

## APC/Cyanine7 anti-human IFN- $\gamma$ Antibody

<b>Catalog# / Size</b>	502529 / 25 tests 502530 / 100 tests
<b>Clone</b>	4S.B3
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interferon- $\gamma$ , Immune interferon, Type II interferon, T cell interferon, Macrophage-activating factor (MAF), IFN-g, IFN-gamma
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	Interferon- $\gamma$ is a potent multifunctional cytokine which is secreted primarily by activated NK cells and T cells. Originally characterized based on anti-viral activities, IFN- $\gamma$ also exerts anti-proliferative, immunoregulatory, and proinflammatory activities. IFN- $\gamma$ can upregulate MHC class I and II antigen expression by antigen-presenting cells.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Chimpanzee, Baboon, Cynomolgus, Rhesus
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Partially purified, native human IFN- $\gamma$
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with APC/Cyanine7 under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">intracellular immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 $\mu$ l per million cells in 100 $\mu$ l staining volume or 5 $\mu$ l per 100 $\mu$ l of whole blood.
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	<p><b>ELISA or ELISPOT Detection</b><sup>5</sup>: 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><b>Flow Cytometry</b><sup>3,4,6-8</sup>: The fluorochrome-labeled 4S.B3 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify IFN-<math>\gamma</math>-producing cells within mixed cell populations.</p> <p><b>Additional reported applications (for the relevant formats) include</b>: neutralization<sup>1,2</sup>, 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-<math>\gamma</math>.</p> <p><b>Note</b>: For testing human IFN-<math>\gamma</math> in serum or plasma, BioLegend's ELISA Max™ Sets (Cat. No. 430101 to 430106) are specially developed and recommended.</p>
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name APC/Cy7 to APC/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our APC/Cyanine7 products. Please contact <a href="#">Technical Service</a> if you have any questions.

## 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. Kurktschiev P, *et al.* 2014. *J Exp Med.* 211:2047. [PubMed](#)
2. Lim D, *et al.* 2014. *J Immunol.* 193:5065. [PubMed](#)
3. Wilgenburg B, *et al.* 2016. *Nat Commun.* 7:11653. [PubMed](#)
4. Tauriainen J, *et al.* 2017. *Sci Rep.* 7:40354. [PubMed](#)
5. Rodda LB, *et al.* 2020. *Cell.* 184(1):169-183.e17. [PubMed](#)
6. Zeng W, *et al.* 2017. *Front Immunol.* 0.806944444. [PubMed](#)
7. Di Blasi D, *et al.* 2019. *Cell Mol Gastroenterol Hepatol.* 0.510416667. [PubMed](#)
8. Lückel C, *et al.* 2019. *Nat Commun.* 4.390277778. [PubMed](#)
9. Eken A, *et al.* 2020. *North Clin Istanb.* 0.513194444. [PubMed](#)
10. Longbrake EE, *et al.* 2018. *Mult Scler.* 24:728. [PubMed](#)
11. Saraiva DP, *et al.* 2018. *Front Immunol.* 2.184027778. [PubMed](#)

## RRID

AB\_10663411 (BioLegend Cat. No. 502529)  
AB\_10663412 (BioLegend Cat. No. 502530)

## Antigen Details

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<b>Structure</b>	Cytokine; dimer; 20-25 kD (Mammalian)
<b>Bioactivity</b>	Antiviral/antiparasitic activities; inhibits proliferation; enhances MHC class I and II expression on APC
<b>Cell Sources</b>	CD8 <sup>+</sup> and CD4 <sup>+</sup> T cells, NK cells
<b>Cell Targets</b>	T cells, B cells, macrophages, NK cells, endothelial cells, fibroblasts
<b>Receptors</b>	IFN-γRα (CDw119) dimerized with IFN-γRβ (AF-1)
<b>Cell Type</b>	Tregs
<b>Biology Area</b>	Cell Biology, Immunology, Neuroinflammation, Neuroscience
<b>Molecular Family</b>	Cytokines/Chemokines
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Fitzgerald K, <i>et al.</i> Eds. 2001. <i>The Cytokine FactsBook.</i> Academic Press, San Diego.</li><li>2. De Maeyer E, <i>et al.</i> 1992. <i>Curr. Opin. Immunol.</i> 4:321.</li><li>3. Farrar M, <i>et al.</i> 1993. <i>Annu. Rev. Immunol.</i> 11:571.</li><li>4. Gray P, <i>et al.</i> 1987. <i>Lymphokines</i> 13:151.</li></ol>
<b>Regulation</b>	Upregulated by IL-2, FGF-basic, EGF; downregulated by vitamin D3 or DMN; labile at pH2
<b>Gene ID</b>	<a href="#">3458</a>

## Related Protocols

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[Intracellular Cytokine Staining Protocol - Video](#)

[Intracellular Flow Cytometry Staining Protocol](#)

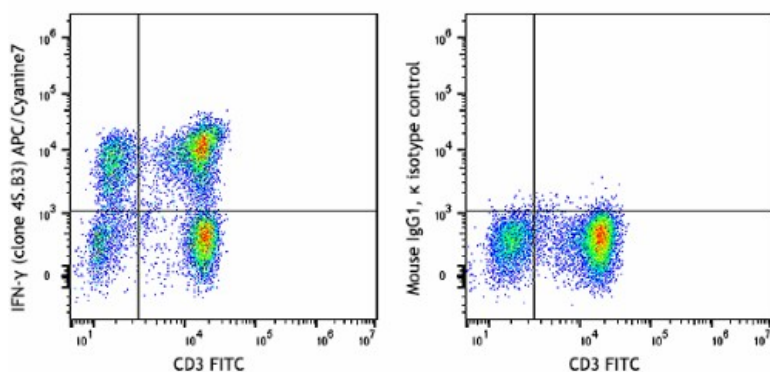
## Other Formats

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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- $\gamma$ , APC/Fire™ 750 anti-human IFN- $\gamma$ , PerCP anti-human IFN- $\gamma$ , Brilliant Violet 750™ anti-human IFN- $\gamma$ , KIRAVIA Blue 520™ anti-human IFN- $\gamma$  Antibody, Spark NIR™ 685 anti-human IFN- $\gamma$  Antibody

## Product Data



PMA + Ionomycin (6 hours) stimulated human PBMCs were surface stained with CD3 FITC then fixed, permeabilized, and intracellularly stained with IFN- $\gamma$  (clone 4S.B3) APC/Cyanine7 (left), or Mouse IgG1,  $\kappa$  APC/Cyanine7 isotype (right). Cells shown gated on lymphocyte population.

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