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ProductInformation

Protease Inhibitor Cocktail
For Fungal and Yeast Cells

Product Number **P 8215**
Storage Temperature –20 °C

Product Description

Crude cell extracts contain a number of endogenous enzymes, such as proteases and phosphatases, which are capable of degrading the proteins present in the extract. The best way to improve the yield of intact proteins is to add inhibitors of these enzymes known to be present in the source material. This protease inhibitor cocktail has been optimized and tested for fungal and yeast cell use.

This is a mixture of protease inhibitors with a broad specificity for the inhibition of serine, cysteine, aspartic, and metalloproteases.

Components

The cocktail solution contains the following concentrations of inhibitors:

AEBSF	100 millimolar
1,10-Phenanthroline	500 millimolar
Pepstatin A	2.2 millimolar
E-64	1.4 millimolar

The individual components of this protease inhibitor cocktail have specific inhibitory properties. A description of each inhibitor is given below.

AEBSF (Product Code A 8456) inhibits serine proteases, such as trypsin and chymotrypsin.

1,10-Phenanthroline (Product Code P 9375) inhibits metalloproteases.

Pepstatin A (Product Code P 4265) inhibits acid proteases, such as pepsin (human or porcine), renin, cathepsin D, chymosin (bovine rennin), and protease B (*Aspergillus niger*).

E-64 (Product Code E 3132) inhibits cysteine proteases, such as calpain, papain, cathepsin B, and cathepsin L.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The cocktail is supplied as a clear, faint pink solution in dimethyl sulfoxide (DMSO).

Storage/Stability

Store the cocktail at –20 °C. The product, as supplied, is stable for 2 years when stored at –20 °C, 8 months at 2–8 °C, and 2 months at room temperature.

Procedure

One ml of the cocktail solution is recommended for the inhibition of protease activity found in 100 ml of cell lysate from 20 g (wet weight) of *Saccharomyces cerevisiae* cells. The *Saccharomyces* cells were grown on a medium containing yeast extract, malt extract, bactopeptone, and glucose. Since not all organisms contain the same level of endogenous proteases, it may sometimes be necessary to increase the concentration of inhibitors.

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