SANTA CRUZ BIOTECHNOLOGY, INC.

TGFβ RIII (C-20): sc-6199



BACKGROUND

A total of three members of the TGF β family, TGF β 1, TGF β 2 and TGF β 3, 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. TGFBs mediate their activity by high affinity binding to the type II receptor transmembrane protein with a cytoplasmic serine-threonine kinase domain. TGF β RIII (transforming growth factor β receptor type 3), also known as TGFBR3 or TGFR-3, is an 850 amino acid secreted and single-pass type I membrane protein that contains one ZP domain and may assist in capturing TGF β for presentation to signaling receptors. TGF β RIII undergoes post-translational modification by glycosaminoglycan groups (GAG) and is encoded by a gene that maps to human chromosome 1p22.1.

CHROMOSOMAL LOCATION

Genetic locus: TGFBR3 (human) mapping to 1p22.1, ENG (human) mapping to 9q34.11; Tgfbr3 (mouse) mapping to 5 E5, Eng (mouse) mapping to 2 B.

SOURCE

TGFB RIII (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TGFB RIII of human origin.

PRODUCT

Each vial contains 200 µg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6199 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TGF_β RIII (C-20) is recommended for detection of TGF_β RIII and Endoglin of mouse, rat, human and mink 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); may cross-react with Endoglin.

TGF_β RIII (C-20) is also recommended for detection of TGF_β RIII and Endoglin in additional species, including canine, bovine, porcine and avian.

Molecular Weight of TGF_B RIII: 100-200 kDa.

Positive Controls: JAR cell lysate: sc-2276, Mv 1 Lu cell lysate: sc-3810 or ECV304 cell lysate: sc-2269.

STORAGE

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

PROTOCOLS

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

RESEARCH USE

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

DATA



TGFB RIII (C-20): sc-6199. Western blot analysis of TGF β RIII expression in JAR whole cell lysate

SELECT PRODUCT CITATIONS

- 1. Matsuo, K., et al. 2000. Transforming growth factor- β is involved in the pathogenesis of dialysis-related amyloidosis. Kidney Int. 57: 697-708.
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- 3. Scherner, O., et al. 2007. Endoglin differentially modulates antagonistic transforming growth factor-β1 and BMP-7 signaling. J. Biol. Chem. 282: 13934-13943.
- 4. Dalton, S.J., et al. 2007. Mechanisms of chronic skin ulceration linking lactate, transforming growth factor- β , vascular endothelial growth factor, collagen remodeling, collagen stability, and defective angiogenesis. J. Invest, Dermatol, 127: 958-968.
- 5. Adams, J.C. 2009. Immunocytochemical traits of type IV fibrocytes and their possible relations to cochlear function and pathology. J. Assoc. Res. Otolaryngol. 10: 369-382.
- 6. Wehrhan, F., et al. 2010. Skin repair using a porcine collagen I/III membrane-vascularization and epithelization properties. Dermatol. Surg. 36: 919-930.
- 7. Meurer, S.K., et al. 2011. Expression and functional analysis of endoglin in isolated liver cells and its involvement in fibrogenic Smad signalling. Cell. Signal. 23: 683-699.
- 8. Sun, Y.L., et al. 2012. Subsynovial connective tissue is sensitive to surgical interventions in a rabbit model of carpal tunnel syndrome. J. Orthop. Res. 30: 649-654.



Try TGFB RIII (A-4): sc-74511, our highly recommended monoclonal aternative to TGF_B RIII (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see TGF_β RIII (A-4): sc-74511.