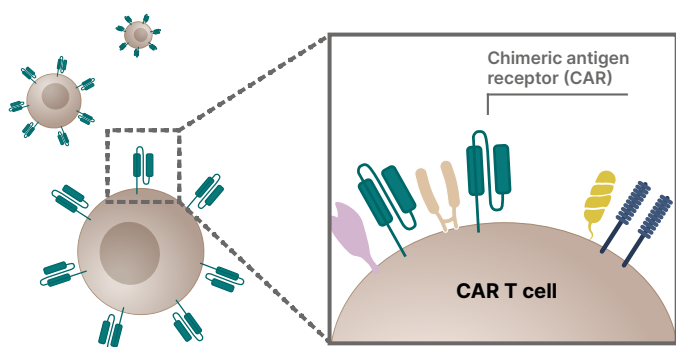


## Illuminating the hidden protein architecture of CAR T cells to power the next generation of cancer therapies



Product Name: **Pixelgen Proxiome FMC63 Barcoded Antibody**

Part nr.: **PP067**

Product name: **Pixelgen Proxiome FLAG Barcoded Antibody**

Part nr.: **PP068**

### What are FLAG and FMC63?

The FLAG tag is a short peptide sequence which can be added to a CAR to facilitate antibody-based detection. FMC63 is a specific CD19-targeting domain in various approved CAR T cell products.

### How to use Pixelgen Proxiome Barcoded CAR T FLAG and FMC63 products?

Our FLAG and FMC63 barcoded antibodies are used as spike-ins for the Proxiome Immuno 155 panel to enable CAR detection.

### Why should I use FLAG and FMC63 barcoded antibodies?

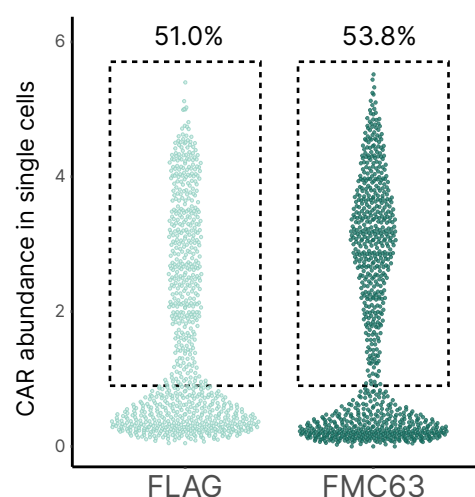
Together with the Pixelgen Proxiome Kit, these antibodies allow thorough mapping of the membrane protein interactome of CAR T cell products and patient samples.

### Protein interactomics offer unique insights into the molecular networks that drive CAR T cell activity.

Chimeric Antigen Receptor (CAR) design not only dictates antigen recognition but also shapes receptor clustering, overall membrane organization, and downstream signaling. These features are closely tied to therapeutic efficacy, safety, and persistence. By mapping the protein interaction landscape of CAR T cells, researchers can connect structural design to functional outcomes, discover predictive biomarkers, and accelerate the development of more precise and durable next-generation immunotherapies.

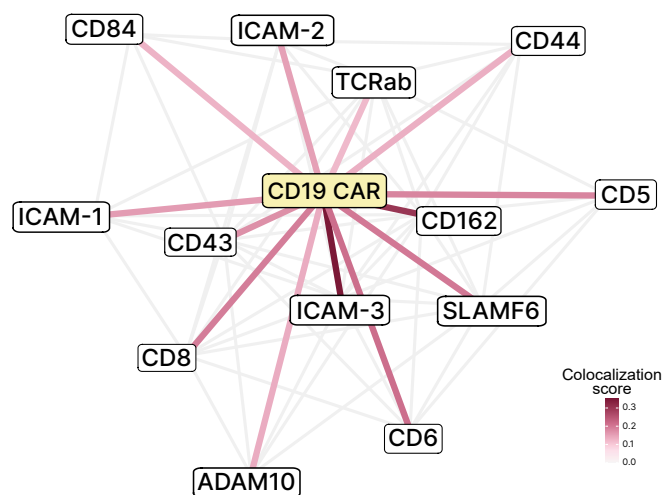
*The Pixelgen Proxiome CAR T cell FLAG and FMC63 products bring single-cell protein interactomics to CAR T cell analysis.*

### CAR detection using either anti-FMC63 or anti-FLAG detection



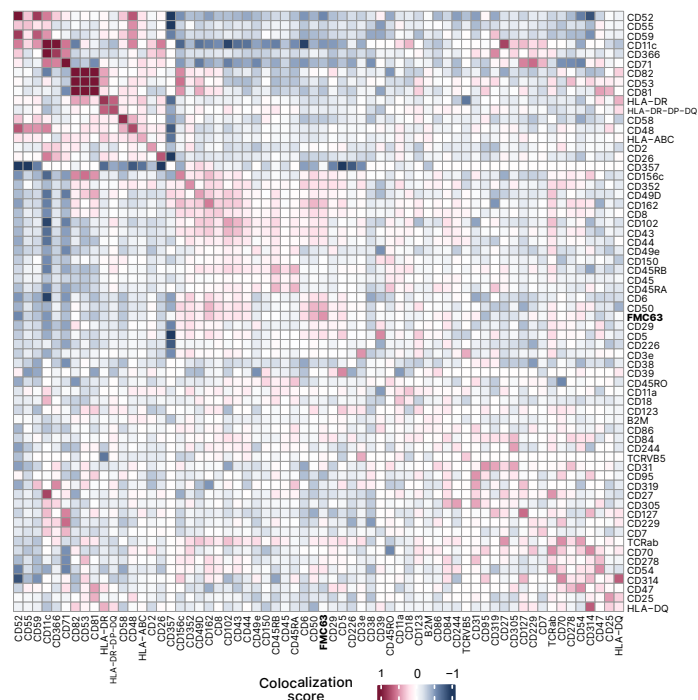
CAR detection can be achieved using either the FMC63 (PP067) or the FLAG (PP068) targeting antibody. Both products display high signal-to-noise ratio, allowing researchers to gate on CAR+ cells and to perform detailed studies of their local and global protein architecture.

## The Proximity Network Assay enables studies of the CAR proxime

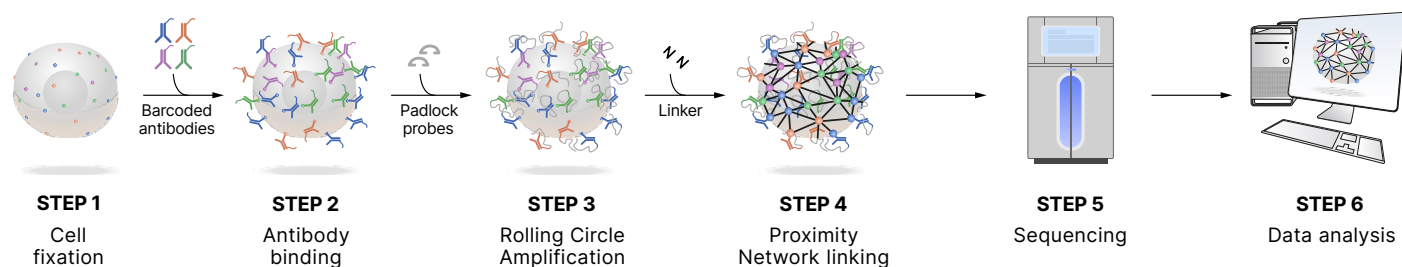


The assay enables detailed characterization of the colocalization partners of individual receptors. The partners of the FMC63-based CD19-targeting CAR can be seen in the network.

## Protein interactome of anti-CD19 CD8+ CAR+ T cells



The full interactome of individual cell populations can be visualized using a colocalization heatmap.



## Workflow of Proximity Network Assay

The Pixelgen Proxime Kit is based on the Proximity Network Assay, a technology for nanoscale spatial analysis of immune cell proteins. Barcoded antibodies are bound to cells in suspension and in situ amplified by rolling circle amplification (RCA). RCA is followed by addition of linker oligos and a gapfill-ligation reaction to form multiple

connections between neighboring proteins. The data generated after sequencing these molecules create a nanoscale protein Proximity Network for each cell, which is then analyzed using spatial statistics to define the organization of each cell's protein interactome, as well as cell-cell interactions.

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PIXELGEN PROXIOME FMC63 Barcoded Antibody  
Part nr.: PP067

PIXELGEN PROXIOME FLAG Barcoded Antibody  
Part nr.: PP068

PIXELGEN PROXIOME KIT Immuno 155  
Part nr.: PROXIMM001



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