

## GMP PE anti-human CD28 Antibody

<b>Catalog# / Size</b>	260008 / 100 tests
<b>Clone</b>	CD28.2
<b>Workshop</b>	V-CD28.05
<b>Other Names</b>	T44, Tp44
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	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

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<b>Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide, 0.2% (w/v) BSA (origin USA), and a stabilizer.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
<b>Concentration</b>	100 $\mu\text{g}/\text{mL}$
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	FC - Quality tested
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 $\mu\text{L}$ per million cells in 100 $\mu\text{L}$ staining volume or 5 $\mu\text{L}$ per 100 $\mu\text{L}$ of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	The Ultra-LEAF™ Purified antibody (Endotoxin < 0.01 EU/ $\mu\text{g}$ , Azide-Free, 0.2 $\mu\text{m}$ filtered) is recommended for highly sensitive assays.

### Application References

(PubMed link indicates BioLegend citation)

- 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

## Disclaimer

**GMP RUO Flow Cytometry Antibodies.** BioLegend GMP RUO fluorophore conjugated antibodies are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research use only. Not for use in diagnostic or therapeutic procedures. Our processes include:

- Batch-to-batch consistency
- Material traceability
- Documented procedures
- Documented employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- Quality audits per ISO 13485:2016
- QA review of released products

## Antigen Details

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<b>Structure</b>	Ig superfamily, type I transmembrane glycoprotein, homodimer, 44 kD
<b>Distribution</b>	Mature T cells, thymocytes, NK cell subsets, plasma cells, EBV-positive B cells
<b>Function</b>	T cell costimulation
<b>Ligand/Receptor</b>	CD80, CD86
<b>Cell Type</b>	B cells, NK cells, Plasma cells, T cells, Thymocytes, Tregs
<b>Biology Area</b>	Costimulatory Molecules, Immunology
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	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.
<b>Gene ID</b>	<a href="#">940</a>

## Related Protocols

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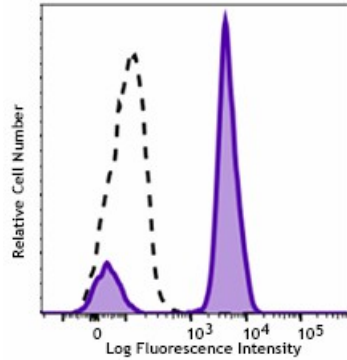
[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

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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

## Product Data



Typical results from human peripheral blood lymphocytes stained either with CD28.2 PE used at 5  $\mu$ L/test (solid histogram) or with an isotype control (dashed histogram).

## Symbols Glossary\*

Symbol	Meaning	Symbol Title	Symbol No.	Symbol	Meaning	Symbol Title	Symbol No.
	Catalog number	Catalogue number	5.1.6		Indicates the need for the user to consult the instructions for use.	Consult instructions for use	5.4.3
	Indicates the temperature limits to which the medical device can be safely exposed.	Temperature limit	5.3.7		Indicates a medical device that needs protection from light sources.	Keep away from sunlight	5.3.2
	Indicates the upper limit of temperature to which the medical device can be safely exposed.	Upper limit of temperature	5.3.6		Indicates the date after which the medical device is not to be used.	Use-by date	5.1.4
	Indicates the medical device manufacturer.	Manufacturer	5.1.1		Indicates the authorized representative in the European Community.	Authorized representative in the European Community	5.1.2
	Indicates the manufacturer's batch code so that the batch or lot can be identified.	Batch code	5.1.5		Indicates a medical device that is intended to be used as an in vitro diagnostic medical device.	<i>In vitro</i> diagnostic medical device	5.5.1

\* Symbol information is from EN ISO 15223-1:2016 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements

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