

Human KLK13 / Kallikrein-13 Protein (His Tag)

Catalog Number: 10199-H08H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

KLK-L4; KLKL4

Protein Construction:

A DNA sequence encoding the pro-form of human KLK13 (NP_056411.1) (Met 1-Ile 262) was expressed with a C-terminal polyhistidine tag.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to cleave the fluorogenic peptide substrate Boc-VPR-AMC (R&D Systems, Catalog # ES011) . The specific activity is >200 pmoles/min/μg. (Activation description: The proenzyme needs to be activated by Lysyl-Endopeptidase for an activated form)

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gly 18

Molecular Mass:

The recombinant human KLK13 consists of 256 amino acids and has a predicted molecular mass of 28.4 kDa. As a result of glycosylation, the apparent molecular mass of rh KLK13 is approximately 33-37 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

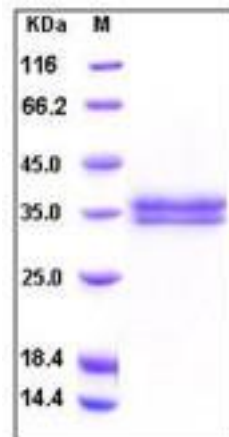
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Human tissue kallikrein 13 (hK13), also known as KLK-L4 (kallikrein-like gene 4), is a member of the human tissue kallikrein family of serine proteases having diverse physiological functions in many tissues. The KLK13 gene resides on chromosome 19q13.3-4 along with other 14 members in a gene cluster and shares a high degree of homology. KLK13 is a trypsin-like, secreted serine protease expressed specifically in the testicular tissue including prostate, salivary gland, breast, and testis. Growing evidence suggests that many kallikreins are implicated in carcinogenesis and may play a role in metastasis. KLK13 may be involved in the pathogenesis and/or progression of breast and ovary cancers, and is regarded as a novel cancer biomarker. In addition, KLK13 interacts and forms complexes with several serum protease inhibitors, such as alpha2-macroglobulin, and its expression is regulated by steroid hormones.

References

1. Yousef G.M., *et al.*, (2000), Identification and characterization of KLK-L4, a new kallikrein-like gene that appears to be down-regulated in breast cancer tissues. *J. Biol. Chem.* 275:11891-11898.
2. Komatsu N., *et al.*, (2003), Expression and localization of tissue kallikrein mRNAs in human epidermis and appendages. *J. Invest. Dermatol.* 121:542-549.
3. Andres A.M., *et al.*, (2007), Understanding the accuracy of statistical haplotype inference with sequence data of known phase. *Genet. Epidemiol.* 31:659-671.

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