Rat Anti-Mouse IgG2a Monoclonal Antibody, FITC Conjugated

Rat, Monoclonal (IgG2a)

Cat. No. DMAB4719
Lot. No. (See product label)

PRODUCT INFORMATION

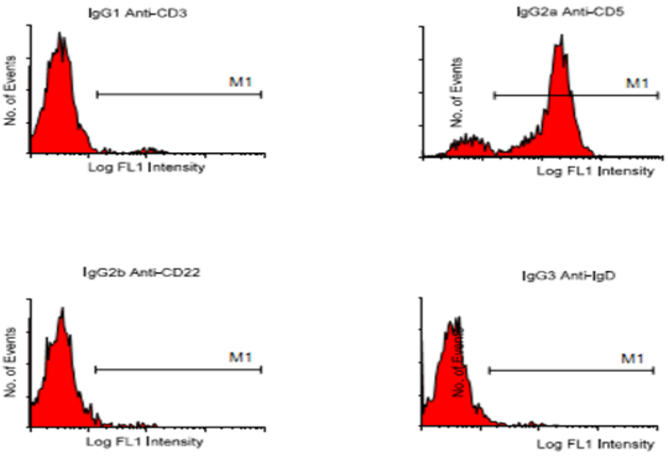
Product Overview: Mab to IgG2a; Rat Monoclonal Antibody to Mouse Immunoglobulin G2a(IgG2a), γ2a heavy chain
Clone: TB84a
Ig Isotype: Rat $IgG_{1\kappa}$
Format: Fluorescein (FITC) Conjugate
Quality: 0.5 mg
Specificity: Reacts with the heavy chain of IgG2a
Applications: Identification and enumeration of $IgG2a^+$ cells by flow cytometry; Identification and enumeration of $IgG2a^+$ cells by immunofluorescence microscopy; Second step reagent for mouse IgG2a monoclonal antibodies; Enzyme-Linked-Immunosorbent-Assay (ELISA)
Characterization: To ensure lot-to-lot consistency, each batch of monoclonal antibody is tested by ELISA and/or flow cytometry to conform to characteristics of a standard reference reagent. Representative data are included in this product insert.
Working Dilutions: Flow Cytometry: Fluorescein conjugate ≤1µg/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: The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C. Protect conjugated forms from light. Reagents are stable for the period shown on the 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.

REFERENCES

1. Stadlmann J, Pabst M, Kolarich D, Kunert R, Altmann F. (2008) Analysis of immunoglobulin glycosylation by LC-ESI-MS of glycopeptides and oligosaccharides. Proteomics. 2008 Jul; 8(14): 2858-2871.
2. Hashira S, Okitsu-Negishi S, Yoshino K (August 2000). "Placental transfer of IgG subclasses in a Japanese population". Pediatr Int 42 (4): 337–342.

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: Immunoglobulin G2a; IgG2a; IgG2a γ2a; Immunoglobulin G2a γ2a; IgG2a heavy chain, Immunoglobulin G2a heavy chain; IgG2a γ2a heavy chain; Immunoglobulin G2a γ2a heavy chain



IMMUNOFLUORESCENT STAINING
Amount Used: 1 µg/10^6 cells
Human PBMC were incubated with either mouse IgG1 anti-CD3, mouse IgG2a anti-CD5, mouse IgG2b anti-CD22, or mouse IgG3 anti-IgD. After washing, the cells were then incubated with FITC-labeled rat anti-mouse IgG1. Small lymphocytes were gated and analyzed on a FACScan™ flow cytometer (BDIS, San Jose, CA).

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