

Anti-Cdc25B Picoband Antibody
Catalog # ABO12176**Specification**

Anti-Cdc25B Picoband Antibody - Product Information

Application	WB, IHC-P
Primary Accession	P30305
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for M-phase inducer phosphatase 2(CDC25B) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Cdc25B Picoband Antibody - Additional Information

Gene ID 994

Other Names

M-phase inducer phosphatase 2, 3.1.3.48, Dual specificity phosphatase Cdc25B, CDC25B, CDC25HU2

Calculated MW

64987 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Mouse, Rat, Human, By Heat
Western blot, 0.1-0.5 µg/ml, Rat, Human

Subcellular Localization

Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole.

Protein Name

M-phase inducer phosphatase 2

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

E.coli-derived human Cdc25B recombinant protein (Position: M119-L248). Human Cdc25B shares 71% and 68.2% amino acid (aa) sequence identity with mouse and rat Cdc25B, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Sequence Similarities

Belongs to the MPI phosphatase family.

Anti-Cdc25B Picoband Antibody - Protein Information

Name CDC25B

Synonyms CDC25HU2

Function

Tyrosine protein phosphatase which functions as a dosage- dependent inducer of mitotic progression (PubMed: [1836978](http://www.uniprot.org/citations/1836978), PubMed: [20360007](http://www.uniprot.org/citations/20360007)). Directly dephosphorylates CDK1 and stimulates its kinase activity (PubMed: [20360007](http://www.uniprot.org/citations/20360007)). Required for G2/M phases of the cell cycle progression and abscission during cytokinesis in a ECT2-dependent manner (PubMed: [17332740](http://www.uniprot.org/citations/17332740)). The three isoforms seem to have a different level of activity (PubMed: [1836978](http://www.uniprot.org/citations/1836978)).

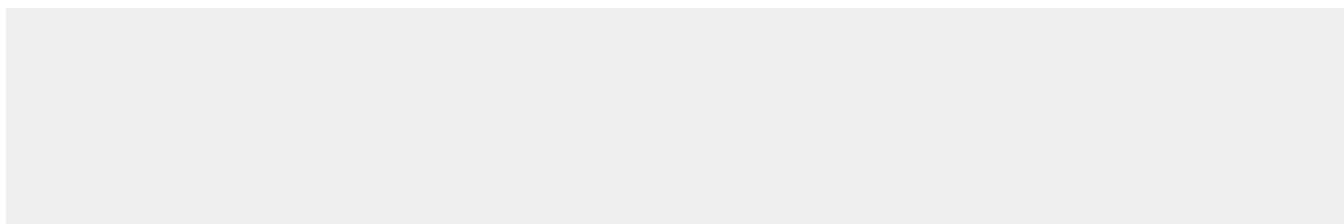
Cellular Location

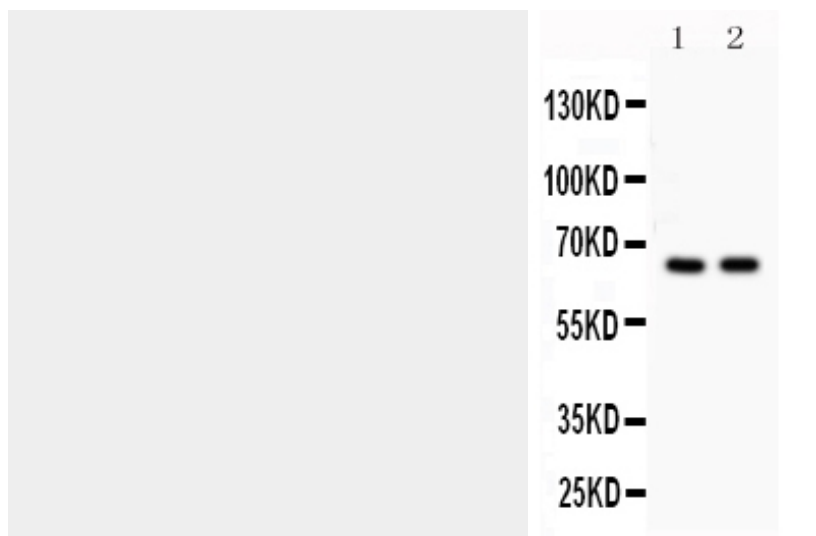
Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole

Anti-Cdc25B Picoband Antibody - Protocols

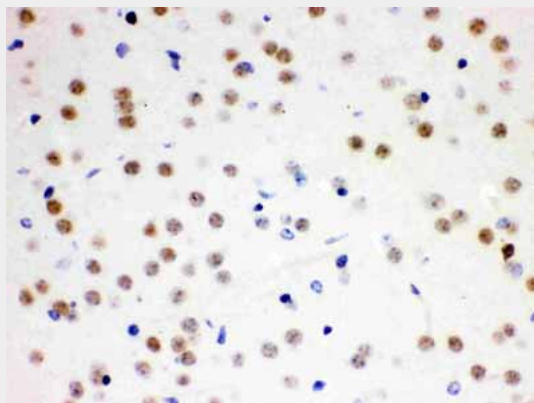
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

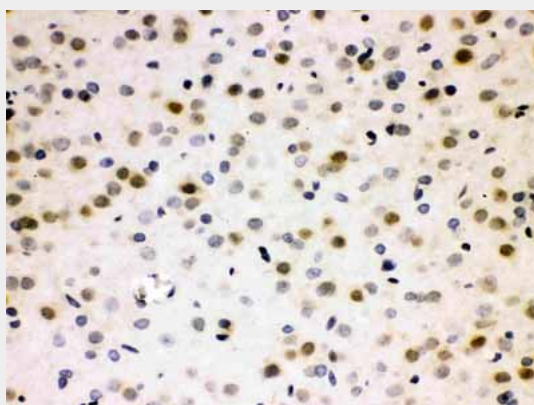
Anti-Cdc25B Picoband Antibody - Images



Anti- Cdc25B Picoband antibody, ABO12176, Western blotting All lanes: Anti Cdc25B (ABO12176) at 0.5ug/ml Lane 1: Rat Liver Tissue Lysate at 50ug Lane 2: Rat Testis Tissue Lysate at 50ug Predicted bind size: 65KD Observed bind size: 65KD



Anti- Cdc25B Picoband antibody, ABO12176, IHC(P) IHC(P): Mouse Brain Tissue



Anti- Cdc25B Picoband antibody, ABO12176, IHC(P) IHC(P): Rat Brain Tissue

Anti-Cdc25B Picoband Antibody - Background

Central to the onset of mitosis in all eukaryotic cells is the CDC2 protein kinase, the activity of which is negatively regulated by phosphorylation and positively activated by dephosphorylation. The latter function is carried out by a specific phosphatase, CDC25. At least 3 human CDC25 genes code for the A, B, and C forms of CDC25. CDC25B is mapped to 20p13. P38 kinase has a critical role

in the initiation of a G2 delay after ultraviolet radiation. Inhibition of p38 blocks the rapid initiation of this checkpoint in both human and murine cells after ultraviolet radiation. In vitro, p38 binds and phosphorylates CDC25B at serines 309 and 361, and CDC25C at serine-216; phosphorylation of these residues is required for binding to 14-3-3 proteins. In vivo, inhibition of p38 prevents both phosphorylation of CDC25B at serine-309 and 14-3-3 binding after ultraviolet radiation, and mutation of this site is sufficient to inhibit the checkpoint initiation. Regulation of CDC25B phosphorylation by p38 is a critical event for initiating the G2/M checkpoint after ultraviolet radiation.