

## Kallikrein 5/KLK5 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	SCTE;KLKL2;KLK5;KLK-L2;Klnc;Kallikrein c
Protein Construction:	Gly30-Asn293
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q9D140
Molecular Weight:	29.9 kDa (predicted). Due to glycosylation, the protein migrates to 40-50 kDa based on Tris-Bis PAGE result.

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing 20 mM NaAc, 150 mM NaCl (pH 5.0). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in 20mM NaAc, 150mM NaCl (pH 5.0). The product concentration should not be less than 100  $\mu$ g/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

The inhibition of kallikrein 5 (KLK5) has been identified as a potential strategy for treatment of the genetic skin disorder Netherton syndrome, in which loss-of-function mutations in the SPINK5 gene lead to down-regulation of the endogenous inhibitor LEKTI-1 and profound skin-barrier defects with severe allergic manifestations. To aid in the development of a medicine for this target, an X-ray crystallographic system was developed to facilitate

fragment-guided chemistry and knowledge-based drug-discovery approaches.

### Reference

Thorpe JH, et al. Evaluation of a crystallographic surrogate for kallikrein 5 in the discovery of novel inhibitors for Netherton syndrome. *Acta Crystallogr F Struct Biol Commun.* 2019 May 1;75(Pt 5):385-39doi: 10.1107/S2053230X19003169. Epub 2019 Apr 26. PMID: 31045568; PMCID: PMC6497096.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481