

Mnt (M-132): sc-769

BACKGROUND

Mnt (Max binding protein), also known as MAD6, ROX, bHLHd3 (class D basic helix-loop-helix protein 3) or MXD6, is a 582 amino acid nuclear protein that forms a complex with Max (Myc-associated factor X) to repress transcription. Mnt contains one basic helix-loop-helix (bHLH) domain and is encoded by a gene that maps to human chromosome 17p13.3. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

CHROMOSOMAL LOCATION

Genetic locus: MNT (human) mapping to 17p13.3; Mnt (mouse) mapping to 11 B5.

SOURCE

Mnt (M-132) is a rabbit polyclonal antibody raised against amino acids 226-361 of Mnt 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-769 X, 200 µg/0.1 ml.

APPLICATIONS

Mnt (M-132) is recommended for detection of Mnt 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).

Mnt (M-132) is also recommended for detection of Mnt in additional species, including canine and avian.

Suitable for use as control antibody for Mnt siRNA (h): sc-38083, Mnt siRNA (m): sc-38084, Mnt shRNA Plasmid (h): sc-38083-SH, Mnt shRNA Plasmid (m): sc-38084-SH, Mnt shRNA (h) Lentiviral Particles: sc-38083-V and Mnt shRNA (m) Lentiviral Particles: sc-38084-V.

Mnt (M-132) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Mnt: 62 kDa.

Positive Controls: rat ovary extract: sc-2399.

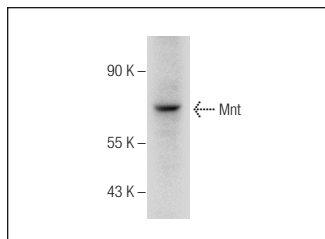
RESEARCH USE

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

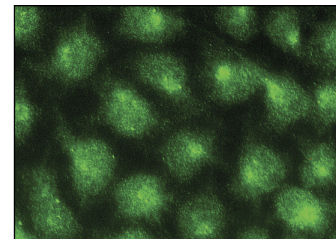
STORAGE

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

DATA



Mnt (M-132): sc-769. Western blot analysis of Mnt expression in rat ovary tissue extract.



Mnt (M-132): sc-769. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Xu, D., et al. 2001. Switch from Myc/Max to Mad1/Max binding and decrease in histone acetylation at the telomerase reverse transcriptase promoter during differentiation of HL60 cells. *Proc. Natl. Acad. Sci. USA* 98: 3826-3831.
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- Matsuoka, Y., et al. 2008. Induction of a novel histone deacetylase 1/ c-Myc/Mnt/Max complex formation is implicated in parity-induced refractoriness to mammary carcinogenesis. *Cancer Sci.* 99: 309-315.
- Hara, T., et al. 2008. Role of human T-cell leukemia virus type I Tax in expression of the human telomerase reverse transcriptase (hTERT) gene in human T-cells. *Cancer Sci.* 99: 1155-1163.
- Ozono, E., et al. 2009. E2F-like elements in p27^{Kip1} promoter specifically sense deregulated E2F activity. *Genes Cells* 14: 89-99.
- Lee, Y.M., et al. 2009. Piceatannol, a natural stilbene from grapes, induces G₁ cell cycle arrest in androgen-insensitive DU145 human prostate cancer cells via the inhibition of CDK activity. *Cancer Lett.* 285: 166-173.
- Terragni, J., et al. 2011. The E-box binding factors Max/Mnt, MITF, and USF1 act coordinately with FoxO to regulate expression of proapoptotic and cell cycle control genes by phosphatidylinositol 3-kinase/Akt/glycogen synthase kinase 3 signaling. *J. Biol. Chem.* 286: 36215-36227.
- Vasilevsky, N.A., et al. 2011. OX40 engagement stabilizes Mxd4 and Mnt protein levels in antigen-stimulated T cells leading to an increase in cell survival. *Eur. J. Immunol.* 41: 1024-1034.

MONOS
Satisfaction
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Try **Mnt (F-11): sc-376708** or **Mnt (G-2): sc-376771**, our highly recommended monoclonal alternatives to Mnt (M-132).