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Phospho-CDC25B(S353) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3054a

Product Information

Application	WB, IHC-P, E
Primary Accession	P30305
Reactivity	Human, Rat, Mouse
Predicted	Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB7935
Calculated MW	64987

Additional Information

Gene ID	994
Other Names	M-phase inducer phosphatase 2, Dual specificity phosphatase Cdc25B, CDC25B, CDC25HU2
Target/Specificity	This CDC25B Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S353 of human CDC25B.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-CDC25B(S353) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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

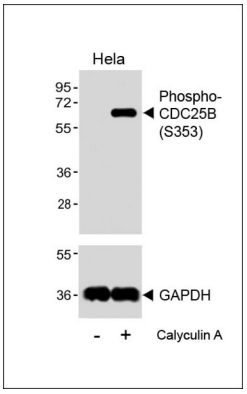
Background

CDC25B is a member of the CDC25 family of phosphatases. CDC25B activates the cyclin dependent kinase CDC2 by removing two phosphate groups and it is required for entry into mitosis. CDC25B shuttles between the nucleus and the cytoplasm due to nuclear localization and nuclear export signals. The protein is nuclear in the M and G1 phases of the cell cycle and moves to the cytoplasm during S and G2. CDC25B has oncogenic properties, although its role in tumor formation has not been determined.

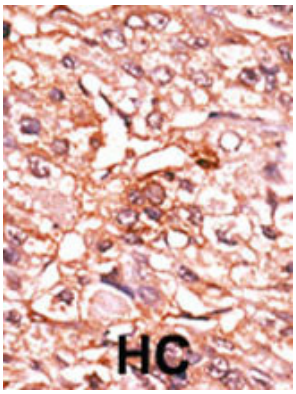
References

Uchida, S., et al., Biochem. Biophys. Res. Commun. 316(1):226-232 (2004). Ito, Y., et al., Int. J. Mol. Med. 13(3):431-435 (2004). Wu, W., et al., Cancer Res. 63(19):6195-6199 (2003). Mils, V., et al., Exp. Cell Res. 285(1):99-106 (2003). Theis-Febvre, N., et al., Oncogene 22(2):220-232 (2003).

Images

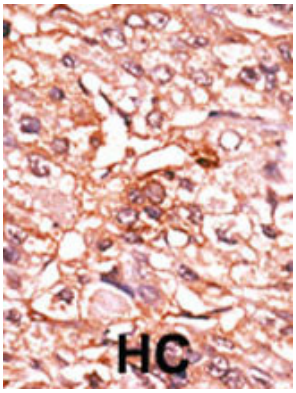


Western blot analysis of lysates from Hela cell line, untreated or treated with 20% FBS + 100nM Calyculin A, 15min, using Phospho-CDC25B(S353) Antibody(upper) or GAPDH(lower).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma

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