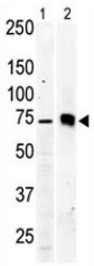
PKC beta 2 Antibody / PRKCB2 (F40137)

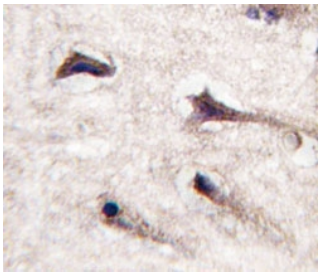
Catalog No.	Formulation	Size
F40137-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F40137-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Primate, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	P05771-2
Applications	Western Blot : 1:1000 IHC (Paraffin) : 1:10-1:50
Limitations	This PKC beta 2 antibody is available for research use only.



Western blot testing of PKC beta 2 antibody and Jurkat cell lysate (lane 1) and mouse brain tissue lysate (2).



IHC analysis of FFPE human brain tissue stained with PKC beta 2 antibody

Description

The PKC beta 2 antibody is designed for the detection of protein kinase C beta 2, also known as PRKCB2, a member of the classical protein kinase C family of calcium dependent serine threonine kinases. This isoform is produced by alternative splicing of the PKC beta gene, giving it a unique C terminal sequence that alters both localization and regulatory properties. Protein kinase C beta 2 is widely expressed in immune cells, vascular endothelium, and cardiac muscle, where it integrates second messenger signals to direct phosphorylation events that influence cell growth and survival.

Functionally, protein kinase C beta 2 plays a pivotal role in immune cell signaling. It modulates B cell receptor activation, supports antibody production, and contributes to T cell mediated cytokine release. In the cardiovascular system, PRKCB2 helps regulate vascular permeability and contractility. Chronic activation of this kinase has been associated with diabetic complications, including retinopathy, nephropathy, and cardiomyopathy, making it an important target for therapeutic research. The PRKCB2 antibody is therefore valuable in both basic and disease focused investigations.

The protein is organized into modular domains including C1 regions that bind diacylglycerol, a C2 region that senses calcium, and a catalytic kinase domain that phosphorylates downstream substrates. These features allow PKC beta 2 to respond rapidly to external stimuli and transduce signals controlling cytoskeletal remodeling, vesicle transport, and transcriptional regulation. Post translational phosphorylation of key residues further adjusts enzyme activity, ensuring precise control over signaling cascades.

Researchers use the PKC beta 2 antibody across multiple applications. In western blotting, it distinguishes this isoform from PKC beta 1 and other closely related kinases. In immunohistochemistry, the antibody reveals tissue specific expression patterns in immune and vascular samples. The reagent is also used in immunoprecipitation to study protein complexes and in translational models examining angiogenesis, tumor biology, and inflammatory pathways. These studies highlight how dysregulation of PKC beta 2 contributes to disease progression.

NSJ Bioreagents supplies the protein kinase C beta 2 antibody validated for reproducibility across assays. Its consistent performance supports researchers investigating signaling pathways, cardiovascular biology, and immune regulation, while providing a dependable tool for projects that require accurate detection of PRKCB2 in both normal physiology and pathological states.

Application Notes

Titration of the PKC beta 2 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 642-673 from the human protein was used as the immunogen for this PKC beta 2 antibody.

Storage

Aliquot the PKC beta 2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.