

KLK7 (H-50): sc-20625

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 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 19q13.41. 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

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.
4. Clements, J., et al. 2001. The expanded human kallikrein (KLK) gene family: genomic organization, tissue-specific expression and potential functions. *Biol. Chem.* 382: 5-14.
5. Yousef, G.M., et al. 2001. Molecular cloning of the human kallikrein 15 gene (KLK15). Up-regulation in prostate cancer. *J. Biol. Chem.* 276: 53-61.

CHROMOSOMAL LOCATION

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

SOURCE

KLK7 (H-50) is a rabbit polyclonal antibody raised against amino acids 154-203 mapping near the C-terminus of KLK7 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

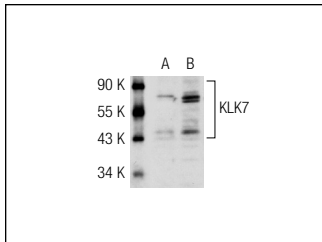
KLK7 (H-50) is recommended for detection of KLK7 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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.

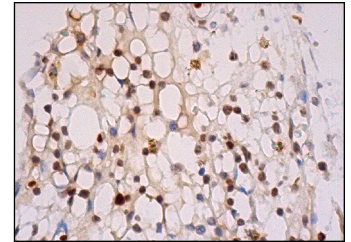
Molecular Weight of KLK7: 27 kDa.

Positive Controls: KLK7 (h): 293T Lysate: sc-113751.

DATA



KLK7 (H-50): sc-20625. Western blot analysis of KLK7 expression in non-transfected: sc-117752 (A) and human KLK7 transfected: sc-113751 (B) 293T whole cell lysates.



KLK7 (H-50): sc-20625. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic and nuclear staining of subset of hematopoietic cells.

SELECT PRODUCT CITATIONS

1. Ishida-Yamamoto, A., et al. 2005. LEKTI is localized in lamellar granules, separated from KLK5 and KLK7, and is secreted in the extracellular spaces of the superficial stratum granulosum. *J. Invest. Dermatol.* 124: 360-366.
2. Raymond, A.A., et al. 2008. Lamellar bodies of human epidermis: Proteomics characterization by high throughput mass spectrometry and possible involvement of CLIP-170 in their trafficking/secretion. *Mol. Cell. Proteomics* 7: 2151-2175.
3. Yamamuro, T., et al. 2013. Tickling stimulation causes the up-regulation of the kallikrein family in the submandibular gland of the rat. *Behav. Brain Res.* 236: 236-243.

RESEARCH USE

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


 MONOS
Satisfation
Guaranteed

Try **KLK7 (H-5): sc-514447** or **KLK7 (1407): sc-80148**, our highly recommended monoclonal alternatives to KLK7 (H-50).