

TP53TG3 (Q-17): sc-249071

BACKGROUND

p53, a DNA-binding, oligomerization domain- and transcription activation domain-containing tumor suppressor, upregulates growth arrest and apoptosis-related genes in response to stress signals, thereby influencing programmed cell death, cell differentiation, and cell cycle control mechanisms. TP53TG3 (TP53-target gene 3 protein), also known as TP53-inducible gene 3 protein, is a 132 amino acid protein that interacts with p53 and may modulate p53 signaling pathways. Localizing to both cytoplasm and nucleus, TP53TG3 is expressed at highest levels in testis and is found at low levels in skeletal muscle, heart and placenta. TP53TG3 exists as three alternatively isoforms that are induced by p53 and are encoded by a gene located on human chromosome 16. The gene encoding CD2BP2 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. Rubinstein-Taybi syndrome and Crohn's disease are associated with defects in chromosome 16.

REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. *Clin. Genet.* 23: 318-320.
2. Matlashewski, G., et al. 1984. Isolation and characterization of a human p53 cDNA clone: expression of the human p53 gene. *EMBO J.* 3: 3257-3262.
3. Kern, S.E., et al. 1991. Identification of p53 as a sequence-specific DNA-binding protein. *Science* 252: 1708-1711.
4. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. *Am. J. Hum. Genet.* 52: 249-254.
5. Ng, C.C., et al. 1999. Isolation and characterization of a novel TP53-inducible gene, TP53TG3. *Genes Chromosomes Cancer* 26: 329-335.
6. Viillard, J.F., et al. 2001. Molecular mechanisms controlling the cell cycle: fundamental aspects and implications for oncology. *Cancer Radiother.* 5: 109-129.
7. Mathew, C.G. and Lewis, C.M. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13: R161-R168.
8. Harms, K.L. and Chen, X. 2005. The C terminus of p53 family proteins is a cell fate determinant. *Mol. Cell. Biol.* 25: 2014-2030.

CHROMOSOMAL LOCATION

Genetic locus: TP53TG3/TP53TG3C (human) mapping to 16p11.2.

SOURCE

TP53TG3 (Q-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TP53TG3 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-249071 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TP53TG3 (Q-17) is recommended for detection of TP53TG3 of 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 TP53TG5.

Suitable for use as control antibody for TP53TG3 siRNA (h): sc-93259, TP53TG3 shRNA Plasmid (h): sc-93259-SH and TP53TG3 shRNA (h) Lentiviral Particles: sc-93259-V.

Molecular Weight of TP53TG3: 14 kDa.

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.

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.