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Anti-Cdc25B Antibody

Catalog # ABO10863

Product Information

Application	WB, IHC-P
Primary Accession	P30305
Host	Rabbit
Reactivity	Human, 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;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Rat, Human
Subcellular Localization	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole.
Source	Eukaryota
Protein Name	M-phase inducer phosphatase 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Cdc25B(541-559aa DYRPMNHEAFKDELKTFRL), different from the related mouse sequence by three amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, 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.

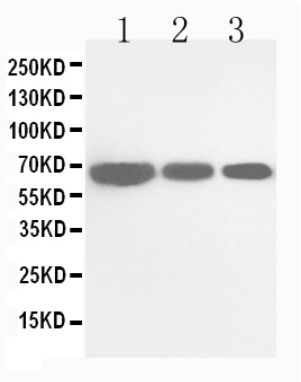
Protein Information

Name	CDC25B
Synonyms	CDC25HU2
Function	Tyrosine protein phosphatase which functions as a dosage- dependent inducer of mitotic progression (PubMed:1836978, PubMed:20360007). Directly dephosphorylates CDK1 and stimulates its kinase activity (PubMed:20360007). Required for G2/M phases of the cell cycle progression and abscission during cytokinesis in a ECT2-dependent manner (PubMed:17332740). The three isoforms seem to have a different level of activity (PubMed:1836978).
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole

Background

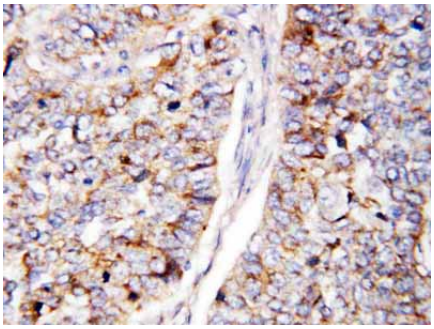
Central to the onset of mitosis in all eukaryotic cells is the CDC2 protein kinase, the activity of which is negatively regulated by phosphorylation and positively activated by dephosphorylation. The latter function is carried out by a specific phosphatase, CDC25. At least 3 human CDC25 genes code for 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.

Images



Anti-Cdc25B antibody, ABO10863, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Rat Kidney Tissue LysateLane 3: Rat Lung Tissue Lysate

Anti-Cdc25B antibody, ABO10863, IHC(P)IHC(P): Human Lung Cancer Tissue



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