Product Information

ReadyShield Protease Inhibitor Cocktail

For Use with Fungal and Yeast Extracts

PIC0001
Storage Temperature −20 °C

Product Description

Crude protein extracts contain endogenous proteases, which can degrade the proteins in the extracts. The best way to increase the yield of intact unmodified proteins is to add inhibitors for the proteases known to be present in the extract.

This protease inhibitor cocktail has been optimized and tested for fungal and yeast extracts. It contains inhibitors with a broad specificity for serine, cysteine, acid and metalloproteases. The cocktail has been tested on extracts from *Saccharomyces cerevisiae.*

This cocktail is supplied as a ready-to-use solution using a proprietary non-freezing formulation.

ReadyShield (Cat. No. PIC0001) is a non-freezing formulation containing the following inhibitors.

Specific inhibitory properties of the components are:

- AEBSF **–** [4-(2-Aminoethyl)benzenesulfonyl fluoride hydrochloride] – serine proteases such as, trypsin, chymotrypsin, plasmin, kallikrein and thrombin.
- E-64 – [N-(trans-Epoxysuccinyl)-L-leucine 4-guanidinobutylamide] – cysteine proteases such as, calpain, papain, cathepsin B, and cathepsin L.
- Pepstatin A – acid proteases such as, pepsin, renin and cathepsin D, and many microbial aspartic proteases.
- Phosphoramidon disodium salt – thermolysin and collagenase

Precautions and Disclaimer

For research 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

The cocktail is shipped on wet ice and storage at −20 °C is recommended. The product, as supplied, is stable for two years. For one month the product can be stored at 2-8 °C.

Procedure

The recommended dilution of the cocktail in the biological extract is 1 mL of the cocktail per 100 mL of 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.

Notes: Not all lysates and extracts contain the same levels of endogenous protease, and it may be necessary to adjust the volume of cocktail used.

References

1. Umezawa H., *Ann. Rev. Microbiol.*, **36**: 75-99 (1982).
2. Aoyagi, T., et al, *Biochem. Int.*, **9**: 405-411 (1984).
3. Aoyagi T., and Umezawa, H., *Acta Biol. Med. Ger.*, **40:** 1523-1529 (1981).
4. Mumford, R. A., et al, *Biochem. Biophys. Res . Comm.*, **103**: 565-572 (1981).

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