

## DESCRIPTION

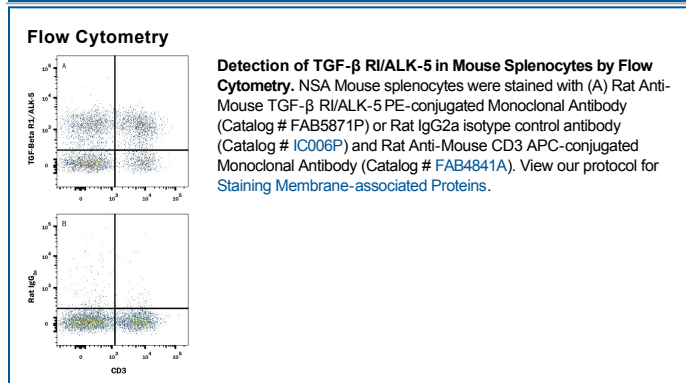
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detect mouse TGF- $\beta$ RI/ALK-5 in flow cytometry. Although this clone detects human and mouse TGF- $\beta$ RI/ALK-5 in Western blots, positive results have not been observed on human TGF- $\beta$ RI/ALK-5 in flow cytometry. In direct ELISAs and Western blots, this antibody shows no cross-reactivity with rrMIS RII, rhTGF- $\beta$ RII, rhTGF- $\beta$ RIIB, or rhTGF- $\beta$ RIII.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 141231
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse TGF- $\beta$ RI/ALK-5 Ala21-Glu121 Accession # BAA05023
<b>Conjugate</b>	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
<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

**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- $\beta$ . 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, originally known as ALK-5 (Activin receptor-like kinase) 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.

### References:

1. Miyazono, K. *et al.* (1994) *Adv. In Immunol.* **55**:181.
2. Massagué, J. (1998) *Ann. Rev. Biochem.* **67**:753.