Cyclin E1 (HE12) Mouse mAb

**Applications**

Western blotting

**Species Cross-Reactivity**

H, Mk

**Molecular Wt.**

48 kDa

**Isotype**

Mouse IgG1**

**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 in vivo including Thr62, Ser88, Ser72, Thr380 and Ser384, and is controlled by at least two kinases, CDK2 and GSK-3 (6,7).

**Specificity/Sensitivity:** Cyclin E1 (HE12) Mouse mAb detects endogenous levels of total cyclin E1 protein. It does not cross react with cyclin E2.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with recombinant human cyclin E1.

**Background References:**


**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at −20°C. Do not aliquot the antibody.

**Recommended Antibody Dilutions:**

Western blotting 1:1000

**For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com**