

Kallikrein 11/KLK11 Protein, Human, Recombinant (His)

General Information

Synonyms:	TLSP;KLK11;kallikrein-related peptidase 11;PRSS20
Protein Construction:	A DNA sequence encoding the human KLK11 isoform 1 (NP_006844.1) (Met 1-Asn 250) with a C-terminal polyhistidine tag was expressed. Predicted N terminal: Glu 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UBX7-1
Molecular Weight:	27 kDa (predicted); 40 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to cleave a colorimetric peptide substrate D-Val-Leu-Lys-ThioBenzyl ester (VLK-SBzl), in the presence of 5,5'Dithio-bis (2-nitrobenzoic acid) (DTNB) (Edwards, K.M. et al.,1999, J. Biol. Chem. 274: 30468) . The specific activity is >200 pmoles/min/μg. (Activation description: The proenzyme needs to be activated by Thermolysin for an activated form)
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

kallikrein-related peptidase 11 (KLK11), also known as hippostasin, trypsin-like serine protease, and PRSS2, is a member of the human tissue kallikrein family. It is a subgroup of serine proteases with diverse physiological

functions, which are implicated in carcinogenesis and some with potential that serving as novel biomarkers for ovarian and prostate cancer and other diseases. The KLK11 gene is one of the fifteen kallikrein subfamily members located in a cluster on chromosome 19. Two alternatively spliced forms exist, resulting in 25 (isoform 1) and 282 (isoform 2) amino acid sequences. Isoform 2 is identical to isoform 1, except for an inserted 32 amino acid segment. Isoform 1 is predominantly expressed in the brain whereas isoform 2 is preferentially expressed in the prostate.

Reference

Yoshida S.,et al.,(1998), cDNA cloning and expression of a novel serine protease, TLSP. *Biochim. Biophys. Acta* 1399:225-228.

Mitsui S.,et al., (2000), A novel isoform of a kallikrein-like protease, TLSP/hippostasin, (PRSS20), is expressed in the human brain and prostate.*Biochem. Biophys. Res. Commun.* 272:205-211.

Yousef G.M.,et al.,(2000), Genomic organization, mapping, tissue expression, and hormonal regulation of trypsin-like serine protease (TLSP PRSS20), a new member of the human kallikrein gene family.*Genomics* 63:88-96.

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