Brilliant Violet 421™ anti-human IFN-γ Antibody

Catalog# / Size	502531 / 25 tests 502532 / 100 tests
Clone	4S.B3
Regulatory Status	RUO
Other Names	Interferon-γ, Immune interferon, Type II interferon, T cell interferon, Macrophage-activating factor (MAF), IFN-g, IFN-gamma
Isotype	Mouse IgG1, κ
Description	Interferon-γ is a potent multifunctional cytokine which is secreted primarily by activated NK cells and T cells. Originally characterized based on anti-viral activities, IFN-γ also exerts anti-proliferative, immunoregulatory, and proinflammatory activities. IFN-γ can upregulate MHC class I and II antigen expression by antigen-presenting cells.

Product Details

Verified Reactivity	Human
Reported Reactivity	Chimpanzee, Baboon, Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Partially purified, native human IFN-γ
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	Lot-specific (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, 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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. 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 Detection[5]:** The biotinylated 4S.B3 antibody is useful as a detection antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with purified NIB42 antibody (Cat. No. 502402/502404) or purified MD-1 antibody (Cat. No. 507502/507513) as the capture antibody. **Flow Cytometry[3,4,6-8]:** The fluorochrome-labeled 4S.B3 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify IFN-γ -producing cells within

mixed cell populations.
Additional reported applications (for the relevant formats) include: neutralization[1,2], Western blotting, immunohistochemical staining of paraformaldehyde-fixed, saponin-treated tissue sections, and immunocytochemistry. The 4S.B3 antibody can neutralize the bioactivity of natural or recombinant IFN-γ.
Note: For testing human IFN-γ in serum or plasma, BioLegend's ELISA MAX™ Sets (Cat. No. 430101 to 430106) are specially developed and recommended.

Application References

(PubMed link indicates BioLegend citation)

1. Meager A, *et al.* 1984. *J. Interferon Res.* 4:619. (Neut)
2. Meager A, 1987. *Lymphokines and Interferons:A Practical Approach*. IRL Press Ltd, Oxford, p. 105. (Neut)
3. Sester M, *et al.* 2002. *J. Virol.* 76:3748. (ICFC)
4. Infante-Duarte C, *et al.* 2000 *J. Immunol.* 165:6107. (ICFC)
5. Goodier M, *et al.* 2000. *J. Immunol.* 165:139. (ELISA)
6. Chen H, *et al.* 2005. *J. Immunol.* 175:591. (ICFC)
7. Smeltz RB, 2007. *J. Immunol.* 178:4786. (ICFC)
8. Iwamoto S, *et al.* 2007. *J. Immunol.* 179:1449. (ICFC) PubMed
9. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (ICFC)

Product Citations

1. Liu Y, *et al.* 2017. Oncogene. 10.1038/onc.2017.209. PubMed
2. Agelidis A, *et al.* 2017. Cell Rep. 10.1016/j.celrep.2017.06.041. PubMed
3. Felices M, *et al.* 2018. JCI Insight. 3. PubMed
4. Chalan P, *et al.* 2016. J Rheumatol. 43: 1008 - 1016. PubMed
5. Siedlik J, *et al.* 2017. J Immunol Methods. 10.4049/jimmunol.1700003. PubMed
6. Langenberg MCC, *et al.* 2020. Nat Med. 26:326. PubMed
7. Wu B, *et al.* 2020. Cell Metabolism. 32(6):967-980.e5. PubMed

RRID

AB_10900083 (BioLegend Cat. No. 502531)
AB_2561398 (BioLegend Cat. No. 502532)

Antigen Details

Structure	Cytokine; dimer; 20-25 kD (Mammalian)
Bioactivity	Antiviral/antiparasitic activities; inhibits proliferation; enhances MHC class I and II expression on APC
Cell Sources	$CD8^+$ and $CD4^+$ T cells, NK cells
Cell Targets	T cells, B cells, macrophages, NK cells, endothelial cells, fibroblasts
Receptors	IFN-γRα (CDw119) dimerized with IFN-γRβ (AF-1)
Cell Type	Tregs
Biology Area	Cell Biology, Immunology, Neuroinflammation, Neuroscience
Molecular Family	Cytokines/Chemokines
Antigen References	1. Fitzgerald K, *et al.* Eds. 2001. The Cytokine FactsBook. Academic Press, San Diego. 2. De Maeyer E, *et al.* 1992. *Curr. Opin. Immunol.* 4:321. 3. Farrar M, *et al.* 1993. *Annu. Rev. Immunol.* 11:571. 4. Gray P, *et al.* 1987. *Lymphokines* 13:151.
Regulation	Upregulated by IL-2, FGF-basic, EGF; downregulated by vitamin D3 or DMN; labile at pH2
Gene ID	3458

Related Protocols

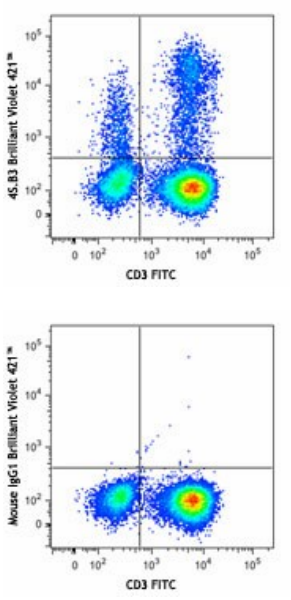
Intracellular Cytokine Staining Protocol - Video

Intracellular Flow Cytometry Staining Protocol

Other Formats

PE anti-human IFN-γ, APC anti-human IFN-γ, FITC anti-human IFN-γ, Biotin anti-human IFN-γ, Purified anti-human IFN-γ, Alexa Fluor® 488 anti-human IFN-γ, Alexa Fluor® 647 anti-human IFN-γ, Alexa Fluor® 700 anti-human IFN-γ, Pacific Blue™ anti-human IFN-γ, PerCP/Cyanine5.5 anti-human IFN-γ, APC/Cyanine7 anti-human IFN-γ, PE/Cyanine7 anti-human IFN-γ, Brilliant Violet 421™ anti-human IFN-γ, Brilliant Violet 570™ anti-human IFN-γ, Brilliant Violet 605™ anti-human IFN-γ, Brilliant Violet 650™ anti-human IFN-γ, Brilliant Violet 711™ anti-human IFN-γ, Brilliant Violet 785™ anti-human IFN-γ, Brilliant Violet 510™ anti-human IFN-γ, PE/Dazzle™ 594 anti-human IFN-γ, APC/Fire™ 750 anti-human IFN-γ, PerCP anti-human IFN-γ, Brilliant Violet 750™ anti-human IFN-γ, KIRAVIA Blue 520™ anti-human IFN-γ Antibody, Spark NIR™ 685 anti-human IFN-γ Antibody

Product Data



Human peripheral blood lymphocytes were stimulated with PMA + Ionomycin for 6 hours (in the presence of monensin), surface stained with CD3 FITC, fixed, permeabilized, and then stained with IFN-γ (clone 4S.B3) Brilliant Violet 421™ (top) or mouse IgG1, κ Brilliant Violet 421™ isotype control (bottom).

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