

TGIF2 (H-64): sc-292160



The Power to Question

BACKGROUND

TGIF2 (TGF β -induced factor homeobox 2), also called 5'-TG-3'-interacting factor 2, is a widely expressed protein with predominant expression in kidney, heart and testis, and it belongs to the TALE/TGIF homeobox family. Localizing to the nucleus, TGIF2 contains one homeobox DNA-binding domain and is believed to function as a transcriptional repressor. Similar to the closely related protein TGIF, TGIF2 recruits histone deacetylases (HDACs) to TGF β -responsive genes, thereby mediating their transcriptional repression. Specifically, TGIF2 interacts with HDAC1 and the transcriptional modulator Smad3. Mutations in the gene encoding TGIF2 can result in holoprosencephaly, a disorder characterized by the underdevelopment of the prosencephalon. In addition, TGIF2 is overexpressed in some ovarian cancers, suggesting a possible role of TGIF2 in carcinogenesis.

REFERENCES

1. Imoto, I., et al. 2000. Amplification and overexpression of TGIF2, a novel homeobox gene of the TALE superclass, in ovarian cancer cell lines. *Biochem. Biophys. Res. Commun.* 276: 264-270.
2. Melhuish, T.A., et al. 2001. TGIF2 interacts with histone deacetylase 1 and represses transcription. *J. Biol. Chem.* 276: 32109-32114.
3. Watanabe, T., et al. 2002. Differentially regulated genes as putative targets of amplifications at 20q in ovarian cancers. *Jpn. J. Cancer Res.* 93: 1114-1122.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607294. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Wang, X. and Zhang, J. 2004. Rapid evolution of mammalian X-linked testis-expressed homeobox genes. *Genetics* 167: 879-888.
6. Jin, L., et al. 2005. Expression pattern of TG-interacting factor 2 during mouse development. *Gene Expr. Patterns* 5: 457-462.
7. Chung, C.M., et al. 2005. Amplification and overexpression of aurora kinase A (AURKA) in immortalized human ovarian epithelial (HOSE) cells. *Mol. Carcinog.* 43: 165-174.
8. Melhuish, T.A. and Wotton, D. 2006. The Tgif2 gene contains a retained intron within the coding sequence. *BMC Mol. Biol.* 7: 2.
9. El-Jaick, K.B., et al. 2007. Functional analysis of mutations in TGIF associated with holoprosencephaly. *Mol. Genet. Metab.* 90: 97-9111.

CHROMOSOMAL LOCATION

Genetic locus: TGIF2 (human) mapping to 20q11.23; Tgif2 (mouse) mapping to 2 H1.

SOURCE

TGIF2 (H-64) is a rabbit polyclonal antibody raised against amino acids 115-178 mapping within an internal region of TGIF2 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g 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-292160 X, 200 μ g/0.1 ml.

APPLICATIONS

TGIF2 (H-64) is recommended for detection of TGIF2 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).

TGIF2 (H-64) is also recommended for detection of TGIF2 in additional species, including canine and bovine.

Suitable for use as control antibody for TGIF2 siRNA (h): sc-63123, TGIF2 siRNA (m): sc-63124, TGIF2 shRNA Plasmid (h): sc-63123-SH, TGIF2 shRNA Plasmid (m): sc-63124-SH, TGIF2 shRNA (h) Lentiviral Particles: sc-63123-V and TGIF2 shRNA (m) Lentiviral Particles: sc-63124-V.

TGIF2 (H-64) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of TGIF2: 30 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

PROTOCOLS

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