

# Kininogen LC (14J09): sc-80524

## BACKGROUND

Kininogen is a 644 amino acid precursor protein that is expressed by the KNG1 gene and is secreted into blood plasma. Due to alternative splicing events, several Kininogen protein derivatives exist, including Kininogen LC (light chain) and Kininogen HC (heavy chain), both of which are produced from the Kininogen precursor and exhibit different functions throughout the cell. Kininogen HC plays an important role in blood coagulation by helping to ensure that prekallikrein and Factor XI (both of which are involved in blood coagulation) are properly situated for interaction with Factor XII. Additionally, Kininogen HC releases a smaller, active protein known as bradykinin, which plays a role in smooth muscle contraction, induction of hypotension, regulation of blood glucose levels, stimulation of nociceptors and overall mediation of inflammatory responses throughout the cell. In contrast to Kininogen HC, which is involved in blood clotting, Kininogen LC is primarily associated with inhibition of thrombocyte aggregation and also functions as a strong inhibitor of cysteine proteinases.

## REFERENCES

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2. Kato, H., et al. 1979. Role of bovine high-molecular-weight (HMW) Kininogen in contact-mediated activation of bovine Factor XII. *Adv. Exp. Med. Biol.* 120B: 19-37.
3. Kaplan, A.P. 1979. The role of high molecular weight Kininogen in contact activation of coagulation, fibrinolysis and kinin generation. *Adv. Exp. Med. Biol.* 120B: 71-91.
4. Kitamura, N., et al. 1985. Structural organization of the human Kininogen gene and a model for its evolution. *J. Biol. Chem.* 260: 8610-8617.
5. Cheung, P.P., et al. 1992. Chromosomal mapping of human Kininogen gene (KNG) to 3q26—qter. *Cytogenet. Cell Genet.* 59: 24-26.
6. Greenbaum, L.M. 1992. The T-Kininogen, T-kinin system of the rat. *Agents Actions Suppl.* 36: 215-222.
7. el-Dahr, S.S., et al. 1993. Molecular aspects of kallikrein and Kininogen in the maturing kidney. *Pediatr. Nephrol.* 7: 646-651.
8. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 228960. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
9. Imamura, T., et al. 2002. Release of a new vascular permeability enhancing peptide from Kininogens by human neutrophil elastase. *Biochem. Biophys. Res. Commun.* 294: 423-428.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: KNG1 (human) mapping to 3q27.3.

## SOURCE

Kininogen LC (14J09) is a mouse monoclonal antibody raised against amino acids 438-531 of recombinant Kininogen LC of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> in 1.0 ml PBS with < 0.1% sodium azide and protein stabilizer.

## APPLICATIONS

Kininogen LC (14J09) is recommended for detection of Kininogen LC of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Kininogen siRNA (h): sc-40723, Kininogen shRNA Plasmid (h): sc-40723-SH and Kininogen shRNA (h) Lentiviral Particles: sc-40723-V.

Molecular Weight of Kininogen HC: 64 kDa.

Molecular Weight of Kininogen LC: 53 kDa.

Positive Controls: ECV304 cell lysate: sc-2269.

## SELECT PRODUCT CITATIONS

1. Phan, Q.T., et al. 2022. Serum bridging molecules drive candidal invasion of human but not mouse endothelial cells. *PLoS Pathog.* 18: e1010681.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.