

#4132 Store at -20°C

Cyclin E2 Antibody


Cell Signaling
TECHNOLOGY®

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

Applications: WB	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 48	Source: Rabbit	UniProt ID: #O96020	Entrez-Gene Id: 9134
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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	Cyclin E2 Antibody detects endogenous levels of total cyclin E2 protein.	
Species predicted to react based on 100% sequence homology:	Chicken	
Source / Purification	Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy-terminus of human cyclin E2. Antibodies are purified by protein A and peptide affinity chromatography.	
Background	Cyclin E1 and cyclin E2 can associate with and activate CDK2 (1). Upon DNA damage, upregulation/activation of the CDK inhibitors p21 Waf1/Cip1 and p27 Kip1 prevent cyclin E/CDK2 activation, resulting in G1/S arrest. When conditions are favorable for cell cycle progression, cyclin D/CDK4/6 phosphorylates Rb and is thought to reduce the activity of p21 Waf1/Cip1 and p27 Kip1, allowing subsequent activation of cyclin E/CDK2 (1,2). Cyclin E/CDK2 further phosphorylates Rb to allow progression into S-phase, where cyclin E/CDK2 is thought to phosphorylate and activate multiple proteins involved in DNA synthesis (2,3). Turnover of cyclin E is largely controlled by phosphorylation that results in SCFFbw7-mediated ubiquitination and proteasome-dependent degradation (4,5). Cyclin E1 is phosphorylated at multiple sites <i>in vivo</i> including Thr62, Ser88, Ser72, Thr380, and Ser384, and is controlled by at least two kinases, CDK2 and GSK-3 (6,7).	
Background References	1. Lauper, N. et al. (1998) <i>Oncogene</i> 17, 2637-43. 2. Lundberg, A.S. and Weinberg, R.A. (1998) <i>Mol Cell Biol</i> 18, 753-61. 3. Ewen, M.E. (2000) <i>Genes Dev</i> 14, 2265-70. 4. Won, K.A. and Reed, S.I. (1996) <i>EMBO J</i> 15, 4182-93. 5. Koepp, D.M. et al. (2001) <i>Science</i> 294, 173-7. 6. Welcker, M. et al. (2003) <i>Mol Cell</i> 12, 381-92. 7. Ye, X. et al. (2004) <i>J Biol Chem</i> 279, 50110-9.	

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	WB: Western Blotting
Cross-Reactivity Key	H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr: horse GP: Guinea Pig Rab: rabbit All: all species expected

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