

TTLL9 (T-20): sc-85982

BACKGROUND

A large protein group known as the tubulin tyrosine ligase-like (TTL) 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 three alternatively spliced transcripts that are encoded by a gene located on human chromosome 20.

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. Janke, C., et al. 2005. Tubulin polyglutamylase enzymes are members of the TTL domain protein family. *Science* 308: 1758-1762.
3. Wloga, D., et al. 2008. Glutamylation on α -tubulin is not essential but affects the assembly and functions of a subset of microtubules in *Tetrahymena thermophila*. *Eukaryot. Cell* 7: 1362-1372.
4. Ikegami, K., et al. 2008. TTLL10 is a protein polyglycylase that can modify nucleosome assembly protein 1. *FEBS Lett.* 582: 1129-1134.
5. Ikegami, K., et al. 2009. TTLL10 can perform tubulin glycylation when co-expressed with TTLL8. *FEBS Lett.* 583: 1957-1963.
6. Kubo, T., et al. 2010. Tubulin polyglutamylation regulates axonemal motility by modulating activities of inner-arm dyneins. *Curr. Biol.* 20: 441-445.
7. Wasylyk, C., et al. 2010. Tubulin tyrosine ligase like 12, link to prostate cancer through tubulin post-translational modification and chromosome ploidy. *Int. J. Cancer* 127: 2542-2553

CHROMOSOMAL LOCATION

Genetic locus: TTLL9 (human) mapping to 20q11.21; Ttl9 (mouse) mapping to 2 H1.

SOURCE

TTLL9 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TTLL9 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85982 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

TTLL9 (T-20) is recommended for detection of TTLL9 isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 isoform 3.

TTLL9 (T-20) is also recommended for detection of TTLL9 isoforms 1 and 2 in additional species, including equine, bovine and porcine.

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.

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) 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.

STORAGE

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

PROTOCOLS

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