



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at +4C
#14731

Rb (4H1) Mouse mAb (PE Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: FC-FP	Reactivity: H Mk B Pg	Sensitivity: Endogenous	Source/Isotype: Mouse IgG2a	UniProt ID: #P06400	Entrez-Gene Id: 5925
-------------------------------	---------------------------------	-----------------------------------	---------------------------------------	-------------------------------	--------------------------------

Product Usage Information	Application Flow Cytometry (Fixed/Permeabilized)	Dilution 1:50
Storage	Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. <i>Do not aliquot the antibodies. Protect from light. Do not freeze.</i>	
Specificity/Sensitivity	Rb (4H1) Mouse mAb (PE Conjugate) detects endogenous levels of total Rb protein. The antibody does not cross-react with the Rb homologues p107 or p130, or with other proteins.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with an Rb-C terminal fusion protein containing residues 701-928 of human Rb.	
Description	This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Rb (4H1) Mouse mAb #9309.	
Background	The retinoblastoma tumor suppressor protein Rb regulates cell proliferation by controlling progression through the restriction point within the G1-phase of the cell cycle (1). Rb has three functionally distinct binding domains and interacts with critical regulatory proteins including the E2F family of transcription factors, c-Abl tyrosine kinase, and proteins with a conserved LXCXE motif (2-4). Cell cycle-dependent phosphorylation by a CDK inhibits Rb target binding and allows cell cycle progression (5). Rb inactivation and subsequent cell cycle progression likely requires an initial phosphorylation by cyclin D-CDK4/6 followed by cyclin E-CDK2 phosphorylation (6). Specificity of different CDK/cyclin complexes has been observed <i>in vitro</i> (6-8) and cyclin D1 is required for Ser780 phosphorylation <i>in vivo</i> (9).	
Background References	<ol style="list-style-type: none"> Sherr, C.J. (1996) <i>Science</i> 274, 1672-7. Nevins, J.R. (1992) <i>Science</i> 258, 424-9. Welch, P.J. and Wang, J.Y. (1993) <i>Cell</i> 75, 779-90. Hu, Q.J. et al. (1990) <i>EMBO J</i> 9, 1147-55. Knudsen, E.S. and Wang, J.Y. (1997) <i>Mol Cell Biol</i> 17, 5771-83. Lundberg, A.S. and Weinberg, R.A. (1998) <i>Mol Cell Biol</i> 18, 753-61. Connell-Crowley, L. et al. (1997) <i>Mol Biol Cell</i> 8, 287-301. Kitagawa, M. et al. (1996) <i>EMBO J</i> 15, 7060-9. Geng, Y. et al. (2001) <i>Proc Natl Acad Sci USA</i> 98, 194-9. 	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Applications Key	FC-FP: Flow Cytometry (Fixed/Permeabilized)
Cross-Reactivity Key	H: Human Mk: Monkey B: Bovine Pg: Pig
Trademarks and Patents	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc. All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.
Limited Uses	Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.