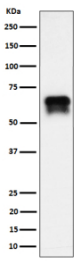
CDK16 Antibody / PCTK1 / PCTAIRE1 [clone 29C70] (FY12470)

Catalog No.	Formulation	Size
FY12470	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, Mouse, Rat
Format	Liquid
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	29C70
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	Q00536
Applications	Western Blot : 1:500-1:2000
Limitations	This CDK16 antibody is available for research use only.



Western blot analysis of PCTAIRE1/CDK16 expression in BxPC-3 cell lysate using CDK16 antibody. CDK16 (~56 kDa predicted) was detected as a doublet migrating at ~65–70 kDa, consistent with phosphorylation-dependent mobility shifts previously described for PCTAIRE1. The upper band likely represents a hyperphosphorylated form of CDK16.

Description

CDK16 antibody recognizes cyclin dependent kinase 16, also called PCTK1, PCTAIRE1, a member of the cyclin dependent kinase family encoded by the CDK16 gene. Unlike classical CDKs that regulate cell cycle checkpoints, CDK16 plays roles in vesicle trafficking, neuronal signaling, and spermatogenesis. It contains a conserved kinase domain and unique regulatory regions that interact with cyclins and adaptor proteins. CDK16 is highly expressed in brain and testis, consistent with its specialized functions in neurotransmission and reproduction.

CDK16 antibody is widely used in neuroscience and reproductive biology research. In neurons, CDK16 regulates exocytosis of synaptic vesicles, contributing to neurotransmitter release and synaptic plasticity. In germ cells, CDK16 supports spermatogenesis by modulating vesicular transport and cytoskeletal organization. Mutations or altered expression of CDK16 have been linked to intellectual disability, developmental delay, and reproductive disorders. By detecting CDK16, researchers can study how kinase signaling influences both neuronal communication and fertility.

The antibody is validated for western blotting, immunohistochemistry, immunofluorescence, and ELISA. In western blot assays, CDK16 antibody detects bands corresponding to expected isoforms, enabling quantitative comparisons across tissues. Immunohistochemistry demonstrates tissue localization in brain and testis, while immunofluorescence highlights cytoplasmic distribution in neurons and germ cells. ELISA applications allow measurement of CDK16 protein levels in experimental samples.

Beyond physiology, CDK16 has been implicated in cancer. Elevated expression has been reported in breast, lung, and prostate carcinoma, where it contributes to proliferation, survival, and invasion. CDK16 modulates signaling pathways that intersect with tumor suppressor networks, suggesting its role as a driver of oncogenesis. By applying CDK16 antibody, scientists can evaluate how kinase dysregulation promotes tumor development and whether CDK16 serves as a therapeutic target or biomarker.

CDK16 also participates in insulin secretion, immune responses, and cellular differentiation. Its broad influence highlights the importance of studying this kinase in diverse biological contexts. In experimental systems, CDK16 interacts with proteins that regulate exocytosis and endocytosis, linking it to fundamental processes of intracellular trafficking. This versatility makes CDK16 antibody a valuable reagent for both basic and translational research.

CDK16 antibody offered by NSJ Bioreagents delivers dependable specificity across platforms, supporting research into neuronal signaling, reproduction, cancer, and cellular communication. Its proven reliability ensures accurate detection of CDK16 in tissues and cell models, making it an essential tool for laboratories investigating kinase biology.

Application Notes

Optimal dilution of the CDK16 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human PCTAIRE1 was used as the immunogen for the CDK16 antibody.

Storage

Store the CDK16 antibody at -20oC.