

# p-Rb (Ser 795): sc-21875

## BACKGROUND

Pediatric cancer retinoblastoma and the formation of other human tumors can be attributed to mutations in the retinoblastoma tumor suppressor gene (Rb). The Rb protein regulates differentiation, apoptosis and cell cycle control by coordinating the cell cycle at G<sub>1</sub>-S with transcriptional machinery. During G<sub>1</sub>, cyclin D-dependent kinase-mediated phosphorylation of Rb at Ser 795 marks the conversion of Rb from a transcriptionally repressive, hypophosphorylated state to an inactive, phosphorylated state, which may be sustained through mitosis by differential phosphorylation of up to 16 putative serine or threonine residues, including Ser 249/Thr 252, Thr 373, Thr 356, Ser 780, Ser 807/Ser 811, and Thr 821/Thr 826. Hypophosphorylated Rb represses the transcription of genes controlling the cell cycle through direct protein-protein interactions and through the recruitment of histone deacetylase.

## CHROMOSOMAL LOCATION

Genetic locus: RB1 (human) mapping to 13q14.2; Rb1 (mouse) mapping to 14 D3.

## SOURCE

p-Rb (Ser 795) is available as either goat (sc-21875) or rabbit (sc-21875-R) affinity purified polyclonal antibody raised against a short amino acid sequence containing Ser 795 phosphorylated Rb of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21875 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-Rb (Ser 795) is recommended for detection of Ser 795 phosphorylated Rb of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Rb siRNA (h): sc-29468, Rb siRNA (m): sc-29469, Rb shRNA Plasmid (h): sc-29468-SH, Rb shRNA Plasmid (m): sc-29469-SH, Rb shRNA (h) Lentiviral Particles: sc-29468-V and Rb shRNA (m) Lentiviral Particles: sc-29469-V.

Molecular Weight (predicted) of p-Rb: 106 kDa.

Molecular Weight (observed) of p-Rb: 107-140 kDa.

Positive Controls: Rb (h2): 293T Lysate: sc-159907.

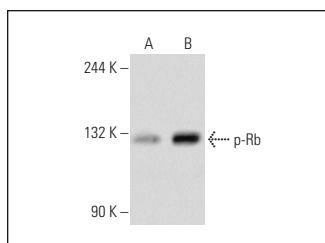
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



p-Rb (Ser 795)-R: sc-21875-R. Western blot analysis of Rb phosphorylation in non-transfected: sc-117752 (A) and human Rb transfected: sc-159907 (B) 293T whole cell lysates.



p-Rb (Ser 795): sc-21875. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing nuclear staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Veiga-Fernandes, H., et al. 2004. High expression of active CDK6 in the cytoplasm of CD8 memory cells favors rapid division. *Nat. Immunol.* 5: 31-37.
2. Wei, Q., et al. 2007. Galectin-4 is involved in p27-mediated activation of the myelin basic protein promoter. *J. Neurochem.* 101: 1214-1223.
3. Chen, C.H., et al. 2009. Synergistic anti-cancer effect of baicalein and silymarin on human hepatoma HepG2 cells. *Food Chem. Toxicol.* 47: 638-644.
4. Yu, A.L., et al. 2009. Subtoxic oxidative stress induces senescence in retinal pigment epithelial cells via TGF-β release. *Invest. Ophthalmol. Vis. Sci.* 50: 926-935.
5. Folch, J., et al. 2009. Evaluation of pathways involved in pentachlorophenol-induced apoptosis in rat neurons. *Neurotoxicology* 30: 451-458.
6. Lontos, M., et al. 2009. Modulation of the E2F1-driven cancer cell fate by the DNA damage response machinery and potential novel E2F1 targets in osteosarcomas. *Am. J. Pathol.* 175: 376-391.
7. Ling, Y., et al. 2011. Baicalein potently suppresses angiogenesis induced by vascular endothelial growth factor through the p53/Rb signaling pathway leading to G<sub>1</sub>/S cell cycle arrest. *Exp. Biol. Med.* 236: 851-858.

## PROTOCOLS

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