

Kallikrein-7 Protein, Human (HEK293, His)

Cat. No.:	HY-P76466
Synonyms:	Kallikrein-7; Serine protease 6; hSCCE; KLK7; PRSS6; SCCE
Species:	Human
Source:	HEK293
Accession:	NP_005037.1 (E23-R253)
Gene ID:	5650
Molecular Weight:	30-33 kDa.

PROPERTIES

AA Sequence	<pre> E E A Q G D K I I D G A P C A R G S H P W Q V A L L S G N Q L H C G G V L V N E R W V L T A A H C K M N E Y T V H L G S D T L G D R R A Q R I K A S K S F R H P G Y S T Q T H V N D L M L V K L N S Q A R L S S M V K K V R L P S R C E P P G T T C T V S G W G T T T S P D V T F P S D L M C V D V K L I S P Q D C T K V Y K D L L E N S M L C A G I P D S K K N A C N G D S G G P L V C R G T L Q G L V S W G T F P C G Q P N D P G V Y T Q V C K F T K W I N D T M K K H R </pre>
Biological Activity	Measured by its ability to cleave the fluorogenic peptide substrate Mca-RPKPVE-Nval-WRK (Dnp) NH ₂ and the specific activity is >150 pmoles/min/μg. (Activation description: The proenzyme needs to be activated by Thermolysin for an activated form)
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. 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	Kallikrein-7, a member of the kallikrein subfamily of serine proteases, exhibits chymotrypsin-like activity and participates in the proteolysis of intercellular cohesive structures preceding desquamation, the shedding of the outermost epidermal layer.
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This enzyme's diverse physiological functions extend to its involvement in cancer-related processes, including invasion and metastasis. Elevated expression of the Kallikrein-7 gene is associated with an unfavorable prognosis and the progression of various cancer types. Polymorphisms in this gene may contribute to the development of atopic dermatitis. Situated within a gene cluster on chromosome 19, this gene has multiple alternatively spliced transcript variants, reflecting its complexity and involvement in various cellular processes. With biased expression observed in skin (RPKM 68.1) and esophagus (RPKM 25.3), Kallikrein-7 emerges as a multifaceted protease with implications in both normal physiology and disease states.

Caution: Product has not been fully validated for medical applications. For research use only.

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