

Rabbit CCNB1 Polyclonal Antibody | anti-CCNB1 antibody

CCNB1 Antibody

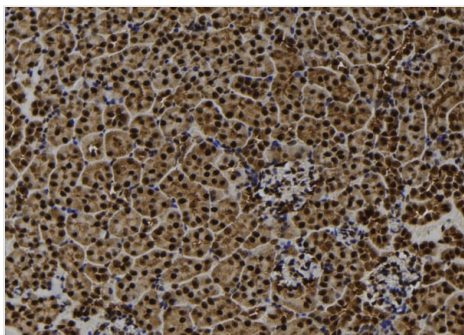
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326548	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

CCNB1; Polyclonal Antibody; CCNB1 Antibody; CCNB 1; CCNB; ccnb1; CCNB1_HUMAN; Cyclin B1; G2 mitotic specific cyclin B1; G2/mitotic-specific cyclin-B1; anti-CCNB1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	CCNB1 antibody detects endogenous levels of total CCNB1
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	433
Applicable Applications for anti-CCNB1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthetic peptide of human CCNB1
Subcellular Location	Cytoplasm. Nucleus. Cytoplasm > Cytoskeleton > Centrosome.
Tissue Specificity	Accumulates steadily during G2 and is abruptly destroyed at mitosis.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



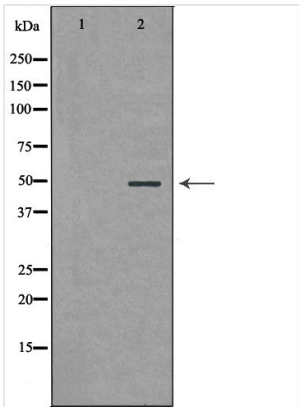
IHC (Immunohistochemisry)

AAA326548 at 1/100 staining Mouse kidney 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)

AAA326548 staining NIH-3T3 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.



WB (Western Blot)

Western blot analysis of extracts of HepG2, using CCNB1 antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-CCNB1 antibody

Description: Cyclins are a family of proteins that activate specific cyclin-dependent kinases required for progression through the cell cycle. The entry of all eukaryotic cells into mitosis is regulated by activation of cdc2/cdk1 at the G2/M transition. This activation is a multi-step process that begins with the binding of the regulatory subunit, cyclin B1, to cdc2/cdk1 to form the mitosis-promoting factor (MPF). MPF remains in the inactive state until phosphorylation of cdc2/cdk1 at Thr161 by cdk activating kinase (CAK) (1, 2) and dephosphorylation of cdc2/cdk1 at Thr14/Tyr15 by cdc25C (3-5). Four cyclin B1 phosphorylation sites (Ser126, 128, 133, and 147) are located in the cytoplasmic retention signal (CRS) domain and are thought to regulate the translocation of cyclin B1 to the nucleus at the G2/M checkpoint, promoting nuclear accumulation and initiation of mitosis (6-9). While MPF itself can phosphorylate Ser126 and Ser128, polo-like kinase 1 (PLK1) phosphorylates cyclin B1 preferentially at Ser133 and possibly at Ser147 (6, 10). At the end of mitosis, cyclin B1 is targeted for degradation by the anaphase-promoting complex (APC), allowing for cell cycle progression (11). Research studies have shown that cyclin B1 is overexpressed in breast, prostate, and non-small cell lung cancers (12-14).

Function: Essential for the control of the cell cycle at the G2/M (mitosis) transition.

Subunit Structure: Interacts with the CDC2 protein kinase to form a serine/threonine kinase holoenzyme complex also known as maturation promoting factor (MPF). The cyclin subunit imparts substrate specificity to the complex. Binds HEI10. Interacts with catalytically active RALBP1 and CDC2 during mitosis to form an endocytotic complex during interphase. Interacts with CCNF; interaction is required for nuclear localization. Interacts with CDK5RAP3 (PubMed:15790566).

Post-translational Modifications: Ubiquitinated by the SCF(NIPA) complex during interphase, leading to its destruction. Not ubiquitinated during G2/M phases. Phosphorylated by PLK1 at Ser-133 on centrosomes during prophase: phosphorylation by PLK1 does not cause nuclear import. Phosphorylation at Ser-147 was also reported to be mediated by PLK1 but Ser-133 seems to be the primary phosphorylation site.

Similarity: Belongs to the cyclin family. Cyclin AB subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	14327896
NCBI GeneID	891
NCBI Accession #	NP_114172.1
NCBI GenBank Nucleotide #	NM_031966.3
UniProt Accession #	P14635; Q5TZP9; A8K066
Molecular Weight	Observed: 48 kDa Predicted: 49 kDa
NCBI Official Full Name	G2/mitotic-specific cyclin-B1 isoform 1
NCBI Official Synonym Full Names	cyclin B1
NCBI Official Symbol	CCNB1
NCBI Official Synonym Symbols	CCNB
NCBI Protein Information	G2/mitotic-specific cyclin-B1
UniProt Protein Name	G2/mitotic-specific cyclin-B1
UniProt Gene Name	CCNB1
UniProt Synonym Gene Names	CCNB

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/ccnb1-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/326548>