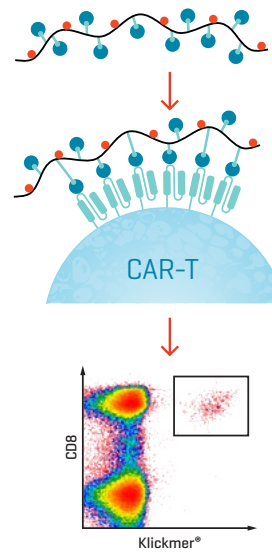


Quantification of CAR-T Cells

- Direct detection of CAR using **Klickmer**[®] technology
- Sensitive detection of even low affinity CARs due to high avidity of **Klickmer**[®] technology and multiple fluorophores
- Assess transduction levels
- Determine the % of CAR-positive cells
- Demonstrate that the infusion product meets defined lot release criteria
- Monitor kinetics and persistence of the infused T cells in patient blood samples



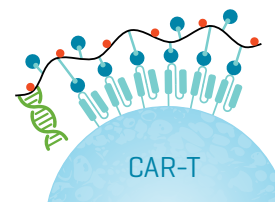
Klickmer[®] reagent assembled with your antigen of choice

Klickmer[®] binds to CAR-T target cell

Assess % of target-specific Klickmer[®]-positive T cells by flow cytometry

Phenotypic Characterization of CAR-T Cells

- Characterize even low frequency target cells
- Combine information about gene expression, surface proteins and other functional markers
- Flow cytometry, NGS or single-cell multi-omics



dCODE Klickmer[®] reagents boost sensitivity and enable in-depth characterization of CAR-T cells

Further Reading

Read more about how Immudex's technology is being applied in the development of T cell-based therapeutics.

Detection and quantification of T cells:

Rapoport *et al.* *Nat Med* [2015] 21(8):914-921.
[doi: 10.1038/nm.3910](https://doi.org/10.1038/nm.3910)

Walseng *et al.* *Sci Rep* [2017] 7(1):10713.

[doi: 10.1038/s41598-017-11126-y](https://doi.org/10.1038/s41598-017-11126-y)

Proics *et al.* *Gene Ther* [2022]

[doi: 10.1038/s41434-022-00358-x](https://doi.org/10.1038/s41434-022-00358-x)

Foy *et al.* *Nature* [2022] Nov 10;1-10.

[doi: 10.1038/s41586-022-05531-1](https://doi.org/10.1038/s41586-022-05531-1)

Stevens *et al.* *Authorea* [2022].

[doi: 10.22541/au.165727810.00978327/v1](https://doi.org/10.22541/au.165727810.00978327/v1)

Kinetics and persistence of infused cells:

Hong *et al.* *Nat Med* [2023] 29, 104-114.

<https://doi.org/10.1038/s41591-022-02128-z>

TCR discovery:

Zhang *et al.* *Sci Adv* [2021] 7(20).

[doi: 10.1126/sciadv.abf5835](https://doi.org/10.1126/sciadv.abf5835)

TCR validation:

Silva *et al.* *Front Immunol* [2022] 13:896242.

[doi: 10.3389/fimmu.2022.896242](https://doi.org/10.3389/fimmu.2022.896242)

Vazquez-Lombardi *et al.*

Immunity [2022] 55(10):1953-1966.e10.

[doi: 10.1016/j.immuni.2022.09.004](https://doi.org/10.1016/j.immuni.2022.09.004)

Validation of specificity:

Bunse *et al.* *Nat Commun* 12, 240 [2021].

<https://doi.org/10.1038/s41467-020-20488-3>

Yamarkovich *et al.* *Nature* [2021] 599(7885):477-484.

[doi: 10.1038/s41586-021-04061-6](https://doi.org/10.1038/s41586-021-04061-6)

Ma *et al.* *Cytotherapy* [2016] 18(8):985-994.

[doi: 10.1016/j.jcyt.2016.05.001](https://doi.org/10.1016/j.jcyt.2016.05.001)

Break the Limits of Antibody Discovery

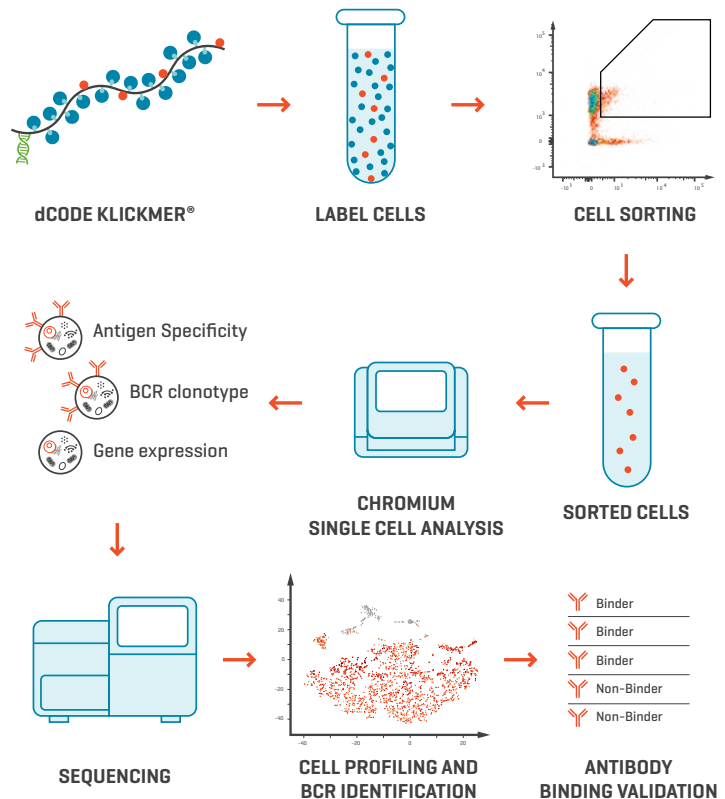
Discover novel antibodies for CAR-T engineering:

- Speed up antibody discovery with single-cell sequencing of antigen-specific B cells using **dCODE Klickmer**
- Load target antigen[s] onto **dCODE Klickmer** to identify and sequence antibody-producing B cells

Discover TCR-like antibodies recognizing pMHC:

- pMHC Monomers** for animal immunization
- Biotinylated pMHC Monomers** for screening libraries of TCR-like antibodies by phage display

Antibody discovery with **dCODE Klickmer**.
Multiplexing capability with up to 1000 unique DNA barcodes.



Resources

Cell Therapy

Explore how Dextramer[®] reagents support the development and manufacturing of effective cell therapies.

[Learn more: immudex.com/cell-therapy](https://immudex.com/cell-therapy)

Antibody Discovery

Read the study demonstrating how dCODE Klickmer[®] identified 40 target-specific antibodies.

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

Case Studies and Application Notes

Immerse yourself in educational content exploring the applications of Dextramer[®] technology.

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

Klickmer[®]

- Create high avidity multimers with your choice of biotinylated molecule

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

dCODE Klickmer[®]

- Analyze your target cell populations by NGS or single-cell multi-omics

[Learn more: immudex.com/dCODE-Klickmer](https://immudex.com/dCODE-Klickmer)

MHC Monomers

- Ready-to-Use Monomers
- Peptide-Receptive Solutions

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