SANTA CRUZ BIOTECHNOLOGY, INC.

plasma kallikrein (H-25): sc-133915

BACKGROUND

plasma prekallikrein is a glycoprotein that is synthesized in the liver and is secreted into the blood as a single polypeptide chain that participates in the surface-dependent activation of blood coagulation, fibrinolysis, kinin generation and inflammation. The human plasma prekallikrein gene maps to chromosome 4q35.2 and encodes a serine proteinase, known as Fletcher Factor. plasma prekallikrein converts to plasma kallikrein by Factor XII A through the cleavage of an internal Arg-Ile bond. plasma kallikrein releases bradykinin when activated by gram-negative septicemia or irreversible hemorrhagic shock. plasma prekallikrein activation induces the cleavage of high molecular weight kininogen (HK) and subsequent liberation of bradykinin. Cleaved HK is antiangiogenic, and bradykinin stimulates tPA liberation and nitric oxide formation. Activated plasma kallikrein promotes single-chain urokinase activation and subsequent plasminogen activation kininigens and their breakdown products are antithrombin agents.

REFERENCES

1. Mills, I.H. 1979. Kallikrein, kininogen and kinins in control of blood pressure. Nephron 23: 61-71.
2. Colman, R.W., Sartor, R.B., Adam, A.A., DeLa Cadena, R.A. and Stadnicki, A. 1998. The plasma kallikrein-kinin system in sepsis, inflammatory arthritis, and enterocolitis. Clin. Rev. Allergy Immunol. 16: 365-384.
3. Schmaier, A.H. 2000. Plasma kallikrein/kinin system: a revised hypothesis for its activation and its physiologic contributions. Curr. Opin. Hematol. 7: 261-265.
4. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 229000. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. LocusLink Report (LocusID: 3818). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: KLKB1 (human) mapping to 4q35.2.

SOURCE

plasma kallikrein (H-25) is a protein A purified rabbit polyclonal antibody raised against synthetic plasma kallikrein peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

plasma kallikrein (H-25) is recommended for detection of plasma kallikrein of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for plasma kallikrein siRNA (h): sc-40411, plasma kallikrein shRNA Plasmid (h): sc-40411-SH and plasma kallikrein shRNA (h) Lentiviral Particles: sc-40411-V.

Molecular Weight of plasma kallikrein precursor: 71 kDa.

Molecular Weight of plasma kallikrein HC: 46 kDa.

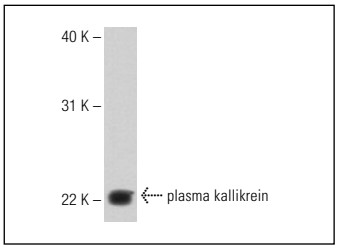
Molecular Weight of plasma kallikrein LC: 31 kDa.

Positive Controls: Human fetal liver tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



plasma kallikrein (H-25): sc-133915. Western blot analysis of plasma kallikrein expression in human fetal liver tissue extract.

RESEARCH USE

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