

Simply Cellular[®] anti-Mouse for Violet Laser



BEADS • ABOVE THE REST



A novel product for conducting bead-based compensation for the violet laser. ✨

Background

Polymer-based calibration beads are commonly used for the routine set-up and QC of flow cytometers. They can be made to approximate the size and scatter characteristics of lymphocytes and other cells, and may be dyed or coated for use with a broad range of reagents and instruments. While these types of standards have almost universal application, there are special cases where a different bead matrix would be advantageous. Specifically, common polymer compositions (polystyrene, etc.) possess a significant absorbance band in the UV/Violet region. This can lead to seemingly higher detection thresholds and complicate bead-based compensation when using 405nm excitation.

Benefits

The Simply Cellular anti-Mouse Violet Laser standard features microspheres comprised of a proprietary matrix that exhibits low autofluorescence with violet excitation. Beads are suitable for labeling with mouse mAbs conjugated with violet fluorochromes, and for use as a compensation or general reference standard for detectors off of the violet laser. Beads are also suitable for use with other fluorochromes and lasers / detectors, e.g. 488nm, 633nm.

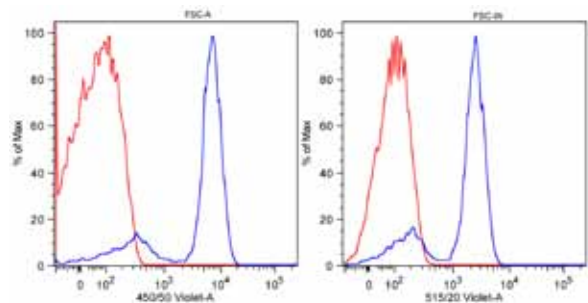


Figure 1: Unstained and CD3 Pacific Blue stained cells.

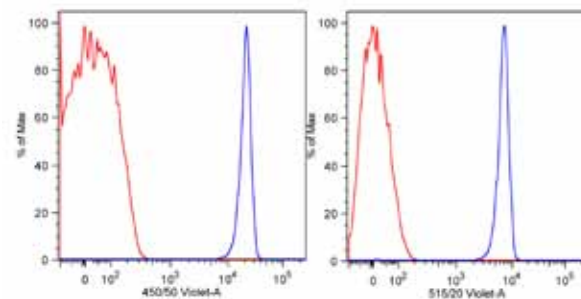


Figure 2: Blank and CD3 Pacific Blue stained beads.

Characteristics

The Simply Cellular anti-Mouse Violet Laser standard is supplied as 2 populations: 1 blank and one high binding anti-Mouse IgG (Fc-specific) population. They are supplied in aqueous suspension containing ProClin[®].

Expected Results

The below results demonstrate that compensation matrices developed using the Simply Cellular anti-Mouse for Violet Laser beads produce comparable data when compared to cells. In this study, a sample of healthy donor whole blood was ammonium chloride lysed and labeled with CD3 Pacific Blue™ (BD), CD45 V500 (BD), and CD11b eFluor® 605NC (eBioscience). Two compensation matrices were created, one with single labeled cells and the other with single labeled Simply Cellular beads using the sample reagents. Figure 3A shows the analysis gated on leukocytes using the compensation matrix created using Simply Cellular beads, and Figure 3B illustrates the analysis using single stained cells to create the matrix. Values for the matrices are shown in Figure 3C. Data using other fluorophores, e.g. V450, yielded similar results (data not shown).

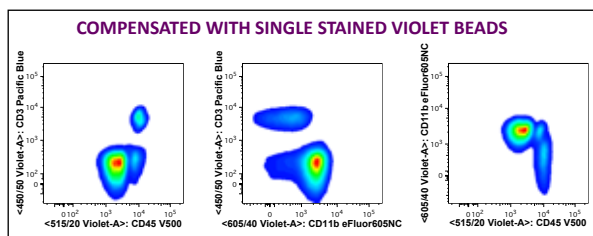


Figure 3A: The analysis gated on leukocytes using the compensation matrix created using Simply Cellular® beads.

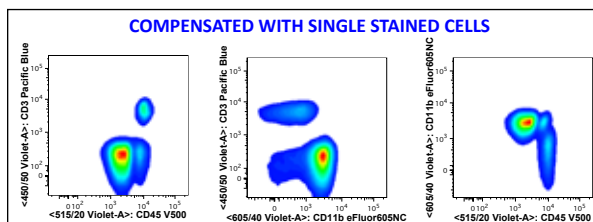


Figure 3B: The analysis using single stained cells to create the matrix.

Detectors	Value (%)	Detectors	Value (%)
515/20 Violet – 450/50 Violet	32.6	515/20 Violet – 450/50 Violet	31.93
605/40 Violet – 450/50 Violet	3.06	605/40 Violet – 450/50 Violet	0.00
450/50 Violet – 515/20 Violet	7.42	450/50 Violet – 515/20 Violet	6.86
605/40 Violet – 515/20 Violet	33.51	605/40 Violet – 515/20 Violet	32.06
450/50 Violet – 605/40 Violet	0.05	450/50 Violet – 605/40 Violet	0.16
515-20 Violet – 605/40 Violet	0.05	515-20 Violet – 605/40 Violet	0.09

Figure 3C: Compensation matrices.

SIMPLY CELLULAR® ANTI-MOUSE FOR VIOLET LASER

Cat. # Product Description

835 Simply Cellular® anti-Mouse for Violet Laser

Cat. # Related Product Description

915 Violet Laser Fluorescent Reference Standard

- eFluor® is a registered trademark of eBioscience, Inc.
- Pacific Blue™ is a trademark of Life Technologies, Inc.
- ProClin® is a registered trademark of Rohm and Haas, Co.
- Simply Cellular® is a registered trademark of Bangs Laboratories, Inc.

Conclusion

Simply Cellular anti-Mouse for Violet Laser beads yield exceptional results with violet excitation, and permit development of compensation matrices that are comparable to those made using labeled cells.



Bangs Laboratories supplies a large variety of uniform polymeric, silica, and magnetic microsphere products setting the standards for diagnostic, research, and flow cytometry applications. No matter the project, we have a product that serves or we'll work to custom-design a solution to fit. And that's not the half of it.

We also stand behind our products. Regardless of the size of your question or the size of your company, we offer tech support, absolutely free.

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