

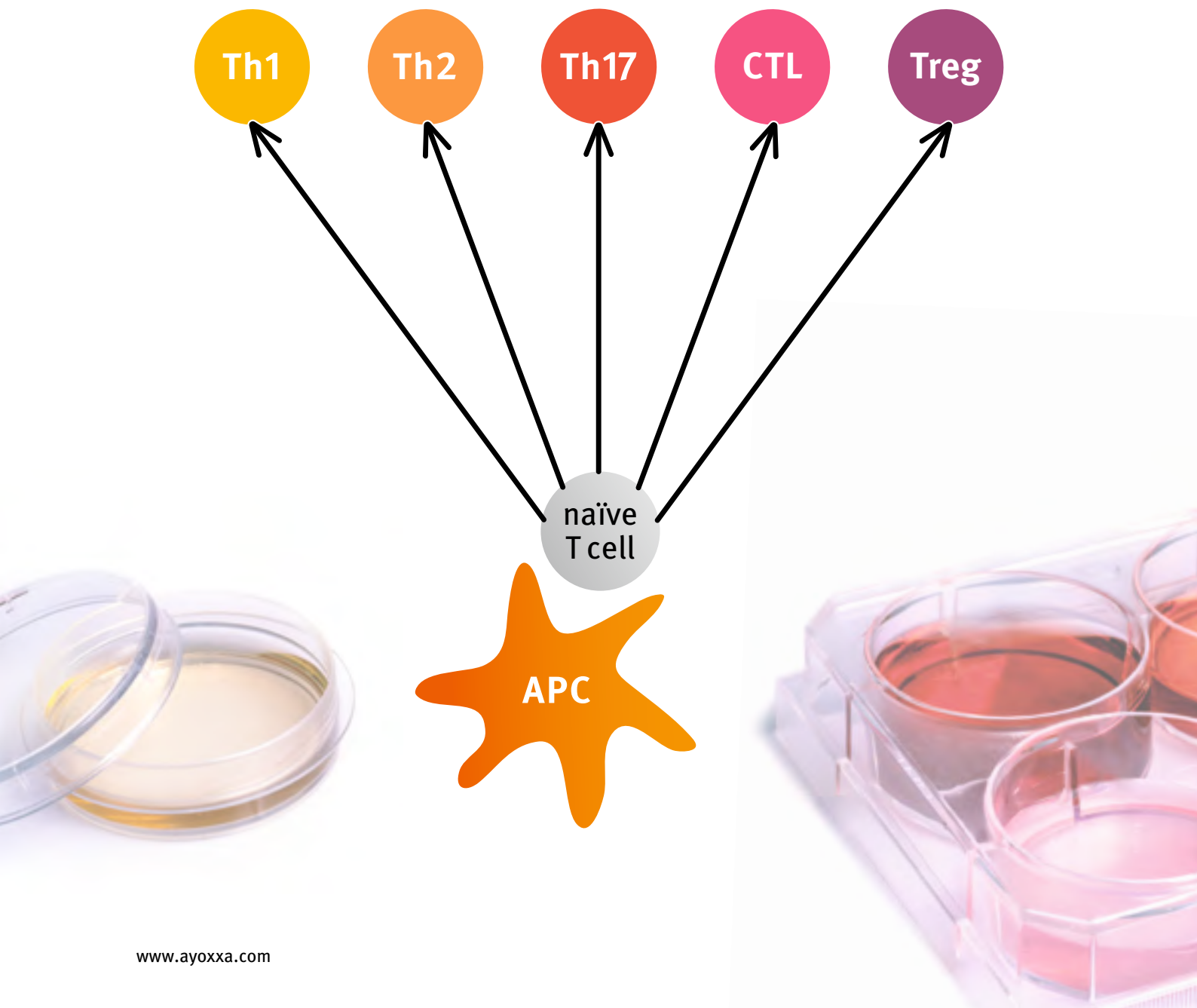
IMMUNOLOGY

Unravel Complexity

LUNARIS™ T Cell Characterization Kits

Mouse & Human:

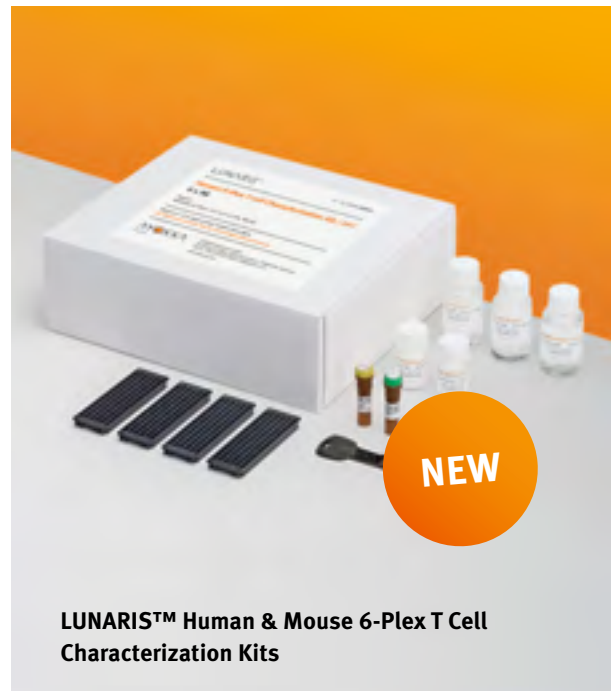
Granzyme B, IFN- γ , IL-2, IL-4, IL-17A, TGF- β 1



LUNARIS™ Human & Mouse T Cell Characterization Kits

Validated, scalable, robust

- > Validated for quantitative analysis of soluble effector molecules secreted by distinct T cell populations
- > Generate biomarker profiles to identify Th1 (IFN- γ), Th2 (IL-4), Th17 (IL-17A), Treg (TGF- β 1), and cytotoxic T cells (Granzyme B)
- > Quantify IL-2 as a marker for T cell proliferation
- > Scalable and standardized assay architecture with robust chemistry guarantee reproducibility
- > Enables translational research with murine and human samples



LUNARIS™ Human & Mouse 6-Plex T Cell Characterization Kits

For the quantification of IFN- γ , IL-2, IL-4, IL-17A, TGF- β 1, and Granzyme B in cell culture supernatant.

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

Elucidate T Cell Differentiation

Antigen presentation and intercellular signaling prompt the differentiation of naïve T cells into effector subsets that mount effective immune responses. This differentiation process is carefully orchestrated. Dysregulation leading to an altered number or function of differentiated T cell subsets can result in pathologies ranging from autoimmunity to cancer.

Thus, a research tool that allows accurate and reproducible identification of predominant T cell subsets in cell culture experiments can help unravel the complexity and spot potential points of therapeutic intervention.

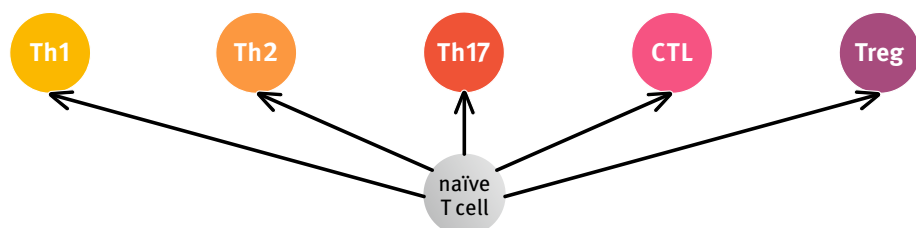
Each T cell subset secretes a characteristic repertoire of effector cytokines that stabilize T cell differentiation, contribute to pathogen clearance, or both. These soluble molecules can be exploited as markers of T cell subtypes and thus, characterize the outcomes of differentiation.

Relevant research areas:

- > Infection biology
- > Autoimmune disorders
- > Cancer

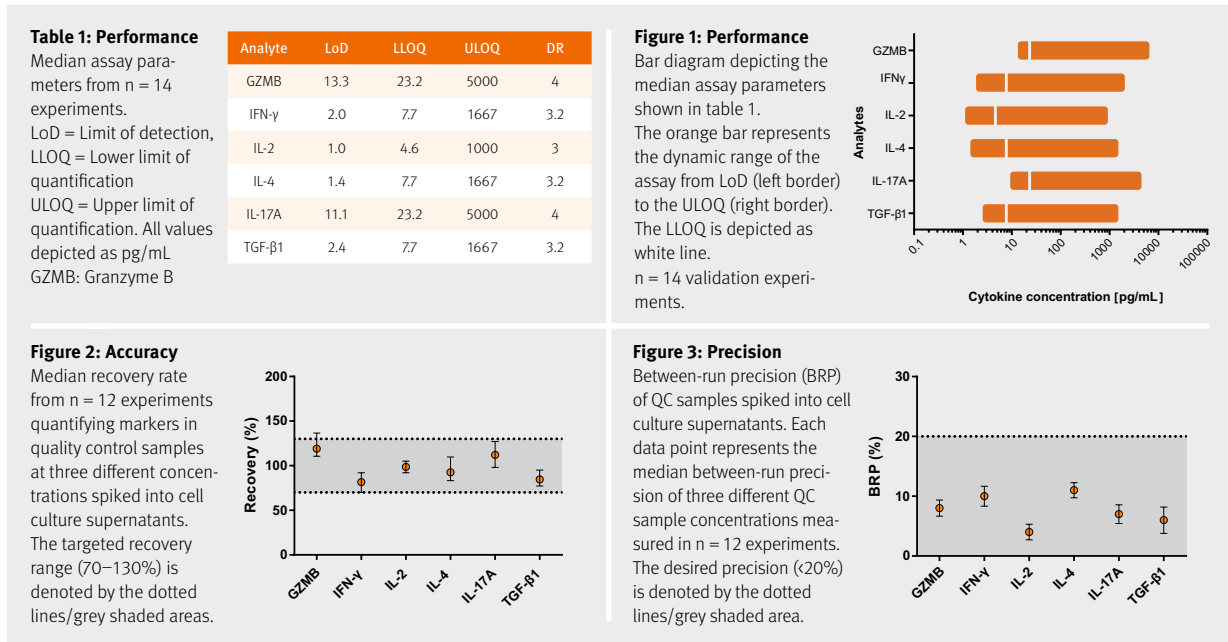
Roles of different T cell subsets in health and disease

Biological function	Effector against intracellular bacteria and protozoa	Effector against extra-cellular parasites	Effector against extra-cellular bacteria	Tumor and virus clearance	Establishing self-tolerance
Dysregulated in	E.g. type 1 diabetes	E.g. allergy, hypersensitivity	E.g. rheumatoid arthritis, multiple sclerosis, psoriasis	E.g. type 1 diabetes, arthritis, liver damage in hepatitis B	E.g. prevention of tumor clearance, autoimmunity



Excellent Data Quality

LUNARIS™ Human 6-Plex T Cell Characterization Kit Validation*



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

LUNARIS™: Innovative technology for translational proteomics

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

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

LUNARIS™ is optimized for sample volumes as low as 3 µL, which is as little as one-tenth the volume required for similar technologies, while allowing full multiplex testing without compromising quality data or precision in 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.

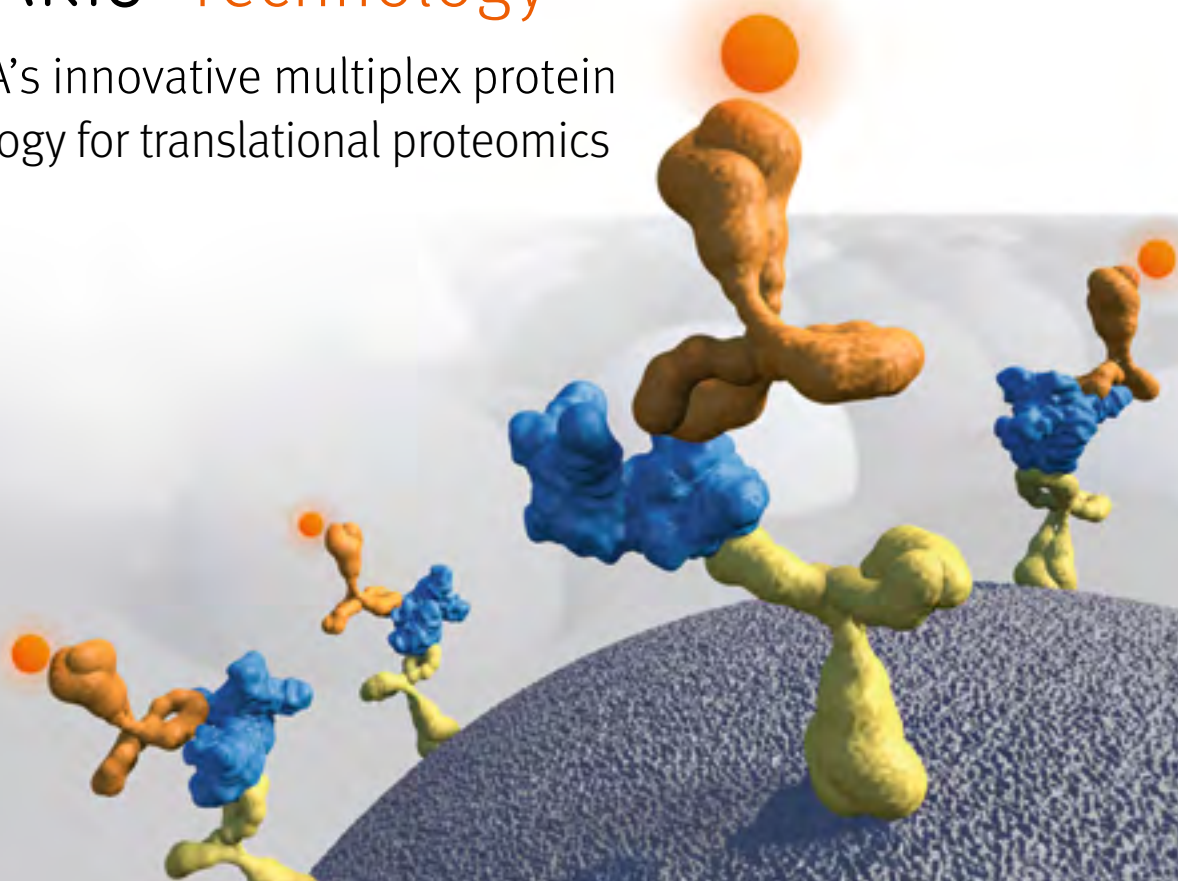
AYOXXA Services: Multiple options to access the advantages of LUNARIS™

- > **Complete testing & readout services**
- > **Send in sample for testing & receive a complete analysis report**
- > **Perform assay in your lab, send 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



Unravel Complexity

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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 generated in clinical studies. 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.

LUNARIS™	MTP plate format	# LUNARIS™ BioChips	Cat. No.	# samples in duplicates
Human 6-Plex T Cell Characterization Kit	96	1 x 32 3 x 32	LHTC-10060S LHTC-10060F	8 40
	384	1 x 96 4 x 96	LHTC-20060S LHTC-20060F	40 184
Mouse 6-Plex T Cell Characterization Kit	96	1 x 32 3 x 32	LMTC-10060S LMTC-10060F	8 40
	384	1 x 96 4 x 96	LMTC-20060S LMTC-20060F	40 184

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