

#2927 Store at -20°C

Cyclin H Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

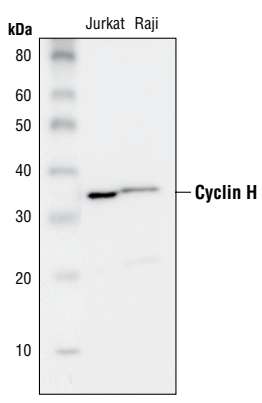
Entrez-Gene ID #902
Swiss-Prot Acc. #P51946

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IHC-P Endogenous	H, M, R	36 kDa	Rabbit**

Background: Cyclin H belongs to a conserved cyclin family that plays a critical role in the regulation of cell cycle dependent kinases (CDKs) necessary for cell cycle progression (1,2). In general, the activity of CDKs requires the binding of appropriate cyclins as well as phosphorylation driven by CDK-activating kinase (CAK). Cyclin H is part of the CAK complex that includes the kinase CDK7, and an assembly factor p36/Mat1, which enhances binding between cyclin H and CDK7 and increases activity (3,4). CAK regulates progression through the cell cycle by activating cdc2, CDK2, and CDK4 kinases through phosphorylation of a critical threonine residue in the T-loop of the CDK-cyclin complexes (5,6). The CAK complex can exist either in its free form or in association with transcription factor IIH (TFIIH) which can affect its substrate specificity (7,8,9). When bound to TFIIH, CAK preferentially phosphorylates the carboxy-terminal domain of RNA polymerase II (9), providing a link between cell cycle control, transcriptional regulation, and DNA repair.

Specificity/Sensitivity: Cyclin H Antibody detects endogenous levels of cyclin H. It does not cross-react with other family members at physiological levels.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy-terminus of cyclin H. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from Jurkat and Raji cells, using Cyclin H Antibody.

Background References:

- (1) Fisher, R.P. and Morgan, D.O. (1994) *Cell* 78, 713-724.
- (2) Makela, T.P. et al. (1994) *Nature* 371, 254-257.
- (3) Yee, A. et al. (1995) *Cancer Res.* 55, 6058-6062.
- (4) Devault, A. et al. (1995) *EMBO J.* 14, 5027-5036.
- (5) Solomon, M.J. (1994) *Trends Biochem. Sci.* 19, 496-500.
- (6) Morgan, M.O. (1995) *Nature* 374, 131-133.
- (7) Shiekhatter, R. et al. (1995) *Nature* 374, 283-287.
- (8) Serizawa, H. et al. (1995) *Nature* 374, 280-282.
- (9) Rossignol, M. et al. (1997) *EMBO J.* 16, 1628-1637.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

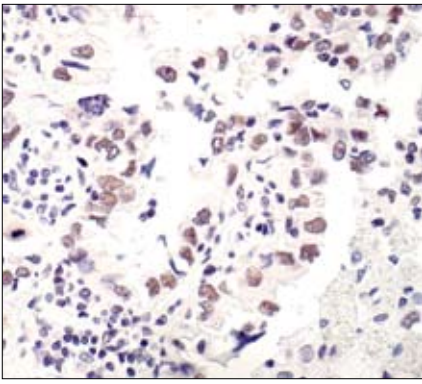
Western blotting	1:1000
Immunoprecipitation	1:100
Immunohistochemistry (Paraffin)	1:75
Unmasking buffer:	Citrate
Antibody diluent:	TBST-5%NGS

For application specific protocols please see the web page for this product at www.cellsignal.com.

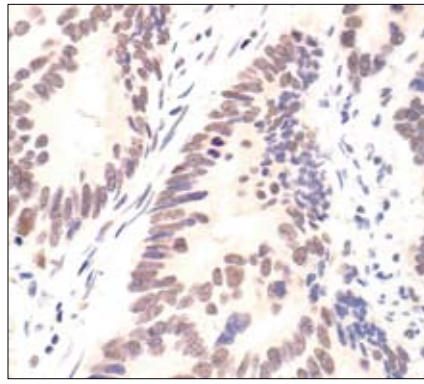
Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

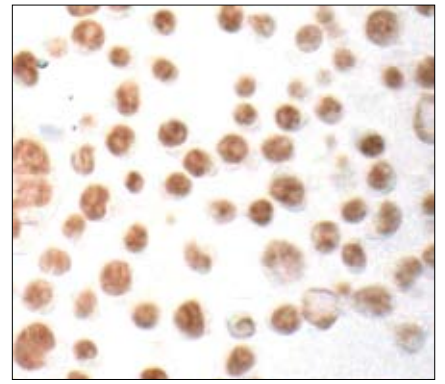
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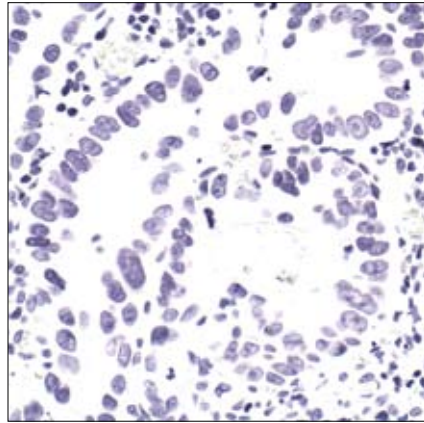
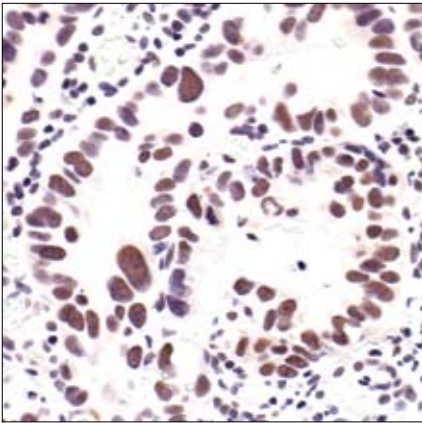
Immunohistochemical analysis of paraffin-embedded human lung carcinoma, using Cyclin H Antibody.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma, showing nuclear localization, using Cyclin H Antibody.



Immunohistochemical analysis of paraffin-embedded Jurkat cells, using Cyclin H Antibody.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using Cyclin H Antibody in the presence of control peptide (left) or antigen specific peptide (right),