

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. TGFβ₁, TGFβ₂ and TGFβ₃ 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 TGFβ₃ protein has approximately 80% identity to the mature region of both TGFβ₁ and TGFβ₂. However, the NH₂ terminals or precursor regions of their molecules share only 27% sequence identity.

CHROMOSOMAL LOCATION

Genetic locus: TGFβ1 (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 IgG₁ 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), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], 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 TGFβ₁ monomer: 13 kDa.

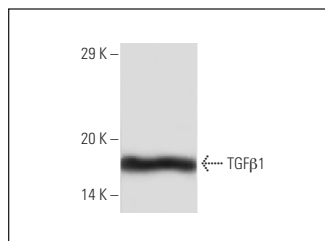
Molecular Weight of TGFβ₁ dimer: 25 kDa.

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

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- Sun, J., et al. 2020. Involvement of the TGFβ₁ pathway in caveolin-1-associated regulation of head and neck tumor cell metastasis. *Oncol. Lett.* 19: 1298-1304.
- Kanai, R., et al. 2021. Interferon-γ enhances the therapeutic effect of mesenchymal stem cells on experimental renal fibrosis. *Sci. Rep.* 11: 850.
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- Hwang, P., et al. 2023. A multi-targeting bionanomatrix coating to reduce capsular contracture development on silicone implants. *Biomater. Res.* 27: 34.

RESEARCH USE

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

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