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AP09514PU-S Polyclonal Antibody to Cyclin B1 - Aff - Purified

Alternate names: CCNB, CCNB1, Cyclin-B1, G2/mitotic-specific cyclin-B1

Quantity: 50 µg

Concentration: 1.0 mg/ml

Background: In mammals, cyclin B associates with inactive p34 cdc2 which facilitates phosphorylation of p34 cdc2 at amino acids 14 Thr and 15 Tyr. This maintains the inactive state until the end of G2 phase. The inactive cyclin B p34 cdc2 complex continues to accumulate in the cytoplasm until the completion of DNA synthesis, when Cdc25, a specific protein phosphatase, dephosphorylates amino acids 14Thr and 15Tyr of p34 cdc2, rendering the complex active at the G2 / M boundary. This mitotic kinase complex remains active until the metaphase / anaphase transition when cyclin B is degraded. This degradation process is ubiquitin dependent and is necessary for the cell to exit mitosis. Therefore, cyclin B p34 cdc2 plays a critical role in G2 to M transition. Two alternative transcripts have been found, a constitutively expressed transcript, and a cell cycle-regulated transcript that is expressed predominantly during G2/M phase. The different transcripts result from the use of alternate transcription initiation sites.

Uniprot ID: P14635

NCBI: NP_114172

GeneID: 891

Host: Rabbit

Immunogen: Peptide sequence around aa.145~149 (A-F-S-D-V) derived from Human Cyclin B1

Format:
State: Liquid purified Ig fraction
Purification: Affinity Chromatography using epitope-specific peptide
Buffer System: PBS (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% Sodium Azide and 50% Glycerol

Applications:
Immunohistochemistry on Paraffin Sections: 1/50-1/100.
Immunofluorescence: 1/100-1/200.
Western Blot: 1/500-1/1000.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight: 60 kDa

Specificity:
This Antibody detects endogenous levels of total Cyclin B1 protein.
Species: Human and Mouse.
Other species not tested.

Storage:
Upon receipt, store undiluted (in aliquots) at -20°C.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Originator or purchased from resellers:

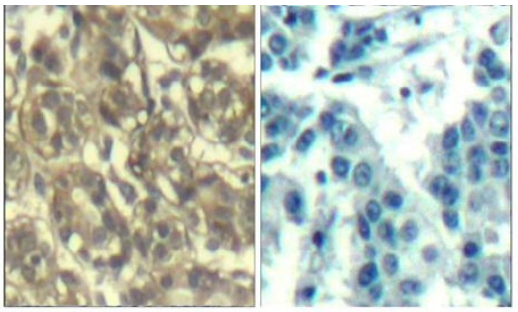
1. Jiang Y, Wang Y, Wang T, Hawke DH, Zheng Y, Li X, et al. PKM2 phosphorylates MLC2 and regulates cytokinesis of tumour cells. Nat Commun. 2014 Nov 21;5:5566. doi: 10.1038/ncomms6566. PubMed PMID: 25412762.

General Readings:

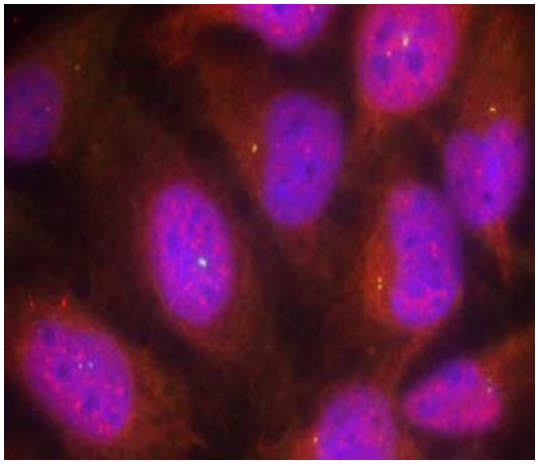
1. Norbury, C. and Nurse, P. (1992) Annu. Rev. Biochem. 61, 441-470.
2. Atherton-Fessler, S. et al. (1993) Mol. Cell. Biol. 13, 1675-1685.
3. Galaktionov, K. et al. (1995) Genes Dev. 9, 1046-1058.

Pictures:

Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using Cyclin B1 Antibody



Immunofluorescence staining of methanol-fixed HeLa cells using Cyclin B1 Antibody



Western blot analysis of extracts from HepG2 and HT29 cells using Cyclin B1 antibody