

# PRODUCT INFORMATION



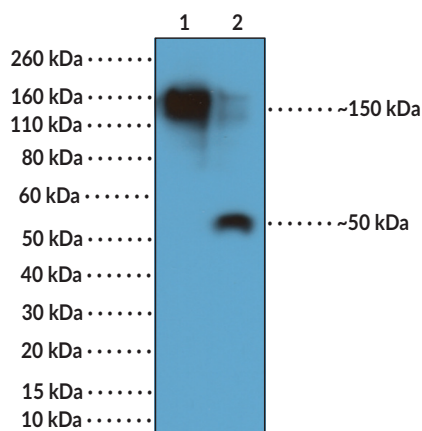
## IgG1 (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM106)

Item No. 32349

### Overview and Properties

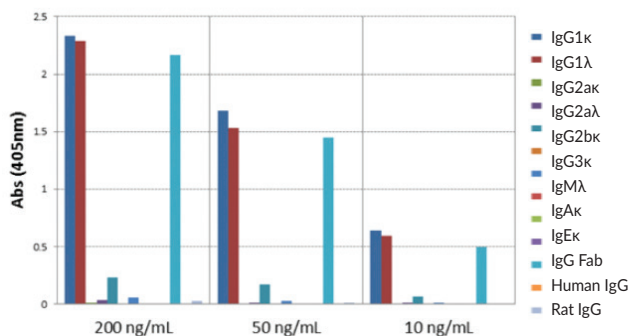
**Contents:** This vial contains 50 µg of protein A-affinity purified monoclonal antibody.  
**Synonym:** Immunoglobulin G1  
**Immunogen:** Mouse IgG  
**Cross Reactivity:** (+) IgG1; (-) Mouse IgG2a, IgG3, IgM, IgA, IgE; (-) Human, rat IgG  
**Species Reactivity:** (+) Mouse  
**Form:** Liquid  
**Storage:** -20°C (as supplied)  
**Stability:** ≥1 year  
**Storage Buffer:** PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide  
**Clone:** RM106  
**Host:** Rabbit  
**Isotype:** IgG  
**Applications:** ELISA and Western blot (WB); the recommended starting concentration is 0.005-0.2 µg/ml for ELISA and 0.1-0.5 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



**Lane 1:** Non-reduced mouse IgG1 (20 ng)  
**Lane 2:** Reduced mouse IgG1 (20 ng)

WB of non-reduced and reduced mouse IgG1 using IgG1 (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM106) at a concentration of 0.2 µg/ml.



IgG1 (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM106)

ELISA of mouse immunoglobulins (Igs). IgG1 (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM106) reacts to the Fc region of mouse, IgG1κ, IgG1λ, and IgG2βκ. No cross reactivity with IgG2ακ, IgG2αλ, IgG3κ, IgMκ, IgAκ, IgEκ, IgG Fab, human IgG, or rat IgG. The plate was coated with 50 ng/well of different immunoglobulins. 200 ng/ml, 50 ng/ml, or 10 ng/ml of IgG1 (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM106) was used as the primary antibody. An alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

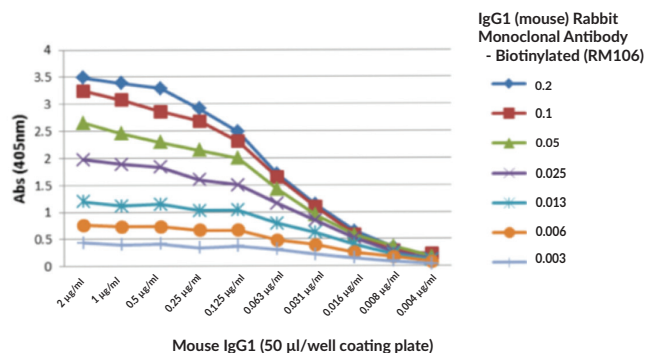
**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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A titer ELISA using IgG1 (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM106). The plate was coated with different amount of mouse IgG1. A serial dilution of IgG1 (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM106) was used as the primary antibody. An alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.

## Description

Immunoglobulin G (IgG) is a member of the immunoglobulin superfamily of glycoproteins that plays a central role in the adaptive immune response.<sup>1</sup> It is produced by B cells and later secreted by plasma cells and is the most abundant circulating antibody in human and mouse serum.<sup>1,2,6</sup> IgG consists of two heavy chains of approximately 50 kDa each and two light chains of approximately 25 kDa each.<sup>1</sup> The heavy chains are linked together by disulfide bonds to form an Fc region and also combine with the light chains to form the Fab region, which mediate receptor and antigen binding, respectively.<sup>3</sup> IgG is produced following IgM class-switching in response to infection and is involved in numerous humoral host defense responses, including antibody-dependent cell-mediated cytotoxicity (ADCC), toxin neutralization, and pathogen opsonization.<sup>2</sup> IgG exists as four isotypes in mice: IgG1, IgG2b, IgG3, and, in a strain-specific manner, IgG2a or IgG2c.<sup>4,7</sup> IgG1 production is driven by Th2-stimulated immune responses. IgG1 neutralizes toxins and activates the inhibitory FcγRIIB receptor but does not trigger FcγR-mediated effector functions. Formulations containing humanized, chimeric, or murine IgG1 monoclonal antibodies have been used in the treatment of inflammatory diseases, such as ulcerative colitis, multiple sclerosis, and asthma, as well as cancer.<sup>5</sup> Cayman's IgG1 (mouse) Monoclonal Antibody - Biotinylated (RM106) can be used for ELISA and Western blot (WB) applications. The antibody recognizes the Fc region of IgG1 and detects non-reduced and reduced IgG1 from mouse samples at approximately 150 and 50 kDa, respectively.

## References

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- Martin, R.M., Brady, J.L., and Lew, A.M. The need for IgG2c specific antiserum when isotyping antibodies from C57BL/6 and NOD mice. *J. Immunol. Methods.* **212**(2), 187-192 (1998).

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