Aprotinin BioChemica

Synonym
Trasylo®

state of matter
Solid

origin
from bovine lung

Formula
C_{284}H_{432}N_{84}O_{79}S_{7}

M
6511.52 g/mol

CAS-No.: 9087-70-1

HS-No.: 35040090

Storage: 2 - 8°C

LGK: 10 - 13

WGK: 1

® registered trademark of Bayer AG

Specification

Assay (Protein)
min. 90 %

Activity (KIU/mg)
min. 5400

pH (1 %; H\textsubscript{2}O)
5.0 - 7.5

Water (K.F.)
max. 6 %

Literature


Aprotinin was isolated independently from two laboratories and originally named *Bovine Pancreatic Trypsin Inhibitor* (BPTI) and *Trypsin-kallikrein Inhibitor* (TKI). It is a strongly basic protein (58 amino acids; ref. 1, 2). Aprotinin inhibits trypsin, chymotrypsin, kallikrein from different sources and plasmin. Its recommended working concentration is 2 - 10 μg/ml (approx. 1 μM). The working concentration given in ref. 3 (500 KIU/ml; approx. 10 μM) seems to be very high.

**Stability:** Aprotinin may be stored indefinite at +4°C in lyophilized form. Dissolved in saline or buffer solutions (e. g. 10 mg/ml) at pH 5 - 8, it may be stored aliquoted at +4°C at least for one month or frozen at -20°C for several years. Thawed aliquots of the stock solutions should not be frozen again, because repeated freeze-thawing will lead to aggregation of the polypeptide aprotinin. Solutions with a pH value below 4 or above 9 should be used immediately. Protect from direct sunlight, UV light and reducing agents. It is stable in water, 70 % methanol, 70 % ethanol or 50 % acetone, too (2, 3).

**Unit-Definition:** One Trypsin Inhibitor Unit (TIU) will decrease the activity of 2 trypsin units by 50 %, where one trypsin unit will hydrolyze 1.0 μmole Na-benzoyl-DL-arginine p-nitroanilide (BAPNA) per minute at pH 7.8 and 25°C. 1 TIU (Trypsin Inhibitor Unit) corresponds to approx. 1300 KIU (Kallikrein Inhibitor Units) and 1 TIU corresponds to one Ph. Eur. Unit.