

CDK4 (D9G3E) Rabbit mAb (Biotinylated)

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H Mk	Endogenous	30	Rabbit IgG	#P11802	1019

Product Usage Information	Application	Dilution
	Western Blotting	1:1000
Storage	Supplied in 136 mM NaCl, 2.6 mM KCl, 12 mM sodium phosphate (pH 7.4) dibasic, 2 mg/ml BSA, and 50% glycerol. Store at -20°C. <i>Do not aliquot the antibody.</i>	
Specificity/Sensitivity	CDK4 (D9G3E) Rabbit mAb (Biotinylated) 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 biotin under optimal conditions. The biotinylated 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).	
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	
Cross-Reactivity Key	H: Human Mk: Monkey	
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