

# Active Recombinant Full Length Human Retinoblastoma 1 / RB1 Protein, His-tagged

Cat. No. RB1-2509H Lot. No. (See product label)

## SPECIFICATION

<b>Product Overview</b>	Recombinant human His-tagged pRB (residues 1-928) is expressed in <i>abaculovirus</i> system and purified by affinity and FPLC chromatography. 105 kDa.
<b>Species</b>	Human
<b>Source</b>	Insect Cells
<b>Protein Length</b>	1-928 a.a.
<b>Description</b>	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 the E2F family. pRB represses transcription of its target genes, such as cdc2, cyclin A, c-Fos and oncogene c-Myc, through the binding with E2F factors and thereby regulating cell proliferation.
<b>Applications</b>	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.
<b>Activity</b>	1 unit equals 1 nanogram of purified protein. 1 unit is sufficient for a gel mobility shift

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assay in a 20 µreaction; 50 units are sufficient for reconstituted transcription assay and 100 units are sufficient for a protein-protein interaction assay.

**Quality Control**

The purified protein is greater than 95% homogeneous based on SDS-PAGE gel analysis.

**Reagents Supplied**

1x dilution buffer A: 20 mM Tris-Cl (pH 8.0), 20% Glycerol, 100 mM KCl, 0.2 mM EDTA and 1mM DTT.

**Storage Conditions**

Store at -80°C.

**Pathways**

Bladder cancer; Cell cycle; Chronic myeloid leukemia; Glioma; Melanoma; Non-small cell lung cancer; Pancreatic cancer; Pathways in cancer; Prostate cancer; Small cell lung cancer; Cell Cycle, Mitotic; DNA Replication

## GENE INFORMATION

**Gene Name**

RB1 retinoblastoma 1 [ Homo sapiens ]

**Synonyms**

RB1; retinoblastoma 1; RB; pRb; OSRC; pp110; p105-Rb; RB1; osteosarcoma; OTTHUMP00000018397; Rb; retinoblastoma susceptibility protein; retinoblastoma-associated protein

**Gene ID**

5925

**mRNA Refseq**

NM\_000321

**Protein Refseq**

NP\_000312

**MIM**

180200

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<b>UniProt ID</b>	P06400
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<b>Chromosome Location</b>	13q14.2
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<b>Function</b>	androgen receptor binding; kinase binding; phosphoprotein binding; transcription coactivator activity; transcription factor activity; transcription factor binding; transcription repressor activity; ubiquitin protein ligase binding
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