

## Pacific Blue™ anti-mouse IFN- $\gamma$ Antibody

<b>Catalog# / Size</b>	505817 / 25 $\mu$ g 505818 / 100 $\mu$ g
<b>Clone</b>	XMG1.2
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interferon- $\gamma$ , Immune interferon, Type II interferon, T cell interferon, Macrophage-activating factor (MAF)
<b>Isotype</b>	Rat IgG1, $\kappa$
<b>Description</b>	IFN- $\gamma$ 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>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	<i>E. coli</i> -expressed, recombinant mouse IFN- $\gamma$
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<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 $\leq 1.0 \mu$ g per $10^6$ cells in 100 $\mu$ l volume. It is recommended that the reagent be titrated for optimal performance for each application.

\* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.

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**Excitation Laser** Violet Laser (405 nm)

**Application Notes**

**ELISA<sup>1-4,11,14</sup> or ELISPOT<sup>5</sup> Detection:** The biotinylated XMG1.2 antibody is useful as a detection antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with purified R4-6A2 antibody (Cat. No. 505702/505706) as the capture antibody and recombinant mouse IFN- $\gamma$  (Cat. No. 575309) as the standard.

**ELISA or ELISPOT Capture:** The purified XMG1.2 antibody is useful as a capture antibody for a sandwich ELISA or ELISPOT assay, when used in conjunction with biotinylated R4-6A2 antibody (Cat. No. 505704) as the detection antibody and recombinant mouse IFN- $\gamma$  (Cat. No. 575309) as the standard. The LEAF™ purified antibody is suggested for ELISPOT capture (Cat. No. 505812).

**Flow Cytometry<sup>7,8,12,13,16</sup>:** The fluorochrome-labeled XMG1.2 antibody is useful for intracellular immunofluorescent staining and flow cytometric analysis to identify IFN- $\gamma$ -producing cells within mixed cell populations.

**Neutralization<sup>1-3,9,10</sup>:** The XMG1.2 antibody can neutralize the bioactivity of natural or

recombinant IFN- $\gamma$ . The LEAF™ purified antibody (Endotoxin <0.1 EU/ $\mu$ g, Azide-Free, 0.2  $\mu$ m filtered) is recommended for neutralization of mouse IFN- $\gamma$  bioactivity *in vivo* and *in vitro* (Cat. No. 505812). For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 505834) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/ $\mu$ g).

**Additional reported applications (for the relevant formats) include:** Western blotting, immunohistochemical staining of frozen tissue sections<sup>6,22,23</sup>, and immunocytochemistry.

**Note:** For testing mouse IFN- $\gamma$  in serum, plasma or supernatant, BioLegend's ELISA Max™ Sets (Cat. No. 430801 to 430806) are specially developed and recommended.

## Application References

(PubMed link indicates BioLegend citation)

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2. Sander B, *et al.* 1993. *J. Immunol. Meth.* 166:201. (ELISA, Neut)
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4. Yang X, *et al.* 1993. *J. Immunoassay* 14:129. (ELISA)
5. Klinman D, *et al.* 1994. *Curr. Prot. Immunol.* John Wiley and Sons, New York. Unit 6.19. (ELISPOT)
6. Sander B, *et al.* 1991. *Immunol. Rev.* 119:65. (IHC)
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## Product Citations

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## RRID

AB\_528922 (BioLegend Cat. No. 505817)  
AB\_893526 (BioLegend Cat. No. 505818)

## Antigen Details

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<b>Structure</b>	Cytokine; dimer; 40-80 kD (Mammalian)
<b>Bioactivity</b>	Antiviral/antiparasitic activities; inhibits proliferation; enhances MHC class I and II expression on APCs
<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- $\gamma$ R $\alpha$ (CDw119) dimerized with IFN- $\gamma$ R $\beta$ (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. The Cytokine FactsBook. 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 1- $\alpha$ -25-Dihydroxy vitamin D3, dexamethasone
<b>Gene ID</b>	<a href="#">15978</a>

## Related Protocols

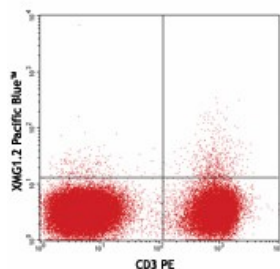
[Surface and Intracellular Cytokine Staining for Flow Cytometry - Video](#)

[Intracellular Flow Cytometry Staining Protocol](#)

## Other Formats

APC anti-mouse IFN- $\gamma$ , Biotin anti-mouse IFN- $\gamma$ , FITC anti-mouse IFN- $\gamma$ , PE anti-mouse IFN- $\gamma$ , Purified anti-mouse IFN- $\gamma$ , Alexa Fluor<sup>®</sup> 488 anti-mouse IFN- $\gamma$ , Alexa Fluor<sup>®</sup> 647 anti-mouse IFN- $\gamma$ , Pacific Blue<sup>™</sup> anti-mouse IFN- $\gamma$ , PerCP/Cyanine5.5 anti-mouse IFN- $\gamma$ , PE/Cyanine7 anti-mouse IFN- $\gamma$ , Brilliant Violet 421<sup>™</sup> anti-mouse IFN- $\gamma$ , Brilliant Violet 650<sup>™</sup> anti-mouse IFN- $\gamma$ , Ultra-LEAF<sup>™</sup> Purified anti-mouse IFN- $\gamma$ , Brilliant Violet 711<sup>™</sup> anti-mouse IFN- $\gamma$ , Brilliant Violet 785<sup>™</sup> anti-mouse IFN- $\gamma$ , Brilliant Violet 605<sup>™</sup> anti-mouse IFN- $\gamma$ , Brilliant Violet 510<sup>™</sup> anti-mouse IFN- $\gamma$ , Purified anti-mouse IFN- $\gamma$  (Maxpar<sup>®</sup> Ready), PE/Dazzle<sup>™</sup> 594 anti-mouse IFN- $\gamma$ , Alexa Fluor<sup>®</sup> 700 anti-mouse IFN- $\gamma$ , APC/Cyanine7 anti-mouse IFN- $\gamma$ , GolnVivo<sup>™</sup> Purified anti-mouse IFN- $\gamma$ , APC/Fire<sup>™</sup> 750 anti-mouse IFN- $\gamma$ , Spark NIR<sup>™</sup> 685 anti-mouse IFN- $\gamma$

## Product Data



PMA and Ionomycin-stimulated (6hrs)  
BALB/c splenocytes stained with XMG1.2  
Pacific Blue<sup>™</sup> and CD3 PE

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