

## Ultra-LEAF™ Purified anti-mouse CD28 Antibody

<b>Catalog# / Size</b>	102115 / 100 µg 102116 / 1 mg 102121 / 5 mg 102122 / 25 mg 102131 / 50 mg 102132 / 100 mg
<b>Clone</b>	37.51
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Tp44, T44
<b>Isotype</b>	Syrian Hamster IgG
<b>Description</b>	CD28 is a 44 kD glycoprotein, also known as Tp44 or T44. It is a member of the Ig superfamily, expressed on thymocytes, most peripheral T cells, and NK cells. In association with CD80 (B7-1) and CD86 (B7-2), CD28 acts as the second signal for T and NK cell activation and proliferation. The 37.51 antibody has been reported to augment <i>in vitro</i> T cell proliferation and cytokine production, and promote CTL development.

### Product Details

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<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Syrian Hamster
<b>Immunogen</b>	C57BL/6 mouse T-cell lymphoma EL-4
<b>Formulation</b>	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.
<b>Preparation</b>	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
<b>Concentration</b>	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 <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">IP, IHC-F, Costim, Block - Reported in the literature, not verified in house</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 ≤ 1.0 µg per million cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunoprecipitation <sup>1</sup> , <i>in vitro</i> costimulation of T and NK cells <sup>1</sup> , <i>in vitro</i> blocking of allogeneic mixed leukocyte response and inhibition of MHC-unrestricted CTL cytotoxicity <sup>3,4</sup> , <i>in vitro</i> induction of thymocyte differentiation <sup>2,5-9,11</sup> , and immunohistochemical staining of acetone-fixed frozen sections. For <i>in vivo</i> studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) (Cat. No. 102116).
<b>Additional Product Notes</b>	Get a 50% discount on this product when purchased in our Activation Bundles. Restrictions apply. <a href="#">Learn more...</a>
<b>Application References</b>	1. Gross JA, <i>et al.</i> 1992. <i>J. Immunol.</i> 149:380. (IP, Costim) 2. Cibotti R, <i>et al.</i> 1997. <i>Immunity</i> 6:245. (Costim) 3. Masten BJ, <i>et al.</i> 1997. <i>Am. J. Respir. Cell Mol. Biol.</i> 16:335. (Block)
<b>(PubMed link indicates BioLegend citation)</b>	

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## Product Citations

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## RRID

AB\_11150408 (BioLegend Cat. No. 102115)  
 AB\_11147170 (BioLegend Cat. No. 102116)  
 AB\_2810330 (BioLegend Cat. No. 102121)  
 AB\_2810331 (BioLegend Cat. No. 102122)  
 AB\_2810332 (BioLegend Cat. No. 102131)  
 AB\_2810333 (BioLegend Cat. No. 102132)

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## Antigen Details

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<b>Structure</b>	Ig superfamily, 44 kD
<b>Distribution</b>	Thymocytes, CD4 <sup>+</sup> , CD8 <sup>+</sup> peripheral T cells, NK cells
<b>Function</b>	Costimulates T and NK cells
<b>Ligand/Receptor</b>	CD80 (B7-1), CD86 (B7-2)
<b>Cell Type</b>	NK cells, T cells, Thymocytes, Tregs
<b>Biology Area</b>	Costimulatory Molecules, Immunology
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Barclay AN, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.</li> <li>2. Lenschow DJ, <i>et al.</i> 1996. <i>Annu. Rev. Immunol.</i> 14:233.</li> <li>3. Gross JA, <i>et al.</i> 1992. <i>J. Immunol.</i> 149:380.</li> </ol>
<b>Gene ID</b>	<a href="#">12487</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

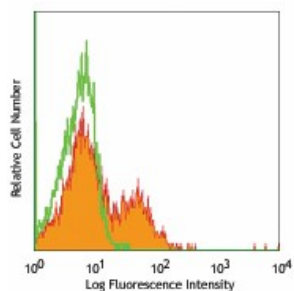
## Other Formats

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APC anti-mouse CD28, Biotin anti-mouse CD28, PE anti-mouse CD28, PE/Cyanine5 anti-mouse CD28, Purified anti-mouse CD28, PerCP/Cyanine5.5 anti-mouse CD28, Ultra-LEAF™ Purified anti-mouse CD28, Purified anti-mouse CD28 (Maxpar® Ready), PE/Cyanine7 anti-mouse CD28, PE/Dazzle™ 594 anti-mouse CD28, Brilliant Violet 421™ anti-mouse CD28, TotalSeq™-C0204 anti-mouse CD28, KIRAVIA Blue 520™ anti-mouse CD28

## Product Data

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C57BL/6 splenocytes stained with LEAF™ purified 37.51, followed by anti-Syrian hamster IgG FITC

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