SANTA CRUZ BIOTECHNOLOGY, INC.

TGFβ RII (S-20): sc-33932

SANTA CRUZ BIOTECHNOLOGY

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 TGFB 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.

REFERENCES

1. 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.
2. Derynck, R., et al. 1985. Human transforming growth factor β cDNA sequence and expression in tumor cell lines. Nature 316: 701-705.
3. ten Dijke, P., et al. 1988. Identification of a new member of the transforming growth factor type β gene family. Proc. Natl. Acad. Sci. USA 85: 4715-4719.
4. Cheifetz, S., et al. 1990. Distinct transforming growth factor β receptor subsets as determinants of cellular responsiveness to three TGFβ isoforms. J. Biol. Chem. 265: 20533-20538.
5. Massague, J. 1992. Receptors for the TGFβ family. Cell 69: 1067-1070.

CHROMOSOMAL LOCATION

Genetic locus: Tgfbr2 (mouse) mapping to 9 F3.

SOURCE

TGFβ RII (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of TGFβ RII of rat 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-33932 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

TGFβ RII (S-20) is recommended for detection of TGFβ RII of rat and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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)

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

Molecular Weight of TGFβ RII: 70 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **TGFβ RII (C-4): sc-17791** or **TGFβ RII (D-2): sc-17799**, our highly recommended monoclonal alternatives to TGFβ RII (S-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **TGFβ RII (C-4): sc-17791**.