

Rb Monoclonal Antibody (1F8)

Catalog NumberMA1-34070

Product data sheet

Details		Species Reactivity	
Size	500 µL	Species reactivity	Human, Mouse, Rat
Host/Isotope	Mouse / IgG1	Published species	Rat, Human, Mouse, Not Applicable
Class	Monoclonal	Tested Applications	
Type	Antibody	Immunohistochemistry (Paraffin) (IHC (P))	Assay-dependent
Clone	1F8	Immunoprecipitation (IP)	Assay-dependent
Immunogen	Recombinant full length protein (Human).	Western Blot (WB)	1:100-1:500
Conjugate	Unconjugated	Published Applications	
Form	Liquid	Immunohistochemistry (Paraffin) (IHC (P))	See 3 publications below
Concentration	0.1 mg/mL	Immunohistochemistry (IHC)	See 12 publications below
Storage Conditions	4° C, do not freeze	Western Blot (WB)	See 11 publications below
		Miscellaneous PubMed (Misc)	See 1 publications below
		Gel Shift (GS)	See 1 publications below
		Immunocytochemistry (ICC/IF)	See 1 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

A suggested positive control is K562 WCL.

Background/Target Information

Rb is a tumor suppressor nuclear phosphoprotein capable of binding to DNA. It is phosphorylated on serine and threonine, but not on tyrosine residues. It forms a complex with SV40 large T antigen, adenovirus E1A, and human papilloma virus-16 E. Rb protein may act by regulating transcription and loss of its function leads to uncontrolled cell growth. Aberrations in the RB gene have been implicated in cancers of breast, colon, prostate, kidney, nasopharynx, and leukemia.

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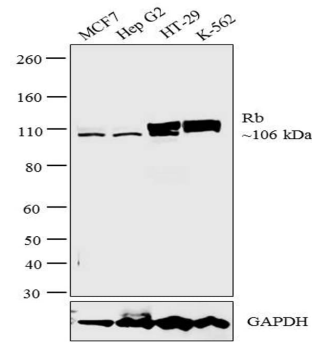
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Rb Antibody (MA1-34070) in WB

Western blot analysis was performed on modified whole cell extracts (1% SDS) (30 µg lysate) of MCF7 (Lane 1), Hep G2 (Lane 2), HT-29 (Lane 3) and K-562 (Lane 4). The blot was probed with Anti- Rb Monoclonal Antibody (Product # MA1-34070, 1:500 dilution) and detected by chemiluminescence using Goat anti Mouse IgG (H+L) Superclonal™ Secondary Antibody, HRP conjugate (Product # A28177, 0.25 µg/mL, 1:4000 dilution). A 106 kDa band corresponding to Rb was detected across the cell lines tested.



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PubMed References For Rb Monoclonal Antibody (1F8)

3 Immunohistochemistry (Paraffin) References

Species / Dilution	Summary
Human / Not Cited	MA134070 was used in immunohistochemistry - paraffin section to analyze high-risk HPV incidence, prognostic biomarkers, and outcome in HIV-positive and -negative patients with head and neck squamous cell cancer
	Molecular cancer research : MCR (2017; 15: 179) "High-Risk HPV, Biomarkers, and Outcome in Matched Cohorts of Head and Neck Cancer Patients Positive and Negative for HIV." Author(s):Walline HM,Carey TE,Goudsmit CM,Bellile EL,D'Souza G,Peterson LA,McHugh JB,Pai SI, Lee JJ,Shin DM, Ferris RL PubMed Article URL: http://dx.doi.org/10.1158/1541-7786.MCR-16-0255
Human / Not Cited	MA1-34070 was used in immunohistochemistry - paraffin section to run phase II single-arm trial of CDK4/6 inhibitor palbociclib in Rb-positive advanced breast cancer
	Clinical cancer research : an official journal of the American Association for Cancer Research (2015; 21: 995) "CDK 4/6 inhibitor palbociclib (PD0332991) in Rb+ advanced breast cancer: phase II activity, safety, and predictive biomarker assessment." Author(s):DeMichele A,Clark AS,Tan KS,Heitjan DF,Gramlich K,Gallagher M,Lal P,Feldman M,Zhang P,Colameco C, Lewis D,Langer M,Goodman N,Domchek S,Gogineni K,Rosen M,Fox K,O'Dwyer P PubMed Article URL: http://dx.doi.org/10.1158/1078-0432.CCR-14-2258
Human / 1:100	MA1-34070 was used in immunohistochemistry - paraffin section to determine the role and diagnostic efficacy of RB1, CDK4, CHMP2B, HSP90, and cPLA2G4A as markers in myxofibrosarcomas and myxoid liposarcomas
	International journal of surgical pathology (2014; 22: 589) "Immunohistochemical analysis of expressions of RB1, CDK4, HSP90, cPLA2G4A, and CHMP2B is helpful in distinction between myxofibrosarcoma and myxoid liposarcoma." Author(s):Wang T,Goodman MA,McGough RL,Weiss KR,Rao UN PubMed Article URL: http://dx.doi.org/10.1177/1066896914532539

12 Immunohistochemistry References

Species / Dilution	Summary
Human / 1:20	MA1-34070 was used in immunohistochemistry to study p53, p16 and Rb protein expression and the clinicopathology of patients with locally advanced urinary bladder cancer
	Urologic oncology (2004; 22: 112) "The prevalence and clinicopathologic correlate of p16INK4a, retinoblastoma and p53 immunoreactivity in locally advanced urinary bladder cancer." Author(s):Tzai TS,Tsai YS,Chow NH PubMed Article URL: http://dx.doi.org/10.1016/S1078-1439(03)00176-5
Human / 1:200	MA1-34070 was used in immunohistochemistry to study retinoblastoma protein-1 gene methylation and heterozygous loss in polyomavirus-negative Merkel cell carcinoma
	APMIS : acta pathologica, microbiologica, et immunologica Scandinavica (2014; 122: 1157) "RB1 gene in Merkel cell carcinoma: hypermethylation in all tumors and concurrent heterozygous deletions in the polyomavirus-negative subgroup." Author(s):Sahi H,Savola S,Sihto H,Koljonen V,Bohling T,Knuutila S PubMed Article URL: http://dx.doi.org/10.1111/apm.12274
Human / Not Cited	MA1-34070 was used in immunohistochemistry to study the molecular determinants of the response to radiotherapy in oral carcinoma
	International journal of cancer (2004; 109: 710) "p53, p16 and cyclin D1: molecular determinants of radiotherapy treatment response in oral carcinoma." Author(s):Jayasurya R,Francis G,Kannan S,Lekshminarayanan K,Nalinakumari KR,Abraham T,Abraham EK,Nair MK PubMed Article URL: http://dx.doi.org/10.1002/ijc.20042
Human / Not Cited	MA1-34070 was used in immunohistochemistry to study the effects of epigenetic silencing of p14ARF on the subcellular localization of MDM2
	Cancer research (2001; 61: 2816) "p14ARF silencing by promoter hypermethylation mediates abnormal intracellular localization of MDM2." Author(s):Esteller M,Cordon-Cardo C,Corn PG,Meltzer SJ,Pohar KS,Watkins DN,Capella G,Peinado MA,Matias-Guiu X, Prat J,Baylin SB,Herman JG PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/11306450

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	MA1-34070 was used in immunohistochemistry to study the prognostic value of cell-cycle regulators in urothelial neoplasms of the bladder
Human / 1:25	European urology (2006; 50: 506) "Molecular and immunohistochemical analysis of the prognostic value of cell-cycle regulators in urothelial neoplasms of the bladder." Author(s):Yurakh AO,Ramos D,Calabuig-Fariñas S,López-Guerrero JA,Rubio J,Solsona E,Romanenko AM,Vozianov AF,Pellin A,Llombart-Bosch A PubMed Article URL: http://dx.doi.org/10.1016/j.eururo.2006.03.027
Human / 1:400	MA1-34070 was used in immunohistochemistry to define a molecular profile for benign and malignant parathyroid tumor discrimination Cancer (2009; 115: 334) "Defining a molecular phenotype for benign and malignant parathyroid tumors." Author(s):Fernandez-Ranvier GG,Khanafshar E,Tacha D,Wong M,Kebebew E,Duh QY,Clark OH PubMed Article URL: http://dx.doi.org/10.1002/cncr.24037
Human / 1:200	MA1-34070 was used in immunohistochemistry to investigate the expression of double-strand break repair genes in non-small cell lung cancer Clinical cancer research : an official journal of the American Association for Cancer Research (2007; 13: 832) "Epigenetic inactivation of the chromosomal stability control genes BRCA1, BRCA2, and XRCC5 in non-small cell lung cancer." Author(s):Lee MN,Tseng RC,Hsu HS,Chen JY,Tzao C,Ho WL,Wang YC PubMed Article URL: http://dx.doi.org/10.1158/1078-0432.CCR-05-2694
Human / Not Cited	MA1-34070 was used in immunohistochemistry to identify biomarkers to classify primary cutaneous B-cell lymphomas Experimental dermatology (2011; 20: 331) "Simultaneous aberrations of single CDKN2A network components and a high Rb phosphorylation status can differentiate subgroups of primary cutaneous B-cell lymphomas." Author(s):Kaune KM,Neumann C,Hallermann C,Haller F,Schön MP,Middel P PubMed Article URL: http://dx.doi.org/10.1111/j.1600-0625.2010.01226.x
Human / 1:50	MA1-34070 was used in immunohistochemistry to study the prognostic value of alterations in the G1-S checkpoint in localized leiomyosarcoma of the peripheral soft tissue Annals of surgical oncology (2011; 18: 566) "Prognostic significance of the alterations of the G1-S checkpoint in localized leiomyosarcoma of the peripheral soft tissue." Author(s):Panels J,Beltrami G,Scoccianti G,Capanna R,Paglierani M,Pepi M,Massi D,Franchi A PubMed Article URL: http://dx.doi.org/10.1245/s10434-010-1226-6
Human / Not Cited	MA1-34070 was used in immunohistochemistry to study the clinical value of measuring retinoblastoma pathway expression in cervical intraepithelial neoplasia Gynecologic oncology (2007; 104: 207) "The expressions of the Rb pathway in cervical intraepithelial neoplasia; predictive and prognostic significance." Author(s):Nam EJ,Kim JW,Kim SW,Kim YT,Kim JH,Yoon BS,Cho NH,Kim S PubMed Article URL: http://dx.doi.org/10.1016/j.ygyno.2006.07.043
Human / Not Cited	MA1-34070 was used in immunohistochemistry to study the lack of association of HPV with non-small cell lung cancer in Canadian and North American populations Lung cancer (Amsterdam, Netherlands) (2013; 79: 215) "Human papilloma virus genome is rare in North American non-small cell lung carcinoma patients." Author(s):Yanagawa N,Wang A,Kohler D,Santos Gda C,Sykes J,Xu J,Pintilie M,Tsao MS PubMed Article URL: http://dx.doi.org/10.1016/j.lungcan.2012.11.018
Human / Not Cited	MA1-34070 was used in immunohistochemistry to study the role of the G1/S transition regulators in the recurrence of head and neck squamous carcinomas Journal of cellular physiology (2012; 227: 233) "Alteration of G1/S transition regulators influences recurrences in head and neck squamous carcinomas." Author(s):Canzonieri V,Barzan L,Franchin G,Vaccher E,Talamini R,Sulfaro S,Baldassarre G PubMed Article URL: http://dx.doi.org/10.1002/jcp.22723

11 Western Blot References

Species / Dilution	Summary
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	MA1-34070 was used in western blot to evaluate an inducible p53 expressing cell clone for p53 gene therapy in cancers
Human / Not Cited	Archives of dermatological research (2009; 301: 631) "Establishment of ponasterone A-inducible the wild-type p53 protein-expressing clones from HSC-1 cells, cell growth suppression by p53 expression and the suppression mechanism." Author(s):Hori M,Suzuki K,Udono MU,Yamauchi M,Mine M,Watanabe M,Kondo S,Hozumi Y PubMed Article URL: http://dx.doi.org/10.1007/s00403-008-0915-5
Mouse / Not Cited	MA1-34070 was used in western blot to study the molecular mechanisms by which mesenchymal stem cells inhibit T cell proliferation Cellular immunology (2007; 245: 16) "The inhibition of T-cells proliferation by mouse mesenchymal stem cells through the induction of p16INK4A-cyclin D1/cdk4 and p21waf1, p27kip1-cyclin E/cdk2 pathways." Author(s):Kim JA,Hong S,Lee B,Hong JW,Kwak JY,Cho S,Kim CC PubMed Article URL: http://dx.doi.org/10.1016/j.cellimm.2007.03.003
Human / 1:2000	MA1-34070 was used in western blot to study the E6 and E7 gene silencing and its effect on human papillomavirus 16-positive oropharyngeal cancer cells Journal of the National Cancer Institute (2009; 101: 412) "E6 and e7 gene silencing and transformed phenotype of human papillomavirus 16-positive oropharyngeal cancer cells." Author(s):Rampias T,Sasaki C,Weinberger P,Psyrrri A PubMed Article URL: http://dx.doi.org/10.1093/jnci/djp017
Human / Not Cited	MA1-34070 was used in western blot to study the antiproliferative and apoptotic effects of ixocarpalactone A on colon cancer cells The FEBS journal (2006; 273: 5714) "Ixocarpalactone A isolated from the Mexican tomatillo shows potent antiproliferative and apoptotic activity in colon cancer cells." Author(s):Choi JK,Murillo G,Su BN,Pezzuto JM,Kinghorn AD,Mehta RG PubMed Article URL: http://dx.doi.org/10.1111/j.1742-4658.2006.05560.x
Human / Not Cited	MA1-34070 was used in western blot to investigate the effect of E6/E7 viral oncoproteins on Wnt signaling pathway in HPV16-positive oropharyngeal cancer cells Molecular cancer research : MCR (2010; 8: 433) "Activation of Wnt signaling pathway by human papillomavirus E6 and E7 oncogenes in HPV16-positive oropharyngeal squamous carcinoma cells." Author(s):Rampias T,Boutati E,Pectasides E,Sasaki C,Kountourakis P,Weinberger P,Psyrrri A PubMed Article URL: http://dx.doi.org/10.1158/1541-7786.MCR-09-0345
Rat / Not Cited	MA1-34070 was used in western blot to study the inhibition of C6 glioma cell growth by caffeic acid phenethyl ester and the potential mechanisms involved Cancer letters (2006; 234: 199) "Inhibitory effect of caffeic acid phenethyl ester on the growth of C6 glioma cells in vitro and in vivo." Author(s):Kuo HC,Kuo WH,Lee YJ,Lin WL,Chou FP,Tseng TH PubMed Article URL: http://dx.doi.org/10.1016/j.canlet.2005.03.046
Human / Not Cited	MA1-34070 was used in western blot to study the role of ribonucleotide reductase M2 subunit downregulation in the mechanism by which flavopiridol sensitizes gastrointestinal cancer cell lines to gemcitabine Clinical cancer research : an official journal of the American Association for Cancer Research (2001; 7: 2527) "Flavopiridol increases sensitization to gemcitabine in human gastrointestinal cancer cell lines and correlates with down-regulation of ribonucleotide reductase M2 subunit." Author(s):Jung CP,Motwani MV,Schwartz GK PubMed Article URL: http://www.ncbi.nlm.nih.gov/pubmed/11489836
Human / Not Cited	MA1-34070 was used in western blot to investigate the effect of the dominant negative c-jun on the activation of cyclin D1 and cyclin E kinase complexes Molecular biology of the cell (2001; 12: 2352) "Dominant negative c-jun inhibits activation of the cyclin D1 and cyclin E kinase complexes." Author(s):Hennigan RF,Stambrook PJ PubMed Article URL: http://dx.doi.org/10.1091/mbc.12.8.2352
Human / Not Cited	MA1-34070 was used in western blot to study the involvement of telomerase activity in human fibroblast growth arrest The Journal of biological chemistry (2003; 278: 7692) "Evidence that high telomerase activity may induce a senescent-like growth arrest in human fibroblasts." Author(s):Gorbunova V,Seluanov A,Pereira-Smith OM PubMed Article URL: http://dx.doi.org/10.1074/jbc.M212944200

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	MA1-34070 was used in western blot to study the role of p16INK4A in the mechanism by which HFE polymorphisms affect the response of cancer cells to chemotherapy
Human / 1:200	International journal of cancer (2011; 129: 2104) "HFE polymorphisms influence the response to chemotherapeutic agents via induction of p16INK4A." Author(s):Lee SY,Liu S,Mitchell RM,Slagle-Webb B,Hong YS,Sheehan JM,Connor JR PubMed Article URL: http://dx.doi.org/10.1002/ijc.25888
	MA1-34070 was used in western blot to investigate the influence of selective inhibition of rRNA transcription on the cell cycle of human cancer cells
Human / Not Cited	Journal of cell science (2011; 124: 3017) "Selective inhibition of rRNA transcription downregulates E2F-1: a new p53-independent mechanism linking cell growth to cell proliferation." Author(s):Donati G,Brighenti E,Vici M,Mazzini G,Treré D,Montanaro L,Derenzini M PubMed Article URL: http://dx.doi.org/10.1242/jcs.086074
1 Miscellaneous PubMed References	
Species / Dilution	Summary
	MA1-34070 was used in western blot to discuss how SKI-mediated processes in melanoma cells
Human / Not Cited	Cell cycle (Georgetown, Tex.) (2010; 9: 1684) "SKI promotes Smad3 linker phosphorylations associated with the tumor-promoting trait of TGFbeta." Author(s):Lin Q,Chen D,Timchenko NA,Medrano EE PubMed Article URL: http://dx.doi.org/10.4161/cc.9.9.11292
1 Gel Shift References	
Species / Dilution	Summary
	MA1-34070 was used in EMSA and western blot to investigate the cellular effects of chlorophyllin treatment
Not Applicable / Not Cited	International journal of cancer (2009; 125: 2086) "E2F4 and ribonucleotide reductase mediate S-phase arrest in colon cancer cells treated with chlorophyllin." Author(s):Chimploy K,Díaz GD,Li Q,Carter O,Dashwood WM,Mathews CK,Williams DE,Bailey GS,Dashwood RH PubMed Article URL: http://dx.doi.org/10.1002/ijc.24559
1 Immunocytochemistry References	
Species / Dilution	Summary
	MA1-34070 was used in immunocytochemistry and western blot to study the effects of rRNA synthesis inhibition on cell cycle progression and cell population growth according to retinoblastoma and p53 status
Human / 1:200	Cell proliferation (2007; 40: 532) "Different effects of ribosome biogenesis inhibition on cell proliferation in retinoblastoma protein- and p53-deficient and proficient human osteosarcoma cell lines." Author(s):Montanaro L,Mazzini G,Barbieri S,Vici M,Nardi-Pantoli A,Govoni M,Donati G,Treré D,Derenzini M PubMed Article URL: http://dx.doi.org/10.1111/j.1365-2184.2007.00448.x

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