

Kininogen HC (1.B.708): sc-59580

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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3. Mills, I.H. 1979. Kallikrein, kininogen and kinins in control of blood pressure. *Nephron* 23: 61-71.
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.
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CHROMOSOMAL LOCATION

Genetic locus: KNG1 (human) mapping to 3q27.3; Kng2 (mouse) mapping to 16 B1.

SOURCE

Kininogen HC (1.B.708) 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.

RESEARCH USE

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

APPLICATIONS

Kininogen HC (1.B.708) is recommended for detection of common heavy chain of HMWK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Kininogen siRNA (h): sc-40723, Kininogen siRNA (m): sc-39326, Kininogen shRNA Plasmid (h): sc-40723-SH, Kininogen shRNA Plasmid (m): sc-39326-SH, Kininogen shRNA (h) Lentiviral Particles: sc-40723-V and Kininogen shRNA (m) Lentiviral Particles: sc-39326-V.

Molecular Weight of Kininogen HC: 64 kDa.

Molecular Weight of Kininogen LC: 53 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or Caki-1 cell lysate: sc-2224.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

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 for detailed protocols and support products.