

QuantumPlex™

Multiplexing Bead Array



BEADS • ABOVE THE REST



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

QUANTUMPLEX™

What is QuantumPlex?

QuantumPlex is an innovative bead platform for suspension array applications. The beads may be analyzed using any standard flow cytometer, and do not require the use of specialized software. QuantumPlex offers flexible, efficient, and cost-effective assay development.

Kit Components

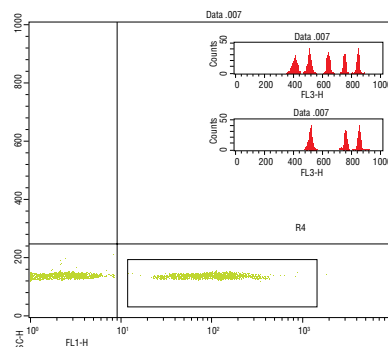
QuantumPlex kits come with 5-bead sets of two sizes, 4.4µm and 5.5µm. Each set consists of five bead populations internally dyed with varying intensities of Bangs' proprietary dye, Starfire Red™. The bead sets are available individually or as a combined set of ten.

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 Argon or He-Ne lasers. The dye emits in the FL3 channel (685nm) with very little carry-over into FL1 or FL2, allowing one or both of these channels to be used for analyte detection.

Binding Possibilities

QuantumPlex kits are available with three different surfaces to accommodate the coating strategy of choice: anti-mouse IgG, streptavidin, or carboxyl functional groups. Anti-mouse beads specifically bind the Fc-portion of mouse monoclonal antibodies. The streptavidin beads readily bind biotinylated ligands. Finally, biomolecules may be coupled directly to the carboxylated beads using standard aqueous chemistry.



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.

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, QuantumPlexM SP, is similarly available for coating and assay optimization.

QUANTUMPLEX™ & QUANTUMPLEX™ M

Cat. # Product Description

205	anti-Mouse IgG 4.4µm (5 intensities)
208	anti-Mouse IgG 5.5µm (5 intensities)
209	anti-Mouse IgG 4.4µm & 5.5µm (10 intensities)
215	Streptavidin 4.4µm (5 intensities)
218	Streptavidin 5.5µm (5 intensities)
219	Streptavidin 4.4µm & 5.5µm (10 intensities)
235	Carboxyl 4.4µm (5 intensities)
238	Carboxyl 5.5µm (5 intensities)
239	Carboxyl 4.4µm & 5.5µm (10 intensities)
250	Magnetic Carboxyl ~6µm (5 intensities)
252	Magnetic Streptavidin ~6µm (5 intensities)

QUANTUMPLEX™ SP & M SP

Cat. # Product Description

204	Single Population anti-Mouse IgG 4.4µm
207	Single Population anti-Mouse IgG 5.5µm
214	Single Population Streptavidin 4.4µm
217	Single Population Streptavidin 5.5µm
234	Single Population Carboxyl 4.4µm
237	Single Population Carboxyl 5.5µm
251	Magnetic Single Population Carboxyl ~6µm
253	Magnetic Single Population Streptavidin ~6µm

Flexible Assay Development

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

- Up to a ten-plex 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) 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.



Bangs Laboratories supplies a large variety of uniform 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? Give us a call.



317.570.7020

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