

## Product Information

In the staining of surface antigens in flow cytometry, certain subpopulations of leukocytes (particularly monocytes and macrophages) exhibit background from non-specific binding with Fc gamma receptors or anthocyanidin dyes.

Fc gamma receptors are type I transmembrane protein of the immunoglobulin superfamily. There are three subtypes, Fc<sub>1</sub> RI (CD64), Fc<sub>2</sub> RII (CD32) and Fc<sub>3</sub> RIII (CD16), which are expressed on cells such as B cells, monocytes, macrophages, NK cells, and granulocytes. In immunology experiments such as cell sorting, immunofluorescence, immunohistochemistry, and flow cytometry, the Fc regions of primary and secondary antibodies can non-specifically bind to Fc<sub>1</sub> receptors on the cell surface, causing high background and leading to significant errors in experimental results.

Anthocyanidin dyes such as Cyanine dyes and related tandem dyes such as PE-Cyanine 5.5, PE-Cyanine 5, PerCP-Cyanine 5.5, PE-Cyanine 7, and APC-Cyanine 7 also may bind non-specifically with certain leukocyte subpopulations to cause high background due to the hydrophobicity and charge of anthocyanidin dyes. MonoZero™ Human/Mouse 3-in-1 Blocking Reagent simultaneously blocks the interaction between antibodies and human or mouse Fc receptors, as well as the non-specific binding of leukocyte subpopulations to anthocyanidin dyes, thus reducing background signal and leading to more accurate data. This product contains chimeric antibodies with porcine IgG1 constant region and should not affect the binding of primary and secondary antibodies in the experiment. It also contains a human IgG Fc fragment. This product is not recommended for experiments that include anti-human IgG Fc antibodies. This product is not compatible with CD16/CD32/CD64 staining using antibodies whose epitope is at that binding interface.

## Components

Buffer: PBS with 0.1% Proclin300, pH 7.2

## Package

50 T / 100 T / 500 T

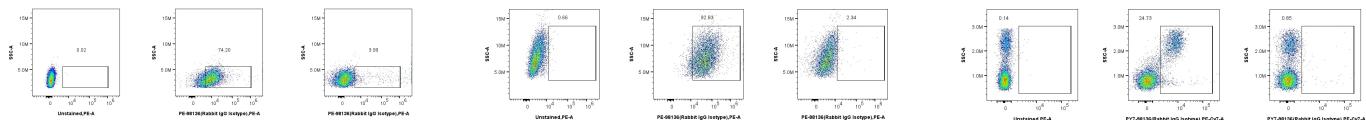
## Storage

Store sealed at 2-8°C and do not freeze. Ensure product is fully thawed and thoroughly mix before use.

## Notes

1. This product functions as a human/mouse universal Fc Block and should be used with human or mouse samples.
2. After incubation with MonoZero™ Human/Mouse 3-in-1 Blocking Reagent, no wash is necessary. Primary antibodies can be added directly to the cell suspension.

## Validation Data



Human monocytic cell line THP-1 cells were incubated with (right) and without (center) MonoZero™ Human/Mouse 3-in-1 Blocking Reagent, then stained with PE-conjugated Rabbit IgG Isotype Control (PE-98136).

Murine macrophage cell line J774A.1 cells were incubated with (right) and without (center) MonoZero™ Human/Mouse 3-in-1 Blocking Reagent, then stained with PE-conjugated Rabbit IgG Isotype Control (PE-98136).

Human PBMCs were incubated with (right) and without (center) MonoZero™ Human/Mouse 3-in-1 Blocking Reagent, then stained with PE-Cyanine7 conjugated Rabbit IgG Isotype Control (PY7-98136).

For technical support and original validation data for this product please contact

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