

Biotin anti-human CD28

Catalog # / Size: 302903 / 25 µg
302904 / 100 µg

Clone: CD28.2

Isotype: Mouse IgG1, κ

Workshop Number: V-CD28.05

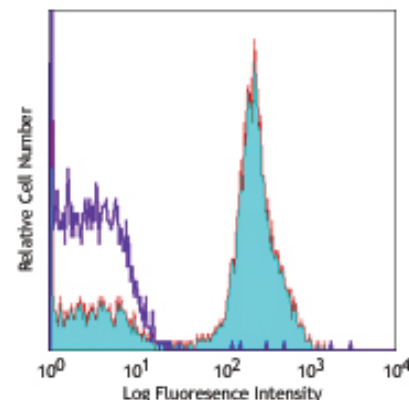
Reactivity: Human, **Cross-Reactivity:** Chimpanzee, Baboon, Cynomolgus, Rhesus, Pigtailed Macaque, Squirrel Monkey, Capuchin Monkey, Sooty Mangabey

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

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

Concentration: 0.5 mg/ml

Storage: The antibody solution should be stored undiluted at 4°C. **Do not freeze.**



Human peripheral blood lymphocytes stained with biotinylated CD28.2, followed by Sav-PE

Applications:

Applications: FC - Quality tested

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is ≤ 0.5 µg per 10⁶ cells in 100 µl volume or 100 µl 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. 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/µg).

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)
- Jeong SH, *et al.* 2004. *J. Virol.* 78:6995. (Costim)
- 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
- Ye Z, *et al.* 2008. *Infect. Immun.* 76:2541. PubMed
- Magatti M, *et al.* 2008. *Stem Cells* 26:182. (FA) PubMed
- Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
- 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:

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

| Related Products: | Product | Clone | Application |
|-------------------|-----------------------------------|---------|-------------|
| | Biotin anti-human CD80 | 2D10 | FC |
| | Biotin anti-human CD86 | IT2.2 | FC |
| | Biotin Mouse IgG1, κ Isotype Ctrl | MOPC-21 | FC, ICFC |
| | APC Streptavidin | | FC, ICFC |
| | APC/Cy7 Streptavidin | | FC, ICFC |



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HRP Streptavidin
PE Streptavidin
PE/Cy5 Streptavidin
PE/Cy7 Streptavidin
Cell Staining Buffer
RBC Lysis Buffer (10X)
Human TruStain FcX™ (Fc Receptor Blocking Solution)

ELISA, ELISPOT, IHC, WB
FC, ICFC
FC, ICFC
FC, ICFC
FC, ICC, ICFC
FC, ICFC
FC, ICC, ICFC



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