

## Product Information

### Anti-Interferon- $\gamma$

produced in goat, affinity isolated antiserum

Catalog Number **I9141**

Synonym: Anti-IFN- $\gamma$

### Product Description

Anti-Interferon- $\gamma$  was produced in goat using recombinant, mouse IFN- $\gamma$ , expressed in *E. coli*, as the immunogen. Affinity isolated antibody is obtained from goat anti-interferon- $\gamma$  antiserum by immunospecific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to mouse interferon- $\gamma$ .

Interferon- $\gamma$  exerts a variety of biological effects including antiviral activity,<sup>1</sup> inhibition of cell or tumor growth<sup>2,3</sup> and promotion of differentiation of B cells into immunoglobulin-producing cells.<sup>4,5</sup> In addition to antiviral activity, human IFN- $\gamma$  is a potent modulator of immune response and modifies cellular processes.<sup>6</sup> IFN- $\gamma$  is classified as immune interferon.<sup>6</sup> IFN- $\gamma$  functions as an activating factor to prime macrophages (MAF) for non-specific tumoricidal activity<sup>7</sup> and activates monocytes to exert enhanced cytotoxicity against tumor cells.<sup>8</sup> IFN- $\gamma$  acts a signal for major histocompatibility antigen expression.<sup>9</sup> IFN- $\gamma$  boosts cytotoxicity of natural killer cells and stimulates T cell cytotoxicity. The species specificity of IFN- $\gamma$  resides in the interaction of IFN- $\gamma$  with its receptor.<sup>10</sup> Human IFN- $\gamma$  does not bind specifically to mouse, hamster or bovine cells.<sup>10</sup>

### Reagent

Supplied as a lyophilized powder from 0.2  $\mu$ m-filtered phosphate buffered saline (pH 7.4) with 5% trehalose.

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage

Prior to reconstitution, store at  $-20$  °C. Reconstituted product may be stored  $2-8$  °C for a maximum of one month. For prolonged storage, freeze in working aliquots at  $-20$  °C. Avoid repeated freezing and thawing.

### Reconstitution and Use

To one vial of lyophilized powder, add 1 ml of 0.2  $\mu$ m-filtered PBS to produce a 100  $\mu$ g/ml stock solution of Anti-IFN- $\gamma$ . If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

### Product Profile

**Neutralization:** Anti-IFN- $\gamma$  is tested for its ability to neutralize the biological activity of rmlFN- $\gamma$  on L929 cells. The ND<sub>50</sub> of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of rmlFN- $\gamma$  that is present at a concentration just high enough to elicit a maximum response. In this bioassay, rmlFN- $\gamma$  was mixed with various dilutions of the antibody and the antigen-antibody mixture was added to confluent cultures of L929 cells in a 96-well plate. The assay mixture was incubated at 37 °C for 20-24 hours in a humidified CO<sub>2</sub> incubator. After incubation, the medium was aspirated from all wells and encephalomyocarditis virus (EMCV) was added to each test well. The 96-well plate was incubated for an additional 20-24 hours. The cells were fixed and examined for cytopathic effect by measurement of optical densities in a microplate reader at 540 nm.

**Indirect Immunoblotting:** 0.1-0.2  $\mu$ g/ml antibody detects 2 ng/lane of recombinant, mouse IFN- $\gamma$  under reducing and non-reducing conditions.

The antibody may also be used in ELISA. By ELISA and immunoblotting, the antibody shows <1% cross-reactivity with recombinant human IFN- $\gamma$ . In addition, by direct ELISA, the antibody does not cross-react with other cytokines tested.\*

## References

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ADM,PHC 06/11-1

\* rhANG, rhAnnexin V, rhAR, rhB7-1, rhB7-2, rmB7-2, rhBTC, rh $\beta$ -NGF, rhBDNF, rmC10, rhCD4, rhCD8, rhCD28, rhCNTF, rrCNTF, rhEGF, rhENA-78, rhEPO, rhFGFa, rhFGFb, rhFGF-4, rhFGF-5, rhFGF-6, rhFGF-7, rhFGF-9, rhG-CSF, rhG-CSF R $\alpha$ , rmG-CSF, rhGDNF, rhGM-CSF, rhGM-CSF R $\alpha$ , rmGM-CSF, rhGRO(, rhGRO $\alpha$ , rhGRO $\beta$ , rhHB-EGF, rhHRG- $\alpha$ , rhHGF, rhI-309, rhIGF-I, rhIGF-I R, rhIGF-II, rhIL-1 $\alpha$ , rhIL-1 RI, rhIL-1 RII, rmIL-1 $\alpha$ , rhIL-1 $\beta$ , rmIL-1 $\beta$ , rrIL-1 $\beta$ , rhIL-1 ra, rmIL-1 ra, rhIL-2, rhIL-2 sR $\alpha$ , rhIL-2 sR $\beta$ , rhIL-2 sR(, rmIL-2, rhIL-3, rhIL-3 sR $\alpha$ , rmIL-3, rhIL-4, rhIL-4 sR, rmIL-4, rhIL-5, rhIL-5 sR $\alpha$ , rhIL-5 sR $\beta$ , rmIL-5, rhIL-6, rhIL-6 sR, rmIL-6, rhIL-7, rhIL-7 R, rmIL-7, rhIL-8, rhIL-9, rmIL-9, rhIL-10, rhIL-10 sR, rmIL-10, rhIL-10 sR, rhIL-11, rhIL-12, rmIL-12, rhIL-13, rmIL-13, rhIL-15, rhIP-10, rhJAK-1, rmJAK-1, rmJAK-2, rmJE, rmKC, rhLIF, rhLIF R, rmLIF, rhM-CSF, rmM-CSF, rhMCP-1, rhMCP-1 R, rhMCP-2, rhMCP-3, rhMidkine, rhMIF, rhMIP-1 $\alpha$ , rmMIP-1 $\alpha$ , rhMIP-1 $\beta$ , rmMIP-1 $\beta$ , rmMIP-2, rhNT-3, rhNT-4, rhOSM, rhPD-ECGF, hPDGF, pPDGF, rhPDGF-AA, rhPDGF-AB, rhPDGF-BB, rhPDGF R $\alpha$ , rhPIGF, rhPTN, rhRANTES, rhSCF, rmSCF, rhsgp130, rhSLPI, rhSTAT-1, rmSTAT-3, rmSTAT-4, hTfR, rhTGF- $\alpha$ , rhTGF- $\beta$ 1, rhTGF- $\beta$ 2, rhTGF- $\beta$ 3, raTGF- $\beta$ 5, rhLAP (TGF- $\beta$ 1), rhLatent TGF- $\beta$ 1, rhTGF- $\beta$  sRII, rhTGF- $\beta$  sRIII, rhTNF- $\alpha$ , rmTNF- $\alpha$ , rrTNF- $\alpha$ , rhTNF- $\beta$ , rhsTNF RI, rhsTNF RII, rhTPO, rmTPO, rhVEGF, rmVEGF.