**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 Ser249/Thr252, Thr373, Thr356, Ser780, Ser807/Ser811, and Thr821/Thr826. 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 249/Thr 252) is available as either goat (sc-16671) or rabbit (sc-16671-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser249 and Thr252 dually 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-16671 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

p-Rb (Ser 249/Thr 252) is recommended for detection of Ser249 and Thr252 dually 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 1:500-1000), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:500-1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Rb (Ser 249/Thr 252) 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.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

**STORAGE**

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

**DATA**

p-Rb (Ser249/Thr252): sc-16671. Western blot analysis of Rb phosphorylation in K-562 whole cell lysate.

p-Rb (Ser249/Thr252): sc-16671. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tumor showing nuclear localization (B).