

#### DESCRIPTION

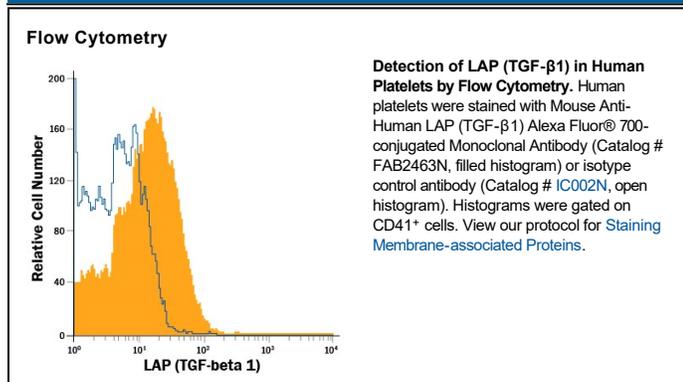
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human LAP (TGF- $\beta$ 1) in direct ELISAs. In direct ELISAs, this antibody does not cross-react with recombinant human (rh) TGF- $\beta$ 1, rhTGF- $\beta$ 2, rhTGF- $\beta$ 1.2, rhTGF- $\beta$ 3, or rhTGF- $\alpha$ .
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 27232
<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 human LAP (TGF- $\beta$ 1) Leu30-Arg278 (Cys33Ser) Accession # P01137
<b>Conjugate</b>	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	5 $\mu$ 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> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### BACKGROUND

TGF- $\beta$ 1 is one member of a six gene family that has been described in mammals, birds, fish and frog. The name TGF- $\beta$  is applied to a 24-28 kDa disulfide-linked dimer that is generated through the proteolytic processing of a larger precursor molecule. For TGF- $\beta$ 1, a 50-55 kDa, 391 amino acid (aa) proprecursor is first, covalently linked to a second proprecursor (creating a disulfide-linked homodimer), and second, internally cleaved to generate two covalently-linked homodimers that remain non-covalently associated. The smallest homodimer representing aa 279-390 of the proform is TGF- $\beta$ 1; the largest homodimer representing aa 30-278 of the proform is termed LAP (Latency-associated Peptide). The LAP homodimer wraps itself around the smaller TGF- $\beta$ 1 homodimer, thus blocking an interaction of mature TGF- $\beta$  with its receptors. Almost all cells secrete the inactive TGF- $\beta$ :LAP complex, and most do so with LAP covalently bound to a very large 120-160 kDa LTBP (Latent TGF- $\beta$  Binding Protein), platelets being a notable exception. LTBP associates with multiple matrix components and this serves to store TGF- $\beta$  extracellularly in a non-active form. When TGF- $\beta$  signaling is needed, the LTBP:matrix association is disrupted, and the TGF- $\beta$ :LAP complex is exposed to multiple LAP binding partners such as TSP-1 and various Integrins. Interactions with these factors cause LAP to unwrap and dissociate from TGF- $\beta$ , resulting in TGF- $\beta$  "activation" and receptor binding. There are three human TGF- $\beta$ 1 LAPs and TGF- $\beta$ 1 LAP shares 36% and 33% aa sequence identity with TGF- $\beta$ 2 LAP and TGF- $\beta$ 3 LAP, respectively. Human to mouse, TGF- $\beta$ 1 LAP shares 86% aa sequence identity.

**PRODUCT SPECIFIC NOTICES**

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