



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

#8497 Store at +4C

Phospho-Cyclin D1 (Thr286) (D29B3) XP[®] 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: #P24385	Entrez-Gene Id: 595
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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 antibodies. Protect from light. Do not freeze.	
Specificity/Sensitivity	Phospho-Cyclin D1 (Thr286) (D29B3) XP [®] Rabbit mAb (PE Conjugate) detects endogenous levels of cyclin D1 only when phosphorylated at Thr286. This antibody does not cross-react with other cyclin D family members.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr286 of cyclin D1 protein.	
Description	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 Phospho-Cyclin D1 (Thr286) (D29B3) XP [®] Rabbit mAb #3300.	
Background	Activity of the cyclin-dependent kinases CDK4 and CDK6 is regulated by T-loop phosphorylation, by the abundance of their cyclin partners (the D-type cyclins), and by association with CDK inhibitors of the Cip/Kip or INK family of proteins (1). The inactive ternary complex of cyclin D/CDK4 and p27 Kip1 requires extracellular mitogenic stimuli for the release and degradation of p27 concomitant with a rise in cyclin D levels to affect progression through the restriction point and Rb-dependent entry into S-phase (2). The active complex of cyclin D/CDK4 targets the retinoblastoma protein for phosphorylation, allowing the release of E2F transcription factors that activate G1/S-phase gene expression (3). Levels of cyclin D protein drop upon withdrawal of growth factors through downregulation of protein expression and phosphorylation-dependent degradation (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. Diehl, J.A. et al. (1997) <i>Genes Dev</i> 11, 957-72. 	
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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