

PRODUCT INFORMATION

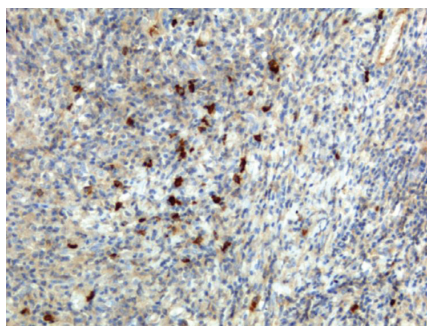


IgA1 and IgA2 (human) Rabbit Monoclonal Antibody (Clone RM128) Item No. 32114

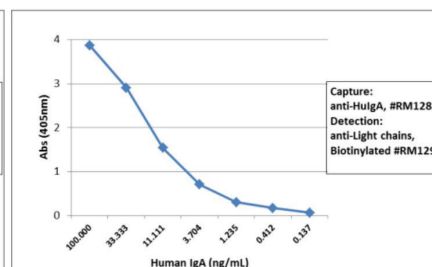
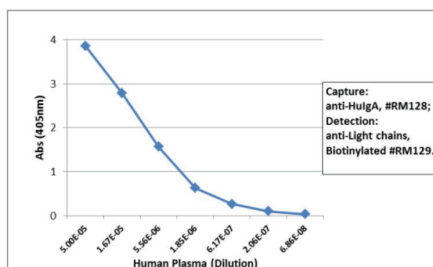
Overview and Properties

Contents: This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym: Immunoglobulin A1 and A2
Immunogen: Human IgA
Cross Reactivity: (+) Human IgA1, IgA2; (-) Human IgG, IgM, IgD, IgE
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: 1.0 mg/ml
Clone: RM128
Host: Rabbit
Isotype: IgG
Applications: ELISA, Immunocytochemistry (ICC), and Immunohistochemistry (IHC); the recommended starting concentration for ELISA is 50-200 ng/well (for capture) and 0.05-0.2 µg/ml (for detection), 0.5-2 µg/ml for ICC, and 0.1-1 µg/ml for IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

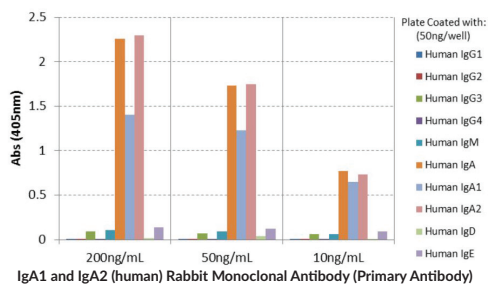
Images



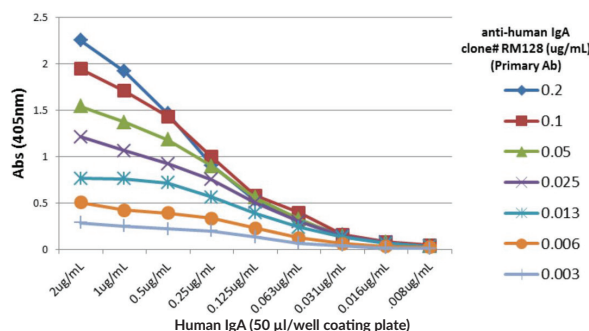
Immunohistochemical analysis of human lymphoid tissue using IgA1 and IgA2 (human) Rabbit Monoclonal Antibody.



Sandwich ELISA using IgA1 and IgA2 (human) Rabbit Monoclonal Antibody as the capture antibody (100 ng/well) and Ig Light Chain (human) Monoclonal Antibody - Biotinylated (Item No. 32112) as the detection antibody, followed by an alkaline phosphatase-conjugated streptavidin.



ELISA of Human Immunoglobulins (Igs). IgA1 and IgA2 (human) Rabbit Monoclonal Antibody reacts only to human IgA1 and IgA2 and not to human IgG, IgM, IgD, or IgE. The plate was coated with 50 ng/well of different Igs. IgA1 and IgA2 (human) Rabbit Monoclonal Antibody was used as the primary antibody and an alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.



A Titer ELISA using IgA1 and IgA2 (human) Rabbit Monoclonal Antibody. The plate was coated with different amounts of human IgA. A serial dilution of IgA1 and IgA2 (human) Rabbit Monoclonal Antibody 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 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.^{1,2} Human IgA consists of two identical light chains of approximately 25 kDa each, as well as two heavy chains of approximately 60 kDa each that contain C-terminal extensions, known as tailpieces, which allow for IgA oligomerization.^{3,4} There are two IgA subclasses, IgA1 and IgA2, which are encoded by *IGHA1/α1* and *IGHA2/α2*, respectively, and have differences primarily in the hinge and heavy chain constant regions.⁴ IgA 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.^{1,2} Monomeric IgA1 is predominant in the serum, but dimeric secretory IgA (SIgA) is the predominant form in mucosal surfaces and secretions with the ratio of subclasses varying based on the IgA-secreting cell types present.^{4,5} Dimeric and polymeric IgA bind to Igα Fc receptor I (FcαRI) and the IgM- and IgA-binding high affinity Igα and Igμ Fc receptor (Fcα/μ-R), which are both involved in mediating immune responses.^{5,6} 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.¹ Serum levels of IgA are decreased in patients with IgA deficiency, who are typically asymptomatic but may have allergy or autoimmune disorders or experience recurrent infections.⁷ IgA deposits in vessels and, in certain cases, the glomerulus in children with IgA vasculitis (IgAV), a disorder characterized by vascular inflammation, purpura, joint pain, gastrointestinal disturbances, and, in severe cases, glomerulonephritis.⁸ Cayman's IgA1 and IgA2 (human) Rabbit Monoclonal Antibody can be used for ELISA, immunocytochemistry (ICC), and immunohistochemistry (IHC) applications.

References

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