SANTA CRUZ BIOTECHNOLOGY, INC.

KLK7 (H-5): sc-514447

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Kallikreins (KLKs) belong to the serine protease family of proteolytic enzymes. Human pancreatic/renal KLK encodes for the KLK1 enzyme, which is involved in post-translational processing of polypeptide precursors. The function of the other members of KLK gene family is currently unknown, but evidence suggests that many KLKs are implicated in carcinogenesis. The human KLK gene family consists of 15 serine proteases. The human KLK genes are clustered on chromosome 19q13.41. Unlike other kalllikreins, the KLK4-15 encoded proteases are less related and do not contain a conventional KLK loop. Clusters of genes exhibit high prostatic (KLK2-4, KLK15) or pancreatic (KLK6-13) expression. KLK2 is also known as glandular kallikrein 2, tissue kallikrein or HGK-1, and KLK3 is known as prostate-specific antigen (PSA). Both KLK2 and KLK3 have important applications in prostate cancer and breast cancer diagnostics. KLK4, KLK5, KLK9, KLK13, KLK12 and KLK14 have been previously known as KLK-L1, KLK-L2, KLK-L3, KLK-L4, KLK-L5 and KLK-L6, respectively. Many of the KLKs are regulated by steroid hormones and a few of them, specifically KLK3, KLK6 and KLK10, are known to be downregulated in breast and other cancers.

REFERENCES

1. Yousef, G.M., et al. 2000. Genomic organization of the human kallikrein gene family on chromosome 19q13.3-q13.4. Biochem. Biophys. Res. Commun. 276: 125-133.
2. Diamandis, E.P., et al. 2000. The new human kallikrein gene family: implications in carcinogenesis. Trends Endocrinol. Metab. 11: 54-60.
3. Yousef, G.M., et al. 2001. Cloning of a new member of the human kallikrein gene family, KLK14, which is down regulated in different malignancies. Cancer Res. 61: 3425-3431.

CHROMOSOMAL LOCATION

Genetic locus: KLK7 (human) mapping to 19q13.41; Klk7 (mouse) mapping to 7 B4.

SOURCE

KLK7 (H-5) is a mouse monoclonal antibody raised against amino acids 154-203 of KLK7 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KLK7 (H-5) is available conjugated to agarose (sc-514447 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514447 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514447 PE), fluorescein (sc-514447 FITC), Alexa Fluor® 488 (sc-514447 AF488), Alexa Fluor® 546 (sc-514447 AF546), Alexa Fluor® 594 (sc-514447 AF594) or Alexa Fluor® 647 (sc-514447 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514447 AF680) or Alexa Fluor® 790 (sc-514447 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

KLK7 (H-5) is recommended for detection of KLK7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 KLK7 siRNA (h): sc-41533, KLK7 siRNA (m): sc-41534, KLK7 shRNA Plasmid (h): sc-41533-SH, KLK7 shRNA Plasmid (m): sc-41534-SH, KLK7 shRNA (h) Lentiviral Particles: sc-41533-V and KLK7 shRNA (m) Lentiviral Particles: sc-41534-V.

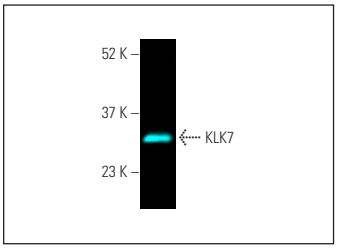
Molecular Weight of KLK7: 27 kDa.

Positive Controls: mouse skin extract: sc-364251.

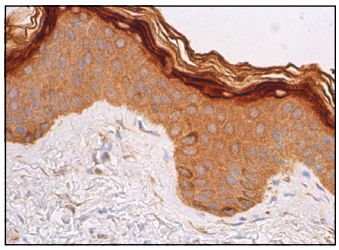
RECOMMENDED SUPPORT REAGENTS

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.

DATA



KLK7 (H-5) Alexa Fluor® 647: sc-514447 AF647. Direct fluorescent western blot analysis of KLK7 expression in mouse skin tissue extract. Blocked with UltraCruz® Blocking Reagent: sc-516214.



KLK7 (H-5): sc-514447. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes.

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.