SANTA CRUZ BIOTECHNOLOGY, INC.

TTLL12 (V-19): sc-86933

BACKGROUND

A large protein group known as the tubulin tyrosine ligase-like (TTLL) family is implied to catalyze ligations of amino acids to tubulins and other substrates. Each member contains a characteristic TTL domain. TTLL12 (tubulin tyrosine ligase-like family, member 12) is a 644 amino acid protein that contains one TTL domain. Of the 14 members of the TTLL family that modify tubulin, TTLL12 is the least characterized member. TTLL12 is highly expressed in a multitude of metastatic prostate cancer cell lines, therefore, it is considered a target for tumor therapy. Overexpression of TTLL12 is suggested to alter chromosome ploidy, whereas downregulation of TTLL12 influence several post-translational modifications of tubulin. TTLL12 is encoded by a gene located on human chromosome 22, which houses over 500 genes and is the second smallest human chromosome.

REFERENCES

1. Trichet, V., et al. 2000. Characterization of the human tubulin tyrosine ligase-like 1 gene (TTLL1) mapping to 22q13.1. Gene 257: 109-117.
2. Briegel, W., et al. 2004. Chromosome 22q11 deletion syndrome and its relevance for child and adolescent psychiatry. An overview of etiology, physical symptoms, aspects of child development and psychiatric disorders. Z Kinder. Jugendpsychiatr. Psychother. 32: 107-115.
3. Janke, C., et al. 2005. Tubulin polyglutamylase enzymes are members of the TTL domain protein family. Science 308: 1758-1762.
4. Ikegami, K., et al. 2008. TTLL10 is a protein polyglycylase that can modify nucleosome assembly protein 1. FEBS Lett. 582: 1129-1134.
5. Rogowski, K., et al. 2009. Evolutionary divergence of enzymatic mechanisms for posttranslational polyglycylation. Cell 137: 1076-1087.
6. Ikegami, K., et al. 2009. TTLL10 can perform tubulin glycylation when co-expressed with TTLL8. FEBS Lett. 583: 1957-1963.

CHROMOSOMAL LOCATION

Genetic locus: TTLL12 (human) mapping to 22q13.2; Ttll12 (mouse) mapping to 15 E1.

SOURCE

TTLL12 (V-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TTLL12 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-86933 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

TTLL12 (V-19) is recommended for detection of TTLL12 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with TTLL1 and TTLL9.

TTLL12 (V-19) is also recommended for detection of TTLL12 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TTLL12 siRNA (h): sc-76773, TTLL12 siRNA (m): sc-154789, TTLL12 shRNA Plasmid (h): sc-76773-SH, TTLL12 shRNA Plasmid (m): sc-154789-SH, TTLL12 shRNA (h) Lentiviral Particles: sc-76773-V and TTLL12 shRNA (m) Lentiviral Particles: sc-154789-V.

Molecular Weight (predicted) of TTLL12: 74 kDa.

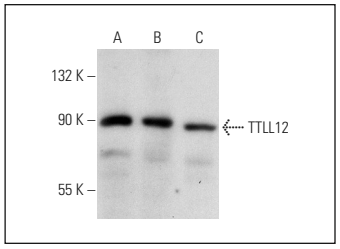
Molecular Weight (observed) of TTLL12: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

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



TTLL12 (V-19): sc-86933. Western blot analysis of TTLL12 expression in HeLa (**A**), K-562 (**B**) and NTERA-2 cl.D1 (**C**) 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.