Human LAP (TGF-β1) Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 27232

Catalog Number: FAB2463N

100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LAP (TGF-β1) in direct ELISAs. In direct ELISAs, this antibody does not cross-react with recombinant human (rh) TGF-β1, rhTGF-β2, rhTGF-β1.2, rhTGF-β3, or rhTGF-α.
Source	Monoclonal Mouse IgG_1 Clone # 27232
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human LAP (TGF-β1) Leu30-Arg278 (Cys33Ser) Accession # P01137
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	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.

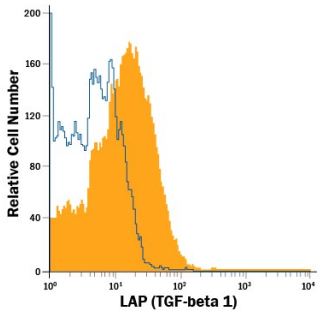
APPLICATIONS

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
Flow Cytometry	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of LAP (TGF-β1) in Human Platelets by Flow Cytometry. Human platelets were stained with Mouse Anti-Human LAP (TGF-β1) Alexa Fluor® 700-conjugated Monoclonal Antibody (Catalog # FAB2463N, filled histogram) or isotype control antibody (Catalog # IC002N, open histogram). Histograms were gated on $CD41^+$ cells. View our protocol for Staining Membrane-associated Proteins.

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

TGF-β1 is one member of a six gene family that has been described in mammals, birds, fish and frog. The name TGF-β is applied to a 24-28 kDa disulfide-linked dimer that is generated through the proteolytic processing of a larger precursor molecule. For TGF-β1, 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-β1; 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-β1 homodimer, thus blocking an interaction of mature TGF-β with its receptors. Almost all cells secrete the inactive TGF-β:LAP complex, and most do so with LAP covalently bound to a very large 120-160 kDa LTBP (Latent TGF-β Binding Protein), platelets being a notable exception. LTBP associates with multiple matrix components and this serves to store TGF-β extracellularly in a non-active form. When TGF-β signaling is needed, the LTBP:matrix association is disrupted, and the TGF-β: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-β, resulting in TGF-β "activation" and receptor binding. Ther are three human TGF-β1 LAPs and TGF-β1 LAP shares 36% and 33% aa sequence indentity with TGF-β2 LAP and TGF-β3 LAP, respectively. Human to mouse, TGF-β1 LAP shares 86% aa sequence identity.

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Alexa Fluor® 700-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 27232

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100 TESTS

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