**BACKGROUND**

TC1 (thyroid cancer protein 1), whose alternative names include C8orf4 or MGC22806, is a natively disordered and novel tumorigenic protein consisting of 106 amino acids that is known to associate with thyroid, gastric and breast cancers. TC1 is ubiquitously expressed and may enhance the aggressive behavior of cancers by acting as an upstream regulator involved in positive regulation of the Wnt/β-catenin signaling pathway. Upregulation of TC1 by mitogens and the ERK 1/2 signaling pathway promotes the G1-to-S-phase transition of the cell cycle. TC1 also plays a role as a novel heat shock response regulator that is upregulated by cellular stresses and heat shock. The gene encoding TC1 maps to human chromosome 8, which consists of nearly 146 million base pairs, encodes over 80,000 genes and is associated with a variety of diseases and malignancies including Schizophrenia, bipolar disorder, Trisomy 8, Pfeiffer syndrome and congenital hypothyroidism.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: C8orf4 (human) mapping to 8p11.21; 181001101Rik (mouse) mapping to 8 A2.

**SOURCE**

TC1 (C-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of TC1 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.

**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-98165 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

TC1 (C-13) is recommended for detection of TC1 of human origin, 181001101Rik of mouse origin and LOC100910163 of rat 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).

Suitable for use as control antibody for TC1 siRNA (h): sc-77472, 181001101Rik siRNA (m): sc-108546, TC1 shRNA Plasmid (h): sc-77472-SH, 181001101Rik shRNA Plasmid (m): sc-108546-SH, TC1 shRNA (m) Lentiviral Particles: sc-77472-V and 181001101Rik shRNA (m) Lentiviral Particles: sc-108546-V.

Molecular Weight of TC1: 12 kDa.

Positive Controls: Mouse thyroid extract: sc-2407 or rat thyroid extract: sc-2402.

**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: 1:2000-1:1000) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:1000) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

TC1 (C-13): sc-98165. Western blot analysis of TC1 expression in mouse thyroid tissue extract.

TC1 (C-13): sc-98165. Western blot analysis of TC1 expression in rat thyroid tissue extract.

**RESEARCH USE**

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