

PRODUCT INFORMATION



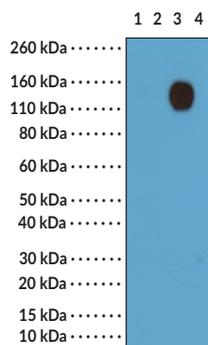
Igλ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM110)

Item No. 32346

Overview and Properties

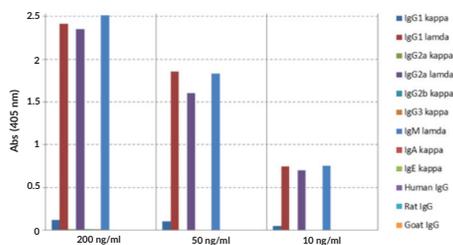
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|----------------------------|--|
| Contents: | This vial contains 50 µg of protein A-affinity purified monoclonal antibody. |
| Synonym: | Immunoglobulin λ Light Chain |
| Immunogen: | Mouse IgMλ |
| Cross Reactivity: | (+) Igλ light chain; (-) Igκ light chain; (-) Human, goat, rat 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 and Western blot (WB; non-reducing conditions); the recommended starting concentration is 0.005-0.2 µg/ml for ELISA and 0.1-0.5 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

Images



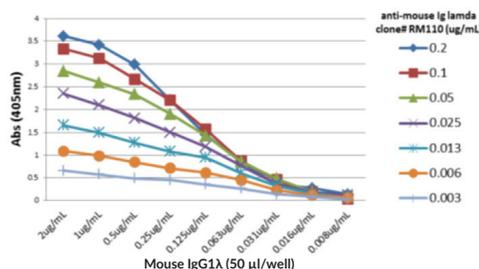
Lane 1: Mouse IgG1κ non-reduced (20 ng)
Lane 2: Mouse IgG1κ reduced (20 ng)
Lane 3: Mouse IgG1λ non-reduced (20 ng)
Lane 4: Mouse IgG1λ reduced (20 ng)

WB of mouse IgG1κ and IgG1λ non-reduced or reduced using Igλ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM110) at a concentration of 0.2 µg/ml.



Igλ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM110)

ELISA of mouse immunoglobulins. Igλ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM110) reacts only to Igλ light chain and not to Igκ light chain, human IgG, rat IgG, or goat IgG. The plate was coated with 50 ng/well of different immunoglobulins. Igλ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated was used as the primary antibody and an alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary



A Titer ELISA using Igλ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM110). The plate was coated with different amounts of mouse IgG1λ. A serial dilution of Igλ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated (RM110) 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

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) Monoclonal Antibody - Biotinylated (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

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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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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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