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#5884

Phospho-CDK4 (Thr172) Antibody

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

Applications: W	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 30	Source/Isotype: Rabbit	UniProt ID: #P11802	Entrez-Gene Id: 1019
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Product Usage Information	Application Western Blotting	Dilution 1:1000
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.	
Specificity/Sensitivity	Phospho-CDK4 (Thr172) Antibody recognizes endogenous levels of CDK4 protein only when phosphorylated at Thr172.	
Species predicted to react based on 100% sequence homology	Mouse, Rat, Monkey, Dog, Pig	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr172 of human CDK4 protein. Antibodies are purified by protein A and peptide affinity chromatography.	
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	
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