CAR Cell Therapy

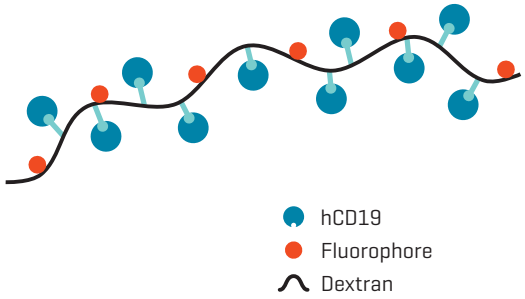
IMMUDEX®
PRECISION IMMUNE MONITORING

CAR Dextramer® hCD19 for Sensitive Detection and Characterization of CD19-Specific CAR-T Cells

CAR Dextramer® reagents enhance sensitivity, enabling the reliable detection of even lowly expressed CARs using a rapid one-step staining protocol.

CAR Dextramer® for certain targets are already available.

Our expert team can also design custom CAR Dextramer® reagents for you, based on your specific targets.

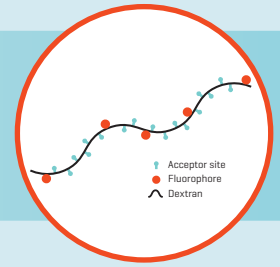


Interested in Other Targets?

Choose your target antigen

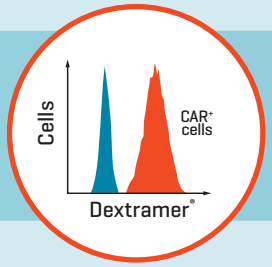
BCMA, CD22, HER2...

Select reagent(s)



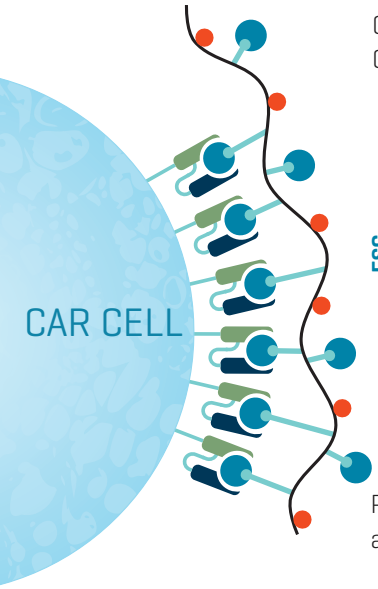
We make the reagent for you

Detect and characterize your CAR cells

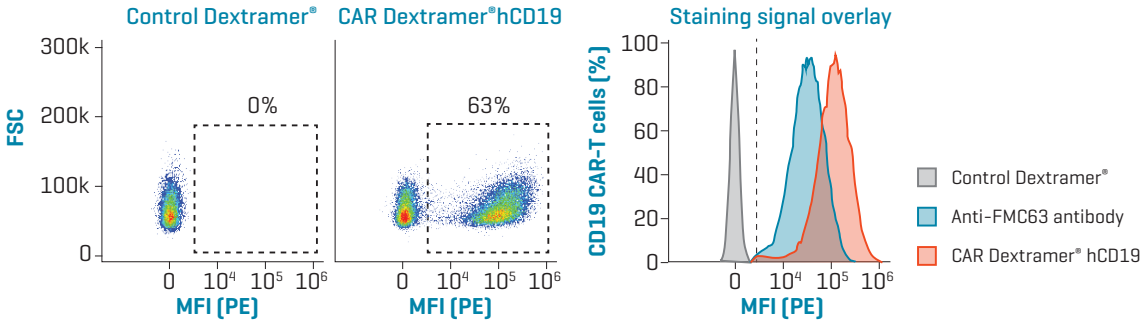


Assess % of target-specific Dextramer®-positive cells by flow cytometry

Superior CAR Cell Detection with CAR Dextramer® hCD19



CAR Dextramer® hCD19 exhibits higher mean fluorescence intensity (MFI) compared to another anti-CD19 CAR detection reagent, resulting in superior staining brightness and enhanced detection sensitivity.



Primary human CD19 CAR-T cells stained with PE-labelled CAR Dextramer® hCD19 or a commercially available anti-FMC63 idiotype antibody. Control Dextramer® was used as negative control.

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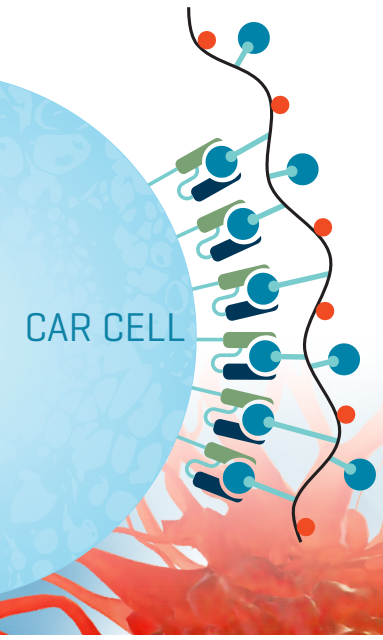
Enhance CAR Cell Detection with CAR Dextramer®

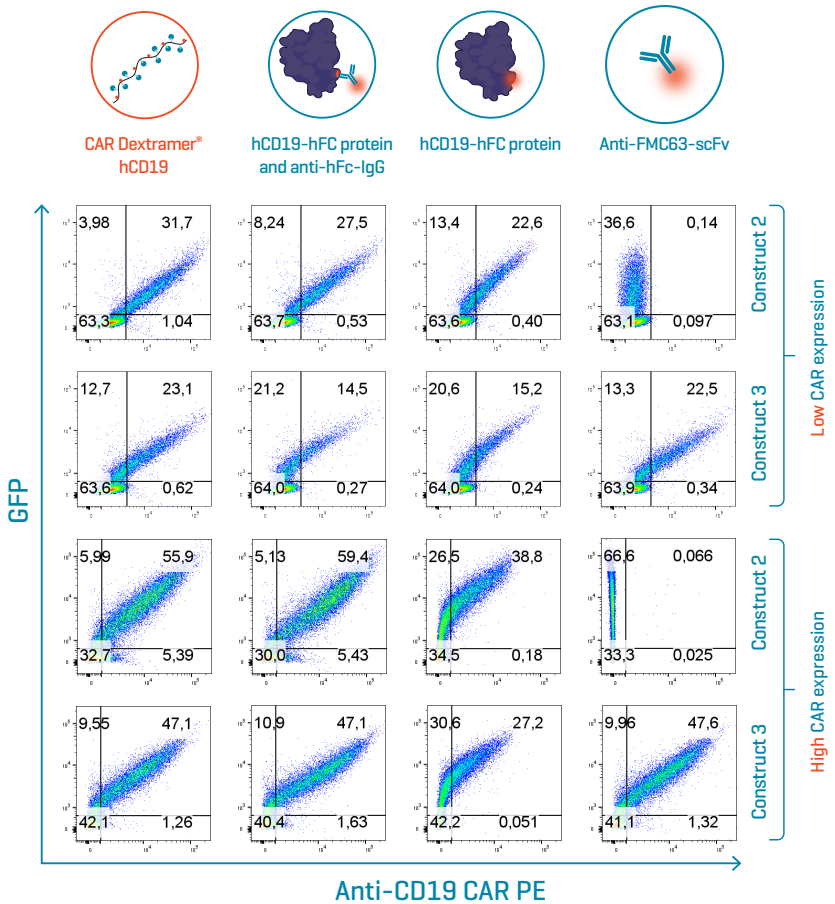


- **Optimized Reagent Design:** Backed by over a decade of expertise in immune monitoring, our reagents are meticulously designed for maximum detection performance.
- **Enhanced Sensitivity through Multimerization:** Dextramer® enables multimerization of the target antigen, enhancing sensitivity in CAR detection, especially when CAR expression is low.
- **Reliable Results:** Provides consistent, high-quality results across experiments, ensuring reliable data for research and clinical applications.
- **Simplified Staining Protocol:** Our stable, optimized reagents allow for staining at room temperature with minimal wash steps, easing your workflow and minimizing the handling of your cell samples.
- **Simultaneous phenotyping:** Room-temperature staining enables the detection of CAR T cells alongside key surface markers, such as CCR7 and CD45, for efficient and comprehensive analysis.

Superior Detection of CD19 CAR Cells with Low CAR Expression

Our collaborator tested the performance of CAR Dextramer® hCD19 in detecting two different anti-CD19 CAR constructs across two CAR-T cell lines (one with low CAR expression and another with high CAR expression).

- **Reliable –** CAR Dextramer® effectively detects both CD19 CAR constructs with high staining intensity.
- **Sensitive –** CAR Dextramer® is more effective than other staining reagents in detecting CD19 CAR-T cells with low CAR expression.
- **Faster Workflow –** rapid one-step staining protocol and fewer wash steps.



Data kindly provided by collaborator

BIONTECH

CONTACT IMMUDEX customer@immudex.com

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.

READ THE **FDA 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."

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."

CAR Dextramer® - Direct Detection

CAR Dextramer® 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.

Antigen Recognition of CAR Construct

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

CAR Dextramer® - Functional Detection

The CAR receptor is detected in the same way it encounters the target antigen.

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.

MHC Dextramer®

Available for a wide range of viral specificities for evaluation by flow cytometry.

dCODE® Technology

Characterize the clonality and TCR repertoire of antigen-specific TCRs through V(D)J sequencing.

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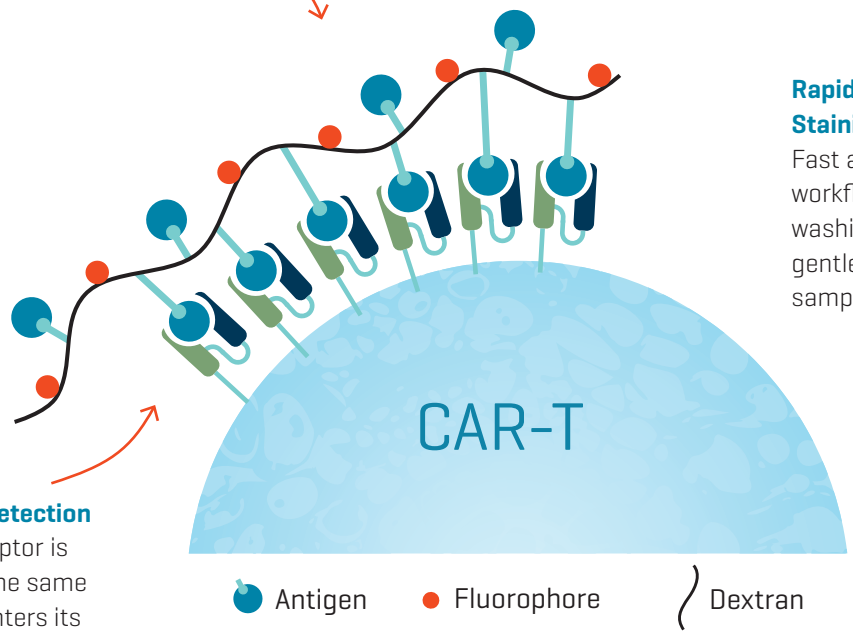
CAR Dextramer® - Easy and Reliable Detection of CAR Cells

Enables Immune Profiling
Allows concurrent detection of immune markers, e.g. CCR7 and CD45RA

Sensitive Detection
Multimerization of target proteins and high number of fluorochromes ensures sensitive detection of even low CAR expression



Rapid One-Step Staining Protocol
Fast and easy workflow with minimal washing, ensuring gentle handling of cell samples

Functional Detection
The CAR receptor is detected in the same way it encounters its target antigen

Catalog Number	Product Name/Description	Test Size	Dye
CT001C	CAR Dextramer®, hCD19	50 tests	PE
DS006	Custom CAR Dextramer® (designed based on your target antigen)	On request	On request

Interested in learning more? Please contact us at **customer@immudex.com**

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