

M33 (C-18): sc-19297

BACKGROUND

Polycomb group (PcG) proteins form multiprotein complexes and play a role in gene silencing and Hox gene regulation by altering chromatin structure during transcription. The PcG protein M33, also known as CBX2 or MOD2, controls the accessibility of retinoic acid response elements in the vicinity of Hox genes regulatory regions by direct and/or indirect mechanisms. MPC2 and MPC3 are PcG proteins that show structural similarity to M33 and, like M33, bind the PcG protein RING1 through a conserved c-box motif located in the C-terminus of RING1. Both M33 and BMI-1 have an influence on positions effect variegation (PEV), which is the suppression of protein expression in a proportion of cells. M33 deficiency may cause sex reversal by interfering with steps upstream of the Y-chromosome-specific SRY gene. M33 may also be involved in two different pathologies: the campomelic syndrome, an inherited disorder, and neoplastic disorders linked to allele loss in this region.

REFERENCES

1. Gez, J., Gaunt, S.J., Passage, E., Burton, R.D., Cudrey, C., Pearce, J.J. and Fontes, M. 1995. Assignment of a polycomb-like chromobox gene (CBX2) to human chromosome 17q25. *Genomics* 26: 130-131.
2. Garcia, E., Marcos-Gutierrez, C., del Mar Lorente, M., Moreno, J.C. and Vidal, M. 1999. RYBP, a new repressor protein that interacts with components of the mammalian polycomb complex, and with the transcription factor YY1. *EMBO J.* 18: 3404-3418.
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6. Hemenway, C.S., de Erkenez, A.C. and Gould, G.C. 2001. The polycomb protein MPC3 interacts with AF9, an MLL fusion partner in t(9;11)(p22;q23) acute leukemias. *Oncogene* 20: 3798-3805.

CHROMOSOMAL LOCATION

Genetic locus: CBX2 (human) mapping to 17q25.3; Cbx2 (mouse) mapping to 11 E2.

SOURCE

M33 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of M33 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19297 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

M33 (C-18) is recommended for detection of M33 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

M33 (C-18) is also recommended for detection of M33 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for M33 siRNA (h): sc-38189, M33 siRNA (m): sc-38190, M33 shRNA Plasmid (h): sc-38189-SH, M33 shRNA Plasmid (m): sc-38190-SH, M33 shRNA (h) Lentiviral Particles: sc-38189-V and M33 shRNA (m) Lentiviral Particles: sc-38190-V.

Molecular Weight of M33 isoforms: 56/23 kDa.

Positive Controls: P19 cell lysate: sc-24760.

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) 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.

SELECT PRODUCT CITATIONS

1. Sustacková, G., Kozubek, S., Stixová, L., Legartová, S., Matula, P., Orlova, D. and Bártová, E. 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 **M33 (34): sc-136387**, our highly recommended monoclonal alternative to M33 (C-18).