

# Flow Cytometry Showcase

Polysciences carries an expansive array of products for cellular isolation and analysis, antibody isolation, and proteomics assays. We invite you to check out a few of them here and to contact us any time for discussion regarding your specific needs.

### Quantum™ QC

Quantum<sup>™</sup> QC is a heavy-hitting, multi-fluorescent, 8-peak tool for putting instruments through their paces. With Quantum<sup>™</sup> QC, you will be able to prod and poke and get to know your cytometers like never before.

As a validation and QC tool, Quantum<sup>™</sup> QC may be used to determine detection thresholds, understand resolution, and assess and track linearity. It can provide confidence that the system is suitable for use, or alert you to potential problems before samples are run. It can be used for instrument set-up to achieve standardized PMT settings and define the Window of Analysis. Such a comprehensive product must be difficult to use, right? Wrong! QC all of your lasers and detectors with one little drop. Honestly, with very little effort, you are going to look like some kind of genius.



### **Small Bead Calibration Kits**

Current applications in flow cytometry extend far beyond traditional lymphocyte immunophenotyping, with some involving the analysis of very small particles such as extracellular vesicles or microbial species. Our fluorescent YG Small Bead Calibration Kits allow operators to verify the resolution capabilities of the flow cytometer, and to establish appropriate instrument settings for the analyses. See our Nanobead Calibration kit, which extends the range of our Submicron & Micron Kits.





Scatter plot of FITC vs SSC of a mixture of 100 nm, 200 nm, 500 nm and 800 nm beads (Nanobead kit + Submicron kit) on a BD FACSCanto II

#### **Cellular Expression Analysis**

Our tools for quantitative flow cytometry provide the means to standardize fluorescence intensity measurements, permitting truly quantitative cellular expression analyses. Our products include Quantum<sup>™</sup> MESF (Molecules of Equivalent Soluble Fluorochrome) and Quantum<sup>™</sup> Simply Cellular<sup>®</sup> (ABC, Antibody Binding Capacity) kits. Fluorochrome-labeled microspheres are used to generate a standard curve relating fluorescence intensity to standardized MESF or ABC values from Quantum<sup>™</sup> MESF or Quantum<sup>™</sup> Simply Cellular<sup>®</sup> beads. The MESF or ABC values of labeled cell samples may be determined by measuring their fluorescence intensities, and "reading" the corresponding MESF or ABC values from the standard curve using the QuickCal<sup>®</sup> analysis template that is provided with the kit.



**U.S. Corporate Headquarters** | 400 Valley Rd, Warrington, PA 18976 | 1(800) 523-2575 (215) 343-6484 | Fax 1(800) 343-3291 | info@polysciences.com **Polysciences Europe GmbH** | Badener Str. 13, 69493 Hirschberg an der Bergstrasse, Germany | +(49) 6201 845 20 0 | Fax +(49) 6201 845 20 20 | info@polysciences.de **Polysciences Asia Pacific, Inc.** | 2F-1, 207 DunHua N. Rd. Taipei, Taiwan 10595 | (886) 2 8712 0600 | Fax (886) 2 8712 2677 | info@polysciences.tw

## Flow Cytometry cont.

### ViaCheck<sup>™</sup> Cell Viability Controls

Trypan blue dye exclusion is a common method for the determination of cell viability. It is used extensively in cell and tissue culture programs, and for a range of research studies including apoptosis, cytopathic effects of viral infection, and effects of sample processing methods on cell viability and concentration.

Instrumental methods for cell viability analysis provide significant advantages over manual determinations, offering high accuracy, precision, and throughput. However, as with any analytical instrument, it is important to implement a QC program to ensure confidence in results.

ViaCheck<sup>™</sup> Cell Viability Instrument Standards are an addition to our extensive line of microsphere standards for instrument QC. ViaCheck<sup>™</sup> standards mimic the light scattering characteristics of live and dead cells in the trypan blue dye exclusion method, and may be used to confirm the capabilities and verify the performance of image-based cell viability instruments (e.g. Vi-CELL, Cedex Hi Res, etc.). The standards are available in a range of common concentrations and live / dead ratios.



#### **Bioseparation**

We offer a full range of BioMag<sup>®</sup> and BioMag<sup>®</sup>Plus particles coated with surface marker-specific antibodies for isolation of leukocyte subsets, in addition to particles coated with secondary antibodies and Fc-binding proteins for capture of antibody or primary antibody-labeled cells.

- Anti-CD markers
- Streptavidin, biotin
- Lectins
- Protein A or G
- Secondary antibodies

BioMag<sup>®</sup> and BioMag<sup>®</sup>Plus are high-performance superparamagnetic particles that are uniquely suited to cell separations and other biopurifications. Their irregular morphology affords much greater surface area than similarly-sized spherical particles, which translates into high binding capacities and efficient isolations with conservative use of particles.

# Flow Cytometry Products

| Cat. #         | Description   |
|----------------|---|
| BLI725         | Quantum™ QC   |
| BLI832- BLI833 | Submicron / Micron Bead<br>Calibration Kit  |
| BL1834         | Nanobead Calibration Kit  |
| BLI488         | Quantum™ AlexaFluor® 488 MESF   |
| BLI555         | Quantum™ FITC MESF  |
| BL1827         | Quantum™ R-PE MESF  |
| BLI647         | Quantum™ AlexaFluor®647 MESF  |
| BL1828         | Quantum™ PE-Cy™5 MESF   |
| BL1822         | Quantum™ Cy™5 MESF  |
| BL1823         | Quantum™ APC MESF   |
| BLI815         | Simply Cellular® anti-Mouse IgG   |
| BLI816         | Simply Cellular® anti-Rat IgG   |
| BLI817         | Simply Cellular® anti-Human IgG   |
| 24622, 25997,  | Viacheck Viabilty Controls  |
| 24623, 24624,  | 0%, 25% 50%, 75%, 90% 100%  |
| 24625, 24626   | Viability   |
| 24627-24629    | Viacheck Concentration Controls<br>1e <sup>+6</sup> , 4e <sup>+6</sup> , 8e <sup>+6</sup> Concentration |

### Order online anytime at polysciences.com