

TGF β 1 (2E6): sc-52892



The Power to Question

BACKGROUND

Transforming growth factor β s (TGF β s) were originally discovered due to their ability to promote anchorage-independent growth of rat NRK fibroblasts in the presence of TGF α . It is now realized that TGF β s mediate many cell-cell interactions that occur during embryonic development. Three TGF β s have been identified in mammals. TGF β 1, TGF β 2 and TGF β 3 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 TGF β requires dimerization of the monomers (usually homodimers) and release of the latent peptide portion. Overall, the mature region of the TGF β 3 protein has approximately 80% identity to the mature region of both TGF β 1 and TGF β 2. However, the NH₂ terminals or precursor regions of their molecules share only 27% sequence identity.

REFERENCES

1. Todaro, G.J., et al. 1980. Transforming growth factors produced by certain human tumor cells: polypeptides that interact with epidermal growth factor receptors. *Proc. Natl. Acad. Sci. USA* 77: 5258-5262.
2. Anzano, M.A., et al. 1983. Sarcoma growth factor from conditioned medium of virally transformed cells is composed of both type α and type β transforming growth factors. *Proc. Natl. Acad. Sci. USA* 80: 6264-6268.

CHROMOSOMAL LOCATION

Genetic locus: TGF β 1 (human) mapping to 19q13.2.

SOURCE

TGF β 1 (2E6) is a mouse monoclonal antibody raised against TGF β 1 from platelets of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TGF β 1 (2E6) is recommended for detection of platelet-derived and recombinant dimeric and monomeric forms of TGF β 1 under both non-reducing and reducing conditions of human origin by Western Blotting (non-reducing) (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for TGF β 1 siRNA (h2): sc-270322, TGF β 1 shRNA Plasmid (h2): sc-270322-SH and TGF β 1 shRNA (h2) Lentiviral Particles: sc-270322-V.

Molecular Weight of TGF β 1 monomer: 13 kDa.

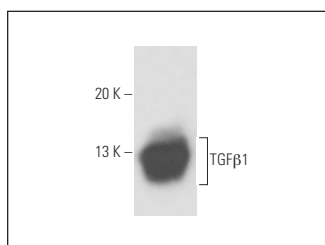
Molecular Weight of TGF β 1 dimer: 25 kDa.

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

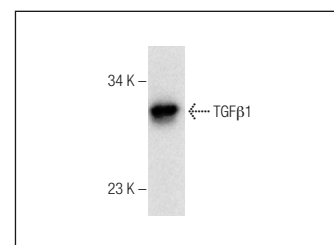
RECOMMENDED SUPPORT REAGENTS

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).

DATA



TGF β 1 (2E6): sc-52892. Western blot analysis of TGF β 1 expression in platelet extract.



TGF β 1 (2E6): sc-52892. Western blot analysis of TGF β 1 expression in human adrenal tissue extract.

SELECT PRODUCT CITATIONS

1. Li, B., et al. 2017. TGF- β 2-induced ANGPTL4 expression promotes tumor progression and osteoclast differentiation in giant cell tumor of bone. *Oncotarget* 8: 54966-54977.
2. Ning, J., et al. 2018. MicroRNA-326 inhibits endometrial fibrosis by regulating TGF- β 1/Smad3 pathway in intrauterine adhesions. *Mol. Med. Rep.* 18: 2286-2292.
3. Cheng, Y., et al. 2019. MicroRNA-30e regulates TGF- β -mediated NADPH oxidase 4-dependent oxidative stress by Snai1 in atherosclerosis. *Int. J. Mol. Med.* 43: 1806-1816.
4. Souza, C.S., et al. 2019. Preventive effect of exercise training on diabetic kidney disease in ovariectomized rats with type 1 diabetes. *Exp. Biol. Med.* 1: 1535370219843830.

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.

CONJUGATES

See **TGF β 1 (3C11): sc-130348** for TGF β 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.