

Simplified Immunophenotyping with No Compensation Panels

Designing effective flow cytometry panels can be challenging, especially with regard to managing spectral spillover and applying accurate compensation. To simplify the process, we have designed a series of five-color no compensation panels for both mouse and human, incorporating a viability dye and commonly used surface markers for blood and tissue analysis. These panels were acquired on a **ZE5 Cell Analyzer**, yet they will work with other conventional cytometers using the appropriate lasers and filters.

Visit bio-rad-antibodies.com/no-comp-panels for more information about compensation and further details about the panels.

Mouse No Compensation Panels

General Identification Panel: T, B, and Myeloid Cells

Table 1. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the T, B, and myeloid cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD11b	SBV440	405	436	MCA711SBV440
Ly-6G	FITC	488	525	MCA6077F
CD3	SBB810	488	802	MCA500SBB810
Viability dye	Vivafix 547/573	561	573	1351116
CD19	SBR670	640	666	MCA1439SBR670

Em, emission; FITC, fluorescein isothiocyanate; SBB, StarBright™ Blue; SBR, StarBright Red; SBV, StarBright Violet.

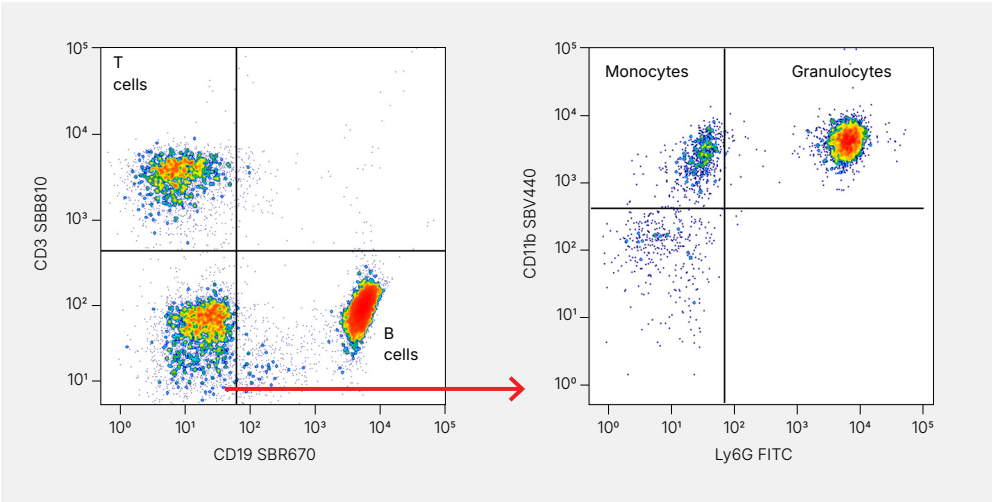


Fig. 1. T, B, and myeloid cell panel data. Red cell-lysed mouse blood was stained with the T, B, and myeloid cell panel. Live, single cells were gated prior to the gating strategy shown by the red arrow. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). FITC, fluorescein isothiocyanate; SBB, StarBright Blue; SBR, StarBright Red; SBV, StarBright Violet.



Lymphocyte Panel: T Cells

Table 2. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the T cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD45	SBUV400	355	394	MCA1031SBUV400
CD8	SBV440	405	436	MCA609SBV440
Viability dye	Vivafix 498/521	488	521	1351115
CD3	SBB810	488	802	MCA500SBB810
CD4	SBY575	561	579	MCA2691SBY575

Em, emission; SBB, StarBright Blue; SBUV, StarBright UltraViolet; SBV, StarBright Violet; SBY, StarBright Yellow

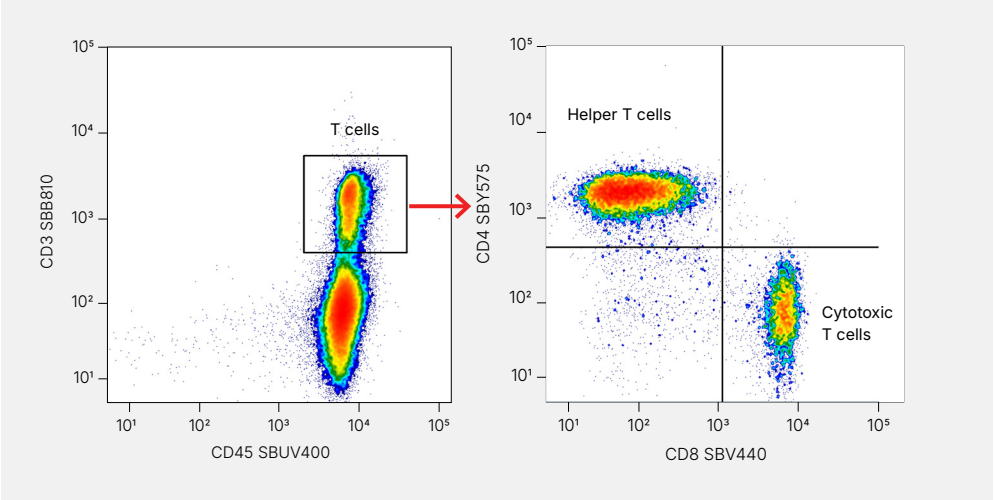


Fig. 2. T cell panel data. Splenocytes from C57BL/6 mice were stained with the T cell panel. Live, single cells were gated prior to the gating strategy shown by the red arrow. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). SBB, StarBright Blue; SBUV, StarBright UltraViolet; SBV, StarBright Violet; SBY, StarBright Yellow.

Lymphocyte Panel: B Cells

Table 3. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the B cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD80	SBV440	405	436	MCA2462SBV440
CD273	FITC	488	525	MCA2465F
Viability dye	Vivafix 547/573	561	573	1351116
CD45R/B220	SBY800	561	788	MCA1258SBY800
CD19	SBR670	640	666	MCA1439SBR670

Em, emission; FITC, fluorescein isothiocyanate; SBR, StarBright Red; SBV, StarBright Violet; SBY, StarBright Yellow.

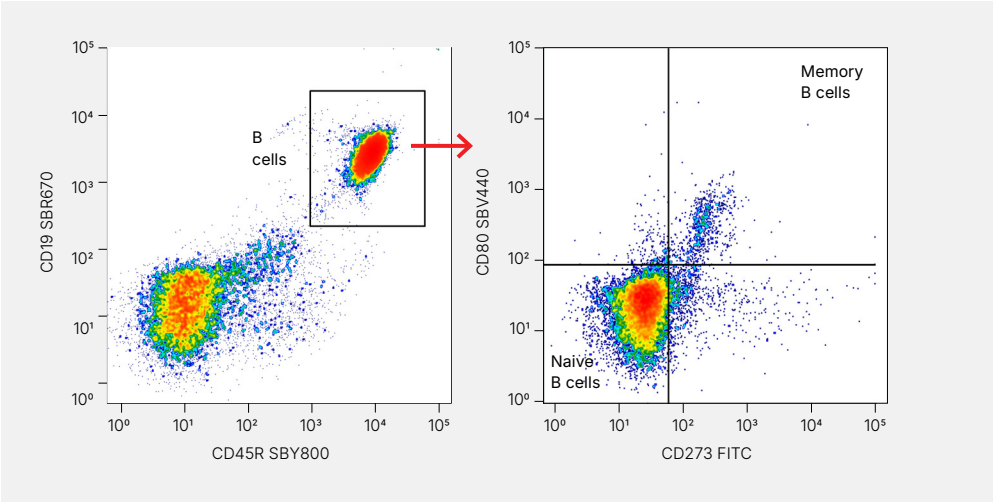


Fig. 3. B cell panel data. Red cell-lysed mouse blood was stained with the B cell panel. Live single lymphocytes were gated prior to the gating strategy shown by the red arrow. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). FITC, fluorescein isothiocyanate; SBR, StarBright Red; SBV, StarBright Violet; SBY, StarBright Yellow.

Lymphocyte Panel: NK and NKT Cells

Table 4. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the NK and NKT cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD45	SBV440	405	436	MCA1031SBV440
CD49b	FITC	488	525	MCA2125F
Viability dye	Vivafix 583/603	561	603	1351117
CD161/NK1.1	SBR670	640	666	MCA1266SBR670
CD3	SBR815	640	811	MCA500SBR815

Em, emission; FITC, fluorescein isothiocyanate; SBB, StarBright Blue; SBR, StarBright Red; SBV, StarBright Violet.

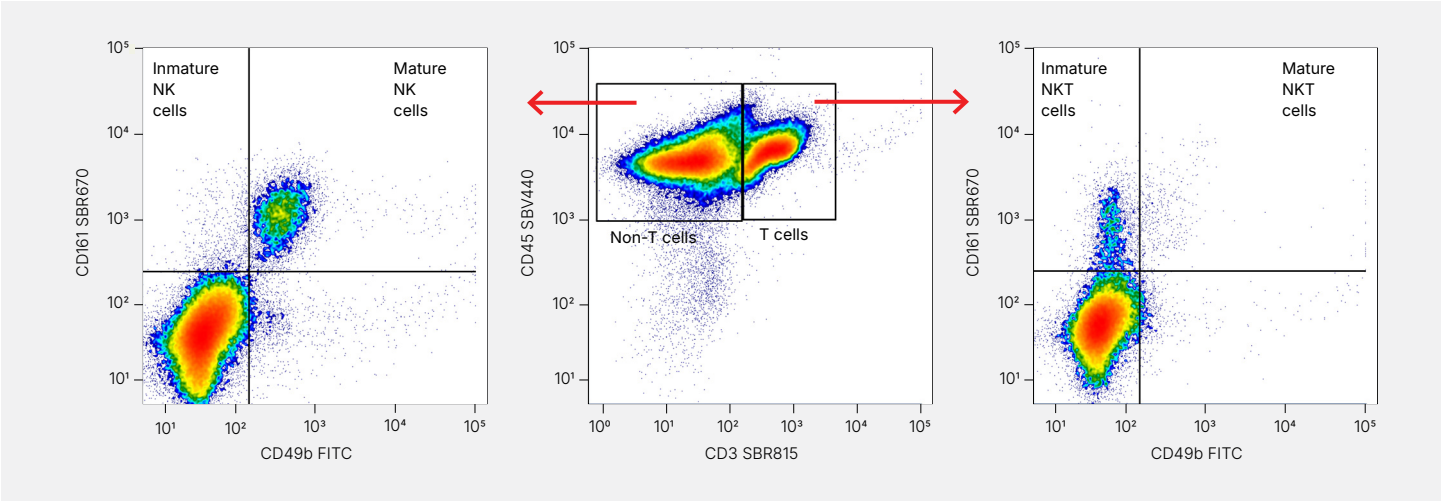


Fig. 4. NK and NKT cell panel data. Splenocytes from C57BL/6 mice were stained with the NK and NKT cell panel. Live, single cells were gated prior to the gating strategy shown by the red arrows. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). FITC, fluorescein isothiocyanate; NK, natural killer; SBB, StarBright Blue; SBR, StarBright Red; SBV, StarBright Violet.

Human No Compensation Panels

General Identification Panel: T Cells, B Cells, and Myeloid Cells

Table 5. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the T, B, and myeloid cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD11b	SBUV400	355	394	MCA551SBUV400
Viability dye	Vivafix 498/521	488	521	1351115
CD19	SBY575	561	579	MCA1940SBY575
CD14	SBY800	561	788	MCA1568SBY800
CD3	SBR670	640	666	MCA463SBR670

Em, emission; SBR, StarBright Red; SBY, StarBright Yellow; SBUV, StarBright UltraViolet.

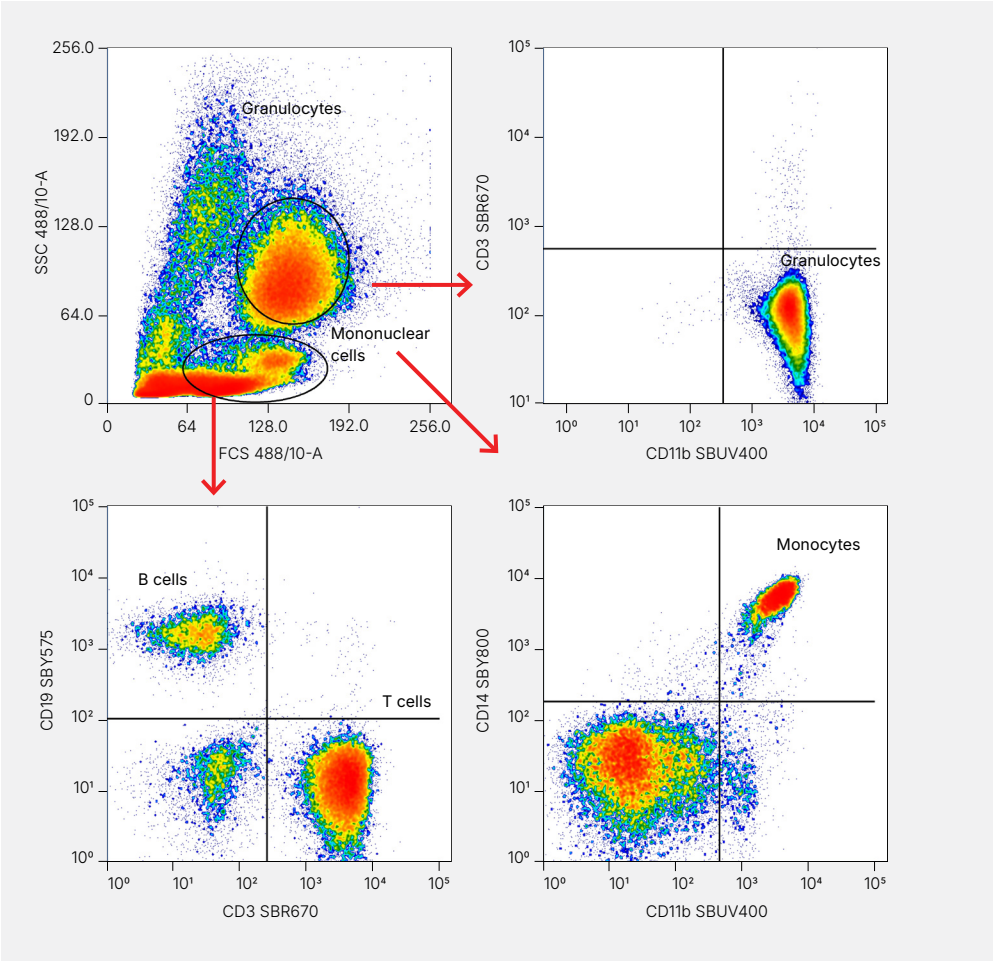


Fig. 5. T, B, and myeloid cell panel data. Red cell-lysed human peripheral blood was stained with the T, B, and myeloid cell panel. Live, single cells were gated prior to the gating strategy shown by the red arrows. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). SBR, StarBright Red; SBY, StarBright Yellow; SBUV, StarBright UltraViolet.

General Identification Panel: T Cells, B Cells, NK Cells, and NKT Cells

Table 6. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the T, B, NK, and NKT cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
Viability dye	Vivafix 353/442	355	442	1321111
CD56	SBV515	405	516	TZA062SBV515
CD19	SBB810	488	802	MCA1940SBB810
CD45	SBY605	561	606	MCA87SBY605
CD3	SBR715	640	712	MCA463SBR715

Em, emission; SBB, StarBright Blue; SBR, StarBright Red; SBY, StarBright Yellow; SBV, StarBright Violet.

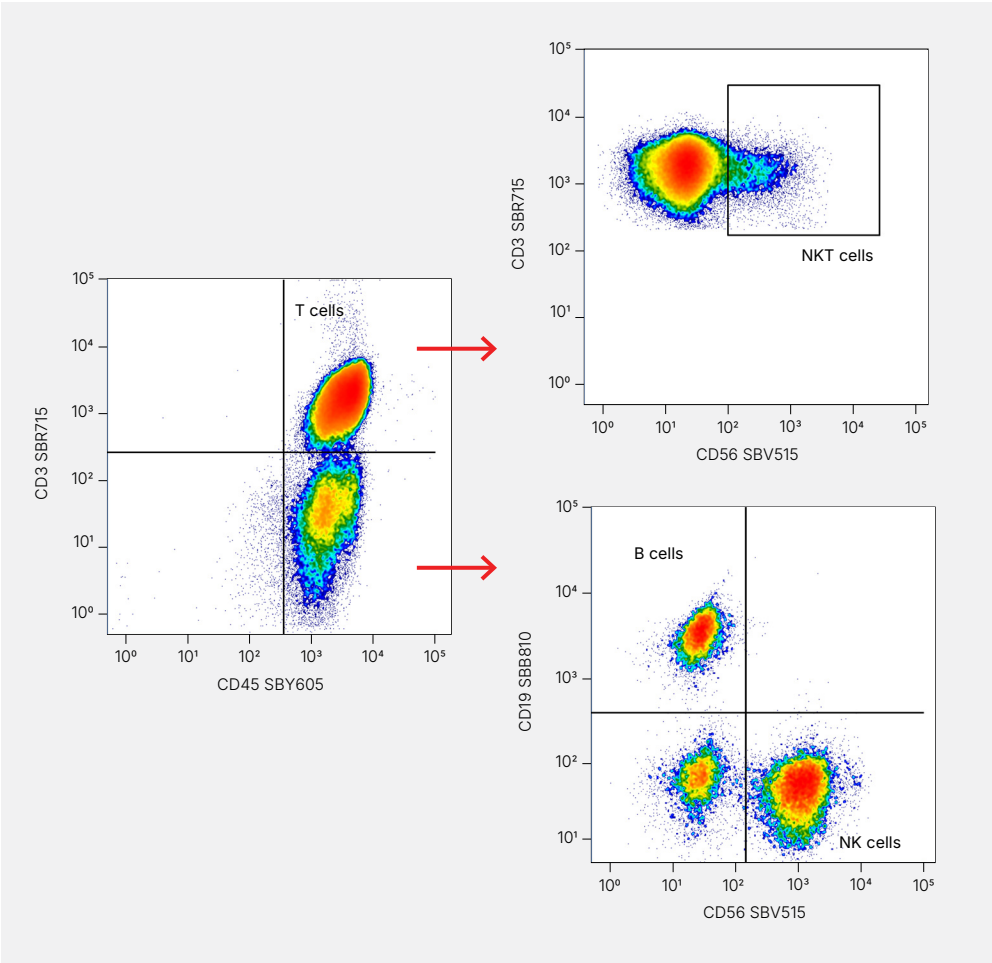


Fig. 6. T, B, NK, and NKT cell panel data. Human peripheral blood mononuclear cells (PBMCs) were stained with the T, B, NK, and NKT cell panel. Live, single lymphocytes were gated prior to the gating strategy shown by the red arrows. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). NK, natural killer; SBB, StarBright Blue; SBR, StarBright Red; SBY, StarBright Yellow; SBV, StarBright Violet.

T Cell Panel: Helper and Cytotoxic T Cells

Table 7. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the helper and cytotoxic T cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD45	SBUV400	355	394	MCA87SBUV400
CD8	SBV440	405	436	MCA1226SBV440
Viability dye	Vivafix 498/521	488	521	1351115
CD4	SBY575	561	579	MCA1267SBY575
CD3	SBR715	640	712	MCA463SBR715

Em, emission; SBR, StarBright Red; SBUV, StarBright UltraViolet; SBV, StarBright Violet; SBY, StarBright Yellow.

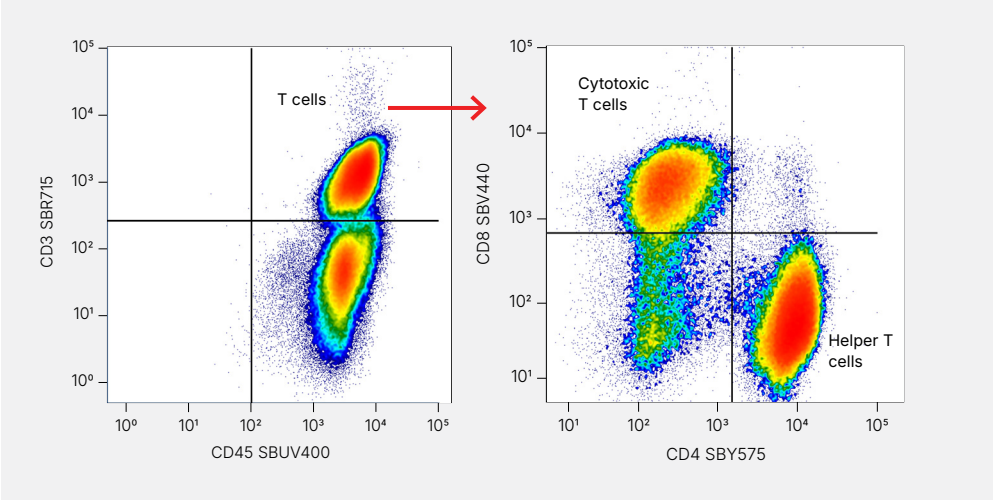


Fig. 7. Helper and cytotoxic T cell panel data. Human peripheral blood mononuclear cells (PBMCs) were stained with the helper and cytotoxic T cell panel. Live, single lymphocytes were gated prior to the gating strategy shown by the red arrow. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). SBR, StarBright Red; SBUV, StarBright UltraViolet; SBV, StarBright Violet; SBY, StarBright Yellow.

T Cell Panel: Naive and Memory T Cells

Table 8. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the naive and memory T cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD45RO	SBUV400	355	394	MCA461SBUV400
CD3	SBV440	405	436	MCA473SBV440
Viability dye	Vivafix 498/521	488	521	1351115
CD4	SBY575	561	579	MCA1267SBY575
CD45RA	SBR670	640	666	MCA88SBR670

Em, emission; SBR, StarBright Red; SBUV, StarBright UltraViolet; SBV, StarBright Violet; SBY, StarBright Yellow.

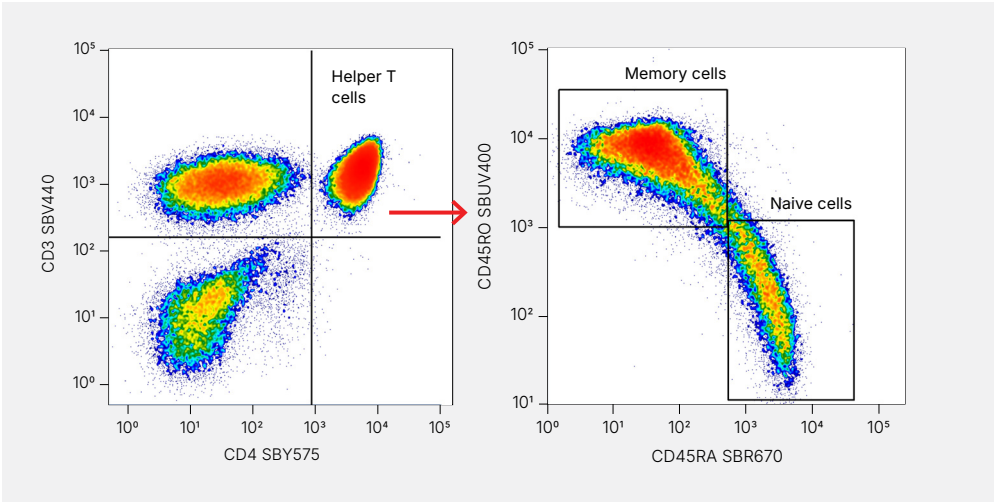


Fig. 8. Naive and memory T cell panel data. Human PBMCs were stained with the naive and memory T cell panel. Live, single lymphocytes were gated prior to the gating strategy shown by the red arrow. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). SBR, StarBright Red; SBUV, StarBright UltraViolet; SBV, StarBright Violet; SBY, StarBright Yellow.

T Cell Panel: Regulatory T Cells

Table 9. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the regulatory T cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
Viability dye	Vivafix 353/442	355	442	1351111
CD3	SBV515	405	516	MCA463SBV515
CD25	SBV790	405	782	MCA2127SBV790
CD127	PE	561	578	HCA402PE
CD4	SBR670	640	666	MCA1267SBR670

Em, emission; PE, phycoerythrin; SBR, StarBright Red; SBV, StarBright Violet.

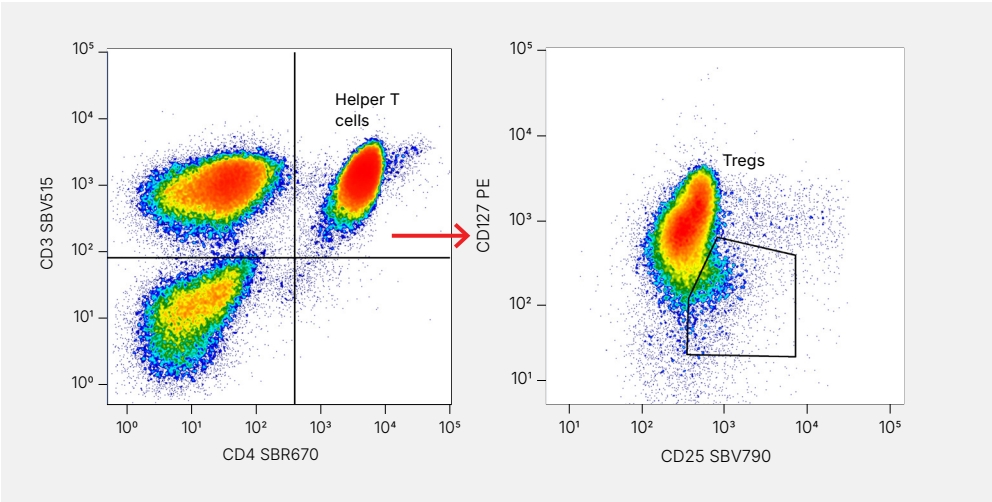


Fig. 9. Regulatory T cell panel data. Human peripheral blood mononuclear cells (PBMCs) were stained with the regulatory T cell panel. Live, single lymphocytes were gated prior to the gating strategy shown by the red arrow. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). PE, phycoerythrin; SBR, StarBright Red; SBV, StarBright Violet; Tregs, regulatory T cells.

B Cell Panel: Naive and Memory B Cells

Table 10. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the naive and memory B cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD19	SBV440	405	436	MCA1940SBV440
IgD	FITC	488	525	STAR143F
CD20	SBB810	488	802	MCA1710SBB810
Viability dye	Vivafix 547/573	561	573	1351116
CD27	SBR670	640	666	MCA755SBR670

Em, emission; FITC, fluorescein isothiocyanate; SBB, StarBright Blue; SBR, StarBright Red; SBV, StarBright Violet.

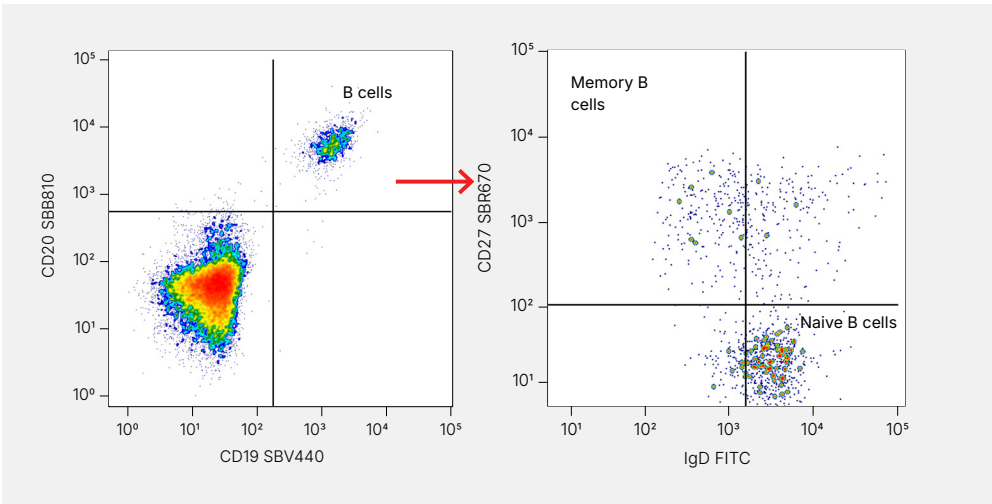


Fig. 10. Naive and memory naive B cell panel data. Human peripheral blood mononuclear cells (PBMCs) were stained with the naive and memory cell panel. Live, single lymphocytes were gated prior to the gating strategy shown by the red arrow. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). FITC, fluorescein isothiocyanate; SBB, StarBright Blue; SBR, StarBright Red; SBV, StarBright Violet.

NK, NKT, and Myeloid Cell Panel: NK and NKT Cells

Table 11. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the NK and NKT cell panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD3	SBV440	405	436	MCA463SBV440
CD335	FITC	488	525	MCA4646F
Viability dye	Vivafix 547/573	561	573	1351116
CD56	A647	640	665	MCA2693A647
CD45	SBR815	640	811	MCA87SBR815

A647, Alexa Fluor 647; Em, emission; FITC, fluorescein isothiocyanate; SBR, StarBright Red; SBV, StarBright Violet.

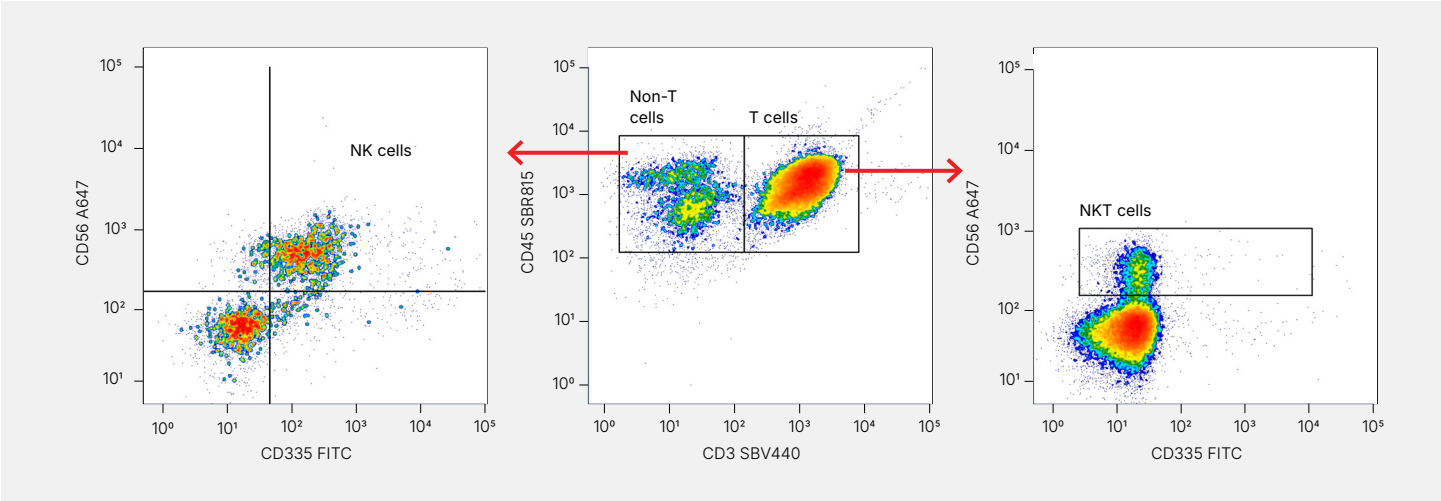


Fig. 11. NK and NKT cell panel data. Human peripheral blood mononuclear cells (PBMCs) were stained with the NK and NKT cell panel. Live, single lymphocytes were gated prior to the gating strategy shown by the red arrows. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). A647, Alexa Fluor 647; FITC, fluorescein isothiocyanate; NK, natural killer; SBR, StarBright Red; SBV, StarBright Violet.

Myeloid Panel: Monocytes, Granulocytes, and Eosinophils

Table 12. The Bio-Rad antibodies, color-coded according to the laser line, and viability dye used in the monocyte, granulocyte, and eosinophil panel.

Marker	Fluorophore	Laser	Em Max	Catalog #
CD11b	SBV440	405	436	MCA551SBV440
Viability dye	Vivafix 408/512	405	512	1351113
CD13	PE	561	578	MCA1270PE
CD14	SBY800	561	788	MCA1568SBY800
CD16	A647	640	665	MCA2537A647

A647, Alexa Fluor 647; Em, emission; PE, phycoerythrin; SBV, StarBright Violet; SBY, StarBright Yellow.

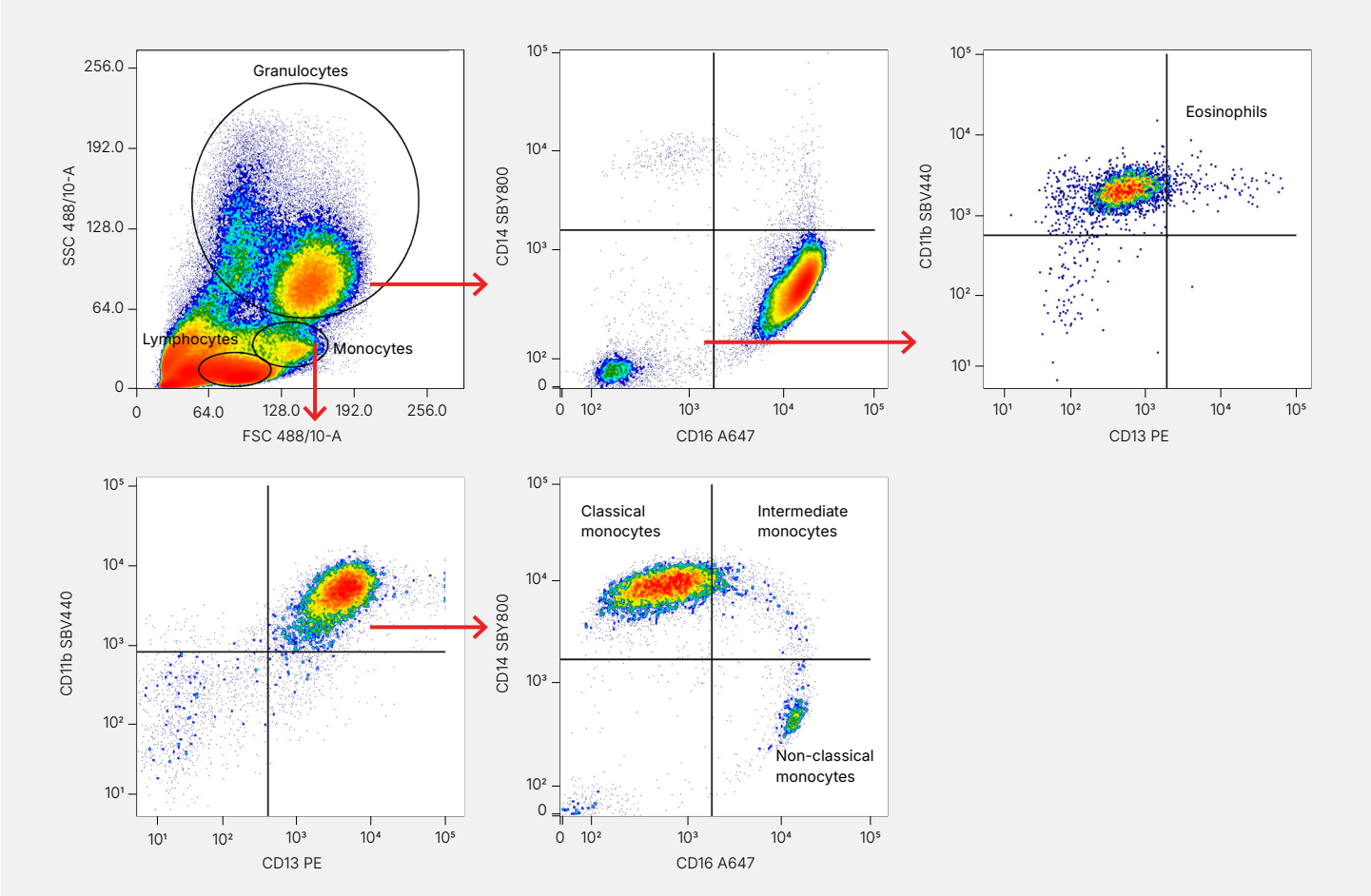


Fig. 12. Monocyte, granulocyte, and eosinophil panel data. Red blood cell-lysed human peripheral blood was stained with the monocyte, granulocyte, and eosinophil panel. Live, single cells were gated prior to the gating strategy shown by the red arrows. Data were analyzed using FCS Express 7 (De Novo Software by Dotmatics). A647, Alexa Fluor 647; PE, phycoerythrin; SBV, StarBright Violet; SBY, StarBright Yellow.

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