METTL7A (N-19): sc-130168



The Power to Question

BACKGROUND

METTL7A (methyltransferase-like 7A), also known as AAM-B, is a 244 amino acid protein that is thought to function as a methyltransferase and is encoded by a gene which maps to chromosome 12. Encoding over 1,100 genes, chromosome 12 comprises nearly 4.5% of the human genome and is associated with a number of skeletal deformaties, including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Chromosome 12 is also home to both a homeobox gene cluster, which encodes crucial transcription factors for morphogenesis, and a natural killer complex gene cluster encoding C-type lectin proteins, which mediate the NK cell response to MHC class I interaction. Additionally, trisomy 12p (three copies of the p arm of chromosome 12) leads to facial developmental defects, seizure disorders and a host of other symptoms varying in severity, depending on the extent of mosaicism.

REFERENCES

- 1. Allen, T.L., Brothman, A.R., Carey, J.C. and Chance, P.F. 1996. Cytogenetic and molecular analysis in trisomy 12p. Am. J. Med. Genet. 63: 250-256.
- 2. 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: S1-2.
- Trowsdale, J., Barten, R., Haude, A., Stewart, C.A., Beck, S. and Wilson, M.J. 2001. The genomic context of natural killer receptor extended gene families. Immunol. Rev. 181: 20-38.
- 4. Clark, H.F., Gurney, A.L., Abaya, E., Baker, K., Baldwin, D., Brush, J., Chen, J., Chow, B., Chui, C., Crowley, C., Currell, B., Deuel, B., Dowd, P., Eaton, D., Foster, J., Grimaldi, C., Gu, Q., Hass, P.E., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. Genome Res. 13: 2265-2270.
- Zumkeller, W., Volleth, M., Muschke, P., Tönnies, H., Heller, A., Liehr, T., Wieacker, P. and Stumm, M. 2004. Genotype/phenotype analysis in a patient with pure and complete trisomy 12p. Am. J. Med. Genet. A 129: 261-264.
- Kelley, J., Walter, L. and Trowsdale, J. 2005. Comparative genomics of natural killer cell receptor gene clusters. PLoS Genet. 1: e27.
- 7. Segel, R., Peter, I., Demmer, L.A., Cowan, J.M., Hoffman, J.D. and Bianchi, D.W. 2006. The natural history of trisomy 12p. Am. J. Med. Genet. A 140: 695-703.

CHROMOSOMAL LOCATION

Genetic locus: METTL7A (human) mapping to 12q13.13.

SOURCE

METTL7A (N-19) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of METTL7A of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 μg lgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

METTL7A (N-19) is recommended for detection of METTL7A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 METTL7A siRNA (h): sc-95742, METTL7A shRNA Plasmid (h): sc-95742-SH and METTL7A shRNA (h) Lentiviral Particles: sc-95742-V.

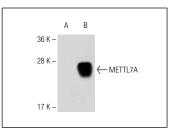
Molecular Weight of METTL7A: 28 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

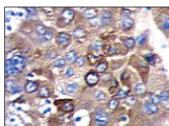
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



METTL7A (N-19): sc-130168. Western blot analysis of METTL7A expression in 293 showing nontransfected (**A**) and transfected (**B**) whole cell lysate.



METTL7A (N-19): sc-130168. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic staining

RESEARCH USE

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