

Endogenous Alkaline Phosphatase Blocking Buffer (20 X)

Introduction

Alkaline phosphatase (AP/ALP/AKP/ALKP/ALPase/Alk Phos) is a hydrolase that effectively hydrolyzes phosphate monoesters under alkaline conditions, removing phosphate groups from substrate molecules and generating phosphate ions and free hydroxyl groups. This enzyme is widely present in various cells and tissues, such as bladder epithelium, ovary, kidney, salivary gland, and small intestinal epithelial cells. Proper blocking of endogenous alkaline phosphatase can reduce background staining interference and improve staining specificity.

This product is an Endogenous Alkaline Phosphatase Blocking Buffer (20X) specifically designed for immunohistochemistry (IHC), immunocytochemistry (ICC), and in situ hybridization (ISH). Its main active component is Levamisole and others, which inhibit most types of alkaline phosphatase except calf intestinal alkaline phosphatase (CIAP/CIP). Its primary function is to block endogenous alkaline phosphatase present in tissues and cells, effectively reducing background staining and improving the signal-to-noise ratio. This product is suitable for cultured cells, frozen sections, and paraffin-embedded sections. Compared to other similar products, this blocking buffer does not interfere with specific signals. Extensive testing and optimization have confirmed that it does not inhibit calf intestinal alkaline phosphatase; therefore, it can be added directly to alkaline phosphatase chromogenic substrates without concern for suppressing specific signals.

One package (6 mL) of this product is sufficient for approximately 1,200 samples, based on a usage volume of 100 μ L of staining solution per sample.

Protocol

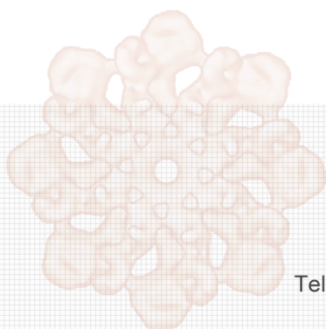
1. Preparation of working solution: Mix this product with an appropriate amount of alkaline phosphatase substrate solution (K4151 BCIP/NBT Alkaline Phosphatase Color Development Kit) at a ratio of 1:20. For example, add 50 μ L of this product to 1 mL of alkaline phosphatase substrate solution, mix well, and use immediately.
2. Use of working solution: Use the prepared working solution in the same manner as a conventional alkaline phosphatase substrate solution.

Note

1. Primary application: Blocking endogenous alkaline phosphatase activity in tissues or cells during IHC, ICC, and ISH.
2. Inhibition of endogenous alkaline phosphatase is reversible; therefore, this blocking buffer must be used

simultaneously with the alkaline phosphatase substrate solution.

3. Storage and shipping conditions: Store at 4°C; stable for at least one year. Store at -20°C; stable for at least one year. Ship with blue ice.
4. This product is for scientific research use only.



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