

Peroxide Block

Referencies: AP12002; AP12003



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INTENDED USE AND PRESENTATION:

For *in vitro* diagnostic use.

AP12002, 50 mL. Ready to use.

AP12003, 100 mL. Ready to use.

SUMMARY, EXPLANATION AND LIMITATIONS:

Endogenous peroxidase activity in the tissue can result in unspecific background staining in immunohistochemical staining procedures using horse radish peroxidase (HRP) as detection enzyme. This effect can be eliminated when tissue sections are incubated with Peroxide Block prior to immunohistochemical staining. Hydrogen peroxide in the solution blocks the activity of endogenous peroxidase.

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. It requires a highly trained histotechnologist. Tissue processing and handling prior to immunostaining, for example variations in fixation and embedding or the inherent nature of the tissue can cause inconsistent results (Nadji and Morales, 1983). Inadequate counterstaining and mounting can influence the interpretation of the results.

APPLICATIONS:

The blocking solution Peroxide Block is intended for inhibition of endogenous peroxidase activity in tissue sections. It is primarily intended to be used in immunohistochemistry on formalin-fixed paraffin-embedded samples if using a detection system with horse radish peroxidase.

The interpretation of the stain results is the full responsibility of the user. Any experimental result must be confirmed by a medically established diagnostic product or procedure.

REAGENT PROVIDED:

Ref.: AP12002

50 ml Peroxide block (Ready to use).

Ref.: AP12003

100 ml Peroxide block (Ready to use).

METHOD AND PROCEDURE:

Principle of the method: The IHC as technique to demonstrate the presence of an antigen in tissues and cells, is a sequential procedure of several steps: the application of antibody specific for the antigen of interest (primary antibody), the detection and visualization of bound antibody by one of a variety of enzyme chromogenic systems and washing steps. The chromogenic enzyme activation results in a visible product at the site where the antigen is located. The results can be evaluated in a light microscope.

Peroxide Block is applied onto tissue sections to reduce non-specific staining due to endogenous peroxidase activity in immunohistochemistry. The step is carried out before incubation with primary antibody but after dewaxing and rehydration.

If a heat induced epitope retrieval (HIER) or enzymatic digestion is necessary for immunohistochemical detection it is of no importance if the Peroxide Block is used before or

after this step. In some cases it has been shown, that blocking of endogenous peroxidase before the epitope retrieval leads to better results.

Specimen: Formalin-fixed paraffin-embedded tissue section.

Reagent preparation: The solution is provide as ready to use.

Procedure:

1. Apply Peroxide Block for 10 minutes at room temperature. The section should be covered completely.

2. Rinse with wash buffer.

3. Proceed with next steps for immunohistochemical staining as usual starting with protein blocking or the primary antibody.

See our web site at www.genova-europe.com for detailed protocols ancillary reagents and support products.

REQUIRED MATERIALS BUT NOT SUPPLIED:

All reagents, materials, and laboratory equipment for IHC procedures are not provided with this product. This includes primary antibodies, adhesive slides and cover slips, positive and negative control tissues, Xylene or adequate substitute, ethanol, distilled H₂O, heat pretreatment equipment (pressure cooker, steamer, microwave), pipettes, Coplin jars, glass jars, moist chamber, histological baths, negative control reagents, counter-staining solution, mounting materials, and microscope.

Antibodies, buffered solutions for antigen retrieval, enzyme treatments, others highly sensitive detection systems, and other auxiliary reagents are available from Genova Scientific.

STORAGE AND STABILITY:

Store the solution at 2-8°C without further dilution and do not freeze it. Avoid exposure to strong light. Do not use after the expiration date. If the product is stored under different conditions from those stipulated in these technical indications, the new conditions must be verified by the user.

Genova Scientific guarantees that the product will maintain all of the described characteristics from the production date until the expiration date, as long as the product is stored and used as recommended. No other guarantees are provided. Under no circumstances is Genova Scientific obliged to cover damages caused by use of this reagent.

TROUBLESHOOTING:

If you observe unusual staining or other deviations from the expected results please read these instructions carefully, contact Genova Scientific's technical support or your local distributor. Also refer to the instructions of the detection systems for guidance on general troubleshooting.

PRECAUTIONS:

Use only by qualified personnel.

Use proper protective equipment in order to avoid contact with reagents and samples in the eyes, skin, and mucosal tissues. In case of contact with sensitive areas, immediately flush the affected area with water. Avoid microbial



Catalog number



Batch code



In Vitro diagnostic medical device



Temperature limitation



Expiration date



Manufacturer



See instruction for use



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contamination of the reagent, as this may produce nonspecific staining results. Material safety data sheet (MSDS) is available upon request.

PERFORMANCE CHARACTERISTICS:

Genova Scientific has conducted studies to evaluate the performance of the kit reagents. The product has been found to be suitable for the intended use.

BIBLIOGRAPHY:

Elias JM "Immunohistopathology – A practical Approach to Diagnosis" ASCP Press 2003
Nadji M, Morales AR. Immunoperoxidase, part 1: the techniques and its pitfall. Lab Med 1983; 14:767-770.

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Catalog number



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In Vitro diagnostic medical device



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Temperature limitation



Expiration date



Manufacturer



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