BioVision

07/15

For research use only

Aprotinin, Active, Bovine Recombinant (AOF)

CATALOG #:	7866-1	1 mg
	7866-5	5 X 1 mg

ALTERNATIVE NAMES: BPTI, Basic protease inhibitor, Pancreatic trypsin inhibitor

SOURCE: *E. coli*

PURITY: ≥ 90% by SDS-PAGE

MOL. WT.: 9.7 kDa (36-93 aa + N-terminal Poly-his tag)

FORM: Lyophilized

FORMULATION: Lyophilized from 5 mg/ml solution in PBS

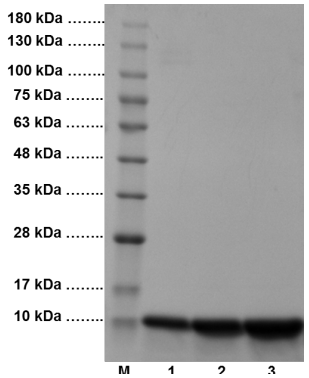
RECONSTITUTION INSTRUCTIONS: Centrifuge the vial prior to opening at low speed. Reconstitute in water to a concentration of 1 mg/ml. The solution can then be diluted into PBS or other aqueous buffers and store at 4°C for 1 week or –20°C for future use. For long-term storage, it is recommended to add a carrier protein (e.g., 0.1% BSA). Avoid repeated freezing and thawing cycles.

BACKGROUND: Aprotinin inhibits the activity of several proteolytic enzymes such as chymotrypsin, kallikrein, plasmin and trypsin. It is present in blood and in most tissues, with a high concentration in lung, 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. Aprotinin is a natural proteinase inhibitor polypeptide consisting of fifty-eight amino acids arranged in a single polypeptide chain, cross-linked by three disulfide bridges. BioVision's Recombinant Bovine Aprotinin is an animal-origin free protein purified by proprietary chromatographic techniques.

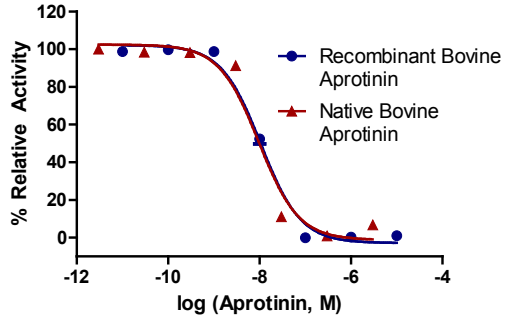
ACTIVITY: BioVision's Recombinant Bovine Aprotinin has been tested for its inhibitory activity against Trypsin and Plasmin using Trypsin Activity Colorimetric Assay Kit **(K771-100)** and Plasmin Inhibitor Screening Kit (Fluorometric) **(K382-100)**. The inhibitory activity of Recombinant Bovine Aprotinin (IC_{50} = 10.7 nM) against Trypsin was comparable to that of native Bovine Aprotinin (IC_{50} = 9.6 nM). The IC_{50} of Recombinant Bovine Aprotinin against Plasmin was 15 nM. It has been found to inhibit SARS-CoV and SARS-CoV-2 *in vitro*.

APPLICATIONS: Recombinant Bovine Aprotinin can be used for inhibition of Trypsin and Trypsin-like enzymes. It can also be used in inhibitor screening assays, activity studies, selectivity profiling, and numerous such applications.

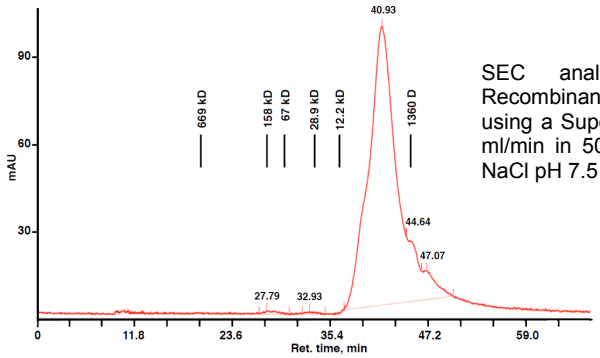
For Research Use Only! Not to be used in humans.



SDS-PAGE (4-20%) of Recombinant Bovine Aprotinin (His-tagged):
M: Protein Marker
1: His-Aprotinin (5 µg)
2: His-Aprotinin (10 µg)
3: His-Aprotinin (15 µg)



Measurement of inhibitory activity of His-tagged Recombinant Bovine Aprotinin (IC_{50} = 10.7 nM) and native Aprotinin (IC_{50} = 9.6 nM) against Trypsin by Trypsin Activity Colorimetric Assay Kit (K771-100)



SEC analysis of His-tagged Recombinant Bovine Aprotinin using a Superose 12 column at 0.4 ml/min in 50 mM Tris and 0.25 M NaCl pH 7.5

RELATED PRODUCTS:

- Aprotinin (Bovine Lung) (**Cat. No. 4690-5, -100, -1000**)
- EZBlock™ Protease Inhibitor Cocktail XII, EDTA-free, Animal-free (**Cat. No. K221**)
- EZBlock™ Protease Inhibitor Cocktail XIII, EDTA & Animal-Free **(Cat. No. K222)**
- EZBlock™ Protease Inhibitor Cocktail V, EDTA-Free (**Cat. No. K290**)
- EZBlock™ Protease Inhibitor Cocktail VI, General Use (**Cat. No. K291**)
- EZBlock™ Protease Inhibitor Cocktail VII (**Cat. No. K292**)
- EZBlock™ Protease Inhibitor Cocktail VIII (**Cat. No. K293**)
- EZBlock™ Protease Inhibitor Cocktail X, EDTA-Free (**Cat. No. K297**)
- EZBlock™ Protease Inhibitor Cocktail XIV (**Cat. No. K223**)

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