

p-Rb (Ser 795): sc-7986

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 G₁-S with transcriptional machinery. During G₁, 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-7986) or rabbit (sc-7986-R) polyclonal affinity purified 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-7986 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Rb (Ser 795) is also recommended for detection of correspondingly phosphorylated Rb in additional species, including equine, canine, bovine and porcine.

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.

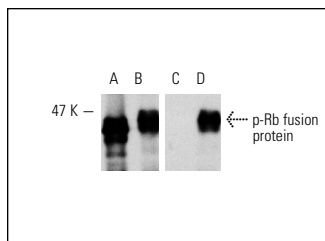
STORAGE

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



Western blot analysis of mouse recombinant Rb fusion protein (A,C) and Rb phosphorylated by human recombinant Cdc2 complexed with human recombinant Cyclin B (B,D). Antibodies tested include: Rb (M-153): sc-7905 (A,B) and p-Rb (Ser 795)-R: sc-7986-R (C,D).

SELECT PRODUCT CITATIONS

- Royuela, M., et al. 2001. Immunoexpressions of p21, Rb, Mcl-1 and Bad gene products in normal, hyperplastic and carcinomatous human prostates. *Eur. Cytokine Netw.* 12: 654-663.
- Boiko, A.D., et al. 2006. A systematic search for downstream mediators of tumor suppressor function of p53 reveals a major role of BTG2 in suppression of Ras-induced transformation. *Genes Dev.* 20: 236-252.
- Pasder, O., et al. 2006. Downregulation of Fer induces PP1 activation and cell-cycle arrest in malignant cells. *Oncogene* 25: 4194-4206.
- Tu, Z., et al. 2006. IKK α regulates estrogen-induced cell cycle progression by modulating E2F1 expression. *J. Biol. Chem.* 281: 6699-6706.
- Osborn, S., et al. 2007. Constitutive phosphorylation mutation in Fas-associated death domain (FADD) results in early cell cycle defects. *J. Biol. Chem.* 282: 22786-22792.
- Chen, X., et al. 2009. The overexpression of multidrug resistance-associated proteins and gankyrin contribute to arsenic trioxide resistance in liver and gastric cancer cells. *Oncol. Rep.* 22: 73-80.
- Boutahar, N., et al. 2010. Brain-derived neurotrophic factor inhibits cell cycle reentry but not endoplasmic reticulum stress in cultured neurons following oxidative or excitotoxic stress. *J. Neurosci. Res.* 88: 2263-2271.
- Wang, Z., et al. 2011. Embryonic liver fodrin involved in stellate cell activation and formation of regenerative nodule in liver cirrhosis. *J. Cell. Mol. Med.* 16: 118-128.

MONOS
Satisfaction
Guaranteed

Try **p-Raf-1 (E-1): sc-271929** or **p-Raf-1 (H-8): sc-271928**, our highly recommended monoclonal alternatives to p-Raf-1 (Ser 795).