

Immunophenotyping Package

MI-Compleukocyte™

| Panel 1: Antibody/Dye | Description |
|-----------------------|---|
| CD45 | Pan-hematopoietic cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| FoxP3 | Regulatory T cell marker |
| CD25 | Regulatory T cell marker |
| PD-1 | T cell activation/Exhaustion marker |
| CD69* | Activation marker |
| Ki-67 | Proliferation marker |
| CD49b/CD335 | Natural killer/Natural killer T cell marker |
| Viability Dye | Dead cell exclusion |

*CD69 can be substituted with alternative markers including LAG3, ICOS, or CTLA-4.

| Panel 2: Antibody/Dye | Description |
|-----------------------|--|
| CD45 | Pan-hematopoietic cell marker |
| CD19 | B cell marker |
| CD11b | Pan-myeloid lineage marker |
| Ly-6G | Granulocytic-MDSC/ Neutrophil marker |
| Ly-6C | Monocytic-MDSC/Monocyte marker |
| CD11c | Dendritic cell marker |
| CD24 | Dendritic cell delineation |
| F4/80 | Pan-macrophage marker |
| MHC Class II | M1 macrophage & dendritic cell marker/Antigen presentation |
| CD206 | M2 macrophage marker |
| Viability Dye | Dead cell exclusion |

| Panel 3: Antibody/Dye | Description |
|-----------------------------|-------------------------------|
| Counting Fluorosphere Beads | Cell enumeration reagent |
| CD45 | Pan-hematopoietic cell marker |
| Viability Dye | Dead cell exclusion |

Provides absolute counts, comprehensive analysis for 11 lymphoid and myeloid subsets, and T cell activation analysis.

All MI Bioresearch standard immunophenotyping flow cytometry panels are copyrighted. Unauthorized disclosure is prohibited.

Client shall not reverse engineer, perform any studies to determine the structure or chemical composition, or elucidate the physical properties in which any of our processes or panels have been created.

Lymphoid Lineage Panels

NEW MI-Expanded CompT™

| Antibody/Dye | Description |
|---------------|-------------------------------------|
| CD45 | Pan immune cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| FoxP3 | Regulatory T cell marker |
| CD25 | Regulatory T cell marker |
| CD44 | Activation/Memory marker |
| CD62L | Naïve T cell/Memory marker |
| Ki-67 | Proliferation marker |
| CD69 | T cell activation marker |
| PD-1 | T cell activation/Exhaustion marker |
| LAG-3 | T cell activation/Exhaustion marker |
| TIM-3 | T cell exhaustion marker |
| ICOS | T cell activation marker |
| Granzyme B | Anti-tumor cytotoxicity marker |
| Viability Dye | Dead cell exclusion |

The MI-Expanded CompT™ can be customized to include NK/NKT cell markers (CD49b/CD335) to enable granzyme B and activation marker expression in these subsets.

MI-CompT™

| Antibody/Dye | Description |
|---------------|-------------------------------------|
| CD45 | Pan-hematopoietic cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| CD25 | Regulatory T cell marker |
| FoxP3 | Regulatory T cell marker |
| PD-1 | T cell inhibitory signaling protein |
| CD69* | Activation marker |
| Ki-67 | Proliferation marker |
| Viability Dye | Dead cell exclusion |

Our most commonly utilized lymphoid panel, for analysis of three distinct T cell subsets plus activation profiles. *CD69 can be substituted with alternative markers including LAG3, ICOS, or CTLA-4.

MI-NK™

| Antibody/Dye | Description |
|---------------|---|
| CD45 | Pan-hematopoietic cell marker |
| CD49b/CD335 | Natural killer/Natural killer T cell marker |
| CD3 | Pan-T cell marker |
| Ly-6C | Myeloid-derived suppressor cell exclusion |
| Ly-6G | Myeloid-derived suppressor cell exclusion |
| Viability Dye | Dead cell exclusion |

MI-T Effector/Memory™

| Antibody/Dye | Description |
|--------------|-------------------------------|
| CD45 | Pan-hematopoietic cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| CD44 | Activation/Memory marker |
| CD62L | Naïve T cell/Memory marker |
| Ki-67 | Proliferation marker |

MI-BasicT™

| Antibody/Dye | Description |
|---------------|-------------------------------|
| CD45 | Pan-hematopoietic cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| Viability Dye | Dead cell exclusion |

MI-Treg™

| Antibody/Dye | Description |
|---------------|-------------------------------|
| CD45 | Pan-hematopoietic cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| CD25 | Regulatory T cell marker |
| FoxP3 | Regulatory T cell marker |
| Viability Dye | Dead cell exclusion |

MI-BasicT&B™

| Antibody/Dye | Description |
|---------------|-------------------------------|
| CD45 | Pan-hematopoietic cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| CD19 | B cell marker |
| Viability Dye | Dead cell exclusion |

MI-T A&E™

| Antibody/Dye | Description |
|---------------|-------------------------------------|
| CD45 | Pan-hematopoietic cell marker |
| CD3 | Pan-T cell marker |
| CD4 | CD4+ T cell marker |
| CD8 | CD8+ T cell marker |
| PD-1 | T cell inhibitory signaling protein |
| CD69* | Activation marker |
| Ki-67 | Proliferation marker |
| Viability Dye | Dead cell exclusion |

Provides analysis of proliferation and activation/exhaustion markers in T cells. *CD69 can be substituted with alternative markers including LAG3, ICOS, or CTLA-4.

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Myeloid Lineage Panels

MI-CompMyeloid™

| Antibody/Dye | Description |
|---------------|--|
| CD45 | Pan-hematopoietic cell marker |
| CD11b | Pan-myeloid lineage marker |
| F4/80 | Pan-macrophage marker |
| CD24 | Macrophage exclusion/Dendritic cell delineation |
| Ly-6C | Monocytic-MDSC/Monocyte marker |
| MHC Class II | M1 macrophage & dendritic cell marker/Antigen presentation |
| CD206 | M2 macrophage marker |
| Ly-6G | Granulocytic-MDSC/Neutrophil marker |
| CD11c | Dendritic cell marker |
| CD3/CD19 | T and B cell exclusion |
| Viability Dye | Dead cell exclusion |

Our most commonly utilized myeloid panel, for analysis of five distinct myeloid subsets. Formerly named the MI-TAM.

MI-CompDC™

| Antibody/Dye | Description |
|--------------------|---|
| CD45 | Pan-hematopoietic cell marker |
| F4/80, Ly-6G, CD19 | Exclusion gate for macrophages, granulocytes, and B cells |
| CD11c | Dendritic cell marker |
| CD24 | Dendritic cell delineation |
| CD8 | DC1 subset marker |
| MHC Class II | Dendritic cell marker/Antigen presentation |
| CD103 | DC1 subset marker |
| CD11b | DC2 subset marker |
| XCR1 | Cross presenting/Migratory dendritic cell marker |
| CD80 | Maturation marker |
| CD86 | Maturation marker |
| Viability Dye | Dead cell exclusion |

The MI-CompDC™ can be customized to analyze inflammatory DC and plasmacytoid DC subsets by substituting in Ly-6C/CD206 and Siglec-H respectively.

MI-CompMDSC™

| Antibody/Dye | Description |
|---------------|---|
| CD45 | Pan-hematopoietic cell marker |
| CD11b | Pan-myeloid lineage marker |
| Ly-6C | Monocytic-MDSC/Monocyte marker |
| Ly-6G | Granulocytic-MDSC/Neutrophil marker |
| CD115 | Monocyte marker/MDSC characterization |
| CD11c | Dendritic cell marker/MDSC characterization |
| F4/80 | Macrophage marker/MDSC characterization |
| PD-L1 | T cell inhibitory signaling protein |
| CD3/CD19 | T and B cell exclusion |
| Viability Dye | Dead cell exclusion |

Provides in depth characterization of myeloid-derived suppressor cells.

MI-MDSC™

| Antibody/Dye | Description |
|---------------|-------------------------------------|
| CD45 | Pan-hematopoietic cell marker |
| CD11b | Pan-myeloid lineage marker |
| Ly-6C | Monocytic-MDSC/Monocyte marker |
| Ly-6G | Granulocytic-MDSC/Neutrophil marker |
| CD3/CD19 | T and B Cell exclusion |
| Viability Dye | Dead cell exclusion |

Provides basic characterization of myeloid-derived suppressor cells.