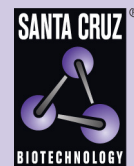


# TGFβ RII (C-16): sc-220



The Power to Question

## BACKGROUND

A total of three members of the TGFβ family, TGFβ1, TGFβ2 and TGFβ3, have been identified in mammals. Each is synthesized as a latent precursor that is subsequently cleaved forming the 112 amino acid growth factor which becomes active upon dimerization. TGFβs mediate their activity by high affinity binding to the type II receptor (TGFβ RII) transmembrane protein with a cytoplasmic serine-threonine kinase domain. TGFβ RII (TGF-β receptor type-2), also known as TGFBR2, is a 567 amino acid single-pass type I membrane protein that contains one protein kinase domain and is a member of the protein kinase superfamily, TKL Ser/Thr protein kinase family and TGFβ receptor subfamily. For signaling growth inhibition and early gene responses, TGFβ RII requires both its kinase activity and association with a TGFβ-binding protein, designated the type I receptor. TGFβ RII exists as two alternatively spliced isoforms that are encoded by a gene that maps to human chromosome 3.

## CHROMOSOMAL LOCATION

Genetic locus: TGFBR2 (human) mapping to 3p24.1; Tgfr2 (mouse) mapping to 9 F3.

## SOURCE

TGFβ RII (C-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the C-terminus of TGFβ RII 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.

Blocking peptide available for competition studies, sc-220 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TGFβ RII (C-16) is recommended for detection of TGFβ RII p70 of mouse, rat, human and ovine 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).

TGFβ RII (C-16) is also recommended for detection of TGFβ RII p70 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TGFβ RII siRNA (h): sc-36657, TGFβ RII siRNA (m): sc-36658, TGFβ RII shRNA Plasmid (h): sc-36657-SH, TGFβ RII shRNA Plasmid (m): sc-36658-SH, TGFβ RII shRNA (h) Lentiviral Particles: sc-36657-V and TGFβ RII shRNA (m) Lentiviral Particles: sc-36658-V.

Molecular Weight (predicted) of TGFβ RII isoforms: 64/67 kDa.

Molecular Weight (observed) of TGFβ RII: 75 kDa.

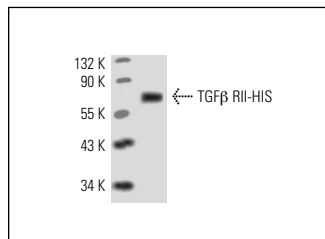
## RESEARCH USE

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

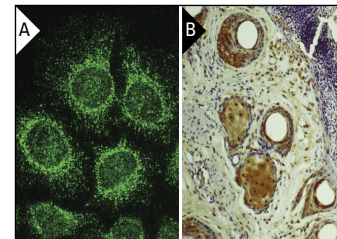
## STORAGE

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

## DATA



TGFβ RII (C-16): sc-220. Western blot analysis of HIS-tagged human recombinant TGFβ RII.



TGFβ RII (C-16): sc-220. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded wounded ovine skin one day following excisional injury. Probed with TGFβ RII (C-16): sc-220. Kindly provided by Leslie Gold (B).

## SELECT PRODUCT CITATIONS

- Macias-Silva, M., et al. 1996. MADR2 is a substrate of the TGFβ receptor and its phosphorylation is required for nuclear accumulation and signaling. *Cell* 87: 1-20.
- Moreno, S.G., et al. 2010. TGFβ signaling in male germ cells regulates gonocyte quiescence and fertility in mice. *Dev. Biol.* 342: 74-84.
- Garamszegi, N., et al. 2010. Extracellular matrix-induced transforming growth factor-β receptor signaling dynamics. *Oncogene* 29: 2368-2380.
- Revuelta-Cervantes, J., et al. 2011. Protein tyrosine phosphatase 1B (PTP1B) deficiency accelerates hepatic regeneration in mice. *Am. J. Pathol.* 178: 1591-1604.
- Upadhyay, G., et al. 2011. Stem cell antigen-1 enhances tumorigenicity by disruption of growth differentiation factor-10 (GDF10)-dependent TGF-β signaling. *Proc. Natl. Acad. Sci. USA* 108: 7820-7822.
- Chen, G., et al. 2011. Distinctive mechanism for sustained TGF-β signaling and growth inhibition: MEK1 activation-dependent stabilization of type II TGF-β receptors. *Mol. Cancer Res.* 9: 78-89.
- Zeddou, M., et al. 2012. Differential signalling through ALK-1 and ALK-5 regulates leptin expression in mesenchymal stem cells. *Stem Cells Dev.* 21: 1948-1955.
- Fernández-Velasco, M., et al. 2012. NOD1 activation induces cardiac dysfunction and modulates cardiac fibrosis and cardiomyocyte apoptosis. *PLoS ONE* 7: e45260.



Try **TGFβ RII (C-4): sc-17791** or **TGFβ RII (D-2): sc-17799**, our highly recommended monoclonal alternatives to TGFβ RII (C-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **TGFβ RII (C-4): sc-17791**.