SANTA CRUZ BIOTECHNOLOGY, INC.

TGFβ RII (L-21): sc-400

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.

CHROMOSOMAL LOCATION

Genetic locus: TGFBR2 (human) mapping to 3p24.1; Tgfbr2 (mouse) mapping to 9 F3.

SOURCE

TGFβ RII (L-21) is available as either rabbit (sc-400) or goat (sc-400-G) polyclonal affinity purified antibody raised against a peptide mapping within a cytoplasmic domain of TGFβ RII of human origin.

PRODUCT

Each vial contains either 100 µg (sc-400) or 200 µg (sc-400-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-400 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-400 AC, 500 µg/ 0.25 ml agarose in 1 ml.

APPLICATIONS

TGFβ RII (L-21) 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 (L-21) is also recommended for detection of TGFβ RII p70 in additional species, including equine, canine, bovine, porcine and avian.

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.

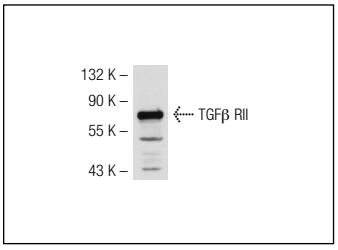
Molecular Weight (predicted) of TGFβ RII isoforms: 64/67 kDa.

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

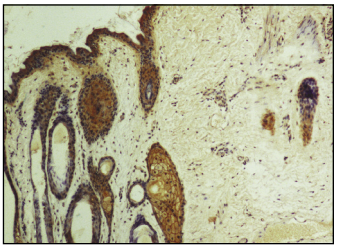
STORAGE

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

DATA



TGFβ RII (L-21): sc-400. Western blot analysis of TGFβ RII expression in NIH/3T3 whole cell lysate.



Immunoperoxidase staining of formalin-fixed, paraffin-embedded wounded ovine skin one day following excisional injury. Probed with TGFβ RII (L-21): sc-400. Kindly provided by Leslie Gold.

SELECT PRODUCT CITATIONS

1. Suire, S., et al. 1995. Follicle stimulating hormone (FSH) stimulates transferrin gene transcription in rat Sertoli cells: *cis* and *trans*-acting elements involved in FSH action via cyclic adenosine 3',5'-monophosphate on the transferrin gene. Mol. Endoc. 9: 756-766.
2. Baugé, C., et al. 2011. Modulation of transforming growth factor β signalling pathway genes by transforming growth factor β in human osteoarthritic chondrocytes: involvement of Sp1 in both early and late response cells to transforming growth factor β. Arthritis Res. Ther. 13: R23.
3. 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.
4. Lee, D.S., et al. 2011. Crosstalk between nuclear factor I-C and transforming growth factor-β1 signaling regulates odontoblast differentiation and homeostasis. PLoS ONE 6: e29160.
5. Matise, L.A., et al. 2012. Lack of transforming growth factor-β signaling promotes collective cancer cell invasion through tumor-stromal crosstalk. Breast Cancer Res. 14: R98.
6. Baugé, C., et al. 2012. Regulatory mechanism of transforming growth factor β receptor type II degradation by interleukin-1 in primary chondrocytes. Biochim. Biophys. Acta 1823: 983-986.

RESEARCH USE

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