

PE anti-human CD28

Catalog # / Size: 2114535 / 25 tests
 2114540 / 100 tests
 2114700 / 100 µg

Clone: CD28.2

Isotype: Mouse IgG1, κ

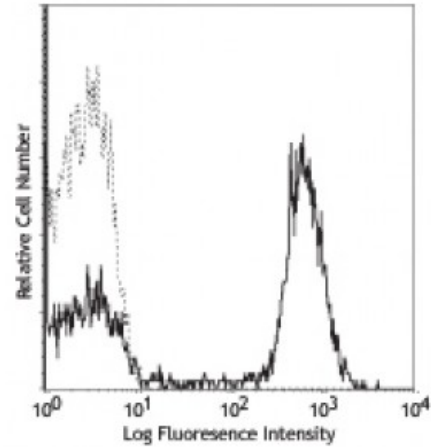
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody.

Formulation: microg size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
 test sizes: 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: microg sizes: 0.2 mg/ml
 test sizes: lot-specific



Human peripheral blood lymphocytes stained with CD28.2 PE

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 using the microg size, the suggested use of this reagent is ≤0.5 microg per million cells in 100 microL volume. **Test size products are transitioning from 20 microL to 5 microL per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 microL staining volume or per 100 microL of 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:**
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 - 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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 7. Rivollier A, *et al.* 2004. *Blood* 104:4029. (Costim)
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 9. Sheng W, *et al.* 2007. *Elsevier* 580:6819. [PubMed](#)
 10. Mitsuhashi M. 2007. *Clin Chem.*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)
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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.