

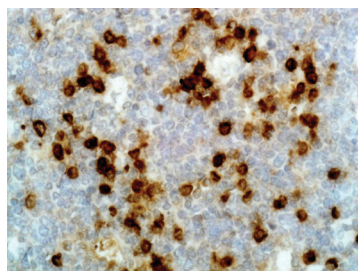
# PRODUCT INFORMATION

## Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127) Item No. 32109

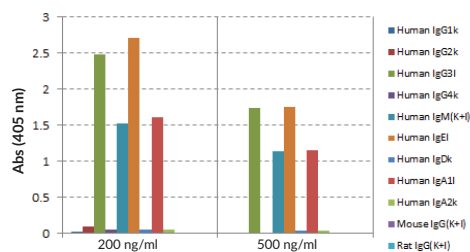
### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Synonyms:</b>	Igλ, Immunoglobulin λ Light Chain
<b>Immunogen:</b>	Human IgG
<b>Cross Reactivity:</b>	(-) Human Igκ light chain; (-) Cynomolgus monkey, goat, mouse, rat, or rhesus monkey IgG
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	RM127
<b>Host:</b>	Rabbit
<b>Applications:</b>	ELISA, flow cytometry (FC), immunocytochemistry (ICC), immunohistochemistry (IHC); the recommended starting concentration for ELISA is 0.05–0.2 µg/ml, 0.2–2 µg/ml for FC, 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

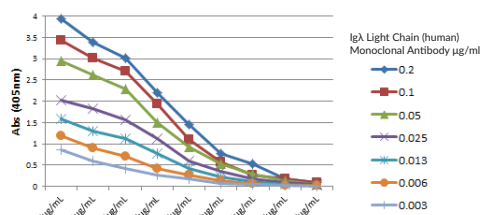


Immunohistochemical staining of formalin-fixed and paraffin-embedded human tonsil tissue section using Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127) (Item No. 32109).



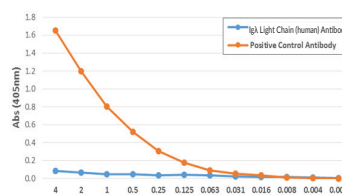
Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127)

ELISA showing Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127) reacts only to the λ light chain of human immunoglobulins, and not to the κ light chain, mouse IgG, rat IgG, or goat IgG.



Igλ Light Chain (human) (50 µl/well)

A titer ELISA using Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127). The plate was coated with different amounts of human IgG3λ. A serial dilution of Igλ Light Chain (human) Monoclonal Rabbit Antibody (Clone RM127) was used as the primary antibody, followed by an alkaline phosphatase-conjugated anti-rabbit IgG as the secondary antibody.



Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127) and Positive Control Antibody (µg/ml)

ELISA showing Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127) does not react to monkey IgG. The plate was coated with Rhesus monkey IgG. A serial dilution of Igλ Light Chain (human) Rabbit Monoclonal Antibody (Clone RM127) and a monkey IgG-binding antibody (positive control) was used as the detection 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**  
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## Description

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Ig $\lambda$  light chain is one type of light chain found in immunoglobulins, which are part of the immunoglobulin superfamily of glycoproteins that plays a central role in the adaptive immune response.<sup>1</sup> Immunoglobulins are produced by B cells and later secreted by plasma cells as antibodies.<sup>2</sup> They are composed of two heavy chains of approximately 50 kDa each and two light chains of approximately 25 kDa each.<sup>1</sup> 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.<sup>3</sup> Mammalian immunoglobulins contain either Ig $\kappa$  or Ig $\lambda$  light chains, each of which are composed of a constant and variable domain.<sup>2,4</sup> The ratio of Ig $\kappa$  to Ig $\lambda$  light chain-containing antibodies varies between species, with ratios of 20:1, 2:1, and 1:20 in mice, humans, and cattle, respectively. In systemic amyloidosis, a clonal population of plasma cells produces light chains that form amyloid fibrils, and the type of free light chains (FLCs) produced is predominantly Ig $\lambda$  with an Ig $\kappa$  to Ig $\lambda$  ratio of 1:3 or, in amyloidosis patients with nephrotic-range proteinuria, 1:5.<sup>5</sup> Cayman's Ig $\lambda$  Light Chain (human) Monoclonal Antibody (Clone RM127) can be used for ELISA, flow cytometry (FC), immunocytochemistry (ICC), and immunohistochemistry (IHC) applications. The antibody recognizes the  $\lambda$  light chain from human samples.

## References

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1. Schroeder, H.W., Jr. and Cavicini, L. Structure and function of immunoglobulins. *J. Allergy Clin. Immunol.* **125**(2 Suppl. 2), S41-S52 (2010).
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).
3. Vaillant A.A.J. and Ramphul K. Immunoglobulin. In: StatPearls [Internet]. Treasure Island (FL): StatPearlsPublishing (2020). Available from: <https://www.ncbi.nlm.nih.gov/books/NBK513460/>
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., editor. 6th edition, Garland Science Publishing (2004).
5. Gertz, M.A., Lacy, M.Q., and Dispenzieri, A. Immunoglobulin light chain amyloidosis and the kidney. *Kidney Int.* **61**(1), 1-9 (2002).

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