

## Product Information

# Protease Inhibitor Cocktail

For use with mammalian cell and tissue extracts, DMSO solution

**P8340**

## Product Description

Crude cell extracts contain various endogenous enzymes, such as proteases and phosphatases, which can degrade proteins in the extracts. The best way to increase the yield of intact proteins is to add inhibitors of those enzymes known to be present.

The P8340 protease inhibitor cocktail has been optimized and tested for mammalian cell and tissue extracts. P8340 contains inhibitors with a broad specificity for serine, cysteine, and acid proteases, and aminopeptidases.

P8340 is supplied as a ready-to-use solution in DMSO. The inhibitors in P8340 are as follows, with respective specific inhibitor targets and target classes of each inhibitor listed:

- AEBSF [4-(2-Aminoethyl)benzenesulfonyl fluoride hydrochloride]: serine proteases, such as trypsin, chymotrypsin, plasmin, kallikrein and thrombin
- Aprotinin: serine proteases, such as trypsin, chymotrypsin, plasmin, and kallikrein; human leukocyte elastase, but not pancreatic elastase
- Bestatin hydrochloride: aminopeptidases, such as leucine aminopeptidase and alanyl aminopeptidase<sup>1-4</sup>
- E-64 [*N*-(trans-Epoxy succinyl)-L-leucine 4-guanidinobutylamide]: cysteine proteases, such as calpain, papain, cathepsin B, and cathepsin L
- Leupeptin hemisulfate salt: serine proteases and cysteine proteases, such as plasmin, trypsin, papain, and cathepsin B
- Pepstatin A: acid proteases, such as pepsin, renin and cathepsin D, and many microbial aspartic proteases

Several theses<sup>5</sup> and dissertations<sup>6-22</sup> have cited use of product P8340 in their protocols.

## Storage/Stability

Store the product at -20 °C.

## Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Usage

One mL of P8340 is recommended for the inhibition of endogenous enzymes found in 100 mL of lysate from 20 g (wet weight) of bovine liver, or in 10 mL of cell lysate from CHO cells at a cell density of 10<sup>8</sup> cells per mL. CHO cells were grown on DMEM with 10% FCS (heat-inactivated).

**Note:** Not all lysates contain the same levels of endogenous enzymes. It may be necessary to adjust the volume of cocktail required.

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P8340dat Rev 06/22 CP,AP,NDH,PHC,GCY,MAM

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