

# Mel-18 (N-17): sc-8904

## BACKGROUND

In *Drosophila*, Polycomb (PcG) gene family encodes chromatin proteins that are required for the repression of homeotic loci in embryonic development. Mel-18 and Bmi-1 are mammalian homologs of *Drosophila* PcG group proteins, as they are similarly expressed during development and implicated in the regulation of gene expression, axial skeleton development, and the 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: PCGF2 (human) mapping to 17q12, BMI1 (human) mapping to 10p12.2; Pcgf2 (mouse) mapping to 11 D, Bmi1 (mouse) mapping to 2 A3.

## SOURCE

Mel-18 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Mel-18 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-8904 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8904 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Mel-18 (N-17) is recommended for detection of Mel-18 and 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).

Mel-18 (N-17) is also recommended for detection of Mel-18 and Bmi-1 in additional species, including equine, canine, bovine, porcine and avian.

Mel-18 (N-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Mel-18 monomer: 38 kDa.

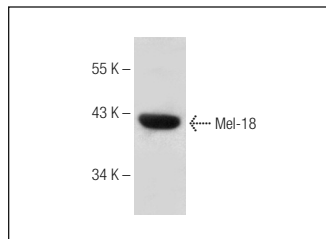
Molecular Weight of Mel-18 dimer: 70-90 kDa.

Positive Controls: human liver extract: sc-363766.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Mel-18 (N-17): sc-8904. Western blot analysis of Mel-18 expression in human liver tissue extract.

## SELECT PRODUCT CITATIONS

- Sanchez-Beato, M., et al. 2004. Abnormal PcG protein expression in Hodgkin's lymphoma. Relation with E2F6 and NFκB transcription factors. *J. Pathol.* 204: 528-537.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **Mel-18 (H-1): sc-515329** or **Mel-18 (B-8): sc-390868**, our highly recommended monoclonal alternatives to Mel-18 (N-17).