Technical Bulletin

Anti-Human IgG1−FITC Antibody, Mouse Monoclonal

Clone 8c/6-39, purified from hybridoma cell culture

F0767

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 myeloma human IgG was used as the immunogen. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Cat. No. ISO2. The immunoglobulin fraction of mouse ascites fluid is conjugated to fluorescein isothiocyanate (FITC).

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 the WHO/IUIS. The product may be used for the identification of the human IgG1 subclass by means of various immunoassays.

Human IgG consist of four subclasses (1-4) that can be recognized by antigenic 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. Lipopolysaccahrides 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 telangiextasia.

Low IgG2 levels were found in patients with SLE and juvenile diabetes mellitus. 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.

Reagent

Supplied as a solution in 0.01 M phosphate buffer, pH 8.0, containing 1% inactivated BSA and 15 mM sodium azide as a preservative.

Antibody concentration: 2-4 mg/mL

F/P Molar Ratio: 3-8

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.

Storage

For continuous use, store at 2-8 °C. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

Fluorescent Dot Immunobinding Assay (F-DIBA):

a minimum working dilution of 1:64 was determined using a 4-8 microgram dot of human IgG1.

Particle Immunofluorescence Assay (P-IFMA):

a minimum working dilution of 1:32 was determined using a 50 µL suspension of human IgG-agarose

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