PRODUCT INFORMATION

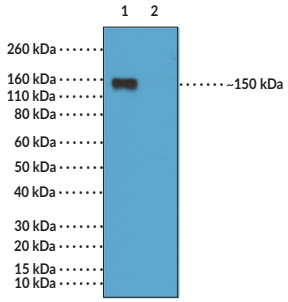
IgG2a (mouse) Monoclonal Antibody (Clone RM219)

Item No. 32005

Overview and Properties

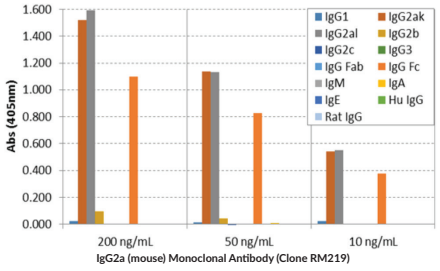
Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym:	Immunoglobulin G2a
Immunogen:	Mouse IgG2a
Cross Reactivity:	(–) Mouse IgG1, IgG2b, IgG2c, IgG3, IgM, IgA, IgE; (–) Human, rat IgG
Species Reactivity:	(+) Mouse IgG2a Fc region
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1.0 mg/ml
Clone:	RM219
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA and Western blot (WB; non-reduced); 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

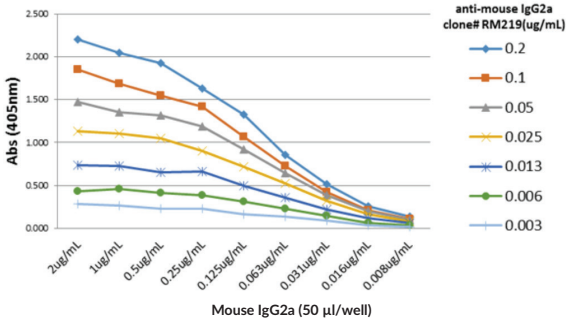


Lane 1: Non-reduced mouse IgG2a (0.5 µg/ml)
Lane 2: Reduced mouse IgG2a (0.5 µg/ml)

WB of non-reduced and reduced mouse IgG2a using 0.5 µg/ml of IgG2a (mouse) Monoclonal Antibody (Clone RM219). This antibody reacts to non-reduced IgG2a (~150 kDa).



ELISA of Mouse Immunoglobulins (Igs). IgG2a (mouse) Monoclonal Antibody (Clone RM219) reacts to the Fc region of mouse IgG2a. No cross reactivity with IgG1, IgG2b, IgG2c, IgG3, IgM, IgA, IgE, human IgG, or rat IgG. The plate was coated with 50 ng/well of different Igs. 200, 50, or 10 ng/ml of IgG2a (mouse) Monoclonal Antibody (Clone RM219) was used as the primary antibody. An alkaline phosphatase conjugated anti-rabbit IgG was used as the secondary antibody.



A Titer ELISA of Mouse IgG2a. The plate was coated with different amounts of mouse IgG2a. A serial dilution of IgG2a (mouse) Monoclonal Antibody (Clone RM219) was used as the primary antibody. An alkaline phosphatase conjugated anti-rabbit IgG was used as the secondary antibody.

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PRODUCT INFORMATION

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] *In vivo*, class switching to the IgG2a isotype can happen via IFN-γ-dependent and -independent mechanisms, with the former resulting from the cognate interaction of B cells with T helper 1 (Th1) cells.[7] IgG2a is the predominant isotype produced in response to infection with DNA or RNA viruses in mice.[8] Cayman's IgG2a (mouse) Monoclonal Antibody (Clone RM219) can be used for ELISA and Western blot (WB; non-reducing conditions) applications. The antibody recognizes the Fc region of IgG2a from mouse samples at approximately 150 kDa.

References

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