SANTA CRUZ BIOTECHNOLOGY, INC.

# TGFβ1 (2E6): sc-52892

## 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 $NH_2$ 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: TGFB1 (human) mapping to 19q13.2.

## SOURCE

TGFβ1 (2E6) is a mouse monoclonal antibody raised against TGFβ1 from platelets of human origin.

## PRODUCT

Each vial contains 100 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

TGFβ1 (2E6) is recommended for detection of platelet-derived and recombinant dimeric and momomeric forms of TGFβ1 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 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

Molecular Weight of TGFβ1 monomer: 13 kDa.

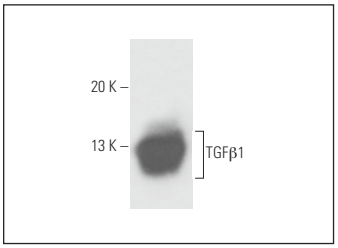
Molecular Weight of TGFβ1 dimer: 25 kDa.

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

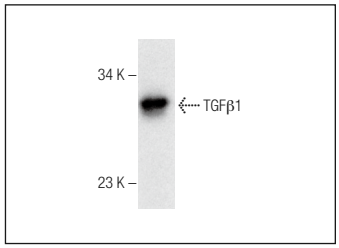
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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




TGFβ1 (2E6): sc-52892. Western blot analysis of TGFβ1 expression in platelet extract.




TGFβ1 (2E6): sc-52892. Western blot analysis of TGFβ1 expression in human adrenal tissue extract.

## SELECT PRODUCT CITATIONS


1. Li, B., et al. 2017. TGF-β2-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 TGFβ1/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. 244: 758-769.


## 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.

CONJUGATES

See **TGF β1 (3C11): sc-130348** for TGF β1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.