

Halt Protease Inhibitor Cocktail

87786 78429 78438

2051.3

Number	Description
87786	Halt Protease Inhibitor Cocktail , contains sufficient reagents to treat 100mL of sample Protease Inhibitor Cocktail (100X) , 1mL EDTA Solution, 0.5M (100X) , 1mL
78429	Halt Protease Inhibitor Cocktail , contains sufficient reagents to treat 500mL of sample Protease Inhibitor Cocktail (100X) , 5mL EDTA Solution, 0.5M (100X) , 5mL
78438	Halt Protease Inhibitor Cocktail , contains sufficient reagents to treat 1L of sample Protease Inhibitor Cocktail (100X) , 10mL EDTA Solution, 0.5M (100X) , 10mL

Storage: Upon receipt store at 4°C. Product shipped on ice pack.

Introduction

The Thermo Scientific™ Halt™ Protease Inhibitor Cocktail protects proteins from degradation by endogenous proteases released during protein extraction and purification. The ready-to-use cocktail contains several potent inhibitors (Table 1) in DMSO against the major classes of protease including aspartic acid, cysteine and serine proteases and, when EDTA is included, metalloproteases.

Table 1. Protease inhibitors included in the cocktail.

<u>Inhibitor</u>	<u>1X Concentration</u>
AEBSF	1mM
Aprotinin	800nM
Bestatin	50µM
E64	15µM
Leupeptin	20µM
Pepstatin A	10µM
EDTA*	5mM

*EDTA is provided in a separate vial.

Important Product Information

- Halt Protease Inhibitor Cocktail is a broad-spectrum protease inhibitor and does not contain phosphatase inhibitors. The protease inhibitors used in the formulation at their 1X working concentrations are listed in Table 1.
- EDTA inhibits metalloproteases by chelating the divalent cations necessary for their activity. By this same mechanism, the activities of other proteins might be affected by EDTA; therefore, empirically determine if EDTA is beneficial in particular experiments.
- EDTA interferes with immobilized metal-chelate affinity chromatography (IMAC) and 2-D gel electrophoresis. If needed, remove EDTA by extensive dialysis or desalting before performing such procedures.
- This protease inhibitor cocktail is supplied at a 100X concentration in DMSO and is generally effective when used at a 1X final concentration; however, if a sample contains particularly high levels of proteases, the effective cocktail concentration might require optimization.
- The cocktail might freeze during storage, which does not affect its function or performance. If frozen, equilibrate the bottle to room temperature until the cocktail becomes a liquid.

Procedure

Note: Wear proper personal protective equipment when working with this DMSO-containing protease inhibitor cocktail.

1. Equilibrate the bottle to room temperature.
2. Vortex the bottle before use to ensure a homogeneous suspension.
3. Immediately before use, add 10µL of Halt Protease Inhibitor Cocktail per milliliter of sample directly to the cell lysis buffer or extract to produce a 1X final concentration.
4. Optional: For inhibition of metalloproteases, add 10µL of EDTA per milliliter of sample directly to the lysis buffer or extract to produce a 1X (5mM) final working concentration.

Troubleshooting

Problem	Possible Cause	Solution
Poor inhibition of protease activity	Sample contains high levels of proteases	Add sufficient cocktail to produce a 2X or 3X final concentration
Cocktail does not provide sufficient protection against a particular protease family	Inhibitor for a specific family is not a component of the cocktail	Add individual inhibitors to the samples for the specific protease
	A specific inhibitor is not at the needed concentration	Use the cocktail at a higher concentration

Related Thermo Scientific Products

78430	Halt Protease Inhibitor Single-Use Cocktail (100X) , 100µL × 24 microtubes
78440	Halt Protease and Phosphatase Inhibitor Cocktail (100X) , 1mL
78444	Halt Protease and Phosphatase Inhibitor Cocktail (100X) , 5 × 1mL
78446	Halt Protease and Phosphatase Inhibitor Cocktail (100X) , 10mL
78428	Halt Phosphatase Inhibitor Single-Use Cocktail (100X) , 100µL × 24 microtubes
88660	Pierce™ Protease Inhibitor Tablets , 30 tablets
78420	Halt Phosphatase Inhibitor Cocktail (100X) , 1mL
88662	Pierce Phosphatase Inhibitor Tablets , 20 tablets
78248	B-PER™ Bacterial Protein Extraction Reagent , 500mL
78990	Y-PER™ Yeast Protein Extraction Reagent , 500mL
78833	NE-PER™ Nuclear and Cytoplasmic Extraction Kit
78501	M-PER™ Mammalian Protein Extraction Reagent , 250mL

Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample.

NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS.

Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to humans or animals.

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

© 2014 Thermo Fisher Scientific Inc. All rights reserved. Unless otherwise indicated, all trademarks are property of Thermo Fisher Scientific Inc. and its subsidiaries. Printed in the USA.