

Alexa Fluor[®] 700 anti-human IFN- γ Antibody

Catalog# / Size	502519 / 25 μ g 502520 / 100 μ g
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.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor [®] 700 under optimal conditions.
Concentration	0.5 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	<p>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 ≤ 0.5 μg per million cells in 100 μl volume. It is highly recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor[®] 700 has a maximum emission of 719 nm when it is excited at 633 nm / 635 nm. Prior to using Alexa Fluor[®] 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor[®] and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Red Laser (633 nm)
Application Notes	<p>ELISA or ELISPOT Detection⁵: 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.</p> <p>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.</p> <p>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</p>

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)
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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. Dhariwala MO, *et al.* 2020. *Cell Rep Med.* 1:100132. [PubMed](#)
2. Kritikou J, *et al.* 2016. *Sci Rep.* 6:30636. [PubMed](#)
3. Braun J, *et al.* 2020. *Nature.* 587:270. [PubMed](#)
4. Arunachalam PS, *et al.* 2021. *Nature.* 596:410. [PubMed](#)
5. Perumal D, *et al.* 2020. *Clin Cancer Res.* 26:450. [PubMed](#)
6. James E, *et al.* 2016. *PLoS Pathog.* 12: 1005375. [PubMed](#)
7. Rodda LB, *et al.* 2020. *Cell.* 184(1):169-183.e17. [PubMed](#)
8. Gruber CN, *et al.* 2020. *Immunity.* 53(3):672-684. [PubMed](#)
9. Chow I, *et al.* 2014. *PLoS One.* 9:112882. [PubMed](#)
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11. Riese P, *et al.* 2022. *Nat Commun.* 13:6894. [PubMed](#)
12. Clayton KL, *et al.* 2021. *Cell Host Microbe.* 29(3):435-447.e9. [PubMed](#)
13. Fernandez IZ, *et al.* 2019. *J Exp Med.* 216:1255. [PubMed](#)
14. Carrion B, *et al.* 2021. *Neurol Neuroimmunol Neuroinflamm.* 8:. [PubMed](#)

RRID

AB_528920 (BioLegend Cat. No. 502519)
AB_528921 (BioLegend Cat. No. 502520)

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- γ R α (CDw119) dimerized with IFN- γ R β (AF-1)
Cell Type	Tregs
Biology Area	Cell Biology, Immunology, Neuroinflammation, Neuroscience
Molecular Family	Cytokines/Chemokines
Antigen References	<ol style="list-style-type: none">1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> Academic Press, San Diego.2. De Maeyer E, <i>et al.</i> 1992. <i>Curr. Opin. Immunol.</i> 4:321.3. Farrar M, <i>et al.</i> 1993. <i>Annu. Rev. Immunol.</i> 11:571.4. Gray P, <i>et al.</i> 1987. <i>Lymphokines</i> 13:151.
Regulation	Upregulated by IL-2, FGF-basic, EGF; downregulated by vitamin D3 or DMN; labile at pH2
Gene ID	3458

Related Protocols

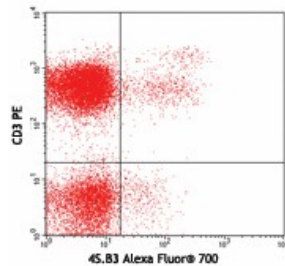
[Surface and Intracellular Cytokine Staining for Flow Cytometry - Video](#)

[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



PMA+ionomycin-stimulated (5 hours)
human PBMCs surface stained with CD3
PE and intracellular stained with 4S.B3
Alexa Fluor® 700

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