SANTA CRUZ BIOTECHNOLOGY, INC.

TGFβ2 (B-10): sc-374658

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: TGFB2 (human) mapping to 1q41; Tgfb2 (mouse) mapping to 1 H5.

SOURCE

TGFβ2 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 343-377 at the C-terminus of TGFβ2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374658 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TGFβ2 (B-10) is recommended for detection of mature and precursor forms of TGFβ2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TGFβ2 (B-10) is also recommended for detection of mature and precursor forms of TGFβ2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TGFβ2 siRNA (h): sc-39802, TGFβ2 siRNA (m): sc-39803, TGFβ2 shRNA Plasmid (h): sc-39802-SH, TGFβ2 shRNA Plasmid (m): sc-39803-SH, TGFβ2 shRNA (h) Lentiviral Particles: sc-39802-V and TGFβ2 shRNA (m) Lentiviral Particles: sc-39803-V.

Molecular Weight of TGFβ2 monomer: 13 kDa.

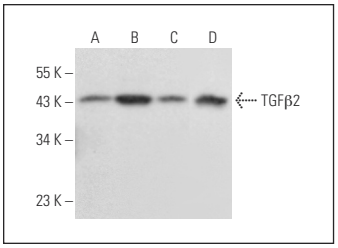
Molecular Weight of TGFβ2 dimer: 25 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A549 cell lysate: sc-2413 or MCF7 whole cell lysate: sc-2206.

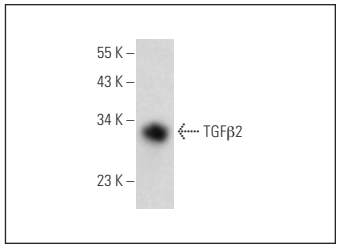
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TGFβ2 (B-10): sc-374658. Western blot analysis of TGFβ2 expression in HeLa (**A**), A549 (**B**), MCF7 (**C**) and NCI-H226 (**D**) whole cell lysates.



TGFβ2 (B-10): sc-374658. Western blot analysis of TGFβ2 expression in rat small intestine 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. Rodríguez-Uribe, G., et al. 2018. HPV16-E6 oncoprotein activates TGF-β and Wnt/β-catenin pathways in the epithelium-mesenchymal transition of cataracts in a transgenic mouse model. Biomed Res. Int. 2018: 2847873.
3. Guo, G., et al. 2019. MicroRNA-153 affects nasopharyngeal cancer cell viability by targeting TGF-β2. Oncol. Lett. 17: 646-651.
4. Boos, F., et al. 2023. The endothelial-enriched lncRNA LINC00607 mediates angiogenic function. Basic Res. Cardiol. 118: 5.
5. Tang, T., et al. 2023. Carbon quantum dots as a nitric oxide donor can promote wound healing of deep partial-thickness burns in rats. Eur. J. Pharm. Sci. 183: 106394.

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.

CONJUGATES

See **TGFβ2 (H-6): sc-374659** for TGFβ2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.