
Endogenous Alkaline Phosphatase Blocking Buffer (20×)

E752117

Storage: Store at -20°C for 12 months.

Introduction:

Endogenous alkaline phosphatase is widely present in some cells and tissues, including bladder epithelium, ovaries, kidneys, and salivary glands. Intestinal alkaline phosphatase is commonly found in small intestinal epithelial cells, while human placental alkaline phosphatase is usually produced by the microvilli of placental cells. During the preparation of cell smears, alkaline phosphatase is present in neutrophilic segmented granulocytes, neutrophilic band granulocytes, and neutrophilic metamyelocytes. It may also exist in chronic and acute granulocytic leukemia cells as well as some leukemia cells in neutrophilic leukemoid reactions.

When using alkaline phosphatase for detection methods such as immunohistochemistry (IHC) or immunocytochemistry (ICC), the presence of endogenous alkaline phosphatase can cause specific staining to be interfered with by the background staining from endogenous alkaline phosphatase. Blocking endogenous alkaline phosphatase with an appropriate blocking solution can effectively reduce background staining and improve the signal-to-noise ratio.

The main active ingredient of this blocking solution is Levamisole, etc., which can inhibit most types of alkaline phosphatase except for Calf Intestinal Alkaline Phosphatase (CIAP/CIP). Alkaline phosphatase-labeled secondary antibodies and alkaline phosphatase-labeled Streptavidin that are commonly used usually contain Calf Intestinal Alkaline Phosphatase (CIAP). For use, add 50 microliters of this product to each milliliter of alkaline phosphatase staining solution (i.e., a 20-fold dilution), mix well, and then use it according to the procedure for alkaline phosphatase staining solutions.

Usage method:

1. Preparation of Working Solution:

Mix the endogenous alkaline phosphatase blocking solution (20X) with an appropriate alkaline phosphatase substrate solution (e.g., BCIP/NBT chromogenic substrate) at a ratio of 1:20. The mixture is ready for use after thorough mixing. For example, take 50 µl of the endogenous alkaline phosphatase blocking solution (20X) and add it to 1 ml of the alkaline phosphatase substrate solution; the mixture can be used after mixing well.

2. Usage of Working Solution:

The prepared working solution as described above can be used following the procedure for alkaline phosphatase substrate solutions.

Precautions:

1. The inhibition of endogenous alkaline phosphatase is reversible, and this blocking solution must be used simultaneously with the alkaline phosphatase substrate solution.
2. It is restricted to scientific research use by professional personnel, and shall not be used for food or pharmaceuticals, nor stored in ordinary residential premises.
3. For your safety and health, please wear a lab coat and disposable gloves during operation.

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