Ultra-LEAF™ Purified anti-human CD28 Antibody

Catalog# / Size	302933 / 100 µg 302934 / 1 mg 302943 / 5 mg 302944 / 25 mg 302959 / 50 mg 302960 / 100 mg
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. *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.

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	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.01 EU/µg of the protein (<0.001 ng/µg of the protein) as determined by the LAL test.
Preparation	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
Concentration	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
Application	FC - *Quality tested* IHC-F, Costim, FA - *Reported in the literature, not verified in house*
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 ≤ 1.0 µg per million cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
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

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Product Citations

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RRID

AB_11150591 (BioLegend Cat. No. 302933)
AB_11148949 (BioLegend Cat. No. 302934)
AB_2616667 (BioLegend Cat. No. 302943)
AB_2616668 (BioLegend Cat. No. 302944)
AB_2800748 (BioLegend Cat. No. 302959)
AB_2800749 (BioLegend Cat. No. 302960)

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	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.
Gene ID	940

Related Protocols

Cell Surface Flow Cytometry Staining Protocol

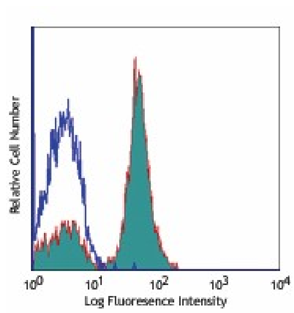
T Cell Activation with anti-CD3 Antibodies Protocol - Human

T Cell Activation with anti-CD3 Antibodies Protocol - Mouse

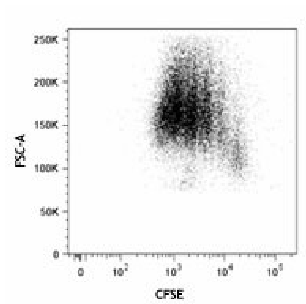
Other Formats

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

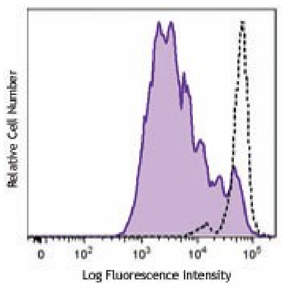
Product Data



Human peripheral blood lymphocytes stained with LEAF™ purified CD28.2, followed by anti-mouse IgGs FITC



Human peripheral blood mononuclear cells were stained with CFSE on day 0, and then stimulated with (filled histogram) or without (open histogram) immobilized LEAF™ Purified CD3 (clone UCHT1) and LEAF™ purified CD28 (clone CD28.2) for 3 days. On day 4, cells were harvested and stained with CD4 Brilliant Violet 711™. Dot plot (above) was analyzed on live cells. Histogram data (below) was analyzed by gating on CD4 positive cells (above).



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