SANTA CRUZ BIOTECHNOLOGY, INC.

MTCL1 (W-19): sc-84865

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MTCL1 (microtubule cross-linking factor 1), also known as CCDC165 (Coiled-coil domain-containing protein 165), SOGA2 or MTCL1, is a 1,905 amino acid protein that localizes to the cell membrane, cytoplasm and cytoskeleton. MTCL1 is a microtubule-associated factor that plays a role in regulating polarization and microtubule dynamics as well as the development and maintenance of non-centrosomal microtubule bundles. MTCL1 is encoded by a gene that maps to chromosome 18 and is expressed as four isoforms due to alternative splicing events. Chromosome 18 encodes over 300 genes and contains about 76 million bases. Trisomy 18, or Edwards syndrome, is the second most common trisomy after Downs syndrome. Symptoms of Edwards syndrome include low birth weight, a variety of physical development defects, heart deformations and breathing difficulty. Translocation between chromosome 18 and 14 is the most common translocation in cancers, and occurs in follicular lymphomas. Niemann-Pick disease, hereditary hemorrhagic telangiectasia and erythropoietic protoporphyria are associated with chromosome 18. The TGFβ modulators, Smad2, Smad4 and Smad7 are encoded by chromosome 18.

REFERENCES

1. Carstea, E.D., et al. 1993. Linkage of Niemann-Pick disease type C to human chromosome 18. Proc. Natl. Acad. Sci. USA 90: 2002-2004.
2. Grosso, S., et al. 2005. Chromosome 18 aberrations and epilepsy: a review. Am. J. Med. Genet. A 134: 88-94.
3. Aurizi, C., et al. 2007. Heterogeneity of mutations in the ferrochelatase gene in Italian patients with erythropoietic protoporphyria. Mol. Genet. Metab. 90: 402-407.
4. Broderick, P., et al. 2007. A genome-wide association study shows that common alleles of SMAD7 influence colorectal cancer risk. Nat. Genet. 39: 1315-1317.
5. Kamal, A.H. et al. 2007. Hereditary hemorrhagic telangiectasia. Mayo Clin. Proc. 82: 1364.
6. Shovlin, C.L., et al. 2007. Elevated factor VIII in hereditary haemorrhagic telangiectasia (HHT): Association with venous thromboembolism. Thromb. Haemost. 98: 1031-1039.

CHROMOSOMAL LOCATION

Genetic locus: MTCL1 (human) mapping to 18p11.22; Mtcl1 (mouse) mapping to 17 E1.1.

SOURCE

MTCL1 (W-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MTCL1 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-84865 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MTCL1 (W-19) is recommended for detection of MTCL1 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)], 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); non cross-reactive with other MTCL family members.

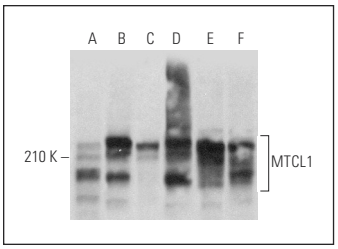
Suitable for use as control antibody for MTCL1 siRNA (h): sc-75383, MTCL1 siRNA (m): sc-146448, MTCL1 shRNA Plasmid (h): sc-75383-SH, MTCL1 shRNA Plasmid (m): sc-146448-SH, MTCL1 shRNA (h) Lentiviral Particles: sc-75383-V and MTCL1 shRNA (m) Lentiviral Particles: sc-146448-V.

Positive Controls: F9 cell lysate: sc-2245, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

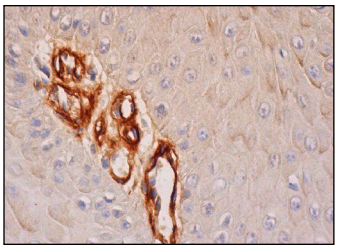
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MTCL1 (W-19): sc-84865. Western blot analysis of MTCL1 expression in Jurkat (**A**), LADMAC (**B**), HeLa (**C**), F9 (**D**), HEK293 (**E**) and SJRH30 (**F**) whole cell lysates.



MICL1 (W-19): sc-84865. Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic and membrane staining of endothelial cells.

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.