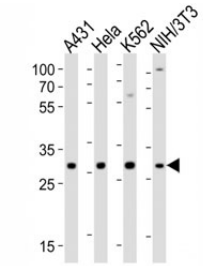
CDK5 Antibody (F52799)

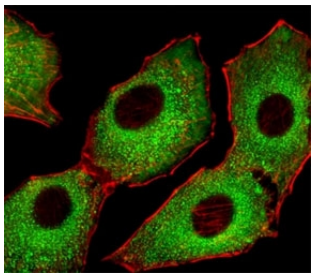
Catalog No.	Formulation	Size
F52799-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F52799-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

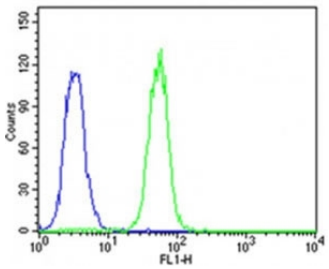
Availability	1-3 business days
Species Reactivity	Human, Mouse
Predicted Reactivity	Rat, Bovine, Xenopus
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	Q00535
Applications	Flow Cytometry: 1:25 Immunofluorescence: 1:25 Western blot: 1:1000
Limitations	This CDK5 antibody is available for research use only.



Western blot analysis of lysate from A431, HeLa, K562, mouse NIH3T3 cell line using CDK5 antibody



Fluorescent image of A549 cells stained with CDK5 antibody at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-rabbit IgG was used as the secondary Ab (green). Cytoplasmic actin was counterstained with Alexa Fluor 555 conjugated with Phalloidin (red).



Flow cytometric analysis of K562 cells using CDK5 antibody (green) compared to an isotype control of rabbit IgG (blue); Ab was diluted at 1:25 dilution. An Alexa Fluor 488 goat anti-rabbit IgG was used as the secondary Ab.

Description

Proline-directed serine/threonine-protein kinase essential for neuronal cell cycle arrest and differentiation and may be involved in apoptotic cell death in neuronal diseases by triggering abortive cell cycle re-entry. Regulates several neuronal development and physiological processes including neuronal survival, migration and differentiation, axonal and neurite growth, synaptogenesis, oligodendrocyte differentiation, synaptic plasticity and neurotransmission, by phosphorylating key proteins. Activated by interaction with CDK5R1 (p35) and CDK5R2 (p39), especially in post-mitotic neurons, and promotes CDK5R1 (p35) expression in an autostimulation loop. Phosphorylates many downstream substrates such as Rho and Ras family small GTPases (e.g. PAK1, RAC1, RHOA, CDC42) or microtubule-binding proteins (e.g. MAPT/TAU, MAP2, MAP1B), and modulates actin dynamics to regulate neurite growth and/or spine morphogenesis. Phosphorylates also exocytosis associated proteins such as MCAM/MUC18, SEPT5, SYN1, and CDK16/PCTAIRE1 as well as endocytosis associated proteins such as DNM1, AMPH and SYNJ1 at synaptic terminals. In the mature central nervous system (CNS), regulates neurotransmitter movements by phosphorylating substrates associated with neurotransmitter release and synapse plasticity; synaptic vesicle exocytosis, vesicles fusion with the presynaptic membrane, and endocytosis. Promotes cell survival by activating anti-apoptotic proteins BCL2 and STAT3, and negatively regulating of JNK3/MAPK10 activity.[UniProt]

For additional information on CDK5 biology, neuronal signaling and our Neuronal Protein Kinase Antibody, visit our CDK5 Antibody page.

Application Notes

Titration of the CDK5 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

This CDK5 antibody was produced from a rabbit immunized with a KLH conjugated synthetic peptide between 254-289 amino acids from the C-terminal region of human CDK5.

Storage

Aliquot the CDK5 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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