**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 RI) transmembrane protein with a cytoplasmic serine-threonine kinase domain. TGFβ RI (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 RI requires both its kinase activity and association with a TGFβ-binding protein, designated the type I receptor. TGFβ RI 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**

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

**PRODUCT**

Each vial contains 200 µg IgG, kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TGFβ RI (C-4) is available conjugated to agarose (sc-17791 AC), 500 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 488 (sc-17791 AF488), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; or to either Alexa Fluor® 546 (sc-17791 AF546), Alexa Fluor® 647 (sc-17791 AF647), 200 µg/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 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

TGFβ RI (C-4) is recommended for detection of TGFβ RI of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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).

Suitable for use as control antibody for TGFβ RI siRNA (h): sc-36655, TGFβ RI siRNA (m): sc-366558, TGFβ RI shRNA Plasmid (h): sc-366557-SH, TGFβ RI shRNA Plasmid (m): sc-366558-SH, TGFβ RI shRNA (h) Lentiviral Particles: sc-366557-V and TGFβ RI shRNA (m) Lentiviral Particles: sc-366558-V.

Molecular Weight (predicted) of TGFβ RI isoforms: 84/87 kDa. Molecular Weight of glycosylated TGFβ RI: 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**

TGFβ RI (C-4): sc-17791. Western blot analysis of TGFβ RI expression in Hep G2 (A), A549 (B), T-1 (C), 3T3-L1 (D), ENRK (E) and Mv 1 Lu (F) whole cell lysates.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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