

Product Information

Anti-Human IgG2 antibody, Mouse monoclonal
Clone HP-6014, purified from hybridoma cell culture

Product Number **SAB4200783**

Product Description

Anti-Human IgG2 antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the HP-6014 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with purified human IgG2 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.

Anti-Human IgG2 antibody, Mouse monoclonal specifically recognizes the Fab region of Human IgG2.¹ The antibody shows no cross-reactivity with human IgG1, IgG3, or IgG4. The IUIS/WHO study singled out this monoclonal antibody as one of the most widely applicable IgG2 specific monoclonal antibodies.² The antibody is recommended to use in various immunological techniques, including ELISA, immunofluorescence,³ hemagglutination (HA),⁴ and hemagglutination inhibition (HAI).⁵

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 physicochemical 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 give rise to IgG1 and IgG3 antibodies.⁶ Lipopolysaccharides stimulate an IgG2 response in PBL's and an IgG1 response in the spleen. Only IgG1 and IgG3 are capable of adherence to mononuclear phagocytes while IgG2 and IgG4 autoantibodies are much less efficient.⁷

The amount of the different IgG subclasses present in the bloodstream varies with age. For example, IgG1 and IgG3 reach normal adult levels by 5-7 years of age while IgG2 and IgG4 levels raise more slowly, reaching adult levels at about 10 years of age.^{8,9} 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.¹⁰

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 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 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 0.07–0.15 µg/mL is recommended using 1 µg/mL Human IgG2 myeloma for coating.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

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