

Pacific Blue™ anti-human CD28

Catalog # / Size: 2114640 / 100 tests
2114635 / 25 tests

Clone: CD28.2

Isotype: Mouse IgG1, κ

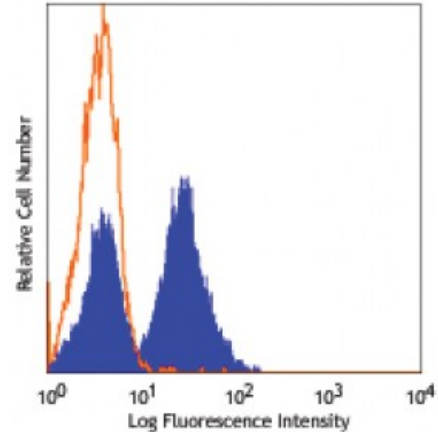
Reactivity: Human

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

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: Lot-specific



Human peripheral blood lymphocytes stained with CD28.2 Pacific Blue™

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.

* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

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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 2. Nunes J, *et al.* 1993. *Biochem. J.* 293:835.
 3. Calea-Lauri J, *et al.* 1999. *J. Immunol.* 163:62.
 4. Tazi A, *et al.* 1999. *J. Immunol.* 163:3511. (IHC)
 5. Marti F, *et al.* 2001. *J. Immunol.* 166:197. (Costim)
 6. Jeong SH, *et al.* 2004. *J. Virol.* 78:6995. (Costim)
 7. Rivollier A, *et al.* 2004. *Blood* 104:4029. (Costim)
 8. Scharschmidt E, *et al.* 2004. *Mol. Cell Biol.* 24:3860. (Costim)
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 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.