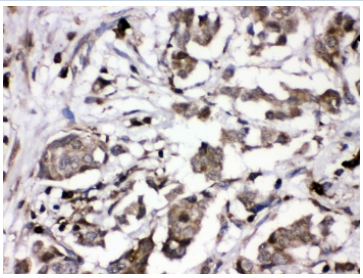
| Catalog No. | Formulation | Size |
|---|---|---|
| R31731 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

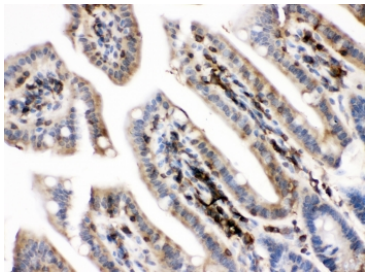
| | |
|---|---|
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity |
| **Buffer** | Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide |
| **UniProt** | P17252 |
| **RRID** | AB_3757099 |
| **Applications** | Western Blot : 0.5-1ug/ml<br>Immunohistochemistry (FFPE) : 1-2ug/ml |
| **Limitations** | This PKC alpha Antibody / PRKCA Polyclonal Antibody is available for research use only. |



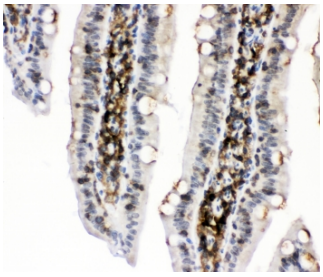

PKC alpha Antibody by WB in human and rodent samples. Western blot analysis using PRKCA Polyclonal Antibody demonstrates immunoreactive bands near the predicted molecular weight of approximately 77 kDa. Samples were loaded in the following order: lane 1, rat brain tissue; lane 2, mouse brain tissue; lane 3, mouse heart tissue; and lane 4, human 22Rv1 prostate carcinoma cells. A prominent band is visible near 77 kDa in all four lanes, consistent with detection of PKC alpha. The comparable electrophoretic migration across human, mouse, and rat samples supports the stated cross-species reactivity of this rabbit polyclonal antibody.



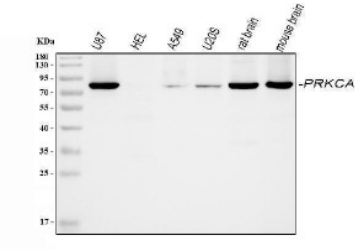
PKC alpha Antibody by IHC in human breast carcinoma. Immunohistochemistry of formalin-fixed, paraffin-embedded human breast carcinoma using PRKCA Polyclonal Antibody at 1 ug/ml demonstrates brown immunoreactivity in tumor cells. Staining is predominantly cytoplasmic, with variable intensity among individual cells. Sections underwent heat-induced epitope retrieval in 10 mM citrate buffer, pH 6.0, for 10-20 minutes before antibody incubation. The observed staining illustrates PKC alpha expression within the malignant epithelial tissue.



PKC alpha Antibody by IHC in mouse intestinal epithelium. Immunohistochemistry of formalin-fixed, paraffin-embedded mouse intestine using PRKCA Polyclonal Antibody at 1 ug/ml demonstrates brown immunoreactivity within intestinal epithelial cells. Staining is distributed throughout portions of the villous epithelium, with variable intensity among cells. Heat-induced epitope retrieval was performed using 10 mM citrate buffer, pH 6.0, for 10-20 minutes. The staining pattern illustrates PKC alpha expression in mouse intestinal tissue.



PKC alpha Antibody by IHC in rat intestinal epithelium. Immunohistochemistry of formalin-fixed, paraffin-embedded rat intestine using PRKCA Polyclonal Antibody at 1 ug/ml demonstrates brown staining in intestinal epithelial cells. Immunoreactivity is visible along the villous epithelium, with prominent cytoplasmic staining in subsets of cells. Sections were subjected to heat-induced epitope retrieval in 10 mM citrate buffer, pH 6.0, for 10-20 minutes before staining. These findings illustrate detection of PKC alpha in rat intestinal tissue.




PKC alpha Antibody by WB in human cell lines and rodent brain tissue. Western blot analysis using PRKCA Polyclonal Antibody demonstrates immunoreactive bands in human and rodent samples. Lane 1 contains human U87 cell lysate; lane 2, human HEL cell lysate; lane 3, human A549 cell lysate; lane 4, human U2OS cell lysate; lane 5, rat brain lysate; and lane 6, mouse brain lysate. Each lane was loaded with 30 ug of total protein under reducing conditions. Proteins were separated by 5-20% SDS-PAGE and transferred to nitrocellulose. The membrane was incubated overnight at 4oC with the primary antibody at 0.5 ug/ml. Prominent bands migrate near the expected 77 kDa molecular weight, with differences in signal intensity among samples.

## Description

PKC alpha Antibody / PRKCA Polyclonal Antibody targets protein kinase C alpha (PKC alpha), a conventional member of the protein kinase C family encoded by the PRKCA gene. This serine/threonine kinase participates in intracellular signaling pathways that regulate cell proliferation, differentiation, migration, survival, and responses to extracellular stimuli. PKC alpha is expressed in numerous tissues and contributes to the coordination of cellular processes through phosphorylation of downstream signaling proteins.

PKC alpha belongs to the conventional PKC subgroup, which also includes PKC beta and PKC gamma. These kinases share conserved regulatory and catalytic domains but exhibit differences in tissue distribution, substrate recognition, and physiological function. Activation of PKC alpha is regulated by calcium, diacylglycerol, and phospholipid interactions. Binding of these signaling molecules promotes conformational changes that relieve autoinhibition and facilitate kinase activity. Phosphorylation at regulatory sites is also important for enzyme maturation, stability, and catalytic competence.

PRKCA signaling influences cytoskeletal organization, cell adhesion, membrane trafficking, and receptor-mediated responses. In epithelial tissues, PKC alpha contributes to the regulation of cell junctions and differentiation, while in cardiovascular tissues it participates in pathways affecting cardiac contractility and remodeling. The kinase also interacts with signaling networks involving MAPK, NF-kappaB, and other regulators of cellular stress responses. Depending on the cellular environment, PKC alpha activity may promote or restrain proliferation, highlighting the context-dependent nature of its biological functions.

Altered PRKCA expression and signaling have been investigated in several cancers, including breast, lung, and prostate malignancies. Its influence on tumor behavior varies with tissue type, molecular background, and interactions with other signaling proteins. Researchers also study PKC alpha in neurological, inflammatory, and cardiovascular processes,

where changes in kinase activity can affect cellular homeostasis.

The PKC alpha Antibody from NSJ Bioreagents is a rabbit polyclonal reagent raised against a recombinant human PRKCA fragment corresponding to amino acids 153-342. It is suitable for investigating protein expression by western blot and immunohistochemistry in validated human, mouse, and rat samples. PRKCA Polyclonal Antibody detection supports studies examining the distribution and abundance of this signaling kinase across different tissues and experimental conditions.

Explore additional Signal Transduction Antibodies for investigating protein kinases and intracellular signaling pathways.

## Application Notes

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

## Immunogen

Human partial recombinant protein (AA 153-342) was used as the immunogen for this PKC alpha Antibody.

## Storage

After reconstitution, the PKC alpha Antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

## Alternate Names

Protein Kinase C alpha antibody, PRKCA antibody, PKC alpha antibody, Protein Kinase C alpha Polyclonal antibody


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