

# Rat Anti-Mouse IgA Monoclonal Antibody, R-PE Conjugated

## Rat, Monoclonal (Immunoglobulin A)

Cat. No. DMAB4657

Lot. No. (See product label)

### PRODUCT INFORMATION

**Product Overview:** Mab to IgA

Rat Monoclonal Antibody to Mouse Immunoglobulin A (IgA),  
 $\alpha$  chain specific

**Clone:** A12-45-3

**Ig Isotype:** Rat IgG<sub>1k</sub>

**Format:** R-phycoerythrin (R-PE) Conjugate

**Quality:** 0.2 mg

**Specificity:** Reacts with the  $\alpha$  heavy chain of mouse IgA

**Applications:** Identification and enumeration of IgA<sup>+</sup> cells by flow cytometry; Identification and enumeration of IgA<sup>+</sup> cells by immunofluorescence microscopy; 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.

**Working Dilutions:**

Flow Cytometry:  $\leq 0.2 \mu\text{g}/10^6$  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:** The R-phycoerythrin (R-PE) conjugate is supplied as 0.1 mg in 1.0 mL or 0.2 mg in 2.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!** 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.

### BACKGROUND

**Introduction:** Immunoglobulin A (IgA) is an antibody that plays a critical role in mucosal immunity. More IgA is produced in mucosal linings than all other types of antibody combined; between three and five grams are secreted into the intestinal lumen each day. This accumulates to 75% of the total immunoglobulin produced in the entire body. IgA has two subclasses (IgA1 and IgA2) and can exist in a dimeric form called secretory IgA (sIgA). In its secretory form, IgA is the main immunoglobulin found in mucous secretions, including tears, saliva, colostrum and secretions from the genitourinary tract, gastrointestinal tract, prostate and respiratory epithelium. It is also found in small amounts in blood. The secretory component of sIgA protects the immunoglobulin from being degraded by proteolytic enzymes, thus sIgA can survive in the harsh gastrointestinal tract environment and provide protection against microbes that multiply in body secretions. IgA is a poor activator of the complement system, and opsonises only weakly. Its heavy chains are of the type  $\alpha$ .

**Keywords:** IgA; Ig alpha 1 chain C region; Ig alpha 2 chain C region; IGHA1; IGHA2; Immunoglobulin heavy constant alpha 1; Immunoglobulin heavy constant alpha 2 A2m marker; Immunoglobulin heavy constant alpha 2; Immunoglobulin A; Ig A  $\alpha$ ; Immunoglobulin A  $\alpha$ ; Ig A heavy chain, Immunoglobulin A heavy chain; Ig A  $\alpha$  heavy chain; Immunoglobulin A  $\alpha$  heavy chain

### REFERENCES

1. S Fagarasan and T Honjo (2003). "Intestinal IgA Synthesis: Regulation of Front-line Body Defenses". *Nat. Rev. Immunology* 3 (1): 63-72.
2. P. Brandtzaeg, R. Pabst (2004). "Let's go mucosal: communication on slippery ground". *Trends Immunology* 25 (11): 570-577.

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