

## Certificate of Analysis

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**Product Name:** Aprotinin  
**CAS Number:** 9087-70-1

**Catalog No.:** 4139 **Batch No.:** 24  
**EC Number:** 232-994-9

### 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>284</sub> H <sub>432</sub> N <sub>84</sub> O <sub>79</sub> S <sub>7</sub>
<b>Batch Molecular Weight:</b>	6511.48
<b>Physical Appearance:</b>	White to off-white lyophilised solid
<b>Net Peptide Content:</b>	86%
<b>Solubility:</b>	Soluble to 4 mg/ml in water
<b>Storage:</b>	Store at +4°C
<b>Peptide Sequence:</b>	<div style="border: 1px solid black; padding: 5px; margin: 5px 0;">           Arg-Pro-Asp-Phe-Cys-Leu-Glu-Pro-Pro-Tyr-            Thr-Gly-Pro-Cys-Lys-Ala-Arg-Ile-Ile-Arg-            Tyr-Phe-Tyr-Asn-Ala-Lys-Ala-Gly-Leu-Cys-            Gln-Thr-Phe-Val-Tyr-Gly-Gly-Cys-Arg-Ala-            Lys-Arg-Asn-Asn-Phe-Lys-Ser-Ala-Glu-Asp-            Cys-Met-Arg-Thr-Cys-Gly-Gly-Ala         </div>

### 2. ANALYTICAL DATA

<b>Activity :</b>	6318 KIU/mg
<b>Endotoxin:</b>	0.5 EU/mg

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Catalog No.:** 4139

**Batch No.:** 24

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EC Number: 232-994-9

**Description:**

Aprotinin is a competitive serine protease inhibitor. Reversibly binds to and blocks the enzymatic active site. Inhibits a range of serine proteases including trypsin, chymotrypsin, kallikrein and plasmin. Inhibits cytopathogenic effect of SARS-CoV-2 and double-stranded RNA formation in SARS-CoV-2-infected cells. This product is from Bovine Lung.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>284</sub>H<sub>432</sub>N<sub>84</sub>O<sub>79</sub>S<sub>7</sub>

Batch Molecular Weight: 6511.48

Physical Appearance: White to off-white lyophilised solid

**Peptide Sequence:**

Arg-Pro-Asp-Phe-Cys-Leu-Glu-Pro-Pro-Tyr-  
Thr-Gly-Pro-Cys-Lys-Ala-Arg-Ile-Ile-Arg-  
Tyr-Phe-Tyr-Asn-Ala-Lys-Ala-Gly-Leu-Cys-  
Gln-Thr-Phe-Val-Tyr-Gly-Gly-Cys-Arg-Ala-  
Lys-Arg-Asn-Asn-Phe-Lys-Ser-Ala-Glu-Asp-  
Cys-Met-Arg-Thr-Cys-Gly-Gly-Ala

**Storage:** Store at +4°C

**Solubility & Usage Info:**

Soluble to 4 mg/ml in water

**Net Peptide Content:** 86% (Remaining weight made up of counterions and residual water).

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

**References:**

**Bojkova et al** (2020) SARS-CoV-2 and SARS-CoV differ in their cell tropism and drug sensitivity profiles. *Bioinformatics* **37** 2282.

**Parlee et al** (2012) Elastase and tryptase govern TNFα-mediated production of active chemerin by adipocytes. *PLoS ONE* **7** e51072. PMID: 23227233.

**Reichel et al** (2011) Plasmin inhibitors prevent leukocyte accumulation and remodeling events in the postischemic microvasculature. *PLoS ONE* **6** e17229. PMID: 21364954.

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