

## IS-10051 Phosphatase Inhibitor Cocktail (2 Tubes, 100X)

### Description

For Phosphorylation Protection, more inhibitors mean better results. So we provide Two Tubes with 8 inhibitors. Phosphorylation of proteins and lipids is a hallmark of the signaling or metabolic status of cells. For decades, researchers have used easily-accessible phosphate mimetics (tube A) to prevent the loss of phosphorylation on biomolecules in vitro. In recent years however, a number of naturally derived agents (tube B) have been discovered as potent inhibitors of phosphatases, thus increasing the available protection spectrum.

### Components

Contents	2 Tubes, 100X
Phosphatase Inhibitor Cocktail	1mL A
	1mL B

The contents of tube A (aqueous) and tube B(DMSO)

Tube #	Ingredient	100x Conc.	Target
A (Aqueous)	Sodium Fluoride	100 mM	Acid phosphatases
	Sodium Orthovanadate	100 mM	Alkaline phosphatases, PTPs, ATPases
	Sodium Tartrate	400 mM	Acid phosphatases
	Sodium Molybdate	115 mM	Acid and phosphoprotein phosphatases
	Imidazole	200 mM	Alkaline phosphatases
B (DMSO)	(-)-p-Bromotetramisole oxalate	2.5 mM	Alkaline phosphatases
	Cantharidin	500 µM	Ser/Thr phosphatases
	Microcystin LR, (from <i>Microcystis aeruginosa</i> )	500 nM	PP1 and PP2A

- Works well in common detergents such as 1% SDS, Triton, and NP-40.
- DTT, EDTA and EGTA may reduce the protection effects of Sodium Orthovanadate.

### Storage

The product should be stored at -20°C, and is stable for up to 2 years. When kept at 2-8°C, the product remains stable for 2 months.

### Notice

Add in 2 steps: Add A tube, tap to mix well. Then add B tube, mix again.

### Protocol

1. This product can be applied in Western Blot analysis, Co-IP, pull-down, IF, IHC, kinase assay and etc.
2. Thaw at room temperature. Before assaying, add each solution at 1:100 (v/v) dilution to samples (such as cell lysates or tissue extracts). Mix the sample sufficiently after each time of addition.

### Trouble Shooting

Problem	Suggestion
Weak western bands for both phosphorylated and non-phosphorylated proteins.	Add a <b>protease inhibitor cocktail</b> beforehand to protect all kinds of proteins.
Light-green sediment precipitated after mixing two tubes before use.	This sediment is <b>mainly salt precipitation</b> . Salts in the aqueous tube and natural compounds in the DMSO tube will both be influenced. The precipitate <b>cannot be completely be re-dissolved</b> and so precipitation should be avoided. <b>Separate addition</b> of the two tubes is required as described in the instructions.
Tube B takes a long time to melt.	This is because <b>DMSO thaws very slowly</b> , especially in low temperatures. <b>Thawing in 25°C water bath</b> is recommended. <b>Aliquot tube B</b> to 10 tubes of 100ul to help shorten the time.

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