PerCP-Cy™5.5 Mouse Anti-Human CD163

Product Information
Material Number: 563887
Alternate Name: CD163 antigen; M130; MM130; GHI/61; D11C163A; RM3/1
Size: 100 Tests
Vol. per Test: 5 µl
Clone: GHI/61
Immunogen: Glycoprotein preparation from Hairy Cell Leukemia Spleen
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Workshop: VI M38
Storage Buffer: Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description
The GHI/61 monoclonal antibody specifically binds to human CD163. CD163 is also known as Scavenger receptor cysteine-rich type 1 protein M130 (M130), Hemoglobin scavenger receptor and Macrophage-associated antigen. CD163 is a 110-130 kDa transmembrane glycoprotein. CD163 is a monocyte/macrophage-restricted antigen expressed on the majority of tissue macrophages and peripheral blood monocytes. CD163 belongs to the scavenger receptor superfamily. Its expression on monocytes is upregulated upon cellular activation. CD163 expression reportedly changes on monocytes and macrophages as these cells differentiate. This finding suggests a role for this molecule in the differentiation and/or regulation of monocyte and macrophage function. CD163 may play a role in the clearance and endocytosis of hemoglobin and haptoglobin complexes by macrophages.

It has been reported (Maniecki et al., 2011) that the presence of calcium impacts the binding affinity of clone GHI/61 to CD163. There is a variation in detecting CD163 positive monocytes when the cells are prepared with different anticoagulants, where heparin was observed to have the highest inhibitory effect on clone GHI/61.

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 PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity.

Application Notes
Application
| Flow cytometry | Routinely Tested |

Two-color flow cytometric analysis of CD163 expression on human peripheral blood monocytes. Whole blood was stained with APC Mouse Anti-Human CD14 antibody (Cat. No. 555399/561708/561383) and either PerCP-Cy™5.5 Mouse IgG1, κ Isotype Control (Cat. No. 550795; dashed line histogram) or PerCP-Cy™5.5 Mouse Anti-Human CD163 antibody (Cat. No. 563887; solid line histogram). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histograms were derived from CD14 positive-gated events with the forward and side light-scatter characteristics of intact monocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.
### Suggested Companion Products

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<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<td>Stain Buffer (FBS)</td>
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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. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
6. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
7. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
9. Cy is a trademark of GE Healthcare.

### References

- Law SK, Micklem KJ, Shaw JM. A new macrophage differentiation antigen which is a member of the scavenger receptor superfamily. *Eur J Immunol.* 1993; 23(9):2320-2325. (Biology)