



Product Information

MONOCLONAL ANTI-HUMAN IgG1

Mouse Ascites fluid

Clone 8c/6-39

Product Number **I 2513**

Product Description

Monoclonal Anti-Human IgG1 (mouse IgG2a isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. The Fc fragment of a human IgG1 myeloma protein was used as the immunogen. The isotype is determined by double diffusion assay using immunoglobulin and subclass specific antisera.

Human IgG consists of four subclasses (1-4) that can be recognized by antigen differences in their heavy chains. They constitute approximately 65, 30, 5 and 4% of the total IgG respectively. Each subclass has different biological and physiochemical properties. The IgG subclass may be preferentially produced in response to different antigens. For instance, anti-polysaccharide responses are mainly of the IgG2 subclass, while protein antigens give rise to IgG1 and IgG3 antibodies. Lipopolysaccharides stimulate an IgG2 response in PBL's and an IgG1 response in the spleen. Human IgG1 is the predominant subclass of *in vivo* and *in vitro* produced anti-tetanus toxoid antibodies. Only IgG1 and IgG3 are capable of adherence to mononuclear phagocytes. Serum IgG subclass deficiencies have been recorded for different patient groups. For example, IgG2 and IgG4 deficiency is associated with IgA deficiency as found in patients of ataxia telangiectasia. Low IgG2 levels were found in patients with SLE and juvenile diabetes melitus. A disproportionate elevation of IgG1 has also been found in the cerebral spinal fluid of patients with multiple sclerosis. Examination of the distribution pattern of IgG subclasses in different types of diseases may provide insight into the immunological processes involved and may assist in the diagnosis of various disorders.

Monoclonal Anti-Human IgG1 is specific for an epitope expressed in the Fc region of the human IgG1 antibody. The antibody does not react with human IgG2, IgG3, or

IgG4. This clone (also known as the HP6019 clone) has been established as a useful human IgG1 specificity standard by the WHO/IUIS.

The antibody may be used for the following applications:

1. Identification of human IgG1 subclass by means of various immunoassays.
2. Direct hemagglutination (HA) and hemagglutination inhibition (HAI) assays, enzyme linked immunosorbent assay (ELISA), immunofluorometric assay (IFMA) and detection of cytoplasmic IgG.

Reagents

The antibody is provided as ascites fluid with 0.1% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 0-5 °C. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is **not** recommended. Storage in "frost-free" freezers is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

In order to obtain best results it is recommended that each individual user determine their optimal working dilution by titration assay.

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