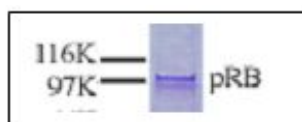


pRB

Retinoblastoma Protein, Tumor Suppressor Protein, Transcription Factor and Proliferation Factor

human, recombinant, Sf9 insect cells

Cat. No.	Amount
PR-765	5 μ g



For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM Tris-HCl, pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20% glycerol.

Activity

1 ng is sufficient for a gel mobility shift assay in a 20 μ l reaction, 50 ng are sufficient for reconstituted transcription assay and 100 ng are sufficient for a protein-protein interaction assay.

Application

Recombinant pRB protein can be used for

- 1) *in vitro* function studies including transcription and DNA binding assays,
- 2) protein-protein interaction assay and
- 3) cell growth and proliferation assays.

Purity

>95% by SDS-PAGE.

Description

pRB, the product of retinoblastoma susceptibility gene RB-1, is one of the best-studied tumor suppressor gene products. At least two other pRB-related proteins, p107 and p130, have been identified and characterized. Mutations in RB-1 gene are often associated with the occurrence of various tumors. The activity of pRB is regulated through phosphorylation in a cell cycle-dependent manner. The hyperphosphorylated RB protein usually associates with the cell nucleus and binds transcription factors of E2F family. pRB represses transcription of its target genes, such as *cdc2*, cyclin A, and oncogene *c-myc*, *c-fos* through the binding with E2F factors and thereby regulating cell proliferation.

The wild type pRB (residue 1-928) is expressed in baculovirus system and purified by an affinity column in combination with FPLC chromatography.

Purified protein is greater than 95% homogeneous and contains no detectable proteases, DNase, and RNase activity.

Selected References:

- Lee et al. (1987) Human retinoblastoma susceptibility gene: cloning, identification, and sequence. *Science* **235**:1394.
- Onadim et al. (1992) Oncogenic point mutations in exon 20 of the RB1 gene in families showing incomplete penetrance and mild expression of the retinoblastoma phenotype. *Proc. Natl. Acad. Sci. USA* **89**:6177.
- Chen et al. (1989) Phosphorylation of the retinoblastoma gene product is modulated during the cell cycle and cellular differentiation. *Cell* **58**:1193.
- Ludlow et al. (1989) SV40 large T antigen binds preferentially to an underphosphorylated member of the retinoblastoma susceptibility gene product family. *Cell* **56**:57.
- Hinds et al. (1992) Regulation of retinoblastoma protein functions by ectopic expression of human cyclins. *Cell* **70**:993.