SANTA CRUZ BIOTECHNOLOGY, INC.

# TGFβ2 (V): sc-90

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 TGFs 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, TGFB3 (human) mapping to 14q24.3; Tgfb2 (mouse) mapping to 1 H5, Tgfb3 (mouse) mapping to 12 D2.

## SOURCE

TGFβ2 (V) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of TGFβ2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for neutralization studies, sc-90 L, 200 µg/0.1 ml.

TGFβ2 (V) is available conjugated to agarose (sc-90 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-90 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TGFβ2 (V) is recommended for detection of mature and precursor forms of TGFβ2 and, to a lesser extent, TGFβ3 of mouse, rat, human and *Xenopus laevis* 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with TGFβ1. TGFβ2 (V) is also recommended for detection of mature and precursor forms of TGFβ2 and, to a lesser extent, TGFβ3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TGFβ1/2/3 siRNA (h): sc-44146, TGFβ1/2/3 siRNA (m): sc-44147, TGFβ1/2/3 shRNA Plasmid (h): sc-44146-SH, TGFβ1/2/3 shRNA Plasmid (m): sc-44147-SH, TGFβ1/2/3 shRNA (h) Lentiviral Particles: sc-44146-V and TGFβ1/2/3 shRNA (m) Lentiviral Particles: sc-44147-V.

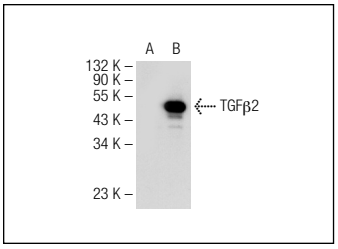
Molecular Weight of TGFβ2 monomer: 13 kDa.

Molecular Weight of TGFβ2 dimer: 25 kDa.

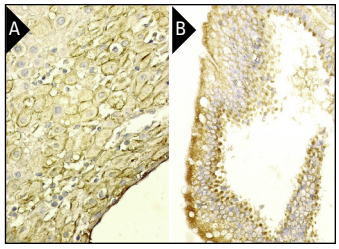
## RESEARCH USE

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

## DATA




TGFβ2 (V): sc-90. Western blot analysis of TGFβ2 expression in non-transfected: sc-117752 (**A**) and mouse TGFβ2 transfected: sc-124019 (**B**) 293T whole cell lysates.




TGFβ2 (V): sc-90. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue (**A**) and human small intestine (**B**) showing cytoplasmic and extracellular localization.

## SELECT PRODUCT CITATIONS


1. Krieglstein, K., et al. 1998. Glial cell line-derived neurotrophic factor requires transforming growth factor β for exerting its full neurotrophic potential on peripheral and CNS neurons. J. Neurosci. 18: 9822-9834.
2. Hassan, M., et al. 2009. Hepatitis C virus core protein triggers hepatic angiogenesis by a mechanism including multiple pathways. Hepatology 49: 1469-1482.
3. Caron, P.L., et al. 2009. Transforming growth factor β isoforms regulation of Akt activity and XIAP levels in rat endometrium during estrous cycle, in a model of pseudopregnancy and in cultured decidual cells. Reprod. Biol. Endocrinol. 7: 80.
4. Sriperumbudur, R., et al. 2010. Transforming growth factor-β (TGFβ) and its signaling components in peri-ovulatory pig follicles. Anim. Reprod. Sci. 120: 84-94.
5. Bottoms, S.E., et al. 2010. Tgf-β isoform specific regulation of airway inflammation and remodelling in a murine model of asthma. PLoS ONE 5: e9674.
6. Mallarino, R., et al. 2011. Two developmental modules establish 3D beak-shape variation in Darwin's finches. Proc. Natl. Acad. Sci. USA 108: 4057-4062.


## STORAGE

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