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R1566P Polyclonal Antibody to Cyclin B1 pSer126 - Aff - Purified

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

Quantity: 0.1 mg

Concentration: 0.6 mg/ml (by UV absorbance at 280 nm)

Background: Cyclin B1 (also called CCNB1 and G2/mitotic-specific cyclin B1) is a regulatory protein involved in mitosis. The gene product complexes with p34(cdc2) to form a serine/threonine kinase holoenzyme complex called the maturation-promoting factor (MPF). 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. S126 phosphorylation, the site of phosphorylation recognized by this antibody, is involved in an auto-phosphorylation of the cdk -cyclin complex. Recognition of this phosphorylated site suggests the antibody is useful to detect the active form of the complex and may serve as a marker of mitosis.

Uniprot ID: P14635

NCBI: NP_114172.1

GeneID: 891

Host: Rabbit

Immunogen: This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 120-131 of Human Cyclin B1 protein.

Format: **State:** Liquid (sterile filtred) purified Ig fraction.
Purification: Immunoaffinity chromatography.
Buffer System: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 with 0.01% (w/v) Sodium Azide as preservative.

Applications: This affinity purified antibody has been tested for use in ELISA (1:10,000-1:50,000) and Western blot (1:100-1:1,000). Specific conditions for reactivity should be optimized by the end user. Expect a band ~ 48 kDa in size corresponding to Cyclin B1 by western blotting in the appropriate cell lysate or extract.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This product is an affinity purified antibody produced by immunoaffinity chromatography using phospho peptide coupled to agarose beads followed by solid phase adsorption(s) against non-phospho peptide and non-specific peptide to remove any unwanted reactivities. This antibody is specific for phosphorylated human Cyclin B1 protein at the pS126 residue. BLAST analysis indicates 100 % homology of the immunizing sequence with Cyclin B1 from human.
Cross reactivity may occur with Cyclin B1 from rat, dog and chimpanzee as only a single amino acid change was detected within the immunogen sequence from these sources (91% homology). Partial reactivity may also occur with Cyclin B1 from mouse and hamster where two amino acids changes was noted (83% homology). Minimal

reactivity is expected with the non-phosphorylated form of the protein.

Add. Information:

Protein Sequence: Human Cyclin B1, 433 aa, predicted MW 48.3 kDa
1 malrvtrnsk inaenkakin magakrvpta paatskpglr prtalgdign kvseqlqakm
61 pmkkeakpsa tgkvidkklp kplekvpmlv pvpvsepvpe pepepepepv keeklspepi
121 lvdtaspspm etsgcapaee dlcqafsdvi lavndvdaed gadpnlcsey vkdiyaylrq
181 leeeqavrpk yllgrevtgn mrailidwlv qvqmkfrllq etmymtvsii drfmqnncvp
241 kkmlqlvgvt amfiaskyee myppeigdfa fvtdntytkh qirqmemkil ralnfglgrp
301 lplhflrras kigevdveqh tlakylmelt mldydmvhfp psqiaagafc lalkildnge
361 wtptlqhyls yteesllpvm qhlaknvvmv nqgltkhmtv knkyatskha kistlpqlns
421 alvqdlakav akv

Storage:

Store vial at -20°C prior to opening. Dilute only prior to immediate use.
For extended storage aliquot contents and freeze at -20°C or below.
Avoid cycles of freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Davy CE, Jackson DJ, Raj K, Peh WL, Southern SA, Das P, et al. Human papillomavirus type 16 E1 E4-induced G2 arrest is associated with cytoplasmic retention of active Cdk1/cyclin B1 complexes. J Virol. 2005 Apr;79(7):3998-4011. PubMed PMID: 15767402.
2. Innocente SA, Lee JM. p53 is a NF-Y- and p21-independent, Sp1-dependent repressor of cyclin B1 transcription. FEBS Lett. 2005 Feb 14;579(5):1001-7. Epub 2005 Jan 13. PubMed PMID: 15710382.
3. Torgler R, Jakob S, Ontsouka E, Nachbur U, Mueller C, Green DR, et al. Regulation of activation-induced Fas (CD95/Apo-1) ligand expression in T cells by the cyclin B1/Cdk1 complex. J Biol Chem. 2004 Sep 3;279(36):37334-42. Epub 2004 Jun 23. PubMed PMID: 15215233.
4. Charrier-Savournin FB, Château MT, Gire V, Sedivy J, Piette J, Dulic V. p21-Mediated nuclear retention of cyclin B1-Cdk1 in response to genotoxic stress. Mol Biol Cell. 2004 Sep;15(9):3965-76. Epub 2004 Jun 4. PubMed PMID: 15181148.

Pictures:

WB using Anti-Cyclin B pS126 antibody shows detection of a band ~48 kDa corresponding to phosphorylated human Cyclin B(arrowheads) in various whole cell lysates. Lysates tested were lane 1 - Hela (cervical carcinoma), lane 2 - H23 (lung carcinoma), lane 3 - Hep3b (Hepatocarcinoma), lane 4 - T98G (Glioblastoma) and lane 5 - Daudi (B cell lymphoblast). The primary antibody was used at 1:100. HRP conjugated Gt-a-Rabbit IgG [H&L] was used at 1:5000.