

TGF β RII (C-4): sc-17791

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. TGF β s mediate their activity by high affinity binding to the type II receptor (TGF β RII) transmembrane protein with a cytoplasmic serine-threonine kinase domain. TGF β 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 TGF β receptor subfamily. For signaling growth inhibition and early gene responses, TGF β RII requires both its kinase activity and association with a TGF β -binding protein, designated the type I receptor. TGF β 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

TGF β RII (C-4) is a mouse monoclonal antibody raised against amino acids 1-567 of TGF β RII of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TGF β RII (C-4) is available conjugated to agarose (sc-17791 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17791 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17791 PE), fluorescein (sc-17791 FITC), Alexa Fluor[®] 488 (sc-17791 AF488), Alexa Fluor[®] 546 (sc-17791 AF546), Alexa Fluor[®] 594 (sc-17791 AF594) or Alexa Fluor[®] 647 (sc-17791 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-17791 AF680) or Alexa Fluor[®] 790 (sc-17791 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TGF β RII (C-4) is recommended for detection of TGF β RII of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

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

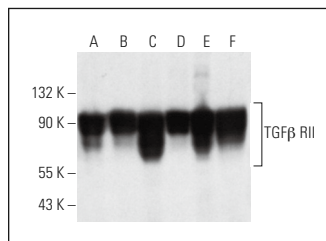
Molecular Weight of TGF β RII isoforms: 64/67 kDa.

Molecular Weight of glycosylated TGF β RII: 75-85 kDa.

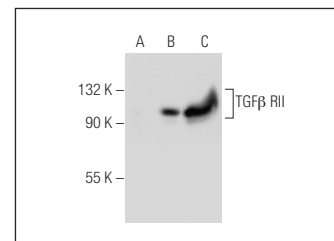
STORAGE

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

DATA



TGF β RII (C-4): sc-17791. Western blot analysis of TGF β RII expression in Hep G2 (A), A549 (B), TF-1 (C), 3T3-L1 (D), KNRK (E) and Mv 1 Lu (F) whole cell lysates.



TGF β RII (C-4): sc-17791. Western blot analysis of TGF β RII expression in non-transfected 293T: sc-117752 (A), mouse TGF β RII transfected 293T: sc-124016 (B) and NIH/3T3 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

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- Leiphrakpam, P.D., et al. 2018. TGF β and IGF1R signaling activates protein kinase A through differential regulation of Ezrin phosphorylation in colon cancer cells. *J. Biol. Chem.* 293: 8242-8254.
- Huang, H., et al. 2019. Targeting TGF β R2-mutant tumors exposes vulnerabilities to stromal TGF β blockade in pancreatic cancer. *EMBO Mol. Med.* 11: e10515.
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RESEARCH USE

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

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