

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

Catalog# / Size	141307 / 100 µg 141308 / 1 mg
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

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Mouse <i>Tgfb1</i> -transduced P3U1 cells
Formulation	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is < 0.01 EU/µg of the protein (< 0.001 ng/µg of the protein) as determined by the LAL test.
Preparation	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
Concentration	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
Application	FC - Quality tested IP, Neut, WB - 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-β, and pro-TGF-β. 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-β activity, but not the distinct 25 kDa free form of TGF-β. ²
Application References	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. PubMed
(PubMed link indicates BioLegend citation)	
RRID	AB_2832509 (BioLegend Cat. No. 141307) AB_2860693 (BioLegend Cat. No. 141308)

Antigen Details

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	<ol style="list-style-type: none">1. Oida T, <i>et al.</i> 2010. <i>PLoS</i>2. Tran D, <i>et al.</i> 2009. <i>P. Natl. Acad. Sci. USA</i> 106:13445.3. Ochi H, <i>et al.</i> 2006. <i>Nat. Med.</i> 12:627.4. Oida T, <i>et al.</i> 2003. <i>J. Immunol.</i> 170:2516.5. Nakamura K. 2001. <i>J. Exp. Med.</i> 194:629.6. Miyazono K, <i>et al.</i> 1993. <i>Growth Factors</i> 8:11.
Gene ID	21803

Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-mouse LAP (TGF- β 1), PE anti-mouse LAP (TGF- β 1), Ultra-LEAF™ Purified anti-mouse LAP (TGF- β 1)

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