Hello Bio, Inc.
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500
F. 609-228-4994

customercare-usa@hellobio.com

DATASHEET

Protease & Phosphatase Inhibitor Cocktail solution (plus EDTA)

Product overview

Name	Protease & Phosphatase Inhibitor Cocktail solution (plus EDTA)
Cat No	HB9104
Biological action	Inhibitor
Description	Protease & Phosphatase Inhibitor Cocktail solution (plus EDTA)

Biological Data

Biological description

Overview

This protease and phosphatase inhibitor cocktail contains a mixture of both protease and phosphatase inhibitors.

Protease and phosphatase inhibitor cocktails protect proteins from degradation by endogenous proteases and phosphatases released during protein extraction and purification.

Components and action

The following components are included in this cocktail. The protease inhibitors target aminopeptidases, cysteine and serine proteases and the phosphatase inhibitors target serine/threonine and protein tyrosine phosphatases:

Protease inhibitors:

- Aprotinin (Aprotinin (bovine, recombinant, Nicotiana sp.,): serine protease inhibitor (80µM)
- Bestatin: aminopeptidase B and leucine aminopeptidase inhibitor (5mM)
- E-64: cysteine protease inhibitor (1.5mM)
- Leupeptin hemisulfate: serine/cysteine protease inhibitor (2mM)

Phosphatase inhibitors:

- β-Glycerophosphate: serine/threonine phosphatase inhibitor (10mM)
- Sodium fluoride: acid phosphatase and serine/threonine phosphatase inhibitor (50mM)
- Sodium orthovanadate: protein tyrosine phosphatase/ alkaline phosphatase inhibitor (1mM)
- Sodium pyrophosphate decahydrate: serine/threonine phosphatase inhibitor (10mM)
- EDTA disodium salt: metalloprotease inhibitor (500µM)

Formulation & usage recommendation

The cocktail is supplied as 1 vial of cocktail in water (1 ml) and 1 vial of EDTA disodium salt (0.5 mM).

This should be sufficient for 100ml of sample. It is generally effective at a 1X final concentration but may require optimization if a sample contains particularly high levels of proteases.

Please note that EDTA inhibits metalloproteases by chelating divalent cations necessary for this activity. It may therefore affect the activities of other proteins. You should therefore determine if your experiment requires EDTA.

Application notes	This cocktail interferes with IMAC and 2D gel electrophoresis. You can dialyze or desalt your sample to effectively remove inhibitors from sample extracts before performing such procedures. 1. Equilibrate the bottle to room temperature. 2. Vortex the bottle to ensure a homogeneous suspension. 3. Immediately before use, add 10µL of the Protease Inhibitor Cocktail per milliliter of sample directly to the lysis buffer or extract to produce a 1X final concentration. 4. *OPTIONAL*: Add EDTA to inhibit metalloproteases at 10µL/mL of lysis buffer or extract to achieve a 1X (5mM) final working concentration.

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in Water, DMSO (supplied in 1ml DMSO)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Appearance	Clear liquid