

FC Receptor Blocker

Cat. # NB309

INTRODUCTION

Biotin is a vitamin and a coenzyme found in a variety of tissues, it is found in abundance in liver and kidney tissues. Biotin has a great binding affinity for avidin and streptavidin, this binding affinity is the basis of current detection system technology for localization of primary antibodies binding sites to the target antigens. In enzyme immunochemistry and in ELISA technology the use of a biotinylated secondary antibody as the second step reagent and avidin or streptavidin conjugated enzyme as the third step reagent makes the localization of primary antibody possible. Biotin interference is caused by the presence of endogenous and/or exogenous biotin in the assay system giving rise to background staining. Endogenous biotin is especially more pronounced in fresh frozen cryostat sections.

Fc receptors are glycoproteins of approximate molecular weights of 50-70 kD. They are mostly present on blood cells such as monocytes/macrophages, B cells, granulocytes and some T cells. Fc receptors have great affinity for the Fc region of monomeric IgG and non specific binding can result in generation of background. Such examples of Fc receptor rich specimen are lymphoma sections, tonsil sections and blood smears. Cryostat sections are richer in Fc receptors than formalin fixed embedded tissues.

PRODUCT DESCRIPTION

"Biotin Free Diluent and Fc Receptor Block" was developed as a dual functioning reagent. It can be used as a blocking agent to block Fc receptors present in hematopoietic specimens that give rise to non specific staining in immunoassays. In addition, this reagent is a biotin free diluent and is suitable for diluting primary and secondary antibodies in assays that require absence of biotin. The use of this diluent minimizes the introduction of exogenous biotin in the assay system at the diluent level.

As Fc receptor blocking agent, this product is effective for blocking Fc receptors in hematopoietic tissue or smear specimens suspected of containing cells that carry Fc receptors on their surface. Such specimen rich in Fc receptors are tonsil, bone marrow smears, lymph nodes and preparations made of blood components.

This blocking agent is especially helpful for blocking Fc receptors in cryostat sections that are processed for CD phenotyping as in lymphoma and leukemia specimen. It is also quite helpful for obtaining specific signals in sections stained for Kappa, lambda and Immunoglobulins (IgGs).

APPLICATION/ INTENDED USE

This reagent is intended to be used as an antibody diluent and/or as a blocking agent for blocking Fc receptors in hematopoietic specimens

STORAGE CONDITION

Store in refrigerator at 2- 8°C.

PRODUCT FORMAT

Working solution, no dilution or adjustments necessary.

INSTRUCTIONS

For Blocking Fc receptors in immunocytochemical and immunofluorescence specimen

1. Deparaffinize slides and rinse in water as usual.
2. Cover sections or smears with 3-6 drops of Fc receptor block to achieve full specimen coverage.
3. Incubate for 20 minutes at room temperature.
4. Rinse in the assay wash buffer.
5. Proceed with immunostaining as usual.

For Blocking Fc receptors in flow cytometric assays

1. Lyse or ficol blood as usual.
2. Add 0.3 ml of Fc receptor block for 10^6 cells.
3. Incubate for 20 minutes.
4. Wash twice in assay wash buffer.
5. Proceed with antibody staining.

For Diluting and Storing Antibodies

Dilute concentrated antibody by the number of fold desired with this antibody diluent. For continuous use, store at 4°C. For extended storage, aliquot in working dilution, freeze at -20°C or at -70°C. Do not repeatedly freeze and thaw antibodies.

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