

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TGF- β RII in ELISAs and Western blots. In sandwich immunoassays, approximately 25% cross-reactivity with recombinant human (rh) TGF- β RIIb is observed and less than 0.05% cross-reactivity with rhTGF- β RI, rhTGF- β RIII, recombinant mouse TGF- β RII, and rhTGF- β I is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TGF- β RII Ile24-Asp159 Accession # P37173
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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 (Catalog # 241-R2)
Human TGF-β RII Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 μ g/mL	Human TGF- β RII Antibody (Catalog # AF-241-NA)
ELISA Detection	0.1-0.4 μ g/mL	Human TGF- β RII Biotinylated Antibody (Catalog # BAF241)
Standard		Recombinant Human TGF- β RII (Catalog # 241-R2)

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 but does not appear to be involved in signal transduction. The type II receptor 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 apparently requires the presence of the type II receptor to bind TGF- β . Current evidence suggests that signal transduction requires the cytoplasmic domains of both the type I and type II receptors.

The recombinant soluble TGF- β type II receptor is capable of binding TGF- β 1, TGF- β 3, and TGF- β 5 with sufficient affinity to act as an inhibitor of these isoforms at high concentrations. The soluble receptor also binds TGF- β 2, but with an affinity at least two orders of magnitude lower. Binding of TGF- β 1, TGF- β 3, and TGF- β 5 to the soluble TGF- β type II receptor can also be demonstrated by using the soluble receptor as a capture agent on ELISA plates and this observation has been used as the basis for the development of immunoassays for these isoforms of TGF- β .

References:

1. Miyazono, K. *et al.* (1994) Adv. in Immunol. **55**:181.