SANTA CRUZ BIOTECHNOLOGY, INC.

TGFβ1 (3C11): sc-130348

BACKGROUND

Transforming growth factor βs (TGFβs) were originally discovered due to their ability to promote anchorage-independent growth of rat NRK fibroblasts in the presence of TGFα. It is now realized that TGFβs mediate many cell-cell interactions that occur during embryonic development. Three TGFβs have been identified in mammals. TGF β1, TGF β2 and TGF β3 are each synthesized as precursor proteins that are very similar in that each is cleaved to yield a 112 amino acid polypeptide that remains associated with the latent portion of the molecules. Biologically active TGFβ requires dimerization of the monomers (usually homodimers) and release of the latent peptide portion. Overall, the mature region of the TGF β3 protein has approximately 80% identity to the mature region of both TGF β1 and TGF β2. However, the NH_2 terminals or precursor regions of their molecules share only 27% sequence identity.

CHROMOSOMAL LOCATION

Genetic locus: TGFB1 (human) mapping to 19q13.2; Tgfb1 (mouse) mapping to 7 A3.

SOURCE

TGFβ1 (3C11) is a mouse monoclonal antibody raised against recombinant TGFβ1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TGFβ1 (3C11) is available conjugated to agarose (sc-130348 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-130348 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-130348 PE), fluorescein (sc-130348 FITC), Alexa Fluor® 488 (sc-130348 AF488), Alexa Fluor® 546 (sc-130348 AF546), Alexa Fluor® 594 (sc-130348 AF594) or Alexa Fluor® 647 (sc-130348 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-130348 AF680) or Alexa Fluor® 790 (sc-130348 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TGFβ1 (3C11) is recommended for detection of TGFβ1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TGFβ1 siRNA (h2): sc-270322, TGFβ1 siRNA (m): sc-37192, TGFβ1 shRNA Plasmid (h2): sc-270322-SH, TGFβ1 shRNA Plasmid (m): sc-37192-SH, TGFβ1 shRNA (h2) Lentiviral Particles: sc-270322-V and TGFβ1 shRNA (m) Lentiviral Particles: sc-37192-V.

Molecular Weight of TGF β1 monomer: 13 kDa.

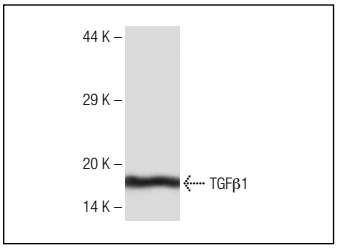
Molecular Weight of TGF β1 dimer: 25 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, human platelet extract: sc-363773 or T-47D cell lysate: sc-2293.

STORAGE

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

DATA



TGFβ1 (3C11): sc-130348. Western blot analysis of human recombinant TGFβ1.

SELECT PRODUCT CITATIONS

1. Duan, Y.G., et al. 2011. Immunodeviation towards a Th17 immune response associated with testicular damage in azoospermic men. Int. J. Androl. 34: e536-e545.
2. Xu, L., et al. 2011. Glioma-derived T cell immunoglobulin- and mucin domain-containing molecule-4 (TIM4) contributes to tumor tolerance. J. Biol. Chem. 286: 36694-36699.
3. Han, M., et al. 2011. Lower growth factor expression in follicular fluid undergone *in-vitro* fertilization. Clin. Exp. Reprod. Med. 38: 210-215.
4. Huang, W., et al. 2015. *Astragalus* and *Paeoniae* radix rubra extract inhibits liver fibrosis by modulating the transforming growth factor-β/ Smad pathway in rats. Mol. Med. Rep. 11: 805-814.
5. Zhang, X., et al. 2015. Roles of TGFβ/Smad signaling pathway in pathogenesis and development of gluteal muscle contracture. Connect. Tissue Res. 56: 9-17.
6. Tang, M.R., et al. 2015. Prognostic significance of *in situ* and plasma levels of transforming growth factor β1, -2 and -3 in cutaneous melanoma. Mol. Med. Rep. 11: 4508-4512.
7. Gonçalves, A.S., et al. 2015. Immunosuppressive mediators of oral squamous cell carcinoma in tumour samples and saliva. Hum. Immunol. 76: 52-58.
8. Kutlu, O., et al. 2016. Antifibrogenic role of valproic acid in streptozotocin induced diabetic rat penis. Andrologia 48: 453-463.
9. Khamaisi, M., et al. 2016. PKCδ inhibition normalizes the wound-healing capacity of diabetic human fibroblasts. J. Clin. Invest. 126: 837-853.
10. Feng, T., et al. 2017. Hepatocyte-specific Smad7 deletion accelerates DEN-induced HCC via activation of STAT3 signaling in mice. Oncogenesis 6: e294.

RESEARCH USE

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