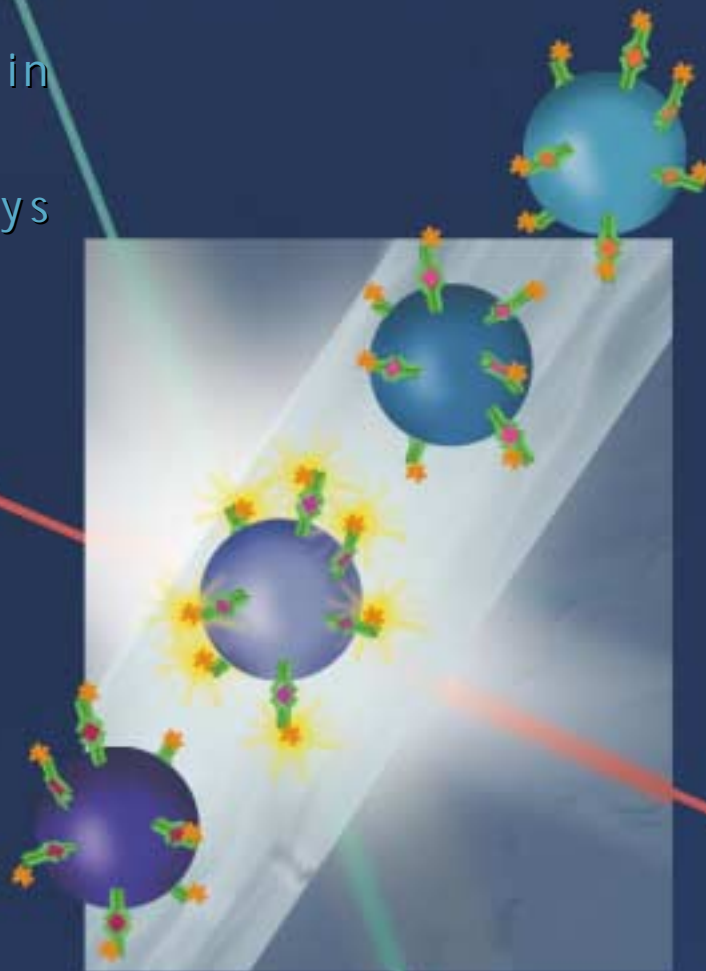


cytokine multiplex for
the luminex® platform

f l u o r o k i n e®

M . A . P

from the world's leader in
cytokine immunoassays



R&D
SYSTEMS

Fluorokine[®] MAP



INTRODUCTION

With Fluorokine MAP and the Luminex[®] 100 analyzer, you can measure multiple cytokines in a single 50 μ L aliquot of serum, plasma, or cell culture supernatant. Microparticles are dyed with differing concentrations of two fluorophores to generate distinct bead sets. Each bead set is coated with capture antibody specific for one cytokine. Captured cytokine is detected using a biotinylated detection antibody and streptavidin-phycoerythrin (S-PE). The Luminex 100 analyzer is a dual laser, flow-based, sorting and detection platform. One laser is bead-specific and determines which cytokine is being detected. The other laser determines the magnitude of PE-derived signal, which is in direct proportion to the amount of cytokine bound.

KIT CONFIGURATION

Fluorokine MAP kits are configured as a Base kit and a panel of Analyte Kits. Each Analyte Kit contains antibody-coated microparticles and biotinylated detection antibodies. The Base kit contains everything else you need to perform the assay. This arrangement allows the end-user maximum flexibility in creating panel composition.

BASE KIT

- Standard Cocktail
- Microparticle Diluent
- Calibrator Diluents
- Streptavidin-PE
- Wash Buffer
- Filter-bottom Microplate
- Mixing Bottles
- Plate Covers

ANALYTE KITS

- Antibody-coated Microparticles
- Biotinylated Detection Antibody

AVAILABLE PANELS

Fluorokine MAP Human Cytokine Panel

Base Kit	LUH000
ENA-78/CXCL5	LUH254
FGF basic	LUH233
G-CSF	LUH214
GM-CSF	LUH215
IFN- γ	LUH285
IL-1 α /IL-1F1	LUH200
IL-1 β /IL-1F2	LUH201
IL-1ra/IL-1F3	LUH280
IL-2	LUH202
IL-4	LUH204
IL-5	LUH205
IL-6	LUH206
IL-8/CXCL8	LUH208
IL-10	LUH217
IL-17	LUH317
MCP-1/CCL2	LUH279
MIP-1 α /CCL3	LUH270
MIP-1 β /CCL4	LUH271
RANTES/CCL5	LUH278
TNF- α /TNFSF1A	LUH210
Tpo	LUH288
VEGF	LUH293

Fluorokine MAP Mouse Cytokine Panel

Base Kit	LUM000
GM-CSF	LUM415
IFN- γ	LUM485
IL-1 β /IL-1F2	LUM401
IL-2	LUM402
IL-4	LUM404
IL-5	LUM405
IL-6	LUM406
IL-10	LUM417
IL-12 p70	LUM419
IL-13	LUM413
JE/CCL2	LUM479
KC	LUM453
MIP-2	LUM452
TNF- α /TNFSF1A	LUM410
VEGF	LUM493

Fluorokine MAP Human MMP Panel

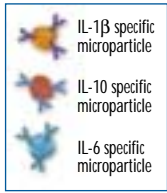
Base Kit	LMP000
MMP-1	LMP901
MMP-2	LMP902
MMP-3	LMP513
MMP-7	LMP907
MMP-8	LMP908
MMP-9	LMP911
MMP-12	LMP919
MMP-13	LMP511

Product inserts are available at www.RnDSystems.com/multiplex

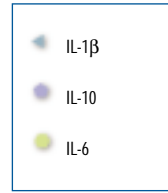
Luminex is a registered trademark of Luminex Corporation.

ASSAY PROCEDURE

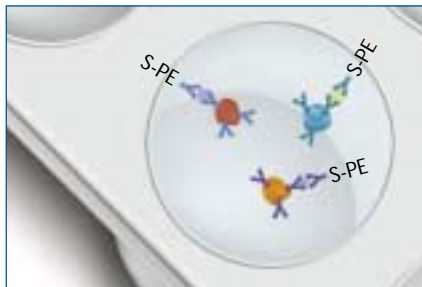
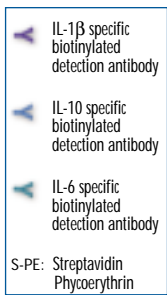
(IL-1 β , IL-10, and IL-6 from the human Fluorokine MAP cytokine panel are used as examples. The assay is not limited to 3 cytokines.)



Step 1) Add 50 μ L of the diluted microparticle mixture to each well of a filter-bottom microplate.

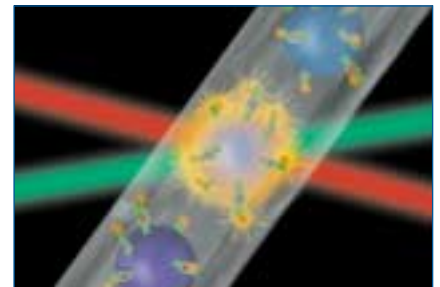


Step 2) Add 50 μ L of Standard Cocktail or sample to wells. Incubate on a shaker at room temperature. Wash microplate wells, removing liquid with a vacuum manifold.



Step 3) Add biotinylated detection antibody mixture, incubate and wash. Add streptavidin-PE, incubate and wash.

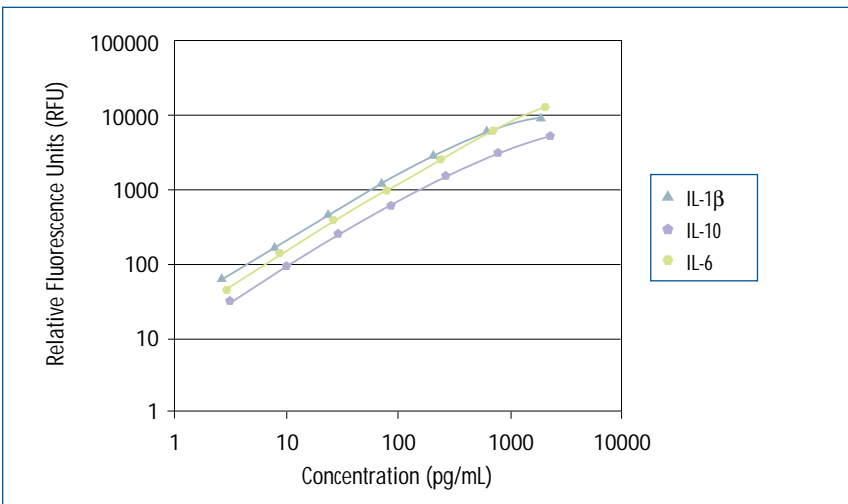
One laser is bead-specific and determines which cytokine is being detected. A second laser is PE-specific and determines how much cytokine is bound.



Step 4) Resuspend microparticles and load plate on the Luminex 100 for analysis.

CALCULATION OF RESULTS

Typical standard curves for IL-1 β , IL-10, and IL-6 run simultaneously.



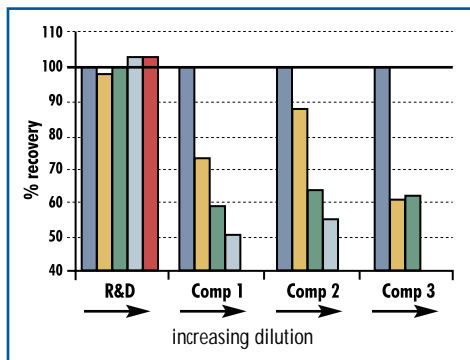
Using Fluorokine MAP and the Luminex 100 analyzer, you can measure multiple cytokines in a single 50 μ L aliquot of serum, plasma, or culture supernatant.

QUALITY & PERFORMANCE

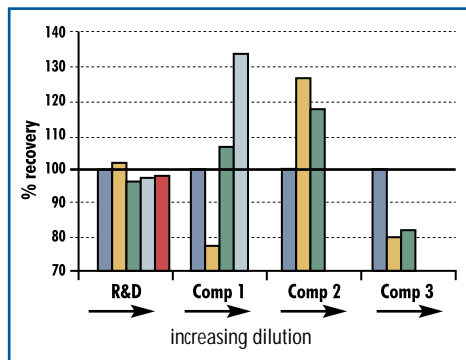
R&D Systems' Fluorokine MAP kits are subject to the same development, validation, manufacturing, and quality control standards as our Quantikine® ELISAs, the world's most referenced cytokine immunoassays. The result is the most accurate, sensitive, and reproducible cytokine multiplex assay available. For each sample type (serum, plasma, and cell culture supernatants), Fluorokine MAP is evaluated and validated on the following performance characteristics: sensitivity, precision, recovery, sample linearity, specificity, and the ability to recognize both the natural and recombinant analyte. Further, all analytes are tested together as a panel to ensure multiplex compatibility.

We evaluate kits from other companies on the same parameters.

We encourage you to do the same.



Cell Culture Supernatants (IL-4)



Serum (IL-6)

Fluorokine MAP vs. Competitors:

Sample Linearity

When multiplied by the dilution factor, serial dilutions of a sample should generate the same value obtained with undiluted sample. This characteristic is termed sample linearity, and is expressed as percent recovery (percent of expected value) over the range of dilution. Less than or greater than 100% recovery over the range of dilution suggests that the assay is inaccurate.

LUMINEX ANALYZERS

Luminex 100 analyzers, software, and service packages are available through the following preferred vendors. Please refer to promotional code RDS001 for special offers.

Applied Cytometry Systems
3453 Ramona Avenue, Suite 10
Sacramento, CA 95826
Tel (866) 500-FLOW
www.appliedcytometry.com

MiraiBio
1201 Harbor Bay Parkway, Suite 150
Alameda, CA 94502
Tel (800) 624-6176
www.miraibio.com

Several companies offer modified Luminex analyzers such as the Bio-Plex™ (Bio-Rad Laboratories, Inc.) and LiquiChip™ (Qiagen). R&D Systems' Fluorokine MAP kits may be run on any of these machines. For tips on running Fluorokine MAP kits on modified Luminex analyzers, please contact our technical service department at (800) 343-7475, send us an e-mail at info@rndsystems.com, or use the live on-line product support feature at www.RnDSystems.com.



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