

Certificate of Analysis

Product: Aprotinin
Reference Number: 5D-62106
Lot Number: 230309-21
Expiration Date: 2027-03

Description: Aprotinin lyophilized Powder, Trypsin inhibitor, pancreatic alkaline. Aprotinin is multiple inhibitor of many serine proteases, including trypsin, Plasmin, Urokinase, Kallikrein, Factor XIIa, etc. It contains 58 amino acids. It forms stable complexes with these enzymes.

Storage: Store unopened vial at 2-8°C

Presentation: Vial of 250 mg

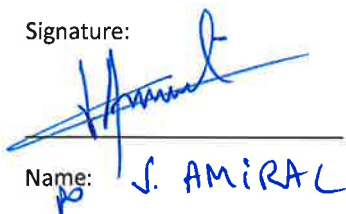
Specifications: Lot specific assay results:

Tests	Results	Specifications
Specific Activity (Trypsin inhibition)	6,066 KIU/mg	6,000 +/- 1,000 KIU/mg
Appearance	White powder	White powder
Appearance at 15 PEU/ml	Clear solution	Clear solution
Solubility in ware	>50 mg/mL	>50 mg/mL
Visual Inspection	White lyophilized pellet	White lyophilized pellet
pH*	5.83 à 22°C	5.00 to 7.00
Protein Content	250mg	250 +/- 25 mg
Product homogeneity	1 single band at about 6,500 Da on SDS PAGE	1 single band at about 6,500 Da on SDS PAGE
Absorbance at 3 PEU/ml (280nm)	0.670	0.60 to 0.80
Conclusion	Passed	Passed

- **Note:** Aprotinin is diluted in distilled water; there is no buffering substance; pH can therefore present fluctuations, as the aprotinin solution is not buffered.

For Laboratory Use Only.

Signature:



Name:

J. AMIRAL

Date:

2023/03/17

APROTININ

REF 5D-62106

*(Trypsin inhibitor, pancreatic Alkaline)
from bovine lung*

For Laboratory Use Only.

Not for use in human or direct animal applications.

**Store at 2-8°C
Lyophilized Powder, 250 mg**

DESCRIPTION

APROTININ, 250mg, Lyophilized Powder. Trypsin inhibitor, pancreatic alkaline. Aprotinin is a multiple inhibitor of many serine proteases, including Trypsin, Plasmin, Urokinase, Kallikrein, Factor XIIa, etc. It contains 58 amino acids. It forms stable complexes with these enzymes.

FORMULA

$C_{284}H_{432}N_{84}O_{79}S_7$

MOLECULAR WEIGHT

6511

COMPOSITION

Aprotinin powder, lyophilized.

SOLUBILITY

≥ 25 mg/mL in distilled water.

APROTININ ACTIVITY

Aprotinin was tested with Pharmacopoeias' compliant methods for its inhibitory potency of Trypsin, expressed as "Trypsin Inhibitory Units" (TIU). 1 TIU inhibits 50% of the activity of 2 Units of Trypsin.

PRINCIPLE

Aprotinin can be used in any application where inhibition of its targeted proteases is needed. Current uses include protein isolation, removal of reactive proteases through solid phase, inhibition of undesired proteolytic activity in laboratory assays, or other techniques; for blocking fibrinolytic activity in vitro; etc.

PREPARATION

The vial contains 250 mg, and can be restored with 5 mL distilled water for obtaining a solution at about 50 mg/mL.

STANDARDIZATION

Aprotinin has a specific activity of about 6,100 KIU/mg (this corresponds to about 6.0 TIU/mg or about 3.35 PEU/mg).

APPLICATIONS

Aprotinin can be used for the determination of:

1. Targeted proteases inhibition
2. Laboratory assays and techniques
3. Protein purification
4. Etc.

STORAGE AND STABILITY

Lyophilized Aprotinin: Stable at 2-8°C up to the expiration date printed on the label; after reconstitution with distilled water: up to 6 months stored at ≤ -20°C.

Aprotinin Solution: contamination by microorganisms must be avoided.

NOTE: Aprotinin contains no preservatives; after reconstitution it must be used rapidly or stored frozen. Alternatively, a preservative (for example Sodium Azide at 0.9 mg/ml) can be added.

WARNINGS AND PRECAUTIONS

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REFERENCES

1. Lottenberg R, Sjak SN, Fazleabs AT, Roberts RM. Aprotinin inhibits urokinase but not tissue-type plasminogen activator. Thromb Res 1988; 49: 549-56.
2. Fritz H, Wunderer G. Biochemistry and applications of aprotinin, the kallikrein-inhibitor from bovine organs. Arzneim Forsch./Drug. Res. 1983; 33: 479-94.

APROTININ

REF 5D-62106-1

*(Trypsin inhibitor, pancreatic Alkaline)
from bovine lung*

For Laboratory Use Only.

Not for use in human or direct animal applications.

**Store at 2-8°C
Lyophilized Powder, 1 g**

DESCRIPTION

APROTININ, 1 g, lyophilized powder. Trypsin inhibitor, pancreatic alkaline. Aprotinin is a multiple inhibitor of many serine proteases, including Trypsin, Plasmin, Urokinase, Kallikrein, Factor XIIa, etc. It contains 58 amino acids. It forms stable complexes with these enzymes.

FORMULA

$C_{284}H_{432}N_{84}O_{79}S_7$

MOLECULAR WEIGHT

6511

COMPOSITION

Aprotinin powder, lyophilized.

SOLUBILITY

≥ 25 mg/mL in distilled water.

APROTININ ACTIVITY

Aprotinin was tested with Pharmacopoeias' compliant methods for its inhibitory potency of Trypsin, expressed as "Trypsin Inhibitory Units" (TIU). 1 TIU inhibits 50% of the activity of 2 Units of Trypsin.

PRINCIPLE

Aprotinin can be used in any application where inhibition of its targeted proteases is needed.

Current uses include protein isolation, removal of reactive proteases through solid phase, inhibition of undesired proteolytic activity in laboratory assays, or other techniques; for blocking fibrinolytic activity in vitro; etc.

PREPARATION

The vial contains 1 g and can be restored with 10 mL distilled water for obtaining a solution at about 100 mg/mL.

STANDARDIZATION

Aprotinin has a specific activity of about 6,000 KIU/mg (this corresponds to about 6.0 TIU/mg or about 3.35 PEU/mg).

APPLICATIONS

Aprotinin can be used for e.g., the determination of:

1. Targeted proteases inhibition
2. Laboratory assays and techniques
3. Protein purification

STORAGE AND STABILITY

Lyophilized Aprotinin: Stable at 2-8°C up to the expiration date printed on the label; after reconstitution with distilled water: up to 6 months stored at ≤ -20°C.

Aprotinin Solution: contamination by microorganisms must be avoided.

NOTE: Aprotinin contains no preservatives; after reconstitution it must be used rapidly or stored frozen. Alternatively, a preservative (for example Sodium Azide at 0.9 mg/mL) can be added.

WARNINGS AND PRECAUTIONS

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REFERENCES

1. Lottenberg R, Sjak SN, Fazleabs AT, Roberts RM. Aprotinin inhibits urokinase but not tissue-type plasminogen activator. *Thromb Res* 1988; 49: 549-56.
2. Fritz H, Wunderer G. Biochemistry and applications of aprotinin, the kallikrein-inhibitor from bovine organs. *Arzneim Forsch./Drug. Res.* 1983; 33: 479-94.



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