Antigen Retrieval Solution Citrate buffer of pH6.0 (20X)

Cat #: B-IMWS02

Size: 100 mL

Storage: Store at 2-8°C, for 2 years

Applications

After fixation of cells or tissues with formaldehyde or other aldehyde-based reagents, protein cross-linking occurs, which masks the antigenic sites and weakens the staining signal in immunostaining. This antigen retrieval solution effectively removes the cross-linking between proteins caused by aldehyde fixation, fully exposing the antigenic epitopes in samples such as paraffin sections, thereby improving the immunostaining results. Antigen retrieval is typically performed on paraffin sections, while it is not required for frozen sections. Antigen retrieval greatly improves immunostaining on paraffin sections, and there is evidence suggesting significant improvement in staining on frozen sections as well. Specifically, when immunostaining on frozen sections yields unsatisfactory results, antigen retrieval can be considered. In principle, whether it is frozen sections or cell smears, as long as the samples are fixed with formaldehyde or other aldehyde-based reagents, antigen retrieval effectively removes protein cross-linking and fully exposes the antigenic epitopes, thereby greatly improving immunostaining results. This product is suitable for paraffin sections and can also be used for other samples such as frozen sections.

Instructions for Use

1. Mix triple-distilled water with the 20X concentrated solution in a volume ratio of 19:1 according to the desired amount.

2. Perform antigen retrieval using this solution after dewaxing the tissue sections. This product can be used for antigen retrieval using microwave or high-temperature high-pressure methods, with microwave being the common method.

2.1. For microwave method

A. Immerse the sections in the antigen retrieval solution (1X) and heat at 95-100°C for approximately 20 minutes (heating time can be controlled within 10-30 minutes, the optimal heating time should be determined based on different samples and target proteins). If using a microwave oven for heating, avoid boiling and excessive evaporation of water.

B. Then cool to room temperature within approximately 20-30 minutes.

C. Wash 1-2 times with immunostaining wash buffer for 3-5 minutes each time. Subsequently, proceed to blocking and other subsequent immunostaining steps.

2.2. For high-temperature high-pressure method

A. Rinse the dewaxed tissue sections with tap water, followed by five rinses with distilled water. Place the rinsed tissue sections in a container filled with distilled water.

B. Place the pressure cooker on an induction cooker, pour the antigen retrieval solution into the pressure cooker, plug in the power, do not seal the valve, heat on high heat until boiling, then press the pause button. Place the rinsed tissue sections (shake off excess water from the slides) into the antigen retrieval solution, making sure the tissue on the slides is completely immersed. Cover the pressure cooker and seal the valve, then continue heating on low heat for 3-4 minutes (the optimal heating time should be determined based on different samples and target proteins). Turn off the heat and unplug the power.

C. Allow the pressure valve to drop naturally, then open the pressure cooker and let the retrieval solution cool down naturally.

D. Once the temperature of the retrieval solution has cooled to a suitable level, remove the tissue sections and place them in a beaker filled with distilled water, rinsing 5-6 times with distilled water.

Storage and Shelf Life

Store sealed at 2°C to 8°C, for 2 years.

Note:

The product listed herein is for research use only and is not intended for use in human or clinical diagnosis.