

METTL7B (D-2): sc-398626

BACKGROUND

METTL7B (methyltransferase-like protein 7B) is a 244 amino acid protein belonging to the methyltransferase superfamily. METTL7B is believed to have methyltransferase activity, wherein METTL7B catalyzes the transfer of a methyl group from one compound to another. The gene that encodes METTL7B maps to chromosome 12 which makes up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12 including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Chromosome 12 is also home to a homeobox gene cluster which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster encoding C-type lectin proteins which mediate the NK cell response to MHC I interaction. Trisomy 12p leads to facial development defects, seizure disorders and a host of other symptoms varying in severity depending on the extent of mosaicism and is most severe in cases of complete trisomy.

REFERENCES

- Allen, T.L., et al. 1996. Cytogenetic and molecular analysis in trisomy 12p. *Am. J. Med. Genet.* 63: 250-256.
- Yang, W. and Cole, W.G. 1998. Low basal transcripts of the COL2A1 collagen gene from lymphoblasts show alternative splicing of exon 12 in the Kniest form of spondyloepiphyseal dysplasia. *Hum. Mutat.* 1: S1-S2.
- Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. *Immunol. Rev.* 181: 20-38.
- Zumkeller, W., et al. 2004. Genotype/phenotype analysis in a patient with pure and complete trisomy 12p. *Am. J. Med. Genet. A* 129A: 261-264.
- Kelley, J., et al. 2005. Comparative genomics of natural killer cell receptor gene clusters. *PLoS Genet.* 1: e27.

CHROMOSOMAL LOCATION

Genetic locus: METTL7B (human) mapping to 12q13.2.

SOURCE

METTL7B (D-2) is a mouse monoclonal antibody raised against amino acids 169-244 mapping at the C-terminus of METTL7B of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

METTL7B (D-2) is available conjugated to agarose (sc-398626 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398626 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398626 PE), fluorescein (sc-398626 FITC), Alexa Fluor® 488 (sc-398626 AF488), Alexa Fluor® 546 (sc-398626 AF546), Alexa Fluor® 594 (sc-398626 AF594) or Alexa Fluor® 647 (sc-398626 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398626 AF680) or Alexa Fluor® 790 (sc-398626 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

METTL7B (D-2) is recommended for detection of METTL7B of 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 METTL7B siRNA (h): sc-96008, METTL7B shRNA Plasmid (h): sc-96008-SH and METTL7B shRNA (h) Lentiviral Particles: sc-96008-V.

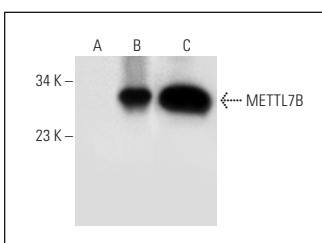
Molecular Weight of METTL7B: 28 kDa.

Positive Controls: METTL7B (h): 293T Lysate: sc-158726 or U-251-MG whole cell lysate: sc-364176.

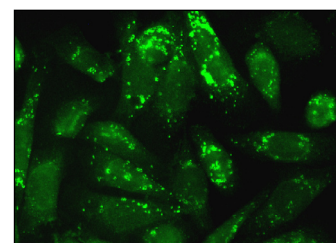
RECOMMENDED SUPPORT REAGENTS

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



METTL7B (D-2): sc-398626. Western blot analysis of METTL7B expression in non-transfected 293T: sc-117752 (A), human METTL7B transfected 293T: sc-158726 (B) and U-251-MG (C) whole cell lysates.



METTL7B (D-2): sc-398626. Immunofluorescence staining of formalin-fixed SW480 cells showing lipid droplets localization.

SELECT PRODUCT CITATIONS

- Xiong, Y., et al. 2021. High level of METTL7B indicates poor prognosis of patients and is related to immunity in glioma. *Front. Oncol.* 11: 650534.

STORAGE

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

RESEARCH USE

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