

CDK5 monoclonal antibody

Catalog: MB66517

Host: Mouse

Reactivity: Human, Mouse, Rat, Monkey

BackGround:

Cyclin-dependent kinases (CDKs) are serine/threonine kinases that are activated by cyclins and govern eukaryotic cell cycle progression. While CDK5 shares high sequence homology with its family members, it is thought mainly to function in postmitotic neurons to regulate the cytoarchitecture of these cells. Analogous to cyclins, the regulatory subunits p35 and p39 associate with and activate CDK5 despite the lack of sequence homology. CDK5 is ubiquitously expressed, with high levels of kinase activity detected primarily in the nervous system due to the narrow expression pattern of p35 and p39 in post-mitotic neurons. A large number of CDK5 substrates have been identified although no substrates have been specifically attributed to p35 or p39. Substrates of CDK5 include p35, PAK1, Src, β -catenin, tau, neurofilament-H, neurofilament-M, synapsin-1, APP, DARPP32, PP1-inhibitor, and Rb. p35 is rapidly degraded ($T_{1/2} < 20$ min) by the ubiquitin-proteasome pathway. However, p35 stability increases as CDK5 kinase activity decreases, likely as a result of decreased phosphorylation of p35 at Thr138 by CDK5. Proteolytic cleavage of p35 by calpain produces p25 upon neurotoxic insult, resulting in prolonged activation of CDK5 by p25. Research studies have shown accumulation of p25 in neurodegenerative diseases, such as Alzheimer's disease and amyotrophic lateral sclerosis (ALS).

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 35 kDa

Swiss-Prot:

Q00535

Purification&Purity:

The antibody was purified by immunogen affinity chro-

matography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/100)

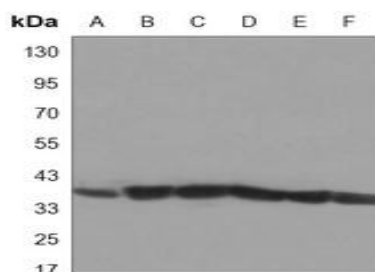
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

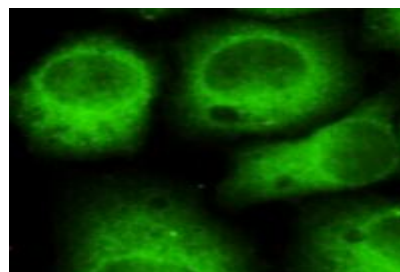
Specificity:

Recognizes endogenous levels of CDK5 protein.

DATA:



Western blot analysis of CDK5 expression in NIH3T3 (A), HeLa (B), PC12 (C), COS7 (D), Jurkat (E), K562 (F) whole cell lysates.



Immunofluorescent analysis of CDK5 staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Note:

For research use only, not for use in diagnostic procedure.

Bioworld Technology, Inc.

Add: 1660 South Highway 100, Suite 500 St. Louis Park, MN 55416, USA.

Email: info@bioworld.com

Tel: 6123263284

Fax: 6122933841

Bioworld technology, co. Ltd.

Add: No 9, weidi road Qixia District Nanjing, 210046, P. R. China.

Email: info@biogot.com

Tel: 0086-025-68037686

Fax: 0086-025-68035151



PRODUCT DATA SHEET

Bioworld Technology, Inc.

Bioworld Technology, Inc.

Add: 1660 South Highway 100, Suite 500 St. Louis Park,
MN 55416, USA.

Email: info@bioworld.com

Tel: 6123263284

Fax: 6122933841

Bioworld technology, co. Ltd.

Add: No 9, weidi road Qixia District Nanjing, 210046,
P. R. China.

Email: info@biogot.com

Tel: 0086-025-68037686

Fax: 0086-025-68035151