

KLK1 (13G11): sc-58372

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 posttranslational processing of polypeptide precursors. The function of the other members of KLK gene family is still 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. Unlike other kallikreins, 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

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CHROMOSOMAL LOCATION

Genetic locus: KLK1 (human) mapping to 19q13.33.

SOURCE

KLK1 (13G11) is a mouse monoclonal antibody raised against purified prekallikrein 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.

KLK1 (13G11) is available conjugated to agarose (sc-58372 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58372 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58372 PE), fluorescein (sc-58372 FITC), Alexa Fluor® 488 (sc-58372 AF488), Alexa Fluor® 546 (sc-58372 AF546), Alexa Fluor® 594 (sc-58372 AF594) or Alexa Fluor® 647 (sc-58372 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-58372 AF680) or Alexa Fluor® 790 (sc-58372 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

KLK1 (13G11) is recommended for detection of two variants of pre-KLK1 and KLK1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for KLK1 siRNA (h): sc-43882, KLK1 shRNA Plasmid (h): sc-43882-SH and KLK1 shRNA (h) Lentiviral Particles: sc-43882-V.

Molecular Weight of KLK1: 30-50 kDa.

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.

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 for detailed protocols and support products.