

Bovine Aprotinin/ Pancreatic Trypsin Inhibitor

Synonyms: Pancreatic trypsin inhibitor, Basic protease inhibitor, BPI, BPTI, Aprotinin, AP.

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
100 mg	1155.919.166		
250 mg	1155.919.258		
1 g	1155.919.188		

Please enquire for bulk quantities and other vial sizes

Description

Aprotinin is a natural proteinase inhibitor polypeptide consisting of 58 amino acids with a molecular mass of 6,5 kDa. It is a single polypeptide chain which is cross-linked by three disulfide bridges. Aprotinin inhibits the activity of several proteolytic enzymes such as chymotrypsin, kallikrein, plasmin and trypsin. Aprotinin is present in blood and most tissues, with a high concentration in lung. Aprotinin inhibits pro-inflammatory cytokine release and maintains glycoprotein homeostasis. In platelets, aprotinin reduces glycoprotein loss (e.g. GpIb, GpIIb/IIIa), while in granulocytes it prevents the expression of pro-inflammatory adhesive glycoproteins (e.g. CD11b). It can be used for in vitro inhibition of fibrinolytic activity in blood samples.

Application

Aprotinin is used for the protection of proteins and enzymes during isolation/purification. Inhibition of protease activity increases cell longevity in cell and tissue culture studies. Purification of urokinase, trypsin and chymotrypsin on immobilized aprotinin. Quantification of kallikrein activity in mixtures of esterases and proteases. Controlled degradation of substrates by avoiding nonspecific proteolysis in clinical chemistry assays. Aprotinin is a model protein for protein folding studies. Molecular mass marker in SDS-polyacrylamide gel electrophoresis.

Definition of the units

1 Ph. Eur.-unit of Aprotinin inhibits 50 % of the enzymatic activity of 2 Microkatal Trypsin, with BAEE as Substrate, measured at pH 8,0 und 25 °C.

1 PEU = 1800 KIU.

- **Biological Activity** 3,5 PEU (Ph. Eur. Units)/mg; 6300 KIU (Kallikrein Inactivator Units)/mg
- **Source** Bovine Lung
- **Stabilizer** None
- **Buffer** The protein (1mg/ml) was lyophilized with no additives*
- **Physical state** Sterile filtered, lyophilized

Reconstitution

We recommend a quick spin followed by reconstitution in water to a concentration of at least 100 µg/ml, which can then be further diluted. **Do not vortex.** This solution can be stored at 2-8°C for up to 1 week or in working aliquots at -15°C to -25°C. Working aliquots should be at the highest practical concentration. For long term storage we recommend to add at least 0.1% BSA (order number: [2835.919.xyz](#)) or HSA. Please avoid repeated freeze thaw cycles and contact with strongly basic solutions, inactive at pH > 12,8. Common working concentrations are between 0,06 and 2µg/ml.

Stability

The lyophilized protein is stable at room temperature for up to 1 month and at least until the lot specific expiry date if kept below -18°C. Reconstituted Aprotinin should be stored in working aliquots at -20°C to -80°C if possible with carrier protein, e.g. 0,1% BSA [2835.919.xyz](#). **Please avoid repeated freeze-thaw cycles.**

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.