

Epiontis ID[®] Validated Panels

Immunophenotyping by qPCR

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Introduction

Precision for Medicine offers technology solutions that meet the stringent demands of global clinical studies. Epiontis ID is a robust, adaptable, and cost-effective technology that utilizes specific epigenetic markers. It simplifies trial logistics and delivers consistent results, making it ideal for immune monitoring at all stages of clinical trials.

The Epiontis ID portfolio includes immunophenotyping assays that enable precise monitoring of immune cell types with minimal sample requirements. It performs well with a wide range of sample types, including frozen whole blood with any coagulant, such as Paxgene RNA/DNA tubes, as well as tissue samples.

Validated, off-the-shelf use

Epiontis ID assays are fully validated and conducted on an automated measurement platform under ISO 17025 accreditation. The growing portfolio includes monitoring options for T cells, B cells, NK cells, monocytes, and various types of granulocytes, each customizable as needed. Review Precision's validated Epiontis ID assays for your upcoming clinical trials.

Currently, there are over 35 validated assays available for Epiontis ID. Study sponsors can select and combine any of the various cell types in a panel for analysis.

| T Lymphocytes | Other Immune Cells | Exhaustion/Activation/ Migration Markers | Other Cell Types (Fibrocytes) |
|---|--|--|---|
| <ul style="list-style-type: none">• CD3 T cells• CD4 T cells• CD8 T cells• Regulatory T cells• Th17 cells• TFH cells• Gamma delta ($\gamma\delta$) T cells• GATA3+ cells• CD4 memory T cells• CD8-naive T cells | <ul style="list-style-type: none">• B cells• NK cells• Neutrophils• Eosinophils• Basophils• Monocytes• NC monocytes• Monocytic MDSC• Plasmacytoid DC• Naive B cells• Memory B cells• IgM+ B cells | <ul style="list-style-type: none">• PD1+ cells• TIGIT+ cells• CTLA4+ cells• LAG3+ cells• CXCR3+ cells• Granulysin+ cells• CCR7+ cells• IL6R+ cells• CCR6+ cells• CRTH2+ cells• S1PR1+ cells• S1PR5+ cells• Integrin alpha 4+ cells• CCR9+ cells | <ul style="list-style-type: none">• Col1A1+ cells• PDGFRB+ cells |

Example panels

Below are examples of the types of panels that can be constructed using Epiontis ID's validated markers.

| Panel Description | Sample Matrix | Markers | Panels Can Be Combined and Customized Without Additional Validation | | | | | | | | | | | | | | |
|---|------------------------------------|---------|---|------|------|---------|-----------|-------|------------|--------|--------|--------|-------|-----|--|--|--|
| T/B | Whole Blood, Paxgene, PBMC, Tissue | 4 | CD3 | CD4 | CD8 | B | | | | | | | | | | | |
| T/B/NK/ Degranulation | Whole Blood, Paxgene, PBMC, Tissue | 6 | CD3 | CD4 | CD8 | B | NK | GPLY | | | | | | | | | |
| T/B/NK/Monocyte/ Granulocyte | Whole Blood, Paxgene | 9 | CD3 | CD4 | CD8 | B | NK | Monoc | Neutro | Eosino | Baso | | | | | | |
| T/T-Memory | Whole Blood, Paxgene, PBMC | 5 | CD3 | CD4 | CD8 | mem CD4 | naive CD8 | | | | | | | | | | |
| T/B-Differentiation | Whole Blood, Paxgene, PBMC, Tissue | 7 | CD3 | CD4 | CD8 | B | naive B | mem B | IgM B | | | | | | | | |
| T/T-Cell Subsets | Whole Blood, Paxgene, PBMC, Tissue | 6 | CD3 | CD4 | CD8 | Treg | Th17 | Tfh | γδ-T cells | | | | | | | | |
| T/T-Cell Subsets/ NK/Activation/ Exhaustion | Whole Blood, Paxgene, PBMC, Tissue | 12 | CD3 | CD4 | CD8 | Treg | Th17 | Tfh | NK | CXCR3 | LAG3 | TIGIT | CTLA4 | PD1 | | | |
| T/NK/MDSC/pDC | Whole Blood, Paxgene, PBMC | 6 | CD3 | CD4 | CD8 | NK | MDSC | pDC | | | | | | | | | |
| Additional Markers | Marker Dependent | Add on | GATA3 | CCR6 | CCR7 | CRT2 | S1PR1 | S1PR5 | Inta4 | IL6R | PDGFRβ | Col1A1 | | | | | |

For ease of navigation, we've color-coded markers in each panel to correspond to the cell type measured to quickly evaluate whether a validated panel contains a desired cell type marker.

| | | |
|--------------|-------------------|-----------------------|
| T Cell | B-Cell Type | Degranulation |
| T Memory | Granulocyte | Activation/Exhaustion |
| T Regulatory | Myeloid/DC | |
| Monocyte/NK | Immune Checkpoint | |

Additional information

1. qPCR immunophenotyping determines the number of all cell types independently in 2 readout formats:

- Percent of total cells
- Cells per microliter blood

2. To align with flow cytometry data, Epiontis ID results are calculated as ratios. For example, Treg cells within the parental CD4 T-cell gate:

$$\frac{\text{Treg cells in sample}}{\text{CD4 T cells in sample}} = \% \text{ Treg cells within the CD4 T-cell compartment}$$

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