

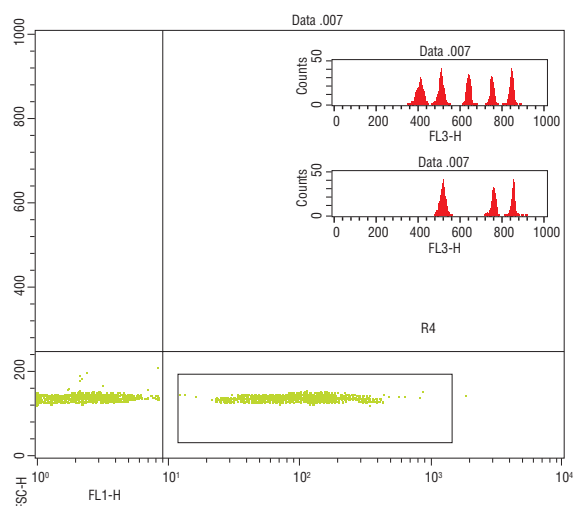
Multiplexing Bead Array

QuantumPlex™ combines versatility with performance to deliver flexible, efficient, and cost-efficient throughput.

Our QuantumPlex™ kits provide a general platform for multiplexed assay development as standard flow cytometers. Microsphere populations in 5 - bead kits are encoded with different intensities of Starfire Red™ and the two size kits (4.4 μm, 5.5 μm) may be combined to extend the array. Starfire Red™ emits in the red channel (e.g., PE-Cy™5, APC) with very little carry-over into lower wavelengths, leaving other detectors available for determination of positive binding events via common reporters such as FITC and PE.

Starfire Red™

Starfire Red™ is a fluorescent dye with unique characteristics that make it ideal for multiplexing applications. The dye's broad excitation band allows it to be excited at a number of wavelengths, e.g. with 488nm or 633nm lasers. The dye emits in the red (PE-Cy™5, APC) with very little carry-over into the FITC or PE bands, allowing one or both of these channels to be used for analyte detection.



Through selective gating in the fluorescent reporter channel, the "positive" populations may easily be isolated. The dot plot above shows the results of a sample stained for four analytes. The sample contained two of the four analytes.

Binding Possibilities

QuantumPlex™ kits are available with two different surfaces to accommodate the coating strategy of choice: streptavidin or carboxyl groups. The streptavidin beads readily bind biotinylated ligands, or biomolecules may be coupled directly to the carboxylated beads using standard aqueous chemistry.

QUANTUMPLEX™ SP

QuantumPlex™ Single Population (SP) is useful for the development of simplex flow cytometric assays or for the optimization of attachment chemistry and assay parameters before transitioning to a multiplexed format. Like QuantumPlex™, they are dyed with Starfire Red™, and are suitable for use on standard flow cytometers.

QUANTUMPLEX™M

QuantumPlex™ Magnetic (M) kits consist of five populations of ~6μm highly uniform superparamagnetic microspheres encoded with different intensities of Starfire Red™. Like QuantumPlex™, they are suitable for use on standard flow cytometers. Highly efficient separations may be performed using rare earth magnetic separators. A single population, QuantumPlex™M SP, is similarly available for coating and assay optimization.

FLEXIBLE ASSAY DEVELOPMENT

QuantumPlex™ is a highly flexible platform that offers fully customizable assay development:

- An extended array may be developed by combining the 4.4µm and 5.5µm kits;
- Functionalized and streptavidin-coated versions are available for secure attachment of antibodies, peptides, oligonucleotides, or other ligands;
- FL1 (Green) and / or FL2 (Orange) reporters may be used for detection;
- Separations may be performed manually (centrifugation) or using automated systems (filter-bottom plates, magnetic separation [M]) for higher throughput;
- Assays may be run on any standard flow cytometer, without the need for specialized software.

And if our standard QuantumPlex™ platforms don't address your needs, please ask us about our capabilities to custom manufacture.

QUANTUMPLEX™ PRODUCTS Cont.

Cat. #	Product Description
237	QuantumPlex™ SP Single Population Carboxyl 5.5µm
251	QuantumPlex™™ SP Magnetic Single Population Carboxyl ~6µm
253	QuantumPlex™™ SP Magnetic Single Population Streptavidin ~6µm

QUANTUMPLEX™ PRODUCTS

Cat. #	Product Description
215	QuantumPlex™ Streptavidin 4.4µm (5 intensities)
218	QuantumPlex™ Streptavidin 5.5µm (5 intensities)
219	QuantumPlex™ Streptavidin 4.4µm & 5.5µm (10 intensities)
235	QuantumPlex™ Carboxyl 4.4µm (5 intensities)
238	QuantumPlex™ Carboxyl 5.5µm (5 intensities)
239	QuantumPlex™ Carboxyl 4.4µm & 5.5µm (10 intensities)
250	QuantumPlex™™ Magnetic Carboxyl ~6µm (5 intensities)
252	QuantumPlex™™ Magnetic Streptavidin ~6µm (5 intensities)
214	QuantumPlex™ SP Single Population Streptavidin 4.4µm
217	QuantumPlex™ SP Single Population Streptavidin 5.5µm
234	QuantumPlex™ SP Single Population Carboxyl 4.4µm




Bangs Laboratories manufactures magnetic, polymeric and silica 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.

Sound interesting? 

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