Mouse Anti-Rat Immunoglobulin G_{2a} R-PE Monoclonal Antibody

Mouse, Monoclonal (IgG_{2a})
Cat. No. DMAB4843
Lot. No. (See product label)

PRODUCT INFORMATION

Product Overview: Mab to IgG_{2a}
Mouse Monoclonal Antibody to Rat Immunoglobulin G_{2a} (IgG_{2a}), γ_{2a} heavy chain
Clone: 3B9F5
Ig Isotype: Mouse IgG1κ
Format: R-phycoerythrin (R-PE) Conjugate
Quality: 0.1 mg
Specificity: Reacts with the γ_{2a} heavy chain (Fc) of rat IgG_{2a}
Applications: Identification and enumeration of $IgG2a^+$ cells by immunofluorescence microscopy; Second step reagent for rat IgG2a monoclonal antibodies; Enzyme-Linked-Immunosorbent-Assay (ELISA)
Characterization: To ensure lot-to-lot consistency, each batch of monoclonal antibody is tested as a second 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: ≤0.1 µg/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 R-phycoerythrin (R-PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN3 and a stabilizing agent. Store at 2-8°C. Do not freeze! Protect conjugated forms from light. 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.

REFERENCES

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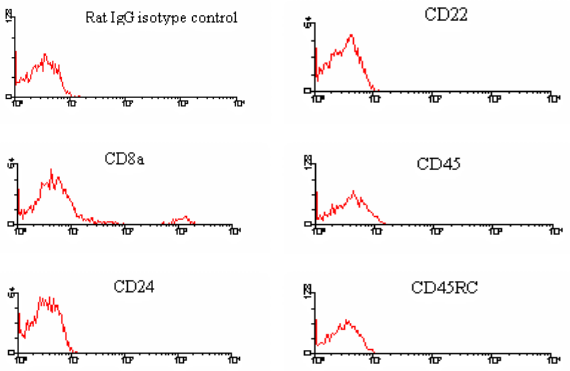
2. Painter PC, Mosher LE, Rhoads C (July 1982). "Low-frequency modes in the Raman spectra of proteins". Biopolymers 21 (7): 1469–72.
3. Stadlmann J, Pabst M, Kolarich D, Kunert R, Altmann F. (2008) Analysis of immunoglobulin glycosylation by LC-ESI-MS of glycopeptides and oligosaccharides. Proteomics. 2008 Jul;8(14):2858-71.

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; Immunoglobulin G2a; IgG2aγ2a; Immunoglobulin G2aγ2a; IgG2a heavy chain, Immunoglobulin G2a heavy chain; IgG2a γ2aheavy chain; Immunoglobulin G2aγ2aheavy chain

IMMUNOFLUORESCENT STAINING

Amount Used: 0.02 µg/10^6 cells



BALB/c splenocytes were incubated with rat IgG1 isotype control, rat anti-mouse CD22 (2D6, rat IgG1), rat anti-mouse CD8 (53-6.7, rat IgG2a), rat anti-mouse CD45 (LCA) (I3/2.3, rat IgG2b), rat anti- mouse CD24 (30-F1, rat IgG2c), and rat anti-mouse CD45RC (GL24, rat IgM). After washing, the cells were stained with R-PE-labeled Mouse Anti-Rat IgG2a. Small lymphocytes

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