

Mnt (F-11): sc-376708

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.

REFERENCES

- Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. *Am. J. Hum. Genet.* 50: 1235-1242.
- Meroni, G., et al. 1997. Rox, a novel bHLHZip protein expressed in quiescent cells that heterodimerizes with Max, binds a non-canonical E box and acts as a transcriptional repressor. *EMBO J.* 16: 2892-2906.

CHROMOSOMAL LOCATION

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

SOURCE

Mnt (F-11) is a mouse monoclonal antibody raised against amino acids 226-361 of Mnt of human 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-376708 X, 200 µg/0.1 ml.

Mnt (F-11) is available conjugated to agarose (sc-376708 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376708 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376708 PE), fluorescein (sc-376708 FITC), Alexa Fluor® 488 (sc-376708 AF488), Alexa Fluor® 546 (sc-376708 AF546), Alexa Fluor® 594 (sc-376708 AF594) or Alexa Fluor® 647 (sc-376708 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376708 AF680) or Alexa Fluor® 790 (sc-376708 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Mnt (F-11) is recommended for detection of Mnt of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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 (F-11) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

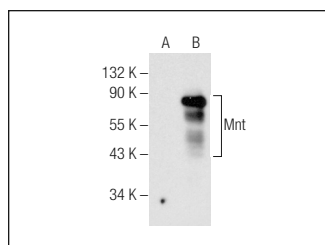
Molecular Weight of Mnt: 62 kDa.

Positive Controls: Mnt (h): 293T Lysate: sc-112501.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Mnt (F-11): sc-376708. Western blot analysis of Mnt expression in non-transfected: sc-117752 (A) and human Mnt transfected: sc-112501 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Kapoor, I., et al. 2016. Proteomic discovery of Mnt as a novel interacting partner of E3 ubiquitin ligase E6AP and a key mediator of myeloid differentiation. *Oncotarget* 7: 7640-7656.
- Lavin, D.P., et al. 2021. Mnt represses epithelial identity to promote epithelial-to-mesenchymal transition. *Mol. Cell. Biol.* 41: e0018321.

RESEARCH USE

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