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Cyclin D1 (92G2) Rabbit mAb (PE Conjugate)

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

Applications: FC-FP	Reactivity: H M R	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

Cyclin D1 (92G2) Rabbit mAb (PE Conjugate) detects endogenous levels of total cyclin D1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the carboxy-terminus of human cyclin D1.

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 Cyclin D1 (92G2) Rabbit mAb #2978.

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

- Hirai, H. et al. (1995) *Mol Cell Biol* 15, 2672-81.
- Sherr, C.J. (1996) *Science* 274, 1672-7.
- Lukas, J. et al. (1996) *Mol Cell Biol* 16, 6917-25.
- Diehl, J.A. et al. (1997) *Genes Dev* 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 **M:** Mouse **R:** Rat

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