# Purified anti-mouse LAP (TGF-β1) Antibody

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| **Catalog# / Size** | 141302 / 100 µg |
| **Clone** | TW7-20B9 |
| **Regulatory Status** | RUO |
| **Other Names** | Transforming growth factor-beta 1 (TGF-b1), Latency Associated Peptide (LAP), TGFB1, DPD1 |
| **Isotype** | Mouse IgG1, κ |
| **Description** | Transforming growth factor beta (TGF-β) is a cytokine that has critical functions in immune response by regulating Treg and Th17 cells. TGF-β is first synthesized as pro-TGF-β 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-β to prevent its activity. This complex can further associate with latent-TGF-β-binding protein (LTBP) to produce a large latent form for deposition onto the extracellular matrix. The latent-TGF-β can be expressed on the membrane of activated Treg cells, immature dendritic cells, megakaryocytes, and platelets. |

## Product Details

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| **Verified Reactivity** | Mouse |
| **Antibody Type** | Monoclonal |
| **Host Species** | Mouse |
| **Immunogen** | Mouse *Tgfb1*-transduced P3U1 cells |
| **Formulation** | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. |
| **Preparation** | The antibody was purified by affinity chromatography. |
| **Concentration** | 0.5 mg/ml |
| **Storage & Handling** | The antibody solution should be stored undiluted between 2°C and 8°C. |
| **Application** | FC - *Quality tested*<br>IP, WB, Neut - *Reported in the literature, not verified in house* |
| **Recommended Usage** | Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤1.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. |
| **Application Notes** | Clone TW7-20B9 has been reported to not cross-react with human LAP.[2] Several anti-LAP antibody clones have been compared and characterized for their LAP reactivity.[2] This antibody recognizes recombinant LAP, latent TGF-ß, and pro-TGF-ß.<br><br>Additional reported applications (for relevant formats) include: Western blotting[1], immunoprecipitation[1], and neutralization[2]. TW7-20B9 is able to neutralize certain unconventional T cell-derived forms of TGF-ß activity, but not the distinct 25 kDa free form of TGF-ß.[2] |
| **Application References**<br><br>**(PubMed link indicates BioLegend citation)** | 1. Oida T, *et al.* 2010. *PLoS ONE* (FC, IP, WB)<br>2. Oida T, *et al.* 2011. *PLoS ONE* 6:e18365. (Neut)<br>3. Tu Z, *et al.* 2012. *Invest Ophthalmol Vis Sci.* 53:959. PubMed |
| **Product Citations** | 1. Edwards J, *et al.* 2013. J Immunol. 190:5506. PubMed |
| **RRID** | AB_10717504 (BioLegend Cat. No. 141302) |

## Antigen Details

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| **Structure** | Dimmers of latency-associated peptide non-covalently associated with dimmers of mature TGF-β |
| **Distribution** | Many cell types, highly expressed on activated Tregs and platelets |
| **Function** | TGF-β controls cell differentiation, tissue morphogenesis, cell growth, inflammation, matrix synthesis, apoptosis, and regulates immune response. |
| **Ligand/Receptor** | TGF-β receptors |
| **Cell Type** | Dendritic cells, Platelets, Tregs |
| **Biology Area** | Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Immunology, Signal Transduction |
| **Molecular Family** | Cytokines/Chemokines, Growth Factors |
| **Antigen References** | 1. Oida T, *et al.* 2010. *PLoS*<br>2. Tran D, *et al.* 2009. *P. Natl. Acad. Sci. USA* 106:13445.<br>3. Ochi H, *et al.* 2006. *Nat. Med.* 12:627.<br>4. Oida T, *et al.* 2003. *J. Immunol.* 170:2516.<br>5. Nakamura K. 2001. *J. Exp. Med.* 194:629.<br>6. Miyazono K, *et al.* 1993. *Growth Factors* 8:11. |
| **Gene ID** | 21803 |

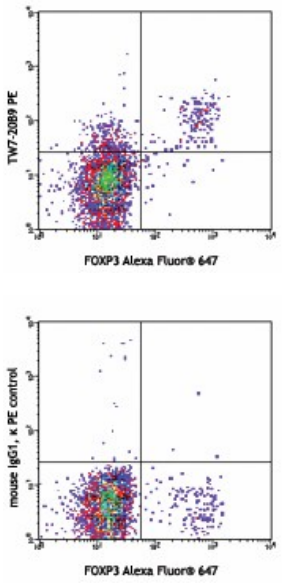
## Related Protocols

Cell Surface Flow Cytometry Staining Protocol

## Other Formats

Purified anti-mouse LAP (TGF-β1), PE anti-mouse LAP (TGF-β1), Ultra-LEAF™ Purified anti-mouse LAP (TGF-β1)

## 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-β1) (clone TW7-20B9) PE (top) or mouse IgG1, κ PE isotype control (bottom). This was followed by intracellular staining with FOXP3 Alexa Fluor® 647. Data shown was generated by gating on CD4+ lymphocyte population.

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