

Purified anti-human CD28

Catalog # / Size: 2114505 / 25 µg
2114510 / 100 µg

Clone: CD28.2

Isotype: Mouse IgG1, κ

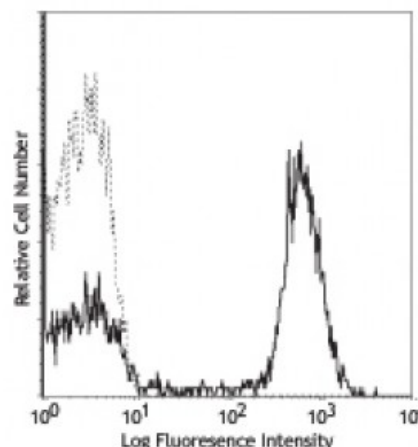
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

Workshop Number: V-CD28.05

Concentration: 0.5



Human peripheral blood lymphocytes stained with CD28.2 PE

Applications:

Applications: Other

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 ≤ 0.5 microg per 10^6 cells in 100 microL volume or 100 microL whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Additional reported applications (for the relevant formats) include: immunoprecipitation, immunohistochemical staining of acetone-fixed frozen tissue sections⁴, and *in vitro* T cell costimulation⁵⁻⁸. 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:**
- Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
 - Nunes J, *et al.* 1993. *Biochem. J.* 293:835.
 - Calea-Lauri J, *et al.* 1999. *J. Immunol.* 163:62.
 - Tazi A, *et al.* 1999. *J. Immunol.* 163:3511. (IHC)
 - Marti F, *et al.* 2001. *J. Immunol.* 166:197. (Costim)
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 - Rivollier A, *et al.* 2004. *Blood* 104:4029. (Costim)
 - Scharschmidt E, *et al.* 2004. *Mol. Cell Biol.* 24:3860. (Costim)
 - Sheng W, *et al.* 2007. *Elsevier* 580:6819. [PubMed](#)
 - Mitsuhashi M. 2007. *Clin Chem.* 53:148. [PubMed](#)
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 - Yoshino N, *et al.* 2008. *Exp. Anim. (Tokyo)* 49:97. (FC)
 - Berg M, *et al.* 2008. *J Leukoc Biol.* 83:853. (IP) [PubMed](#)
 - Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
 - Leonard JA, *et al.* 2011. *J. Virol.* 85:6867. [PubMed](#)

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.