

APC/Fire™ 810 anti-human CD28 Antibody

Catalog# / Size	302985 / 25 tests 302986 / 100 tests
Clone	CD28.2
Regulatory Status	RUO
Workshop	V-CD28.05
Other Names	T44, Tp44
Isotype	Mouse IgG1, κ
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. <i>In vitro</i> 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.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	Baboon, Capuchin Monkey, Chimpanzee, Pigtailed Macaque, Sooty Mangabey, Squirrel Monkey
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with APC/Fire™ 810 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * APC/Fire™ 810 has a maximum excitation of 650 nm and a maximum emission of 810 nm. Excessive exposure to light, and commonly used fixation, permeabilization buffers can affect APC/Fire™ 810 fluorescence signal intensity and spread. Please keep conjugates protected from light exposure. For more information and representative data, visit our Fire Dyes page.
Excitation Laser	Red Laser (633 nm)
Application Notes	The Ultra-LEAF™ Purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for highly sensitive assays.

Application References

(PubMed link indicates
BioLegend citation)

1. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
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)
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](#)

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RRID

AB_3698955 (BioLegend Cat. No. 302985)
AB_3698955 (BioLegend Cat. No. 302986)

Antigen Details

Structure	Ig superfamily, type I transmembrane glycoprotein, homodimer, 44 kD
Distribution	Mature T cells, thymocytes, NK cell subsets, plasma cells, EBV-positive B cells
Function	T cell costimulation
Ligand/Receptor	CD80, CD86
Cell Type	B cells, NK cells, Plasma cells, T cells, Thymocytes, Tregs
Biology Area	Costimulatory Molecules, Immunology
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none">1. Schlossman S, <i>et al.</i> Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.2. June CH, <i>et al.</i> 1994. <i>Immunol. Today</i> 15:321.3. Linskey PS, <i>et al.</i> 1993. <i>Annu. Rev. Immunol.</i> 11:191.
Gene ID	940

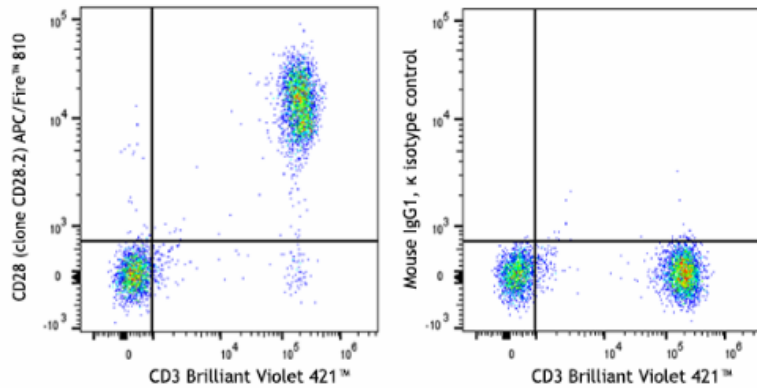
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD28, Biotin anti-human CD28, FITC anti-human CD28, PE anti-human CD28, PE/Cyanine5 anti-human CD28, Purified anti-human CD28, Alexa Fluor® 488 anti-human CD28, Alexa Fluor® 700 anti-human CD28, PerCP/Cyanine5.5 anti-human CD28, Pacific Blue™ anti-human CD28, PE/Cyanine7 anti-human CD28, Ultra-LEAF™ Purified anti-human CD28, Brilliant Violet 421™ anti-human CD28, Brilliant Violet 510™ anti-human CD28, Purified anti-human CD28 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD28, Brilliant Violet 785™ anti-human CD28, Brilliant Violet 650™ anti-human CD28, Brilliant Violet 711™ anti-human CD28, APC/Fire™ 750 anti-human CD28, Alexa Fluor® 647 anti-human CD28, TotalSeq™-A0386 anti-human CD28, TotalSeq™-B0386 anti-human CD28, TotalSeq™-C0386 anti-human CD28, Brilliant Violet 605™ anti-human CD28, APC/Cyanine7 anti-human CD28, Brilliant Violet 750™ anti-human CD28, PE/Fire™ 810 anti-human CD28, GMP PE anti-human CD28, TotalSeq™-D0386 anti-human CD28, Spark Violet™ 423 anti-human CD28, Cell-Vive™ GMP Ultra-LEAF™ Purified anti-human CD28 SF, GMP APC anti-human CD28, Cell-Vive™ GMP Ultra-LEAF™ Biotin anti-human CD28 SF, Spark Blue™ 515 anti-human CD28, Spark Red™ 718 anti-human CD28, GMP PerCP/Cyanine5.5 anti-human CD28, APC/Fire™ 810 anti-human CD28, Spark YG™ 581 anti-human CD28 (Flexi-Fluor™), Spark YG™ 593 anti-human CD28 (Flexi-Fluor™) Antibody, Spark NIR™ 685 anti-human CD28 (Flexi-Fluor™) Antibody, Spark UV™ 387 anti-human CD28 (Flexi-Fluor™)

Product Data



Human peripheral blood lymphocytes were stained with anti-human CD3 (clone SK7) Brilliant Violet 421™ and anti-human CD28 (clone CD28.2) APC/Fire™ 810 (left) or mouse IgG1, κ APC/Fire™ 810 isotype control (right).

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