

## Biotin anti-mouse IFN- $\gamma$ Antibody

<b>Catalog# / Size</b>	505704 / 500 $\mu$ g
<b>Clone</b>	R4-6A2
<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>	Rat 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

<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	Partially-purified, native 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 biotin 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. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ELISA Detection</a> , <a href="#">ELISPOT Detection</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">ELISA assay</a> . For use as an ELISA detection antibody, a concentration range of 0.5-2.0 $\mu$ g/ml is recommended. To obtain a linear standard curve, serial dilutions of IFN- $\gamma$ recombinant protein (Cat. No. 575309) are recommended at concentration up to 2000 pg/mL. The final standard range should be determined by the end user. For use as an ELISPOT detection antibody, a concentration range of 1-4 $\mu$ g/ml is recommended. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	<p><b>ELISA Capture<sup>1,4,6,10,11</sup> or ELISPOT Capture<sup>5</sup>:</b> The purified R4-6A2 antibody is useful as the capture antibody in a sandwich ELISA or ELISPOT assay, when used in conjunction with the biotinylated XMG1.2 antibody (Cat. No. 505804) as the detection antibody and recombinant mouse IFN-<math>\gamma</math> (Cat. No. 575309) as the standard. The Ultra-LEAF™ purified antibody is suggested for ELISPOT capture. For ELISPOT Capture, the suggested use of this antibody is 1.0 - 4.0 <math>\mu</math>g/mL.</p> <p><b>ELISA or ELISPOT Detection:</b> The biotinylated R4-6A2 antibody is useful as the detection antibody in a sandwich ELISA or ELISPOT assay, when used in conjunction with the purified XMG1.2 antibody (Cat. Nos. 505802 &amp; 505812) as the capture antibody and recombinant mouse IFN-<math>\gamma</math> (Cat. No. 575309) as the standard.</p> <p><b>Neutralization<sup>1,2,9</sup>:</b> The Ultra-LEAF™ purified antibody (Endotoxin &lt;0.01 EU/<math>\mu</math>g, Azide-Free, 0.2 <math>\mu</math>m filtered) is recommended for neutralization of mouse IFN-<math>\gamma</math> bioactivity <i>in vivo</i> and <i>in vitro</i> (Cat. Nos. 505708 - 505713).</p> <p><b>Additional reported applications (for the relevant formats) include:</b> immunohistochemical staining<sup>3,6,8</sup> of acetone-fixed frozen tissue sections.</p> <p><b>Note:</b> For testing mouse IFN-<math>\gamma</math> in serum, plasma or supernatant, BioLegend's ELISA Max™ Sets (Cat. No. 430801 and 430804) are specially developed and recommended.</p>
<b>Application References</b>	<ol style="list-style-type: none"> <li>Abrams J, <i>et al.</i> 1992. <i>Immunol. Rev.</i> 127:5.</li> <li>Stevenson M, <i>et al.</i> 1990. <i>Infect. Immun.</i> 58:3225.</li> <li>Sander B, <i>et al.</i> 1993. <i>J. Immunol. Meth.</i> 166:201.</li> <li>Yang X, <i>et al.</i> 1993. <i>J. Immunoassay</i> 14:129.</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

5. Klinman D, *et al.* 1994. *Curr. Prot. Immunol.*. John Wiley and Sons, New York. Unit 6.19.
6. Sander B, *et al.* 1991. *Immunol. Rev.* 119:65.
7. Finkelman F, *et al.* 2003. *Curr. Prot. Immunol.* John Wiley & Sons, New York. Unit 6.28.
8. Khanna A, *et al.* 2000. *J. Immunol.* 164:1346.
9. Terrazas LI, *et al.* 2005. *Intl. J. Parasitology.* 35:1349.
10. Dzhagalov I, *et al.* 2007. *J. Immunol.* 178:2113.
11. Xu G, *et al.* 2007. *J. Immunol.* 179:5358.

#### Product Citations

1. Liang D, *et al.* 2018. *Front Immunol.* 8:1801. [PubMed](#)

#### RRID

AB\_315392 (BioLegend Cat. No. 505704)

## 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 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 1-α-25-Dihydroxy vitamin D3, dexamethasone
<b>Gene ID</b>	<a href="#">15978</a>

## Related Protocols

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[Active Protocols: Sandwich ELISA - Video](#)

[Sandwich ELISA Protocol](#)

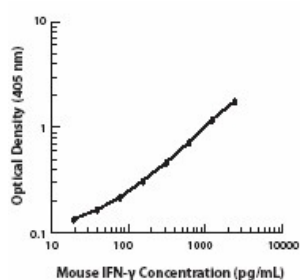
## Other Formats

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Biotin anti-mouse IFN-γ, Purified anti-mouse IFN-γ, Ultra-LEAF™ Purified anti-mouse IFN-γ

## Product Data

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