

Mel-18 (H-115): sc-10744

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; Pcgf2 (mouse) mapping to 11 D.

SOURCE

Mel-18 (H-115) is a rabbit polyclonal antibody raised against amino acids 230-344 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-10744 X, 200 µg/0.1 ml.

APPLICATIONS

Mel-18 (H-115) is recommended for detection of Mel-18 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 (H-115) is also recommended for detection of Mel-18 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Mel-18 siRNA (h): sc-38191, Mel-18 siRNA (m): sc-38192, Mel-18 shRNA Plasmid (h): sc-38191-SH, Mel-18 shRNA Plasmid (m): sc-38192-SH, Mel-18 shRNA (h) Lentiviral Particles: sc-38191-V and Mel-18 shRNA (m) Lentiviral Particles: sc-38192-V.

Mel-18 (H-115) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Mel-18 monomer: 38 kDa.

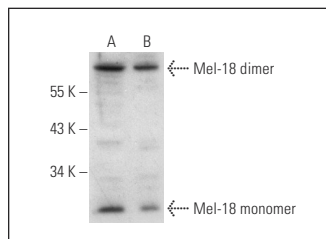
Molecular Weight of Mel-18 dimer: 70-90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

STORAGE

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

DATA



Mel-18 (H-115): sc-10744. Western blot analysis of Mel-18 expression in HeLa (A) and Jurkat (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Anttonen, M., et al. 2003. FOG-2 and GATA-4 are coexpressed in the mouse ovary and can modulate mullerian-inhibiting substance expression. *Biol. Reprod.* 68: 1333-1340.
- Jacob, E., et al. 2008. Unconventional association of the polycomb group proteins with cytokine genes in differentiated T helper cells. *J. Biol. Chem.* 283: 13471-13481.
- Zhang, X.W., et al. 2010. BMI1 and Mel-18 oppositely regulate carcinogenesis and progression of gastric cancer. *Mol. Cancer* 9: 40.
- Qian, T., et al. 2010. Id1 enhances RING1b E3 ubiquitin ligase activity through the Mel-18/Bmi-1 polycomb group complex. *Oncogene* 29: 5818-5827.
- Jacob, E., et al. 2011. Dual function of polycomb group proteins in differentiated murine T helper (CD4⁺) cells. *J. Mol. Signal.* 6: 5.
- Choudhury, S.R., et al. 2011. (-)-Epigallocatechin-3-gallate and DZNep reduce polycomb protein level via a proteasome-dependent mechanism in skin cancer cells. *Carcinogenesis* 32: 1525-1532.
- Sustackova, G., et al. 2012. Acetylation-dependent nuclear arrangement and recruitment of BMI1 protein to UV-damaged chromatin. *J. Cell. Physiol.* 227: 1838-1850.

RESEARCH USE

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



Try **Mel-18 (H-1): sc-515329** or **Mel-18 (B-8): sc-390868**, our highly recommended monoclonal alternatives to Mel-18 (H-115).