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Product Information

Anti-Human IgG3 antibody, Mouse monoclonal
clone HP-6050, purified from hybridoma cell culture

Product Number **SAB4200759**

Product Description

Anti-Human IgG3 antibody, Mouse monoclonal, (mouse IgG1 isotype) is derived from the HP-6050 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a BALB/c mouse immunized with purified human IgG3 myeloma proteins covalently coupled to polyaminostyrene (PAS) microbeads.[1] The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Human IgG3 specifically recognizes Human IgG3. The antibody shows no cross-reactivity with human IgG1, IgG2 and IgG4. The IUIS/WHO study singled out this monoclonal antibody as one of the most widely applicable IgG3 specific monoclonal antibodies.[2] The antibody is recommended to use in various immunological techniques, including ELISA and Immunoprecipitation.

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 and pathological conditions. For instance, anti-polysaccharide responses are mainly of the IgG2 subclass while protein antigens responses give rise to IgG1 and IgG3 antibodies. [3] IgG1 and IgG3 are the only subclasses capable of adherence to mononuclear phagocytes and are recognized readily by the Fc receptors on various reticulo-endothelial cells while IgG2 and IgG4 are far less efficient.[4] The abundance of the different IgG subclasses in the bloodstream varies with age, IgG1 and IgG3 reach normal adult levels by 5-7 years of age while IgG2 and IgG4 levels rise more slowly, reaching adult levels at about 10 years of age.
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.[5] IgG3 deficiency has been associated with a history of recurrent infectious, leading to chronic lung disease. Decreased IgG3 levels are frequently associated with IgG1 deficiency.[6]

Examination of the distribution pattern of IgG subclasses in different types of diseases may provide insight into the related immunological processes and may assist in the diagnosis of various disorders.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Indirect ELISA: a working concentration of 0.15–0.3 μg/ml is recommended using 1 μg/ml human IgG3 myeloma for coating.

Immunoprecipitation: a working concentration 1–2.5 μg/test is recommended using human IgG3 myeloma.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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2. Jefferies R., et al., *Immunol Lett*., **10**, 223-52 (1985).
3. Stevens R., et al., *J Clin Immunol*., **3**, 65-9 (1983).
4. van der Meulen FW., et al., *Br J Haematol*., **46**, 47-56(1980).
5. Oxelius VA., *Am J Med*., **76(3A)**, 7-18 (1984)
6. Herrod HG., *Ann Allergy*, **70**, 3-8 (1993).

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