Epiontis **ID®**

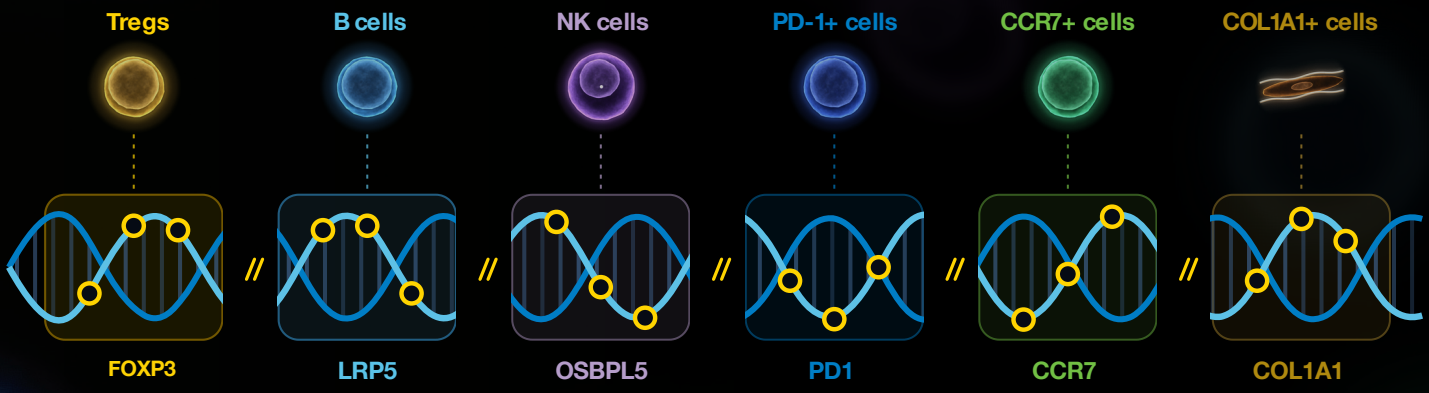
A Different Approach to Immune Monitoring

Quantify immune cell populations without live cells or flow cytometry

HOW IT WORKS

Counted by DNA. Not by living cells.

Each immune cell type carries a distinct DNA methylation signature. Epiontis ID® quantifies these signatures by qPCR, measuring DNA rather than living cells. As long as the cells were present at collection, the signal is preserved, so samples can be frozen at the site and analyzed later without loss.



Diverse cell populations
Cell types and states, each measured by its own validated assay.

→

1 ID per cell type
A marker region demethylated only in that cell type: its epigenetic ID.

→

qPCR readout
Digital, normalized and automated: % of all cells and cells/µL.

→

Global scale
One standardized method at every site; used in 235+ clinical studies.

Opens immune monitoring to more sample matrices

Compatible with virtually any sample containing human DNA, including:

- Dried blood spots (DBS)
- Biofluids
- FFPE tissue
- Fresh-frozen tissue
- Whole blood
- PBMCs
- In vitro expanded cells
- Other matrices containing DNA

Preserves timepoints

With no viable cell processing windows to miss, the risk of sample loss is mitigated and your immune monitoring data remains complete.

Scales cost-effectively

qPCR and simplified logistics keep cost per sample low as trials grow to many sites, patients, and timepoints.

A Precision for Medicine Innovation
Developed by our scientists, used in 235+ clinical studies and counting

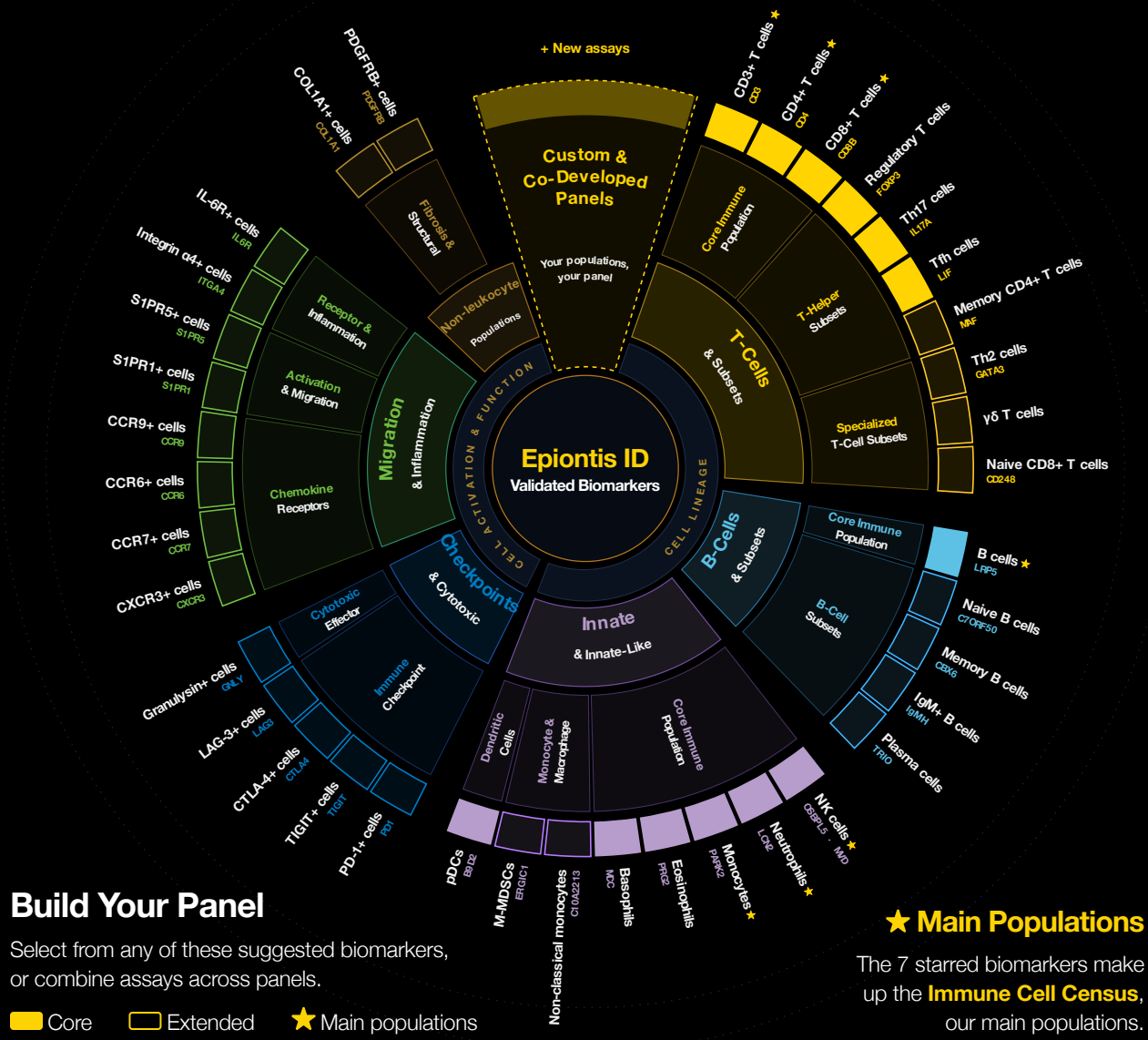
PRECISION for medicine®

VALIDATED BIOMARKERS

Diverse immune cell populations

Each Epiontis ID assay is fully validated and targets its own methylation marker, so multiple biomarkers can be measured side by side from the same DNA, without extra blood drawsor separate sample handling for each one.

Choose a **single marker, cell population, or build your own panel** that covers your program's specific immune cells of interest.



Build Your Panel

Select from any of these suggested biomarkers, or combine assays across panels.

Core Extended ★ Main populations

★ Main Populations

The 7 starred biomarkers make up the **Immune Cell Census**, our main populations.

Start with the Immune Cell Census

Build a baseline view of the immune system and how it shifts with disease and treatment using the Immune Cell Census to measure the seven major immune populations tracked in nearly every study.

CD3+ T cells	CD4+ T cells	CD8+ T cells	B cells	NK cells	Neutrophils	Monocytes
CD3	CD4	CD8B	LRP5	OSBPL5 • MVD	LCN2	PARK2

HOW IT WORKS

From sample to cell count in seven steps

FOLLOW ONE ASSAY · FOXP3 → REGULATORY T CELLS (TREGS)

1 Collect a sample

Whole blood, a dried blood spot, or tissue: frozen, ambient, or fixed. As little as 75 µL of blood.

2 Choose the biomarkers

Each biomarker is one assay, with primers for one cell type's marker region. Choosing the assay defines the question.

3 Bisulfite conversion

Unmethylated C becomes U (read as T). Methylated C is protected. An invisible tag becomes a sequence difference.

4 Extract DNA from all cells

Cells don't need to be alive. The methylation pattern was set during differentiation; the assay only reads it.

5 Methylation-specific qPCR

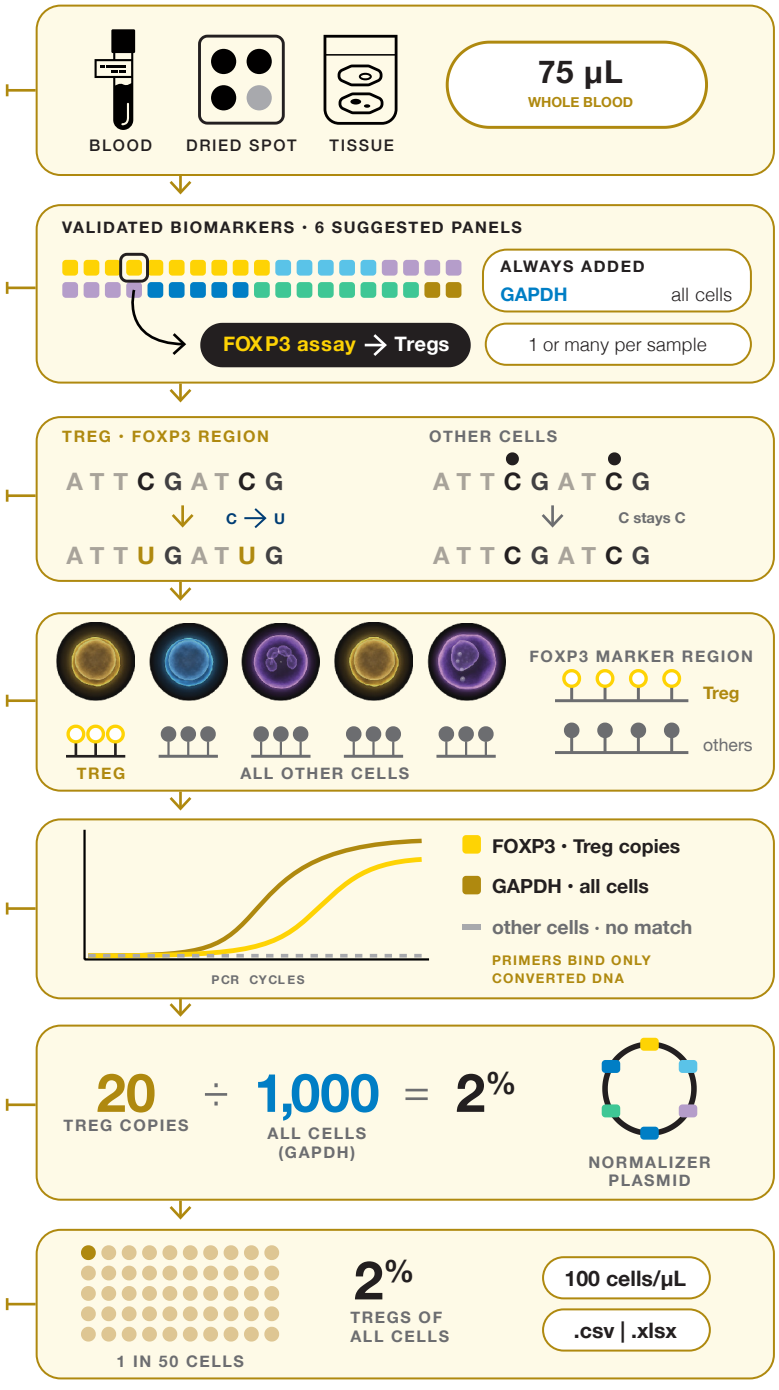
Primers match only the converted, demethylated marker region, so only the target cell type is amplified.

6 Normalize

GAPDH, demethylated in every cell, counts all cells. A plasmid standard, added at the start, corrects PCR efficiency.

7 Report

Each population as % of total cells and, for blood, cells/µL, in your desired report format, with an optional bioanalytical report.



With no viable cell processing windows to miss or specialized on-site processing needed, Epiontis ID greatly simplifies logistics that in turn saves costs.

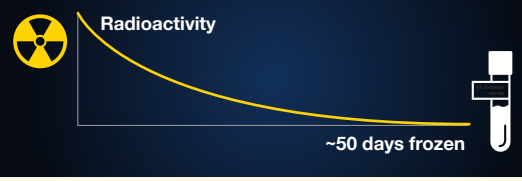
92% average savings on international shipping costs alone*

**Based on internally verified calculations for Epiontis DBS vs. ambient blood on a global scale*

INNOVATIVE APPLICATIONS

Meeting new demands in drug development

Epiontis ID can be applied in any therapeutic program where immune cells tell the story and is particularly well-suited to address evolving needs stemming from modality innovation and patient-centric trial designs.



RADIOPHARMACEUTICAL TRIALS

Clinical Focus

Wait out the decay

Freeze whole blood at the site and hold it until radioactivity has decayed. No PBMC processing in radioactive labs.

Collect and Freeze → **Hold ~50 days*** → **Ship and measure**

Whole blood, EDTA, at site or central lab

Until radioactivity has decayed

**depending on isotope*

No radiochemical labs needed



DRIED BLOOD SPOTS

Immune monitoring beyond the clinic

Quantify immune cells from dried blood spots, expanding access to decentralized and patient-centric studies.

Spot → **Dry and mail** → **Measure**

A few drops of blood on a card, wherever the patient is

No cold chain, no processing

The same Epiontis ID assays as whole blood

Frequently Asked

Does Epiontis ID replace flow cytometry?

In some cases, yes. Epiontis ID complements flow cytometry, is an alternative in certain circumstances, and can be used where flow is not feasible, such as with frozen, dried, or fixed samples. In whole blood, results have been shown to correlate well.

How much sample is needed?

As little as 75 µL of whole blood covers a panel of four cell types. Dried blood spots and tissue also work.

Can you measure in tissue?

Yes. Many assays are validated in FFPE and fresh-frozen tissue; coverage varies by assay.

What if the population we need is not on the list?

New marker regions can be co-developed, typically in 12–18 months. CAR-T cell programs are one example.

Is this approach scientifically validated?

Yes. The approach is supported by hundreds of peer-reviewed publications. For regulatory T cells, Nobel laureate Shimon Sakaguchi has referenced Precision for Medicine's work on the epigenetic regulation of Tregs.

Download your digital copy

Request a panel or build your own

Visit our interactive menu to select the assay(s) most relevant to your study.

precisionformedicine.com/epiontis-ID

PRECISION for medicine®

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