

Certificate of Analysis

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

Catalog No.: 4139 **Batch No.:** 25
EC Number: 232-994-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₈₄H₄₃₂N₈₄O₇₉S₇
Batch Molecular Weight: 6511.48
Physical Appearance: Off-white lyophilised solid
Net Peptide Content: 86%
Solubility: Soluble to 4 mg/ml in water
Storage: Store at +4°C
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

2. ANALYTICAL DATA

Activity: 6318 KIU/mg
Endotoxin: 0.5 EU/mg

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

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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.

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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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