

PRODUCT INFORMATION

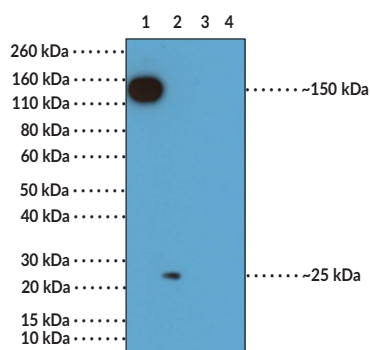


Igk Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated Item No. 32347

Overview and Properties

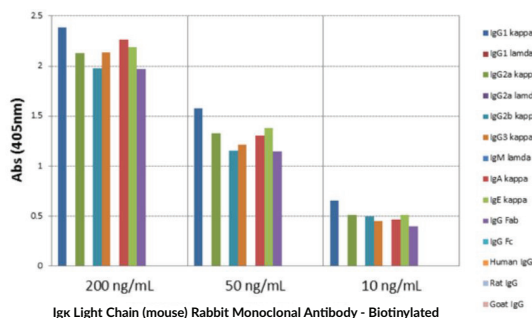
Contents:	This vial contains 50 µg of protein A-affinity purified monoclonal antibody.
Synonym:	Immunoglobulin κ Light Chain
Immunogen:	Mouse IgG
Cross Reactivity:	(+) Igk light chain; (-) Mouse Igλ light chain, (-) Human, goat, rat IgG
Species Reactivity:	(+) Mouse
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration:	1.0 mg/ml
Clone:	RM103
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA and Western blot (WB); 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

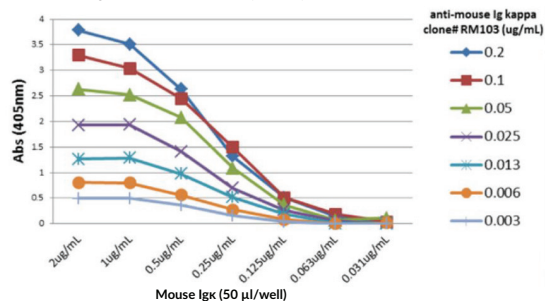


Lane 1: Non-reduced mouse Igk (20 ng)
Lane 2: Reduced mouse Igk (20 ng)
Lane 3: Non-reduced mouse Igλ (20 ng)
Lane 4: Reduced mouse Igλ (20 ng)

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



ELISA of Mouse Immunoglobulins (Igs). Igk Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated reacts only to the Igk light chain of mouse Igs and not to the Igλ light chain, or human, goat, or rat IgG. The plate was coated with 50 ng/well of different Igs: 200, 50, or 10 ng/ml of Igk 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 antibody.



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

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Description

Igκ 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 Igκ or Igλ light chains, each of which are composed of a constant and variable domain.⁴ The ratio of Igκ to Igλ light chain-containing antibodies varies between species, with ratios of 20:1, 2:1, and 1:20 in mice, humans, and cattle, respectively. Igκ and Igλ free light chains (FLCs) are produced during immunoglobulin synthesis, and accumulation of these FLCs, primarily Igκ, 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 Igκ Light Chain (mouse) Rabbit Monoclonal Antibody - Biotinylated can be used for ELISA and Western blot (WB) applications. The antibody recognizes the non-reduced and reduced Igκ light chain from mouse samples at approximately 150 and 25 kDa, respectively.

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).
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/>
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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).

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