

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 rhTGF- β RIII is observed.
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
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose.

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.

	Recommended Concentration	Sample
Western Blot	0.1 μ g/mL	Recombinant Human TGF- β RII Isoform 2 Fc Chimera (Catalog # 1003-RT)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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- β 1, TGF- β 2, and TGF- β 3, 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- β 1 and TGF- β 3 with high affinity, and TGF- β 2 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- β 1 and TGF- β 3 with high affinity. However, only TGF- β RII isoform 2 also binds TGF- β 2 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- β 2 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.