

Rabbit CDC20 Polyclonal Antibody | anti-CDC20 antibody

CDC20 Antibody

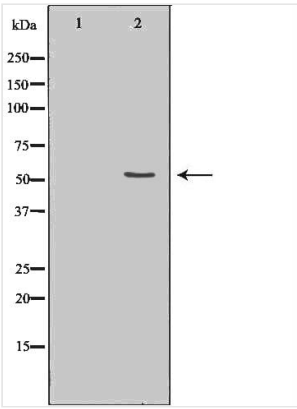
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326138	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

CDC20; Polyclonal Antibody; CDC20 Antibody; bA276H19.3; Cdc 20; CDC20 cell division cycle 20 homolog; CDC20_HUMAN; CDC20A; Cell division cycle 20; Cell division cycle 20 homolog (S. cerevisiae); Cell division cycle 20 homolog; Cell division cycle protein 20 homolog; fizzy; MGC102824; p55CDC; anti-CDC20 antibody

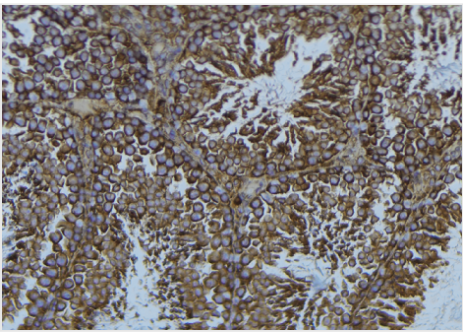
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	CDC20 antibody detects endogenous levels of total CDC20
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	499
Applicable Applications for anti-CDC20 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human CDC20
Subcellular Location	Cytoskeleton
Tissue Specificity	Synthesis is initiated at G1/S, protein level peaks in M phase and protein is abruptly degraded at M/G1 transition.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



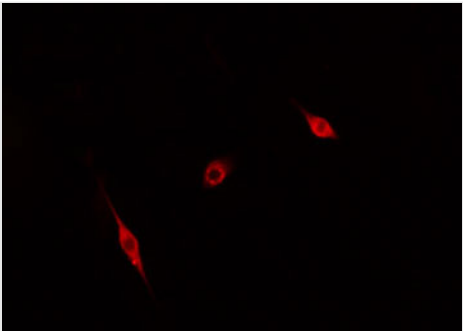
WB (Western Blot)

Western blot analysis of 293 lysate using CDC20 antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326138 at 1/100 staining Mouse testis tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IF (Immunofluorescence)

AAA326138 staining HeLa cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-CDC20 antibody	Description: The cell division cycle demands accuracy to avoid the accumulation of genetic damage. This process is controlled by molecular circuits called checkpoints that are common to all eukaryotic cells (1). Checkpoints monitor DNA integrity and cell growth prior to replication and division at the G1/S and G2/M transitions, respectively. The cdc2-cyclin B kinase is pivotal in regulating the G2/M transition (2, 3). Cdc2 is phosphorylated at Thr14 and Tyr15 during G2-phase by the kinases Wee1 and Myt1, rendering it inactive. The tumor suppressor protein retinoblastoma (Rb) controls progression through the late G1 restriction point (R) and is a major regulator of the G1/S transition (4). During early and mid G1-phase, Rb binds to and represses the transcription factor E2F (5). The phosphorylation of Rb late in G1-phase by CDKs induces Rb to dissociate from E2F, permitting the transcription of S-phase-promoting genes. In vitro, Rb can be phosphorylated at multiple sites by cdc2, cdk2, and cdk4/6 (6-8). DNA damage triggers both the G2/M and the G1/S checkpoints. DNA damage activates the DNA-PK/ATM/ATR kinases, which phosphorylate Chk at Ser345 (9), Chk2 at Thr68 (10) and p53 (11). The Chk kinases inactivate cdc25 via phosphorylation at Ser216, blocking the activation of cdc2. CDC20 binds to and activates the anaphase-promoting complex (APC) during mitosis and G1 phase of the cell cycle (12). Moreover, CDC20 is necessary for ubiquitin ligase activity of the APC/cyclosome (APC/C). In metaphase MAD2L1 inactivates the CDC20-APC/C complex, while in anaphase this inhibition is lost and CDC20-APC/C degrades its substrates (13). p53 and p21 suppress expression of CDC20 upon genotoxic stresses and ectopic introduction of p53. siRNA mediated knock-down of CDC20 in cancer cells leads to attenuated cell growth and induces G(2)/M arrest, suggesting that CDC20 is a possible therapeutic target of cancer (14). Organization of neuronal circuits requires presynaptic axonal differentiation and synapse formation. Function: Required for full ubiquitin ligase activity of the anaphase promoting complex/cyclosome (APC/C) and may confer substrate specificity upon the complex. Is regulated by MAD2L1: in metaphase the MAD2L1-CDC20-APC/C ternary complex is inactive and in anaphase the CDC20-APC/C binary complex is active in degrading substrates. The CDC20-APC/C complex positively regulates the formation of synaptic vesicle clustering at active zone to the presynaptic membrane in postmitotic neurons. CDC20-APC/C-induced degradation of NEUROD2 induces presynaptic differentiation. Subunit Structure: Found in a complex with CDC20, CDC27, SPATC1 and TUBG1. Interacts with NEUROD2 and SPATC1 (By similarity). Interacts with MAD2L1 and BUB1B. The phosphorylated form interacts with APC/C. Interacts with NINL. May interact with MAD2L2. Interacts with CDK5RAP2 and SIRT2. Interacts with isoform 1 of NEK2. Interacts with HSF1 (via phosphorylated form); this interaction occurs in mitosis in a MAD2L1-dependent manner and prevents PLK1-stimulated degradation of HSF1 by blocking the recruitment of the SCF(BTRC) ubiquitin ligase complex (PubMed:18794143). Post-translational Modifications: Acetylated. Deacetylated at Lys-66 by SIRT2; deacetylation enhances the interaction of CDC20 with CDC27, leading to activation of anaphase promoting complex/cyclosome (APC/C). Phosphorylated during mitosis, probably by maturation promoting factor (MPF). Phosphorylated by BUB1 at Ser-41; Ser-72; Ser-92; Ser-153; Thr-157 and Ser-161. Phosphorylated by NEK2. Dephosphorylated by CTDP1. Ubiquitinated and degraded by the proteasome during spindle assembly checkpoint. Deubiquitinated by USP44, leading to stabilize the MAD2L1-CDC20-APC/C ternary complex, thereby preventing premature activation of the APC/C. Ubiquitinated at Lys-490 during prometaphase. Ubiquitination at Lys-485 and Lys-490 has no effect on its ability to bind the APC/C complex. Similarity: Belongs to the WD repeat CDC20/Fizzy family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	118402582
NCBI GeneID	991
NCBI Accession #	NP_001246.2
NCBI GenBank Nucleotide #	NM_001255.2
UniProt Accession #	Q12834; Q5JUY4; Q9BW56; Q9UQI9; B2R6Z6; D3DPJ1
Molecular Weight	Observed: 55 kDa Predicted: 55 kDa
NCBI Official Full Name	cell division cycle protein 20 homolog
NCBI Official Synonym Full Names	cell division cycle 20
NCBI Official Symbol	CDC20
NCBI Official Synonym Symbols	CDC20A; p55CDC; bA276H19.3

NCBI Protein Information	cell division cycle protein 20 homolog
UniProt Protein Name	Cell division cycle protein 20 homolog
UniProt Gene Name	CDC20

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/cdc20-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/326138>