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ProductInformation

MONOCLONAL ANTI-HUMAN IgG1 (Fab SPECIFIC)
Clone SG-16 Mouse Ascites Fluid

Product No. **I 5385**

Product Description

Monoclonal Anti-Human IgG1 (mouse IgG1isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified human IgG was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Human IgG consist 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. Lipopolysaccahrides stimulates 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 capapble 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 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 immunogloical processes involved and may assist in the diagnosis of various disorders.

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.

Specificity

Monoclonal Anti-Human IgG1 is immunospecific for human IgG1 as determined by ELISA. The antibody reacts with the Fab fragment of IgG. This clone has been reported to be allotype G1m(f) specific.[1] No reactivity is observed with human IgG2, IgG3, IgG4, Fc fragment of IgG, IgM or light chains. Monoclonal Anti-Human IgG1 (SG-16 clone) has been established as a useful human IgG1 specificity standard by the WHO/IUIS.

Working Dilution

A minimum working dilution of 1:5,000 is determined by an ELISA using human IgG1 myeloma proteins at 5 μg/ml as the coating solution.

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

Uses

Monoclonal anti-Human IgG1 may be used for the identification of human IgG1 subclass by means of various immunoassays. It can be used in direct hemagglutination (HA) and hemagglutination inhibition (HAI) aasays, enzyme linked immunosorbent assay (ELISA), immunofluorometric assay (IFMA) and detection of cytoplasminc IgG.

Storage

For continuous use, store at 2-8 °C up to one month. 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.

Reference

1. Jefferies, R., et al., Immunology Letters, **10**, 223 (1985).

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