

Phospho-(Ser) CDKs Substrate 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.

Applications	Species Cross-Reactivity*	Source	Motif
W, IP, IHC-P, E-P Endogenous	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.)

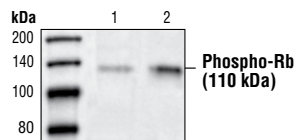
Source/Purification: Polyclonal antibodies are produced by immunizing animals with synthetic phospho-CDK substrate peptides (KLH-coupled). Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

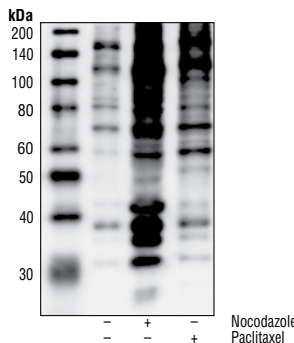
- (1) Morgan, D.O. (1997) *Annu. Rev. Cell Dev. Biol.* 13, 261-291.
- (2) Songyang, Z. et al. (1996) *Mol. Cell. Biol.* 16, 6486-6493.
- (3) Songyang, Z. (1999) *Prog. Biophys. Mol. Biol.* 71, 359-372.
- (4) Holmes, J.K. and Solomon, M.J. (1996) *J. Biol. Chem.* 271, 25240-25246.

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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.



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†

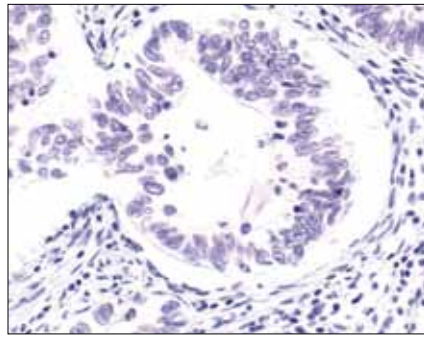
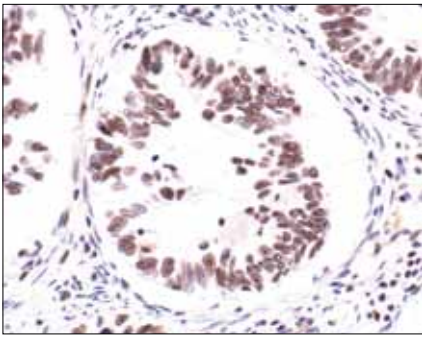
Unmasking buffer: Citrate
Antibody diluent: SignalStain® Antibody Diluent #8112
Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114

†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

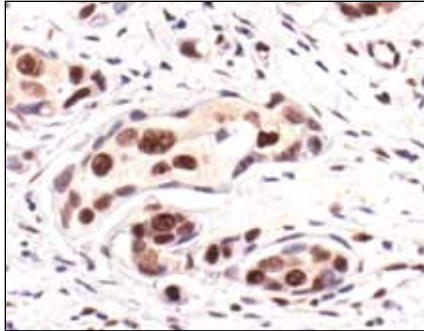
ELISA-Peptide 1:1000

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

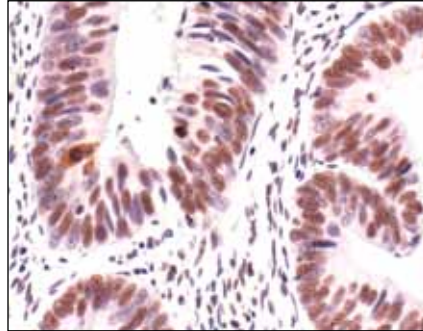
Please visit www.cellsignal.com for a complete listing of recommended companion products.



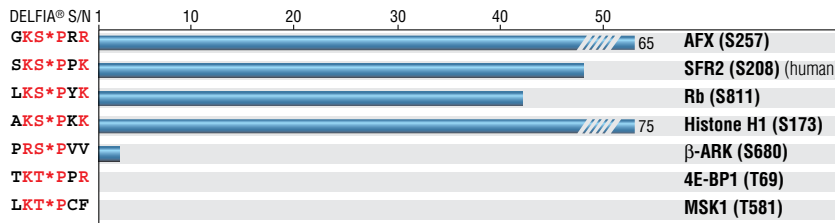
Immunohistochemical analysis of paraffin-embedded human colon carcinoma control (left) or λ -phosphatase-treated (right), using Phospho-(Ser) CDKs Substrate Antibody.



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.)