

Antigen Retrieval Solution for Floating Sections (10X)

Introduction

Fixation of cells or tissues with paraformaldehyde, formaldehyde, or other aldehyde-based reagents induces cross-linking between proteins, which masks antigenic sites in the sample and leads to reduced staining signals or even false-positive results in immunostaining. Antigen Retrieval Solution is used for antigen retrieval in aldehyde-fixed samples such as paraffin-embedded sections and frozen sections, effectively removing aldehyde-induced protein cross-links and fully exposing antigenic epitopes in samples like paraffin sections, thereby greatly improving immunostaining results.

Antigen retrieval is typically required for paraffin sections to enhance immunostaining results. For frozen sections, antigen retrieval is optional; however, many studies have shown that it significantly improves staining outcomes, especially when immunostaining of frozen sections is suboptimal. In principle, for any sample fixed with paraformaldehyde, formaldehyde, or other aldehyde-based reagents—whether frozen sections or cell smears—antigen retrieval effectively removes protein cross-links and fully exposes antigenic epitopes, thereby greatly improving immunostaining results.

This product contains sodium citrate and other components, with a pH of approximately 8.5. It is an antigen retrieval solution particularly suitable for floating sections and can be used for antigen retrieval in paraffin sections, frozen sections, and other samples fixed with paraformaldehyde, formaldehyde, or other aldehyde-based reagents.

Protocol

- For paraffin sections
 - a. Deparaffinization: Immerse sections in xylene for 5 minutes. Replace with fresh xylene and repeat twice (total of 3 xylene washes). Then transfer to absolute ethanol for 5 minutes (twice), then to 90% ethanol for 5 minutes (twice), then to 70% ethanol for 5 minutes (once). Finally, wash with distilled water for 5 minutes (twice).
 - b. Antigen retrieval: Dilute Antigen Retrieval Solution for Floating Sections (10X) 10-fold with double-distilled water or Milli-Q water to prepare Antigen Retrieval Solution for Floating Sections (1X). Immerse sections in the 1X solution and heat at 80°C for approximately 30 minutes. Then allow to stand for 20–30 minutes until cooled to room temperature. Wash 1–2 times with Immunostaining Wash Buffer (user-supplied), 3–5 minutes per wash. Then proceed with subsequent immunostaining steps such as blocking.

***Note:** Antigen Retrieval Solution for Floating Sections (1X) should be preheated to 80°C before use. Heating can be performed using a conventional water bath.

■ For frozen sections

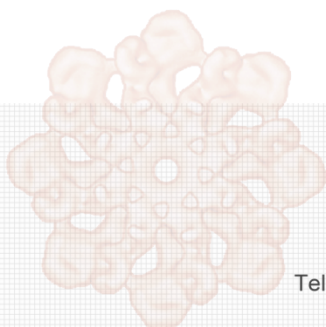
Wash sections with Immunostaining Wash Buffer (user-supplied) for 5 minutes. Immerse sections in Antigen Retrieval Solution for Floating Sections (1X) and heat at 80°C for approximately 30 minutes. Antigen Retrieval Solution for Floating Sections (1X) should be preheated to 80°C before use. Heating can be performed using a conventional water bath. Then allow to stand for 20–30 minutes until cooled to room temperature. Wash 1–2 times with Immunostaining Wash Buffer (user-supplied), 3–5 minutes per wash. Then proceed with subsequent immunostaining steps such as blocking.

■ Other sample types

For antigen retrieval in other sample types, refer to the steps for paraffin sections or frozen sections.

■ **Note**

1. Storage conditions: Store at 4°C or -20°C for one year.
2. This product is for scientific research use only.



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