Rainbow Calibration Particles, 6 peaks (3.0-3.4 µm)

Catalog# / Size	422901 / 5 mL
Regulatory Status	RUO
Other Names	Sphero™ brand beads, 6 peak Rainbow Calibration Beads
Description	These Rainbow Calibration Particles are a mixture of 3.0 - 3.4 µm particles, dyed to six different fluorescent intensities. As their excitation range is 365 - 650 nm, they can be used with most lasers. However, they are not for use with the UV laser. The emission spectra of these rainbow particles is compatible with many common fluorophores used in immunofluorescent staining with flow cytometric analysis.

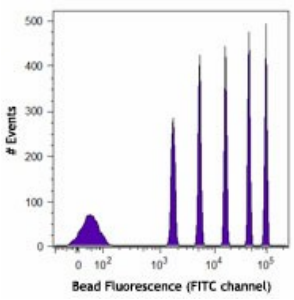
Product Details

Formulation	Rainbow Calibration Particles are in deionized water with 0.02% sodium azide and 0.01% NP-40.
Concentration	10^7 particles per ml.
Storage & Handling	Store between 2°C and 8°C. Do not freeze. Protect from light.
Application	FC
Recommended Usage	Resuspend well (e.g. vortex vigorously) before adding 3-5 drops to 1 ml of filtered DI water.
Application Notes	Use of Rainbow Calibration Particles, 6 peaks (3.0-3.4 µm), is common for the following purposes: 1. Instrument performance verification (linearity) and monitoring 2. Standardization of instrument settings for longitudinal studies (can also use Rainbow Calibration Particles, 8 peaks (Cat. No. 422903), and single-peak Rainbow Fluorescent Particles (Cat No. 422905 and 422907) 3. Evaluation of new collection optics (e.g. bandpass filters) The relative number of fluorophores per particles has been determined for every peak of this product in FL1 (FITC and MEFL), FL2 (RPE and MEPE), FL3 (RPECy5 and MEPCY) and FL4 (APC and MEAP) channels on a flow cytometer to plot the calibration graph, which can be used to check linearity of the PMT in each channel. PMT QC templates can be downloaded directly from Spherotech™.
Application References **(PubMed link indicates BioLegend citation)**	1. Calibration and Performance Tracking of Flow Cytometers Using Sphero™ Calibration Particles 2. Measuring Molecules of Equivalent Fluorochrome (MEF) Using Sphero™ Rainbow and Ultra Rainbow Calibration Particles 3. Determining PMT Linearity in Flow Cytometers Using the Sphero™ PMT Quality Control Excel Template 4. Perfetto SP, *et al.* 2006. *Nat. Protoc.* 1:1522.

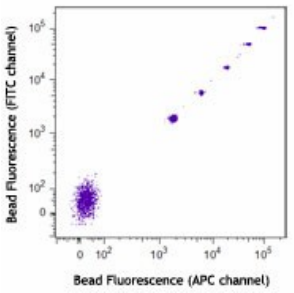
Antigen Details

Gene ID	NA

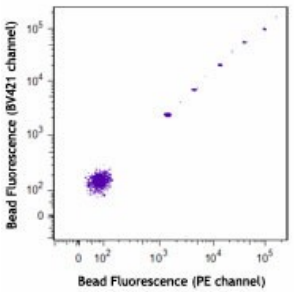
Product Data



Bead fluorescence at 488 nm excitation with a 530/30 BP filter (FITC channel).



Bead fluorescence at 640 nm excitation with a 670/30 BP filter (APC channel) plotted against bead fluorescence at 488 nm excitation with a 530/30 BP filter (FITC channel).



Bead fluorescence at 561 nm excitation with a 582/15 BP filter (PE channel) plotted against bead fluorescence at 405 nm excitation with a 450/50 BP filter (BV421™ channel).

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