

PRODUCT INFORMATION

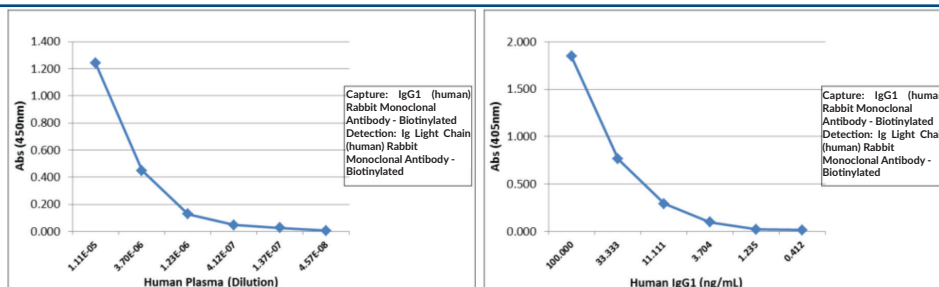


IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117) Item No. 32373

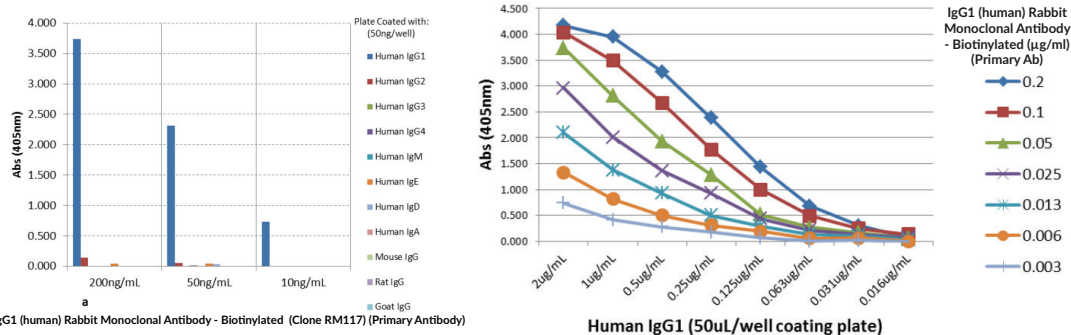
Overview and Properties

Contents:	This vial contains 50 µg of protein A-affinity purified monoclonal antibody.
Synonym:	Immunoglobulin IgG1
Immunogen:	Peptide from the hinge region of human IgG1
Cross Reactivity:	(+) IgG1; (-) Human IgG2, IgG3, IgG4, IgM, IgA, IgD, IgE; (-) Goat, mouse, rat IgG
Species Reactivity:	(+) Human
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:	RM117
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA, Immunocytochemistry (ICC), and Immunohistochemistry (IHC); the recommended starting concentration is 50-200 ng/well (for capture) and 0.05-0.2 µg/ml (for detection) for ELISA, and 0.5-2 µg/ml for ICC and IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Sandwich ELISA using IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117) as the capture antibody and Ig Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (Item No. 32112) as the detection antibody, followed by an alkaline phosphatase-conjugated streptavidin.



IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117) (Primary Antibody)

ELISA of human immunoglobulins (Igs). IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117) reacts only to human IgG1 and not to human IgG2, IgG3, IgG4, IgE, IgD, IgA, mouse IgG, rat IgG or goat IgG. The plate was coated with 50 ng/well of different Igs. 200, 50, or 10 ng/ml of IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117) was used as the primary antibody and an alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.

A Titer ELISA using IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117). The plate was coated with different amounts of human IgG1. A serial dilution of IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117) 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
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.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 humans, IgG1, IgG2, IgG3, and IgG4, each of which has a distinct effector function. IgG1 binds to Fc receptors to induce Fc receptor-mediated effector functions, as well as Cq1 to induce complement activation in response to soluble and membrane protein antigens. Maternal IgG1s are shared with the fetus *via* placental transfer and children with group B streptococcal-induced sepsis are born to mothers with decreased serum levels of IgG1 compared with mothers of uninfected children.⁵ Cayman's IgG1 (human) Rabbit Monoclonal Antibody - Biotinylated (Clone RM117) can be used for ELISA, immunocytochemistry (ICC), and immunohistochemistry (IHC) applications. The antibody recognizes the heavy chain of human IgG1.

References

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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/>
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