

Mouse Anti-Rat Immunoglobulin G₁ R-PE Monoclonal Antibody

Mouse, Monoclonal (Immunoglobulin G₁)

Cat. No. DMAB4807

Lot. No. (See product label)

PRODUCT INFORMATION

Product Overview: Mab to IgG₁

Mouse Monoclonal Antibody to Rat Immunoglobulin G₁(IgG₁),
γ1 heavy chain

Clone: H18E8

Ig Isotype: Mouse IgG₁κ

Format: R-phycoerythrin (R-PE) Conjugate

Quality: 0.1 mg

Specificity: Reacts with the γ1 heavy chain (Fc) of rat IgG₁;
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

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 char-
acteristics of a standard reference reagent. Representative
data are included in this product insert.

Working Dilutions:

Flow Cytometry: ≤0.02 μg/10⁶ cells

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

Handling And Storage: The R-phycoerythrin (R-PE) conju-
gate 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 con-
jugated 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 condi-
tions. Dilute azide-containing compounds in running water
before discarding to avoid accumulation of potentially explo-
sive 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 bind-
ing 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 com-
posed 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: Ig gamma 1 chain C region; IGHG1; Immunoglobu-
lin heavy constant gamma 1 (G1m marker); IgG1; Immu-
noglobulin G1; IgG1γ1; Immunoglobulin G1γ1; IgG1 heavy
chain, Immunoglobulin G1 heavy chain; IgG1γ1heavy chain;
Immunoglobulin G1γ1heavy chain

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