

Mouse Anti-Rat Immunoglobulin G₁ CY5 Monoclonal Antibody

Mouse, Monoclonal (Immunoglobulin G₁)

Cat. No. DMAB4825

Lot. No. (See product label)

PRODUCT INFORMATION

Product Overview: Mab to IgG₁

Mouse Monoclonal Antibody to Rat Immunoglobulin G₁ (IgG₁), γ 1 heavy chain

Clone: H12C6

Ig Isotype: Mouse IgG_{2b}k

Format: Cyanine 5 (CYTM5) Conjugate

Quality: 0.1 mg

Specificity: Reacts with Rat γ 1 heavy chain (Fc); may also react with other species.

Applications: Identification and enumeration of IgG1⁺ cells by immunofluorescence microscopy; Second step reagent for rat IgG1 monoclonal antibodies; ELISA, can be used as capture antibody.

Characterization: To ensure lot-to-lot consistency, each batch of monoclonal antibody is tested as a 2nd step reagent by flow cytometry and/or ELISA to conform to characteristics of a standard reference reagent. Representative data are included in this product insert.

Working Dilutions:

Flow Cytometry: $\leq 0.1 \mu\text{g}/10^6$ cells

Other Applications: Since applications vary, each investigator should determine the optimum working dilutions of the product that is appropriate for their specific needs.

Handling And Storage: Each reagent is stable for the period shown on the bottle label if stored as directed.

Warning: Reagents contain sodium azide. Sodium azide is very toxic if ingested or inhaled. Avoid contact with skin, eyes, or clothing. Wear eye or face protection when handling. If skin or eye contact occurs, wash with copious amounts of water. If ingested or inhaled, contact a physician immediately. Sodium azide yields toxic hydrazoic acid under acidic conditions. Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or copper plumbing.

BACKGROUND

Introduction: Immunoglobulin G (IgG) are antibody molecules. Each IgG is composed of four peptide chains — two heavy chains γ and two light chains. Each IgG has two antigen binding sites. Other Immunoglobulins may be described in terms of polymers with the IgG structure considered the monomer. IgG molecules are synthesized and secreted by plasma B cells. IgG antibodies are large molecules of about 150 kDa composed of 4 peptide chains. It contains 2 identical heavy chains of about 50 kDa and 2 identical light chains of about 25 kDa, thus a tetrameric quaternary structure. The two heavy chains are linked to each other and to a light chain each by disulfide bonds. The resulting tetramer has two identical halves, which together form the Y-like shape. Each end of the fork contains an identical antigen binding site. The Fc regions of IgGs bear a highly conserved N-glycosylation site. The N-glycans attached to this site are predominantly core-fucosylated diantennary structures of the complex type. In addition, small amounts of these N-glycans also bear bisecting GlcNAc and α -2,6-linked sialic acid residues.

Keywords: Igh2; IGHE; IGHEP1; Immunoglobulin heavy constant epsilon; IgE; Immunoglobulin E; IgE ϵ ; Immunoglobulin E ϵ ; IgE heavy chain, Immunoglobulin E heavy chain; IgE heavy chain; Immunoglobulin E heavy chain

REFERENCES

1. Chou KC (August 1985). "Low-frequency motions in protein molecules. Beta-sheet and beta-barrel". *Biophys. J.* 48 (2): 289–97.
2. Chou KC (February 1987). "The biological functions of low-frequency vibrations (phonons). VI. A possible dynamic mechanism of allosteric transition in antibody molecules". *Biopolymers* 26 (2): 285–95.

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