

TGIF2 (G-10): sc-390870

BACKGROUND

TGIF2 (TGFB 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 TGFB 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/>

CHROMOSOMAL LOCATION

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

SOURCE

TGIF2 (G-10) is a mouse monoclonal antibody raised against amino acids 115-178 mapping within an internal region of TGIF2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain 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-390870 X, 200 μ g/0.1 ml.

TGIF2 (G-10) is available conjugated to agarose (sc-390870 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390870 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390870 PE), fluorescein (sc-390870 FITC), Alexa Fluor® 488 (sc-390870 AF488), Alexa Fluor® 546 (sc-390870 AF546), Alexa Fluor® 594 (sc-390870 AF594) or Alexa Fluor® 647 (sc-390870 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390870 AF680) or Alexa Fluor® 790 (sc-390870 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

TGIF2 (G-10) is recommended for detection of TGIF2 of human origin by Western Blotting (starting dilution 1:100, 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).

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.

TGIF2 (G-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

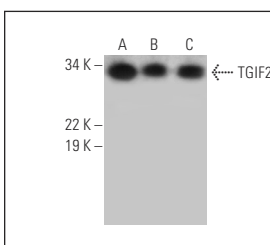
Molecular Weight of TGIF2: 30 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or ES-2 cell lysate: sc-24674.

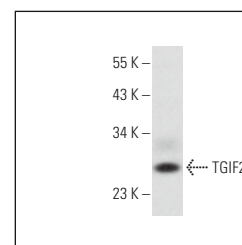
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TGIF2 (G-10): sc-390870. Western blot analysis of TGIF2 expression in HeLa nuclear extract (A) and ES-2 (B) and HeLa (C) whole cell lysates.



TGIF2 (G-10): sc-390870. Western blot analysis of TGIF2 expression in IMR-32 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Yu, X., et al. 2019. TGFB β -induced factor homeobox 2 blocks osteoblastic differentiation through targeting pSmad3/HDAC4/H4ac/Runx2 axis. *J. Cell. Physiol.* 234: 21284-21293.

RESEARCH USE

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

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