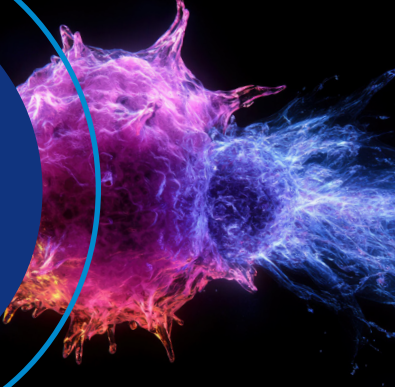
58-plex Innate Immunity Discovery Panel

BD® OMICS-One Innate Protein Panel



The power of protein + RNA without the high cost and complexity

Deep dive into innate immune biology using a validated panel that simplifies the CITE-seq workflow and minimizes your sequencing cost. This panel is designed with 58 key specificities that will help you profile major natural killer (NK) cell and antigen-presenting cell (APC)/myeloid cell protein markers and uncover innate immune cell states with ease. BD® OMICS-One Protein Panels also support single-cell protein-only profiling studies. Reach out to your BD sales representative for more information.

Flexible: Compatible with other BD® OMICS-One Protein Panels or drop-ins from our growing library of more than 470 single-vial BD® AbSeq Antibody-Oligo Reagents

SMART: Designed to lower your sequencing cost without compromising sensitivity

Multiomics enabled: Optimized to work with single-cell RNA-seq assays for multiomics studies

Panel content

Specificity	Clone
CD1c	F10/21A3
CD2*	RPA-2.10
CD3	UCHT1
CD11b**	M1/70
CD11c	B-LY6
CD14	MϕP9
CD15	W6D3
CD16**	3G8
CD27	M-T271
CD32	FLI8.26
CD33	WM53
CD36	IVC7
CD31 (PECAM1)*	WM59
CD38	HIT2
CD40	5C3
CD45*	HI30
CD49a	SR84
CD49d	9F10
CD54	HA58
CD56	NCAM16.2

Specificity	Clone
CD63	H5C6
CD64	10.1
CD80	L307.4
CD85k	ZM3.8
CD94	HP-3D9
CD96	6F9
CD103	BER-ACT8
CD106	51-10C9
CD115 (CSF1R)	9-4D2-1E4
CD116	hGMCSFR-M1
CD122	Mik-β3
CD123	7G3
CD140α	αR1
CD140b (PDGFR)	28D4
CD141	1A4
CD158b (KIR)	DX27
CD158e1	DX9
CD161 (KLRB1)	HP-3G10
CD162	KPL-1
CD163	GHI/61

Specificity	Clone
CD169	7-239
CD184 (CXCR4)	12G5
CD192 (CCR2)	LS132.1D9
CD195 (CCR5)	2D7/CCR5
CD206	19.2
CD226	DX11
CD248	B1/35
CD273	MIH18
CD274	MIH1
CD314 (NKG2D)	1D11
CD329 (Siglec-9)	E10-286
CD335 (NKp46)	9E2/NKP46
CD336 (NKp44)	p44-8
CD337/NKp30	P30-15
CX3CR1	2A9-1
HLA-DR*	G46-6
FcεR1α	AER-37
VISTA	MIH65.rMAb

*SMART-titrated targets

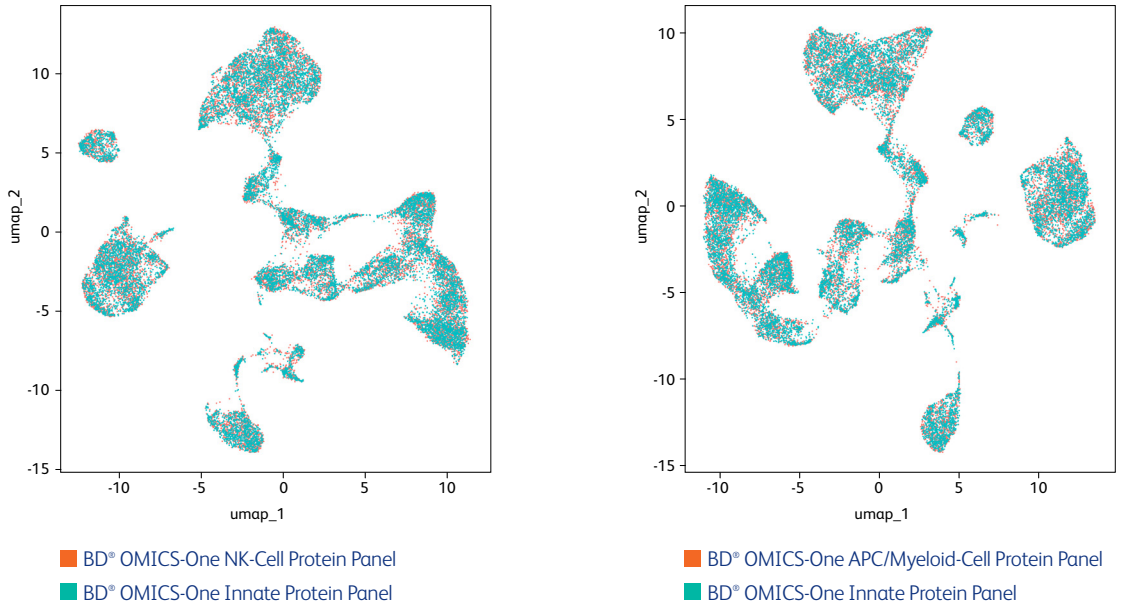
**The BD® OMICS-One Innate Protein Panel comprises two individual lyophilized 30-plex protein panels—the BD® OMICS-One NK-Cell and BD® OMICS-One APC/Myeloid-Cell Protein Panels; these are overlapping specificities in the two protein panels.

BD

Scalable high-plex protein profiling solution with modular panel design

The 58-plex BD® OMICS-One Innate Protein Panel offers unmatched flexibility by combining two independently lyophilized 30-plex antibody-oligo panels—BD® OMICS-One NK-Cell and APC/Myeloid-Cell Protein Panels — while preserving the performance of each individual panel. This modular design also allows the seamless addition of other BD® OMICS-One Protein Panels or the addition of drop-ins from BD® AbSeq Antibody-Oligo Reagents of interest.

A.



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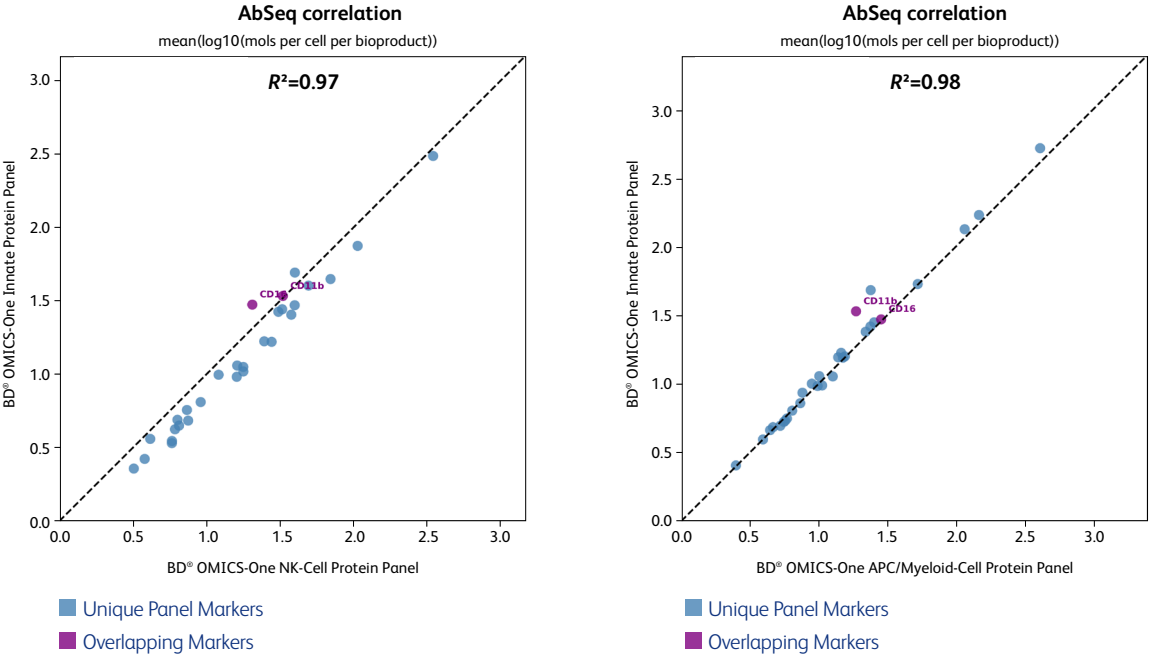
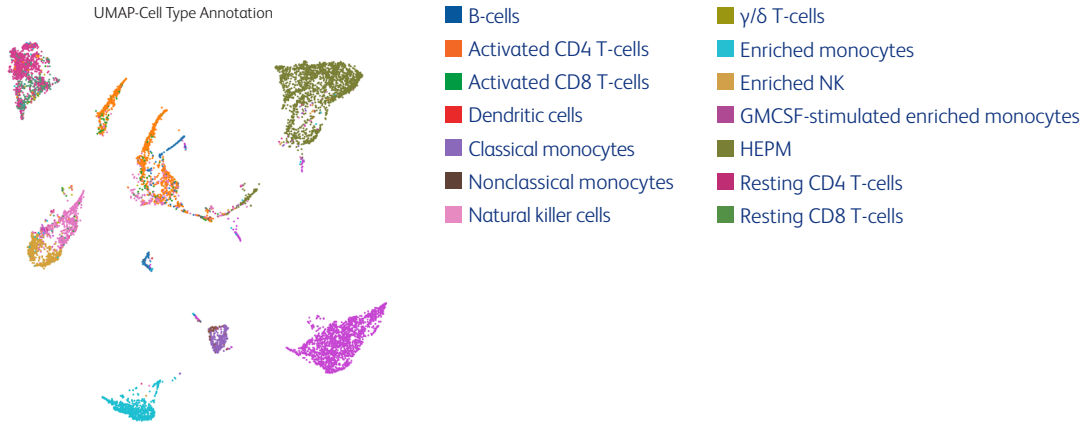


Similar performance between the lyophilized BD® OMICS-One Innate Protein Panels versus each lyophilized component panel. PBMCs (resting, PHA stimulated, CD3/CD28/IL2 stimulated), enriched monocytes, GMCSF-stimulated enriched monocytes, enriched NK cells and HEPM cell line were labeled with BD® Human Single-Cell Multiplexing Kit Sample Tags and pooled. Aliquots of the pooled cell suspension were stained with reconstituted BD® OMICS-One NK-Cell, BD® OMICS-One APC/Myeloid-Cell and BD® OMICS-One Innate Protein Panels. AbSeq, Sample Tag and WTA libraries of each sample were prepared and sequenced (500 reads/specificity per cell). Data were analyzed using the BD Rhapsody™ Sequence Analysis Pipeline. **A.** mRNA-driven UMAP demonstrated strong overlap in the cell groups identified between each 30-plex component protein panel and the combined 58-plex BD® OMICS-One Innate Protein Panel, indicating that mRNA detection was not impacted by the combination of the individual lyophilized BD® OMICS-One Protein Panels. **B.** The total number of antibody-oligo molecules detected by each 30-plex component protein panel showed a high AbSeq correlation with R^2 >0.97 when compared to the combined 58-plex BD® OMICS-One Innate Protein Panel, indicating that protein marker detection was not impacted by the combination of the individual lyophilized BD® OMICS-One Protein Panels.

Reliably detect 58 critical innate immune protein markers

Performance of all 58 markers included in the BD® OMICS-One Innate Protein Panel is optimized for detection in each cell type.

A.



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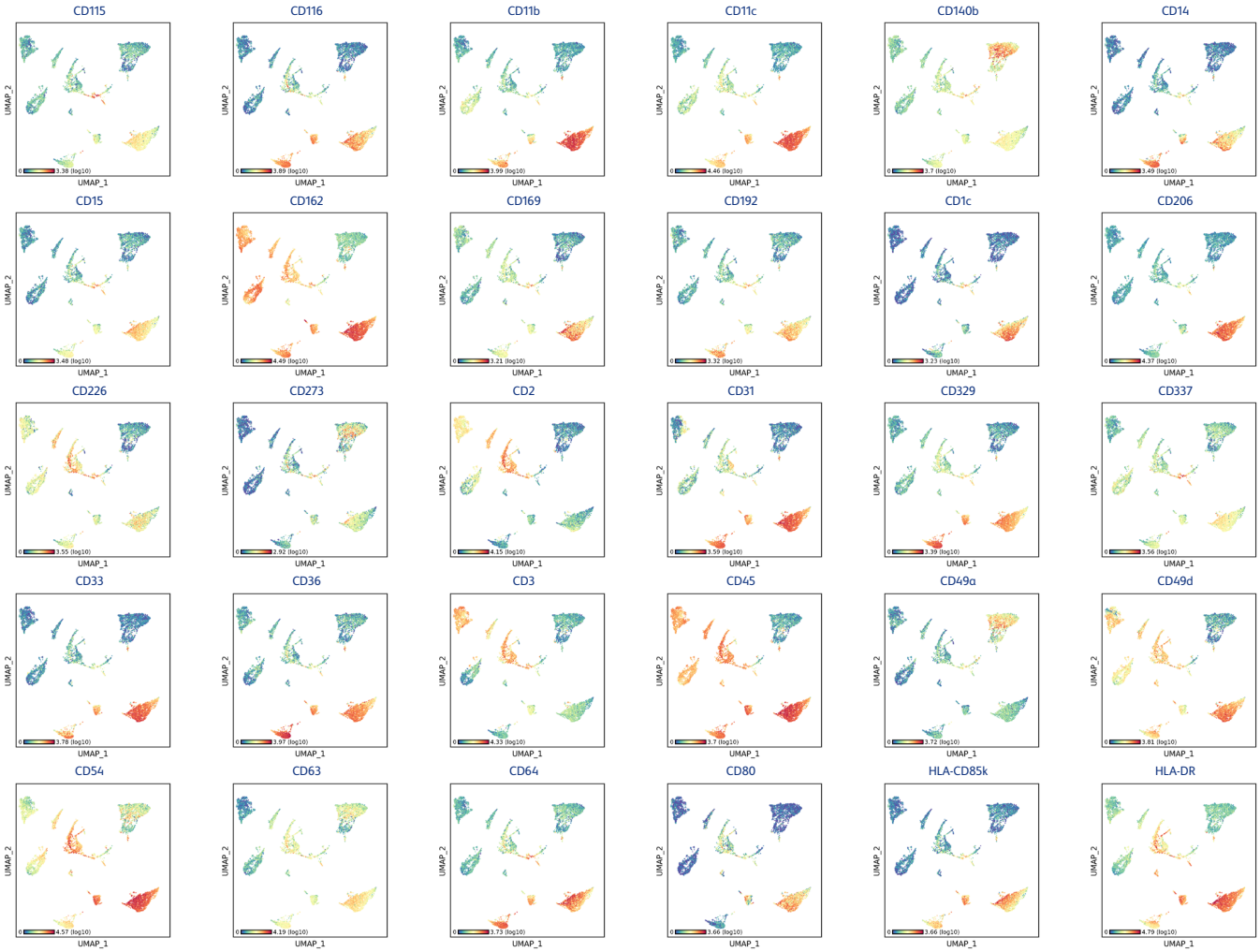


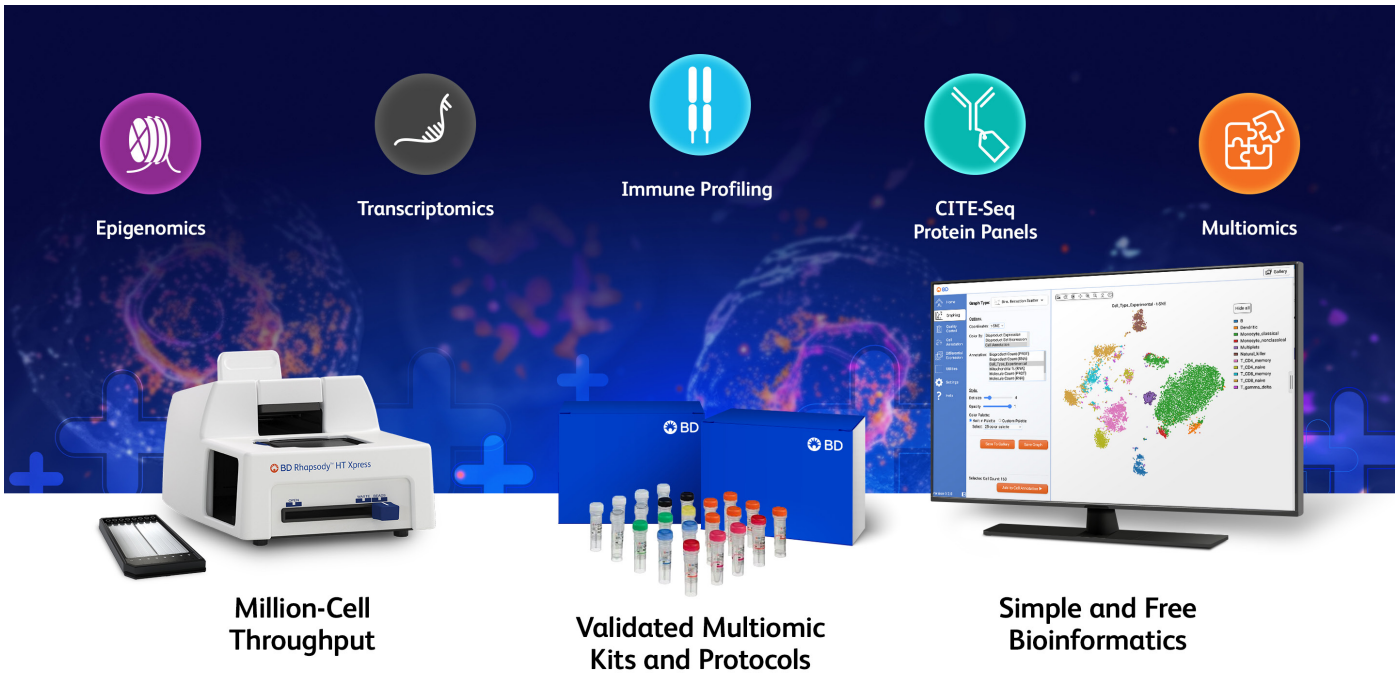
Performance of 30 selected specificities included in the BD® OMICS-One Innate Protein Panel. PBMCs (resting, PHA stimulated, CD3/CD28/IL2 stimulated), enriched monocytes, GMCSF-stimulated enriched monocytes, enriched NK cells and HEPM cell line were labeled with BD® Human Single-Cell Multiplexing Kit Sample Tags and pooled before being stained with the reconstituted BD® OMICS-One Innate Protein Panel. After staining, the cells were captured on the BD Rhapsody™ Single-Cell Analysis System. AbSeq, Sample Tag and WTA libraries were prepared and sequenced. Data were analyzed using the BD Rhapsody™ Sequence Analysis Pipeline. **A.** Cell annotation on UMAP of pooled sample resolved by the WTA mRNA profile. **B.** Heat maps of 30 representative specificities from the BD® OMICS-One Innate Protein Panel on UMAP showing the specificity of detection for individual cell types in the pooled sample.

Manage sequencing costs and improve detection sensitivity with SMART panel design

SMART panel design helps lower sequencing costs while increasing data resolution by using pretitrated, optimal concentrations of antibody-oligos against select high-expressing primary markers in the panel. This allows reallocation of sequencing reads otherwise allotted to these high expressors to now detect secondary and tertiary cell surface markers expressed at lower levels.

The four specificities selected for SMART panel design in the BD® OMICS-One Innate Protein Panel are CD2, CD31, CD45 and HLA-DR.

Part of a complete single-cell multiomics solution



Ordering information

Description	Cat. No.
BD® OMICS-One Innate Protein Panel	572612

Visit **bdbiosciences.com/InnatePanel** to learn more about this panel and review complete performance data.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

BD Life Sciences, Milpitas, CA 95035, U.S.

bdbiosciences.com