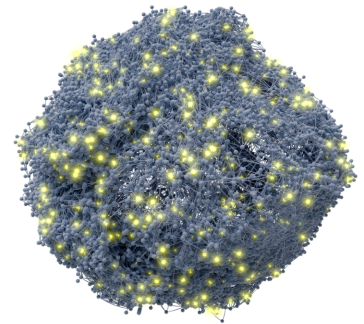


# Uncover the Cell Surface Architecture

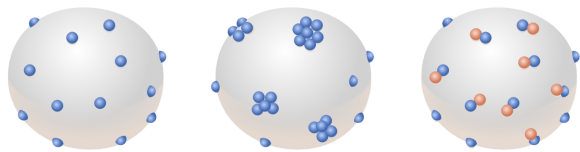
## A new dimension of cell biology

- **Mechanistic insights** - Explore the nanoscale organization of thousands of proteins at the surface of single immune cells
- **High multiplex** - 155 cell surface markers in parallel, ~12000 spatial measurements per single cell. Custom antibody integration available
- **High throughput** - Up to 64 samples per experiment
- **Ready to use** - No specialized instrumentation needed



PD-1 localization on a CD8 T cell

## One experiment - three readouts



**Abundance**

155 measurements per cell

**Clustering**

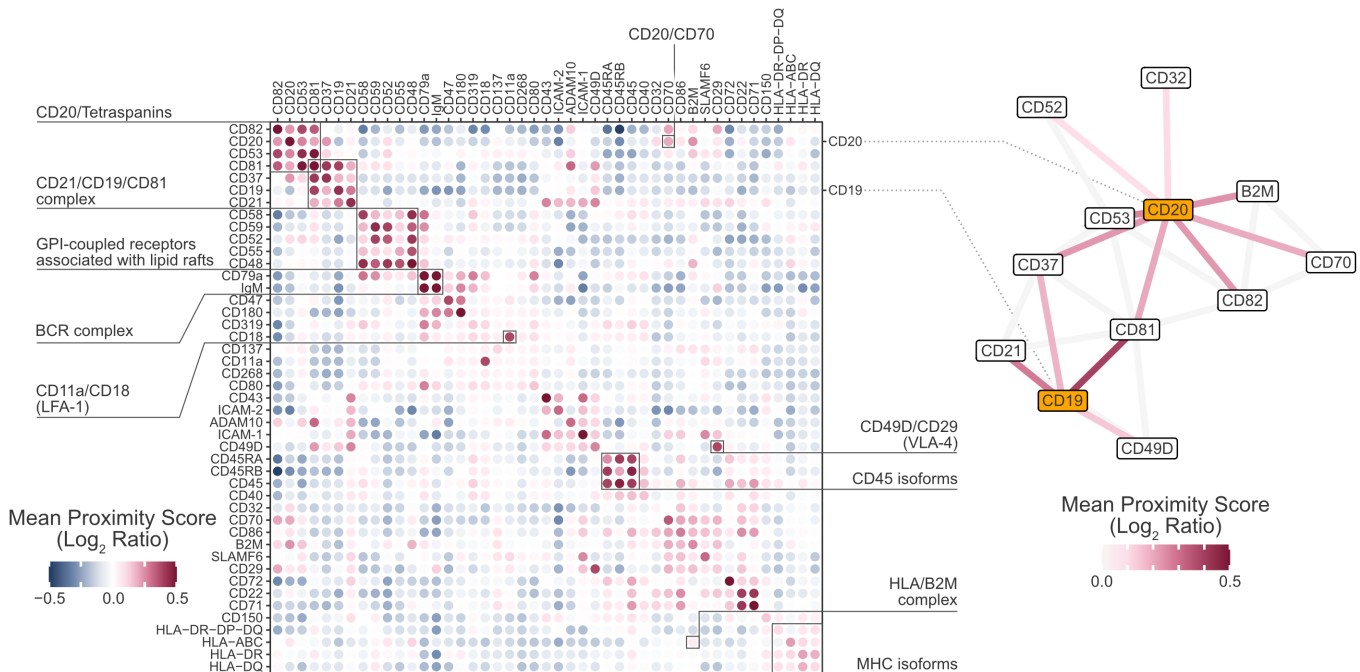
155 measurements per cell

**Colocalization**

~12000 measurements per cell

**Protein function** depends not only on expression, but also on how the proteins are organized and interact at the cell surface. This essential layer of biology remains inaccessible to conventional single cell omics methods, limiting discovery of new mechanisms, biomarkers, and therapeutic targets.

**The Pixelgen Proxiome Kit**, powered by the Proximity Network Assay, is the only technology that enables high-dimensional mapping of single cell protein organization at nanoscale resolution.



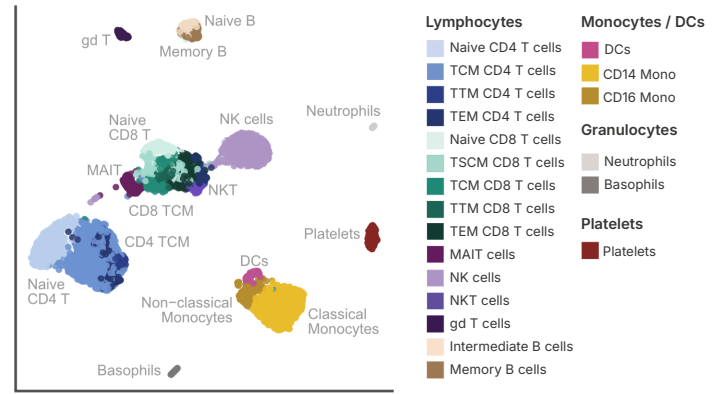
**Clustering and colocalization at a glance.** Visualize protein organization in single cells or across cell populations using intuitive colocalization heatmaps and interaction networks. Instantly uncover both specific protein interactions and larger membrane domains. Here, the surface interactome of Raji B cells reveals the distinct colocalization landscapes of CD19 and CD20, alongside both known and novel protein complexes and functional microdomains.

## Assay Details

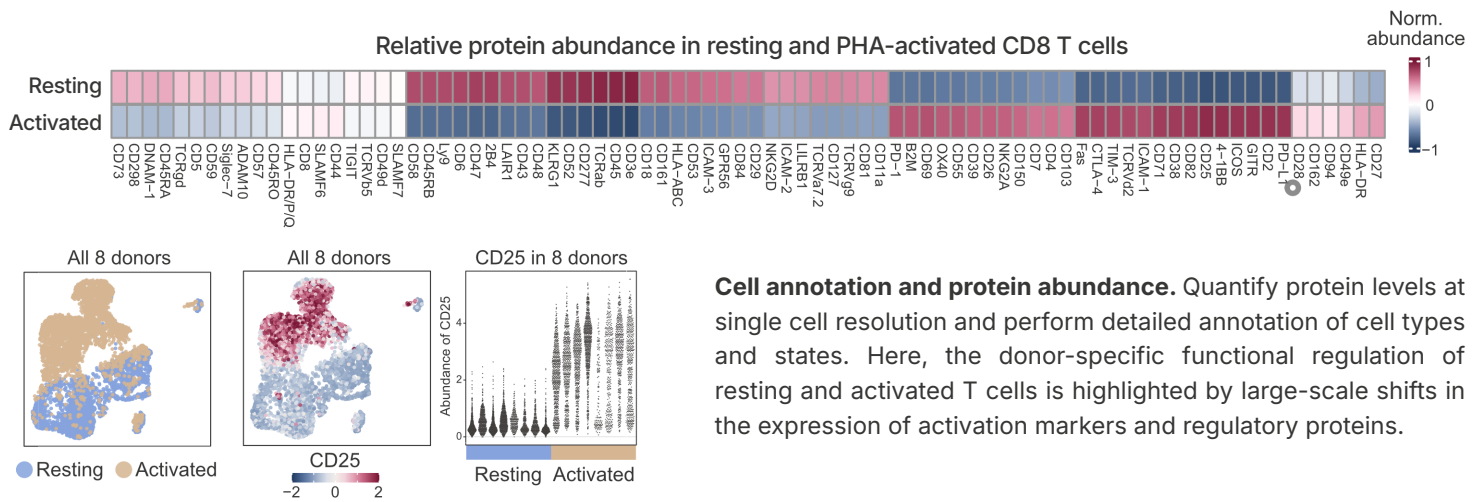
- **Comprehensive immune profiling:** 155-plex panel covering human T, B, NK, monocytes, DCs, stem cells, and more
- **Flexible design:** Possibility to spike in custom antibodies
- **Broad sample compatibility:** Validated on human primary immune cells, CAR T cells, cell lines, dissociated TILs etc.
- **Low cell input:** From 50,000 cells per sample, generating data for 1,000 single cells
- **Scalable assay:** Available in 8, 16 and 32-reaction configurations, supporting up to 64 samples per experiment
- **Streamlined analysis:** Pixelator software delivers spatial scores and integrates with R & Python single cell workflows

## Cell identification

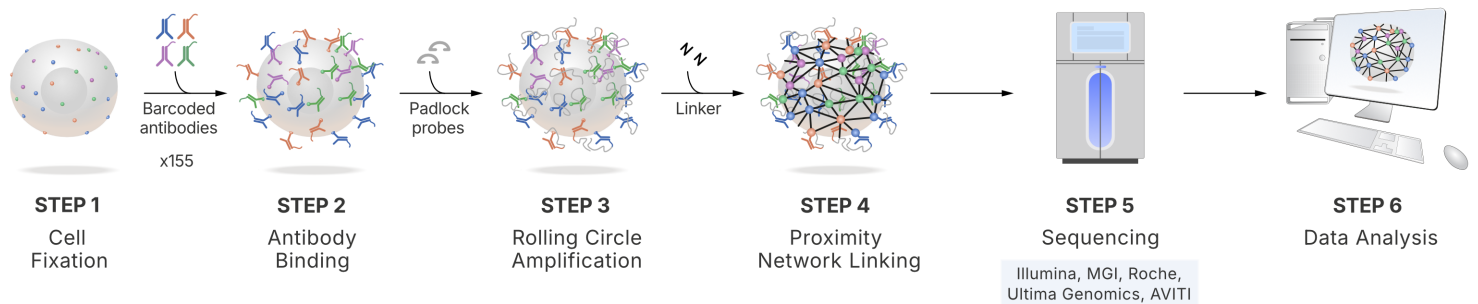
Detailed annotation of PBMCs using 155 markers



## Relative protein abundance in resting and PHA-activated CD8 T cells



**Cell annotation and protein abundance.** Quantify protein levels at single cell resolution and perform detailed annotation of cell types and states. Here, the donor-specific functional regulation of resting and activated T cells is highlighted by large-scale shifts in the expression of activation markers and regulatory proteins.



## Workflow of the Proximity Network Assay (PNA)

The Pixelgen Proxiome Kit is based on the Proximity Network Assay, a technology for nanoscale spatial analysis of immune cell proteins. Cells in suspension are labelled with barcoded antibodies and amplified *in situ* by Rolling Circle Amplification (RCA). Linker oligos are bound to the RCA products, connecting

neighboring proteins. The connections are read out by standard NGS. Single cell surface maps, Proximity Networks, are reconstructed using the Pixelator analysis pipeline, generating spatial statistics for quantitative analysis of protein abundance and organization across thousands of single cells.

Pixelgen Proxiome Kit v2,  
Immuno 155 v2, (8 reactions)  
PROXIMM0028

Pixelgen Proxiome Kit v2,  
Immuno 155 v2, (16 reactions)  
PROXIMM00216

Pixelgen Proxiome Kit v2,  
Immuno 155 v2, (32 reactions)  
PROXIMM00232

Scan for product page



### Compatible add-on products

Pixelgen Proxiome  
FMC63 Barcoded Antibody v2, Part nr.: PP102

Pixelgen Proxiome  
FLAG Barcoded Antibody v2, Part nr.: PP103

Pixelgen Proxiome  
G4S Barcoded Antibody v2, Part nr.: PP104

Pixelgen Proxiome v2 Custom Conjugation Kit  
Part nr.: PROXCUST001, PROXCUST002, PROXCUST003

