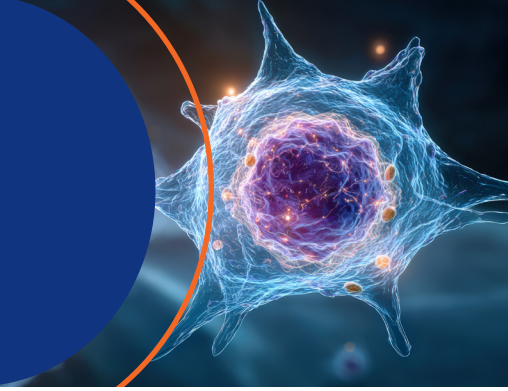
30-plex NK-Cell Biology Discovery Panel

BD® OMICS-One NK-Cell Protein Panel



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

Deep dive into natural killer (NK) cell-centric innate biology using a validated panel that simplifies the CITE-seq workflow and minimizes your sequencing costs. This panel is designed with 30 key specificities that will help you explore the NK cell phenotypes and states, innate immune diversity and stromal interactions 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

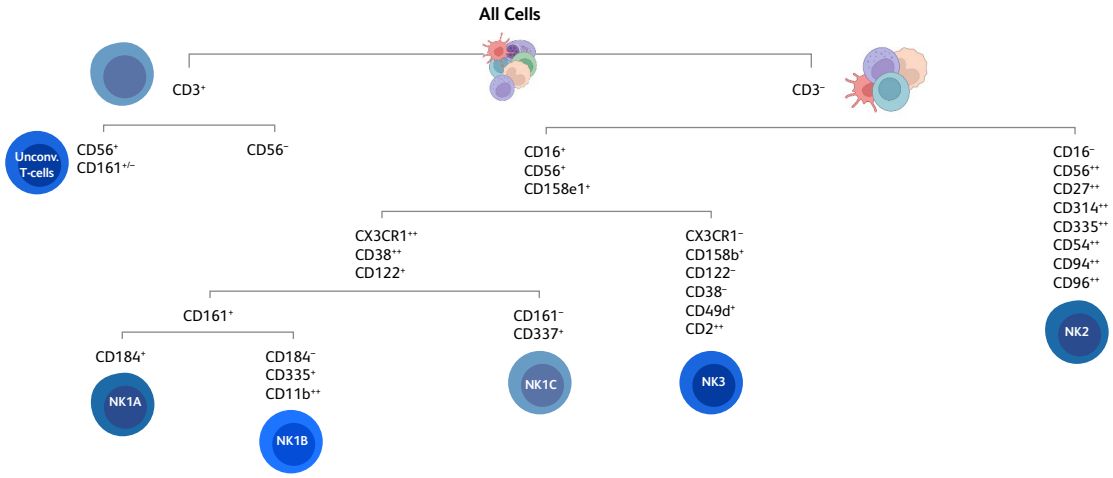
Panel content

Specificity	Clone
CD2*	RPA-2.10
CD3	UCHT1
CD11b	M1/70
CD16	3G8
CD27	M-T271
CD31 (PECAM-1)*	WM59
CD38	HIT2
CD49a	SR84
CD49d	9F10
CD54	HA58

Specificity	Clone
CD56	NCAM16.2
CD63	H5C6
CD94	HP-3D9
CD96	6F9
CD106	51-10C9
CD122	Mik-β3
CD140a	αR1
CD140b (PDGFR)	28D4
CD158b1, b2, j	DX27
CD158e1 (NKB1)	DX9

Specificity	Clone
CD161 (KLRB1)	HP-3G10
CD184 (CXCR4)	12G5
CD226 (DNAM-1)	DX11
CD248 (Endosialin)	B1/35
CD314 (NKG2D)	1D11
CD329 (Siglec-9)	E10-286
CD335 (NKp46)	9E2/NKp46
CD336 (NKp44)	p44-8
CD337 (NKp30)	P30-15
CX3CR1	2A9-1

*SMART-titrated targets



SMART-titrated markers
CD2 and CD31

Symbols
Positive expression: + or ++
Low or negative expression: –

Migration and tissue residency receptors
CD31 CD49a
CD63 CD106

Cell development
CD140a CD248
CD140b

Activating receptors
CD226
CD336

Inhibitory receptors
CD329

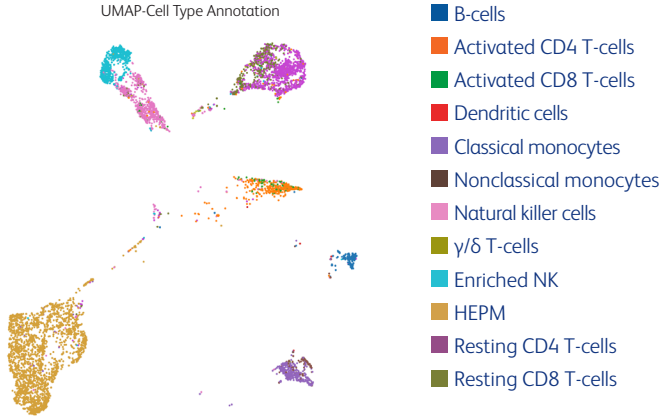
NK cell phenotypes, functional states and tissue interactions monitored by this panel

BD

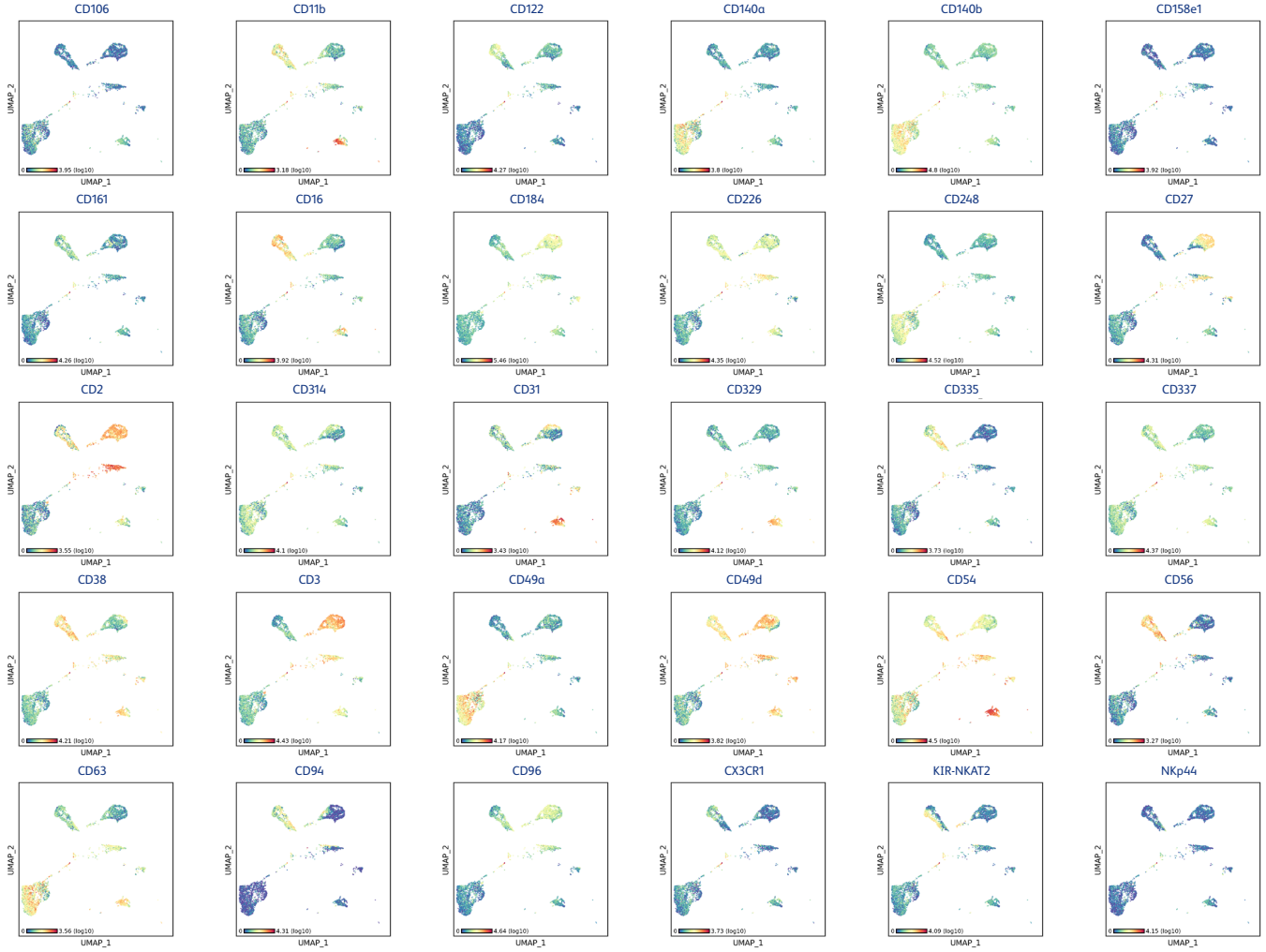
Reliably detect 30 key NK cell-centric protein markers

Performance of all 30 markers included in the BD® OMICS-One NK-Cell Protein Panel is optimized for detection in each cell type.

A.



B.



Performance of all 30 antibody-oligos included in the BD® OMICS-One NK-Cell Protein Panel. PBMCs (resting and CD3/CD28/IL2 stimulated), enriched NK cells and HEPM cell line were labeled with BD® Human Single-Cell Multiplexing Kit Sample Tags and pooled. The single-cell suspension was stained with reconstituted BD® OMICS-One NK-Cell Protein Panel. After staining, cells were captured on the BD Rhapsody™ Single-Cell Analysis System. AbSeq, WTA and SMK libraries were generated and sequenced. **A.** Cell annotation on UMAP of various cell types resolved by the WTA mRNA profile. **B.** Heat maps of each marker detected by the BD® OMICS-One NK-Cell Protein Panel on UMAP showing the specificity of detection for individual cell types.

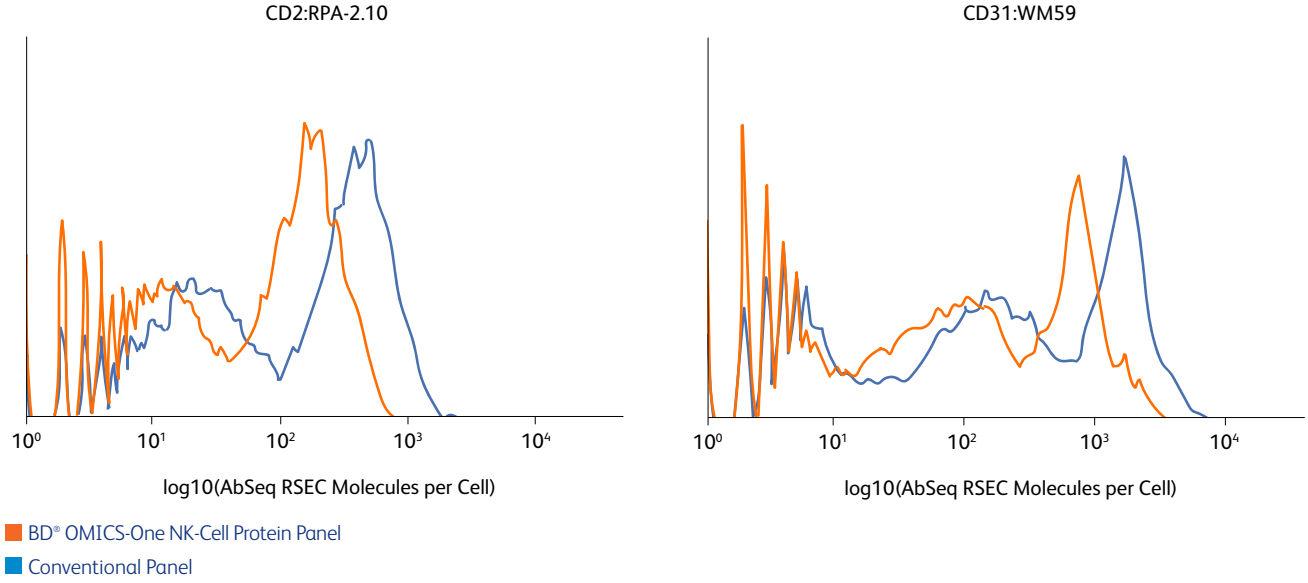
Manage sequencing costs and improve detection sensitivity with SMART panel design

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.

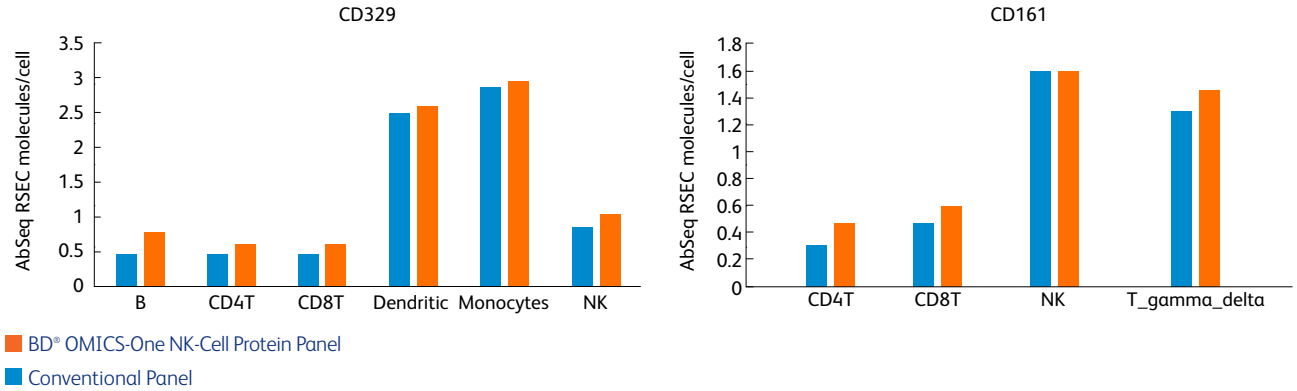
The two specificities selected for SMART panel design in the BD® OMICS-One NK-Cell Protein Panel are CD2 and CD31.

A.

Marker	SMART Panel	Conventional Panel
CD2	50% Positive	51% Positive
CD31	72% Positive	68% Positive

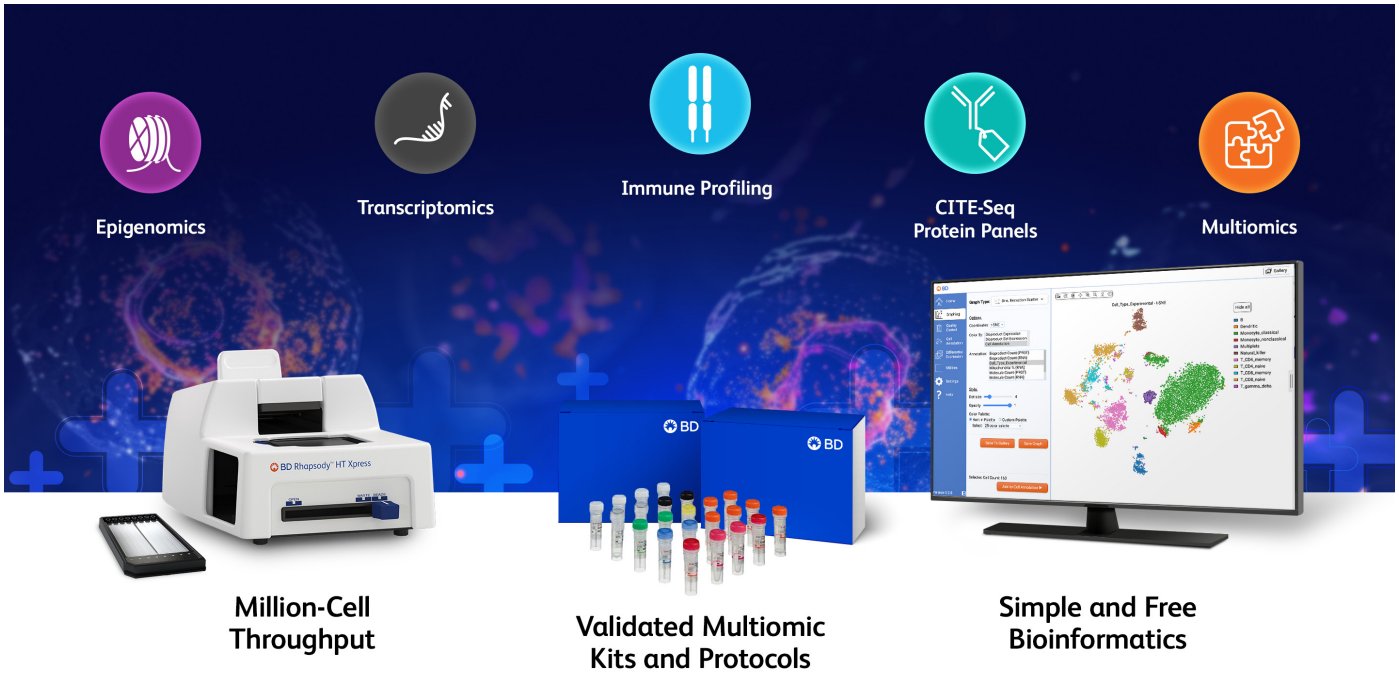


B.



CD2 and CD31 detection is not compromised, while better resolution of low expressors is achieved with SMART panel design A. CD2 and CD31 detection with SMART panel design is not compromised compared to a freshly pooled antibody-oligo panel without SMART panel design, indicated by a comparable number of positive cells in the test sample, albeit with lower AbSeq molecule count. **B.** Lowly expressed proteins CD329 and CD161 are better resolved with the BD® OMICS-One NK-Cell Protein Panel with SMART panel design (orange bars) compared to a freshly pooled antibody-oligo panel (blue bars).

Part of a complete single-cell multiomics solution



Ordering information

Description	Cat. No.
BD® OMICS-One NK-Cell Protein Panel	572434

Visit **bdbiosciences.com/NKPanel** 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