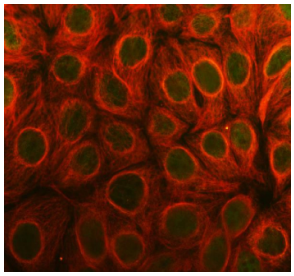
PAK6 Antibody / p21-activated kinase 6 (R30819)

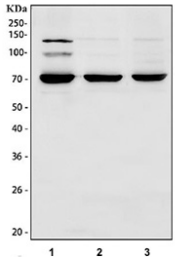
Catalog No.	Formulation	Size
R30819	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

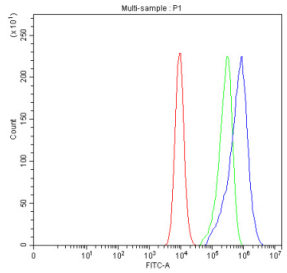
Availability	1-3 business days
Species Reactivity	Human, Rat, Mouse
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9NQU5
Localization	Cytoplasmic, Nuclear
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This PAK6 antibody is available for research use only.



Immunofluorescent staining of FFPE human Caco-2 cells with PAK6 antibody (green) and Alpha Tubulin mAb (red). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot analysis using PAK6 antibody. Lane 1: human Caco-2 whole cell lysates; Lane 2: rat brain tissue lysates; Lane 3: mouse brain tissue lysates. The predicted molecular weight of p21-activated kinase 6 is ~75 kDa, and a predominant band is observed at ~70 kDa, consistent with the commonly observed apparent molecular weight of PAK6. Additional higher-molecular-weight bands around ~100 kDa and ~140 kDa are also observed, which may reflect higher-order or modified PAK6 species in certain samples.



Flow cytometry analysis of fixed and permeabilized human Caco-2 cells with PAK6 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= PAK6 antibody.

Description

PAK6 antibody targets p21-activated kinase 6, encoded by the PAK6 gene. p21-activated kinase 6 is a member of the group II PAK family of serine-threonine kinases and functions as an important downstream effector of small Rho family GTPases. PAK6 participates in signal transduction pathways that regulate cytoskeletal organization, cell survival, and transcriptional responses. Unlike group I PAKs, PAK6 shows distinct regulatory features and tissue expression patterns, reflecting specialized biological roles. The protein is predominantly localized in the cytoplasm but can associate with the nucleus and other subcellular compartments depending on cellular context and signaling state.

Functionally, p21-activated kinase 6 contributes to the regulation of actin cytoskeleton dynamics, cell morphology, and intracellular signaling cascades. PAK6 can modulate kinase-dependent pathways that influence cell growth and stress responses, and it has also been reported to interact with nuclear receptors and transcriptional regulators. Through these interactions, PAK6 links extracellular signaling cues to changes in gene expression and cellular behavior. A PAK6 antibody supports studies focused on kinase signaling and regulation of cytoskeletal and transcriptional processes.

PAK6 expression is most prominent in brain and reproductive tissues, with additional expression reported in other cell types at lower levels. In the nervous system, PAK6 has been associated with neuronal signaling and synaptic regulation, suggesting roles in neural development and plasticity. Its expression pattern and regulatory properties distinguish it from other PAK family members and indicate that PAK6 may function in more specialized signaling contexts rather than broad housekeeping roles.

From a disease-relevance perspective, altered PAK6 expression or activity has been investigated in cancer biology and neurological research. Changes in PAK6 signaling have been associated with tumor progression and hormone-responsive cancers, potentially through effects on cell survival pathways and transcriptional regulation. PAK6 has also been studied in relation to neurodevelopmental processes and neurological disorders, reflecting its enriched expression in neural tissues. These findings have positioned PAK6 as a molecule of interest in studies of disease-associated signaling dysregulation.

At the molecular level, p21-activated kinase 6 contains a conserved C-terminal kinase domain and regulatory regions that control its activation and subcellular localization. Post-translational modifications and protein-protein interactions influence PAK6 activity and can result in variable electrophoretic behavior on SDS-PAGE. A PAK6 antibody supports research applications focused on kinase signaling, neural biology, and disease-associated changes in intracellular signaling pathways, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the PAK6 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the N-terminus of human PAK6 (QNFQHRVHTSFDPKEGK) was used as the immunogen for this PAK6 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the PAK6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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