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CCNB1

Reactivity: Human

Tested applications:WB IHC ICC IF IP

Recommended Dilution:WB 1:500 - 1:2000 IHC 1:50 - 1:200 ICC 1:50 - 1:200 IF 1:50 - 1:200 IP 1:20 - 1:100

Calculated MW:48kDa

Observed MW: Refer to Figures

Immunogen:

A synthetic peptide of human CCNB1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

d

Synonym:

CCNB1; CCNB; cyclin B1

Catalog #:A2056

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID:891

Isotype: IgG

Swiss Prot:P14635

Purity: Affinity purification

For research use only.

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 (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).

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