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Certificate of Analysis

Product: Affinity Purified Anti-Human Cyclin B₁ pS126 (Rabbit)

Code: 600-401-464

Lot #: 20222

Size: 100 µg

Physical State: Liquid (sterile filtered)

Antibody Concentration: 0.42 mg/ml (by UV absorbance at 280 nm)

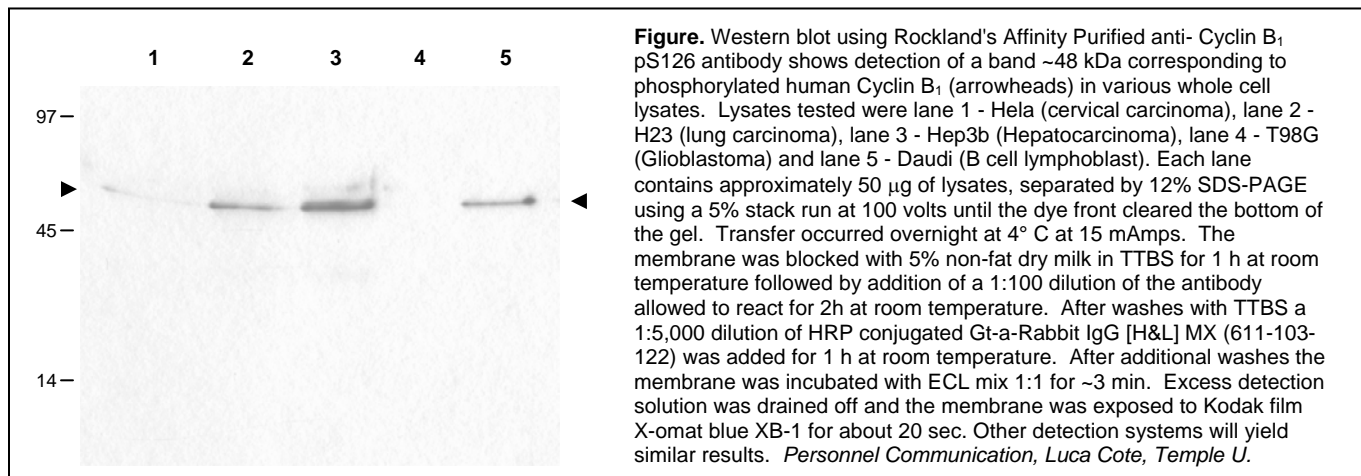
Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Storage Conditions: 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. Expiration date is one (1) year from date of opening.

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.



Application Note(s): This affinity purified antibody has been tested for use in ELISA and western blot. 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.

Recommended Dilutions:	ELISA	1:50,000
	WESTERN BLOT	1:100 - 1:1,000
	IF MICROSCOPY	User Optimized
	OTHER APPLICATIONS	User Optimized

Purity and 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.

Relevant Link(s): Swis-Prot [P14635](#) NCBI Link [NP_114172](#)

Protein Sequence: Human Cyclin B1, 433 aa, predicted MW 48.3 kDa

1	malrvtrnsk	inaenkakin	magakrvpta	paatskpglr	prtalgdign	kvseqlqakm
61	pmkkeakpsa	tgkvidkklp	kplekvpmlv	pvpvsepvpv	pepepepepv	keeklspepi
121	lvdtasp spmp	etsgcapaee	dlcqafsdvi	lavndvdaed	gadpnlcsey	vkdiyaylrq
181	leeeqavrp	yllgrevtgn	mrailidwlv	qvqmkfrllq	etmymtvsii	drfmqnnvcv
241	kkmlqlvgvt	amfiaskyee	myppeigdfa	fvtdntytkh	qirqmemkil	rainfglgrp
301	lplhflrras	kigevdveqh	tlakylmelt	mldydmvhfp	psqiaagafc	lalkildnge
361	wtptlqhyls	yteesllpvm	qhlaknvmv	nqgltkhmtv	knkyatskha	kistlpqlns
421	alvqdlakav	akv				

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.

General References:

Davy,C.E., et al. (2005) Human papillomavirus type 16 E1 E4-induced G2 arrest is associated with cytoplasmic retention of active Cdk1/cyclin B1 complexes. *J. Virol.* **79** (7), 3998-4011.

Innocente,S.A. and Lee,J.M. (2005) p53 is a NF-Y- and p21-independent, Sp1-dependent repressor of cyclin B1 transcription. *FEBS Lett.* **579** (5), 1001-1007.

Torgler,R., Jakob,S., Ontsouka,E., Nachbur,U., Mueller,C., Green,D.R. and Brunner,T. (2004) Regulation of activation-induced Fas (CD95/Apo-1) ligand expression in T cells by the cyclin B1/Cdk1 complex. *J. Biol. Chem.* **279** (36), 37334-37342.

Charrier-Savournin,F.B., Chateau,M.T., Gire,V., Sedivy,J., Piette,J. and Dulic,V. (2004) p21-Mediated nuclear retention of cyclin B1-Cdk1 in response to genotoxic stress. *Mol. Biol. Cell* **15** (9), 3965-3976.

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#611-132-122	IRDye® 800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10
#MB-070	Blocking Buffer for Fluorescent Western Blotting
#KIA-003	MaxTag™ Anti-RABBIT IgG Kit for Immunoblotting
#MB-070	Blocking Buffer for Fluorescent Western Blotting

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