SANTA CRUZ BIOTECHNOLOGY, INC.

TIG1 (K-21): sc-47477

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Retinoids act through ligand-dependent transcription factors, retinoid X receptor (RXRs) and retinoic acid receptors (RARs). Tazarotene-induced gene proteins (TIG), also designated retinoic acid receptor responder proteins or RAR-responsive proteins, can be membrane bound or secreted. They act as tumor suppressor genes in human cancers and are highly expressed in skin, hair follicles, endothelial cells as well as pancreas, spleen and intestine. TIGs have also been implicated as growth regulators that mediate the growth suppressive effects of retinoids and they are activated by tazarotene. TIG1 is a single pass type II membrane protein activated by tazarotene and RAR proteins. It belongs to the protease inhibitor I47 (latexin) family of proteins. TIG2 is a secreted protein that is mainly expressed in epidermis, hair follicles and endothelial cells. TIG2 is inhibited in psoriatic lesions and is activated by tazarotene in skin rafts and in epidermis of psoriatic lesions. TIG3 acts as a growth regulator as it is important for mediating the growth suppressive effects of retinoids. This protein, which is widely expressed in most tissues (although not detected in heart, testis and brain), is activated by tazarotene and belongs to the H-rev107 family of proteins.

REFERENCES

1. DiSepio, D. et al. 1998. Identification and characterization of a retinoid-induced class II tumor suppressor/growth regulatory gene. Proc. Natl. Acad. Sci. USA 95: 14811-14815.
2. Tokumaru, Y., et al. 2004. Optimal use of a panel of methylation markers with GSTP1 hypermethylation in the diagnosis of prostate adenocarcinoma. Clin Cancer Res.10: 5518-5522.
3. Youssef, E.M., et al. 2004. Hypermethylation and silencing of the putative tumor suppressor tazarotene-induced gene 1 in human cancers. Cancer Res. 64: 2411-2417.
4. Takai, N., et al. 2005. Discovery of epigenetically masked tumor suppressor genes in endometrial cancer. Mol. Cancer Res. 3: 261-269.
5. Aagaard, A., et al. 2005. An inflammatory role for the mammalian carboxypeptidase inhibitor latexin: relationship to cystatins and the tumor suppressor TIG1. Structure 13: 309-317.
6. Kwong, J., et al. 2005. Silencing of the retinoid response gene TIG1 by promoter hypermethylation in nasopharyngeal carcinoma. Int. J. Cancer. 113: 386-392.

CHROMOSOMAL LOCATION

Genetic locus: RARRES1 (human) mapping to 3q25.32; Rarres1 (mouse) mapping to 3 E1.

SOURCE

TIG1 (K-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TIG1 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 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-47477 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TIG1 (K-21) is recommended for detection of TIG1 of h,r 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).

Suitable for use as control antibody for TIG1 siRNA (h): sc-61686.

Molecular Weight of TIG1: 33.3 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.

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.