

Phosphatase Inhibitor Cocktail (1 Tube, EDTA-Free, 100X)

Product Description

Protein phosphorylation is an important covalent post-translational modification that can alter the structural conformation of proteins and regulate the function, location, and specific binding of target proteins. Many cellular processes are regulated by reversible phosphorylation of proteins, and 30% of proteins may be phosphorylated during their existence. Since the production and degradation of endogenous proteins are in equilibrium, their cellular levels are stable in the endogenous environment. Crude cell extracts contain many endogenous enzymes, such as phosphatases and proteases, which are capable of degrading and altering the proteins in the extract, and the best way to increase the yield of intact proteins is to incorporate inhibitors of these enzymes.

This product inhibits many types of phosphatases, such as acidic and alkaline phosphatases, serine/threonine (PP1, PP2A, and PP2B), as well as tyrosine protein phosphatases (PTPs) in bacterial, insect, mammalian, yeast, and plant extracts. It can be used as a component of the lysate for protein supernatant obtained from lysed frozen mouse tissues, the lysate of bone-derived macrophages and cell lysates, and the nuclear extraction buffer for immunoprecipitation, and it is also used in the purification and detection of phosphorylated proteins, and in the prevention of dephosphorylation in formalin-fixed, paraffin-embedded (FFPE) tissue sections, etc. This product has little to no effect on BCA or Bradford protein detection.

This product is a ready-to-use phosphatase inhibitor cocktail, which is broad-spectrum, safe and non-toxic. Used in conjunction with protease inhibitor cocktails (e.g., K4002, K4003, etc.), it protects proteins from both dephosphorylation and proteolytic degradation.

Composition and storage conditions

Catalog No.	Product Name	Summary	Targets	CAS Number	Smiles
A8524	Sodium orthovanadate	PTP inhibitors	Membrane Transporter/Ion Channel ATPase	13721-39-6	[O-] [V] (=O) ([O-]) [O-]. [Na+]. [Na+]. [Na+]
B7843	Sodium molybdate	Acidic and phosphoprotein phosphatase	Phosphatase	7631-95-0	[O-] [Mo] (=O) ([O-])=O.[Na+]. [Na+]

		e inhibitors			
B7844	Sodium tartrate dihydrate	Acid phosphatase inhibitors	Phosphatase	868-18-8	<chem>C(C(C(=O)[O-])O)(C(=O)[O-])O.[Na+].[Na+]</chem>
B7845	Imidazole	Alkaline phosphatase inhibitors	Phosphatase	288-32-4	<chem>C1=CN=CN1</chem>
B7846	Sodium fluoride	Acid phosphatase inhibitors	Phosphatase	7681-49-4	<chem>[F-].[Na+]</chem>
C4347	β -glycerophosphate	Reversible inhibitors of serine/threonine phosphatase	Phosphatase	13408-09-8	<chem>[O-]P(OC(CO)CO)([O-])=O.[Na+].[Na+].O.O.O.O.O</chem>
N1686	Cantharidin	Protein phosphatase 1/2A inhibitors	Phosphatase	56-25-7	<chem>O=C([C@]1(C)[C@@]2(C)[C@@H]3O[C@H]1CC3)OC2=O</chem>
	Sodium pyrophosphate	Irreversible inhibitor of serine/threonine phosphatase	Phosphatase	7722-88-5	<chem>[O-]P(=O)([O-])OP(=O)([O-])[O-].[Na+].[Na+].[Na+].[Na+]</chem>
Store at -20°C for one year.					

Protocol

Thaw at room temperature and then add Phosphatase Inhibitor Cocktail to solution samples (e.g., cell lysates or tissue extracts) at 1:100 (v/v) prior to the experiment.

Notes

1. After receiving this product, it can be properly packaged and stored at -20°C to avoid repeated freezing and thawing, and then taken out and added to the lysate when it is ready for use.
2. This product is intended for scientific research purposes only.



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