

Product Information

Protease Inhibitor Cocktail

For use in purification of Histidine-tagged proteins, DMSO solution

P8849

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.

This protease inhibitor cocktail has a broad specificity for the inhibition of serine, cysteine, acid, and thermolysin-like proteases, and aminopeptidases. P8849 particularly omits chelators (such as EDTA), to optimize its use for purification of histidine-tagged (His-tagged) proteins.¹

P8849 is supplied as a solution in DMSO. P8849 contains five protease inhibitors, with the following specific inhibitory properties:

- AEBSF [4-(2-Aminoethyl)benzenesulfonyl fluoride hydrochloride]: serine proteases, such as trypsin, chymotrypsin, plasmin, kallikrein, and thrombin
- Bestatin hydrochloride: aminopeptidases, such as leucine aminopeptidase and alanyl aminopeptidase²⁻⁵
- E-64 [*N*-(trans-Epoxy succinyl)-L-leucine 4-guanidinobutylamide]: cysteine proteases, such as calpain, papain, cathepsin B, and cathepsin L
- Pepstatin A: acid proteases, such as pepsin, rennin, and cathepsin D, and many microbial aspartic proteases
- Phosphoramidon disodium salt: thermolysin and collagenase

Several theses⁶⁻⁹ and dissertations¹⁰⁻²² have cited use of product P8849 in their protocols.

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.

Storage/Stability

Store the product at -20 °C. This product has a recommended retest date of 4 years, when stored under defined conditions, and the container has remained unopened.

Usage

One mL of P8849 cocktail solution is recommended for the inhibition of endogenous enzymes found in 100 mL of lysate from 20 g (wet weight) of *E. coli* cells or 10 g (wet weight) of baculovirus-infected cells. The *E. coli* cells were grown on LB medium. An extract of baculovirus-infected *Spodoptera frugiperda* pupal ovary cells was also tested.

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

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P8849dat Rev 06/22 AP,NDH,PHC,GCY,MAM

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