

METTL7A (S-14): sc-168586

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 deformities, 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

- 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.
- Clark, H.F., 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., 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: METTL7A (human) mapping to 12q13.12; Mettl7a1/Mettl7a2/Mettl7a3 (mouse) mapping to 15 F1.

SOURCE

METTL7A (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of METTL7A 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.

Blocking peptide available for competition studies, sc-168586 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

METTL7A (S-14) is recommended for detection of METTL7A of mouse, rat and human origin, and Ubie and Ubie3 of mouse 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); may cross-react with Mettl7a2-Higd1c of mouse origin.

METTL7A (S-14) is also recommended for detection of METTL7A in additional species, including equine and bovine.

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.

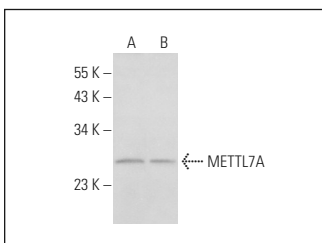
Molecular Weight of METTL7A: 28 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



METTL7A (S-14): sc-168586. Western blot analysis of METTL7A expression in HeLa (A) and MCF7 (B) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.