

Kallikrein 1/KLK1 Protein, Human, Recombinant (His)

General Information

Synonyms:	KLKR;kallikrein 1;hK1;Klk6
Protein Construction:	Ile25-Ser262
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P06870-1
Molecular Weight:	27.5 kDa (predicted); 30-50 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to cleave the fluorogenic peptide substrate: Pro-Phe-Arg-7-amido-4-methylcoumarin (PFR-AMC). The specific activity is >8000 pmol/min/μg. (QC Test) Immobilized Human Kallikrein 1 (active form), His Tag at 0.5 μg/ml (100 μl/well) on the plate. Dose response curve for Anti-Kallikrein 1 Antibody, hFc Tag with the EC50 of 8.2 ng/ml determined by ELISA. (QC Test)
Purity:	> 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 μm filtered solution in 50mM Tris, 150mM NaCl, 8% trehalose (pH 7.5).

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

KLK1 (Kallikrein 1) is a Protein Coding gene. This gene is one of the fifteen kallikrein subfamily members located in a cluster on chromosome 19. This protein is functionally conserved in its capacity to release the vasoactive peptide, Lys-bradykinin, from low molecular weight kininogen. Human tissue kallikrein (KLK1) is a serine protease,

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a component of the KKS that has been demonstrated to exert pleiotropic beneficial effects in protection from tissue injury through its anti-inflammatory, antiapoptotic, antifibrotic, and antioxidative actions. Polymorphism of the human tissue kallikrein 1 (KLK1) A1789G gene is associated with susceptibility to hypertension. Diseases associated with KLK1 include Kallikrein, Decreased Urinary Activity Of and Hereditary Angioedema.

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