

Certificate of Analysis

Product: Affinity Purified Anti-Bmi1 [Goat]

Code: 600-101-392

Lot #: 16724

Size: 100 µg

Physical State: Liquid (sterile filtered)

Antibody Concentration: 0.79 mg/ml (by UV absorbance at 280 nm)

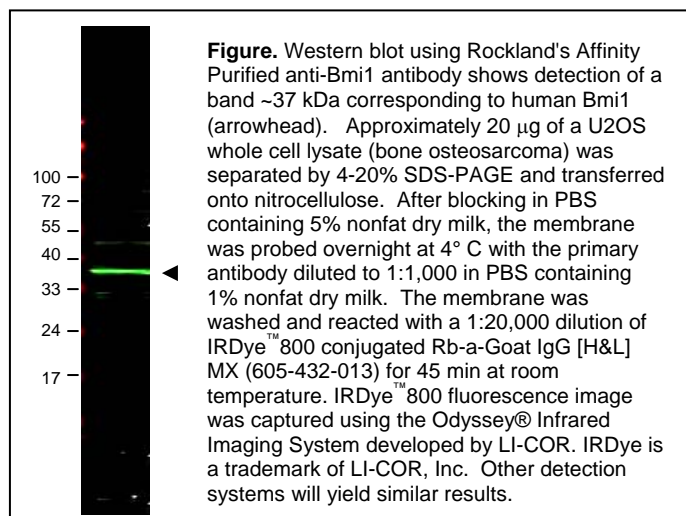
Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Storage Conditions: Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

Background Information: The Bmi-1 oncogene (also known as polycomb group ring finger 4, MGC12685, murine leukemia viral (bmi 1) oncogene homolog, oncogene BMI 1, polycomb complex protein BMI 1 and RNF51) induces telomerase activity and immortalizes human mammary epithelial cells. Bmi-1 extends the replicative life span of human fibroblasts by suppressing the p16-dependent senescence pathway. The polycomb group (PcG) genes are involved in the maintenance of cellular memory through epigenetic chromatin modifications. Recent studies have implicated a role for PcG genes in the self-renewal of hematopoietic stem cells (HSCs), a process in which cellular memory is maintained through cell division. Among the PcG genes, Bmi-1 plays a central role in the inheritance of stemness, and its forced expression promotes HSC self-renewal. These findings highlight the importance of epigenetic regulation in HSC self-renewal and identify PcG genes as potential targets for therapeutic HSC manipulation.



Application Note(s): This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 37 kDa in size corresponding to Bmi1 by western blotting in the appropriate cell lysate or extract.

Recommended Dilutions:	ELISA	1:5,000 - 1:30,000
	WESTERN BLOT	1:500 - 1:3,000
	IF MICROSCOPY	User Optimized
	OTHER APPLICATIONS	User Optimized

Purity and Specificity: This affinity purified antibody is directed against human Bmi1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest cross reactivity with Bmi1 protein from human, rat, orangutan, dog, chimpanzee, bovine and cat based on 100% homology to the immunogen sequence. This sequence shows significant homology to homologues from Xenopus and chicken sources. Reactivity against homologues from other sources is not known.

Relevant Links: NCBI [NP_005171](https://pubmed.ncbi.nlm.nih.gov/1005171/)

Swiss-Prot [P35226](https://www.uniprot.org/uniprot/P35226)

Immunogen: This affinity purified antibody was prepared from whole goat serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 252-264 of human Bmi1 protein.

Protein Sequence: Human Bmi1, 326 aa, predicted MW 36.9 kDa

1	mhrtrrik	elnphlmcvl	cggyfidatt	ieclhsfck	tcivrylets	kycpicdvqv
61	hkrpnlir	sdktlqdivy	klvpglfnkne	mkrrrdfyaa	hpsadaangs	nedrgevade
121	dkriitddei	islsieffdq	nrlrkvnd	kekskeevnd	krylrcaam	tvmhlrkflr
181	skmdipntfq	idvmyeeep	kdytmdia	iyitwrrngp	lpkyrvrpt	ckrmkishqr
241	dgltnagele	sdsgsdkans	paggipstss	clpspstpvq	sphpqfphis	stmngtsnsp
301	sgnhqssfan	rprkssvngs	satssg			

General References:

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Leung, C., Lingbeek, M., Shakhova, O., Liu, J., Tanger, E., Saremaslani, P., Van Lohuizen, M. and Marino, S. (2004) Bmi1 is essential for cerebellar development and is overexpressed in human medulloblastomas. *Nature* **428** (6980), 337-341.

Obuse, C., Yang, H., Nozaki, N., Goto, S., Okazaki, T. and Yoda, K. (2004) Proteomics analysis of the centromere complex from HeLa interphase cells: UV-damaged DNA binding protein 1 (DDB-1) is a component of the CEN-complex, while BMI-1 is transiently co-localized with the centromeric region in interphase. *Genes Cells* **9** (2), 105-120.

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Cmarko, D., Verschure, P.J., Otte, A.P., van Driel, R. and Fakan, S. (2003) Polycomb group gene silencing proteins are concentrated in the perichromatin compartment of the mammalian nucleus. *J. Cell. Sci.* **116** (PT 2), 335-343.

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[#KIA-004](#) **MaxTag**TM Anti-GOAT IgG Kit for Immunoblotting

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