

Spark PLUS V450™ anti-human CD28 Antibody

Catalog# / Size	377821 / 25 tests
Clone	S20013B
Regulatory Status	RUO
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
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human CD28 transfected cells
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 Spark PLUS V450™ 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 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * Spark PLUS V450™ has a maximum excitation of 405 nm and a maximum emission of 452 nm.
Excitation Laser	Violet Laser (405 nm)
Application Notes	Clone S20013B antibody can completely block the binding of clone CD28.2 on target. Clone S20013B can partially block Clone S20013F on target. Clone S20013B can increase anti-CD3 induced human peripheral T-cell proliferation. Clone S20013B is a superagonistic antibody raised towards human CD28, and can induce activation, proliferation of human peripheral T cells without anti-CD3 stimulation.

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	Lymphocytes, T cells, Tfh, Th1, Th17, Th2, Thymocytes, Tregs
Biology Area	Adaptive Immunity, Cell Proliferation and Viability, Costimulatory Molecules, Immuno-Oncology, Immunology
Molecular Family	CD Molecules
Antigen References	- Schlossman S, <i>et al.</i> Eds. 1995. Leukocyte Typing V. Oxford University Press. New York. - June CH, <i>et al.</i> 1994. <i>Immunol Today</i>. 15:321-31. - Linsley PS and Ledbetter JA. 1993. <i>Annu Rev Immunol</i>. 11:191-212.

Gene ID [940](#)

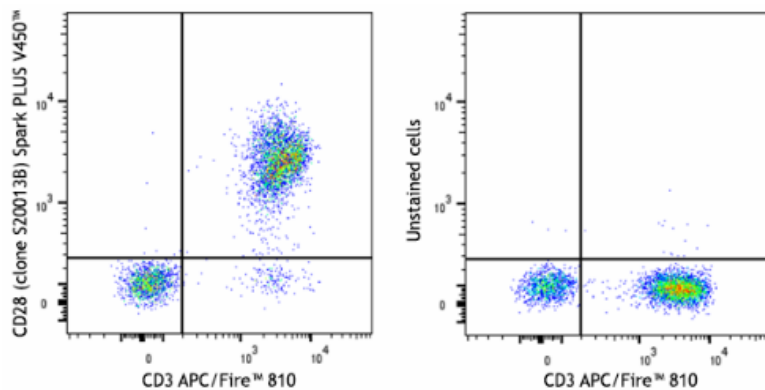
Related Protocols

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

Other Formats

Ultra-LEAF™ Purified anti-human CD28 (Superagonistic), FITC anti-human CD28, PE anti-human CD28, APC anti-human CD28, PE/Cyanine7 anti-human CD28, PerCP/Cyanine5.5 anti-human CD28, Spark Blue™ 550 anti-human CD28 (Flexi-Fluor™), Spark Blue™ 574 anti-human CD28 (Flexi-Fluor™) Antibody, PerCP/Fire™ 806 anti-human CD28, PerCP/Fire™ 780 anti-human CD28 Antibody, Spark PLUS V450™ anti-human CD28

Product Data



Human peripheral blood cells were stained with anti-human CD3 (clone UCHT1) APC/Fire™ 810 and anti-human CD28 (S20013B) Spark PLUS V450™ (left) or stained with anti-human CD3 (clone UCHT1) APC/Fire™ 810 only (right). Data shown are gated on the lymphocyte population.

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