

Cell-Vive™ GMP Ultra-LEAF™ Purified anti-HU CD28 RecAb SF

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| Catalog# / Size | 377613 / 100 µg 377614 / 1 mg |
| Clone | S20013F.Rec |
| 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. |

Quality Statement BioLegend Cell-Vive™ GMP Ultra-LEAF™ antibodies are manufactured and tested in accordance with USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and Ph. Eur. Chapter 5.2.12 in a dedicated GMP facility compliant with ISO 13485:2016. Specifications and processes include

- Ultra-Low endotoxin level (<0.01 EU/µg)
- Manufactured under serum-free conditions
- Bulks tested negative for mycoplasma and bacterial/fungal growth
- Serum-free hybridomas are negative for the presence of murine virus
- Batch-to-batch consistency
- Vendor qualification
- Raw material traceability and documentation
- Documented procedures and employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- QA review of released products
- Quality audits per ISO 13485:2016

Product Details

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| Reactivity | Human |
| Antibody Type | Recombinant |
| Host Species | Mouse |
| Formulation | 0.1 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. |
| Endotoxin Level | Less than 0.01 EU/µg of the protein (< 0.001 ng/µg of the protein) as determined by the LAL test |
| Preparation | GMP Ultra-LEAF™ (Low Endotoxin, Azide-Free) Recombinant Serum Free antibody purified by affinity chromatography |
| Concentration | 1.0 mg/mL |
| 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 Activ - Verified in house Costim - Reported in the literature |
| 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 ≤ 0.25 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. |

S20013F.Rec antibody can be used at 1 µg/mL of antibody in PBS in combination with 1 µg/mL of anti-human CD3 antibody for T cell activation.

Application Notes

Clone S20013F.Rec antibody can completely block the binding of clone CD28.2 on target. Clone S20013F.Rec can partially block Clone S20013B on target. Clone S20013F.Rec can increase anti-CD3 induced human peripheral T-cell proliferation.

This GMP Ultra-LEAF™ Purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.1 µm filtered) is recommended for highly sensitive assays.

Disclaimer

BioLegend Cell-Vive™ GMP Ultra-LEAF™ antibodies are for research use only. Suitable for *ex vivo* cell processing. Not for injection or diagnostic or therapeutic 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.

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 co-stimulation

Ligand/Receptor

CD80/CD86

Antigen References

1. Schlossman S, et al. Eds. 1995. *Leukocyte Typing V*. Oxford University Press. New York.
2. June CH, et al. 1994. *Immunol Today*. 15:321-31.
3. Linsley PS and Ledbetter JA. 1993. *Annu Rev Immunol*. 11:191-212

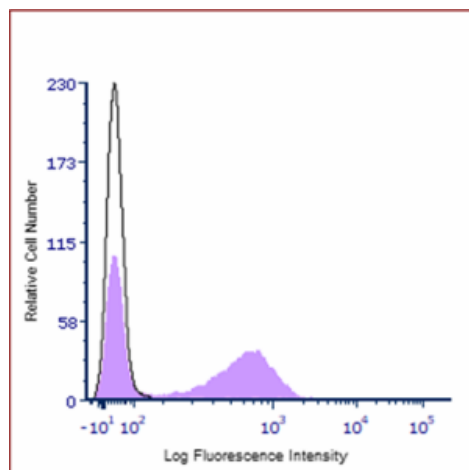
Gene ID

[940](#)

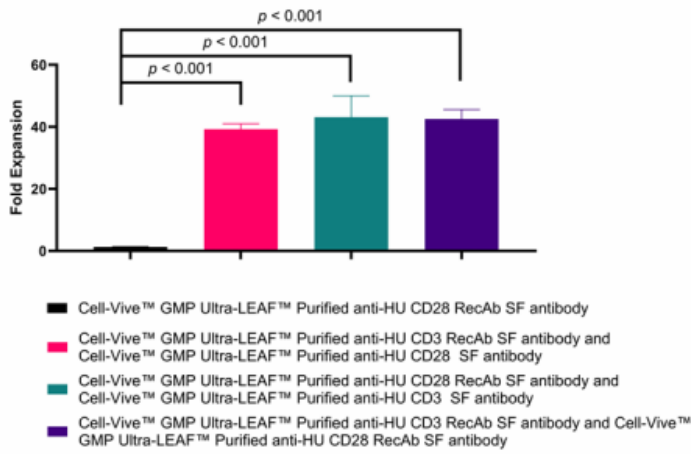
Related Protocols

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

Product Data



Human peripheral blood lymphocytes were stained with Cell-Vive™ GMP Ultra-LEAF™ anti-human CD28 RecAb SF at 0.25 µg per test (Clone S20013F.Rec, cat#: 377614, filled histogram) or an isotype control (Clone MOPC-21, cat#: 400101, open histogram). Both primary stains were followed by an anti-mouse IgG FITC secondary stain (Clone Poly4060, cat#: 406001).



PBMC-derived T cells were activated in the presence of Cell-Vive™ GMP Ultra-LEAF™ anti-human CD28 Recombinant SF antibody (S20013F.Rec, cat#: 377614, black bar) alone or combined with Cell-Vive™ GMP Ultra-LEAF™ anti-human CD3 Recombinant SF antibody (clone OKT3.Rec, cat#: 317368, purple bar). These conditions were compared to both: OKT3.Rec combined with Cell-Vive™ GMP Ultra-LEAF™ Purified anti-human CD28 SF antibody (clone S20013F, cat#: 377605, pink bar) and S20013F.Rec combined with Cell-Vive™ GMP Ultra-LEAF™ Purified anti-human CD3 SF Antibody (clone: OKT3, cat#: 317353, teal bar). T cells were activated by plating 1×10^6 cells on a 12 well plate coated with $1 \mu\text{g}/\text{mL}$ of each antibody in PBS. Cells were cultured for a total of 10 days and fold expansion compared to D0 was calculated at D10. Statistical significance was observed for each antibody pair compared to Cell-Vive™ GMP Ultra-LEAF™ Purified anti-human CD28 RecAb SF antibody alone. Unpaired t-tests confirmed no significant difference in fold expansion between antibody pairs.

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