

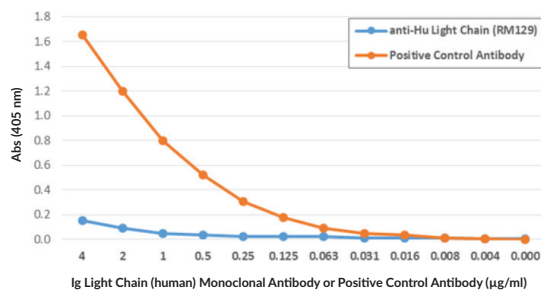
PRODUCT INFORMATION

Ig Light Chain (human) Rabbit Monoclonal Antibody (Clone RM129) Item No. 32111

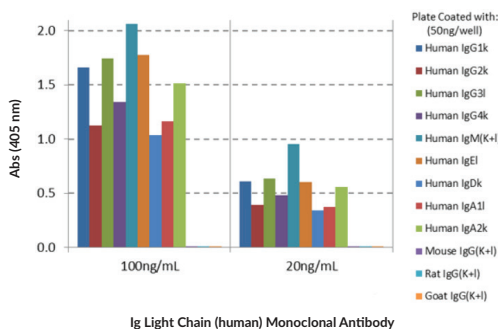
Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody
Synonym:	Immunoglobulin Light Chain
Immunogen:	Human IgG
Cross Reactivity:	(+) Human Igk, Igλ; (-) Cynomolgus monkey, goat, mouse, rat, rhesus monkey 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:	RM129
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA, Immunohistochemistry (ICC), and Immunocytochemistry (IHC); the recommended starting dilution is 0.1-0.5 µg/ml for ELISA, 0.5-2 µg/ml for ICC and IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

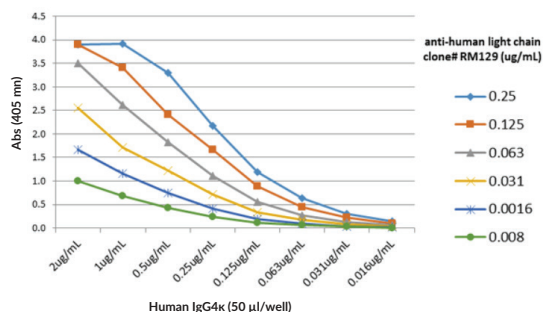
Images



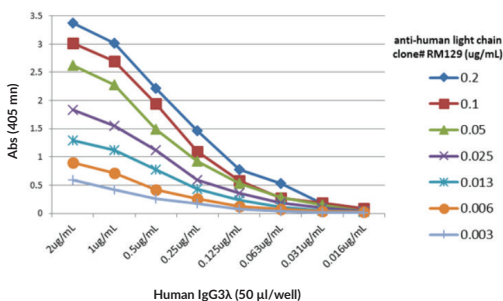
ELISA of Rhesus Monkey IgG. Ig Light Chain (human) Monoclonal Antibody does not react to monkey IgG. The plate was coated with rhesus monkey IgG. A serial dilution of Ig Light Chain (human) Monoclonal Antibody was used with a monkey IgG-reacting antibody (positive control) as the detection antibody.



ELISA of Human Immunoglobulins. Ig Light Chain (human) Monoclonal Antibody reacts only to human Igk and human Igλ and not to mouse, rat, or goat IgG.



A Titer ELISA using Ig Light Chain (human) Monoclonal Antibody. The plate was coated with different amounts of human IgG4k. A serial dilution of Ig Light Chain (human) 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 Ig Light Chain (human) Monoclonal Antibody. The plate was coated with different amounts of human IgG3λ. A serial dilution of Ig Light Chain (human) 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.

PRODUCT INFORMATION



Description

Immunoglobulins are members of the glycoprotein superfamily that play a central role in the adaptive immune response.¹ They are produced by B cells and later secreted by plasma cells as antibodies.² Immunoglobulins are composed 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.³ Mammalian immunoglobulins contain either Ig κ or Ig λ light chains, each of which are composed of a constant and variable domain.⁴ The ratio of Ig κ to Ig λ light-chain containing antibodies varies between species, with ratios of 20:1, 2:1, and 1:20 in mice, humans, and cattle, respectively. Ig κ and Ig λ free light chains (FLCs) are produced during immunoglobulin synthesis, and accumulation of these FLCs is associated with various disorders, including light-chain deposition disease, multiple myeloma, rheumatoid arthritis, diabetic nephropathy, and systemic lupus erythematosus (SLE).^{2,5,6} Cayman's Ig Light Chain (human) Rabbit Monoclonal Antibody (Clone RM129) be used for ELISA, flow cytometry (FC), immunocytochemistry (ICC), and immunohistochemistry (IHC) applications. The antibody recognizes both the Ig κ and Ig λ light chains from human samples.

References

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2. Esparvarinha, M., Nickho, H., Mohammadi, H., *et al.* The role of free kappa and lambda light chains in the pathogenesis and treatment of inflammatory diseases. *Biomed. Pharmacother.* **91**, 632-644 (2017).
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4. Janeway, C.A., Jr., Travers, P., Walport, M., *et al.* Antigen recognition by B-cell and T-cell receptors. *Immunobiology: The Immune System in Health and Disease*, Lawrence, E., 6th edition, *Garland Science Publishing* (2004).
5. Jimenez-Zepeda, V.H. Light chain deposition disease: Novel biological insights and treatment advances. *Int. J. Lab. Hematol.* **34**(4), 347-355 (2012).
6. Sannier, A., Hanouna, G., Daugas, E., *et al.* IgA kappa light and heavy chain deposition disease in multiple myeloma. *Br. J. Haematol.* **183**(1), 13 (2018).

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