

# TGFβ RII (H-567): sc-1700

## 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 3p4.1; Tgfr2 (mouse) mapping to 9 F3.

## SOURCE

TGFβ RII (H-567) is a rabbit polyclonal antibody raised against amino acids 1-567 representing full length 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.

Available as fluorescein conjugate for immunofluorescence, sc-1700 FITC, 200 μg/1 ml.

## APPLICATIONS

TGFβ RII (H-567) is recommended for detection of TGFβ RII p70 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TGFβ RII (H-567) is also recommended for detection of TGFβ RII p70 in additional species, including bovine.

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.

Positive Controls: KNRK whole cell lysate: sc-2214, Hep G2 cell lysate: sc-2227 or 3T3-L1 cell lysate: sc-2243.

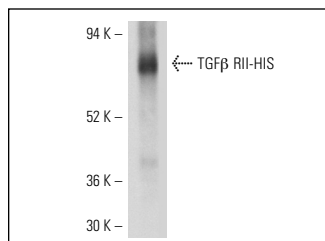
## RESEARCH USE

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 (H-567): sc-1700. Western blot analysis of HIS-tagged human recombinant TGFβ RII.

## SELECT PRODUCT CITATIONS

- Amendt, C., et al. 1998. Expression of a dominant negative type II TGFβ in mouse skin results in an increase in carcinoma incidence and an acceleration of carcinoma development. *Oncogene* 16: 25-34.
- Kleeff, J. and Korc, M. 1998. Up-regulation of transforming growth factor TGF-β receptors by TGF-β1 in COLO-357 Cells. *J. Biol. Chem.* 273: 7495-7500.
- Yang, Y.L., et al. 2009. Bone morphogenetic protein-2 antagonizes renal interstitial fibrosis by promoting catabolism of type I transforming growth factor-β receptors. *Endocrinology* 150: 727-740.
- Chiang, T.A., et al. 2010. Hyperosmolarity enhanced susceptibility to renal tubular fibrosis by modulating catabolism of type I transforming growth factor-β receptors. *J. Cell. Biochem.* 109: 663-671.
- Song, K., et al. 2010. DHT selectively reverses Smad3-mediated/TGF-β-induced responses through transcriptional down-regulation of Smad3 in prostate epithelial cells. *Mol. Endocrinol.* 24: 2019-2029.
- Fong, S.W., et al. 2010. TGF-β2 alters the characteristics of the neuromuscular junction by regulating presynaptic quantal size. *Proc. Natl. Acad. Sci. USA* 107: 13515-13519.
- Song, K., et al. 2010. DHT selectively reverses Smad3-mediated/TGF-β-induced responses through transcriptional down-regulation of Smad3 in prostate epithelial cells. *Mol. Endocrinol.* 24: 2019-2029.
- Biswas, T., et al. 2014. Attenuation of TGF-β signaling supports tumor progression of a mesenchymal-like mammary tumor cell line in a syngeneic murine model. *Cancer Lett.* 346: 129-138.

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Try **TGFβ RII (C-4): sc-17791** or **TGFβ RII (D-2): sc-17799**, our highly recommended monoclonal alternatives to TGFβ RII (H-567). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **TGFβ RII (C-4): sc-17791**.