

Anti-Cyclin-dependent-like kinase 5 Cdk5 Antibody Picoband®

Catalog Number: PA1548

About CDK5

CDK5, Cyclin-Dependent Kinase5, is also known as PSSALRE. The p34 (CDC2) protein kinase regulates important transitions in the eukaryotic cell cycle. The PSSALRE expression is in all human tissues and cell lines tested. The CDK5 gene is mapped to chromosome 7q36. Cyclin-dependent kinase-5 is predominantly expressed in neurons where it phosphorylates both high molecular weight neurofilaments and microtubule-associated protein tau. CDK5 is required for proper development of the mammalian central nervous system. To be activated, CDK5 must associate with its regulatory subunit, p35 (CDK5R1). CDK5 can phosphorylate DARPP32 at threonine-75, converting it into an inhibitor of PKA.

Overview

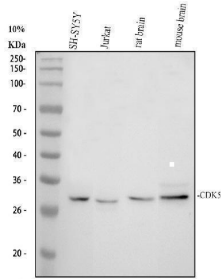
Product Name	Anti-Cyclin-dependent-like kinase 5 Cdk5 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Cyclin-dependent-like kinase 5 Cdk5 Antibody catalog # PA1548. Tested in Flow Cytometry, ICC/IF, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q00535

Technical Details

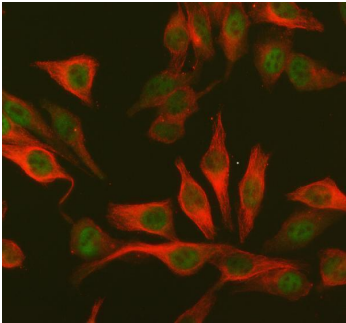
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Cdk5, identical to the related rat and mouse sequence.
Recommended Detection Systems	Boster recommends ECL Plus Western Blotting Substrate (Catalog # AR1196-200) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry(Fixed), 1-3 ug/1x10 ⁶ cells, Human

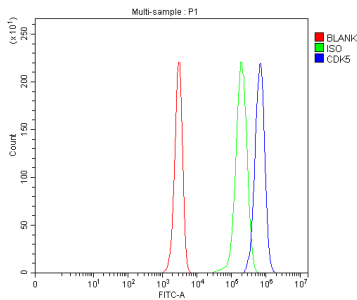
Anti-Cyclin-dependent-like kinase 5 Cdk5 Antibody Picoband® (PA1548) Images



Western blot analysis of Cdk5 using anti-Cdk5 antibody (PA1548). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: rat brain tissue lysates, Lane 4: mouse brain tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Cdk5 antigen affinity purified polyclonal antibody (PA1548) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for Cdk5 at approximately 33 kDa. The expected band size for Cdk5 is at 33 kDa.



IF analysis of Cdk5 using anti-Cdk5 antibody (PA1548) and anti-Alpha Tubulin antibody (M03989-3). Cdk5 was detected in an immunocytochemical section of HeLa cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Cdk5 Antibody (PA1548) and mouse anti-Alpha Tubulin antibody (M03989-3) overnight at 4°C. Fluoro488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of Jurkat cells using anti-Cdk5 antibody (PA1548). Overlay histogram showing Jurkat cells stained with PA1548 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Cdk5 Antibody (PA1548, 1 ug/1x10⁶ cells) for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

1. PubMed ID: 25206467, A new treatment for cognitive disorders related toin uteroexposure to alcohol

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