SANTA CRUZ BIOTECHNOLOGY, INC.

TGIF (H-172): sc-9084

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TGIF (5'-TG-3' interacting factor) was originally identified as a homeodomain protein that binds to a retinoid X receptor (RXR) responsive element, thereby inhibiting the binding of RXR to this site and repressing RXR-dependent transcriptional activation. TGIF is a member of the TALE (three amino acid loop extension) family of homeodomain-containing proteins. TGIF also binds to Smad2, to repress Smad2-Smad4-mediated transcription. Smad2, after phosphorylation mediated by TGFβ receptor, forms a complex with Smad4 and enters the nucleus to regulate transcription. The Smad2-Smad4 complex can interact with coactivators to form a transcriptional activation complex. Alternatively, the Smad2-Smad4 complex can interact with TGIF and HDACs to form a transcriptional repressor complex. Upon interaction with Smad2, TGIF is recruited to TGFβ-responsive genes, where it acts to repress TGFβ-induced transcription.

CHROMOSOMAL LOCATION

Genetic locus: TGIF1 (human) mapping to 18p11.31; Tgif1 (mouse) mapping to 17 E1.3.

SOURCE

TGIF (H-172) is a rabbit polyclonal antibody raised against amino acids 100-272 mapping at the C-terminus of TGIF (5'-TG-3' interacting factor) 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9084 X, 200 µg/0.1 ml.

APPLICATIONS

TGIF (H-172) is recommended for detection of TGIF 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).

Suitable for use as control antibody for TGIF siRNA (h): sc-36659, TGIF siRNA (m): sc-36660, TGIF shRNA Plasmid (h): sc-36659-SH, TGIF shRNA Plasmid (m): sc-36660-SH, TGIF shRNA (h) Lentiviral Particles: sc-36659-V and TGIF shRNA (m) Lentiviral Particles: sc-36660-V.

TGIF (H-172) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TGIF: 35 kDa.

Positive Controls: JAR cell lysate: sc-2276, KNRK whole cell lysate: sc-2214 or SW480 nuclear extract: sc-2155.

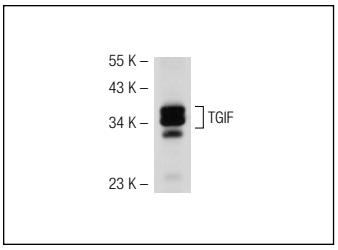
RESEARCH USE

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

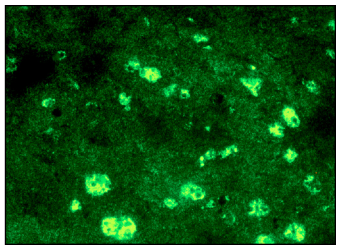
STORAGE

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

DATA



TGIF (H-172): sc-9084. Western blot analysis of TGIF expression in JAR whole cell lysate.



TGIF (H-172): sc-9084. Immunofluorescence staining of normal mouse liver frozen section showing nuclear staining.

SELECT PRODUCT CITATIONS

1. Yang, S., et al. 2008. EGF antagonizes TGFβ-induced tropoelastin expression in lung fibroblasts via stabilization of Smad corepressor TGIF. Am. J. Physiol. Lung Cell. Mol. Physiol. 295: L143-L151.
2. Davis, H., et al. 2011. FBXW7 mutations typically found in human cancers are distinct from null alleles and disrupt lung development. J. Pathol. 224: 180-189.
3. Mistry, D.S., et al. 2011. Gonadotropin-releasing hormone pulse sensitivity of follicle-stimulating hormone-β gene is mediated by differential expression of positive regulatory activator protein 1 factors and corepressors SKIL and TGIF1. Mol. Endocrinol. 25: 1387-1403.
4. Matizonkas-Antonio, L.F., et al. 2011. Detection of TGIF1 homeobox gene in oral squamous cell carcinoma according to histologic grading. Oral Surg. Oral Med. Oral Pathol. Oral Radiol. Endod. 111: 218-224.
5. Walker, S.R., et al. 2013. STAT5 outcompetes STAT3 To regulate the expression of the oncogenic transcriptional modulator Bcl6. Mol. Cell. Biol. 33: 2879-2890.
6. Takemura, T., et al. 2013. Conditional loss of heparin-binding EGF-like growth factor results in enhanced liver fibrosis after bile duct ligation in mice. Biochem. Biophys. Res. Commun. 437: 185-191.
7. Davis, H., et al. 2013. Investigation of the atypical FBXW7 mutation spectrum in human tumours by conditional expression of a heterozygous propellor tip missense allele in the mouse intestines. Gut 63: 792-799.