

Kininogen LC (1.B.709): sc-59581

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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5. Cheung, P.P., et al. 1992. Chromosomal mapping of human Kininogen gene (KNG) to 3q26-qter. *Cytogenet. Cell Genet.* 59: 24-26.
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8. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 228960. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

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

SOURCE

Kininogen LC (1.B.709) is a mouse monoclonal antibody raised against purified high molecular weight Kininogen (HMWK) of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Kininogen LC (1.B.709) 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.

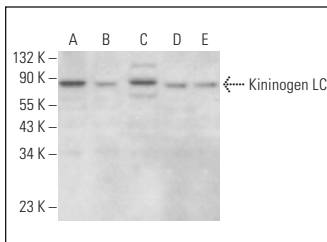
Molecular Weight of Kininogen LC: 53 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HEK293 whole cell lysate: sc-45136 or COLO 205 whole cell lysate: sc-364177.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Kininogen LC (1.B.709): sc-59581. Western blot analysis of Kininogen LC expression in Caki-1 (A), HEK293 (B), COLO 205 (C), ACHN (D) and HL-60 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Garnier, E., et al. 2021. Factor XII protects neurons from apoptosis by epidermal and hepatocyte growth factor receptor-dependent mechanisms. *J. Thromb. Haemost.* 19: 2235-2247.

STORAGE

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

RESEARCH USE

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