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| <b>Product name:</b>     | Cyclin D1 (10Z18) Rabbit Monoclonal Antibody                                                                                                                                                 |
| <b>Cat number:</b>       | MABN09589                                                                                                                                                                                    |
| <b>Conjugate:</b>        | Unconjugated                                                                                                                                                                                 |
| <b>Size:</b>             | 100µL                                                                                                                                                                                        |
| <b>Clone:</b>            | Monoclonal                                                                                                                                                                                   |
| <b>Concentration:</b>    | 1mg/ml                                                                                                                                                                                       |
| <b>Host:</b>             | Rabbit                                                                                                                                                                                       |
| <b>Isotype:</b>          | IgG                                                                                                                                                                                          |
| <b>Immunogen:</b>        | A synthetic peptide of human Cyclin D1                                                                                                                                                       |
| <b>Reactivity:</b>       | Human, Mouse, Rat                                                                                                                                                                            |
| <b>Applications:</b>     | WB 1:1000-1:2000, IHC 1:100-1:500, ICC/IF 1:100-1:200, IP 1:20-1:50                                                                                                                          |
| <b>Molecular Weight:</b> | 34kDa                                                                                                                                                                                        |
| <b>Purification:</b>     | Affinity purification                                                                                                                                                                        |
| <b>Form:</b>             | Liquid                                                                                                                                                                                       |
| <b>Buffer:</b>           | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle. |
| <b>Storage:</b>          | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.                                                                                                 |

**Background:**

Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complex and the subsequent transcription of E2F target genes which are responsible for the progression through the G1 phase. Hypophosphorylates RB1 in early G1 phase. Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals. Regulatory component of the cyclin D1-CDK4 (DC) complex that phosphorylates and inhibits members of the retinoblastoma (RB) protein family including RB1 and regulates the cell-cycle during G(1)/S transition (PubMed:1833066, PubMed:1827756, PubMed:8114739, PubMed:8302605, PubMed:19412162, PubMed:33854235). Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complex and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase (PubMed:1833066, PubMed:1827756, PubMed:8114739, PubMed:8302605, PubMed:19412162). Hypophosphorylates RB1 in early G(1) phase (PubMed:1833066, PubMed:1827756, PubMed:8114739, PubMed:8302605, PubMed:19412162). Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals (PubMed:1833066, PubMed:1827756, PubMed:8302605, PubMed:19412162). Also substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity (PubMed:15241418). Component of the ternary complex, cyclin D1/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (PubMed:9106657). Exhibits transcriptional corepressor activity with INSM1 on the NEUROD1 and INS promoters in a cell cycle-independent manner (PubMed:16569215, PubMed:18417529).