

Active Recombinant Human KLK1, His-tagged

Cat. No. KLK1-643H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human KLK1 produced in E. coli is approximately 29.7 kDa, a single non-glycosylated polypeptide chain containing 262 amino acids with 6×His at C-terminus.
Species	Human
Source	E.coli
Description	Kallikreins are members of a highly conserved serine proteases that are involved in the post-translational modification of many polypeptides, and plays a role in diverse physiological processes. Fifteen kallikreins who seen coding genes are located in a cluster on chromosome 19 have been reported, and growing evidence suggests that many kallikreins are implicated in carcinogens is and some have potential as novel cancer and other disease biomarkers. Human kallikrein1(KLK1), also known as tissue kallikrein, is functionally conserved in its capacity to cleave the low molecular weight kininogen to release the vasoactive peptide, Lys-bradykinin which plays a role in regulating vasodilation, blood pressure reduction, smooth muscle relaxation and contraction, pain induction and inflammation.
Form	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Bio-activity	Fully biologically active when compared to standard. The specific activity determined by cleaving a flourogenic peptide substrate Pro-Phe-Arg-7-amido-4-methylcoumarin (PFRAMC) is no less than 1,500 pmoles/min/µg.

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Molecular Mass	29.7 kDa
AA Sequence	MWFLVLCLAL SLGGTGAAPP IQSRIVGGWE CEQHSQPWQA ALYHFSTFQC GGILVHRQWV LTAHCISDN YQLWLGRHNL FDDENTAQFV HVSESFPHPG FNMSLLENHT RQADEDYSHD LMLRLTEPA DTITDAVKVV ELPTEEPEVG STCLASGWGS IEPENFSFPD DLQCVDLKIL PNDECKKAHV QKVTDFMLCV GHLEGGKDTC VGDSGGPLMC DGV LQGVT SW G
Endotoxin	Less than 1 EU/μg of rHuKLK-1, His as determined by LAL method.
Purity	>90% by SDS-PAGE and HPLC analyses.
Usage	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE.
Storage	This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 centigrade to -70 centigrade. Avoid repeated freeze/thaw cycles.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at< -20="" centigrade="" further="" dilutions="" should="" be="" made="" in="" appropriate="" buffered="" solutions="">

GENE INFORMATION

Gene Name [KLK1 kallikrein 1 \[Homo sapiens \]](#)

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Official Symbol	KLK1
Synonyms	KLK1; kallikrein 1; kallikrein 1, renal/pancreas/salivary; kallikrein-1; Klk6; tissue kallikrein; glandular kallikrein 1; kallikrein serine protease 1; kidney/pancreas/salivary gland kallikrein; hK1; KLKR;
Gene ID	3816
mRNA Refseq	NM_002257
Protein Refseq	NP_002248
UniProt ID	P06870
Chromosome Location	19q13.3
Pathway	Blood Clotting Cascade, organism-specific biosystem; Endocrine and other factor-regulated calcium reabsorption, organism-specific biosystem; Endocrine and other factor-regulated calcium reabsorption, conserved biosystem;
Function	peptidase activity; serine-type endopeptidase activity;

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