

Pierce™ Protease and Phosphatase Inhibitor Mini Tablets

Catalog Numbers A32959 and A32961

Doc. Part No. 2162616 Pub. No. MAN0016071 Rev. A.0

 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Product description

The Thermo Scientific™ Pierce™ Protease and Phosphatase Inhibitor Mini Tablets protect proteins from degradation by endogenous proteases and phosphatases released during protein extraction and purification. Each tablet contains a mixture of several potent inhibitors (Table 1) against the major classes of proteases and phosphatases. The protease inhibitors target aminopeptidases and cysteine and serine proteases and, when EDTA is included, metalloproteases. The phosphatase inhibitors target serine, threonine and tyrosine phosphatases.

Table 1 Protease and phosphatase inhibitors included in the tablets.

Inhibitor	Target Protease/Phosphatase
Aprotinin	Serine proteases
Bestatin	Aminopeptidases
E-64	Cysteine proteases
Leupeptin	Serine and cysteine proteases
Sodium fluoride	Serine and threonine phosphates
Sodium orthovanadate	Tyrosine phosphatases
Sodium pyrophosphate	Serine and threonine phosphatases
β-glycerophosphate	Serine and threonine phosphatases
EDTA*	Metalloproteases

* EDTA is present only in Product No. A32959.

Contents

Cat. No.	Product	Contents	Storage
A32959	Pierce™ Protease and Phosphatase Inhibitor Mini Tablets	20 tablets - each tablet sufficient for 10 mL of extract <i>(Replaces Pierce Protease and Phosphatase Inhibitor Mini Tablets (Product No. 88668))</i>	Store at 4°C.
A32961	Pierce™ Protease and Phosphatase Inhibitor Mini Tablets, EDTA-free	20 tablets - each tablet sufficient for 10 mL of extract <i>(Replaces Pierce Protease and Phosphatase Inhibitor Mini Tablets, EDTA-free (Product No. 88669))</i>	

Additional information

- EDTA inhibits metalloproteases by chelating divalent cations necessary for their activity. By this same mechanism, EDTA can affect the activities of other proteins and also interferes with immobilized metal-chelate affinity chromatography (IMAC) and 2D gel electrophoresis. Empirically determine if EDTA is beneficial.
- Tablets are compatible with common protein assays and Thermo Scientific™ Pierce™ Cell Lysis Reagents.

Use inhibitor tablet

- Dispense tablet from vial and place into 10 mL of solution.
- Vortex to dissolve.

Troubleshooting

Observation	Possible cause	Recommended action
Poor inhibition of protease or phosphatase activity.	Poor inhibition of protease or phosphatase activity.	Sample contains high levels of proteases or phosphatases.
Tablet not protecting against a protease or phosphatase family.	Inhibitor for a specific family was not in tablet.	Add individual inhibitors to the samples for the specific protease or phosphatase.
	A specific inhibitor was not at the needed concentration.	Dissolve the tablet to 2-3X final concentration.

The information in this guide is subject to change without notice.

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Revision history: Pub. No. MAN0016071

Revision	Date	Description
A.0	18 August 2016	New manual

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