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. TTLL1 (tubulin tyrosine ligase-like family, member 1), also known as tubulin polyglutamylase complex subunit 3, PGs3 or C22orf7, is a 423 amino acid catalytic subunit of the neuronal tubulin polyglutamylase complex and a member of the tubulin polyglutamylase family. Localized to cytoskeleton and cytosol, TTLL1 is widely expressed with highest levels found in brain, testis and heart. TTLL1 generates glutamate side chains on C-terminal regions of \(\alpha\) - and \(\beta\) -Tubulin and contains one TTL domain. Four TTLL1 isoforms are known to exist as a result of alternative splicing events. The gene encoding TTLL1 maps to human chromosome 22, which houses over 50 0 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, neurofibromatosis type 2, autism and schizophrenia.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: TTLL1 (human) mapping to 22q13.2; Ttll1 (mouse) mapping to 15 E1.

SOURCE

TTLL1 (N-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of TTLL1 of human origin.

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.

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-86929 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TTLL1 (N-13) is recommended for detection of TTLL1 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 isoform 3.

TTLL1 (N-13) is also recommended for detection of TTLL1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TTLL1 siRNA (h): sc-76772, TTLL1 siRNA (m): sc-154786, TTLL1 shRNA Plasmid (h): sc-76772-SH, TTLL1 shRNA Plasmid (m): sc-154786-SH, TTLL1 shRNA (h) Lentiviral Particles: sc-76772-V and TTLL1 shRNA (m) Lentiviral Particles: sc-154786-V.

Molecular Weight of TTLL1: 49 kDa.

Positive Controls: mouse heart extract: sc-2254.

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

TTLL1 (N-13): sc-86929. Western blot analysis of TTLL1 expression in mouse heart tissue extract.

PROTOCOLS

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