Technical Data Sheet

PE Mouse Anti-Human CD16

Product Information

Material Number: 555407
Alternate Name: FcRIII; Fc-gamma RI; FCG3; FCGR3; FCyRIII; IGFR3
Size: 100 Tests
Vol. per Test: 20 µl
Clone: 3G8
Immunogen: Human polymorphonuclear leukocytes
Isotype: Mouse (BALB/c x DBA/2) IgG1, κ
Reactivity: QC Testing: Human
Tested in Development: Rhesus, Cynomolgus, Baboon
Workshop: IV N409
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 3G8 monoclonal antibody specifically binds to the 50-65 kDa transmembrane form of the IgG Fc Receptor (FcγRIII), a human NK cell-associated antigen. CD16 is expressed on NK cells as well as macrophages and granulocytes. Reports indicate that CD16 plays a role in signal transduction and NK cell activation. The 3G8 antibody blocks the binding of soluble immune complexes to granulocytes. The 3G8 antibody is reported (Vossebeld et al., 1997) to increase intracellular calcium levels in human neutrophils by interacting with both FcγRIIa and FcγRIIIb molecules. This antibody has also been reported to induce homotypic neutrophil aggregation.

This clone also cross-reacts with a subset of peripheral blood lymphocytes and monocytes, but not granulocytes, of baboon and both rhesus and cynomolgus macaque monkeys. Multi-color analysis reveals that the distribution on lymphocytes is similar to that found in human studies with the majority of CD16-positive lymphocytes being both CD3 and CD20 negative.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry Routinely Tested

Flow cytometric analysis of CD16 expression on human peripheral blood lymphocytes. Peripheral blood cells from human were stained with PE Mouse Anti-Human CD16 antibody (Cat. No. 555407/556619/560995; solid line histogram) or PE Mouse IgG1, κ Isotype Control (Cat. No. 555749; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD FACSScan™ Flow Cytometer System.

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Suggested Companion Products

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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use $1 \times 10^6$ cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.

References

Fleit HB, Wright SD, Unkeless JC. Human neutrophil Fc gamma receptor distribution and structure. Proc Natl Acad Sci U S A. 1982; 79(10):3275-3279. (Biology)