

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

<b>Catalog# / Size</b>	141405 / 25 $\mu$ g 141406 / 100 $\mu$ g
<b>Clone</b>	TW7-16B4
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Latency Associated Peptide (LAP), Transforming growth factor-beta 1 (TGF-b1), 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 the 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-associate 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

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<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 APC under optimal conditions.
<b>Concentration</b>	0.2 mg/ml
<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>	Red Laser (633 nm)
<b>Application Notes</b>	Clone TW7-16B4 has been reported to not cross-react with bovine LAP. <sup>2</sup> Several anti-LAP antibody clones have been compared and characterized for their LAP reactivity. <sup>2</sup> TW7-16B4 recognizes recombinant LAP, latent TGF- $\beta$ , and pro-TGF- $\beta$ .  Additional reported applications (for relevant formats) include: Western blotting <sup>1</sup> and immunoprecipitation <sup>1</sup> .
<b>Application References</b>	<ol style="list-style-type: none"><li>1. Oida T, <i>et al.</i> 2010. <i>PLoS One</i> 5:e15523. (FC, IP, WB)</li><li>2. Oida T, <i>et al.</i> 2011. <i>PLoS One</i> 6:e18365. (Neut)</li></ol>

### Product Citations

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**RRID** AB\_10896418 (BioLegend Cat. No. 141405)  
 AB\_10898159 (BioLegend Cat. No. 141406)

## 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>	Tregs, Platelets, Dendritic cells
<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 One</i> 5:e15523.</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>

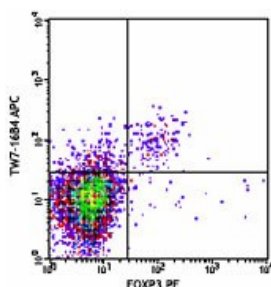
## Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

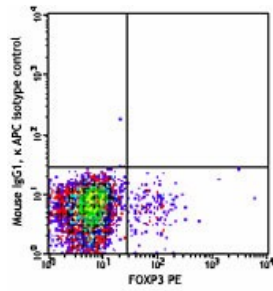
## Other Formats

Purified anti-mouse LAP (TGF- $\beta$ 1), PE anti-mouse LAP (TGF- $\beta$ 1), APC anti-mouse LAP (TGF- $\beta$ 1), Brilliant Violet 421™ anti-mouse LAP (TGF- $\beta$ 1), PerCP/Cyanine5.5 anti-mouse LAP (TGF- $\beta$ 1), Biotin anti-mouse LAP (TGF- $\beta$ 1), FITC anti-mouse LAP (TGF- $\beta$ 1)

## Product Data



CD3+CD28+IL-2-stimulated C57BL/6 mouse splenocytes (48 hours) were surface stained with CD4 FITC and LAP (clone TW7-16B4) APC (top) or mouse IgG1,  $\kappa$  APC isotype control (bottom), then intracellularly stained with FOXP3 PE. Data shown was generated by gating on CD4+ lymphocyte population.



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