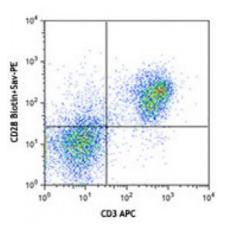
Product Data Sheet

Biotin anti-mouse CD28

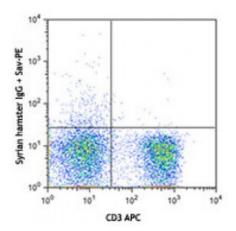
Catalog # / Size:	1110520 / 500 μg 1110515 / 50 μg
Clone:	37.51
Isotype:	Hamster IgG
Immunogen:	C57BL/6 mouse T-cell lymphoma EL-4
Reactivity:	Mouse
Preparation:	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions. The solution is free of unconjugated biotin.
Preparation: Formulation:	chromatography, and conjugated with biotin under optimal conditions. The



C57BL/6 mouse splenocytes were stained with CD3 APC and Biotinylated CD28 (clone 37.51) (top) or Syrian Hamster IgG isotype control (bottom), followed by Sav-PE (bottom).

Applications:

Applications:	Flow Cytometry
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 microg per million cells in 100 microL volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes:	Additional reported applications (for the relevant formats) include: immunoprecipitation1, <i>in vitro</i> costimulation of T and NK cells1, <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. The LEAF [™] purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 102112). For <i>in vivo</i> studies or highly sensitive assays, we recommend Ultra-LEAF [™] purified antibody (Cat. No. 102116) with a lower endotoxin limit than standard LEAF [™] purified antibodies (Endotoxin <0.01 EU/microg).



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Application References:	 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) Pua HH, <i>et al.</i> 2007. <i>J. Exp. Med.</i> 204:25. (Costim) Perchonock CE, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:1768. Barbi J, <i>et al.</i> 2011. <i>Blood</i> 118:2993. PubMed Cunningham NR, <i>et al.</i> 2011. <i>Int Immunol.</i> 23:693. PubMed
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

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 *in vitro* T cell proliferation and cytokine production, and promote CTL development.

Antigen	1. Barclay AN, et al. 1997. The Leukocyte Antigen FactsBook Academic Press.
References:	2 Lenschow DL et al 1996 Annu Rev Immunol 14:233

3. Gross JA, *et al.* 1992. *J. Immunol.* 149:380.