

TGIF (h): 293 Lysate: sc-110546

BACKGROUND

TGIF (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

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4. Lana, G., et al. 1996. Partnership between DPC4 and Smad proteins in TGF β signalling pathways. *Nature* 383: 832-836.
5. Burglin, T.R., et al. 1997. Analysis of TALE superclass homeobox genes (MEIS, PBC, KNOX, Iroquois, TGIF) reveals a novel domain conserved between plants and animals. *Nucleic Acids Res.* 25: 4173-4180.
6. Poupponnot, C., et al. 1998. Physical and functional interaction of Smads and p300/CBP. *J. Biol. Chem.* 273: 22865-22868.
7. Wotton, D., et al. 1999. A Smad transcriptional corepressor. *Cell* 97: 29-39.
8. Gripp, K.W., et al. 2000. Mutations in TGIF cause holoprosencephaly and link Nodal signalling to human neural axis determination. *Nat. Genet.* 25: 205-208.

CHROMOSOMAL LOCATION

Genetic locus: TGIF (human) mapping to 18p11.31.

PRODUCT

TGIF (h): 293 Lysate represents a lysate of human TGIF transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

TGIF (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive TGIF antibodies. Recommended use: 10-20 μ l per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.