
Pepsin Aqueous Solution (0.4%)

Cat. No.: G1508994 | Pack size: 100 mL, 500 mL | Storage: Store at -20°C

Overview

During tissue preparation, antigens are masked by the action of chemical reagents, and the peptide chains of some antigens are denatured by heat, making them undetectable during immunohistochemical staining. To address these issues, the process of re-exposing or restoring such antigens using chemical reagents and heat is referred to as antigen retrieval.

Buffers such as citrate, EDTA or Tris can re-expose antigens masked by formalin under heating conditions without damaging antigenic epitopes, thereby improving antigen detection rates, reducing background staining and enhancing diagnostic accuracy.

Prior to the advent of heat-induced antigen retrieval, enzyme-induced epitope retrieval using trypsin, Proteinase K, pepsin and other enzymes was the most commonly used method. 0.4% Pepsin Aqueous Solution can expose antigenic epitopes in samples such as paraffin sections, thus significantly improving immunostaining results. Paraffin sections generally require antigen retrieval treatment, while frozen sections do not necessarily need such treatment. Antigen retrieval can enhance the immunostaining effect of paraffin sections and also improve that of frozen sections to varying degrees; antigen retrieval may be considered when the immunostaining effect of frozen sections is unsatisfactory. Based on the calculation of 10 ml of 1× antigen retrieval solution required per slide, 100 ml of the solution can be used for the antigen retrieval of 10 samples.

Materials to Be Prepared by the User

1. Graded ethanol.
2. Double-distilled water or deionized water.
3. Heating equipment.
4. Immunostaining wash buffer.

Operating Procedures (For Reference Only)

A. Paraffin Sections

1. Deparaffinization to water
 - ① Xylene, 3 times, 3-5 minutes each time.
 - ② Anhydrous ethanol for dehydration, 3 times, 3-5 minutes each time.

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③ 95% ethanol, 3-5 minutes.

④ 90% ethanol, 3-5 minutes.

⑤ 80% ethanol, 3-5 minutes.

⑥ 70% ethanol, 3-5 minutes.

⑦ Rinse with distilled water, 2 times, 3-5 minutes each time.

2. Antigen retrieval: Immerse the sections in 0.4% Pepsin Aqueous Solution and incubate at 37 °C for 10-25 minutes.

3. Wash with immunostaining wash buffer or tap water, 1-2 times, 3-5 minutes each time, and rinse thoroughly.

4. Perform subsequent immunostaining steps.

B. Frozen Sections

1. Wash the sections with immunostaining wash buffer or tap water for 5 minutes.

2. Antigen retrieval: Immerse the sections in 0.4% Pepsin Aqueous Solution and incubate at 37 °C for 10-25 minutes.

3. Wash with immunostaining wash buffer or tap water, 1-2 times, 3-5 minutes each time, and rinse thoroughly.

4. Perform subsequent immunostaining steps.

C. Other Samples

For other samples, operate with reference to the procedures for paraffin sections or frozen sections.

Precautions

1. Allow the 0.4% Pepsin Aqueous Solution to return to room temperature before use, and avoid repeated freeze-thaw cycles.

2. The optimal incubation time for immersion in 0.4% Pepsin Aqueous Solution needs to be optimized by the user according to different samples and target proteins.

3. For your safety and health, wear a lab coat and disposable gloves during operation.

4. Use the reagent as soon as possible after opening to avoid compromising the results of subsequent experiments.

5. This product is for research use only and shall not be used for any other purposes.

Specifications

Attribute	Value
Synonyms	Pepsin Aqueous Solution
Specifications & Purity	BioReagent, for microscopy, Suitable for Immunohistochemistry(IHC)
Stability And Storage	Store at -20°C long term (12 months).
Storage Conditions	Store at -20°C
Shipped In	Ice chest + Ice pads This product requires cold chain shipping. Ground and other economy services are not available.

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Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

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Limitations & Disclaimer

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- ☐ This product is not a CE-marked in vitro diagnostic device under IVDR (EU) 2017/746 and is not an FDA-cleared device under 21 CFR. Use is restricted to verified businesses, institutions, and qualified professionals for research and development purposes.
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- ☐ Performance depends on sample type, sample condition, handling, and operator technique. Users are responsible for validating the kit for their specific application.
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