

Protease Inhibitor Cocktail Kit

78410

1292.4

Number	Description
78410	Protease Inhibitor Cocktail Kit , sufficient to treat 200mL of sample Kit Contents: Protease Inhibitor Cocktail , 2mL, 100X EDTA Solution (0.5M) , 2mL, 100X

Storage: Upon receipt store at 4°C. Product shipped at ambient temperature. Product is stable for one year at 4°C. When diluted to 1X in buffer, the protease inhibitors remain stable and active for 1-2 weeks at 4°C and up to 12-15 weeks at -20°C.

Introduction

The Thermo Scientific Protease Inhibitor Cocktail provides complete protection of proteins from degradation by endogenous proteases that may be released during extraction and purification of proteins from animal and plant tissues, cultured cells, yeast or bacteria. The cocktail inhibits serine and cystine proteases, calpain proteases, and when EDTA is included, metalloproteases.

Important Product Information

- The Protease Inhibitor Cocktail is a broad-spectrum protease inhibitor only and does not contain phosphatase inhibitors. If necessary, use this cocktail in combination with a phosphatase inhibitor, such as the Thermo Scientific Halt Phosphatase Inhibitor Cocktail (Product No. 78420). Alternatively, use the combined Thermo Scientific Halt Protease and Phosphatase Inhibitor Cocktail (Product No. 78440).
- If the protein of interest is to be purified using immobilized metal chelate affinity chromatography or analyzed by 2D gel electrophoresis, EDTA must be removed from the buffered protein solution by extensive dialysis or desalting before the purification procedure. Alternatively, use Protease Inhibitor Cocktail, EDTA-Free (see Related Thermo Scientific Products at the end of these instructions).
- The protease inhibitor cocktail is supplied as a 100X stock that is generally effective when used at a final concentration of 1X. However, some sample types contain particularly high levels of proteases, and optimization of the working concentration for the inhibitor cocktail may be required.
- Cell lysates may be produced by a variety of standard methods such as lysis reagents, sonication, French press or freeze/thaw. Protease Inhibitor Cocktail has been tested and validated for function with our cell lysis reagents (see Related Thermo Scientific Products Section).
- As an alternative to this Protease Inhibitor Cocktail, a full line of Halt™ Protease Inhibitor Cocktails are also available (see the Related Thermo Scientific Products Section). The Halt Protease Inhibitors do not need to be thawed before use and the formulation is fully disclosed.

Procedure

1. Equilibrate vial of Protease Inhibitor Cocktail to room temperature.
2. Briefly vortex the vial immediately before use to ensure a homogeneous suspension of the cocktail components.
3. Add Protease Inhibitor Cocktail at 10µL/mL directly to the cell lysis reagent or cell extract to produce a 1X final concentration. For higher potency protease inhibition, the cocktail may be added to a 2-3X final concentration.
4. Optional inhibition of metalloproteases: Add EDTA Solution at 10µL/mL to achieve 1X (5mM) final concentration.

Troubleshooting

Problem	Possible Cause	Solution
Poor inhibition of protease activity	Improper solubilization and suspension of Cocktail stock before dispensing	Equilibrate Cocktail to room temperature and vortex immediately before use
	EDTA component not added and metalloproteases remain active	Repeat experiment adding EDTA component
	Sample contains high levels of proteases	Add Cocktail at 2-3X (20-30 μ L/mL) final concentration
	Protein precipitation in sample	Decrease sample protein concentration and avoid repeated freeze-thaw cycles and improper storage conditions
	Product very old or was not stored properly	Purchase new Protease Inhibitor Cocktail Kit

Related Thermo Scientific Products

78840	Subcellular Protein Fractionation Kit
78420	Halt Phosphatase Inhibitor Cocktail (100X), 1mL
87785	Halt Protease Inhibitor Cocktail, EDTA-Free (100X), 1mL
87786	Halt Protease Inhibitor Cocktail Kit, 1mL
78440	Halt Protease and Phosphatase Inhibitor Cocktail (100X), 1mL
78248	B-PER[®] Bacterial Protein Extraction Reagent
78260	B-PER II Bacterial Protein Extraction Reagent
78266	B-PER Reagent (in Phosphate Buffer)
78990	Y-PER[®] Yeast Protein Extraction Reagent
78999	Y-PER Plus Dialyzable Yeast Protein Extraction Reagent
78501	M-PER[®] Mammalian Protein Extraction Reagent
78833	NE-PER[®] Nuclear and Cytoplasmic Extraction Reagents
78510	T-PER[®] Tissue Protein Extraction Reagent

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Current product instructions are available at www.thermoscientific.com/pierce. For a faxed copy, call 800-874-3723 or contact your local distributor.

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