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Cytoplex Bead-based Technology for Clinical Diagnosis

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Abstract

ThermoFisher Scientific offers cytoplex assays for quantitation and detection of proteins nucleic acids and other biomolecules, using bead-based technology. These assays allow simultaneous measurement of multiple targets in each sample, with superior performance and reproducible results lot after lot.

Key advantages of cytoplex bead-based assays include:

Ability to perform simultaneous measurement of multiple targets in the same sample.

Use of small sample volumes in each well (10 μ l)

High throughput and fast assay time (4 hours)

High Sensitivity, High Accuracy, Consistency.

Customer has the ability to pick their own relevant markers.

Open platform, using commonly available flow cytometers, no licensing fees.

Cyto-Plex™ Carboxylated Microspheres provided different sizes and levels of fluorescent intensities for analysis of multiple analytes. The Cyto-Plex microspheres consist of a highly uniform polystyrene particle with fluorescent intensities which are completely separated from each other. The use of a single diameter microsphere for all dye levels saves time by only requiring the development and optimization of one bead chemistry. Multiple diameters can be combined to increase the number of analytes measured in one test. High-density binding sites and low non-specific binding enable coupling with a wide variety of antibodies, nucleic acids and other biomolecules.

Cyto-Plex Carboxylated Microspheres have a maximum emission at 700 nm and can be excited with either 488 nm or 633 nm lasers. Emission can be collected in either the PE-Cy5 or APC channels. Since there is little or no emission in the FITC and PE channels, probes utilizing either of these dyes can be effectively used as reporters.

Biography

Dr. Jay Yuan work on many diagnostics product in various companies. After receiving his Chemistry PhD. degree at Purdue, he got a postdoctoral fellowship at Division of hematology at Stanford University where he research blood diseases. He worked in several companies in Californai, including Amcell Corporations. Abbott Laboratories where he developed products for clinical diagnostics of blood disease. He is now working at ThermoFisher Scientific Corporation as project leader and developing product using cytoplex bead for clinical diagnostics. He is a member of the American Society of Hematology and international society of laboratories hematology and published many papers in Blood and many other scientific journals.

Speaker Info

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