

# PRODUCT INFORMATION



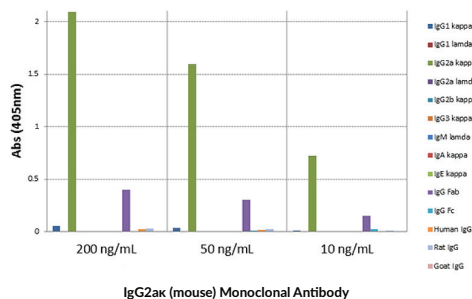
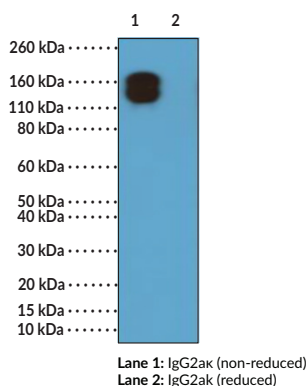
## IgG2ak (mouse) Rabbit Monoclonal Antibody

Item No. 32004

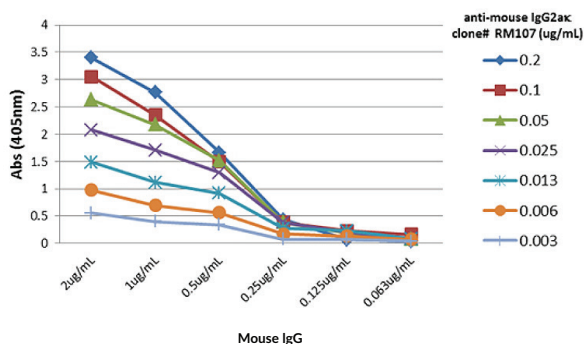
### Overview and Properties

**Contents:** This vial contains 100 µg of protein A-affinity purified monoclonal antibody.  
**Synonym:** Immunoglobulin G2ak  
**Immunogen:** Mouse IgG  
**Cross Reactivity:** (-) Mouse IgG2aλ, IgG1, IgG3, IgM, IgA, IgE; (-) Human, rat, goat 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:** 1.0 mg/ml  
**Clone:** RM107  
**Host:** Rabbit  
**Isotype:** IgG  
**Applications:** ELISA and Western blot (WB); the recommended starting concentration is 0.1-0.5 µg/ml for ELISA and 0.005-0.2 µg/ml for WB. Immunoprecipitation, Flow Cytometry, and other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



ELISA of Mouse Immunoglobulins (Igs). IgG2ak (mouse) Rabbit Monoclonal Antibody reacts specifically to the Fab region of mouse IgG2ak and not to IgG2a λ, IgG1, IgG3, IgM, IgA, IgE, human IgG, rat IgG, or goat IgG.



A Titer Sandwich ELISA Using IgG2ak (mouse) Rabbit Monoclonal Antibody. The plate was coated with different amounts of mouse IgG2ak. A serial dilution of IgG2ak (mouse) monoclonal antibody was used as the primary antibody. An alkaline phosphatase conjugated anti-rabbit IgG as the second 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  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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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.<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>1-3</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>4</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>5,6</sup> *In vivo*, class switching to the IgG2a isotype can happen *via* IFN- $\gamma$ -dependent and -independent mechanisms, with the former resulting from the cognate interaction of B cells with T helper 1 (Th1) cells.<sup>7</sup> IgG2a is the predominant isotype produced in response to infection with DNA or RNA viruses in mice.<sup>8</sup> Mammalian immunoglobulins contain either Ig $\kappa$  or Ig $\lambda$  light chains, each of which are composed of a constant and variable domain.<sup>9</sup> Cayman's IgG2ak (mouse) Rabbit Monoclonal Antibody (Clone RM107) can be used for ELISA and Western blot (WB; non-reducing conditions) applications. The antibody recognizes the Fab region of IgG2ak from mouse samples.

## References

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