

Product datasheet

Anti-CDK5 antibody [EP715Y] - BSA and Azide free ab220214


KO VALIDATED

Recombinant

RabMAb

[7 References](#) [6 Images](#)

Overview

| | |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name | Anti-CDK5 antibody [EP715Y] - BSA and Azide free |
| Description | Rabbit monoclonal [EP715Y] to CDK5 - BSA and Azide free |
| Host species | Rabbit |
| Tested applications | Suitable for: Flow Cyt (Intra), WB, IP, ICC/IF |
| Species reactivity | Reacts with: Mouse, Rat, Human Predicted to work with: Chicken  |
| Immunogen | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| Positive control | WB: HeLa whole cell lysate, NIH3T3 whole cell lysate, PC-12 whole cell lysate IP: ab220214 + SH-SY5Y whole cell lysate. ICC/IF: SH-SY5Y (Human neuroblastoma epithelial cell) |
| General notes | <p>ab220214 is the carrier-free version of ab40773.</p> <p>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</p> <p>Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.</p> <p>This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.</p> <p>Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.</p> <p>This product is compatible with the Maxpar[®] Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar[®] is a trademark of Fluidigm Canada Inc.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility |

- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free production

For more information [see here](#).

Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMAb[®] patents](#).

Properties

| | |
|-----------------------------|-----------------------------------------------|
| Form | Liquid |
| Storage instructions | Shipped at 4°C. Store at +4°C. Do Not Freeze. |
| Storage buffer | pH: 7.2 Constituent: PBS |
| Carrier free | Yes |
| Purity | Protein A purified |
| Clonality | Monoclonal |
| Clone number | EP715Y |
| Isotype | IgG |

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab220214 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Flow Cyt (Intra) | | Use at an assay dependent concentration. ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |
| WB | | Use at an assay dependent concentration. Detects a band of approximately 33 kDa (predicted molecular weight: 33 kDa). |
| IP | | Use at an assay dependent concentration. |
| ICC/IF | | Use at an assay dependent concentration. |

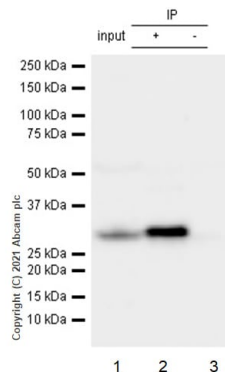
Target

| | |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Function | Probably involved in the control of the cell cycle. Interacts with D1 and D3-type G1 cyclins. Can phosphorylate histone H1, tau, MAP2 and NF-H and NF-M. Also interacts with p35 which activates the kinase. |
| Sequence similarities | Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily. Contains 1 protein kinase domain. |

Cellular localization

Cytoplasm. Cell projection > lamellipodium. Cell projection > growth cone. In axonal growth cone with extension to the peripheral lamellipodia.

Images



Immunoprecipitation - Anti-CDK5 antibody [EP715Y]
- BSA and Azide free (ab220214)

This data was developed using ab220214, the same antibody clone in a different buffer formulation.

Purified ab220214 at 1:20 dilution (1 µg) immunoprecipitating CDK5 in SH-SY5Y whole cell lysate.

Lane 1 (input): SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysate 10 µg.

Lane 2 (+): ab220214 + SH-SY5Y whole cell lysate.

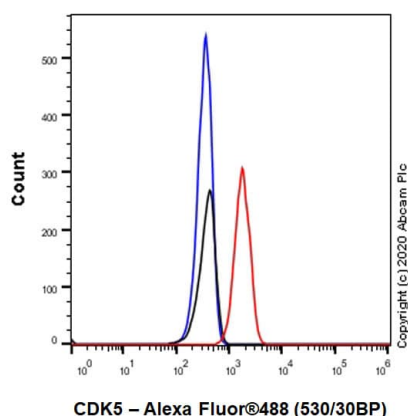
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab40773** in SH-SY5Y whole cell lysate.

VeriBlot for IP Detection Reagent (HRP)TM (**ab131366**) (1:1000 dilution) was used for Western blotting.

Blocking Buffer and concentration: 5% NFDm/TBST.

Diluting buffer and concentration: 5% NFDm/TBST.

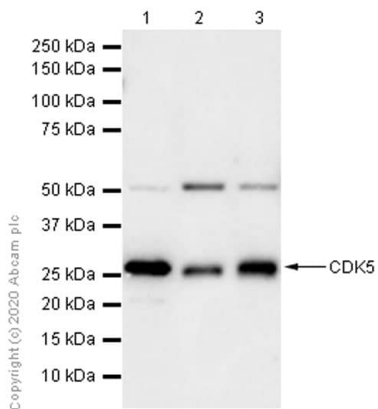
Observed band size: 33 kDa



Flow Cytometry (Intracellular) - Anti-CDK5 antibody
[EP715Y] - BSA and Azide free (ab220214)

This data was developed using ab220214, the same antibody clone in a different buffer formulation.

Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling CDK5 with Purified ab220214 at 1:20 dilution (10 µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa FluorTM 488, **ab150077**) secondary antibody was used at 1:2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-CDK5 antibody [EP715Y] - BSA and Azide free (ab220214)

All lanes : Anti-CDK5 antibody [EP715Y] ([ab40773](#)) at 1/2000 dilution (Purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate

Lane 3 : PC-12 (Rat adrenal gland pheochromocytoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

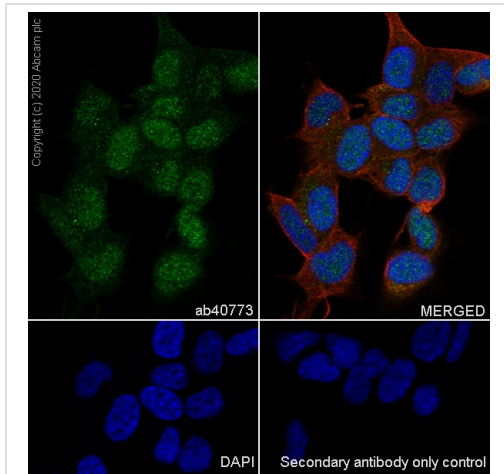
Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 33 kDa

Observed band size: 33 kDa

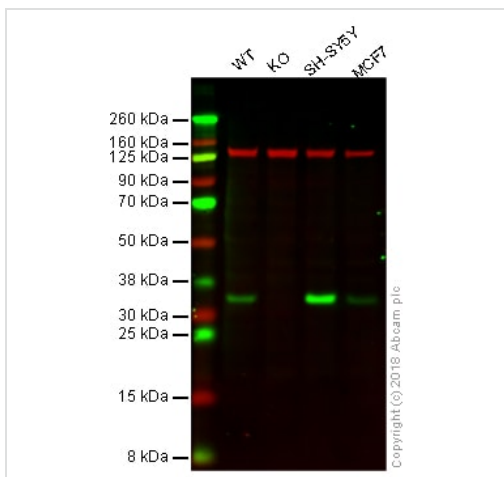
Blocking and dilution buffer: 5% NFDM/TBST.



Immunocytochemistry/ Immunofluorescence - Anti-CDK5 antibody [EP715Y] - BSA and Azide free (ab220214)

This data was developed using **ab40773**, the same antibody clone in a different buffer formulation.

Immunocytochemistry analysis of SH-SY5Y (Human neuroblastoma epithelial cell) cells labeling CDK5 with Purified **ab40773** at 1/50 dilution (4.6 µg/mL). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Western blot - Anti-Cdk5 antibody [EP715Y] - BSA and Azide free (ab220214)

All lanes : Anti-CDK5 antibody [EP715Y] (**ab40773**) at 1/2000 dilution (Unpurified)

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : CDK5 knockout HAP1 whole cell lysate

Lane 3 : SHSY5Y whole cell lysate

Lane 4 : MCF7 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 33 kDa





This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab40773**).

Lanes 1 - 4: Merged signal (red and green). Green - **ab40773** observed at 33 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

ab40773 was shown to specifically react with Cdk5 in wild-type HAP1 cells as signal was lost in CDK5 knockout cells. Wild-type and CDK5 knockout samples were subjected to SDS-PAGE. Ab40773 and **ab130007** (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/2000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary

antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.

Why choose a recombinant antibody?

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Research with confidence Consistent and reproducible results</p> |  <p>Long-term and scalable supply Recombinant technology</p> |
|  <p>Success from the first experiment Confirmed specificity</p> |  <p>Ethical standards compliant Animal-free production</p> |

Anti-Cdk5 antibody [EP715Y] - BSA and Azide free (ab220214)

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