

**MONOCLONAL ANTI-HUMAN INTERFERON- $\gamma$   
RECEPTOR CLONE GIR-208  
IgG Fraction of Mouse Ascites Fluid**

Product No. **I6521**

Monoclonal Anti-Human IFN- $\gamma$  Receptor (IgG1 isotype) is purified from a mouse hybridoma produced by the fusion of mouse myeloma cells and splenocytes from immunized BALB/c mice. Purified human interferon- $\gamma$  receptors obtained from human placenta were used as immunogen.<sup>1</sup> The antibody is purified by Protein G affinity chromatography. Monoclonal Anti-IFN- $\gamma$  Receptor is provided as a liquid in phosphate buffered saline, to which no preservatives are added.

**Description**

Interferon- $\gamma$  (IFN- $\gamma$ ) exerts a variety of biological effects including antiviral activity,<sup>2</sup> inhibition of cell or tumor growth<sup>3,4</sup> and promotion of differentiation of B cells into immunoglobulin-producing cells.<sup>5,6</sup> In addition to antiviral activity, human IFN- $\gamma$  is a potent modulator of immune response and modifies cellular processes.<sup>7</sup> IFN- $\gamma$  is classified as immune interferon.<sup>7</sup> IFN- $\gamma$  functions as an activating factor to prime macrophages (MAF) for non-specific tumoricidal activity<sup>8</sup> and activates monocytes to exert enhanced cytotoxicity against tumor cells.<sup>9</sup> IFN- $\gamma$  acts as a signal for major histocompatibility antigen expression.<sup>10</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>11</sup> Human IFN- $\gamma$  does not bind specifically to mouse, hamster or bovine cells.<sup>11</sup> The Interferon- $\gamma$  receptor is a complex of a high affinity IFN $\gamma$  binding chain (CDw119) and a second accessory protein required for signal transduction.<sup>12</sup> The interferon binding subunit is a single chain transmembrane glycoprotein with a disulphide bond which is essential for function.<sup>12</sup> The IFN- $\gamma$  receptor is a member of the class II cytokine receptor family which also includes the IFN- $\alpha/\beta$  receptor and the IL-10 receptor.

**Performance**

Monoclonal Anti-Human IFN- $\gamma$  Receptor is tested for its ability to neutralize the biological activity of recombinant human IFN- $\gamma$  on WiDr cells,<sup>10</sup> by blocking the binding of IFN- $\gamma$  to cell surface receptors on human WiDr 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 recombinant human IFN- $\gamma$  which is present at a concentration just high enough to elicit a maximum

response. In this bioassay, recombinant human IFN- $\gamma$  was mixed with various dilutions of the antibody and the antigen-antibody mixture was added to confluent cultures of WiDr cells in a 96-well plate. The assay mixture was incubated at 37°C in a humidified CO<sub>2</sub> incubator. After incubation, MTT was added to the 96-well plate and the absorbance read at 540 nm.

**Product Information**

Mass/vial: 0.2 mg  
 Immunogen: Purified human interferon- $\gamma$  receptors obtained from human placenta.  
 Purity:  $\geq$  90% by SDS-PAGE  
 Isotype: Mouse IgG1  
 Formulation: 0.2  $\mu$ m-filtered PBS without additives.  
 Bioactivity: ND<sub>50</sub> = 0.4-8.0  $\mu$ g/ml  
 Sterility: 0.2  $\mu$ m-filtered  
 Endotoxin:  $\leq$ 0.2 ng/vial by LAL method

**Reconstitution and Use**

Dilute the contents of the vial with 0.2  $\mu$ m-filtered PBS containing 0.1% BSA or cell culture medium containing 10% serum. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

**Storage**

Store undiluted product at -70°C for a maximum of 6 months or at 2-8°C for a maximum of 4 weeks. For prolonged storage, freeze in working aliquots at -70°C. Avoid repeated freezing and thawing.

**References**

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3/98

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