

Certificate of Analysis

Product: Affinity Purified Anti-Alga PCNA [Rabbit]

Code: 600-401-887

Lot #: 16428

Size: 100 µg

Physical State: Liquid (sterile filtered)

Antibody Concentration: 1.33 mg/ml (by UV absorbance at 280 nm)

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

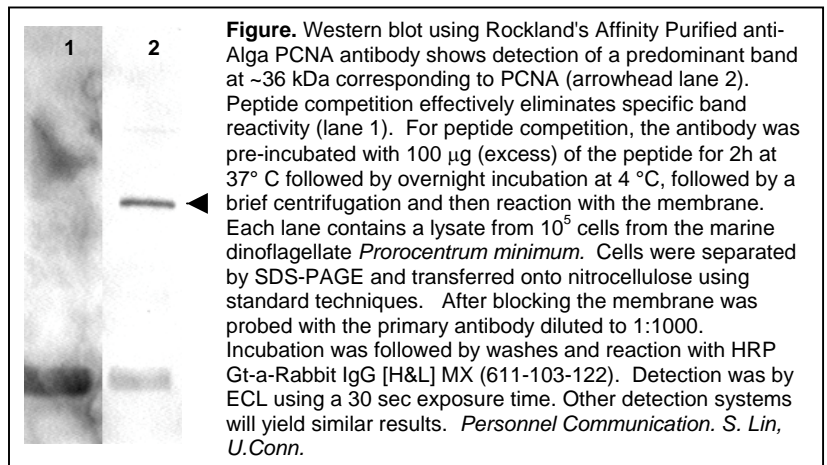
Stabilizer: None

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: PCNA, or Proliferating Cell Nuclear Antigen, is an auxiliary protein of DNA polymerase delta and is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand. PCNA is a nuclear protein.

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 at ~29 kDa in size corresponding to PCNA by western blotting in the appropriate cell lysate or extract.



Relevant Link(s): Swis-Prot [Q9LD36](#)

NCBI Link [AAF67834](#)

Recommended Dilutions:	ELISA	1:10,000 - 1:50,000
	WESTERN BLOT	1:200 - 1:2,000
	IF MICROSCOPY	User Optimized
	OTHER APPLICATIONS	User Optimized

Purity and Specificity: This affinity purified antibody is directed against algal PCNA. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest that this antibody would react with PCNA from the following alga sources: *Prorocentrum minimum*, *Tetraselmis chui*, *Pleurochrysis carterae* and *Isochrysis galbana*. Expect partial reactivity with PCNA from other alga sources as well as carrot, tobacco, peas, soybean and rice based on partial protein sequence homology. Species that have been tested but yielded no positive results are *Pfiesteria piscicida*, *Emiliana huxleyi*, *Akashiwo sanguinea*, *Rhodomonas sp.*, *Karlodinium micrum*, and *Skletonema costatum*. Reactivity with PCNA from other sources has not been determined.

Protein Sequence: *Isochrysis galbana* PCNA, 192 aa, predicted MW 21.5 kDa

1	egfehyrcdr	nvsiginlgs	mgkvlkccnn	ddivtlksde	ngdamtfmfe	nqnadrisdf
61	elklmidse	hlgipdtdyk	ctvqmpsaef	qricrdhail	gdtvtisvtk	egvqfsvsge
121	mgsgnmtikp	netvdtkdcd	rvkvemeepv	clnfaeryl	fftkatslsd	tvilsisadv
181	plvveyrine	lg				

Immunogen: This affinity-purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 55-71 of *Isochrysis galbana* PCNA.

General References:

Lin, S. and Carpenter, E. J. (1998) Identification and preliminary characterization of PCNA gene in the marine phytoplankton *Dunaliella tertiolecta* and *Isochrysis galbana*. *Mol. Marine Biol. Biotechnol.* **7** (1), 62-71.

Lin S., Corstjens P.L.A.M.; (2002) Molecular cloning and expression of the proliferating cell nuclear antigen gene from the coccolithorid *Pleurochrysis carterae* (Haptophyceae). *J. Phycol.* **38**:164-173.

Wei, S.F., Hwang, S.-P. L. and Chang, J. (2004). Influence of ultraviolet radiation on the expression of proliferating cell nuclear antigen and DNA polymerase alpha in *Skeletonema costatum* (Bacillariophyceae). *J. Phycol.* **40**: 655-663.

Lin, S. and Corstjens, P. L. A. M. (2002). Molecular cloning and expression of the Proliferating Cell Nuclear Antigen gene from the coccolithorid *Pleurochrysis carterae* (Haptophyceae). *J. Phycol.* **38**: 164-173.

Cheng, L.-C., Hwang, S.-P. L. & Chang, J. (1997). Gene sequence and expression of an analog of proliferating cell nuclear antigen (PCNA) in the alga *Tetraselmis chui* and detection of the encoded protein with anti-rat PCNA monoclonal antibody. *Appl Environ Microbiol* **63**: 4010-4.

Lin, S., Chang, J. & Carpenter, E. J. (1995). Growth characteristics of phytoplankton determined by cell cycle proteins. I. PCNA immunostaining on *Dunaliella tertiolecta* (Chlorophyceae). *J Phycol* **31**: 338-45

Lin, S. and Carpenter, E. J. (1995) Growth characteristics of phytoplankton determined by cell cycle proteins: The cell cycle of *Ethmodiscus rex* in the southwestern North Atlantic Ocean and Caribbean Sea. *J. Phycol* **31**: 778-785.

Lin, S., Chang, J. & Carpenter, E.J. (1994). Detection of proliferating cell nuclear antigen analog in four species of marine phytoplankton. *J Phycol* **30**: 449-56.

Related Products:

#611-703-127 Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10

#611-132-122 IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10

#MB-070 Blocking Buffer for Fluorescent Western Blotting

#KIA-003 **MaxTag**TM Anti-RABBIT IgG Kit for Immunoblotting

USDA Certification: All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.