

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | 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                                       |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human TGF-β RII Isoform 2<br>Thr23-Asp184<br>Accession # NP_001020018                                                                                                                                                       |
| <b>Conjugate</b>          | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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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