

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TGF-β RII Isoform 2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 2% cross-reactivity with recombinant human (rh) TGF-β RII, recombinant mouse (rm) TGF-β RII, rmTGF-β RI, and rhTG
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TGF-β RII Isoform 2 Thr23-Asp184 Accession # NP_001020018
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Most cell types express three sizes of receptors for TGF-β. These are designated Type I (53 kDa), Type II (70-85 kDa) and Type III (250-350 kDa). The Type III receptor, a proteoglycan that exists in membrane-bound and soluble forms, binds TGF-β1, TGF-β2, and TGF-β3, and appears to participate in both TGF-β dependent and independent cellular signaling. The Type II receptor, by contrast, is a membrane-bound serine/threonine kinase that binds TGF-β1 and TGF-β3 with high affinity, and TGF-β2 with a much lower affinity. The Type I receptor is also a membrane-bound serine/threonine kinase that requires the presence of the Type II receptor to bind TGF-β. Evidence suggests that signal transduction requires the cytoplasmic domains of both the Type I and Type II receptors. TGF-β receptor II isoform 2 (also TGF-β RII isoform A) is an alternatively spliced variant of the standard Type II TGF-β receptor (or TGF-β RII isoform 1) that possesses a 27 amino acid substitution for Val10 near the N-terminus of the mature protein. Both TGF-β RII and TGF-β RII isoform 2 bind TGF-β1 and TGF-β3 with high affinity. However, only TGF-β RII isoform 2 also binds TGF-β2 with high affinity in the absence of TGF-β RIII. While TGF-β RII is widely expressed on cells, TGF-β RII isoform 2 shows distinct expression pattern mainly associated with bone-related cells, such as osteoblasts and mesenchymal precursor cells. TGF-β RII isoform 2 may play an important role in TGF-β2 binding and signaling in cells lacking TGF-β RIII. Mouse also expresses a TGF-β RII isoform 2, and over aa 23-184 of this isoform, human and mouse share 80% aa sequence identity.

PRODUCT SPECIFIC NOTICES

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