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**

Product Citations

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

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

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).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587