# PRODUCT INFORMATION

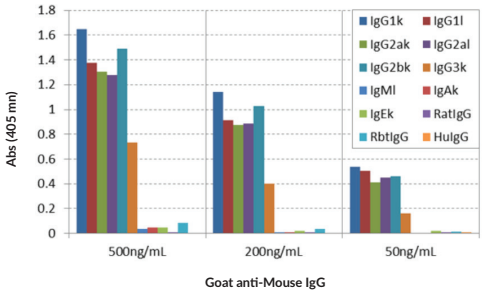
## IgG (mouse) Monoclonal Antibody (Clone RMG07)

*Item No. 22469*

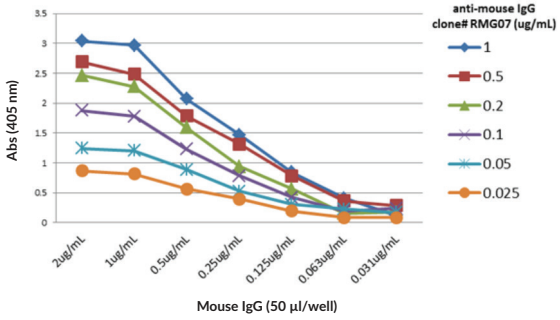
### Overview and Properties

**Contents:** This vial contains 100 µg of protein G-affinity purified monoclonal antibody.
**Synonym:** Immunoglobulin G
**Immunogen:** Mouse IgG
**Cross Reactivity:** (+) Mouse 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:** RMG07
**Host:** Goat
**Isotype:** IgG
**Applications:** ELISA; the recommended starting concentration is 0.0-1 µg/ml. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images




**ELISA of mouse immunoglobulins (Igs).** IgG (mouse) Monoclonal Antibody (Clone RMG07) reacts to mouse IgG1, IgG2a, IgG2b, and IgG3. There is no cross reactivity with mouse IgM, IgA, IgE or human, rat, or rabbit IgG.




**A Titer ELISA of IgG (mouse) Monoclonal Antibody (Clone RMG07).** The plate was coated with different amounts of mouse IgG. A serial dilution of IgG (mouse) Monoclonal Antibody (Clone RMG07) was used as the primary antibody. An alkaline phosphatase-conjugated anti-goat IgG was used as the secondary antibody.




CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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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 (mouse) Monoclonal Antibody (Clone RMG07) can be used for ELISA applications. The antibody recognizes IgG from mouse samples.

## References


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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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