Technical Data Sheet

Human BD Fc Block™

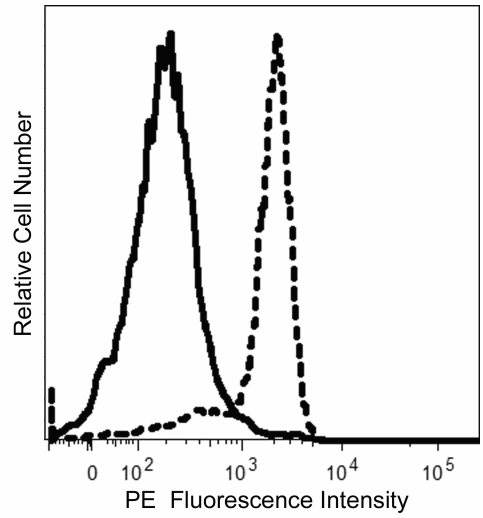
Product Information

Material Number:	**564220**
Size:	0.25 mg
Concentration:	0.5 mg/ml
Reactivity:	QC Testing: Human Tested in Development: Rhesus
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Fcγ Receptors belong to the immunoglobulin superfamily and are expressed at varying levels in multiple cell lineages including high expression in myeloid and B cells. The major functions of Fc receptors are protective functions of the immune system. There are multiple different types of Fc receptors reflecting a variety of different biological activities, which are modulated when they are aggregated by multivalent antigen-antibody complexes.

While normally serving important physiological roles in the immune system, Fc Receptors can also be the cause of nonspecific, false-positive antibody staining of cells. Human BD Fc Block™ is designed and formulated to block or significantly reduce potential non-specific antibody staining caused by receptors for IgG that may be encountered in various applications including the flow cytometric analysis of human cells. Moreover, it can increase the specificity of antibody labeling of extremely rare target cells such as antigen-specific B cells, fetal cells in maternal blood, hematopoietic progenitor cells, or disseminated epithelial tumor cells.



Blocking of non-specific Fc Receptor-mediated fluorescent antibody binding with BD Pharmingen™ Human BD Fc Block™. *Human peripheral blood mononuclear cells were either not treated (dashed line histogram) or preincubated with BD Pharmingen™ Human BD Fc Block™ (Cat. No. 564219/ 564220; solid line histogram). The cells were then stained with an excess of irrelevant PE-conjugated Mouse IgG2a antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable monocytes. Flow cytometric analysis was performed using a BD FACSCanto™ II Flow Cytometer System.*

Preparation and Storage

Store undiluted at 4°C.

Application Notes

Application

Flow cytometry	Routinely Tested

Recommended Assay Procedure:

Incubate 1 million cells suspended in 50-100 µL of staining buffer with 2.5 µg of Human BD Fc Block™ (10 minutes at room temperature) followed by staining with the desired fluorescent antibody. No washing step is needed between the blocking and staining steps.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
554657	Stain Buffer (BSA)	500 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Nimmerjahn F, Ravetch JV. Fc-receptors as regulators of immunity. *Adv Immunol.* 2007; 96:179-204. (Biology)
Ravetch JV, Bolland S. IgG Fc receptors. *Annu Rev Immunol.* 2001; 19:275-290. (Biology)

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