

## DESCRIPTION

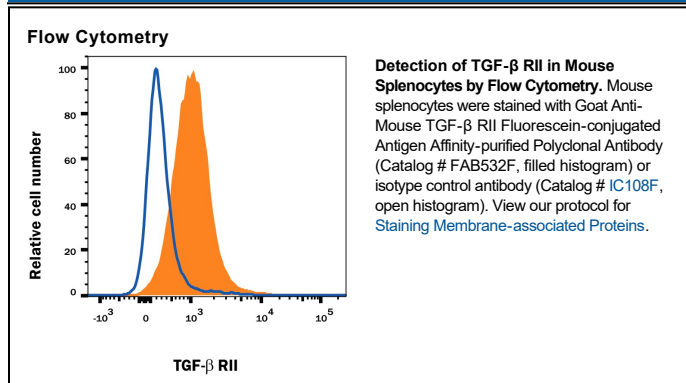
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse TGF- $\beta$ RII in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant human (rh) TGF- $\beta$ RII is observed and less than 1% cross-reactivity with recombinant mouse TGF- $\beta$ RI and rhTGF- $\beta$ RIII is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse TGF- $\beta$ RII and <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse TGF- $\beta$ RII Ile24-Asp184 Accession # Q62312
<b>Conjugate</b>	Fluorescein Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm (FITC)
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *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.

	Recommended Concentration	Sample
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> ● 12 months from date of receipt, 2 to 8 °C as supplied.

## BACKGROUND

Most cell types express three sizes of receptors for TGF- $\beta$ . 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- $\beta$ 1, TGF- $\beta$ 2, and TGF- $\beta$ 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- $\beta$ 1 and TGF- $\beta$ 3 with high affinity and TGF- $\beta$ 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- $\beta$ . Current evidence suggests that signal transduction requires the cytoplasmic domains of both the Type I and Type II receptors.

The recombinant soluble TGF- $\beta$  Type II receptor is capable of binding TGF- $\beta$ 1, TGF- $\beta$ 3, and TGF- $\beta$ 5 with sufficient affinity to act as an inhibitor of these isoforms at high concentrations. The soluble receptor also binds TGF- $\beta$ 2, but with an affinity at least two orders of magnitude lower. Binding of TGF- $\beta$ 1, TGF- $\beta$ 3, and TGF- $\beta$ 5 to the soluble TGF- $\beta$  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- $\beta$ .

## References:

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