

TGFβ1 (500-M66): sc-65378

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 (500-M66) is a mouse monoclonal antibody raised against recombinant TGFβ1 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

TGFβ1 (500-M66) 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

STORAGE

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

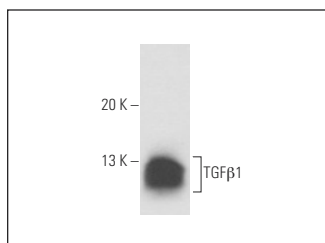
PROTOCOLS

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

RESEARCH USE

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

DATA



TGFβ1 (500-M66): sc-65378. Western blot analysis of TGFβ1 expression in platelet extract.

SELECT PRODUCT CITATIONS

1. Yamada, Y., et al. 2013. Postinfarct active cardiac-targeted delivery of erythropoietin by liposomes with sialyl Lewis X repairs infarcted myocardium in rabbits. *Am. J. Physiol. Heart Circ. Physiol.* 304: H1124-H1133.
2. Barbier, M., et al. 2014. MFAP5 loss-of-function mutations underscore the involvement of matrix alteration in the pathogenesis of familial thoracic aortic aneurysms and dissections. *Am. J. Hum. Genet.* 95: 736-743.
3. de la Mare, J.A., et al. 2017. Extracellular HSP 90 and TGFβ regulate adhesion, migration and anchorage independent growth in a paired colon cancer cell line model. *BMC Cancer* 17: 202.
4. Wang, Y., et al. 2018. Detection of Treg/Th17 cells and related cytokines in peripheral blood of chronic hepatitis B patients combined with thrombocytopenia and the clinical significance. *Exp. Ther. Med.* 16: 1328-1332.
5. Ayla, S., et al. 2019. Wound healing effects of methanol extract of *Laurocerasus officinalis* roem. *Biotech. Histochem.* 94: 180-188.
6. Chen, H., et al. 2020. Telmisartan improves myocardial remodeling by inhibiting leptin autocrine activity and activating PPARγ. *Exp. Biol. Med.* 245: 654-666.
7. Okur, M.E., et al. 2021. Anti-inflammatory, analgesic and *in vivo-in vitro* wound healing potential of the *Phlomis rigida* Labill. extract. *J. Ethnopharmacol.* 266: 113408.
8. Yoon, J.J., et al. 2021. Protective effects of ethanolic extract from rhizome of *Polygoni avicularis* against renal fibrosis and inflammation in a diabetic nephropathy model. *Int. J. Mol. Sci.* 22: 7230.
9. Wang, X. and Hu, Z. 2022. tRNA derived fragment tsRNA-14783 promotes M2 polarization of macrophages in keloid. *Biochem. Biophys. Res. Commun.* 636: 119-127.



See **TGFβ1 (3C11): sc-130348** for TGFβ1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.