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CDC20 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9138a

Product Information

Application	WB, FC, E
Primary Accession	Q12834
Other Accession	Q5H7C0
Reactivity	Human
Predicted	Pig, Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB23122
Calculated MW	54723
Antigen Region	57-84

Additional Information

Gene ID	991
Other Names	Cell division cycle protein 20 homolog, p55CDC, CDC20
Target/Specificity	This CDC20 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 57-84 amino acids from the N-terminal region of human CDC20.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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	CDC20 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CDC20
Function	Substrate-specific adapter and activator of the anaphase promoting complex/cyclosome (APC/C) that confers substrate specificity by binding to substrates and targeting them to the APC/C for ubiquitination and

degradation (PubMed:9734353, PubMed:27030811, PubMed:29343641, PubMed:27120157, PubMed:27509861). Essential for activating APC/C in the metaphase/anaphase transition of the cell cycle, targeting the degradation of cyclin B and securin (PubMed:27120157, PubMed:27509861, PubMed:32666501). Recognizes and binds the destruction box (D box), KEB box and ABBA motifs on protein substrates (PubMed:29343641, PubMed:27509861). The CDC20-APC/C complex positively regulates the formation of synaptic vesicle clustering at active zone to the presynaptic membrane in postmitotic neurons (By similarity). CDC20-APC/C-induced degradation of NEUROD2 induces presynaptic differentiation (By similarity). The CDC20-APC/C complex promotes proper dilation formation and radial migration by degrading CCDC41 (By similarity). Component of the mitotic checkpoint complex (MCC), which inhibits APC/C and delays chromosome segregation until all chromosomes are properly attached to the mitotic spindle (PubMed:27509861). The MCC, which consists of CDC20, MAD2L1/MAD2, BUB1B/BUBR1 and BUB3, is a key player of the spindle assembly checkpoint (PubMed:27509861). The MCC-bound APC/C complex is inactive and this delays the metaphase/anaphase transition (PubMed:9811605, PubMed:9637688, PubMed:27509861). When the spindle assembly checkpoint is silenced, the MCC-APC/C complex recruits the E2 enzyme UBCH10 and triggers the auto-ubiquitination of CDC20 in the MCC, thereby reactivating APC/C for transition into anaphase (PubMed:27509861).

Cellular Location

Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle pole

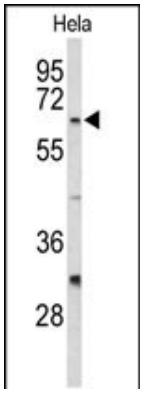
Background

CDC20 is an activating regulatory factor for the APC/C (anaphase promoting complex/cyclosome). It activates the ubiquitination activity of the APC/C. CDC20 confers a strict destruction-box (D-box) dependence on APC. Levels of CDC20, as well as its binding to APC, peak in mitosis and decrease drastically at early G1.

References

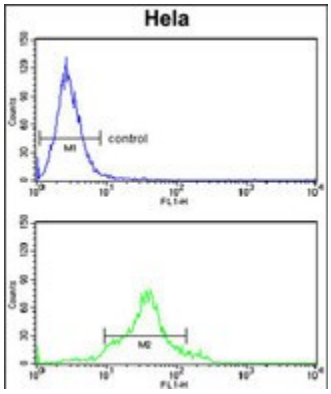
Ge S., et.al., Cell Cycle 8:167-171(2009).
Gauci S., et.al., Anal. Chem. 81:4493-4501(2009).

Images

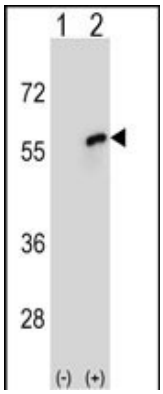


Western blot analysis of CDC20 Antibody (N-term) (Cat. #AP9138a) in Hela cell line lysates (35ug/lane). CDC20 (arrow) was detected using the purified Pab.

CDC20 Antibody (N-term) (Cat. #AP9138a) flow cytometry analysis of Hela cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated



goat-anti-rabbit secondary antibodies were used for the analysis.



Western blot analysis of CDC20 (arrow) using rabbit polyclonal CDC20 Antibody (N-term) (Cat. #AP9138a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CDC20 gene.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.