

## Rat Anti-Mouse IgG3 Monoclonal Antibody, FITC Conjugated

### Rat, Monoclonal (IgG3)

Cat. No. DMAB4766

Lot. No. (See product label)

#### PRODUCT INFORMATION

**Product Overview:** Mab to IgG3; Rat Monoclonal Antibody to Mouse Immunoglobulin G3,  $\gamma$ 3 heavy chain

**Clone:** MO-MG4-8

**Ig Isotype:** Rat IgMk

**Format:** Fluorescein (FITC) Conjugate

**Quality:** 0.5 mg

**Specificity:** Reacts with the  $\gamma$ 3 heavy chain of mouse IgG3. Does not react with other immunoglobulin isotypes.

**Applications:** Identification and enumeration of IgG3<sup>+</sup> cells by flow cytometry; Identification and enumeration of IgG3<sup>+</sup> cells by immunofluorescence microscopy; Second step reagent for mouse IgG3 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  $\leq 1 \mu\text{g}/10^6$  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:** The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>. 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.

#### BACKGROUND

**Introduction:** Immunoglobulin G (IgG) are antibody molecules. Each IgG is composed of four peptide chains -two heavy chains  $\gamma$  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  $\alpha$ -2,6-linked sialic acid residues.

**Keywords:** FLJ39988; FLJ40587; FLJ40789; FLJ40834; HDC; MGC45809; DKFZp686H11213; FLJ40036; FLJ40253; Heavy chain disease protein; Ig gamma 3 chain C region; IGHG3; Immunoglobulin heavy constant gamma 3 (G3m marker); IgG3; Immunoglobulin G3; IgG3  $\gamma$ 3; Immunoglobulin G3  $\gamma$ 3; IgG3 heavy chain; Immunoglobulin G3 heavy chain; IgG3  $\gamma$ 3 heavy chain; Immunoglobulin G3  $\gamma$ 3 heavy chain

#### REFERENCES

1. Xu PC, Chen M, Zhao MH. "High potential to reverse the inhibition of myeloperoxidase by ceruloplasmin of anti-myeloperoxidase autoantibodies of IgG3 subclass." *Autoimmunity*. 2011 Aug 30.
2. Engberg K, Frank CW. "Protein diffusion in photopolymerized poly(ethylene glycol) hydrogel networks." *Biomed Mater*. 2011 Aug 26; 6(5): 055006.

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