

## APROTININ

**REF** 5D-62106

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

**For Research Use Only.  
Not for Use in Diagnostic Procedures.**

**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 concern 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).

### APPLICATIONS

The aprotinin product has been used for the determination of:

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

### STORAGE AND STABILITY

**Aprotinin:** Stable at 2-8°C up to the expiration date printed on the label; up to 6 months stored at ≤ -20°C.

**Solution:** contamination by microorganisms must be avoided.

### WARNINGS AND PRECAUTIONS

For Research Use Only. Not for use in human or veterinary applications.

### 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.
3. Lottenberg R, et al. Aprotinin inhibits urokinase but not tissue-type plasminogen activator. *Thromb Res* 1988; 49: 549-56.
4. Lemmer JH Jr, et al. Aprotinin for coronary bypass operations: efficacy, safety, and influence on early saphenous vein graft patency. A multicenter randomized, double blind, placebo-controlled study. *J Thorac Cardiovasc Surg.* 1994; 107:543-553.
5. Sedraky A, et al. Effect of aprotinin on clinical outcomes in coronary artery bypass graft surgery: A systemic review and meta-analysis of randomized clinical trials. *J Thorac Cardiovasc Surg.* 2004; 128: 442-448.