

CDK2 (78B2) Rabbit mAb (PE Conjugate)

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H M R Mk	Endogenous	Rabbit	#P24941	1017

Product Usage Information	Application	Dilution
Storage	Flow Cytometry (Fixed/Permeabilized)	1:50
Specificity/Sensitivity	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.	
Source / Purification	CDK2 (78B2) Rabbit mAb (PE Conjugate) detects endogenous levels of total CDK2 protein. The unconjugated antibody does not cross-react with other CDK proteins.	
Description	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues of human CDK2 protein.	
Background	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated CDK2 (78B2) Rabbit mAb #2546.	
Background References	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).	
	1. Morgan, D.O. (1995) <i>Nature</i> 374, 131-4. 2. Poon, R.Y. et al. (1996) <i>J Biol Chem</i> 271, 13283-91. 3. Gu, Y. et al. (1992) <i>EMBO J</i> 11, 3995-4005. 4. Fesquet, D. et al. (1993) <i>EMBO J</i> 12, 3111-21. 5. Morgan, D.O. (1997) <i>Annu Rev Cell Dev Biol</i> 13, 261-91.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)
Cross-Reactivity Key	H: Human M: Mouse R: Rat Mk: Monkey
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