

CellCarta has deep expertise in developing flow cytometry panels for clinical use and provides the highest standard of quality with CAP accredited and CLIA certified sites.

To support the monitoring of all immune cell populations, we catered a list of specific panels for both your whole blood and cryopreserved PBMC samples.

OFF-THE-SHELF PANELS

OTS panels were pre-developed and validated at all global sites with the same level of validation and provide the fastest runway to clinical sample analysis.

OTS PANELS FOR WHOLE BLOOD SAMPLES

TBNK - WB1 (VBI-1)	TBNK - WB2 (GFQ-1)	TBNK - WB3 (GAZ-1)	Immune Cells - WB1 (GCK-3)
- T cell - B cell - NK cells - Absolute cell count	- T cell - B cell - NK cells - Absolute cell count	- T cell - B cell - NK cells - Monocytes - Absolute cell count	- T cell - B cell - Monocytes/subsets - NK cell/subsets - NKT - Cell proliferation - Cell activation - Cell cytotoxicity - CD38 monitoring
CD45	CD45	CD45	CD45
CD3	CD3	CD3	CD3
CD4	CD4	CD4	CD4
CD8	CD8	CD8	CD8
CD16/CD56	CD16/CD56	CD14	CD14
CD19	CD19	CD16	CD16
	CD20	CD19	CD19
		CD56	CD38
			CD56
			CD57
			CD69
			CD314 (NKG2D)
			HLA-DR
			Granzyme B
			Perforin
			Ki-67
			IFN-γ

T cells
 B cells
 Monocytes/myeloid
 NK

OTS PANELS FOR WHOLE BLOOD SAMPLES

Immune Cells - WB2 (GCK-4)	T Cell - WB1 (GCK-1)	T cell - WB6 (GDQ-1)	B cell - WB1 (GFL-1)
- T cell - B cell (plasma cells, abnormal plasma cells, non-plasma cells) - Monocytes/subsets - NK cell/subsets - NKT - CD38 monitoring - BCMA monitoring - Absolute cell count	- Memory T cell - Treg - T cell activation - T cell exhaustion - T cell proliferation - T cell cytotoxicity - Immune checkpoints	- Exclusion - T cells - Treg - Marker of Interest - Memory	- B cell memory - B cell class switching - B cell activation - Plasma cells/plasmablasts
CD45	CD3	Live/Dead	CD45
CD3	CD4	CD3	CD19
CD4	CD8	CD4	CD20
CD8	CD14/CD16/CD19	CD8	CD21
CD14	CD25	CD25	CD24
CD16	CD39	CX3CR1	CD27
CD19	CD45RA	CD127	CD38
CD38	CD127	CD38	CD40
CD56	CCR7 (CD197)	CD197 (CCR7)	CD86
CD123	FoxP3	CD45RA	CD95 (FAS)
CD138	HLA-DR	HLA-DR	CD138
PD-L1 (CD274)	PD-1 (CD279)	TCF1/7	IgD
BCMA (TNFRSF17)	LAG-3 (CD223)	TIGIT	
	TIM-3 (CD366)	Ki67	
	4-1BB (CD137)	FoxP3	
	Ki-67	CD279 (PD-1)	
	Granzyme B		

T cells
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OTS PANELS FOR PBMC SAMPLES

T Cell - PBMC1 (VBJ-1)	T Cell - PBMC2 (GBN-1)	B Cell - PBMC2 (GFP-1)	ICS - PBMC1 (GCQ-1)
• T cell memory • T cell activation • T cell exhaustion • Treg • Immune checkpoints	• T cell memory • T cell proliferation • Immune checkpoints	• Plasma cell/plasmablast • B cell memory • B cell class switching • B cell activation	• T cell memory • Th1/Th2/Tfh Functionality • T cell activation • Cytotoxicity • Requires stimulation
Viability	Viability	Viability	Viability
CD3	CD3	CD45	CD3
CD4	CD4	CD19	CD4
CD8	CD8	CD20	CD8
CD25	CD45RA	CD21	CD14/CD19/CD56
CD28	CD57	CD24	CD45RA
CD38	CD95	CD38	CD69
CD45RA	CD127	CD138	CD107a
CD69	CD197 (CCR7)	CD27	CD154 (CD40L)
CD197 (CCR7)	ICOS (CD278)	IgD	CD197 (CCR7)
FoxP3	Ki-67	IgM	CXCR5
HLA-DR	KLRG1	IgG	IFN-γ
Ki-67	PD-1 (CD279)	CD95	TNFα
PD-1 (CD279)	T-bet	CD86	IL-2
TIM-3 (CD366)	TCF1	CD40	IL-4/ IL-13
	TIM-3 (CD366)		IL-21
			Perforin

T cells
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CATALOGUE PANELS

Catalogue panels were pre-developed and validated at specific sites and can be rapidly deployed upon request.

CATALOGUE PANELS FOR WHOLE BLOOD SAMPLES

TBNK - WB4 (GGP-1)	Spectral - Immune Cells - WB1 (GFY-1)	T Cell - WB2 (RAP-1)	T Cell - WB3 (GDM-1)	T Cell - WB4 (GBI-1)
- Leukocytes - Monocytes - NK cells - B cells - T cells - High-sensitivity	- B cell/subset, plasma cells, plasmablasts, memory, class switching - Dendritic cell/subset, maturation, activation - Granulocyte - NK cell/subset - Monocyte/subset - NKT	- Memory T cell - Th1 - Th2 - Th17 - Th polarization	- Memory T cell - T follicular helper cells - Th1 - Th2 - Th9 - Th17 - Th polarization - NKT - NK cells/subsets - Immune Checkpoints	- T cell memory - T cell proliferation - Treg - Immune Checkpoints
CD45	CD45	CD45	CD45	CD45
CD14	CD3	CD3	CD3	CD3
CD16/CD56	CD14	CD4	CD4	CD4
CD19	CD16	CD8	CD8	CD8
CD20	CD19	CD45RA	CD16	CD25
CD3	CD20	CXCR3 (CD183)	CD25	CD45RA
CD4	CD56	CCR4 (CD194)	CD45RA	CCR7 (CD197)
CD8	CD66b	CCR6 (CD196)	CD56	OX-40 (CD134)
	CD21	CCR7 (CD197)	CD127	PD-1 (CD279)
	CD24	CCR10	CCR7 (CD197)	TIM-3 (CD366)
	CD38		CXCR3 (CD183)	FoxP3
	CD138		CXCR5 (CD185)	Ki-67
	CD27		CCR4 (CD194)	
	IgD		CCR6 (CD196)	
	IgM		PD-1 (CD279)	
	CD1c			
	CD11c			
	CD23			
	CD123			
	CD141			
	CD303			
	CD304			
	HLA-DR			

T cells
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CATALOGUE PANELS FOR WHOLE BLOOD SAMPLES

T Cell - WB5 (GBQ-1)	B Cell - WB2 (GDM-2)	B Cell - WB3 (GCH-1)	NK Cell - WB1 (GBI-2)	Monocyte - WB1 (GDM-3)
- T cell activation - T cell exhaustion - T cell proliferation - Treg - Immune Checkpoints	- B cell memory - B cell class switching - B cell activation - Plasma cells/plasmablasts - Regulatory B cells	- B cell memory - B cell class switching - Abnormal B cells	- NK cell/subsets - CD8 T cells - NKT cells - Monocytes/subsets - Cell activation - Cell cytotoxicity - Cell proliferation	- Monocytes/subsets - Dendritic cells (mDC1, mDC2, pDC) - DC maturation
CD45	CD45	CD45	CD45	CD45
CD3	CD1d	CD3/CD14/CD56	CD3	CD3/CD56/CD19/CD20
CD4	CD5	CD19	CD8	CD1c
CD8	CD19	CD20	CD14	CD11c
CD25	CD20	CD27	CD16	CD14
CD38	CD24	IgD	CD19	CD16
CD69	CD27	IgM	CD56	CD83
CD127	CD38	IgG	CD69	CD123
LAG-3 (CD223)	CD40	CD5	CD107a	CD141
PD-1 (CD279)	CD80	CD10	Granzyme B	CCR2 (CD192)
TIM-3 (CD366)	CD86	CD22	Ki-67	CX3CR1
FoxP3	CD138	CD79b	Perforin	BDCA-2 (CD303)
HLA-DR	IgD	CD200		BDCA-4 (CD304)
Ki-67	IgM			HLA-DR

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CATALOGUE PANELS FOR WHOLE BLOOD SAMPLES

Dendritic Cells - WB1 (GCB-2)	Spectral (Modular) T Cell - WB1 (GGH-1)
- Dendritic cells (mDC1, mDC2, pDC) - DC maturation - DC activation	- Exclusion - Granulocytes - Leukocytes - T cells - NK cells - Monocytes - Marker of interest - B cells - Memory - Treg
CD45	CD15
CD3/CD19/CD20/CD56/CD14	CD45
CD1c	CD3
CD11c	CD4
CD40	CD8
CD80	CD56
CD83	CD16
CD123	CD14
CD141	HLA-DR
CD40L (CD154)	CD19
BDCA-2 (CD303)	CD45RA
BDCA-4 (CD304)	CD197 (CCR7)
HLA-DR	CD28
	CD25
	CD127
	FoxP3
	Granzyme B
	CD69
	Ki67
	CD38
	TCF 1/7
	CD39
	CD95
	CD279 (PD-1)
	CD366 (TIM-3)
	CD223 (LAG-3)

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 Spectral Modules

CATALOGUE PANELS FOR PBMC SAMPLES

Spectral (Modular) - T Cell - PBMC1 (GEX-1)	T Cell - PBMC3 (GBN-2)	T Cell - PBMC4 (GGF-1)	T Cell - PBMC5 (GDC-4)	ICS - PBMC2 (GCI-1)
- Treg - Memory T cell - T cell activation - T cell proliferation - T cell exhaustion - Immune checkpoint	- T cell memory - T cell activation - Helper T cell polarization - Treg - Immune checkpoints	- Treg - Memory T cell - T cell activation - T cell proliferation - T cell exhaustion - Immune checkpoint	- T cells - Treg - Marker of Interest - Memory	- CD4 and CD8 T cells - Th1/Th2 cytokines - IL-6 - Cytotoxicity - B cell help - Requires stimulation
Viability	Viability	Viability	Live/Dead	Viability
CD45	CD19	CD3	CD3	CD3
CD3	CD3	CD4	CD4	CD4
CD4	CD4	CD8	CD8	CD8
CD8	CD8	CD25	CD25	CD14/CD19/CD56
CD14	CD25	CD127	CX3CR1	CD40L (CD154)
CD16	CD69	FoxP3	CD127	Granzyme B
CD19	CD45RA	CD45RA	CD38	IFN-γ
CD56	CCR4 (CD194)	CD197 (CCR7)	CCR7 (CD197)	IL-2
HLA-DR	CCR6 (CD196)	CD27	CD45RA	IL-4
CD25	CCR7 (CD197)	CD95	HLA-DR	IL-6
CD127	CCR10	CD38	TCF1/7	IL-5
FoxP3	CXCR3 (CD183)	ICOS	TIGIT	IL-13
CD45RA	FoxP3	Ki-67	Ki67	Perforin
CD197 (CCR7)	HLA-DR	CD57	FoxP3	TNFα
CD28	PD-1 (CD279)	PD-1 (CD279)	CD279 (PD-1)	
CD39		LAG3 (CD223)		
TOX		TIM-3 (CD366)		
TCF1/7				
Granzyme B				
CD38				
Ki-67				
PD-1 (CD279)				
LAG3 (CD223)				
TIM-3 (CD366)				

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 Spectral Modules

CATALOGUE PANELS FOR PBMC SAMPLES

Lympho/Myeloid-PBMC1 (GBN-3)	B Cell - PBMC1 (GDL-1)	B Cell - PBMC3 (GEP-1)	B Cell - PBMC4 (GGN-1)	Immune Cells - PBMC1 (GGV-1)
- T cells - NKT cells $\gamma\delta$ T cells - NK cells/subsets - Monocytes/subsets - mMDSC/eMDSC - Dendritic cells (pDC, mDC1, mDC2)	- B cell memory - B cell class switching - B cell activation - Plasma cells/plasmablasts	- B cell memory - Abnormal B cells	- B cells - Exclusion	- B cells - NK cells/Granulocytes - T cells - Monocytes - Treg - Dendritic cells - Exclusion - NK cells - Marker of interest - Leukocytes
Viability	Viability	Viability	Viability	Viability
CD1c	CD45	CD3/CD56/CD14	CD3/CD14/CD16/CD56	CD45
CD3	CD19	CD19	CD19	CD19
CD11b	CD20	CD20	CD20	CD3
CD11c	CD21	CD27	CD268 (BAFF-R)	CD4
CD14	CD24	IgD	CD45	CD8
CD15	CD27	CD79b (Ig β)	CD37	CD127
CD16	CD38	CD5	CD40	CD56
CD33	CD40	CD10	CD22	CD16
CD56	CD86	CD22	CD79b	CD14
CD64	CD95 (FAS)			CD141
CD86	CD138			CD1c
CD123	IgD			CD123 (IL13-R α)
CD141				CD11c
CD370				HLA-DR
HLA-DR				CD25
TCR $\gamma\delta$				CD86

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IMMUNE CELL MARKERS	
Population Name	Common markers
Lymphocyte	CD45
T Cell	CD3/CD4/CD8
T Memory	CCR7/CD45RA/CD27 /CD28/ CD95/TCF1/7
T Regulatory	CD25/CD127/FoxP3
TCR	TCR $\gamma\delta$
Monocyte	CD14/CD16/HLA-DR
NK Cell	CD56/CD16/NKG2D
B Cell	CD19/CD20/CD27/IgD/IgM/CD21/CD24/CD38/CD138/CD1d/ IgG
Granulocytes/Neutrophils	CD15/CD16
Myeloid Cell	CD33/CD11b/CD11c/CD1c/CD123/CD141/CD303/CD304/CD370/CD64/CD23/CD66b
Intracellular Cytokines	IFN- γ /IL-2/IL-22/IL-4/IL-17A/IL-21/IL-13/IL-5/IL-6/TNF α
Cytotoxic/Degranulation Markers	CD107a/Granzyme B/Perforin
Activation/Proliferation Markers	Ki-67/CD69/HLA-DR/CD38/CD154/CD137/CD86/CD40/CD134/CD95/CD80/CD83
Immune Checkpoint	PD-1/PD-L1/TIM-3/LAG3
Exhaustion Markers	KLRG1/T-bet/TCF-1/CD57/CD39/TOX
Homing Receptors	CCR10/CXCR3/CCR4/CCR6/CXCR5/CX3CR1/CCR2
Immunological Malignancy Markers	BCMA/CD38/CD5

Reach out to our team for details on your panel(s) of interest.

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ABOUT CELLCARTA

Leading provider of specialized precision medicine laboratory services to the biopharmaceutical industry. Leveraging its integrated analytical platforms in immunology, histopathology, proteomics and genomics, as well as related specimen collection and logistics services, CellCarta supports the entire drug development cycle, from discovery to late-stage clinical trials. The company operates globally with 8 facilities located in Canada, USA, Belgium, Australia and China.

For more information on how CellCarta can partner with you, please contact us:

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