

# Bmi-1 (C-20): sc-8906

## BACKGROUND

In *Drosophila*, Polycomb (Pc-γ) gene family encodes chromatin proteins that are required for the repression of homeotic loci in embryonic development. Mel-18 and Bmi-1, mammalian homologs of *Drosophila* Pc-γ group proteins, are similarly expressed during development and implicated in the regulation of gene expression, axial skeleton development, control of proliferation and survival of haematopoietic cells. Mel-18 directly binds to DNA through a RING-finger motif and preferentially associates with juxtaposed enhancer elements on various genes, including Bcl-2, c-Myc and Hox. Mel-18 is an immediate early response gene within the c-Myc/Cdc25 signaling cascade that exhibits tumor suppressor activity and negatively regulates cell cycle progression by blocking S phase entry. Alternatively, Bmi-1 has been identified as a potent oncogene as it contributes to the transcriptional activation of genes implicated in early lymphoid development. Proviral activation of Bmi-1 expression corresponds to enhanced gene-specific activation of other proto-oncogenes, including c-Myc and Pim, subsequently resulting in the progression of lymphomagenesis.

## CHROMOSOMAL LOCATION

Genetic locus: BMI1 (human) mapping to 10p12.2; Bmi1 (mouse) mapping to 2 A3.

## SOURCE

Bmi-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Bmi-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8906 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8906 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Bmi-1 (C-20) is recommended for detection of Bmi-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Bmi-1 (C-20) is also recommended for detection of Bmi-1 in additional species, including equine, canine, bovine, porcine and feline.

Suitable for use as control antibody for Bmi-1 siRNA (h): sc-29814, Bmi-1 siRNA (m): sc-29815, Bmi-1 shRNA Plasmid (h): sc-29814-SH, Bmi-1 shRNA Plasmid (m): sc-29815-SH, Bmi-1 shRNA (h) Lentiviral Particles: sc-29814-V and Bmi-1 shRNA (m) Lentiviral Particles: sc-29815-V.

Bmi-1 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

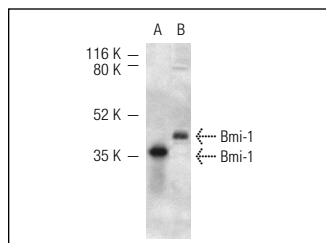
Molecular Weight of Bmi-1: 41 kDa.

Positive Controls: K-562 nuclear extract: sc-2130.

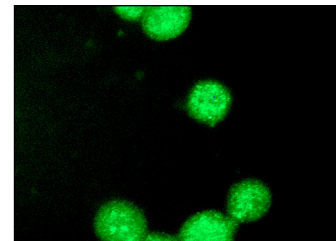
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Bmi-1 (C-20): sc-8906. Western blot analysis of human recombinant Bmi-1 (A) and expression in K-562 nuclear extract (B).



Bmi-1 (C-20): sc-8906. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

- Alonso, S.R., et al. 2004. Progression in cutaneous malignant melanoma is associated with distinct expression profiles: a tissue microarray-based study. *Am. J. Pathol.* 164: 193-203.
- Sanchez-Beato, M., et al. 2004. Abnormal PcG protein expression in Hodgkin's lymphoma. Relation with E2-F6 and NFκB transcription factors. *J. Pathol.* 204: 528-537.
- Silva, J., et al. 2006. Implication of polycomb members Bmi-1, Mel-18, and Hpc-2 in the regulation of p16INK4a, p14ARF, h-TERT, and c-Myc expression in primary breast carcinomas. *Clin. Cancer Res.* 12: 6929-6936.
- Palijan, A., et al. 2009. Ligand-dependent corepressor LCoR is an attenuator of progesterone-regulated gene expression. *J. Biol. Chem.* 284: 30275-30287.
- Agherbi, H., et al. 2009. Polycomb mediated epigenetic silencing and replication timing at the INK4a/ARF locus during senescence. *PLoS ONE* 4: e5622.
- Morachis, J.M., et al. 2010. Regulation of the p53 transcriptional response by structurally diverse core promoters. *Genes Dev.* 24: 135-147.
- Cui, J.G., et al. 2010. Micro-RNA-128 (miRNA-128) down-regulation in glioblastoma targets ARP5 (ANGPTL6), Bmi-1 and E2F-3α, key regulators of brain cell proliferation. *J. Neurooncol.* 98: 297-304.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Bmi-1 (F-9): sc-390443** or **Bmi-1 (1F4): sc-13519**, our highly recommended monoclonal alternatives to Bmi-1 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Bmi-1 (F-9): sc-390443**.