Next Generation Multiplexing Platform

Luminex® xMAP® INTELLIFLEX System

xMAP® INTELLIFLEX

Luminex

Millipore®

Preparation, Separation, Filtration & Monitoring Products

The Luminex® xMAP® INTELLIFLEX system is a compact, flow-based, multiplex platform that simplifies your workflow by combining the reliable performance of xMAP® technology with advanced features to elevate your assay performance and empower assay development innovation.

By combining low- and high-plex capabilities, the xMAP® INTELLIFLEX system gives

fast, reliable results.

Features of the xMAP® INTELLIFLEX System:

- **Wide Dynamic Range**
  Avoid repeat testing due to out-of-range values with the widest dynamic range of any xMAP® platform.

- **Compact Footprint**
  Reduce lab bench requirements with a compact footprint that features an embedded PC and a touchscreen user interface.

- **User-Friendly and Flexible Software**
  Quickly master the platform with easy-to-use software that allows you to optimize workflows, gather performance insights, and export data into common analysis tools.

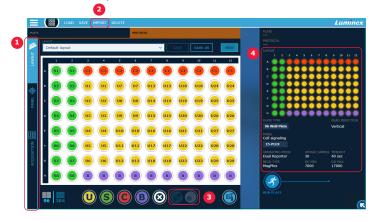- **Compatible with Existing MILLIPLEX® Assays**
  Experience the versatility of xMAP® technology with an open architecture design, enabling you to choose from the most extensive menu of MILLIPLEX® assays and custom assay solutions.

- **Dual Reporter Functionality**
  Now get more data from each target with the second reporter channel that allows you to save on time and precious sample.

Optimize Your Workflow

Quickly assemble plate configurations from saved components and start your run in as few as 20 seconds. Plate configurations can be set up with just a few clicks or can be imported from a CSV template.
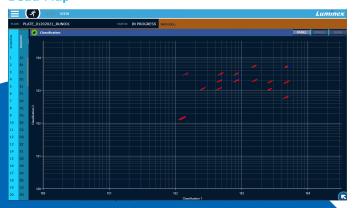

Figure 1. xMAP® INTELLIFLEX exemplary layout controls:

1 Define plate layouts, panels, or acquisition parameters in any sequence, and save modular components for use in different acquisitions.

2 Import plate layouts, sample lists, or panels from CSV.

3 Define replicates with intuitive copy-and-paste controls.
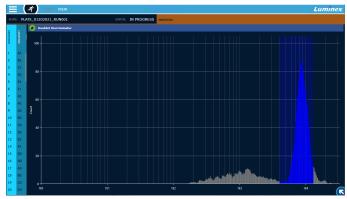
4 View run parameters at a glance.

Monitor Performance Fast

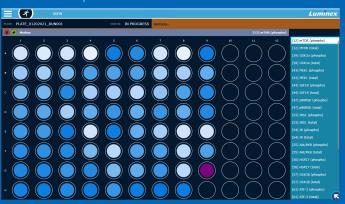Quickly navigate between multiple data types for comprehensive, real-time run monitoring.

Bead Map

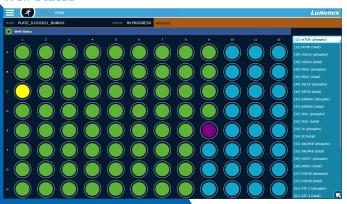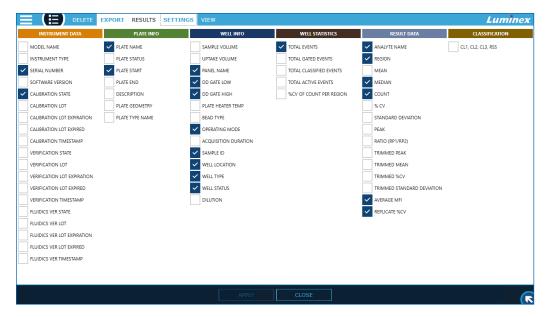### Doublet Discriminator Gate

MFI Heat Map

Well Status

Figure 2. xMAP® INTELLIFLEX run monitoring data examples.
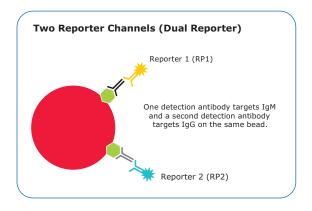
Easily Export Data for Analysis

Export results in one of two CSV formats—an xPONENT®-style format or an INTELLIFLEX style data format—designed for flexibility and simplicity. The xPONENT®-style data format can be analyzed using our Belysa® Immunoassay Curve Fitting Software.
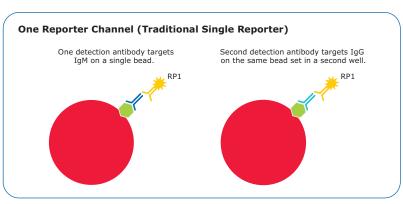

Figure 3. Export selection screen for xMAP® INTELLIFLEX data format.

Get More Data with Dual Reporter Functionality

With the addition of a second reporter channel, you can acquire data about two parameters per target protein or nucleic acid, saving on time and precious sample volume. This is ideal for measuring multiple isotypes or configurations that target the same antigen.

Two Reporter Channels (Dual Reporter)

Reporter 1 (RP1)

One detection antibody targets IgM and a second detection antibody targets IgG on the same bead.

Reporter 2 (RP2)

One Reporter Channel (Traditional Single Reporter)

One detection antibody targets IgM on a single bead.

Second detection antibody targets IgG on the same bead set in a second well.

RP1

RP1

Key

Microsphere

Detection Antibody (Single Reporter)

Detection Antibody (Second Reporter)
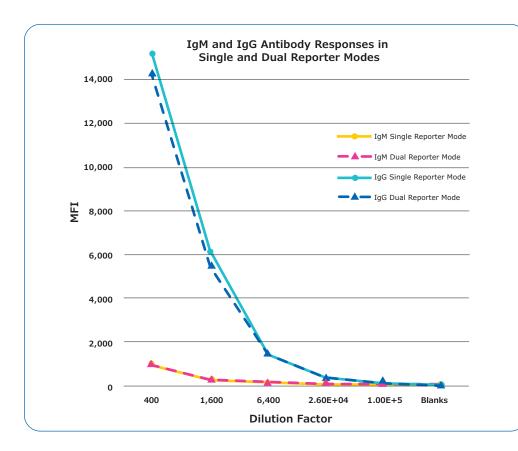
Target Analytes

Capture Antigen

Figure 4: Equivalent signal in both single and dual reporter modes. Phycoerythrin-labeled IgM detection antibody and streptavidin-Super Bright 436 + biotinylated IgG detection antibody were used to measure SARS-CoV-2 N antigen-specific IgM and IgG in single and dual reporter modes. When run together, no interference was observed between the dyes and MFI values were equivalent.

For Research Use Only.
Not For Use In Diagnostic Procedures.

Specifications

Performance	xMAP® INTELLIFLEX	xMAP® INTELLIFLEX DR-SE
Multiplexing Capability	Up to 500 individual analytes per well	Up to 500 individual analytes per well Up to 2 parameters per analyte
Typical Dynamic Range	≥ 5.5 logs	≥ 5.5 logs (RP1) ≥ 4.5 logs (RP2)
Plate Run Time	96-well plate in ~20 min 384-well plate in ~75 min	
Sensitivity	Commercially available kits deliver sensitivity as low as sub-picogram level	
General		
Physical Dimensions	58.4 cm (23 in.) W x 61 cm (24 in.) D x 76.2 cm (30 in.) H	
Weight	54.4 kg (120 lbs)	
System Warmup	30 min	
Operating Temperature	15–30°C (59–86°F)	
Operating System	Microsoft® Windows® 10 IoT Enterprise LTSC	
Barcode Reader	For importing target values from the xMAP® INTELLIFLEX Calibration and Performance Verification Kits	
Fluidics		
Sheath Pressure	8–13 psi (15 psi maximum)	
Sample Injection Rate	2 µL/sec	
Sample Uptake Volume	10–200 µL	
Optics		
Lasers	1 Classification laser 1 Reporter laser	1 Classification laser 2 Reporter lasers
Classification Laser Excitation	638 nm	
Reporter Laser 1 Excitation	532 nm	532 nm (RP1) 405 nm (RP2)
Detector	565–585 nm	565-585 nm (RP1) 421-441 nm (RP2)

DR-SE = dual reporter side eject

Ordering Information

Product Description	Cat. No.
xMAP® INTELLIFLEX RUO System	**INTELLIFLEX-RU0**

Includes:

- xMAP® INTELLIFLEX RU0 Instrument
- xMAP® INTELLIFLEX Software (Installed)
- xMAP® INTELLIFLEX Quick Guide
- xMAP® INTELLIFLEX Performance Verification Kit
- xMAP® INTELLIFLEX Calibration Kit
- xMAP® Sheath Fluid PLUS, 20 L
- (3) Sample Probe Needles
- Sample Probe Height Adjustment Kit
- Power Cable, Country-Specific
- Off-Plate Reagent Block
- Keyboard and Mouse Combo
- Heater Block for 96-Well Microtiter Plates
- Heater Block for 384-Well Microtiter Plates
- Empty Cubitainer for Waste

xMAP® INTELLIFLEX DR-SE	**INTELLIFLEX-DRSE**

Includes:

- xMAP® INTELLIFLEX DR-SE RUO Instrument
- xMAP® INTELLIFLEX Software (Installed)
- xMAP® INTELLIFLEX Quick Guide
- xMAP® INTELLIFLEX Performance Verification Kit
- xMAP® INTELLIFLEX Calibration Kit
- xMAP® Sheath Fluid PLUS, 20 L
- (3) Sample Probe Needles
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- Heater Block for 96-Well Microtiter Plates
- Heater Block for 384-Well Microtiter Plates
- Empty Cubitainer for Waste

Ancillary Products	
xMAP® INTELLIFLEX Performance Verification Kit RUO, 20 Uses	**IFX-PVER-K20**
xMAP® INTELLIFLEX Calibration Kit RUO, 20 Uses	**IFX-CAL-K20**
xMAP® Sheath Fluid PLUS RUO, 20 L	**40-50021**
xMAP® Sheath Concentrate PLUS, 1 L	**40-50023**
Belysa® Immunoassay Curve Fitting Software	**40-122**
BioTek® 405™ LS Magnetic 96-Well Washer	**40-094**

Product Description	Cat. No.
Instrument Services	
Platinum Service	**IFLEX-PLATINUM**
Gold Service	**IFLEX-GOLD**
Platinum Service (DR-SE model)	**IFLEX-DRSE-PLAT**
Gold Service (DR-SE model)	**IFLEX-DRSE-GOLD**
Validation Services	
IQ/OQ with Installation	**VP-IFLEX-IQOQ**
Yearly OQ	**VP-IFLEX-OQ**

To learn more about the xMAP® INTELLIFLEX System, visit
SigmaAldrich.com/intelliflex

Or, explore our MILLIPLEX® portfolio of immunoassays, at
SigmaAldrich.com/milliplex

Millipore®

Preparation, Separation, Filtration & Monitoring Products

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