SANTA CRUZ BIOTECHNOLOGY, INC.

METTL21C (C-16): sc-84361

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

METTL21C, also known as C13orf39, is a 264 amino acid nuclear protein that interacts with members of the heat shock protein 70 families and may function as methylation substrates. The gene encoding METTL21C maps to human chromosome 13, which comprises nearly 4% of human DNA, contains around 114 million base pairs and 400 genes. Key tumor suppressor genes on chromosome 13 include the breast cancer susceptibility gene, BRCA2, and the RB1 (retinoblastoma) gene. RB1 encodes a crucial tumor suppressor protein which, when defective, leads to malignant growth in the retina and has been implicated in a variety of other cancers. The gene SLITRK1, which is associated with Tourette syndrome, is on chromosome 13. As with most chromosomes, polysomy of part or all of chromosome 13 is deleterious to development and decreases the odds of survival. Trisomy 13, also known as Patau syndrome, is quite deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

1. Deng, H., et al. 2006. Examination of the SLITRK1 gene in Caucasian patients with Tourette syndrome. Acta Neurol. Scand. 114: 400-402.
2. Giacinti, C., et al. 2006. RB and cell cycle progression. Oncogene 25: 5220-5227.
3. Grados, M.A., et al. 2006. A new gene for Tourette's syndrome: a window into causal mechanisms? Trends Genet. 22: 291-293.
4. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. Hum. Mol. Genet. 16: 2004-2010.
5. Hall, H.E., et al. 2007. The origin of trisomy 13. Am. J. Med. Genet. A 143: 2242-2248.
6. Hassler, M., et al. 2007. Crystal structure of the retinoblastoma protein N domain provides insight into tumor suppression, ligand interaction and holoprotein architecture. Mol. Cell 28: 371-385.

CHROMOSOMAL LOCATION

Genetic locus: METTL21C (human) mapping to 13q33.1.

SOURCE

METTL21C (C-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of METTL21C 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-84361 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

METTL21C (C-16) is recommended for detection of METTL21C of 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)], 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 METTL21C siRNA (h): sc-75445, METTL21C shRNA Plasmid (h): sc-75445-SH and METTL21C shRNA (h) Lentiviral Particles: sc-75445-V.

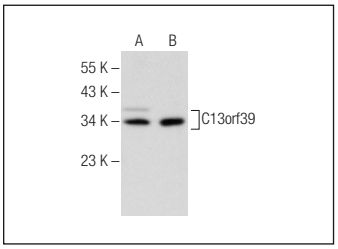
Molecular Weight of METTL21C: 29 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232 or GA-10 whole cell lysate: sc-364230.

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



C13orf39 (C-16): sc-84361. Western blot analysis of C13orf39 expression in MDA-MB-231 (**A**) and GA-10 (**B**) whole cell lysates.

RESEARCH USE

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