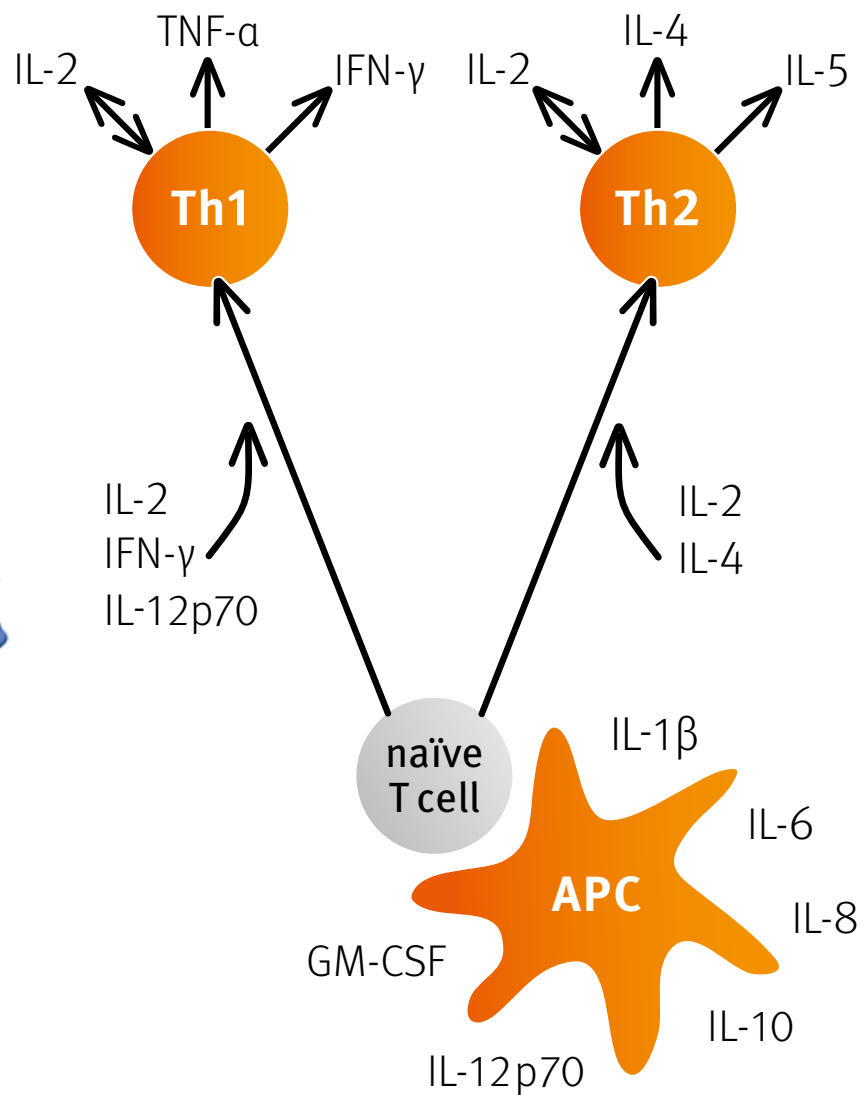


Discover Th1/Th2 Cell Biology



LUNARIS™ Cytokine Kits



LUNARIS™ Human and Mouse Cytokine Kits

Validated, scalable, robust

- > Validated for quantitative analysis of 3–12 soluble cytokines involved in the Th1, Th2-mediated immune response
- > Cytokine profiling in serum, cell culture supernatant, and aqueous humor with sample volumes as low as 3 µL
- > Kits cover targets involved in cell-mediated immunity and humoral response, and in changes caused by inflammation

LUNARIS™ Human 11-Plex Cytokine Kit

Quantifies GM-CSF, IFN- γ , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-8 (CXCL8), IL-10, IL-12p70, TNF- α

LUNARIS™ Mouse 12-Plex Cytokine Kit

Quantifies GM-CSF, IFN- γ , IL-1 β , IL-2, IL-4, IL-5, IL-6, IL-12p70, IL-13, IL-17A, TNF- α

Please note: Additional cytokine kits with lower plex-grade are available upon request – please contact sales@ayoxxa.com.



For Research Use Only. Not for use in diagnostic procedures.

Th1/Th2 Cell Biology

Cytokines mediating immune cell dynamics

According to the classical Th1/Th2 paradigm of immune regulation, Th1 cells are involved in immune responses against intracellular bacteria and viruses. Th2 cells mount a response against extracellular parasites.

Among other factors, the presence of particular cytokines in the microenvironment of a T helper cell determines its biological fate. Autocrine and paracrine signaling polarize an immunological response towards either the Th1 or Th2 direction.

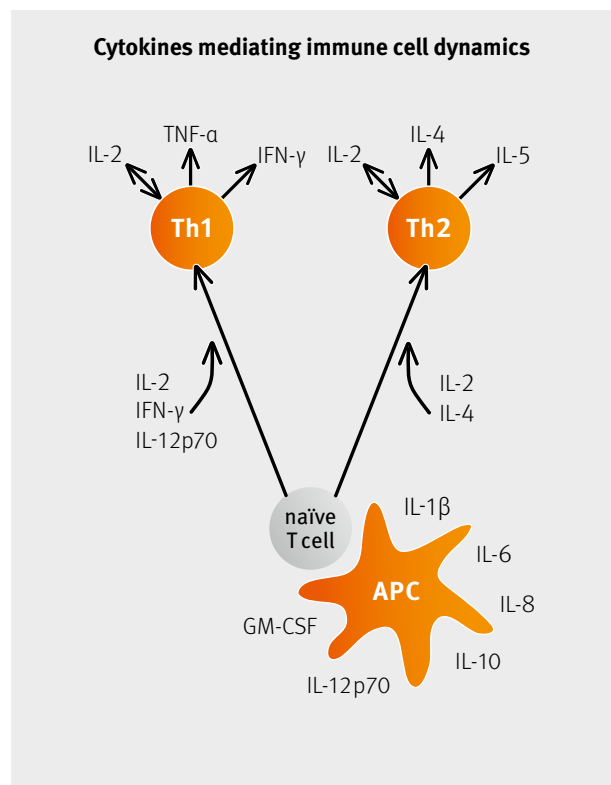
Though not exclusively, Th1 differentiation is generally driven by IL-12 and IFN- γ , while Th2 differentiation is induced by IL-4.

Cytokines are necessary for T helper cell differentiation and activation, understanding cytokine patterns in both healthy development and in disease is a prerequisite to designing therapies.

LUNARIS™ Human and Mouse Cytokine Kits offer tailored biomarker testing to answer a wide range of challenging questions about Th1 and Th2 cell biology.

Relevant research areas:

- > Allergic and autoimmune disorders
- > Immune response to extra-/intracellular pathogens and extracellular parasites
- > Graft-versus-host disease



Excellent Data Quality

Validation of the LUNARIS™ Human 11-Plex Cytokine Kit*

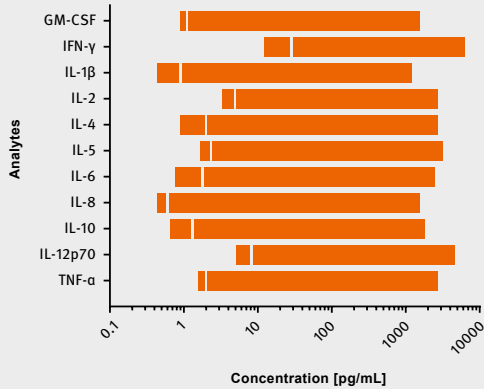


Figure:

Bar diagram depicting the assay parameters shown in the table to the right. The orange bars represent the dynamic range of the assay from LoD (left border) to the ULOQ (right border). LLOQ is depicted as a white line.

Analyte	LoD	LLOQ	ULOQ	DR
GM-CSF	0.8	1.1	1700	3.2
IFN-γ	11.2	28.7	7000	3.8
IL-1β	0.4	0.9	1300	3.1
IL-2	3.0	4.9	3000	3.5
IL-4	0.8	2.0	3000	3.5
IL-5	1.5	2.3	3500	3.5
IL-6	0.7	1.8	2700	3.4
IL-8	0.4	0.4	1700	3.2
IL-10	0.6	1.3	2000	3.3
IL-12p70	4.7	8.2	5000	3.7
TNF-α	1.4	2.0	3000	3.5

Table:

Median assay parameters determined for a twelve point standard curve in more than ten experiments. Limit of detection (LoD), lower limit of quantification (LLOQ), and upper limit of quantification (ULOQ) given in pg/mL; dynamic range (DR) on a log scale.

*Validation data of the corresponding mouse kit are available upon request.

LUNARIS™ Technology

Innovative technology for translational proteomics

- > **Ease of readout and handling**
- > **Fully integrated system**
- > **Flexible scalability from low to high throughput**
- > **Readout of 384 samples in less than one hour**

AYOXXA's proprietary LUNARIS™ platform for multiplex protein analysis is a fully integrated and scalable system. A dedicated reader automates image-based analysis of immunoassay beads in a planar array, so every bead is read and every bead counts.

LUNARIS™ is optimized for sample volumes as low as 3 µL – one-tenth the volume required for similar technologies – yet allows full multiplex testing without compromising data quality or precision from precious samples.

With advantages of superior data quality, workflow flexibility and conservation of precious samples, LUNARIS™ enables reliable quantification of biomarkers from model to man – from lab to clinic – from data to insight.

LUNARIS™ Services

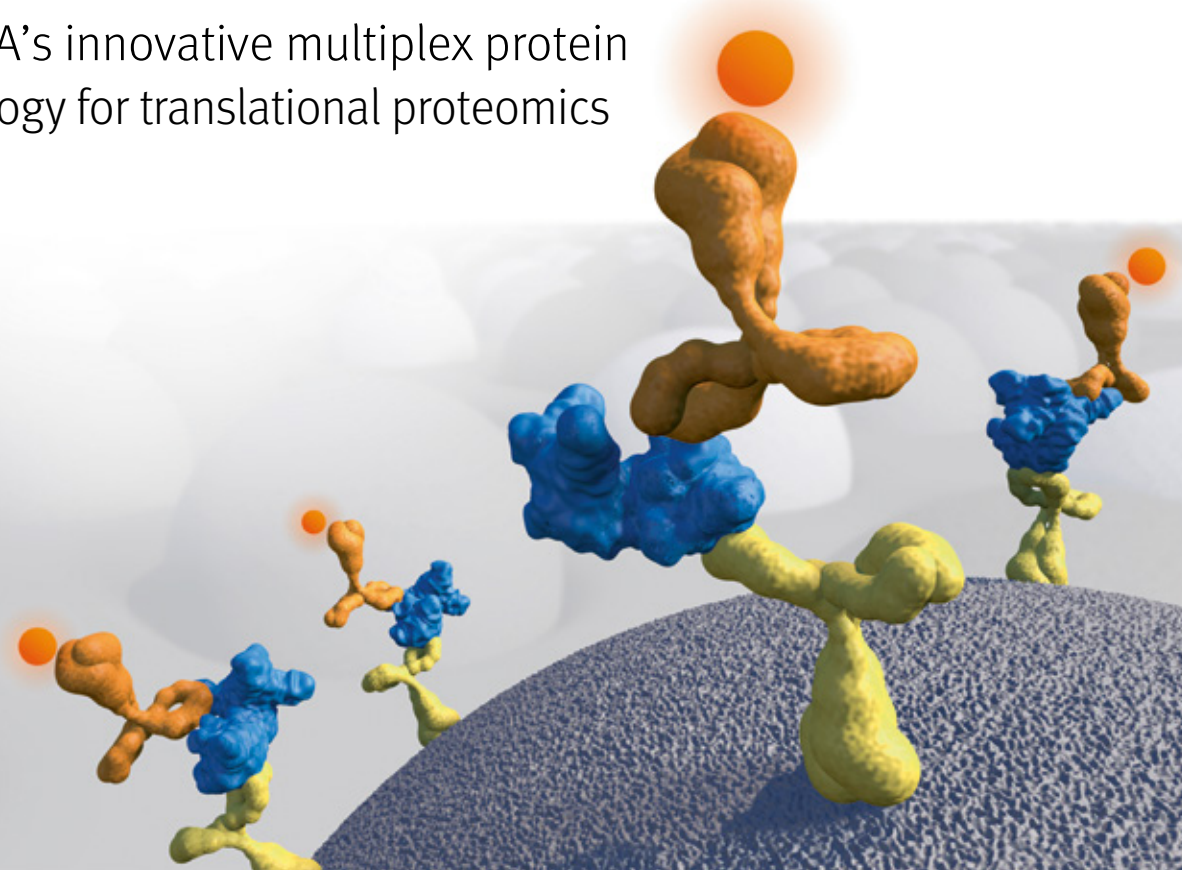
Multiple options to access the advantages of LUNARIS™

- > **Complete testing and readout services**
- > **Send in samples for testing and receive a complete analysis report**
- > **Perform assays in your lab, then send in completed assay plates for readout**
- > **Innovative panel development**
- > **Custom panel configuration**
- > **Custom multiplex assay development**



LUNARIS™ Technology

AYOXXA's innovative multiplex protein technology for translational proteomics



Ordering information

LUNARIS™ Kits	No. of BioChips	Cat. No.	No. of samples*
Human 11-Plex Cytokine Kit	1 × 96 4 × 96	LHCY-20110S LHCY-20110F	40 160
Mouse 12-Plex Cytokine Kit	1 × 96 4 × 96	LMCY-20120S LMCY-20120F	40 160

* Measured in duplicate

Please note:

Additional cytokine kits with lower plex-grade are available upon request – please contact sales@ayoxxa.com.

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Call the experts:

+49 (0)221-222 529-0
cytokines@ayoxxa.com

www.ayoxxa.com

AYOXXA Biosystems is dedicated to the vision of enabling success in translational research.

Building upon an innovative technology platform, our mission is to develop robust assay panels for translational research applications. Our LUNARIS™ multiplex protein analysis platform is optimized for translating knowledge from basic to clinical research. With its advantages in terms of quality, flexibility and efficiency, LUNARIS™ enables reliable quantification of biomarkers from model to man – from lab to clinic – from data to insight.

HEADQUARTERS GERMANY

AYOXXA Biosystems GmbH
BioCampus Cologne
Nattermannallee 1
50829 Köln, Germany
Phone: +49 (0) 221 222 529-0
E-Mail: sales@ayoxxa.com

USA

AYOXXA Biosystems Inc.
c/o Platinum CFO
2600 Tower Oaks Blvd., Suite 220
Rockville, MD 20852
USA
E-Mail: sales@ayoxxa.com