

## Recombinant Human IFN- $\gamma$ (ELISA Std.)

<b>Catalog# / Size</b>	570209 / 4 pack
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Interferon- $\gamma$ , Immune interferon, Type II interferon, T cell interferon, Macrophage-activating factor (MAF),
<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. Recombinant human IFN- $\gamma$ is a 16.7 kD protein containing 143 amino acids.

### Product Details

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<b>Source</b>	Human IFN- $\gamma$ , Gln 24 - Gln 166 - Accession Number NM_000619, was expressed in <i>E. coli</i> .
<b>Molecular Mass</b>	The 144 amino acid N-terminal methionylated recombinant protein has a predicted molecular mass of 16,907 Da. The DTT-reduced protein and the non-reduced protein migrate at approximately 17 kD by SDS-PAGE.
<b>Purity</b>	Purity is >98% as determined by SDS PAGE, Coomassie stained with Invitrogen SimplyBlue SafeStain.
<b>Formulation</b>	Lyophilized in sterile-filtered PBS, pH 7.2, containing 1% BSA, 0.09% sodium azide, and protease inhibitors.
<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>	Upon receipt, store unopened vials between 2°C and 8°C immediately and use within 12 months from date of receipt. Prior to use, reconstitute the lyophilized powder with 0.2 ml of PBS containing a carrier protein (e.g., 1% BSA, protease free), pH7.4. Re-cap vial, vortex. Allow the reconstituted standard to sit at room temperature for 15 minutes, vortex again to mix completely. The reconstituted standard stock solution can be aliquoted into polypropylene vials and stored at -70°C for up to one month. Do not re-use diluted standards. Use a manual defrost freezer and avoid repeated freeze thaw cycles.
<b>Application</b>	<a href="#">ELISA</a>
<b>Recommended Usage</b>	Each lot of this protein is quality control tested by <a href="#">ELISA assay</a> . For use as an ELISA standard, a standard curve comprised of doubling dilutions from 1000 pg/ml to 8 pg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	This IFN- $\gamma$ protein is useful as a standard for a human IFN- $\gamma$ sandwich ELISA, using unlabeled NIB42 antibody (catalog #502402) or unlabeled MD-1 antibody (catalog #507502) for capture and biotinylated 4S.B3 antibody (catalog #502504) for detection.
<b>Product Citations</b>	1. Luo X, <i>et al.</i> 2020. Front Immunol. 11:623. <a href="#">PubMed</a>

### Antigen Details

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<b>Structure</b>	Cytokine; dimer
<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- $\gamma$ R $\alpha$ (CDw119) dimerized with IFN- $\gamma$ R $\beta$ (AF-1)
<b>Biology Area</b>	Cell Biology, Immunology, Neuroinflammation, Neuroscience, Innate Immunity
<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 vitamin D3 or DMN; labile at pH2
<b>Gene ID</b>	<a href="#">3458</a>

## Related Protocols

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[Sandwich ELISA Protocol](#)

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