

PerCP/Cyanine5.5 anti-mouse CD28 Antibody

Catalog# / Size	102113 / 25 µg 102114 / 100 µg
Clone	37.51
Regulatory Status	RUO
Other Names	Tp44, T44
Isotype	Syrian Hamster IgG
Description	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

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Syrian Hamster
Immunogen	C57BL/6 mouse T-cell lymphoma EL-4
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with PerCP/Cyanine5.5 under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 =0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. * PerCP/Cyanine5.5 has a maximum absorption of 482 nm and a maximum emission of 690 nm.
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation ¹ , <i>in vitro</i> costimulation of T and NK cells ¹ , <i>in vitro</i> blocking of allogeneic mixed leukocyte response and inhibition of MHC-unrestricted CTL cytotoxicity ^{3,4} , <i>in vitro</i> induction of thymocyte differentiation ^{2,5-9,11} , 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).
Additional Product Notes	BioLegend is in the process of converting the name PerCP/Cy5.5 to PerCP/Cyanine5.5. The dye molecule remains the same, so you should expect the same quality and performance from our PerCP/Cyanine5.5 products. Contact Technical Service if you have any questions.
Application References	<ol style="list-style-type: none"> Gross JA, <i>et al.</i> 1992. <i>J. Immunol.</i> 149:380. (IP, Costim) Cibotti R, <i>et al.</i> 1997. <i>Immunity</i> 6:245. (Costim) Masten BJ, <i>et al.</i> 1997. <i>Am. J. Respir. Cell Mol. Biol.</i> 16:335. (Block) Nishio M, <i>et al.</i> 1996. <i>J. Immunol.</i> 157:4347. (Block) Zhang N and He Y-W, 2005. <i>J. Exp. Med.</i> 202:395. (Costim) Terrazas LI, <i>et al.</i> 2005. <i>Intl. J. Parasitology.</i> 35:1349. (Costim) Perchonock CE, <i>et al.</i> 2006. <i>Mol Cell Biol.</i> 26(16):6005. (Costim) Wang W, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:4885. (Costim)
(PubMed link indicates BioLegend citation)	

9. Pua HH, *et al.* 2007. *J. Exp. Med.* 204:25. (Costim)
10. Perchonock CE, *et al.* 2007. *J. Immunol.* 179:1768.
11. Barbi J, *et al.* 2007. *Blood* 110:2215.
12. Milpied P, *et al.* 2011. *Blood* 118:2993. [PubMed](#)
13. Cunningham NR, *et al.* 2011. *Int Immunol.* 23:693. [PubMed](#)
14. Crispin JC, *et al.* 2012. *J. Immunol.* 188:3567. [PubMed](#)
15. Li CR, *et al.* 2014. *J Immunol.* 192:1425. [PubMed](#)
16. Blankenhaus B, *et al.* 2014. *PLoS Pathog.* 10:1003913. [PubMed](#)

Product Citations

1. Chow MT *et al.* 2019. *Immunity.* 50(6):1498-1512 . [PubMed](#)
2. Voisin M, *et al.* 2021. *Commun Biol.* 4:420. [PubMed](#)
3. Beus J, *et al.* 2013. *PLoS One.* 8:71221. [PubMed](#)
4. Fox A, *et al.* 2020. *Current Protocols in Cytometry.* 93(1):e74. [PubMed](#)

RRID

AB_2073851 (BioLegend Cat. No. 102113)
 AB_2073850 (BioLegend Cat. No. 102114)

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Antigen Details

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

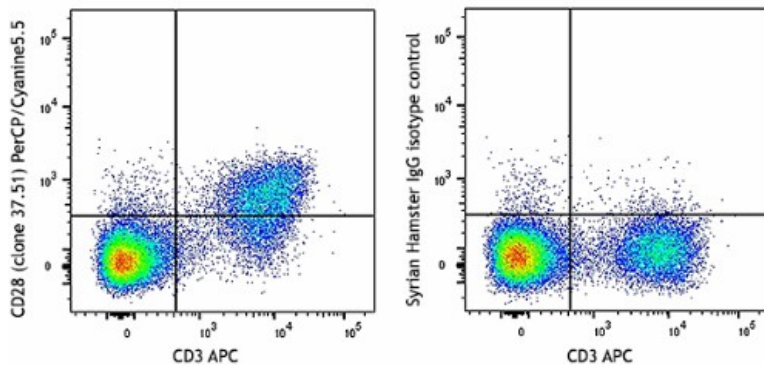
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

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



C57BL/6 mouse splenocytes were stained with CD3 APC and CD28 (clone 37.51) PerCP/Cyanine5.5 (left) or Syrian Hamster IgG PerCP/Cyanine5.5 isotype control (right).

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