



50× Cocktail

Product Number: S080006

Shipping and Storage

Dry ice transportation; stored at -20°C, shelf life of 12 months.

Component

Component	S080006
50× Cocktail	250μL
0.5M EDTA	125μL

Description

This product, 50× Cocktail, is a mixed-type protease inhibitor containing a variety of broad-spectrum protease inhibitors, including AEBSF, Aprotinin, Bestatin, E-64, Leupeptin, and Pepstatin A, with DMSO as the solvent. The product also includes additional EDTA for selective use. The various components in this product can effectively inhibit protease activity in samples from animals, plants, yeast, and bacteria. Among them, AEBSF is a water-soluble irreversible serine protease inhibitor with inhibition constants similar to those of PMSF and DFP. It effectively inhibits proteases such as trypsin, chymotrypsin, plasmin, kallikrein, and thrombin, serving as a substitute for PMSF and DFP with lower toxicity, better water solubility, and improved stability in aqueous solutions. Aprotinin is a competitive reversible serine protease inhibitor. Bestatin is a reversible aminopeptidase inhibitor. E-64 is an irreversible cysteine protease inhibitor. Leupeptin is a reversible serine and cysteine protease inhibitor. Pepstatin A exhibits effective inhibition against aspartic proteases such as cathepsin D and E. EDTA can inhibit metalloproteases.

This product is suitable for protein extraction from various biological samples (e.g., animal tissues/cells, plant tissues, bacteria, yeast, etc.) and is compatible with subsequent protein quantification assays, immunoblot experiments (e.g., WB, Co-IP, pull-down), and more. When diluted 50-fold, 250μL of mixed protease inhibitors can prepare 12.5mL of lysis buffer, and 125μL of EDTA can be used to prepare 12.5mL of lysis buffer.

Protocol

1. Thaw and rewarm this product before use, then centrifuge at low speed for a short period of time.
2. Use in a ratio of 1:50 (volume ratio), that is, add 20μL of 50 × Cocktail to every 1mL of protein lysate.
3. Add 0.5M EDTA to the lysis buffer in a ratio of 1:100 as needed. Note that EDTA cannot be added when detecting the activity of metalloproteinases in the sample; When combined with phosphorylase inhibitors (such as G2007), EDTA cannot be added as it can seriously affect the inhibitory effect of certain components in phosphorylase inhibitors.
4. It should be added before use and cannot be stored in the cracking solution in advance to prevent failure.

Note

1. This product is a highly concentrated solution. When thawed after low-temperature storage, there may be trace amounts of crystalline precipitation, which is a normal phenomenon. After sufficient dissolution and mixing, it can be used normally.
2. The protease content varies in different samples, and a recommended standard dosage is 1:50. If the protease content in the sample is high, the concentration of inhibitor can be appropriately increased.
3. For your safety and health, please wear lab coats and disposable gloves when operating.