

Kininogen-1 Protein, Human (626a.a, HEK293, His)

Cat. No.:	HY-P73266
Synonyms:	Kininogen-1; HMWK; KNG1; BDK; KNG
Species:	Human
Source:	HEK293
Accession:	NP_001095886.1 (Q19-S644)
Gene ID:	3827
Molecular Weight:	100-110 kDa

PROPERTIES

Biological Activity	Measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate Z-FR-AMC and the IC ₅₀ value is < 7 nM.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 25 mM Tris, 100 mM NaCl, pH 7.5. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Kininogen-1 Protein undergoes alternative splicing to yield two distinct proteins—high molecular weight kininogen (HMWK) and low molecular weight kininogen (LMWK). HMWK plays a crucial role in blood coagulation and the assembly of the kallikrein-kinin system. Additionally, HMWK releases bradykinin, a peptide with various physiological effects and antimicrobial properties against bacteria and fungi. In contrast, LMWK is not implicated in blood coagulation. Notably, during severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, a reduction or depletion of angiotensin converting enzyme 2 (ACE2) leads to an elevation in des-Arg(9)-bradykinin levels, a bioactive bradykinin metabolite associated with lung injury and inflammation. The gene exhibits restricted expression primarily in the liver (RPKM 432.8).
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Caution: Product has not been fully validated for medical applications. For research use only.

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