Brilliant Violet 421™ anti-mouse GM-CSF Antibody

Catalog# / Size	505427 / 50 µg
Clone	MP1-22E9
Regulatory Status	RUO
Other Names	Granulocyte/macrophage-colony stimulating factor, CSF-α, Pluripoietin-α, Eosinophil colony stimulating factor (Eo-CSF), Burst promoting activity (BPA)
Isotype	Rat IgG2a, κ
Description	GM-CSF is a hematopoietic factor that is produced by T cells, macrophages, fibroblasts and endothelial cells. This multifunctional cytokine stimulates progenitor cells of neutrophils, eosinophils, and macrophages. GM-CSF is also a differentiation and activating factor for granulocytic and monocytic cells.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Yeast-expressed, recombinant mouse GM-CSF
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 Brilliant Violet 421™ under optimal conditions.
Concentration	0.2 mg/mL
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	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular 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. Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™. This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.
Excitation Laser	Violet Laser (405 nm)
Application Notes	**ELISA or ELISPOT Capture[1,3-5]:** The purified MP1-22E9 antibody is useful as the capture antibody in a sandwich ELISA or ELISPOT assay, when used in conjunction with the biotinylated MP1-31G6 antibody (Cat. No. 505502) as the detecting antibody. The LEAF™ purified antibody is suggested for ELISPOT capture. **Flow Cytometry[8]:** The fluorochrome-labeled MP1-22E9 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify GM-CSF -producing cells within mixed cell populations.

Neutralization[2-4]: The MP1-22E9 antibody can neutralize the bioactivity of natural or recombinant GM-CSF. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for *in vivo* and *in vitro* neutralization (Cat. No. 505408).
Additional reported applications (for the relevant formats) include: immunohistochemical staining of paraformaldehyde-fixed, saponin-treated frozen tissue sections[1,6,7], and immunocytochemistry[8].

Application References

(PubMed link indicates BioLegend citation)

1. Sander B, *et al.* 1993. *J. Immunol. Methods* 166:201.
2. Suda T, *et al.* 1990. *Cell. Immunol.* 129:228.
3. Nozaki S, *et al.* 1991. *J. Invest. Dermatol.* 97:10.
4. Abrams JS, *et al.* 1992. *Immunol. Rev.* 127:5.
5. Abrams JS. 2001. *Curr. Protoc. Immunol.* Unit 6.20.
6. Sander B, *et al.* 1991. *Immunol. Rev.* 119:65.
7. Andersson U, *et al.* 1999. *Detection and quantification of gene expression.* New York:Springer-Verlag.
8. Larkin J, *et al.* 2006. *J. Immunol.* 177:268.

RRID AB_3662370 (BioLegend Cat. No. 505427)

Antigen Details

Structure	Cytokine; 22 kD (Mammalian)
Bioactivity	Growth/development granulocyte/macrophage progenitors; differentiates myeloblasts/monoblasts; synergizes with Epo proliferation of erythroid/megakaryocytic progenitors
Cell Sources	T cells, monocytes/macrophages, fibroblasts, endothelial cells, mast cells
Cell Targets	Granulocyte/macrophage/erythroid/megakaryocytic progenitors, myeloblasts, monoblasts
Receptors	Heterodimer GM-CSFR α subunit (CDw116); β-subunit (CDw131) in common with IL-3R, IL-5R
Biology Area	Cell Biology, Stem Cells
Molecular Family	Cytokines/Chemokines, Growth Factors
Antigen References	1. Fitzgerald, K., *et al.* Eds. 2001. The Cytokine FactsBook. Academic Press, San Diego. 2. Demetri, G., *et al.* 1991. *Blood* 78:2791. 3. Fan, D., *et al.* 1991. *In vivo* 5:571. 4. Negrin, R., *et al.* 1992. *Adv. Pharmacol.* 23:263.
Regulation	Synergistic with IL-1, IL-3, G-CSF; E21R competitive antagonist for receptor binding; stored in ECM with heparan sulfate proteoglycans
Gene ID	12981

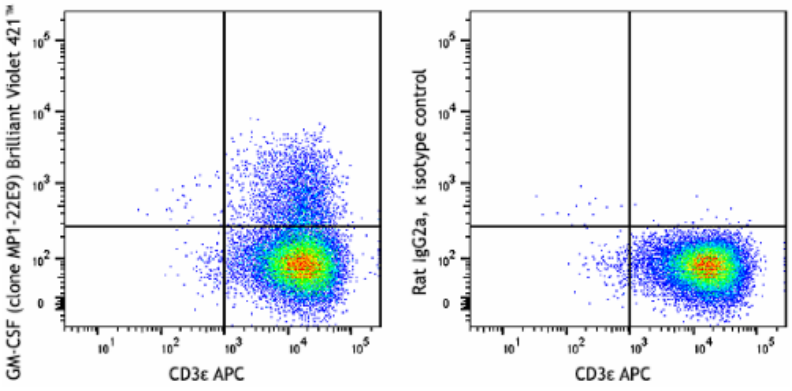
Related Protocols

- Intracellular Flow Cytometry Staining Protocol

Other Formats

FITC anti-mouse GM-CSF, PE anti-mouse GM-CSF, Purified anti-mouse GM-CSF, PerCP/Cyanine5.5 anti-mouse GM-CSF, APC anti-mouse GM-CSF, PE/Cyanine7 anti-mouse GM-CSF, Ultra-LEAF™ Purified anti-mouse GM-CSF, PE/Dazzle™ 594 anti-mouse GM-CSF, APC/Fire™ 750 anti-mouse GM-CSF, Pacific Blue™ anti-mouse GM-CSF, Brilliant Violet 421™ anti-mouse GM-CSF

Product Data



PMA+ ionomycin-stimulated Th2-polarized BALB/c mouse splenocytes were surface stained with anti-mouse CD3ε (clone 145-2C11) APC. Cells were fixed, permeabilized, and intracellularly stained with anti-mouse GM-CSF (clone MP1-22E9) Brilliant Violet 421™ (left) or rat IgG2a, κ Brilliant Violet 421™ isotype control (right)

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms) ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

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