

Phospho-CDK2 (Thr160) Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 33	Source/Isotype: Rabbit	UniProt ID: #P24941	Entrez-Gene Id: 1017
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

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.

Specificity/Sensitivity

Phospho-CDK2 (Thr160) Antibody detects endogenous levels of CDK2 only when phosphorylated at threonine 160. The antibody weakly cross-reacts with cdc2 phosphorylated at Thr161. It does not cross-react with other phosphorylated cyclin dependent kinases.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr160 of human CDK2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Cyclin-dependent kinase 2 (p33CDK2) is an important component of the cell cycle machinery. Like p34cdc2, kinase activity is regulated by phosphorylation state as well as association with a cyclin subunit and a CDK inhibitor. Inhibitory phosphorylation occurs on Thr14 and Tyr15 (1). Inhibition of CDK2-cyclin complexes can also be attributed to association with p27 Kip1 and p21 Waf1/Cip1 (2). Activation of CDK2 complexes requires dephosphorylation of Thr14 and Tyr15 by cdc25 phosphatase and phosphorylation of Thr160 (3), which is mediated by CAK, a complex of CDK7 and cyclin H (4). CDK2/cyclin E kinase activity is important for the G1 to S transition and phosphorylation of the Rb protein. During S-phase, active CDK2/cyclin A complexes predominate and phosphorylate E2F and the active CDK2 complex persists in the nucleus throughout G2 (5).

Background References

1. Morgan, D.O. (1995) *Nature* 374, 131-4.
2. Poon, R.Y. et al. (1996) *J Biol Chem* 271, 13283-91.
3. Gu, Y. et al. (1992) *EMBO J* 11, 3995-4005.
4. Fesquet, D. et al. (1993) *EMBO J* 12, 3111-21.
5. Morgan, D.O. (1997) *Annu Rev Cell Dev Biol* 13, 261-91.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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