PROMETHEUS™
Protein Biology Products

Instruction Manual

Protease Inhibitor Cocktail, Yeast/Fungi [100X] **Cat. No.: 18-436, 18-437 & 18-438**

Introduction:

The cell extracts from yeast and fungi contain a number of endogenous proteases and phosphatases, which are capable of degrading the proteins present in the extract. The need of protease inhibitors arises to protect the proteins from damage caused by the proteases released during the lysis. Also, to improve the yield of native proteins, use of protease inhibitor cocktail along with phosphatase and other inhibitors is recommended during the extraction process. Our protease inhibitor cocktail has been optimized and tested for use with fungal and yeast cell extracts.

Our Protease Inhibitor Cocktail, Yeast/Fungi [100X] has a broad specificity for the inhibition of serine, cysteine, aspartic and metalloproteases. It contains optimized concentration of protease inhibitors: AEBSF (4-[2-Aminoethyl] benzenesulfonyl fluoride hydrochloride), E-64 (N-[trans-Epoxysuccinyl]-L-leucine 4-guanidinobutylamide), Pepstatin A, and 1,10-Phenanthroline protease inhibitors and other proprietary component(s) for broad spectrum inhibition of proteases. The inhibitors present in the cocktail target serine proteases (e.g., trypsin and chymotrypsin), cysteine proteases (e.g., calpain, papain, cathepsin B, and cathepsin L), acid proteases (e.g., pepsin (human or porcine), renin, cathepsin D, chymosin (bovine rennin), and protease B (*Aspergillus niger*) and metalloproteases. The inhibitor cocktail does not contain any chelators, such as EDTA in it, but has1,10-Phenanthroline metalloprotease inhibitor.

The inhibitor cocktail is supplied as a ready to use solution in DMSO, at 100X concentration, which makes it easier to use in low volume at 1X, 2X or more for samples with high protease activities. The supplied inhibitor cocktail helps in preserving the proteins from degradation by proteases and can be used with the lysis buffer for yeast and fungi protein extractions or lysate.

Items Supplied:

Catalog No.	Product Name	Size	Storage Condition*
18-436	Protease Inhibitor Cocktail, Yeast/Fungi [100X]	1.0 ml	4°C to -20°C
18-437	Protease Inhibitor Cocktail, Yeast/Fungi [100X]	2.0 ml	4°C to -20°C
18-438	Protease Inhibitor Cocktail, Yeast/Fungi [100X]	5.0 ml	4°C to -20°C

**The product is shipped at ambient temperature and upon receipt, store it at 4°C for short-term storage (up to 4 months) and at -20°C for long term storage (up to 1 year). The product is stable for one year, if stored and used as recommended.*

Product Handling / Safety Warning:

This product is for research use only and must not be used for clinical diagnostics, therapeutic and human or animal purposes. Wear gloves and other protective measures when handling it and avoid contact to eyes, skin and other exposed parts of the body, read safety data sheet for further details.

Important NOTE About the Product:

- The Protease Inhibitor Cocktail DOES NOT contain Phosphatase inhibitors, but only broad-spectrum protease inhibitors for Histidine-Tagged protein extraction.
- The protease inhibitor cocktail is supplied as a 100X stock, which is normally effective when used at 1X concentration. For Example: 1 ml of the cocktail solution is recommended for the inhibition of protease activity found in 100 ml of cell lysate from ~20 g wet Saccharomyces cerevisiae cell pellet.

Instructions to Use the Product:

I. Take out the Protease Inhibitor Cocktail vial from refrigerator/freezer and let it equilibrate/thaw to room temp. Vortex briefly to mix the solution, if crystals develop due to storage in cold condition, vortex it for briefly for additional 2-3 times.

II. The cocktail is supplied at 100X concentration and recommended to use at 1X as a good starting point. However, the working concentration should be optimized for each individual application and 2-3X concentration can be used for samples with high protease activities.

III. Add 10 µl of Protease Inhibitor Cocktail, Yeast/Fungi [100X] directly into 1 ml of lysis buffer or lysate to achieve 1X concentration of the cocktail and higher concentration [2-3X] may be used, if required.

RELATED PRODUCTS:

1. **Protein Extraction Buffers/ Kits (Cat. No. 18-400, 18-402, 18-404, 18-406, 18-409, 18-411)**
   For extracting proteins from Bacteria, Insects Cells, Mammalian cells, Tissues and Yeast samples
2. **RIPA Lysis Buffer (18-415, 18-416 and 18-417)**
   For extracting proteins from different species samples.
3. **Protein Loading Buffer [2X] (Cat. No. 20-309)**
   Non-reducing ready to use buffer for loading protein samples on to the gel. Premixed, just add an equal volume to your protein sample
4. **Protein Loading Buffer [2X] (Cat. No. 20-310)**
   Reducing ready to use buffer for loading protein samples on to the gel. Premixed, just add an equal volume to your protein sample

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