3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-Human IgG4 antibody, Mouse monoclonal
clone HP-6025, purified from hybridoma cell culture

Product Number **SAB4200683**

Product Description

Anti-Human IgG4 (mouse IgG1 isotype) is derived from the HP-6025 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified human IgG4 myeloma proteins covalently coupled to polyaminostyrene (PAS) microbeads were used as the immunogen.[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 IgG4 is specific for the IgG4 subclass (Kappa and Lambda in an equal manner) and nonreactive with IgG1, IgG2 and IgG3 in ELISA. The IUIS/WHO2 study singled out this antibody as one of the most widely applicable IgG4 specific monoclonal antibodies.[2] The antibody may be used for identification of Human IgG4 subclass in various immunochemical techniques including ELISA, Immunoblotting[3], Immunoenzymometric Assay (IEMA)[4], Hemagglutination (HA)[4], Hemagglutination Inhibition (HAI)[4], Particle Counting Immunoassay (PACIA)[4] and detection of cytoplasmic IgG.[4]

Human IgG consists of four subclasses (1-4) that can be recognized by antigenic differences in their heavy chains. It constitutes 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. Only IgG1 and IgG3 are capable of adhering to mononuclear phagocytes while IgG2 and IgG4 auto-antibodies are not associated with disorders such as hemolytic anemia.[5] 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.[6]

Examination of the distribution pattern of IgG subclasses in different types of diseases may provide insight into the immunological processes involved and thus may assist in the diagnosis of various disorders.[7] For example IgG subclass expression pattern in malaria patients reveals positive association of IgG4 levels and malaria antigens but not with patients age.[8]

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

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 0.15-0.3 μg/mL is recommended using 1 μg/ml human IgG4 myeloma proteins for coating.

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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4. Hamilton RG., *Clin. Chem*., **33**, 1707-25 (1987).
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6. Aucouturier P., et al., *Clin Exp Immunol.*, **68**, 392–6 (1987)
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