NEUROMICS

Oligodendrocyte Marker O4 (PE Labeled) Data Sheet

Catalog Number: FC15013

Product Type Phycoerythrin (PE)-Conjugated Mouse Monoclonal Protein G purified IgM Antibody. Clone #: O4.

Size: 100 Tests

Intended Use: Designed to quantitatively determine the percentage of cells bearing Oligodendrocyte Marker O4 within a population and qualitatively determine the density of CD45 Oligodendrocyte Marker O4 on cell surfaces by flow cytometry.

Storage: Store in dark at 2 -8° C

Species Reactivity: Human, Rat, Mouse

Format: 10 µg of antibody in 1 mL saline containing up to 0.5% BSA and 0.1% sodium azide.

Note: This reagent contains sodium azide as a preservative. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.

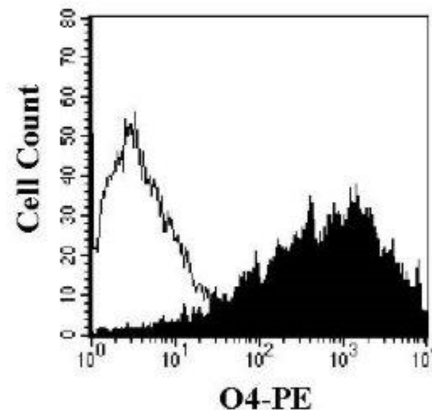
Application Notes

Additional Reagents Required
- PBS (Dulbecco's PBS)
- BSA

Principle of the Test
Washed cells are incubated with the PE-labeled monoclonal antibody, which binds to cells expressing O4 antigen. Unbound PE-conjugated antibody is then washed from the cells. Cells expressing O4 antigen are fluorescently stained, with the intensity of staining directly proportional to the density of expression of O4 antigen. Cell surface expression of O4 antigen is determined by flow cytometric analysis using 488 nm wavelength laser excitation.

Reagent Preparation
Use as is; no preparation is necessary.

Image: Differentiated rat cortical cells were stained with anti-O4-PE (Catalog #: FC15013, filled histogram) or isotype control (open histogram).



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Sample Preparation

Peripheral blood cells: Whole blood should be collected in evacuated tubes containing EDTA or heparin as the anti-coagulant. Contaminating serum components should be removed by washing the cells three times in an isotonic phosphate buffer (supplemented with 0.5% BSA) by centrifugation at 500 x g for 5 minutes. 50 µL of packed cells are then transferred to a 5 mL tube for staining with the monoclonal antibody. Whole blood cells will require RBC lysis following the staining procedure.

Cell Cultures: Continuous cell lines or activated cell cultures should be centrifuged at 500 x g for 5 minutes and washed three times in an isotonic PBS buffer (supplemented with 0.5% BSA), as described above, to remove any residual growth factors that may be present in the culture medium. Cells should then be resuspended in the same buffer to a final concentration of 4 x 10^6 cells/mL and 25 µL of cells (1 x 10^5) transferred to a 5 mL tube for staining.
Note*:* Adherent cell lines may require pretreatment with 0.5 mM EDTA to facilitate removal from substrate. Cells that require trypsinization for removal from substrate should be further incubated in medium for 6 - 10 hours on a rocker platform to enable regeneration of the receptors. The use of a rocker platform will prevent reattachment to the substrate.

Sample Staining
1) Cells to be used for staining with the antibody may be first Fc-blocked by treatment with 1 µg of human IgG/10^5 cells for 15 minutes at room temperature. Do not wash excess blocking IgG from this reaction.
2) Transfer 25 µL of the Fc-blocked cells (1 x 10^5 cells) or 50 µL of packed whole blood to a 5 mL tube.
3) Add 10 µL of PE-conjugated anti-CD45 reagent.
4) Incubate for 30 - 45 minutes at 2 - 8° C.
5) Following this incubation, remove unreacted anti-CD45 reagent by washing (described above)
the cells twice in 4 mL of the same PBS buffer (*note that whole blood will require a RBC lysis step at this point using any commercially available lysing reagent).*
6) Resuspend the cells in 200 - 400 µL of PBS buffer for final flow cytometric analysis.
7) As a control for analysis, cells (in a separate tube) should be treated with PE-labeled mouse IgG_1 antibody. This procedure may need to be modified, depending upon final utilization.

References

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