

Datasheet for ABIN967604

anti-Retinoblastoma 1 antibody (pSer780)



[Go to Product page](#)

3 Images

2 Publications

Overview

Quantity:	0.1 mg
Target:	Retinoblastoma 1 (RB1)
Binding Specificity:	pSer780
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Retinoblastoma 1 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Formalin-fixed Sections) (IHC (f))

Product Details

Brand:	BD Pharmingen™
Immunogen:	Phosphorylated Human Rb
Clone:	J146-35
Isotype:	IgG1 kappa
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	Retinoblastoma 1 (RB1)
Alternative Name:	Rb (RB1 Products)
Background:	The retinoblastoma gene product (Rb) is well known as a tumor suppressor and is either absent or mutated in many human tumors. Retrovirus-mediated gene transfer of the wild-type Rb gene into several Rb mutant neoplastic cell lines suppresses their tumorigenicity. Rb is a 110-kDa nuclear phosphoprotein that undergoes differential phosphorylation during the cell cycle. During G1 phase, Rb is predominantly in a hypophosphorylated state. It becomes increasingly phosphorylated throughout the cell cycle until late mitosis, when substantial dephosphorylation occurs. Hypophosphorylated Rb interacts with a number of cellular proteins including the E2F transcription factor, several cyclins, RBP-1, RBP-2, c-Abl, c-myc, N-myc, and p46. Phosphorylation of Rb at various sites, by Cyclin-dependent protein kinases, inhibits the binding of Rb to these proteins. Rb is thought to mediate its effects, in part, via the repression of genes required for proliferation. For example, Rb is specifically recruited to promoters containing E2F sites and actively represses E2F mediated transcription. Rb also stimulates the activity of other transcription factors, although the mechanisms are less clearly defined. Thus, Rb appears to regulate transcription in its aim to control cell growth. The J146-35 monoclonal antibody recognizes Rb phosphorylated at serine 780 (pS780), which affects Rb binding to E2F. The orthologous phosphorylation sites in mouse and rat Rb are serines 773 and 751, respectively.
Molecular Weight:	110 kDa
Pathways:	Cell Division Cycle , Intracellular Steroid Hormone Receptor Signaling Pathway , Mitotic G1-G1/S Phases , DNA Replication , Maintenance of Protein Location , Synthesis of DNA , Autophagy

Application Details

Comment:	Related Products: ABIN967389
Restrictions:	For Research Use only
Handling	
Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤ 0.09 % sodium azide.
Preservative:	Sodium azide

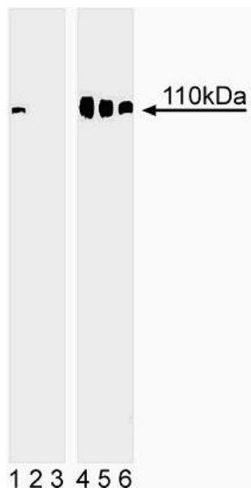
Handling

Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:	Cobrinik: "Pocket proteins and cell cycle control." in: Oncogene , Vol. 24, Issue 17, pp. 2796-809, (2005) (PubMed).
	Knudsen, Wang: "Dual mechanisms for the inhibition of E2F binding to RB by cyclin-dependent kinase-mediated RB phosphorylation." in: Molecular and cellular biology , Vol. 17, Issue 10, pp. 5771-83, (1997) (PubMed).

Images



Western Blotting

Image 1. Western blot analysis of Rb (pS780) in human embryonic skin cells. Lysates from serum-starved (first panel) and fetal bovine serum-stimulated (second panel) WS1 cell line were probed with purified mouse anti-Rb (pS780) monoclonal antibody at concentrations of 4.0 (lanes 1 and 4), 2.0 (lanes 2 and 5), and 1.0 µg/ml (lanes 3 and 6). Rb (pS780) is identified as a band of 110 kDa in the stimulated cells.

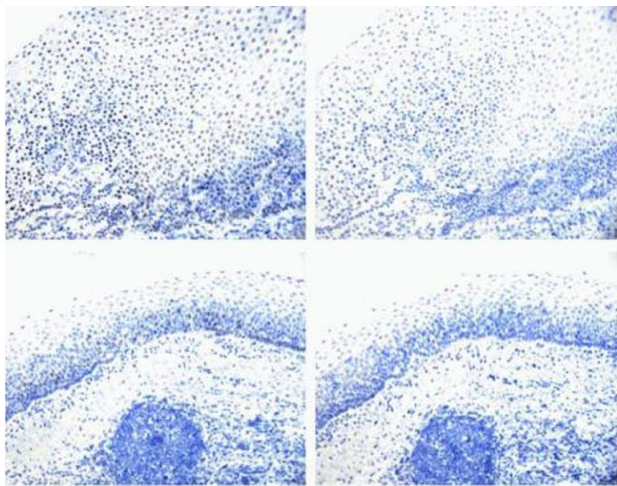
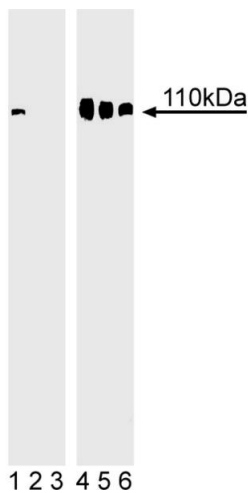


Image 2. Rb (pS780) staining on tonsil. Fresh human tonsil, stimulated with in 5 mM Pervanadate solution for 2 hours (top row) or unstimulated (bottom row), was fixed in formalin and processed. Following antigen retrieval with BD Retrieval A buffer, the sections were either left untreated (left column) or treated with a phosphatase to eliminate all phosphorylation (right column). The tissue sections were stained with purified Mouse anti-Rb (pS780) monoclonal antibody with Hematoxylin counterstaining. Original magnification: 20X.



Western Blotting

Image 3.