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#2546

CDK2 (78B2) Rabbit mAb

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

Applications: W, W-S, IP, FC-FP	Reactivity: H M R Mk	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
Simple Western™
Immunoprecipitation
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:10 - 1:50
1:50
1:50 - 1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #30875.

Specificity/Sensitivity

CDK2 (78B2) Rabbit mAb detects endogenous levels of total CDK2 protein. The antibody does not cross-react with other CDKs.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro241 of human CDK2 protein.

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 **W-S:** Simple Western™ **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

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

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