

#2324 Store at -20°C

Phospho-(Ser) CDKs Substrate Antibody

✓ 100 µl
(10 Western mini-blot)



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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Source	Motif
W, IP, IHC-P, E-P	All	Rabbit**	(K/R)(S*)PX(K/R)

Background: Cyclin-dependent kinases (CDKs) are a family of Ser/Thr kinases that regulate cell-cycle transitions through their association and subsequent phosphorylation of targets in a strictly ordered fashion (1). The substrates for CDKs are proline-directed. The consensus amino acid sequence for CDK substrate is (K/R)(S*)PX(K/R), where X denotes any one of the 20 amino acids (2-4) and S* is the phosphorylation site. Phospho-(Ser) CDKs Substrate Antibody recognizes phosphorylated CDK substrates at their consensus motif, providing a powerful tool for CDK target discovery and characterization as well as HTS drug screening for potential kinase regulators.

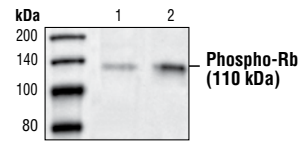
Specificity/Sensitivity: Phospho-(Ser) CDKs Substrate Antibody detects phospho-serine in a (K/R)(S*)PX(K/R) motif. The antibody is phospho-specific but does not recognize phospho-serine in the absence of the CDK motif. The antibody does not cross-react with phospho-threonine- or phospho-tyrosine-containing peptides/proteins. (U.S. Patent No.'s.: 6,441,140; 6,982,318; 7,259,022; 7,344,714; U.S.S.N. 11,484,485; and all foreign equivalents.)

Source/Purification: Polyclonal antibodies are produced by immunizing animals with synthetic phospho-CDK substrate peptides (KLH-coupled). Antibodies are purified by protein A and peptide affinity chromatography.

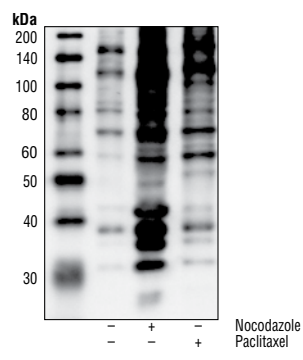
Background References:

- (1) Morgan, D.O. (1997) *Annu. Rev. Cell Dev. Biol.* 13, 261-291.
- (2) Songyang, Z. et al. (1996) *Mol. Cell. Biol.* 16, 6486-6493.
- (3) Songyang, Z. (1999) *Prog. Biophys. Mol. Biol.* 71, 359-372.
- (4) Holmes, J.K. and Solomon, M.J. (1996) *J. Biol. Chem.* 271, 25240-25246.

License/Use Restrictions: Use of CST Motif Antibodies within certain methods (e.g., U.S. Patent No.'s 7,198,896 & 7,300,753) may require a license from CST. For information regarding academic licensing terms please have your technology transfer office contact CST Legal Department at CST_ip@cellsignal.com. For information regarding commercial licensing terms please contact CST Business Development at cbunker@cellsignal.com.



Western blot analysis of extracts from NIH/3T3 cells immunoprecipitated with either Phospho-(Ser) CDKs Substrate Antibody (lane 1) or Phospho-Rb (Ser807/811) Antibody #9308 (lane 2) and then immunoblotted with Phospho-Rb (Ser807/811) Antibody #9308.



Western blot analysis of extracts from HeLa cells, untreated or treated with the microtubule destabilizing agents nocodazole or paclitaxel, using Phospho-(Ser) CDKs Substrate Antibody.

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)	1:200
IHC protocol: Unmasking buffer/Antibody diluent Citrate/ SignalStain® Antibody Diluent #8112	
ELISA-Peptide	1:1000

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

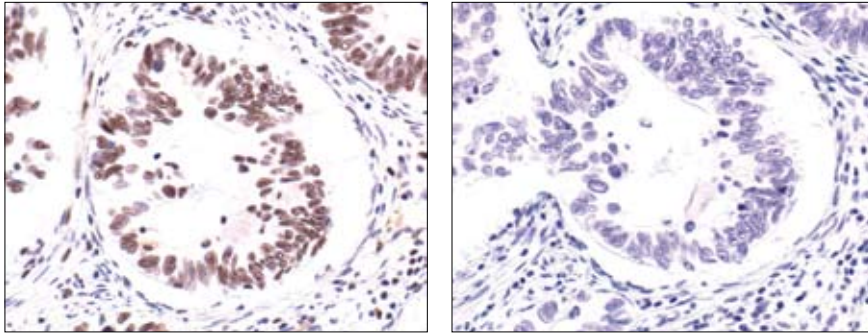
Companion Products:

- Phospho-MAPK/CDK Substrates (PXSP or SPXR/K) (34B2) Rabbit mAb #2325
- Phospho-MAPK Substrates (PXTP) (46G11) Rabbit mAb #4391
- Phospho-(Thr) MAPK/CDK Substrate Mouse mAb #2321
- Phospho-(Ser) PKC Substrate Antibody #2261
- Phospho-(Ser/Thr) ATM/ATR Substrate (4F7) Rabbit mAb #2909
- Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder Detection Pack #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

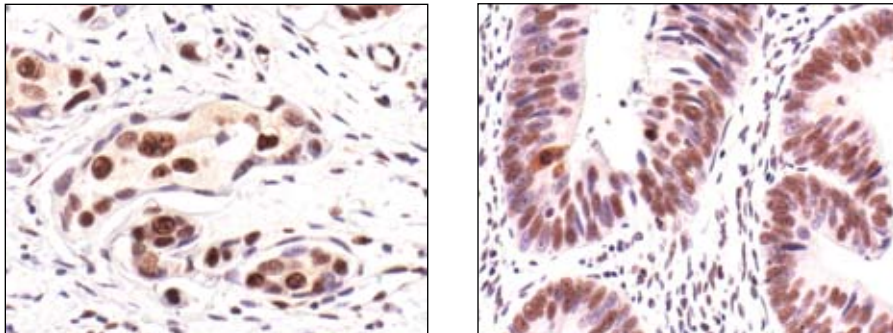
Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E—ELISA E-P—ELISA Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebra fish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

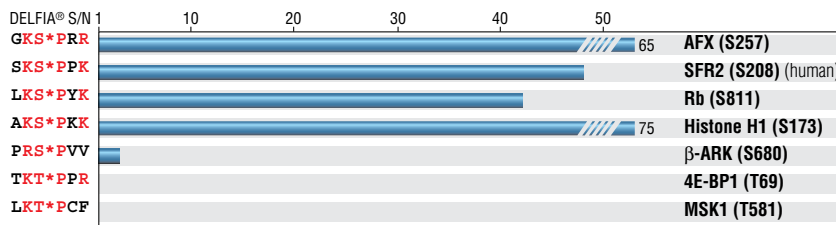


Immunohistochemical analysis of paraffin-embedded human colon carcinoma control (left) or λ -phosphatase-treated (right), using Phospho-(Ser) CDKs Substrate Antibody.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using Phospho-(Ser) CDKs Substrate Antibody.

Immunohistochemical analysis of paraffin-embedded human colon carcinoma, using Phospho-(Ser) CDKs Substrate Antibody.



Phospho-(Ser) CDKs Substrate Antibody ELISA Assay: Signal-to-noise ratio of phospho- versus nonphospho-peptides. (S* denotes phosphorylated serine.)