

## Product datasheet for **TA327246**

### Cyclin B1 (CCNB1) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	ICC/IF, WB
Recommended Dilution:	WB 1:500 - 1:2000;IF 1:50- 1:200
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	A synthetic peptide of human CCNB1
Formulation:	Store at -20C or -80C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	cyclin B1
Database Link:	<a href="#">NP_114172</a> <a href="#">Entrez Gene 25203 Rat</a> <a href="#">Entrez Gene 268697 Mouse</a> <a href="#">Entrez Gene 891 Human</a> <a href="#">P14635</a>



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**Background:**

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. 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. While MPF itself can phosphorylate Ser126 and Ser128, polo-like kinase 1 (PLK1) phosphorylates cyclin B1 preferentially at Ser133 and possibly at Ser147. At the end of mitosis, cyclin B1 is targeted for degradation by the anaphase-promoting complex (APC), allowing for cell cycle progression. Research studies have shown that cyclin B1 is overexpressed in breast, prostate, and non-small cell lung cancers.

**Synonyms:**

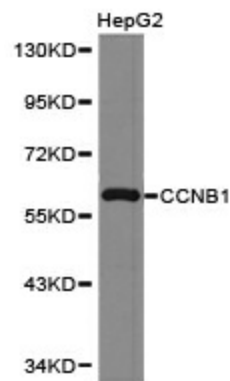
CCNB

**Protein Families:**

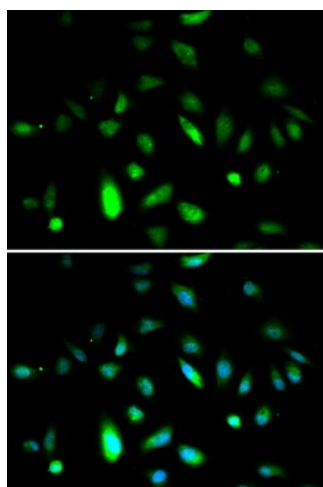
Druggable Genome, Stem cell - Pluripotency

**Protein Pathways:**

Cell cycle, Oocyte meiosis, p53 signaling pathway, Progesterone-mediated oocyte maturation

**Product images:**

Western blot analysis of extracts of HepG2 cell lines, using CCNB1 antibody.



Immunofluorescence analysis of A549 cell using CCNB1 antibody. Blue: DAPI for nuclear staining.