

## Product Information

### Monoclonal Anti-Mouse Interferon- $\gamma$ (IFN- $\gamma$ )

Clone 37895, purified rat immunoglobulin

Product Number **I1142**

#### Product Description

Monoclonal Anti-Mouse Interferon- $\gamma$  (IFN- $\gamma$ ) (rat IgG2a isotype) is purified from a mouse hybridoma elicited from an immunized rat. Recombinant mouse IFN- $\gamma$  (rmIFN- $\gamma$ ), expressed in *E. coli*, was used as the immunogen. The antibody is purified by Protein G affinity chromatography.

The antibody may be used in immunoblotting and flow cytometry. By flow cytometry and immunoblotting, the antibody shows no cross-reactivity with recombinant human IFN- $\gamma$  and recombinant rat IFN- $\gamma$ .

Interferon- $\gamma$  (IFN- $\gamma$ ) 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 an 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 as 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>

#### Reagents

Monoclonal Anti-IFN- $\gamma$  is provided lyophilized from phosphate buffered saline (PBS), pH 7.4, to which no preservatives are added.

#### Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2  $\mu$ m-filtered PBS and 5% trehalose to produce a 500  $\mu$ g/ml stock solution of Monoclonal Anti-Mouse IFN- $\gamma$ . If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

#### Storage/Stability

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

#### Product Profile

Monoclonal Anti-Mouse IFN- $\gamma$  is tested for its ability to neutralize the biological activity of rmIFN- $\gamma$  on the mouse L-929 cell line. 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 rmIFN- $\gamma$  that is present at a concentration just high enough to elicit a maximum response.

In this bioassay, rmIFN- $\gamma$  was mixed with various dilutions of the antibody and the antigen-antibody mixture was added to confluent cultures of L-929 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.

#### References

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