

PRODUCT INFORMATION

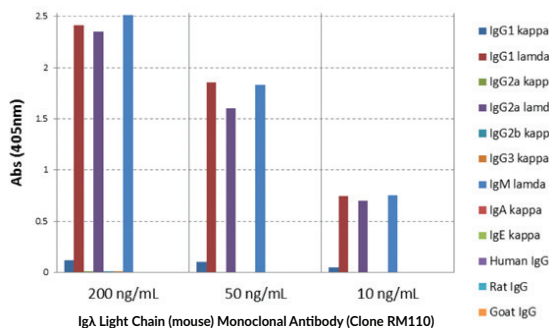
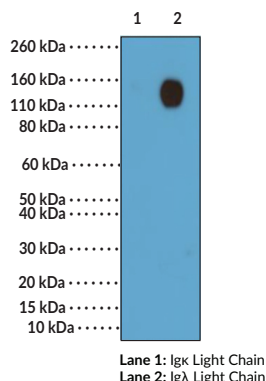


Igλ Light Chain (mouse) Rabbit Monoclonal Antibody (Clone RM110) Item No. 32000

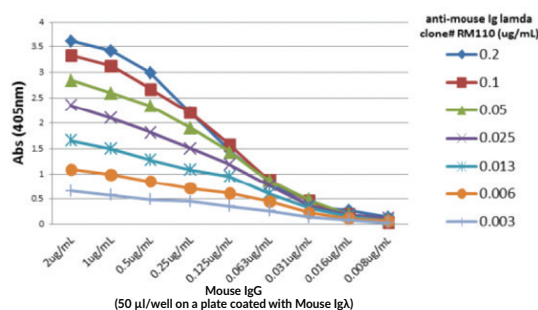
Overview and Properties

| | |
|----------------------------|---|
| Contents: | This vial contains 100 µg of protein A-affinity purified monoclonal antibody. |
| Synonym: | Immunoglobulin λ Light Chain |
| Immunogen: | Mouse IgMλ |
| Cross Reactivity: | (-) Igk light chain, human, rat, goat IgG |
| Species Reactivity: | (+) Mouse |
| 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: | RM110 |
| Host: | Rabbit |
| Isotype: | IgG |
| Applications: | ELISA, Western Blot (WB; non-reducing conditions); the recommended starting concentration for ELISA is 0.005-0.2 µg/ml and 0.1-0.5 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

Images



ELISA of Mouse Immunoglobulins (Igs). Igλ Light Chain (mouse) Rabbit Monoclonal Antibody (Clone RM110) reacts only to λ light chain of all mouse Igs and not human, rat, or goat IgG.



A Titer ELISA of Igλ Light Chain (mouse) Rabbit Monoclonal Antibody (Clone RM110). The plate was coated with different amounts of mouse Igλ. A serial dilution of RM110 was used as the primary antibody. An alkaline phosphatase conjugated anti-rabbit IgG as the second

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.

Copyright Cayman Chemical Company, 11/09/2023

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Ig λ 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.¹ Immunoglobulins are produced by B cells and later secreted by plasma cells as antibodies.² They 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.^{2,4} 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. 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 λ with an Ig κ to Ig λ ratio of 1:3 or, in amyloidosis patients with nephrotic-range proteinuria, 1:5.⁵ Cayman's Ig λ Light Chain (mouse) Rabbit Monoclonal Antibody (Clone RM110) can be used for ELISA and Western blot (WB; non-reducing conditions) applications. The antibody recognizes the Ig λ light chain from mouse samples.

References

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): StatPearls Publishing (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* 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM