

# PRODUCT INFORMATION

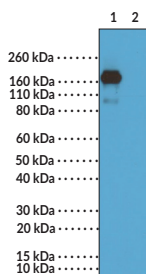


## IgA (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM220) Item No. 32355

### Overview and Properties

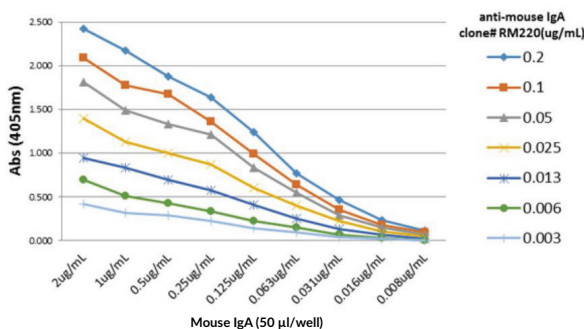
<b>Contents:</b>	This vial contains 50 µg of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	Immunoglobulin A
<b>Immunogen:</b>	Mouse IgA
<b>Cross Reactivity:</b>	(+) IgA; (-) Mouse IgG1, IgG2a, IgG2b, IgG2c, IgG3, IgM, IgE, (-) Human IgA
<b>Species Reactivity:</b>	(+) Mouse
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	RM220
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	ELISA and Western blot (WB; non-reducing conditions); the recommended starting concentration for ELISA is 0.005-0.2 µg/ml and 0.5-2 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images

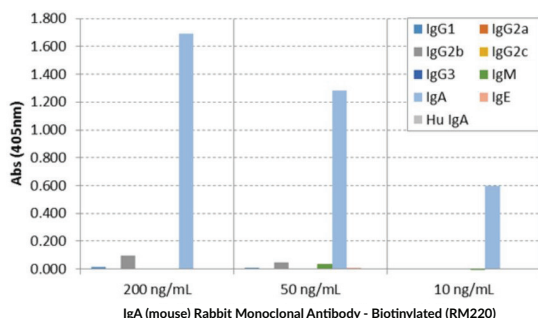


Lane 1: Non-reduced mouse IgA  
Lane 2: Reduced mouse IgA

WB of non-reduced and reduced mouse IgA using IgA (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM220) at a concentration of 0.5 µg/ml.



A Titer ELISA using IgA (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM220). The plate was coated with different amounts of mouse IgA. A serial dilution of IgA (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM220) was used as the primary antibody and an alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.



ELISA of Mouse Immunoglobulins (Igs), IgA (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM220) reacts only to mouse IgA and not to mouse IgG1, IgG2a, IgG2b, IgG2c, IgG3, IgM, IgE, or human IgA. The plate was coated with 50 ng/well of different Igs, 200, 50, or 10 ng/ml of IgA (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM220) was used as the primary antibody and 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.

**WARRANTY AND LIMITATION OF REMEDY**  
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## Description

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Immunoglobulin A (IgA) is a member of the immunoglobulin superfamily of glycoproteins with roles in host defense against intestinal pathogens and both quantitative and qualitative control of host commensal microbiota composition.<sup>1,2</sup> It is produced by B cells and later secreted by plasma cells and is the most abundant antibody on mucosal surfaces that comprises at least 70% of all Ig produced in mice. Mouse IgA consists of two heavy chains of approximately 53.5 kDa each and two light chains of approximately 25 kDa each.<sup>3</sup> Unlike human IgA, mouse IgA exists as a single isotype and is primarily found as a dimer that lacks the disulfide bonds between the light and heavy chains present in other Ig classes.<sup>3,4</sup> Production of IgA is induced in the gut only in animals containing intestinal microbes, and the number of IgA-producing plasma cells is reduced in germ-free mice.<sup>1</sup> IgA-deficient mice exhibit increased lethality compared with wild-type mice in a model of influenza infection, as well as reduced parasite clearance in a model of *G. muris* infection. However, IgA deficiency does not affect clearance of vaginal infection with herpes simplex virus 2 (HSV-2), indicating redundancy in pathogen protection with compensation by antibodies of other isotypes or innate immune mechanisms at mucosal surfaces. Cayman's IgA (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM220) can be used for ELISA and Western blot (WB; non-reducing conditions) applications. The antibody recognizes IgA from mouse samples.

## References

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1. Macpherson, A.J., McCoy, K.D., Johansen, F.-E., *et al.* The immune geography of IgA induction and function. *Mucosal Immunol.* **1(1)**, 11-22 (2008).
2. Mathias, A., Pais, B., Favre, L., *et al.* Role of secretory IgA in the mucosal sensing of commensal bacteria. *Gut Microbes* **5(6)**, 688-695 (2014).
3. Grey, H.M., Sher, A., and Shalitin, N. The subunit structure of mouse IgA. *J. Immunol.* **105(1)**, 75-84 (1970).
4. de Sousa-Pereira, P. and Woof, J.M. IgA: Structure, function, and developability. *Antibodies (Basel)* **8(4)**, 57 (2019).