

## PE anti-mouse LAP (TGF- $\beta$ 1) Antibody

<b>Catalog# / Size</b>	141305 / 25 $\mu$ g 141306 / 100 $\mu$ g
<b>Clone</b>	TW7-20B9
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Transforming growth factor-beta 1 (TGF-b1), Latency Associated Peptide (LAP), TGFB1, DPD1
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	Transforming growth factor beta (TGF- $\beta$ ) is a cytokine that has critical functions in immune response by regulating Treg and Th17 cells. TGF- $\beta$ is first synthesized as pro-TGF- $\beta$ and then it is cleaved by furin proprotein convertase in the Golgi apparatus to produce the dimeric propeptides called latency-associated peptide (LAP) that non-covalently associates with the dimeric mature TGF- $\beta$ to prevent its activity. This complex can further associate with latent-TGF- $\beta$ -binding protein (LTBP) to produce a large latent form for deposition onto the extracellular matrix. The latent-TGF- $\beta$ can be expressed on the membrane of activated Treg cells, immature dendritic cells, megakaryocytes, and platelets.

### Product Details

---

<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Mouse <i>Tgfb1</i> -transduced P3U1 cells
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is $\leq 0.5$ $\mu$ g per million cells in 100 $\mu$ l volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Clone TW7-20B9 has been reported to not cross-react with human LAP. <sup>2</sup> Several anti-LAP antibody clones have been compared and characterized for their LAP reactivity. <sup>2</sup> This antibody recognizes recombinant LAP, latent TGF- $\beta$ , and pro-TGF- $\beta$ .  Additional reported applications (for relevant formats) include: Western blotting <sup>1</sup> , immunoprecipitation <sup>1</sup> , and neutralization <sup>2</sup> . TW7-20B9 is able to neutralize certain unconventional T cell-derived forms of TGF- $\beta$ activity, but not the distinct 25 kDa free form of TGF- $\beta$ . <sup>2</sup>
<b>Application References</b>	1. Oida T, <i>et al.</i> 2010. <i>PLoS ONE</i> (FC, IP, WB) 2. Oida T, <i>et al.</i> 2011. <i>PLoS ONE</i> 6:e18365. (Neut) 3. Tu Z, <i>et al.</i> 2012. <i>Invest Ophthalmol Vis Sci.</i> 53:959. <a href="#">PubMed</a>
<b>(PubMed link indicates BioLegend citation)</b>	
<b>Product Citations</b>	1. Araujo Furlan CL, <i>et al.</i> 2018. <i>Front Immunol.</i> 2.149305556. <a href="#">PubMed</a>
<b>RRID</b>	AB_10717505 (BioLegend Cat. No. 141305)

## Antigen Details

<b>Structure</b>	Dimmers of latency-associated peptide non-covalently associated with dimmers of mature TGF- $\beta$
<b>Distribution</b>	Many cell types, highly expressed on activated Tregs and platelets
<b>Function</b>	TGF- $\beta$ controls cell differentiation, tissue morphogenesis, cell growth, inflammation, matrix synthesis, apoptosis, and regulates immune response.
<b>Ligand/Receptor</b>	TGF- $\beta$ receptors
<b>Cell Type</b>	Dendritic cells, Platelets, Tregs
<b>Biology Area</b>	Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Immunology, Signal Transduction
<b>Molecular Family</b>	Cytokines/Chemokines, Growth Factors
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Oida T, <i>et al.</i> 2010. <i>PLoS</i></li> <li>2. Tran D, <i>et al.</i> 2009. <i>P. Natl. Acad. Sci. USA</i> 106:13445.</li> <li>3. Ochi H, <i>et al.</i> 2006. <i>Nat. Med.</i> 12:627.</li> <li>4. Oida T, <i>et al.</i> 2003. <i>J. Immunol.</i> 170:2516.</li> <li>5. Nakamura K. 2001. <i>J. Exp. Med.</i> 194:629.</li> <li>6. Miyazono K, <i>et al.</i> 1993. <i>Growth Factors</i> 8:11.</li> </ol>
<b>Gene ID</b>	<a href="#">21803</a>

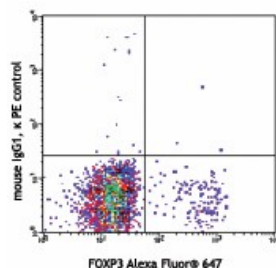
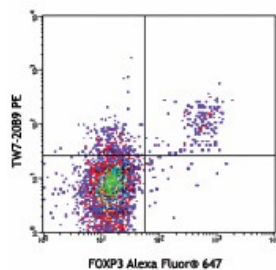
## Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

Purified anti-mouse LAP (TGF- $\beta$ 1), PE anti-mouse LAP (TGF- $\beta$ 1), Ultra-LEAF™ Purified anti-mouse LAP (TGF- $\beta$ 1)

## Product Data



C57BL/6 mouse splenocytes were stimulated with anti-mouse CD3, CD28, and recombinant mouse IL-2 for 48-hours, then surface stained with CD4 FITC and LAP (TGF- $\beta$ 1) (clone TW7-20B9) PE (top) or mouse IgG1,  $\kappa$  PE isotype control (bottom). This was followed by intracellular staining with FOXP3 Alexa Fluor® 647. Data shown was generated by gating on CD4<sup>+</sup> lymphocyte population.

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587