

# KLK10 (G-15): sc-20386

## 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 19q13.41. 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, 6, 10 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.
6. Shimizu-Okabe, C., et al. 2001. Expression of the kallikrein gene family in normal and Alzheimer's disease. *Neuroreport* 12: 27447-27451.

## CHROMOSOMAL LOCATION

Genetic locus: KLK10 (human) mapping to 19q13.41; Klk10 (mouse) mapping to 7 B4.

## SOURCE

KLK10 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KLK10 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-20386 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

KLK10 (G-15) is recommended for detection of KLK10 of mouse, rat and 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).

KLK10 (G-15) is also recommended for detection of KLK10 in additional species, including bovine.

Suitable for use as control antibody for KLK10 siRNA (h): sc-41538, KLK10 siRNA (m): sc-41539, KLK10 shRNA Plasmid (h): sc-41538-SH, KLK10 shRNA Plasmid (m): sc-41539-SH, KLK10 shRNA (h) Lentiviral Particles: sc-41538-V and KLK10 shRNA (m) Lentiviral Particles: sc-41539-V.

Molecular Weight of KLK10: 30 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

## 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.

## SELECT PRODUCT CITATIONS

1. Feng, B., et al. 2006. Clinical significance of human kallikrein 10 gene expression in colorectal cancer and gastric cancer. *J. Gastroenterol. Hepatol.* 21: 1596-1603.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **KLK10 (2): sc-135961**, our highly recommended monoclonal alternative to KLK10 (G-15).