

TGIF (K-15): sc-9825

BACKGROUND

TGIF (for 5'-TG-3' interacting factor) was originally identified as a homeo-domain 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 TGF β 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 TGF β -responsive genes, where it acts to repress TGF β -induced transcription.

REFERENCES

1. Bertolino, E., et al. 1995. A novel homeobox protein which recognizes a TGT core and functionally interferes with a retinoid-responsive motif. *J. Biol. Chem.* 270: 31178-31188.
2. Baker, J.C., et al. 1996. A novel mesoderm inducer, Madr2, functions in the activin signal transduction pathway. *Genes Dev.* 10: 1880-1889.
3. Janknecht, R., et al. 1996. TGF β -stimulated cooperation of Smad proteins with the coactivators CBP/p300. *Genes Dev.* 12: 2114-2119.
4. Lana, G., et al. 1996. Partnership between DPC4 and Smad proteins in TGF β signalling pathways. *Nature* 383: 832-836.
5. Pouponnot, C., et al. 1998. Physical and functional interaction of Smads and p300/CBP. *J. Biol. Chem.* 273: 22865-22868.
6. Wotton, D., et al. 1999. A Smad transcriptional corepressor. *Cell* 97: 29-39.

CHROMOSOMAL LOCATION

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

SOURCE

TGIF (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TGIF of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9825 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9825 X, 200 μ g/0.1 ml.

STORAGE

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

APPLICATIONS

TGIF (K-15) 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 μ g per 100-500 μ g 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).

TGIF (K-15) is also recommended for detection of TGIF in additional species, including equine, canine and bovine.

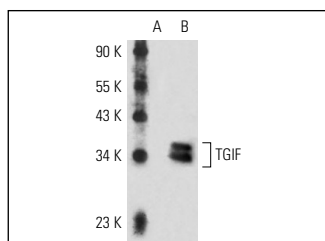
Suitable for use as control antibody for TGIF siRNA (h): sc-36659, TGIF siRNA (m): sc-36660, TGIF shRNA Plasmid (h): sc-36659-SH, TGIF shRNA Plasmid (m): sc-36660-SH, TGIF shRNA (h) Lentiviral Particles: sc-36659-V and TGIF shRNA (m) Lentiviral Particles: sc-36660-V.

TGIF (K-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

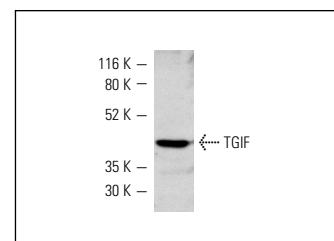
Molecular Weight of TGIF: 35 kDa.

Positive Controls: JAR cell lysate: sc-2276, TGIF (h): 293 Lysate: sc-110546 or rat placenta tissue extract: sc-364808.

DATA



TGIF (K-15): sc-9825. Western blot analysis of TGIF expression in non-transfected: sc-110760 (A) and human TGIF transfected: sc-110546 (B) 293 whole cell lysates.



TGIF (K-15): sc-9825. Western blot analysis of TGIF expression in rat placenta extract.

SELECT PRODUCT CITATIONS

1. Dai, C., et al. 2004. Hepatocyte growth factor antagonizes the profibrotic action of TGF β 1 in mesangial cells by stabilizing Smad transcriptional corepressor TGIF. *J. Am. Soc. Nephrol.* 15: 1402-1412.

RESEARCH USE

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

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Try **TGIF (H-1): sc-17800**, our highly recommended monoclonal alternative to TGIF (K-15). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **TGIF (H-1): sc-17800**.