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CDK4 (D9G3E) Rabbit mAb (PE Conjugate)

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

Applications: FC-FP	Reactivity: H Mk	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P11802	Entrez-Gene Id: 1019
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Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	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 antibody. Protect from light. Do not freeze.	
Specificity/Sensitivity	CDK4 (D9G3E) Rabbit mAb (PE Conjugate) recognizes endogenous levels of total CDK4 protein. In COS-7 cells, this antibody recognizes a 40 kDa background band of unknown origin. This antibody does not cross-react with CDK1, 2, or 6.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human CDK4 protein.	
Description	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated CDK4 (D9G3E) Rabbit mAb #12790.	
Background	Cyclin-dependent kinase activity is regulated by T-loop phosphorylation (Thr172 in the case of CDK4), by the abundance of their cyclin partners, and by association with CDK inhibitors of the Cip/Kip or INK family of proteins (1). The inactive ternary complex of CDK4/cyclin D and p27 Kip1/Cip1 requires extracellular mitogenic stimuli for the release and degradation of p27, which affects progression through the restriction point and pRb-dependent entry into S-phase (2). The active complex of CDK4/cyclin D targets the retinoblastoma protein for phosphorylation, allowing the release of E2F transcription factors that activate G1/S-phase gene expression (3). In HeLa cells, upon UV irradiation, upregulation of p16 INK4A association with CDK4/cyclin D3 leads to a G2 delay, implicating CDK4/cyclin D3 activity in progression through the G2-phase of the cell cycle (4).	
Background References	<ol style="list-style-type: none"> Hirai, H. et al. (1995) <i>Mol Cell Biol</i> 15, 2672-81. Sherr, C.J. (1996) <i>Science</i> 274, 1672-7. Lukas, J. et al. (1996) <i>Mol Cell Biol</i> 16, 6917-25. Gabrielli, B.G. et al. (1999) <i>J Biol Chem</i> 274, 13961-9. 	
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 Mk: Monkey	
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