SANTA CRUZ BIOTECHNOLOGY, INC.

Kininogen LC (C-16): sc-25885

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The kinin substrate, Kininogen, is a potent inhibitor of lysosomal cysteine proteases in the tissue kallikrein-kinin system (KKS). The KKS consists of one circulation-only component and one exclusive tissue and circulation component. Upon tissue damage, the KKS is one of the first inflammatory pathways that influences vasodilation and blood pressure regulation at the site of damage. The KKS begins with coagulation factor XII conversion of prekallikrein to kallikrein, subsequent kallikrein-dependent digestion of high molecular weight kininogen (HK), and liberation of the vasoactive, pro-inflammatory mediator bradykinin (BK). In concert with the KKS, factor XIIa activates factor XI to continue the intrinsic coagulation cascade. Cleavage of HK by plasma kallikrein results in a kininogen light chain and heavy chain. Urinary obstruction in the kidneys and liver upregulates kininogen synthesis. By neutralizing cysteine proteases, kininogen may protect the tubular epithelium of obstructed nephrons from excessive apoptosis at tissue damage sites. The human kininogen gene maps to chromosome 3q27 and encodes a 427 amino acid protein.

REFERENCES

1. 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. 120: 19-37.
2. 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.
3. Kitamura, N., et al. 1985. Structural organization of the human kininogen gene and a model for its evolution. J. Biol. Chem. 260: 8610-8617.
4. Cheung, P.P., et al. 1992. Chromosomal mapping of human kininogen gene (KNG) to 3q26——qter. Cytogenet. Cell Genet. 59: 24-26.
5. Greenbaum, L.M. 1992. The T-kininogen, T-kinin system of the rat. Agents Actions Suppl. 36: 215-222.
6. el-Dahr, S.S., et al. 1993. Molecular aspects of kallikrein and kininogen in the maturing kidney. Pediatr. Nephrol. 7: 646-651.
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SOURCE

Kininogen LC (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Kininogen LC of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25885 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Kininogen LC (C-16) is recommended for detection of full length Kininogen precursor and Kininogen light chain of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

Positive Controls: ECV304 cell lysate: sc-2269.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **Kininogen LC (C11C1): sc-23915** or **Kininogen LC (14J09): sc-80524**, our highly recommended monoclonal alternatives to Kininogen LC (C-16).