

TotalSeq™-C1244 anti-human LAP (TGF-β1) Antibody

Catalog# / Size	300015 / 10 µg
Clone	S20006A
Regulatory Status	RUO
Other Names	Latency Associated Peptide (LAP), Transforming growth factor beta 1 (TGF-β1), TGFβ1, DPD1
Isotype	Mouse IgG1, κ
Barcode Sequence	AACTTCACCTCCTAG
Description	<p>TGF-β1 (transforming growth factor β1) is a multifunctional cytokine which regulates cellular proliferation and differentiation. It is ubiquitously expressed by many types of cells. Platelets express high level of TGF-β. TGF-β is synthesized as a large protein precursor and then secreted as a complex of TGF-β and LAP (latency-associated peptide), in which LAP noncovalently associates with the dimeric mature TGF-β to prevent its activity. TGF-β requires activation before it binds to its receptors and exerts functions. It has been reported that LAP-TGF-β binds to the integrins αβ1, αβ6, αβ8, and α8β1 through RGD domain. TGF-β plays important roles in control proliferation and differentiation of epithelial cells, endothelial cells, fibroblasts, neurons, osteoclasts, and osteoblasts. TGF-β is believed to be important in the regulation of the development of Treg, Th17, and Th9 cells. A recent study has shown that LAP is an activated Treg surface marker.</p>

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human TGF-β1 transfected cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 1 mM EDTA
Preparation	The antibody was purified by chromatography and conjugated with TotalSeq™-C oligomer under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	PG - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis and the oligomer sequence is confirmed by sequencing. TotalSeq™-C antibodies are compatible with 10x Genomics Chromium Single Cell Immune Profiling Solution.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
Application Notes	Clone S2006A can completely block the binding of clones TW4-2F8 and TW4-6H10 on target cells.
Additional Product Notes	TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. 10x

[Genomics Chromium System and Reagents](#)) and sequencer (e.g Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit biolegend.com/totalseq.

The barcode flanking sequences are CCGAGATGTGTATAAGAGACAGNNNNNNNNNN (PCR handle), and NNNNNNNNCCCATATAAGA*A*A (capture sequence). N represents either randomly selected A, C, G, or T, and * indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

RRID AB_2910374 (BioLegend Cat. No. 300015)

Antigen Details

Structure	About 400 amino acids, N-terminal signal peptide is required for secretion from a cell, a pro-region (LAP) and C-terminal region that becomes the mature TGF- β molecule following its release from the pro-region by proteolytic cleavage.
Distribution	Ubiquitously expressed by many kinds of cells
Function	Multifunctional cytokine, regulates cells proliferation, and differentiation
Ligand/Receptor	TGF- β RI, -RII, -RIII, CD105, LTBP, integrins
Cell Type	B cells, Dendritic cells, T cells, Tregs
Biology Area	Adaptive Immunity, Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Immunology, Inhibitory Molecules, Neuroinflammation, Neuroscience, Signal Transduction
Molecular Family	Cytokines/Chemokines, Growth Factors
Antigen References	<ol style="list-style-type: none">1. Yi JJ, <i>et al.</i> 2010. <i>Cell</i>. 142:144.2. Tran DQ, <i>et al.</i> 2009. <i>Blood</i>. 113:5125.3. Lu M, <i>et al.</i> 2002. <i>J Cell Sci</i>. 115:4641.4. Khalil N. 1999. <i>Microbes Infect</i>. 1:1255.
Gene ID	7040

Related Protocols

[TotalSeq™-B or -C with 10x Feature Barcoding Technology](#)

Other Formats

Purified anti-human LAP (TGF- β 1), PE anti-human LAP (TGF- β 1), APC anti-human LAP (TGF- β 1), FITC anti-human LAP (TGF- β 1), PE/Cyanine7 anti-human LAP (TGF- β 1), TotalSeq™-A1244 anti-human LAP (TGF- β 1), TotalSeq™-B1244 anti-human LAP (TGF- β 1), TotalSeq™-C1244 anti-human LAP (TGF- β 1)

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