

Anti-Rb phospho-Thr821 antibody, monoclonal (24A7)

71-173 50 ug

Retinoblastoma protein (Rb), the tumor suppressor product of the retinoblastoma susceptibility gene, is a 110 kDa protein that functions as a negative regulator of the cell cycle by arresting cells in the G1 phase and halting inappropriate cell proliferation (1). At the transcriptional level, Rb protein exerts its growth suppressive function by binding to transcription factors including E2F1, PU1, ATF2, UBF, Elf-1 and c-Abl (2-4). Loss of Rb function leads to uncontrolled cell growth and tumor development and is found in all retinoblastomas and in a variety of other human malignancies. The ability of Rb protein to inhibit transcription and cell cycle progression is inactivated by phosphorylation, which is catalyzed by the cyclin-dependent protein kinases.

Applications

1. Western blotting (~1ug/ml)
 2. ELISA
- Other applications were not tested.

Specification

Antigen: A synthetic peptide containing phospho-Thr821 of human Rb

Isotype: Mouse IgG1(κ)

Form: Purified monoclonal antibody (IgG) 1mg/ml in PBS, 50% glycerol, filter-sterilized

Specificity: Specific to human Rb phosphorylated at Thr821. Not tested for other species.

Can detect endogenous levels of Rb phosphorylated at Thr821 in most cell lines.

Storage: -20°C (long period, -70°C)

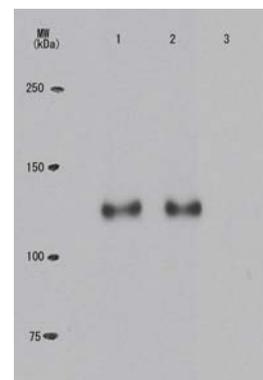
Data Link UniProtKB/Swiss-Prot [P06400](#) (RB_HUMAN)

References

1. Sherr CJ "Cancer cell cycles" *Science* **274**: 1672-1677 (1996) PMID: [8939849](#)
2. Nevins JR "E2F: a link between the Rb tumor suppressor protein and viral oncoproteins" *Science* **258**: 424-429 (1992) PMID: [1411535](#)
3. Welch PJ & Wang JY "A C-terminal protein-binding domain in the retinoblastoma protein regulates nuclear c-Abl tyrosine kinase in the cell cycle" *Cell* **75**: 779-790 (1993) PMID: [8242749](#)
4. Hu QJ *et al* "The regions of the retinoblastoma protein needed for binding to adenovirus E1A or SV40 large T antigen are common sites for mutations" *EMBO J* **9**:1147-1155 (1990) PMID: [2138977](#)

Fig.1 Specificity of the monoclonal antibody (24A7) to the phosphorylated Rb at Thr821 as demonstrated by Western blotting.

Crude extracts of human lung carcinoma cell line H1299 transfected with plasmid expressing Myc-tagged wild-type Rb (lane 1), Rb (S795A) (lane 2) or Rb (T821A) were immuno-precipitated with anti-Myc antibody and the precipitates were analyzed by Western blotting with monoclonal antibody #24A7 (Data provided by Dr. Y. Inoue at the JFCR Cancer Research Institute, Tokyo).



Related product: [#71-171](#) anti-Rb phospho-Ser795 antibody, monoclonal (28B5)