

PRODUCT INFORMATION



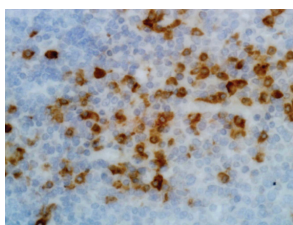
Igk Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (RM126)

Item No. 32365

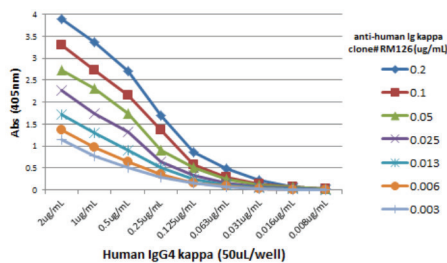
Overview and Properties

Contents: This vial contains 50 µg of protein A-affinity purified monoclonal antibody.
Synonyms: Igκ, Immunoglobulin κ Light Chain
Immunogen: Human IgG
Cross Reactivity: (+) Igκ light chain; (-) Igλ light chain; (-) Goat, mouse, rat 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: RM126
Host: Rabbit
Isotype: IgG
Applications: ELISA, Flow Cytometry (FC), Immunocytochemistry (ICC), and Immunohistochemistry (IHC); the recommended starting concentration is 0.05-0.2 µg/ml for ELISA and 0.5-2 µg/ml for FC, ICC, and IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

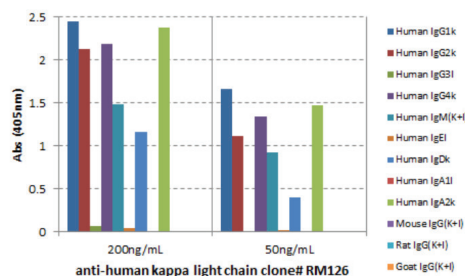
Images



Immunohistochemical staining of human tonsil tissue using Igκ Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (RM126).



A Titer ELISA using Igκ Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (RM126). The plate was coated with different amounts of human IgG4κ. A serial dilution of Igκ Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (RM126) was used as the primary antibody and an alkaline phosphatase-conjugated anti-rabbit IgG was used as the secondary antibody.



ELISA of human immunoglobulins. Igκ Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (RM126) reacts to the kappa light chain of human immunoglobulins and not to the lambda light chain, mouse IgG, rat IgG, or goat IgG. The plate was coated with 50 ng/well of different immunoglobulins. Igκ Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (RM126) 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

Igk 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 Igk or Igλ light chains, each of which are composed of a constant and variable domain.⁴ The ratio of Igk 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. Igk and Igλ free light chains (FLCs) are produced during immunoglobulin synthesis, and accumulation of these FLCs, primarily Igk, 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 Igk Light Chain (human) Rabbit Monoclonal Antibody - Biotinylated (RM127) can be used for ELISA, flow cytometry (FC), immunocytochemistry (ICC), and immunohistochemistry (IHC) applications. The antibody recognizes the Igk light chain from human 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: The immune system in health and disease*. Lawrence, E., editor, Garland Science (2005).
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