

# METTL13 (X-20): sc-101995

## BACKGROUND

METTL13 is a 699 amino acid protein that exists as multiple alternatively spliced isoforms which are encoded by a gene that maps to human chromosome 1. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. A breakpoint has been identified in 1q which disrupts the DISC1 gene and is linked to schizophrenia. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

## REFERENCES

- Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. *J. Exp. Med.* 172: 263-272.
- Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433.
- Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
- Lans, H. and Hoeijmakers, J.H. 2006. Cell biology: aging nucleus gets out of shape. *Nature* 440: 32-34.
- Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.
- Hennah, W., et al. 2006. Genes and schizophrenia: beyond schizophrenia: the role of DISC1 in major mental illness. *Schizophr. Bull.* 32: 409-416.
- Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.

## CHROMOSOMAL LOCATION

Genetic locus: METTL13 (human) mapping to 1q24.3; Mettl13 (mouse) mapping to 1 H2.1.

## SOURCE

METTL13 (X-20) is a purified rabbit polyclonal antibody raised against METTL13 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

METTL13 (X-20) is recommended for detection of METTL13 of mouse, rat and human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for METTL13 siRNA (h): sc-88139, METTL13 siRNA (m): sc-140373, METTL13 shRNA Plasmid (h): sc-88139-SH, METTL13 shRNA Plasmid (m): sc-140373-SH, METTL13 shRNA (h) Lentiviral Particles: sc-88139-V and METTL13 shRNA (m) Lentiviral Particles: sc-140373-V.

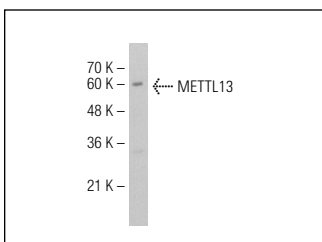
Molecular Weight of METTL13: 79 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or METTL13 (h): 293T Lysate: sc-113786.

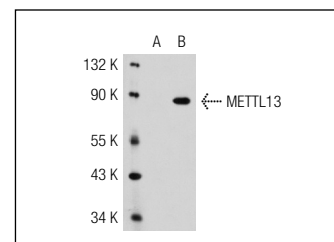
## RECOMMENDED SECONDARY REAGENTS

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 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).

## DATA



METTL13 (X-20): sc-101995. Western blot analysis of METTL13 expression in Hep G2 whole cell lysate.



METTL13 (X-20): sc-101995. Western blot analysis of METTL13 expression in non-transfected (A) and human METTL13 transfected: sc-113786 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Liang, H., et al. 2015. miR-16 promotes the apoptosis of human cancer cells by targeting FEAT. *BMC Cancer* 15: 448.

## 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.