SANTA CRUZ BIOTECHNOLOGY, INC.

METT10D (N-12): sc-136751

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

METT10D (methyltransferase 10 domain containing), also known as METTL16 (methyltransferase-like protein 16) is a 562 amino acid protein that belongs to the METTL16/rlmF family and methyltransferase superfamily. A putative methyltransferase, METT10D exists as two alternatively spliced isoforms and undergoes phosphorylation in response to DNA damage, most likely by Atm or ATR. The gene encoding METT10D maps to human chromosome 17, which 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. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, and is linked to predisposition of cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. Am. J. Hum. Genet. 50: 1235-1242.
2. Evans, S.C., et al. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
3. Varley, J.M., et al. 1997. A detailed study of loss of heterozygosity on chromosome 17 in tumours from Li-Fraumeni patients carrying a mutation to the TP53 gene. Oncogene 14: 865-871.
4. Kersemaekers, A.M., et al. 1998. Loss of heterozygosity for defined regions on chromosomes 3, 11 and 17 in carcinomas of the uterine cervix. Br. J. Cancer 77: 192-200.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: METTL16 (human) mapping to 17p13.3; Mettl16 (mouse) mapping to 11 B5.

SOURCE

METT10D (N-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of METT10D of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-136751 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-136751 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

METT10D (N-12) is recommended for detection of METT10D of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

METT10D (N-12) is also recommended for detection of METT10D in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for METT10D siRNA (h): sc-94001, METT10D siRNA (m): sc-149379, METT10D shRNA Plasmid (h): sc-94001-SH, METT10D shRNA Plasmid (m): sc-149379-SH, METT10D shRNA (h) Lentiviral Particles: sc-94001-V and METT10D shRNA (m) Lentiviral Particles: sc-149379-V.

METT10D (N-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

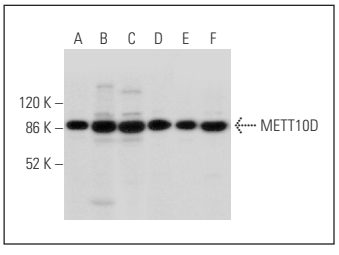
Molecular Weight of METT10D isoforms: 64/26 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

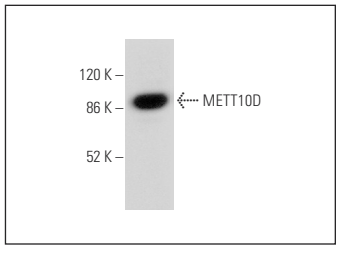
RECOMMENDED SECONDARY REAGENTS

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 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 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.

DATA



METT10D (N-12): sc-136751. Western blot analysis of METT10D expression in HeLa (**A**), A549 (**B**), MCF7 (**C**), Jurkat (**D**), U-251-MG (**E**) and K-562 (**F**) whole cell lysates.



METT10D (N-12): sc-136751. Western blot analysis of METT10D expression in HEK293 whole cell lysate.

RESEARCH USE

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