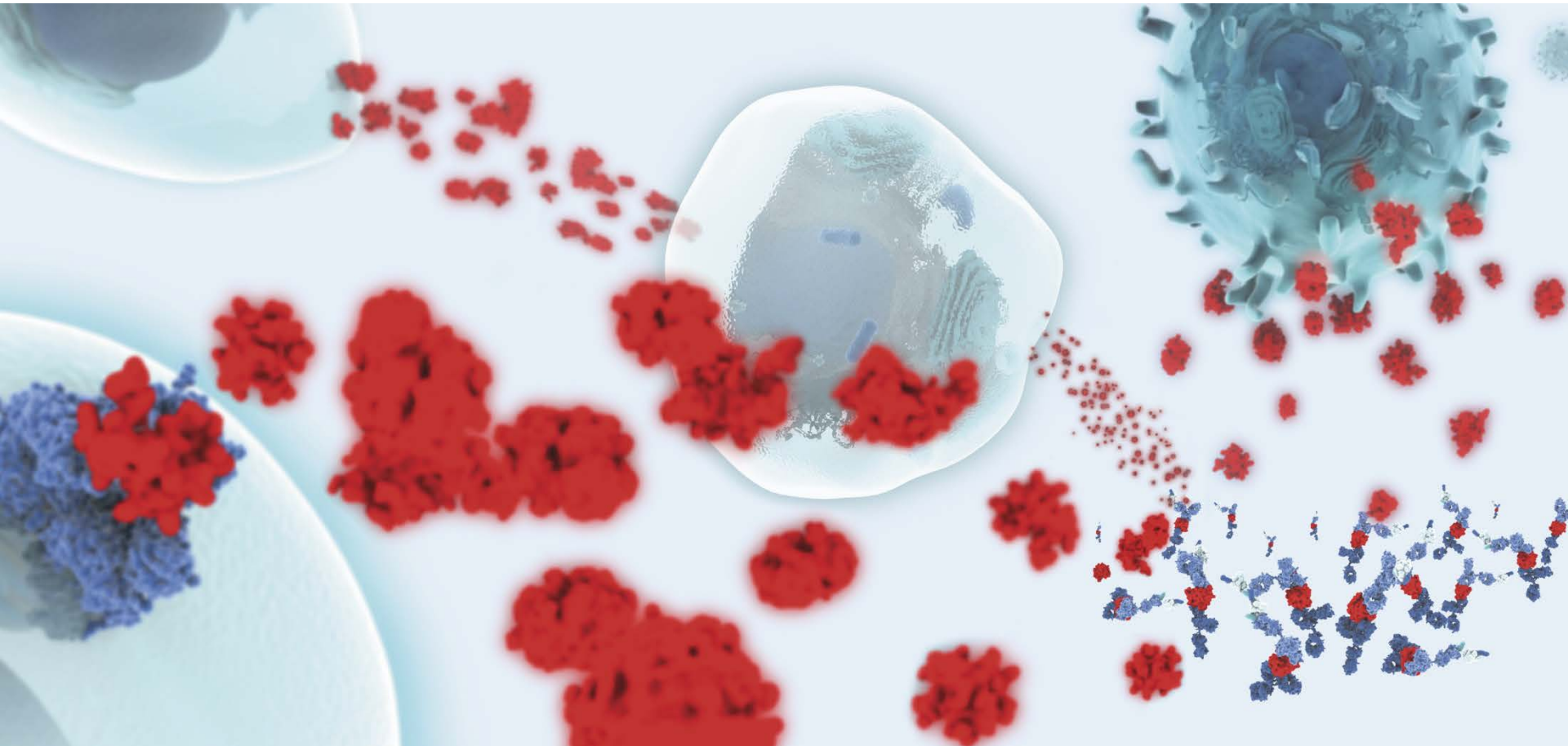




Multi-Analyte ELISArray™ Kits

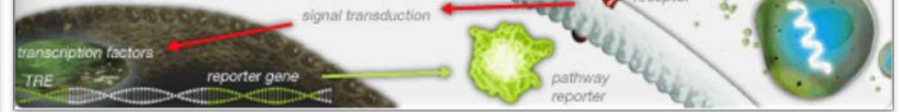
Analyze 12 cytokines or chemokines simultaneously

Pathway-focused solutions for expression analysis

Accurate and Simple Pathway Expression Analysis



Cell-Based Assays for Signaling



Genome-wide miRNA Expression Data



Measure Cytokine Expression



Successful ChIP In One Day



Somatic mutation identification and validation



High-Throughput DNA Methylation Analysis



Targeted exon enrichment for NGS



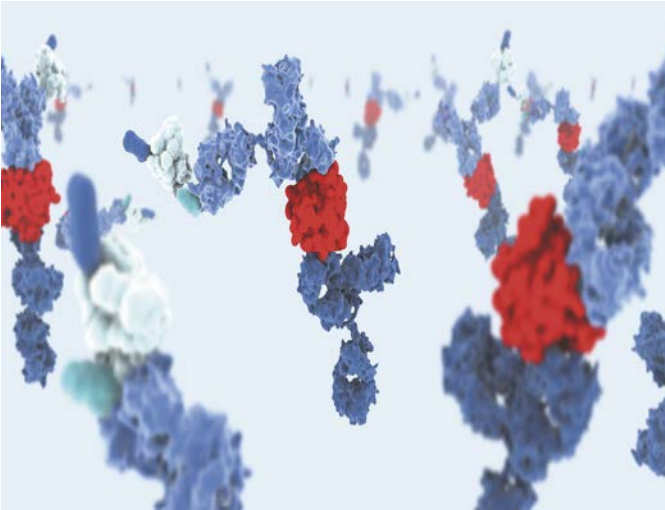
Profile copy number variation



Microbial DNA qPCR Arrays



<http://www.geneglobe.com>



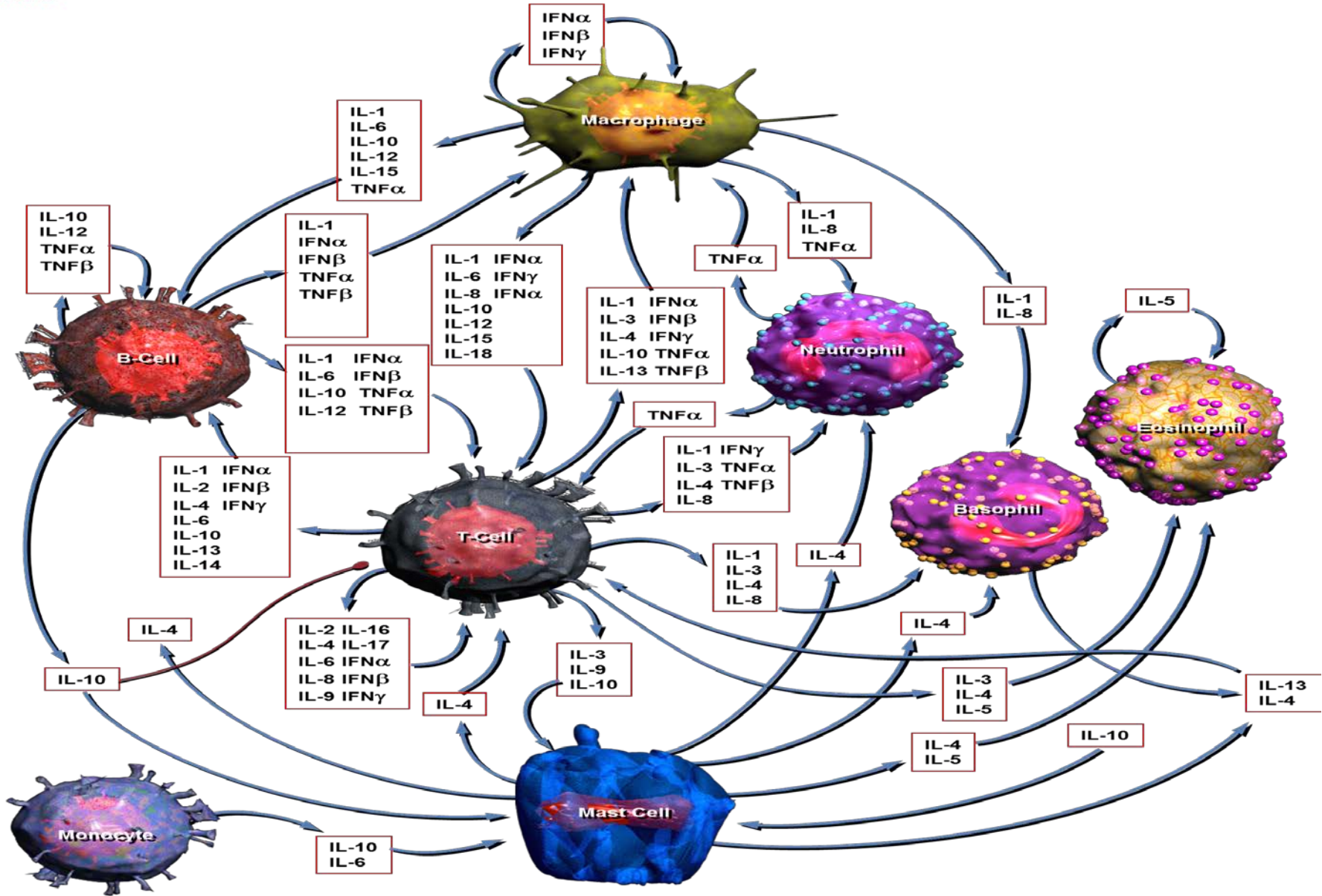
1 Challenges facing cytokine researchers

2 Solutions that the ELISArray kits provide

3 How the ELISArray kits work

4 How you can use the ELISArray kits

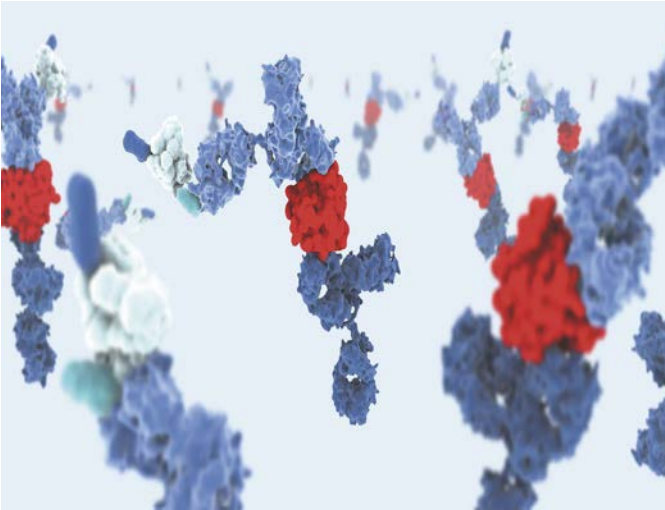
Cytokine signaling: a complicated network



- Common mindset
 - ELISA – quantitative protein analysis
 - Only one cytokine at a time – what about others? which ones?
 - Pick one and buy another ELISA kit
 - Money and time wasted if cytokine proves unimportant

- Cost-effective multi-analyte / multiplex analysis
 - Format and pricing of ELISA products only analyze one cytokine
 - Multiplex methods require complicated and expensive equipment

- Who do you believe?!
 - ELISA kits made by antibody manufacturers



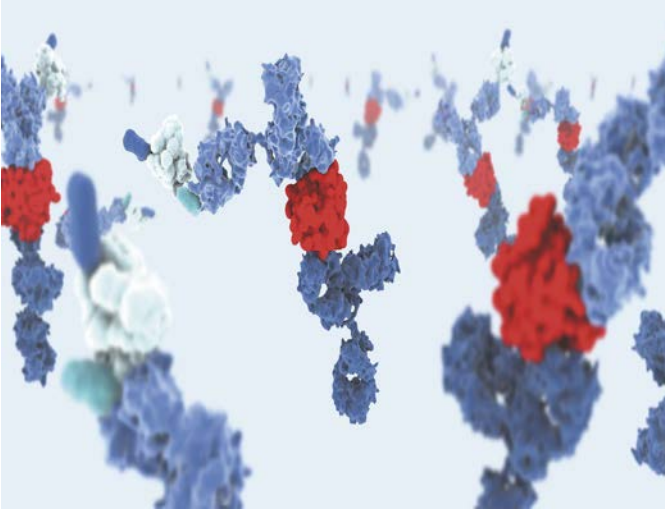
- 1 Challenges facing cytokine researchers
- 2 Solutions that the ELISArray kits provide
- 3 How the ELISArray kits work
- 4 How you can use the ELISArray kits

What do ELISArray kits provide?

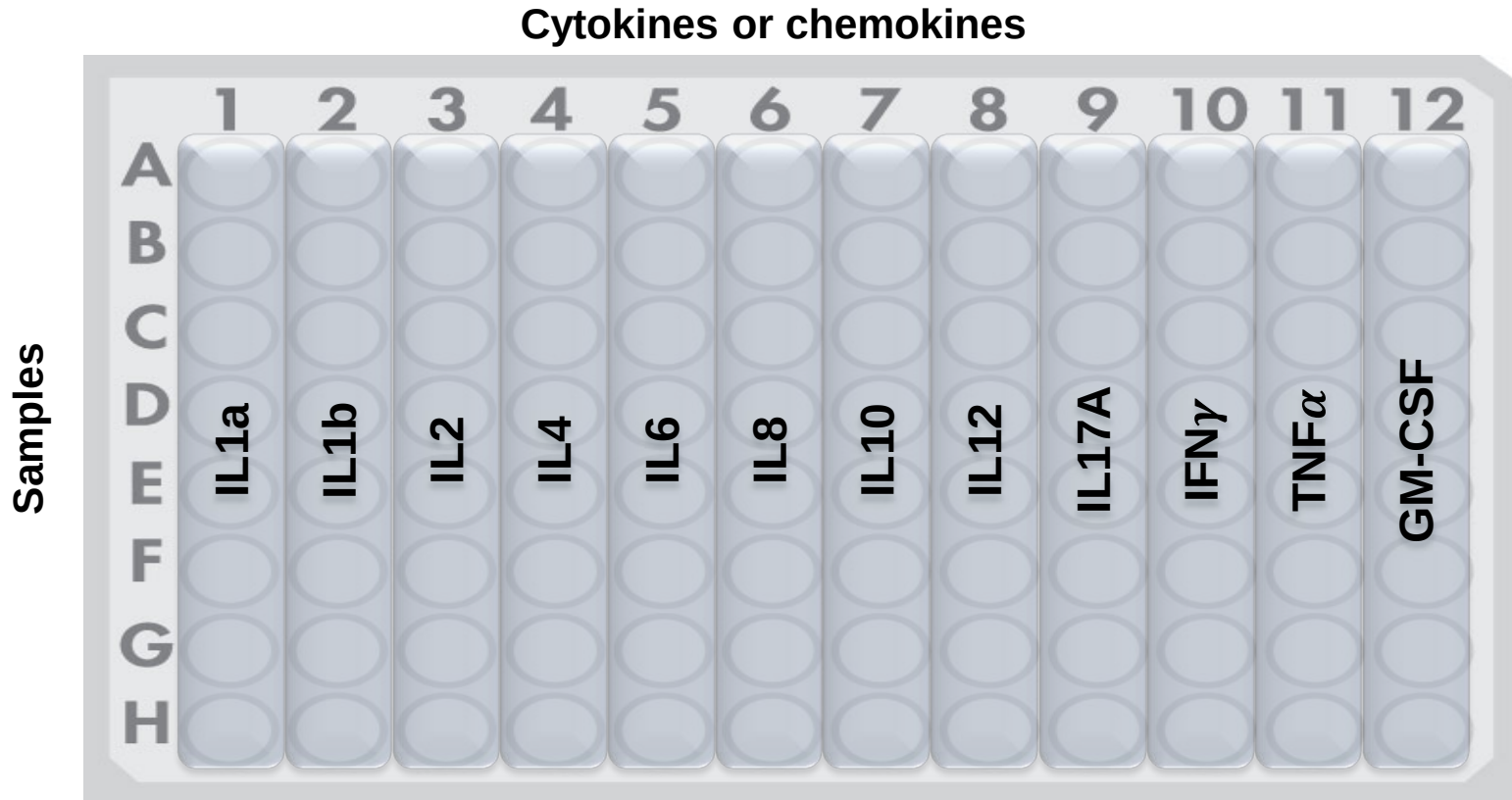
- Multi-protein flexibility
 - Profile twelve cytokines or chemokines in six samples at once using the same development / incubation time
 - All-in-one plate at the cost of one plate
- High performance with minimal effort
 - Profile with the highest levels of sensitivity and linearity possible with screened and validated capture and detection antibodies
- Ease of use
 - No special equipment is required, only the ELISA plate reader already in your lab

What is an ELISArray kit?

- Simultaneously profiles multiple cytokines / chemokines
- Uses convenient and simple ELISA protocol
- COMPLETE kit with standardized set of antigen standards, secondary antibodies, colorimetric detection reagents, buffers and:
 - Twelve different eight-well strips
 - Each strip is coated with one capture antibody
 - All-in-one 96-well microtiter plate



- 1 Challenges facing cytokine researchers
- 2 Solutions that the ELISArray kits provide
- 3 How the ELISArray kits work
 - a Multi-cytokine or chemokine flexibility
 - b Best performance, ease of use, cost-effectiveness
- 4 How you can use the ELISArray kits



Each eight-well strip is coated with a capture antibody for a cytokine or chemokine. A set of twelve strips in one ELISArray represents twelve cytokines or chemokines. Example: Human Inflammatory Cytokines

■ New!! TLR-induced Cytokines I: Viral-induced (Human and Mouse)

H	TNF α , IL1b, IL6, IL12, IL17A, IL8, MCP-1, RANTES, IP-10, MIG, TARC, IFN α
M	TNF α , IL1b, IL6, IL12, IL17A, SDF-1, MCP-1, RANTES, IP-10, MIG, TARC, 6Ckine

■ New!! TLR-induced Cytokines II: Microbial-induced (Human and Mouse)

H	TNF α , IL1b, IL6, IL12, IL17A, IL8, MCP-1, RANTES, MIP-1a, MIP-1b, MDC, Eotaxin
M	TNF α , IL1b, IL6, IL12, IL17A, SDF-1, MCP-1, RANTES, MIP-1a, MIP-1b, MDC, Eotaxin

■ New!! Common Chemokines (Human and Mouse)

H	IL8, MCP-1, RANTES, MIP-1a, MIP-1b, IP-10, I-TAC, MIG, Eotaxin, TARC, MDC, GRO α
M	RANTES, MCP-1, MIP-1a, MIP-1b, SDF-1, IP-10, MIG, Eotaxin, TARC, MDC, KC, 6Ckine

■ Autoimmune Response (Human and Mouse)

H	IL1b, IL4, IL6, IL10, IL12, IL17A, IFN γ , TNF α , TGF β 1, MCP1, MIP-1a, MIP-1b
M	IL1b, IL4, IL6, IL10, IL12, IL17A, IFN γ , TNF α , TGF β 1, MCP1, MIP-1a, MIP-1b

■ Common Cytokines (Human and Mouse)

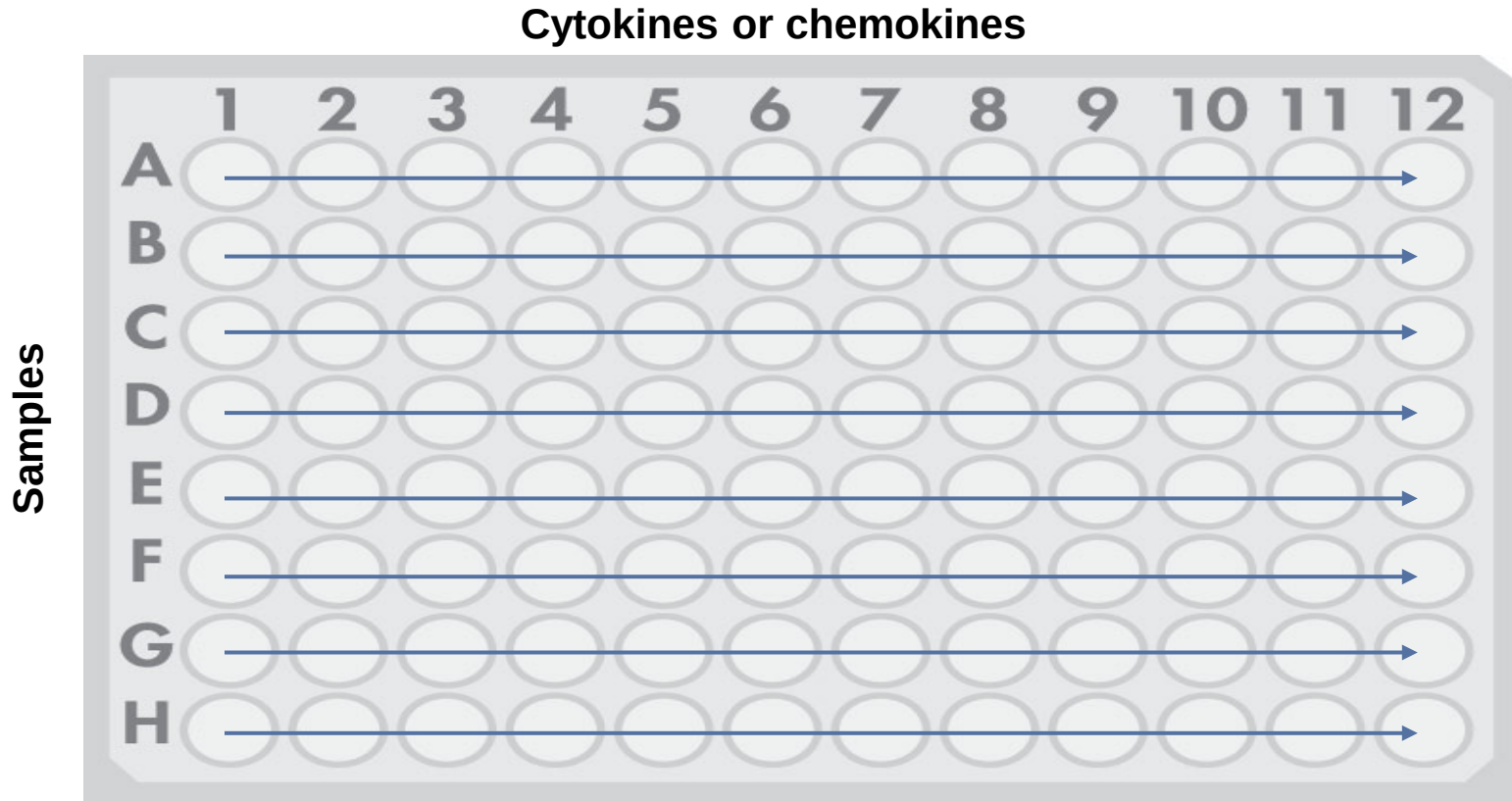
H	IL1a, IL1b, IL2, IL4, IL5, IL6, IL8, IL10, IL12A, IL13, IL17A, GM-CSF
M	IL1a, IL1b, IL2, IL4, IL5, IL6, IL10, IL12A, IL13, IL17A, G-CSF, GM-CSF

■ Inflammatory Cytokines (Human and Mouse)

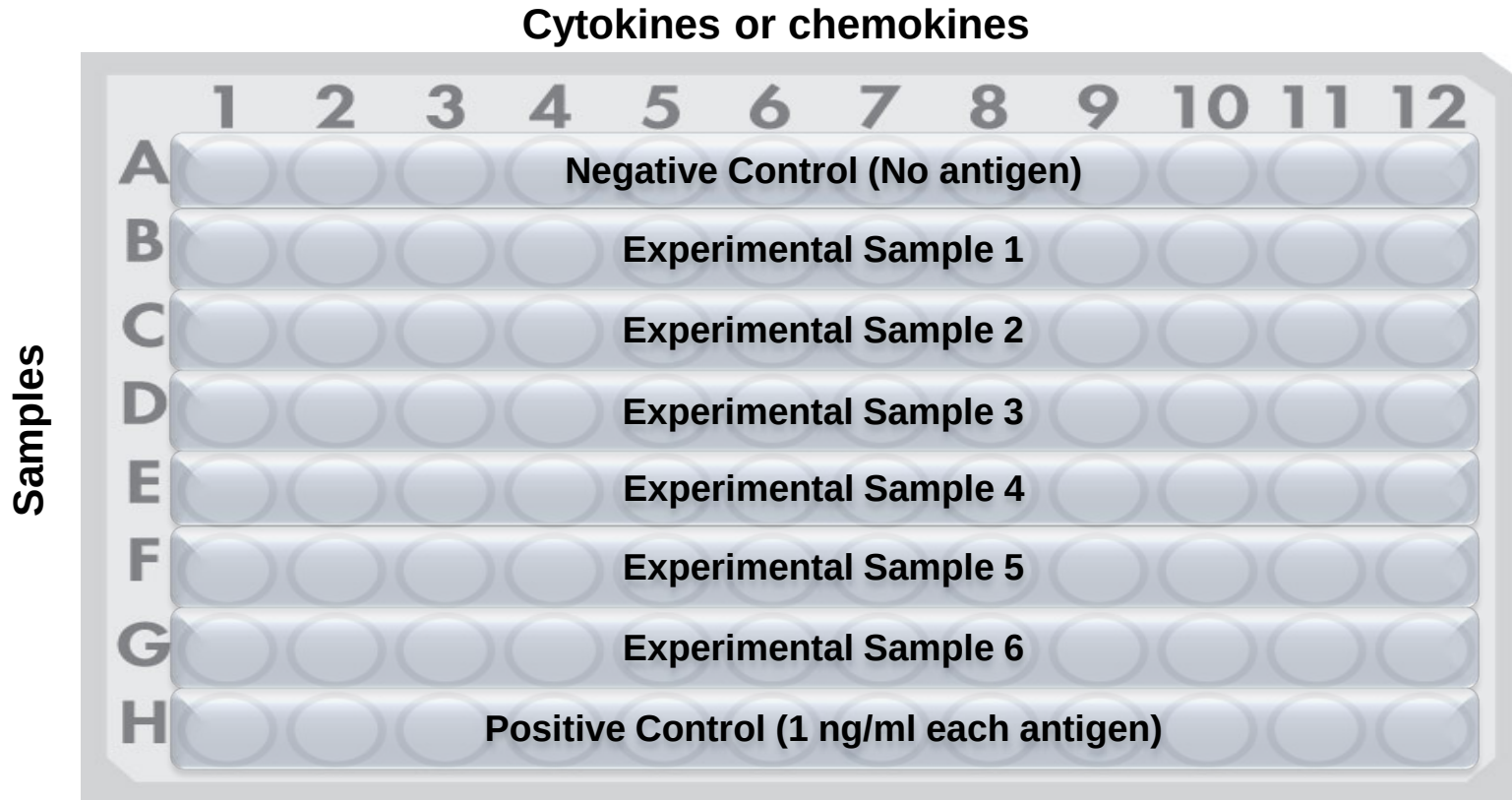
H	IL1a, IL1b, IL2, IL4, IL6, IL8, IL10, IL12, IL17A, IFN γ , TNF α , GM-CSF
M	IL1a, IL1b, IL2, IL4, IL6, IL10, IL12, IL17A, IFN γ , TNF α , G-CSF, GM-CSF

■ Th1 / Th2 / Th17 Cytokines (Human and Mouse)

H	IL2, IL4, IL5, IL6, IL10, IL12, IL13, IL17A, IFN γ , TNF α , G-CSF, TGF β 1
M	IL2, IL4, IL5, IL6, IL10, IL12, IL13, IL17A, IL23, IFN γ , TNF α , TGF β 1



The lettered wells of each strip characterize the same biological sample. Each ELISArray microplate characterizes up to six samples.



Each ELISArray microplate characterizes up to six samples:

One negative control, one positive control, six biological samples

1. Set up antigen standard (included) and sample dilutions
2. Add assay buffer and samples to each ELISArray well. Incubate for 2 hours then wash 3 times. Perform step in 8 tubes using an 8-channel pipettor.
3. Add detection antibody solution. Incubate for 1 hour then wash 3 times. Perform step in 12 tubes using a 12-channel pipettor. Each tube should be diluted with the same volume of buffer.
4. Add avidin-HRP. Incubate for 30 minutes, then wash 4 times.
5. Add development solution. Incubate for 15 minutes in the dark.
6. Add stop solution. Read OD₄₅₀ within 30 minutes.

We systematically test every possible combination of capture and detection antibodies for each cytokine or chemokine using the following criteria:

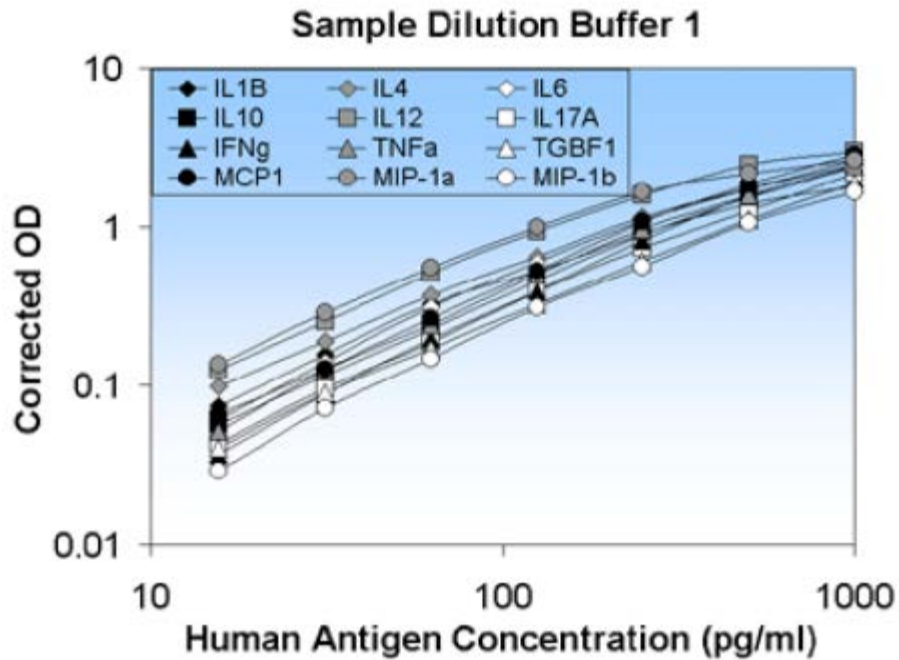
- High sensitivity
 - The highest antigen concentration produces the maximum signal ($OD_{450} \sim 2.0$)
- Good linearity
 - The calibration curve is linear with a correlation factor R^2 greater than 0.950

A combination only passes if it meets these two criteria.

Optimize for simultaneous readout

Each cytokine assay in the ELISArray set provides:

- The same linear response
- From the same antigen concentration range
- Using the same protocol
- Stated Limit of Detection (LOD) for each cytokine



All 12 calibration curves obtained with same 15 minutes development time
 All 12 calibration curves are parallel

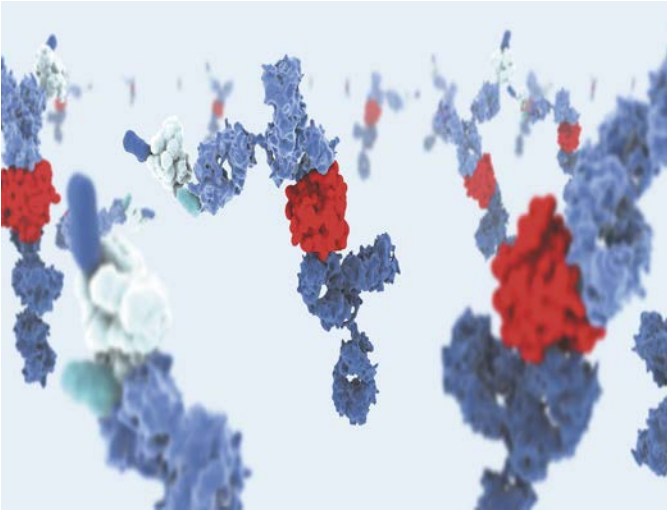
Human				Mouse			
Antigen	LOD	Antigen	LOD	Antigen	LOD	Antigen	LOD
IL1a	13.5	IL17A	28.4	IL1a	32.5	IL17A	46.2
IL1b	17.9	--	--	IL1b	55.2	IL23	67.2
IL2	35.1	IFN γ	19.6	IL2	24.2	IFN γ	39.0
IL4	7.0	TNF α	21.4	IL4	32.8	TNF α	30.5
IL5	14.0	GM-CSF	48.3	IL5	36.1	GM-CSF	23.7
IL6	14.0	G-CSF	20.9	IL6	58.8	G-CSF	25.6
IL8	16.5	MIP-1a	25.7	--	--	MIP-1a	35.1
IL10	5.9	MIP-1b	23.6	IL10	59.4	MIP-1b	26.7
IL12	12.6	MCP1	40.3	IL12	21.1	MCP1	25.5
IL13	15.0	TGF β 1	19.7	IL13	34.6	TGF β 1	22.9

Level of sensitivity typical of ELISA for these cytokines & chemokines

LOD = Limit of Detection (pg/ml)

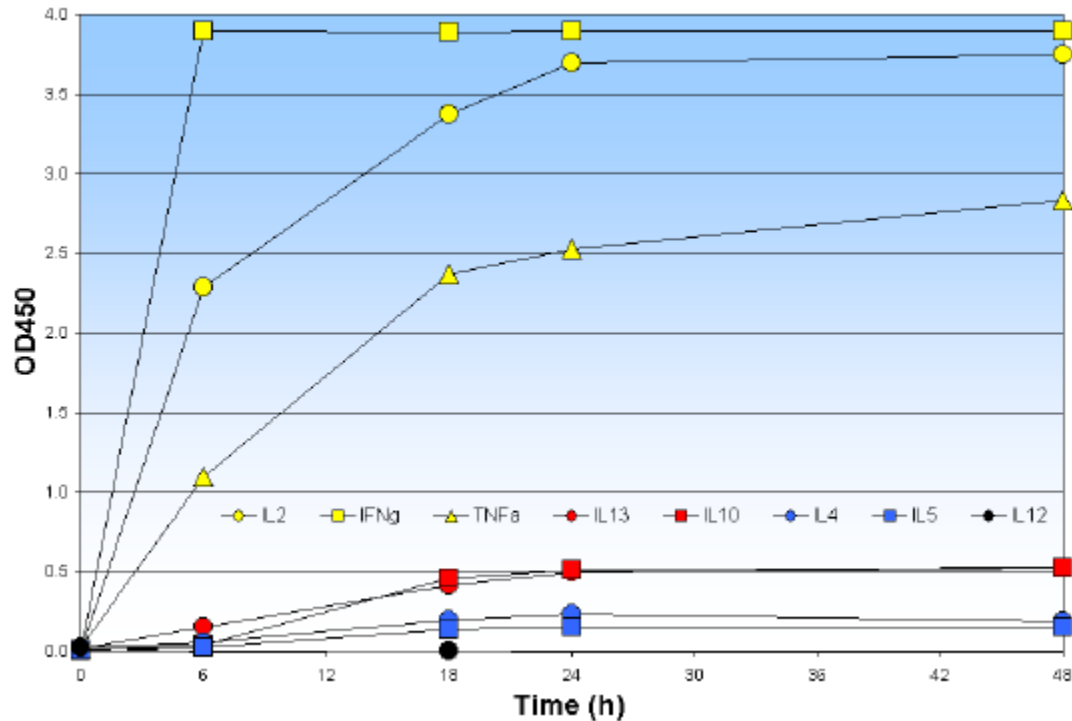
- You can believe us
 - ☐ QIAGEN is not dedicated to one antibody source
 - ☐ Developed with the best possible antibody pairs available
 - ☐ Take advantage of assay development and optimization expertise

- You can profile more of the cytokines that you care about
 - ☐ Profile 12 cytokines in 6 samples with 1 kit
 - ☐ Quickly and easily identify cytokines changing expression levels
 - ☐ Follow up with an individual ELISA for quantitative results
 - ☐ Corresponding Single-Analyte ELISArray Kits also available

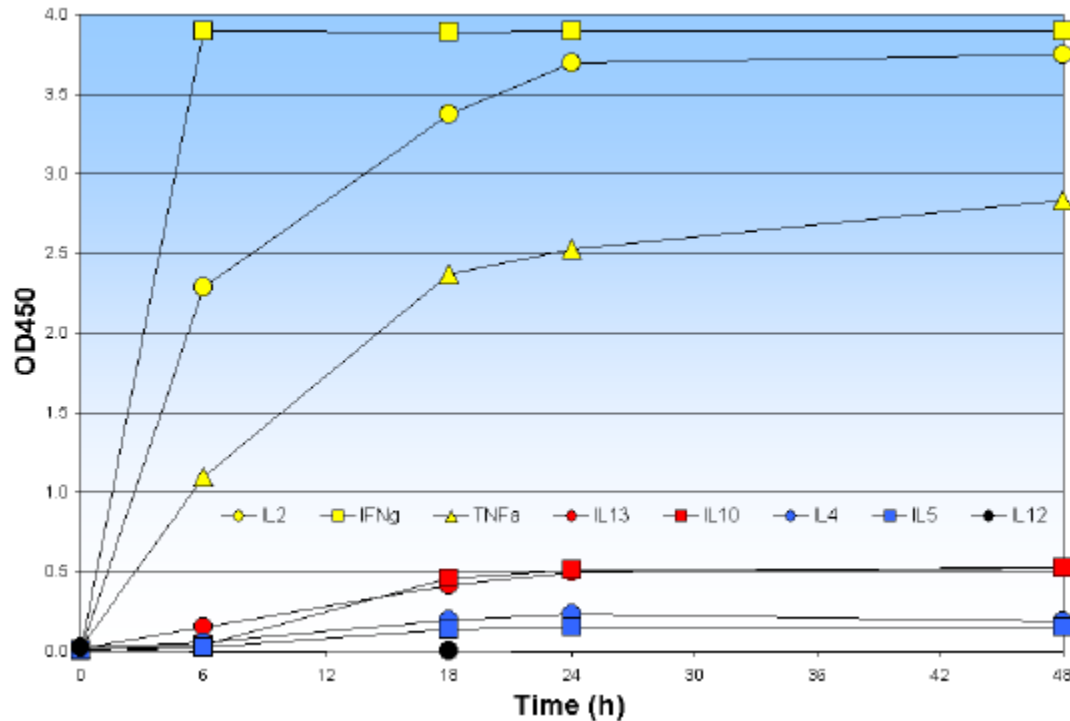


- 1 Challenges facing cytokine researchers
- 2 Solutions that the ELISArray kits provide
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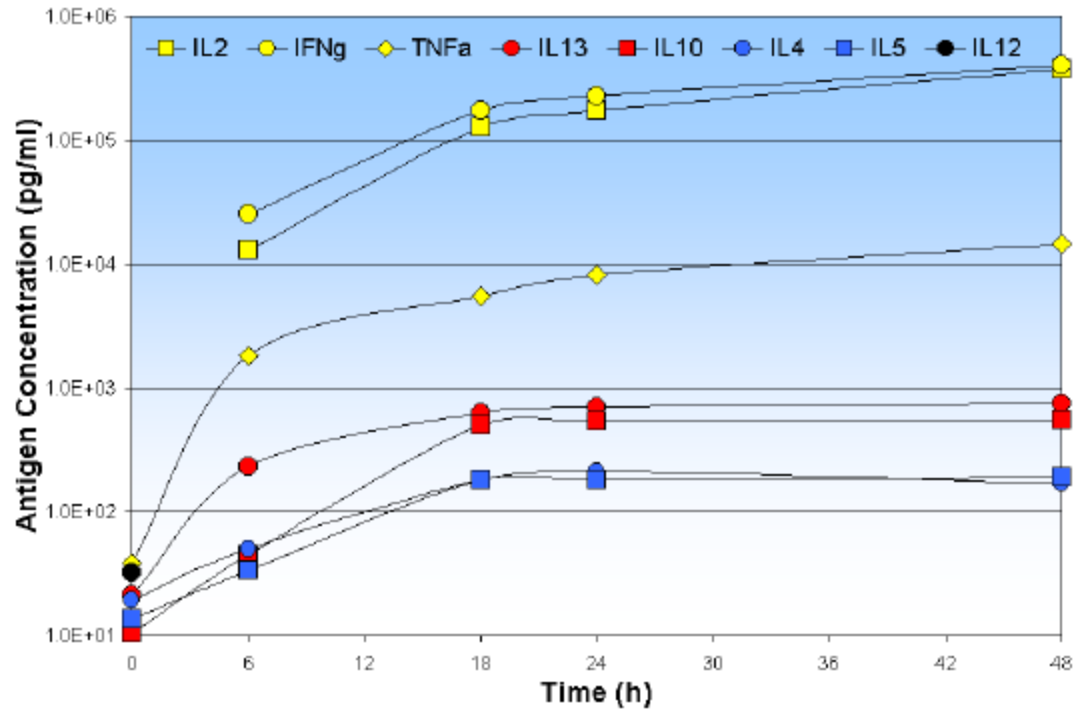
- Treat human peripheral blood mononuclear cells (PBMC) with PMA (50 ng/ml) and ionomycin (1 µg/ml)
- Profile Th1 / Th2 cytokine induction over time
 - 0, 6, 18, 24 and 48 hours
- Follow up with Single-Analyte ELISArray Kits for quantitative results



Large amounts of IL-2 and IFN γ are induced throughout, and apparently beyond, the time course tested. To a lesser extent, TNF α is induced throughout, and apparently beyond, the time course tested.



Only more moderate amounts of IL4, IL5, IL10 and IL13 are induced, reaching a maximum right before 24 hours of stimulation, and seem to start to decrease again at later times. The amount of IL12 is not detectable even after 48 hours of constant stimulation.



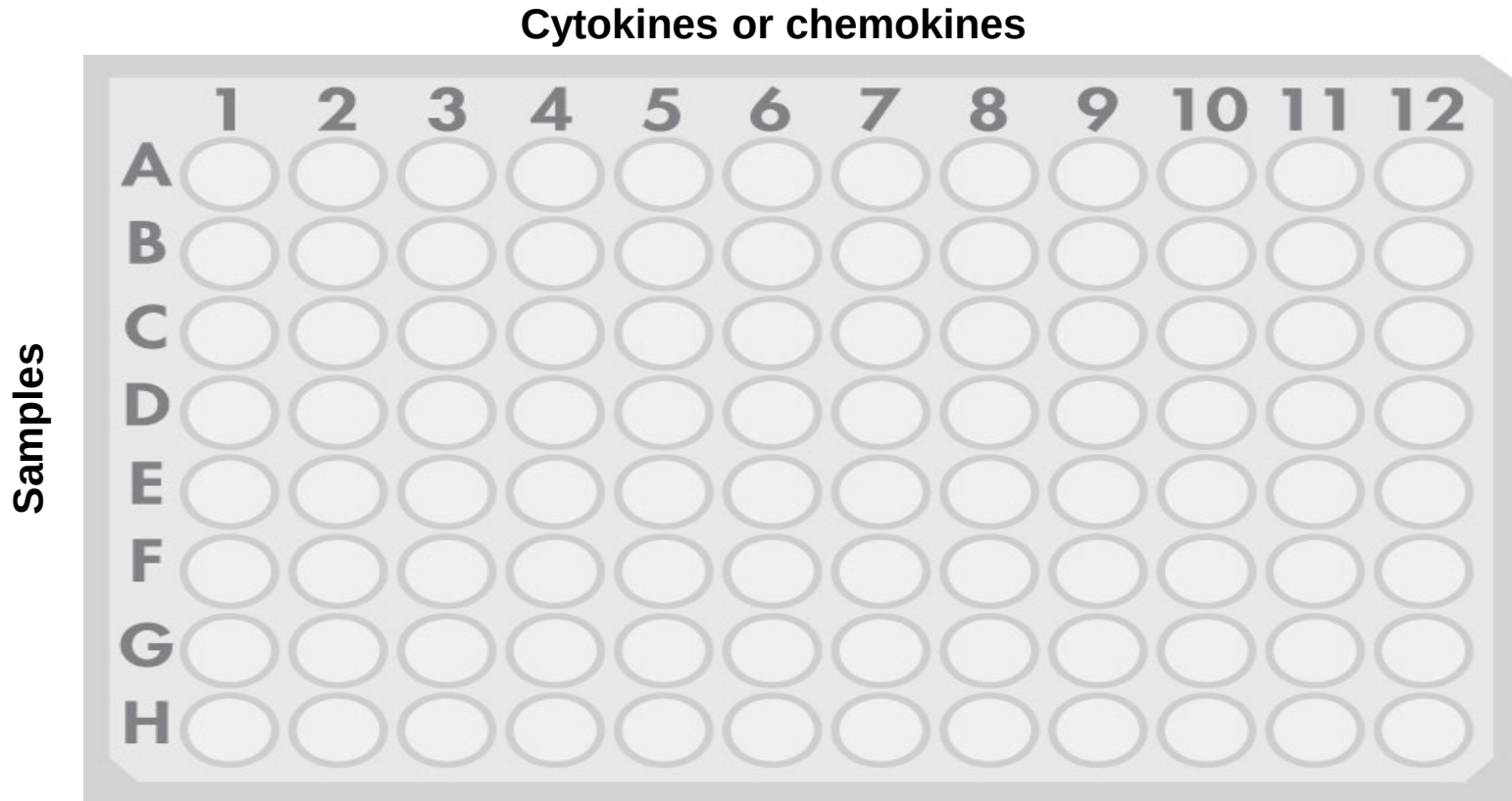
Follow up with *quantitative* results from individual Single-Analyte ELISArray Kits confirms the profiling results from the Multi-Analyte ELISArray Kits.

- Multi-Analyte ELISArray Kits for human and mouse
 - TLR-induced Cytokines I & II
 - Autoimmune response
 - Inflammatory cytokines
 - Common chemokines
 - Common cytokines
 - Th1 / Th2 / Th17 Cytokines

- Single-Analyte ELISArray Kits for human and mouse
 - New mouse
 - RANTES, IP-10, SDF-1, MIG, Eotaxin, TARC, MDC, KC, 6Ckine

- Mix-n-match flexibility:
 - Define your own set of cytokine / chemokine 8-well strips

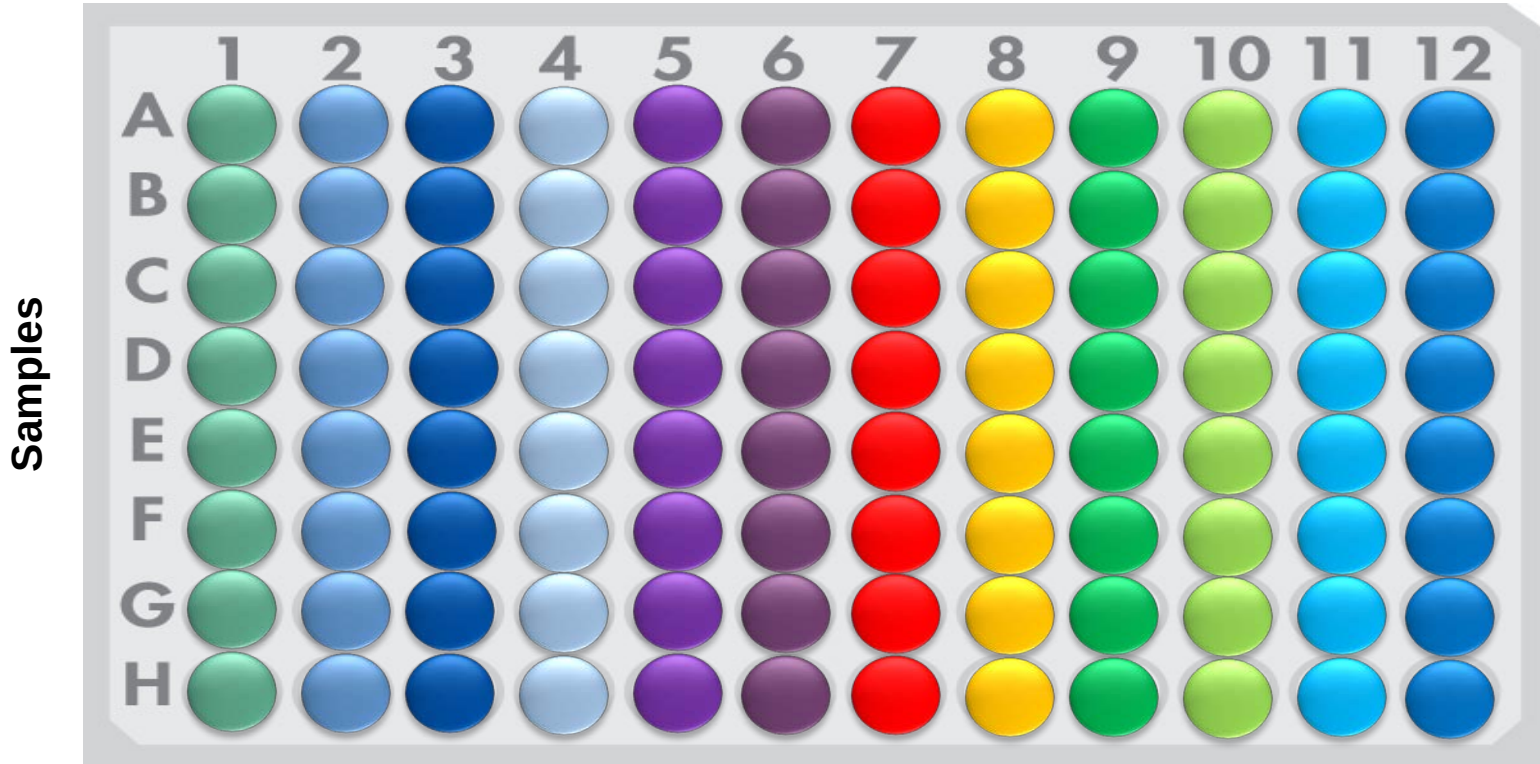
- Off-the-shelf availability



Set up your own combination of 12 cytokines or chemokines

OR set up replicate sets of a smaller number of analytes (2 x 6, 3 x 4)

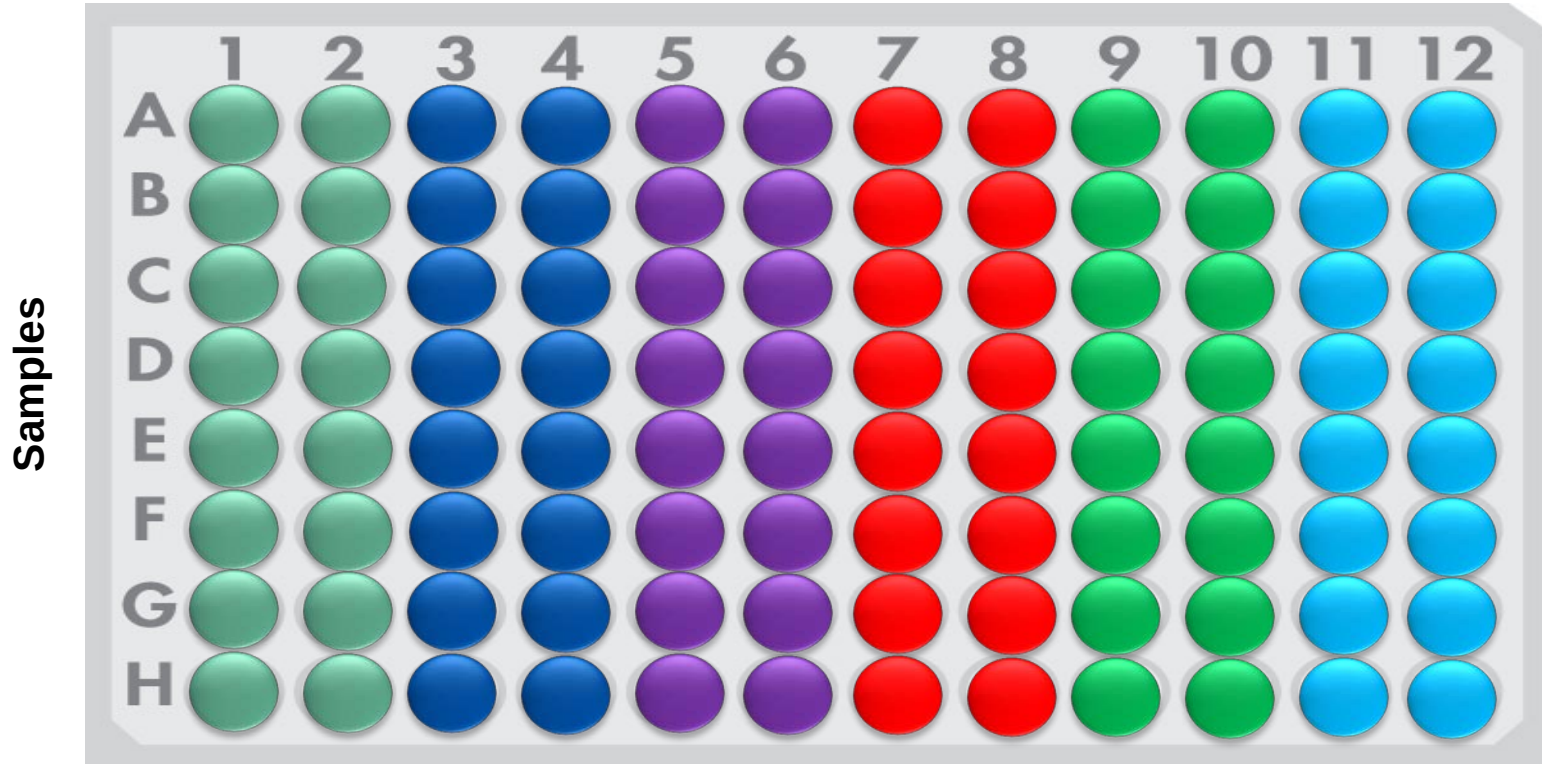
Cytokines or chemokines



Set up your own combination of 12 cytokines or chemokines

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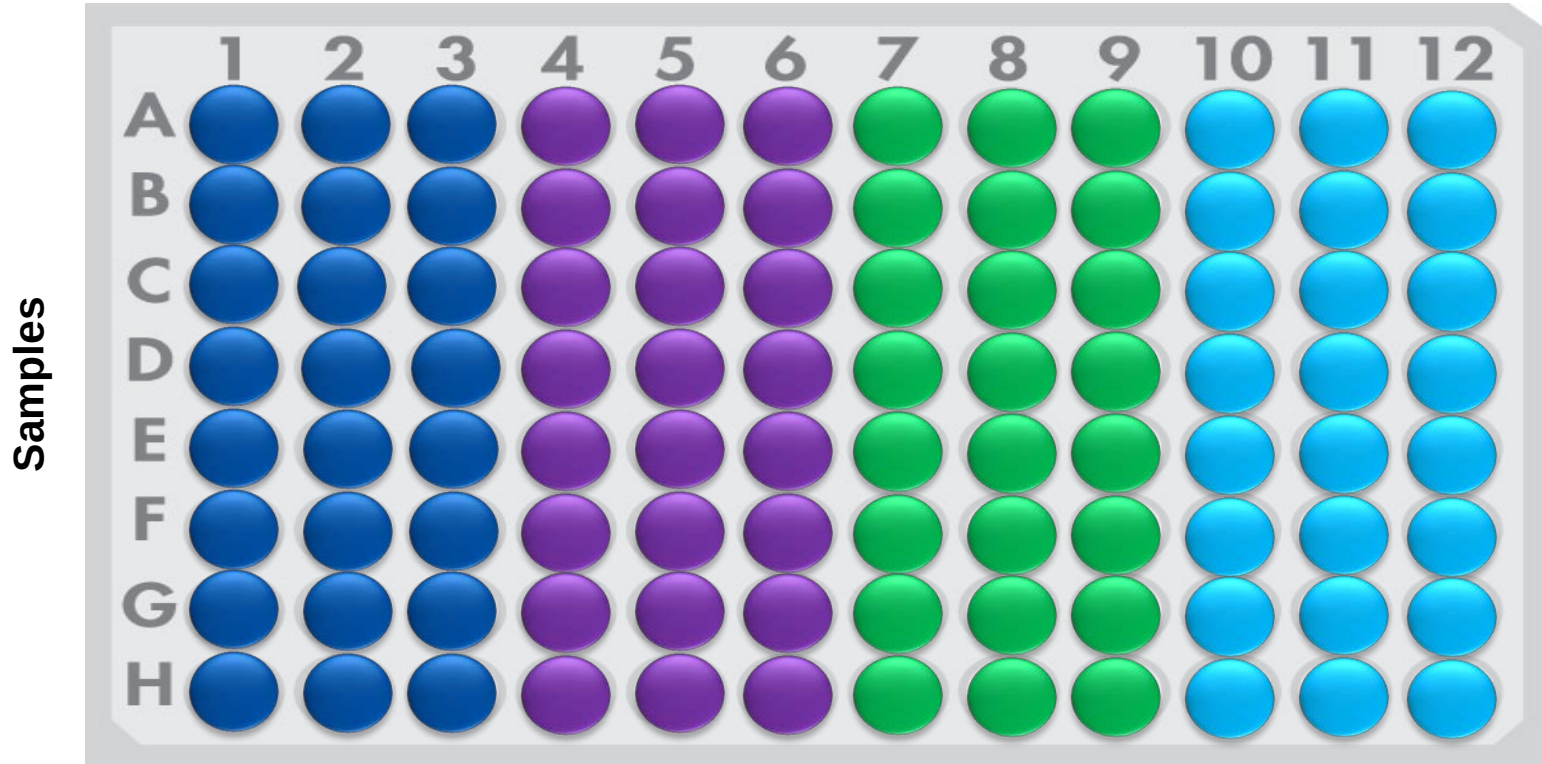
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Cytokines or chemokines



Set up your own combination of 12 cytokines or chemokines

OR set up replicate sets of a smaller number of analytes (2 x 6, 3 x 4)

Minimum initial order	Price
One plate / One cytokine from another manufacturer	\$ 499
12 plates / 12 cytokines from another manufacturer	\$ 5988
One plate / One cytokine in ONE ELISArray Kit	\$ 349
One plate / Twelve cytokines in ONE ELISArray Kit Cataloged	\$ 449
(Custom) Mix-N-Match Multi-Analyte ELISArray Kits	\$ 449

Prices good for US customers only

Non-US customers should contact our local distributor

- Multi-protein flexibility:
 - Profile more of the cytokines / chemokines that you want to see
 - Don't just look at one-at-a-time
 - Four pre-designed sets of 12 human or mouse cytokines and chemokines
 - Mix-n-match your own set of 12 or fewer in replicates

- High performance:
 - Saves you time and effort by already screening for the best antibodies
 - States limit of detection, high sensitivity, good linearity
 - Any cataloged or custom set uses the same protocol

- Ease of use:
 - Conventional ELISA protocol and reader
 - No other special equipment needed

Questions?

Contact technical support 9 AM – 6 PM EST

Telephone: 800-362-7737

Or

Contact Anisha Kharkia

Global Product Manager

Email: Anisha.Kharkia@qiagen.com

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at **www.QIAGEN.com** or can be requested from QIAGEN Technical Services or your local distributor.