

## Protease Inhibitor Cocktail

**Catalog No.** TAAR-BBI2

**Storage:** -20°C for one year.

**Size:**

Content	Volume
Protease Inhibitor Cocktail (100X)	1 mL
0.1M EDTA solution (100X)	1 mL

## Introduction

Crude cell extracts contain a number of endogenous enzymes, such as proteases and phosphatases, which are capable of digesting the proteins present in the extract. TOOLS Protease Inhibitor Cocktail (100X) is a Western blot related ready-to-use concentrated stock solution reagent containing a blend of seven protease inhibitors that is to be added to cell lysis buffer to protect the integrity and functionality of native cellular proteins against degradation by multiple classes of endogenous proteases during protein extraction and sample preparation procedures. The product is supplied as a 100X concentrated stock solution in a liquid format for improved accuracy, solubility, and ease of use in comparison to traditional tablets.

### Important notes

1. Working concentration: 100-fold dilution in tissue lysis buffer. 10 µL of the Protease Inhibitor Cocktail solution is enough to inhibit degradation of proteins in 1 mL lysate.
2. Form: colorless liquid
3. Compatibility: Not MS-compatible: contain AEBSF; Not compatible with immobilized metal chelate affinity chromatography and 2D gel electrophoresis: contain EDTA

## Usage

1. Equilibrate the bottle to room temperature before use.
2. Vortex the bottle before use to ensure a homogeneous suspension
3. This protease inhibitor cocktail is supplied at a 100X concentration in DMSO and is generally effective when used at a 1X final concentration; however, if a sample contains particularly high levels of proteases, the effective cocktail concentration might require optimization.
4. Add protease inhibitor cocktail in lysis buffer at a ratio of 1:100 and mix well.
5. Optional: For inhibition of metalloproteases, add 0.1M EDTA solution in lysis buffer at a ratio of 1:100 and mix well.
6. Add the solution in to cell or tissue samples for protein extraction.  
Lysis buffer containing protease inhibitor cocktail should be freshly prepared before use.

## Specificity

Serine proteases, cysteine proteases, aspartic acid proteases, metalloproteases, aminopeptidases

### Protease Inhibitor Component Information

Protease Inhibitor Component	MW	Protease Family Targeted	Inhibition Type	Typical Working (1X) Conc.	Concentration in 100X cocktail
E-64	357.4	Cysteine proteases (papain, calpain, lysosomal cathepsins)	Irreversible	1 to 20µM	1.5mM
AEBSF-HCl	239.5	Serine proteases (trypsin, chymotrypsin, plasmin, trypsinogen, urokinase, kallikrein)	Irreversible	0.2 to 1.0mM	100mM
Bestatin	308.4	Amino peptidases	Reversible	1 to 10µM	5mM
Leupeptin	475.6	Serine and cysteine proteases	Reversible	10 to 100µM	2mM
Aprotinin	6511.5	Serine proteases (trypsin, chymotrypsin, plasmin, trypsinogen, urokinase, kallikrein)	Reversible	100 to 200nM	80µM
Pepstatin A	685.9	Aspartic acid proteases (pepsin and rennin)	Reversible	1 to 20µM	1mM
EDTA	372.2	Metalloproteases (thermolysin and carboxypeptidase A)	Reversible	1 to 10mM	1mM

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