

TGIF2 (H-36): sc-81989

BACKGROUND

TGIF2 (TGFβ-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 TGFβ-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.

CHROMOSOMAL LOCATION

Genetic locus: TGIF2 (human) mapping to 20q11.23.

SOURCE

TGIF2 (H-36) is a mouse monoclonal antibody raised against recombinant TGIF2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TGIF2 (H-36) is recommended for detection of TGIF2 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

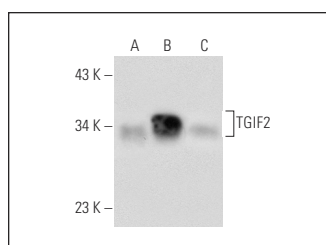
Molecular Weight of TGIF2: 30 kDa.

Positive Controls: TGIF2 (h2): 293T Lysate: sc-172678, HeLa whole cell lysate: sc-2200 or HeLa nuclear extract: sc-2120.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



TGIF2 (H-36): sc-81989. Western blot analysis of TGIF2 expression in non-transfected 293T: sc-117752 (A), human TGIF2 transfected 293T: sc-172678 (B) and HeLa (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Milligan, S., et al. 2017. Impact of dietary phytol on lipid metabolism in SCP2/SCPX/L-FABP null mice. *Biochim. Biophys. Acta Mol. Cell Biol. Lipids* 1862: 291-304.
2. Zhiping, C., et al. 2017. MiR-181a promotes epithelial to mesenchymal transition of prostate cancer cells by targeting TGIF2. *Eur. Rev. Med. Pharmacol. Sci.* 21: 4835-4843.
3. Furuhashi, M., et al. 2021. Formation of contractile 3D bovine muscle tissue for construction of millimetre-thick cultured steak. *NPJ Sci. Food* 5: 6.
4. Sadeghipour, N., et al. 2022. A rationally identified panel of microRNAs targets multiple oncogenic pathways to enhance chemotherapeutic effects in glioblastoma models. *Sci. Rep.* 12: 12017.
5. Lv, D., et al. 2023. Hsa_circ_0063329 inhibits prostate cancer growth and metastasis by modulating the miR-605-5p/tgif2 axis. *Cell Cycle*. E-published.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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