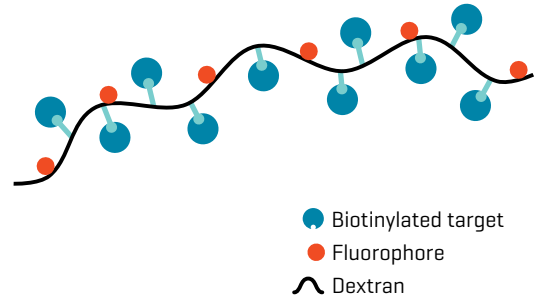


# CAR-T Cell Therapy

## CAR-T Cell Detection and Quantification with Dextramer<sup>®</sup> Technology

Dextramer<sup>®</sup> reagents may provide a sensitive solution for direct detection and quantification of CAR-positive cells by flow cytometry.

Using Dextramer<sup>®</sup> technology, our Custom Solutions and Services team can work with you to develop custom antigen multimers and optimize detection of your CAR-T cells.



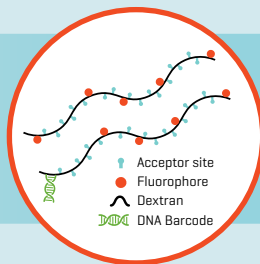
### How does it work?

Choose your target antigen



CD19, BCMA, CD22...

Select reagent type



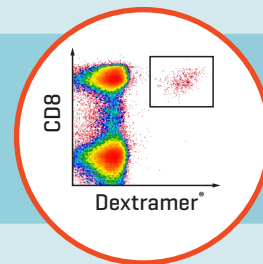
**Flow cytometry:**  
BV421, FITC, PE, APC  
**Single-cell multi-omics:**  
DNA barcode + PE

We make the reagent for you



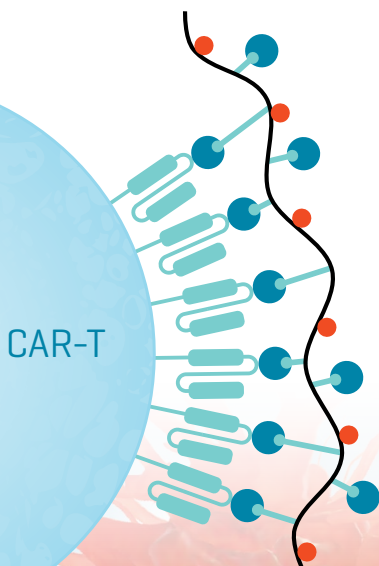
**Customized reagent design**  
**GMP possible**

Quantify CAR-T cells



**Assess % of target-specific Dextramer<sup>®</sup>-positive T cells by flow cytometry**

## Applications of Dextramer<sup>®</sup> Technology in CAR-T Cell Therapy



- Direct CAR-T cell detection
- Enhanced sensitivity for low-affinity CAR-Ts, due to the high avidity of Dextramer<sup>®</sup> technology and multiple fluorophores
- Assessment of transduction levels
- Determine the % of CAR-T-positive cells
- Demonstrate that the infusion product meets defined lot release criteria
- Monitor kinetics and persistence of infused CAR-T cells in patient blood samples
- Deeper characterization of target-specific CAR-T cells with gene and surface marker expression by single-cell multi-omics

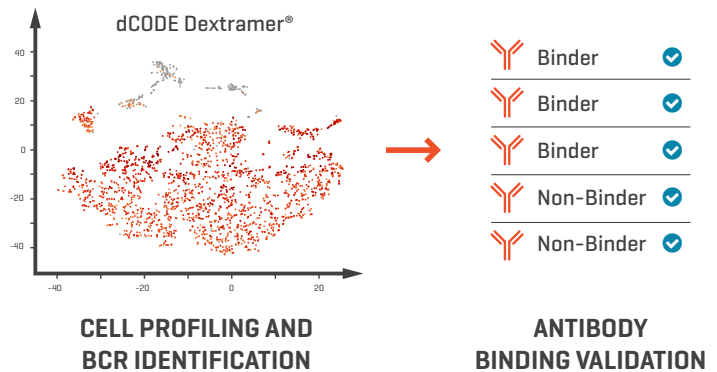
## Discover New CAR-T Antibodies

Use **dCODE Klickmer**<sup>®</sup> for rapid antibody discovery by single-cell multi-omics of antigen-specific B cells. Load target antigens onto dCODE Klickmer<sup>®</sup> to identify and sequence antibody-producing B cells.

**Learn more:** [immudex.com/antibody-discovery](https://immudex.com/antibody-discovery)

Use **pMHC Monomers** for animal immunization and **biotinylated pMHC Monomers** for screening TCR-like antibody libraries via phage display.

**Learn more:** [immudex.com/monomers](https://immudex.com/monomers)



## FDA Guidance for CAR-T Cell Products

The most recent guidance from the FDA regarding the development of CAR-T cell products includes recommendations for detecting and evaluating the CAR product. Our products can assist you in adhering to this guidance.



### Manufacturing and Lot Release

*"Control of the manufacturing process and appropriate in process and lot release testing are crucial to ensure CAR-T cell safety, quality and lot-to-lot consistency."*

### Direct Detection of CAR-T cells

*"Direct detection of the CAR to determine the percentage of CAR-positive cells."*

### Antigen Recognition of CAR Construct

*Assess the ability of each antigen recognition domain to specifically bind to its target.*

### CAR-T levels in Starting Material

*"If pre-treated with another CAR-therapy, evaluation of the previously administered CAR T cell levels in the cellular starting material may be appropriate."*

### Transduced T cells and Biological Activity

*FDA recommends to examine "uncontrolled proliferation, in vitro and in vivo testing for T cell clonality, karyotypic analysis, TCR repertoire analysis, and specificity for viral antigens through ex vivo stimulation and recognition assays" to document the biological activity of transduced T cells.*

### Dextramer<sup>®</sup> Technology

Dextramer<sup>®</sup> technology enables direct CAR detection for development of assays to assess the % of CAR-positive cells for lot release testing or for evaluation of starting material by flow cytometry.

### dCODE<sup>®</sup> Technology

With dCODE<sup>®</sup> technology, Immudex offers a wide range of viral specificities to characterize the clonality and repertoire of antigen-specific TCRs through V(D)J sequencing.

Interested in learning more? Please contact us at [customer@immudex.com](mailto:customer@immudex.com)

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