

PRODUCT INFORMATION



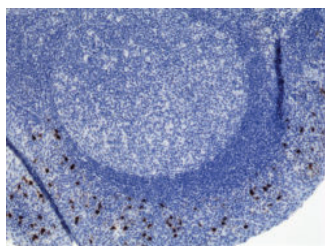
IgA2 (human) Monoclonal Antibody (Clone RM125)

Item No. 32116

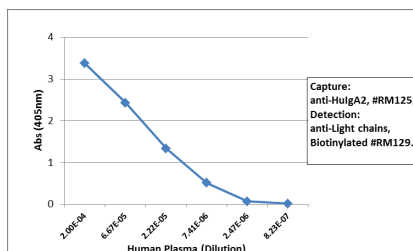
Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym:	Immunoglobulin A2
Immunogen:	Human IgA2
Cross Reactivity:	(+) Human IgA2; (-) Human IgA1, 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:	RM125
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA, Immunocytochemistry (ICC), and Immunohistochemistry (IHC); the recommended starting concentration is 0.05–0.2 ng/ml for capture and 0.05–0.2 µg/ml for detection for ELISA, 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.

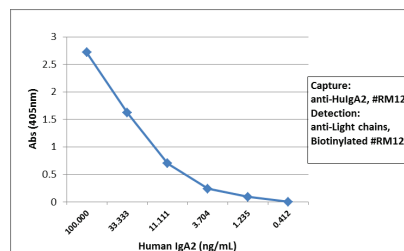
Images



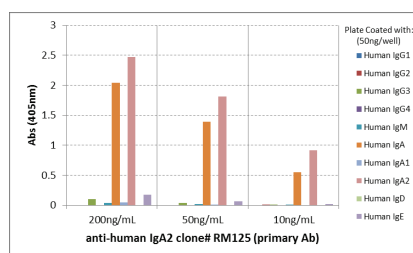
Immunohistochemistry of human tonsil tissue with Cayman's IgA2 (human) Monoclonal Antibody (Clone RM125).



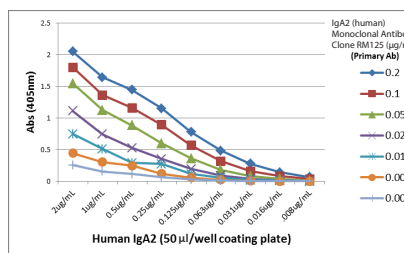
Sandwich ELISA using IgA2 (human) Monoclonal Antibody (Clone RM125) as the capture antibody (100 ng/well), and biotinylated anti-human light chains (κ+ λ) antibody Ig Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (Item No. 32112) as the detection antibody, followed by an alkaline phosphatase-conjugated streptavidin.



Sandwich ELISA using IgA2 (human) Monoclonal Antibody (Clone RM125) as the capture antibody (100 ng/well), and biotinylated anti-human light chains (κ+ λ) antibody Ig Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (Item No. 32112) as the detection antibody, followed by an alkaline phosphatase-conjugated streptavidin.



ELISA of human immunoglobulins shows IgA2 (human) Monoclonal Antibody (Clone RM125) reacts only to human IgA2. No cross reactivity with human IgA1, IgG, IgM, IgD, or IgE. The plate was coated with 50 ng/well of different immunoglobulins. 200 ng/ml, 50 ng/ml, or 10 ng/ml of IgA2 (human) Monoclonal Antibody (Clone RM125) was used as the primary antibody. An alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.



A titer ELISA using IgA2 (human) Monoclonal Antibody (Clone RM125). The plate was coated with different amounts of IgA2 (human). A serial dilution of IgA2 (human) Monoclonal Antibody (Clone RM125) was used as the primary antibody. 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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PRODUCT INFORMATION



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.³ 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.^{3,5} 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 IgA levels are increased in certain gastrointestinal tract and liver diseases, with IgA2 levels increased to a higher degree than IgA1 levels in patients with Crohn's disease and alcoholic liver disease.⁷ Cayman's IgA2 (human) Monoclonal Antibody (Clone RM125) can be used for ELISA, immunocytochemistry (ICC), and immunohistochemistry (IHC) applications.

References

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4. Kerr, M.A. The structure and function of human IgA. *Biochem. J.* **271(2)**, 285-296 (1990).
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6. van Egmond, M., Damen, C.A., van Spriel, A.B., *et al.* IgA and the IgA Fc receptor. *Trends Immunol.* **22(4)**, 205-211 (2001).
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