

PRODUCT INFORMATION

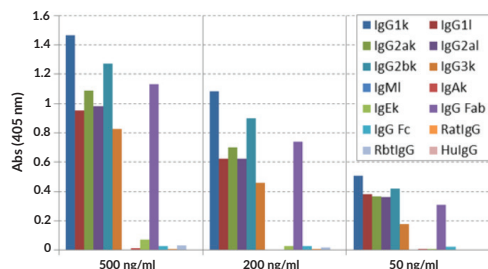


IgG Fab (mouse) Monoclonal Antibody - Biotinylated (RMG05) Item No. 32361

Overview and Properties

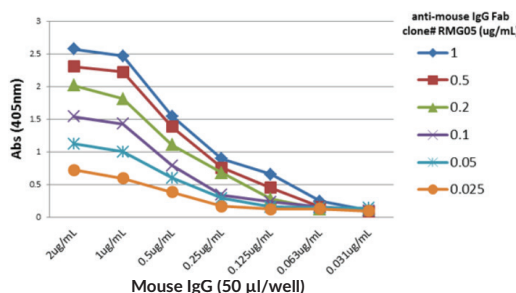
Contents:	This vial contains 50 µg of protein G-affinity purified monoclonal antibody.
Synonym:	Immunoglobulin G
Immunogen:	Mouse IgG
Cross Reactivity:	(+) IgG1, IgG2a, IgG2b, IgG3; (-) Mouse IgM, IgA, IgE; (-) Human, rabbit, rat IgG
Species Reactivity:	(+) Mouse
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1 mg/ml
Clone:	RMG05
Host:	Goat
Isotype:	IgG
Applications:	ELISA; the recommended starting concentration is 0.05-1 µg/ml. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



IgG Fab (mouse) Monoclonal Antibody - Biotinylated (RMG05)

ELISA of mouse immunoglobulins. IgG Fab (mouse) Monoclonal Antibody - Biotinylated (RMG05) reacts to mouse IgG1, IgG2a, IgG2b, and IgG3 and not to mouse IgM, IgA, IgE, human IgG, rat IgG, or rabbit IgG. The plate was coated with 50 ng/well of different immunoglobulins. IgG Fab (mouse) Monoclonal Antibody - Biotinylated (RMG05) was used as the primary antibody and an alkaline phosphatase-conjugated anti-goat IgG was used as the secondary antibody.



A Titer ELISA using IgG Fab (mouse) Monoclonal Antibody - Biotinylated (RMG05). The plate was coated with different amounts of mouse IgG. A serial dilution of IgG Fab (mouse) Monoclonal Antibody - Biotinylated (RMG05) was used as the primary antibody and an alkaline phosphatase-conjugated anti-goat 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.

WARRANTY AND LIMITATION OF REMEDY
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Description

Immunoglobulin G (IgG) is a member of the immunoglobulin superfamily of glycoproteins that plays a central role in the adaptive immune response.¹ It is produced by B cells and later secreted by plasma cells and is the most abundant circulating antibody in human and mouse serum.¹⁻³ IgG consists of two heavy chains of approximately 50 kDa each and two light chains of approximately 25 kDa each.¹ 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.⁴ 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.² IgG exists as four isotypes in mice: IgG1, IgG2b, IgG3, and, in a strain-specific manner, IgG2a or IgG2c.^{5,6} Formulations containing humanized, chimeric, or murine IgG monoclonal antibodies have been used in the treatment of inflammatory diseases, such as ulcerative colitis, rheumatoid arthritis, and asthma, as well as cancer.⁷ Cayman's IgG Fab (mouse) Monoclonal Antibody - Biotinylated (RMG05) can be used for ELISA. The antibody recognizes the Fab region of IgG from mouse samples.

References

1. Schroeder, H.W., Jr. and Cavicini, L. Structure and function of immunoglobulins. *J. Allergy Clin. Immunol.* **125(2 Suppl. 2)**, S41-S52 (2010).
2. Vidarsson, G., Dekkers, G., and Rispens, T. IgG subclasses and allotypes: From structure to effector functions. *Front. Immunol.* **5**, 520 (2014).
3. Mayumi, M., Kuritani, T., Kubagawa, H.M., *et al.* IgG subclass expression by human B lymphocytes and plasma cells: B lymphocytes precommitted to IgG subclass can be preferentially induced by polyclonal mitogens with T cell help. *J. Immunol.* **130(2)**, 671-677 (1983).
4. Vaillant, A.A.J. and Ramphul, K. Immunoglobulin. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing (2020). Available from: <https://www.ncbi.nlm.nih.gov/books/NBK513460/>
5. Collins, A.M. IgG subclass co-expression brings harmony to the quartet model of murine IgG function. *Immunol. Cell Biol.* **94(10)**, 949-954 (2016).
6. 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).
7. Lu, R.-M., Hwang, Y.-C., Liu, I.-J., *et al.* Development of therapeutic antibodies for the treatment of diseases. *J. Biomed. Sci.* **27(1)**, 1 (2020).

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