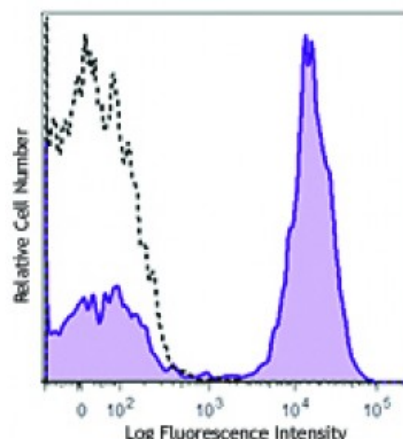


PE/Dazzle™ 594 anti-human CD28

Catalog # / Size:	2114705 / 25 tests 2114710 / 100 tests
Clone:	CD28.2
Isotype:	Mouse IgG1, κ
Reactivity:	Human
Preparation:	The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions. The solution is free of unconjugated PE/Dazzle™ 594 and unconjugated antibody.
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).
Workshop Number:	V-CD28.05
Concentration:	0.2



Human peripheral blood lymphocytes were stained with CD28 (clone CD28.2) PE/Dazzle™ 594 (filled histogram) or mouse IgG1, κ PE/Dazzle™ 594 isotype control (open histogram).

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 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
	* PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm.
Application Notes:	Additional reported applications (for the relevant formats) include: immunoprecipitation, immunohistochemical staining of acetone-fixed frozen tissue sections ⁴ , and <i>in vitro</i> T cell costimulation ⁵⁻⁸ . This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue. The CD28.2 antibody co-stimulates T cell proliferation and cytokine production in the presence of suboptimal amounts of anti-CD3 antibody. The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 302914). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 302934) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).
Application References:	<ol style="list-style-type: none"> Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York. Nunes J, <i>et al.</i> 1993. <i>Biochem. J.</i> 293:835. Calea-Lauri J, <i>et al.</i> 1999. <i>J. Immunol.</i> 163:62. Tazi A, <i>et al.</i> 1999. <i>J. Immunol.</i> 163:3511. (IHC) Marti F, <i>et al.</i> 2001. <i>J. Immunol.</i> 166:197. (Costim) Jeong SH, <i>et al.</i> 2004. <i>J. Virol.</i> 78:6995. (Costim) Rivollier A, <i>et al.</i> 2004. <i>Blood</i> 104:4029. (Costim) Scharschmidt E, <i>et al.</i> 2004. <i>Mol. Cell Biol.</i> 24:3860. (Costim) Sheng W, <i>et al.</i> 2007. <i>Elsevier</i> 580:6819. PubMed Mitsuhashi M. 2007. <i>Clin Chem.</i> 53:148. PubMed

11. Ye Z, *et al.* 2008. *Infect. Immun.* 76:2541. [PubMed](#)
 12. Magatti M, *et al.* 2008. *Stem Cells* 26:182. (FA) [PubMed](#)
 13. Yoshino N, *et al.* 2008. *Exp. Anim. (Tokyo)* 49:97. (FC)
 14. Berg M, *et al.* 2008. *J Leukoc Biol.* 83:853. (IP) [PubMed](#)
 15. Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
 16. Leonard JA, *et al.* 2011. *J. Virol.* 85:6867. [PubMed](#)
 17. Nomura T, *et al.* 2012. *J. Virol.* 86:6481. [PubMed](#)
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Description: CD28 is a 44 kD disulfide-linked homodimeric type I glycoprotein. It is a member of the immunoglobulin superfamily and is also known as T44 or Tp44. CD28 is expressed on most T lineage cells, NK cell subsets, and plasma cells. CD28 binds both CD80 and CD86 using a highly conserved motif MYPPY in the CDR3-like loop. CD28 is considered a major co-stimulatory molecule, inducing T lymphocyte activation and IL-2 synthesis, and preventing cell death. *In vitro* studies indicate that ligation of CD28 on T cells by CD80 and CD86 on antigen presenting cells provides a costimulatory signal required for T cell activation and proliferation.

Antigen References:

1. Schlossman S, *et al.* Eds. 1995. *Leucocyte Typing V*. Oxford University Press. New York.
2. June CH, *et al.* 1994. *Immunol. Today* 15:321.
3. Linskey PS, *et al.* 1993. *Annu. Rev. Immunol.* 11:191.