200 × Protease Inhibitor Cocktail MIX (For Tissue culture media)

Cat:IKM1160

Storage: Store at -20℃, 1 year.

Size: 1*1mL/10*1mL

Introduction

Extracts such as cells or tissues contain many endogenous proteases, phosphatases, etc. In the in vitro environment, the proteins in the extracts are prone to degradation or modification, which affects subsequent protein detection. Therefore, adding inhibitors such as proteases and phosphatases to the extract is an effective method to prevent protein degradation and demodification.

200 × Protease Inhibitor Cocktail MIX (For Tissue culture media) is a mixture of five protease inhibitors, which is specifically optimized for tissue culture medium. After 48 h of action in the medium, the new solution can be replaced to ensure continuous inhibition of protease.

This product is presented with an additional 100 mM EDTA, and customers can choose whether to use it according to their own needs.

Kit Components

Composition	Component	Solvent	Size	Storage
200 × protease inhibitor Cocktail MIX (For Tissue culture media)	Aprotinin	DMSO	1*1mL/10*1mL	-20℃
	Bestatin			
	E-64			
	Leupeptin			
	Pepstatin A			
100mM EDTA	100mM EDTA	Water	1*1mL/10*1mL	2-8℃

Product advantages

1.The product composition is clear and the solvent is clear.

2.Product compatibility is good, Cocktail MIX does not contain metal chelating agent, to ensure compatibility with downstream applications

3.This series of products are given an additional 100 mM EDTA, which can be used directly without additional preparation.

4. Flexible customization. Customers can customize the required MIX or custom one-component

proprietary Kits based on their own experiments. Specifications and packaging can also be customized.

Protocols *(only for reference)*

1. The product should be thawed at room temperature before use, and centrifuged at low speed before opening the cap, so as to better throw the liquid adhered to the pipe wall to the bottom of the pipe.
2. Use at a dilution of 1 : 200 or higher in the tissue culture medium to prevent the secretory protein from being hydrolyzed by protease.

Notes

1. If the subsequent experiments need to detect the activity of metalloproteinases in the extract, EDTA should not be added.
2. This product is only for scientific research. Do not use in medicine, clinical diagnosis or treatment, food and cosmetics.
3. Please do not store in ordinary residential areas.
4. For your safety and health, please wear experimental clothes and wear disposable gloves and masks.

FAQ

Q : Can Inhibitor Cocktail not be diluted according to the specified proportion?

A: Our Cocktail uses a classic concentration ratio. In order to ensure that it has sufficient inhibitory effect on different types of proteases, it is recommended to dilute it in accordance with the specified ratio. However, the inhibitory effect of protease activity is related to many factors, such as the difficulty of target protein degradation, the concentration of protease, the activity of protease and the concentration of inhibitor, which will affect the final protective effect. The content of phosphatase in samples from different sources is different. Therefore, in actual use, the concentration can be adjusted appropriately according to the experimental results.

Q : Why use the inhibitor Cocktail? What are the advantages compared with the commonly used PMSF?

A : Cocktail is a low-toxic, comprehensive protein protection reagent that maximizes the protection of proteins from degradation by proteases. More reliable than a single inhibitor. PMSF is a classical serine protease inhibitor, which is widely used in the process of cell lysis and purification of proteins. However, PMSF has obvious shortcomings in many aspects, one of which is high toxicity. Therefore, AEBSF is selected as its substitute in protease inhibitors. The second is easy degradation failure, which is easy to fail during cell lysis, and the protease inhibitor Cocktail not only protects more comprehensively, but also has a more lasting effect.

Q: Will DMSO affect the experiment?

A : In general, DMSO does not affect the experimental results. DMSO is also used as a solvent for many bioactive substances, such as protein crystallization and co-immunoprecipitation.

DMSO is stable at room temperature, and DMSO is also an excellent cell cryoprotectant at low temperature.

Q : I used Cocktail, but the results are still not ideal. Why?

A : For most proteins, Cocktail has a good effect. If there is still a low protein yield, it is necessary to carefully check the experimental steps and program design to reduce the links leading to protein degradation. For example, before cell treatment, the lysis system should be fully prepared, and Cocktail should be added in advance and mixed well. The cells to be broken should be added to the prepared lysis solution immediately after collection or removal from the refrigerator, so as to ensure the whole low temperature operation. If the target protein is special, there is no inhibitor of a specific protease family in the Cocktail, and a specific protease inhibitor can be added to the lysate.