

100× Deacetylase Inhibitor Cocktail MIX

Cat: IKM1050

Storage: Store at -20°C, 1 year.

Introduction

100 × Deacetylase Inhibitor Cocktail MIX is a mixture of inhibitors designed to maintain the acetylation state of the protein. Lysine acetylation is an important post-translational modification that affects protein transcription, cell cycle and signal transduction pathways. The balance between acetyltransferases and deacetylases affects chromatin condensation, transcription factor activity and protein aggregation. Deacetylation inhibitors are useful tools for studying these important biological pathways.

The 100 × deacetylase inhibitor Cocktail MIX is composed of four components, which can effectively inhibit the activity of various deacetylases and maintain the protein acetylation state: Class I / II deacetylase reversible inhibitors Trichostatin A, Sodium Butyrate, Class III deacetylase (sirtuins, SIRT1) reversible inhibitor Nicotinamide, and SIRT1 selective reversible inhibitor EX-527. In order to improve the detection level of protein acetylation, the deacetylase inhibitor cocktail can be added to the cell culture medium for a period of time before collecting cells and extracting proteins. It can be widely used in WB, IF, FCM and so on.

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
100 × Deacetylase Inhibitor Cocktail MIX	40 μM Trichostatin A	DMSO	1*1mL/10*1mL	-20°C
	200 mM Sodium Butyrate			
	400 mM Nicotinamide			
	1 mM EX-527			
100mM EDTA	100mM EDTA	Water	1*1mL/10*1mL	2-8°C

Product advantage

1. The product composition is clear and the concentration is clear.
2. Product compatibility is good, efficient inhibition of a variety of proteases, comprehensive protection of protein from degradation

3. This series of products are given an additional 100mM 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. The inhibitor mixture was added to the cell culture medium at a ratio of 1 : 100 (v / v), and it is recommended to incubate for 16-48 h before testing.
3. If you need to use EDTA, it can be added to the cracking solution in an appropriate proportion, and it can be used after mixing.

Note

1. DMSO is easy to crystallize at low temperature and can be thawed at 25°C.
2. The lysis solution or culture solution containing the mixture of deacetylase inhibitors should be prepared now, and should not be frozen after preparation for subsequent use.
3. In order to obtain the best use effect, try to avoid too much repeated freezing and thawing. It can be used after proper packaging, and it is recommended to be stored at -80°C when not used temporarily.
4. If the subsequent experiments need to detect the activity of metalloproteinases in the extract, EDTA should not be added.
5. This product is only for scientific research. Do not use in medicine, clinical diagnosis or treatment, food and cosmetics.
6. Please do not store in ordinary residential areas.
7. 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.