SANTA CRUZ BIOTECHNOLOGY, INC.

TTLL9 (C-20): sc-85980

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The Power to Question

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. TTLL9 (tubulin tyrosine ligase-like family, member 9) is a 439 amino acid cytoplasmic protein that localizes to the cilium basal body. Containing one TTL domain, TTLL9 may act as a tubulin polyglutamylase that forms polyglutamate side chains on tubulin. It is suggested that mutations in the gene encoding TTLL9, as well as TTLL1, result in decreased cell multiplicity and phagocytosis. Reduced number of cortical microtubules and defects in the maturation of basal bodies are also due to mutations in the TTLL9 and TTLL1 genes. TTLL9 exists as 3 alternatively spliced transcripts that are encoded by a gene located on human chromosome 20.

REFERENCES

1. Trichet, V., Ruault, M., Roizès, G. and De Sario, A. 2000. Characterization of the human tubulin tyrosine ligase-like 1 gene (TTLL1) mapping to 22q13.1. Gene 257: 109-117.
2. Janke, C., Rogowski, K., Wloga, D., Regnard, C., Kajava, A.V., Strub, J.M., Temurak, N., van Dijk, J., Boucher, D., van Dorsselaer, A., Suryavanshi, S., Gaertig, J. and Edde, B. 2005. Tubulin polyglutamylase enzymes are members of the TTL domain protein family. Science 308: 1758-1762.
3. Wloga, D., Rogowski, K., Sharma, N., Van Dijk, J., Janke, C., Edde, B., Bre, M.H., Levilliers, N., Redeker, V., Duan, J., Gorovsky, M.A., Jerka-Dziadosz, M. and Gaertig, J. 2008. Glutamylation on α Tubulin is not essential but affects the assembly and functions of a subset of microtubules in *Tetrahymena thermophila*. Eukaryotic Cell 7: 1362-1372.
4. Ikegami, K., Horigome, D., Mukai, M., Livnat, I., MacGregor, G.R. and Setou, M. 2008. TTLL10 is a protein polyglycylase that can modify nucleosome assembly protein 1. FEBS Lett. 582: 1129-1134.
5. Ikegami, K. and Setou, M. 2009. TTLL10 can perform tubulin glycylation when co-expressed with TTLL8. FEBS Lett. 583: 1957-1963.
6. Kubo, T., Yanagisawa, H.A., Yagi, T., Hirono, M. and Kamiya, R. 2010. Tubulin polyglutamylation regulates axonemal motility by modulating activities of inner-arm dyneins. Curr. Biol. 20: 441-445.
7. Wasylyk, C., Zambrano, A., Zhao, C., Brants, J., Abecassis, J., Schalken, J.A., Rogatsch, H., Schaefer, G., Pycha, A., Klocker, H. and Wasylyk, B. 2010. Tubulin tyrosine ligase like 12, link to prostate cancer through tubulin post-translational modification and chromosome ploidy. Int. J. Cancer E-published.

CHROMOSOMAL LOCATION

Genetic locus: TTLL9 (human) mapping to 20q11.21; Ttll9 (mouse) mapping to 2 H1.

SOURCE

TTLL9 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TTLL9 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-85980 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TTLL9 (C-20) is recommended for detection of TTLL9 isoform 1 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 TTLL9 isoforms 2 or 3.

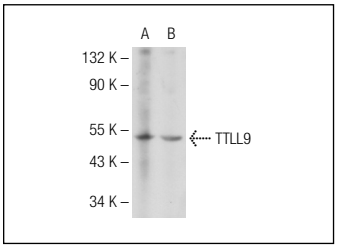
TTLL9 (C-20) is also recommended for detection of TTLL9 isoform 1 in additional species, including canine and bovine.

Suitable for use as control antibody for TTLL9 siRNA (h): sc-76774, TTLL9 siRNA (m): sc-154797, TTLL9 shRNA Plasmid (h): sc-76774-SH, TTLL9 shRNA Plasmid (m): sc-154797-SH, TTLL9 shRNA (h) Lentiviral Particles: sc-76774-V and TTLL9 shRNA (m) Lentiviral Particles: sc-154797-V.

Molecular Weight of TTLL9: 51 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

DATA



TTLL9 (C-20): sc-85980. Western blot analysis of TTLL9 expression in rat brain (**A**) and mouse brain (**B**) tissue extracts.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.