

## Protease Inhibitor Cocktail I (EDTA-Free, 100X in DMSO)

### 1. Description

TargetMol provides a wide array of customizable Protease Inhibitor Cocktails, each with varying mechanisms of actions, aimed at protecting your protein samples. They work by helping proteins avoid rapid degradation caused by endogenous proteases during the cell lysis and protein purification processes.

The Protease Inhibitor Cocktail I contains six protease inhibitors with broad specificity, aimed at facilitating the inhibition of aspartyl, cysteine, serine, as well as several aminopeptidases.

### 2. Experiment Protocol

- Compatible with Western Blot analysis, Co-IP, pull-down, IF, IHC, kinase assay and etc.
- Thaw in Room Temperature
- Add concentrated cocktail at 1:100 (v/v) dilution to solution samples (such as cell lysates or tissue extracts) before assaying.
- Briefly vortex cocktails to help facilitate the dissolution.
- Extracts of up to 20 g wet weight

### 3. Contents

Ingredient	Conc. (100X)	Target	Inhibitor Type	CAS
<b>AEBSF</b>	104 mM	Serine proteases	Irreversible	30827-99-7
<b>Aprotinin</b>	80 μM	Serine proteases	Reversible	9087-70-1
<b>Bestatin</b>	5 mM	Aminopeptidases	Reversible	58970-76-6
<b>E-64</b>	1.5 mM	Cysteine Proteases	Irreversible	66701-25-5
<b>Leupeptin</b>	2 mM	Cysteine and Serine Proteases	Reversible	55123-66-5
<b>Pepstatin A</b>	1.5 mM	Aspartic Proteases	Reversible	26305-03-3

### 4. Properties

<b>Form</b>	Liquid
<b>Formulation</b>	In 1 ml DMSO
<b>Storage</b>	-20°C for 12 months
<b>Freeze</b>	Ok to freeze
<b>Toxicity</b>	Irritant

## Inhibitors, Libraries, Natural Compounds

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### 5. Notice

1. Following initial thaw, aliquot and freeze (-20°C) to avoid thawing and refreezing repeatedly
2. Some DUB proteases (one example is ATAXIN-3) cannot be suppressed by traditional protease inhibitors, such as E-64, AEBSF, bestatin, leupeptin and Aprotinin.

- (Reference: Neil D. Rawlings, Guy Salvesen et al. Handbook of Proteolytic Enzymes, Vol.1, 2012).

### 6. Troubleshooting

Problem	Possible Cause	Solution
<b>Poor inhibition of protease activity</b>	Sample contains high levels of protease	Add sufficient cocktail to produce a 2X or 3X final concentration
<b>Cocktail does not provide sufficient protection against a particular protease family</b>	Inhibitor for that family is not a component of the cocktail, or the cocktail does not contain the needed concentration	Add individual inhibitor to the sample for the specific protease family

### 7. Precautions and Disclaimer

This product is used for scientific research only, not for drug, household, or other uses. View our Material Safety Data Sheet (MSDS) for information regarding potential hazards and safe handling practices.