

M33 (34): sc-136387

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.
3. Bel-Vialar, S., Core, N., Terranova, R., Goudot, V., Boned, A. and Djabali, M. 2000. Altered retinoic acid sensitivity and temporal expression of Hox genes in polycomb-M33-deficient mice. *Dev. Biol.* 224: 238-249.

CHROMOSOMAL LOCATION

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

SOURCE

M33 (34) is a mouse monoclonal antibody raised against amino acids 286-394 of M33 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

M33 (34) is available conjugated to agarose (sc-136387 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136387 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136387 PE), fluorescein (sc-136387 FITC), Alexa Fluor® 488 (sc-136387 AF488), Alexa Fluor® 546 (sc-136387 AF546), Alexa Fluor® 594 (sc-136387 AF594) or Alexa Fluor® 647 (sc-136387 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136387 AF680) or Alexa Fluor® 790 (sc-136387 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

M33 (34) 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

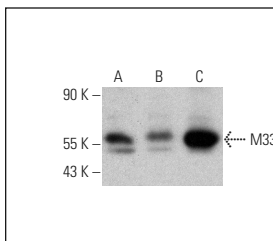
Molecular Weight of M33 isoforms: 56/23 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, A-431 nuclear extract: sc-2122 or P19 cell lysate: sc-24760.

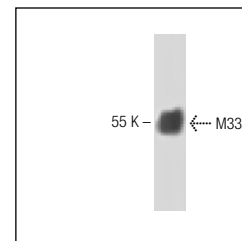
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



M33 (34): sc-136387. Western blot analysis of M33 expression in MDA-MB-231 whole cell lysate (A) and HeLa (B) and A-431 (C) nuclear extracts.



M33 (34): sc-136387. Western blot analysis of M33 expression in P19 whole cell lysate.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.