



Phosphatases Inhibitors

Products Description

. Ready-to-Use Phosphatase Inhibitor Cocktails

- **Convenient:** No need to prepare, ready-to-use formulations.
- **Consistent:** High quality ensures reproducible results.
- **Easy-to-use:** Simply dilute according to your needs.
- **Optimized formulations** designed for your specific applications.

Introduction

Phosphatases remove phosphate groups from monophosphate esters, leaving a free hydroxyl group. Because the addition or removal of a phosphate group can activate or de-activate an enzyme, or allow a particular protein-protein interaction, Phosphatases of various types, together with kinases that perform the opposite reaction, phosphorylation, participate to many key biological pathways with the cell, hence are involved in a variety of disorders including anemia, liver function, and various types of cancers. Phosphorylation and dephosphorylation regulated for example gene expression, signal transduction, cell division and apoptosis.

The inactivation of phosphatases is useful to prevent their uncontrolled activity upon cell lysis, especially for the study phosphorylation activation states of proteins. For this purpose, Uptima provides great Phosphatase Inhibitor Cocktail.

Phosphatase Inhibitor Cocktails preserve phosphorylation of proteins in cells and tissues and protein extracts during a variety of preparation or analytical procedures, i.e. extractions and immunoprecipitation, cell assays and kinase assays. They protect phosphoproteins from phosphatases as described below. Furthermore, the cocktail is compatible with popular protein assays such as BC assay #[UP40840A](#) or Coo Assay #[UPF86400](#).

Cocktails are provided as concentration designed to be used typically diluted 100X. Although to be stored at -20°C , the cocktails are stable at 4°C and suitable for use with any cell or tissue extract.

The phosphatase inhibitor cocktails do not contain protease inhibitors. If necessary, protease inhibitors can be added along with the phosphatase inhibitor cocktail.

The Phosphatase Inhibitor Cocktail are compatible with most detergent-based cell lysis reagents.

The cocktail III, that is the most popular, is not directly compatible with 2D gel electrophoresis and some types of immobilized metal chelate affinity chromatography. However, the components can be removed by dialysis or desalting before performing these incompatible procedures.

Inhibitor	Recommended Applications	Cocktails Components	Specificity of Inhibitors	Cat No. (Storage code)	
Phosphatases Inhibitors					
Phosphatase Inhibitor Cocktail I	Animal tissues, A431 or Jurkat cell extracts	Bromotetramisole, Cantharidin, Microcystin LR	Alkaline Phosphatases, Protein Phosphatase 1 and 2A (PP-1 and PP-2A)	WT0960, 1ml (I)	
Phosphatase Inhibitor Cocktail II	Animal tissues, A431 or Jurkat cell extracts	Imidazole, Na(Orthovanadate, Fluoride, Tartrate, Molybdate)	Protein Tyrosine Phosphatase, Acid Phosphatases and Alkaline Phosphatases	WT8270, 1vial* (II)	
Phosphatase Inhibitor Cocktail III	Animal tissue extracts	Na(Orthovanadate, Fluoride, Pyrophosphate), β -Glycerophosphate	Ser/Thr Phosphatases, Acid Phosphatases, Alkaline Phosphatases, PP1 and PP2A	BT325A, 1vial* (III)	
Phosphatase Inhibitor Cocktail IV	Animal tissue extracts	Bromotetramisole, Cantharidin, Calyculin A	Alkaline Phosphatases, PP1 and PP2A	WT0960, 1ml (IV)	

*Reconstitute each vial with 1 ml H_2O to obtain a 1 ml stock solution.

Storage: -20°C (I)

Directions for use

Handling and Storage

Phosphatase Inhibitor Cocktails should be stored at -20°C (J)

They are provided as ready to use vials, 1ml 100X solution. See each product description or the literature for more information.

Technical and Scientific Information

Phosphatase inhibitors cocktails

Phosphatase Inhibitor Cocktail I WT0960, 1x1ml

A specially formulated cocktail of three phosphatase inhibitors that will inhibit alkaline phosphatases and serine/threonine protein phosphatases such as PP1 and PP2A. Recommended for use with tissue and cell extracts, including extracts containing detergents.

Form: Supplied as clear colorless liquid (1ml DMSO/vial).

Each vial contains 2.5 mM (-)-p-Bromotetramisole oxalate, 500 μM Cantharidin and 500 nM Microcystin-LR.

Usage: Suitable for use as Phosphatase Inhibitor. Recommended usage is 100-fold dilution

Storage: -20°C

Phosphatase Inhibitor Cocktail II WT8270, 1x1vial* lyophilized

A cocktail of five phosphatase inhibitors which has been optimized for the inhibition of protein tyrosine phosphatases, acid and alkaline phosphatases. Recommended for use with tissue and cell extracts including extracts containing detergents.

Form: Supplied as white lyophilized solid. Each vial contains 200 mM Imidazole, 100 mM Sodium Fluoride, 115 mM Sodium Molybdate, 100 mM Sodium Orthovanadate and 400 mM Sodium Tartrate Dihydrate.

Usage: Reconstitute each vial with 1 ml H_2O to obtain a 1 ml stock solution.

Recommended concentration is a 100-fold dilution.

Storage: -20°C

Phosphatase Inhibitor Cocktail III BT325A, 1x1 vial* lyophilized

A cocktail of four phosphatase inhibitors which has been optimized for the inhibition of both serine/threonine and protein tyrosine phosphatases (PTPs).

Form: Supplied as white lyophilized solid. Soluble in water, aqueous buffers. Each vial contains 250 mM Sodium Fluoride, 5 mM Sodium Orthovanadate, 50 mM Sodium Pyrophosphate and 50 mM β -Glycerophosphate.

Usage: Reconstitute each vial with 1 ml H_2O to obtain a 1 ml stock solution.

Alternatively, add powder directly to extraction media.

Storage: -20°C

Phosphatase Inhibitor Cocktail IV WT0950, 1x1ml in DMSO

A specially formulated cocktail of three phosphatase inhibitors that will inhibit both serine/threonine and alkaline

Form: Supplied as a liquid in 1 ml DMSO (clear colorless liquid). Each vial contains 2.5 mM (-)-p-Bromotetramisole oxalate, 500 μM Cantharidin and 1 μM Calyculin A, Discodermia calyx.

Usage: Add to water, aqueous buffer or directly to extraction media.

Storage: -20°C

FT-BT325A

Other phosphatase inhibitors

Calyculin A, *Discodermia calyx* #[388918](#), #[38891B](#)

Marine toxin which inhibits protein phosphatase 2A and protein phosphatase 1. Also potent non-phorbol tumor promoter.

Fostriecin, *Streptomyces Pulveraceus* subsp. *Fostreus* #[WT4720](#)

Anti-tumor antibiotic. Catalytic inhibitor of topoisomerase II. Strong inhibitor of protein phosphatase 2A, weak inhibitor of PP-1.

Other names: Phosphotrienin, CI-920 ; C19H26O9PNa

M.W. 452.4; Soluble in Water, Methanol or Ethanol.

Storage Temp -20°C

Okadaic acid #[search](#)

Potent inhibitor of protein phosphatases, especially protein phosphatases 1 and 2 classes. Also used as a tumor promoter

Salubrinal #[RM0301](#), #[RM0302](#)

Cell permeable and selective inhibitor of the phosphatase complexes that dephosphorylate eukaryotic translation initiation factor 2 subunit α (eIF-2 α).

Protects ER stress-induced apoptosis (EC50~15 μ M in PC12 cells stimulated with 750ng/ml of tunicamycin.

Other names: CAS [405060-95-9] ; C21H20Cl3N4OS

M.W. 479.8 ; Soluble in DMSO (10mg/ml).

Storage Temp -20°C

PIA Proteases Inhibitor A #[EZQ410](#) (100x) & #[EZQ400](#) (1000x)

A custom concentration cocktail for optimum inhibition of calcium-dependent endopeptidases, trypsin-like serine proteases, papain, and cysteine proteases. Contains: 0.02mg/ml antipain; 0.05mg/ml leupeptin; 50mg/ml EDTA in water.

Soluble in 1ml H2O for 1ml solution.

Storage Temp -20°C

Related / associated products and documents

Protease Inhibitors [WT0900](#)

Protein assays: BC Assay #[UP40840A](#); Coo Assay #[UPF86400](#).

See [Product highlights](#), [BioSciences Innovations catalogue](#) and [e-search tool](#).

Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>.

Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06

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