SANTA CRUZ BIOTECHNOLOGY, INC.

MBTD1 (H-6): sc-514535

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The transcriptional repressing polycomb-group (PcG) family is a part of a cellular memory system responsible for the stable inheritance of gene activity. PcG proteins assemble into multimeric protein complexes, which are involved in maintaining the transcriptional repressive state of genes over successive cell generations. MBTD1 (malignant brain tumor domain containing 1) is a 628 amino acid nuclear protein that belongs to the PcG family of proteins. Existing as a monomer, MBTD1 undergoes alternative splicing events to produce three isoforms. MBTD1 contains one FCS-type zinc finger and four MBT repeats, and is encoded by a gene that maps to human chromosome 17q21.33. 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.

REFERENCES

1. Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. Hum. Mutat. 15: 105-113.
2. Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.
3. Minamoto, T., et al. 2001. Distinct pattern of p53 phosphorylation in human tumors. Oncogene 20: 3341-3347.

CHROMOSOMAL LOCATION

Genetic locus: MBTD1 (human) mapping to 17q21.33; Mbtd1 (mouse) mapping to 11 D.

SOURCE

MBTD1 (H-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 163-192 within an internal region of MBTD1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MBTD1 (H-6) is available conjugated to agarose (sc-514535 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514535 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514535 PE), fluorescein (sc-514535 FITC), Alexa Fluor® 488 (sc-514535 AF488), Alexa Fluor® 546 (sc-514535 AF546), Alexa Fluor® 594 (sc-514535 AF594) or Alexa Fluor® 647 (sc-514535 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514535 AF680) or Alexa Fluor® 790 (sc-514535 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514535 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

MBTD1 (H-6) is recommended for detection of MBTD1 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 MBTD1 siRNA (h): sc-94157, MBTD1 siRNA (m): sc-149312, MBTD1 shRNA Plasmid (h): sc-94157-SH, MBTD1 shRNA Plasmid (m): sc-149312-SH, MBTD1 shRNA (h) Lentiviral Particles: sc-94157-V and MBTD1 shRNA (m) Lentiviral Particles: sc-149312-V.

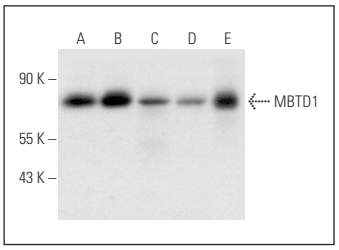
Molecular Weight of MBTD1 isoforms: 70/48/47 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or Y79 nuclear extract: sc-2126.

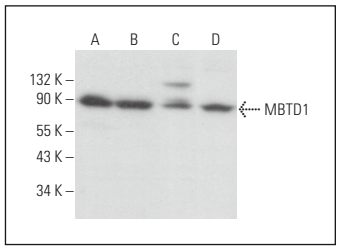
RECOMMENDED SUPPORT REAGENTS

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



MBTD1 (H-6): sc-514535. Western blot analysis of MBTD1 expression in K-562 (**A**), Jurkat (**B**), HL-60 (**C**) and SW480 (**D**) whole cell lysates and Y79 nuclear extract (**E**).



MBTD1 (H-6): sc-514535. Western blot analysis of MBTD1 expression in K-562 (**A**), THP-1 (**B**), SH-SY5Y (**C**) and c4 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Feng, L., et al. 2023. Long non-coding RNA H19 recruits NFYB to activate MBTD1 and regulate doxorubicin resistance in lymphoma cells. Mol. Biotechnol. 65: 997-1009.

STORAGE

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