MHC dCODE Dextramer® (10x)

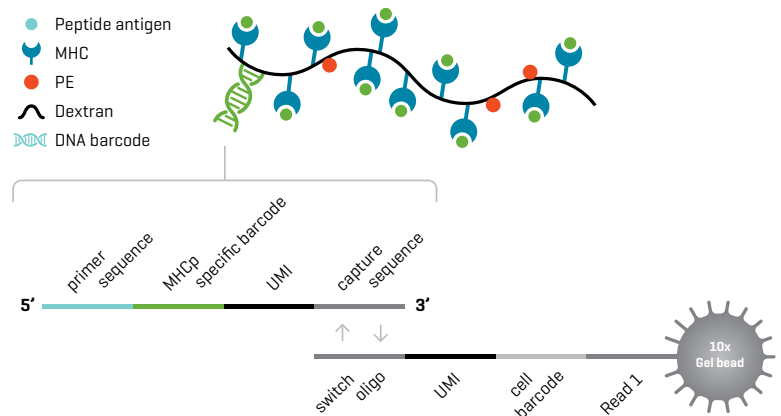**IMMUDEX®**
PRECISION IMMUNE MONITORING

Perform Single-Cell Multi-Omics on Antigen-Specific T cells with MHC dCODE Dextramer®

MHC dCODE Dextramer® has a DNA oligonucleotide attached to the dextran backbone with a barcode signature sequence that defines the monomeric peptide-MHC complexes on the Dextramer®. This enables indexing of antigen-specific T cells and multiplexing for many TCR specificities.
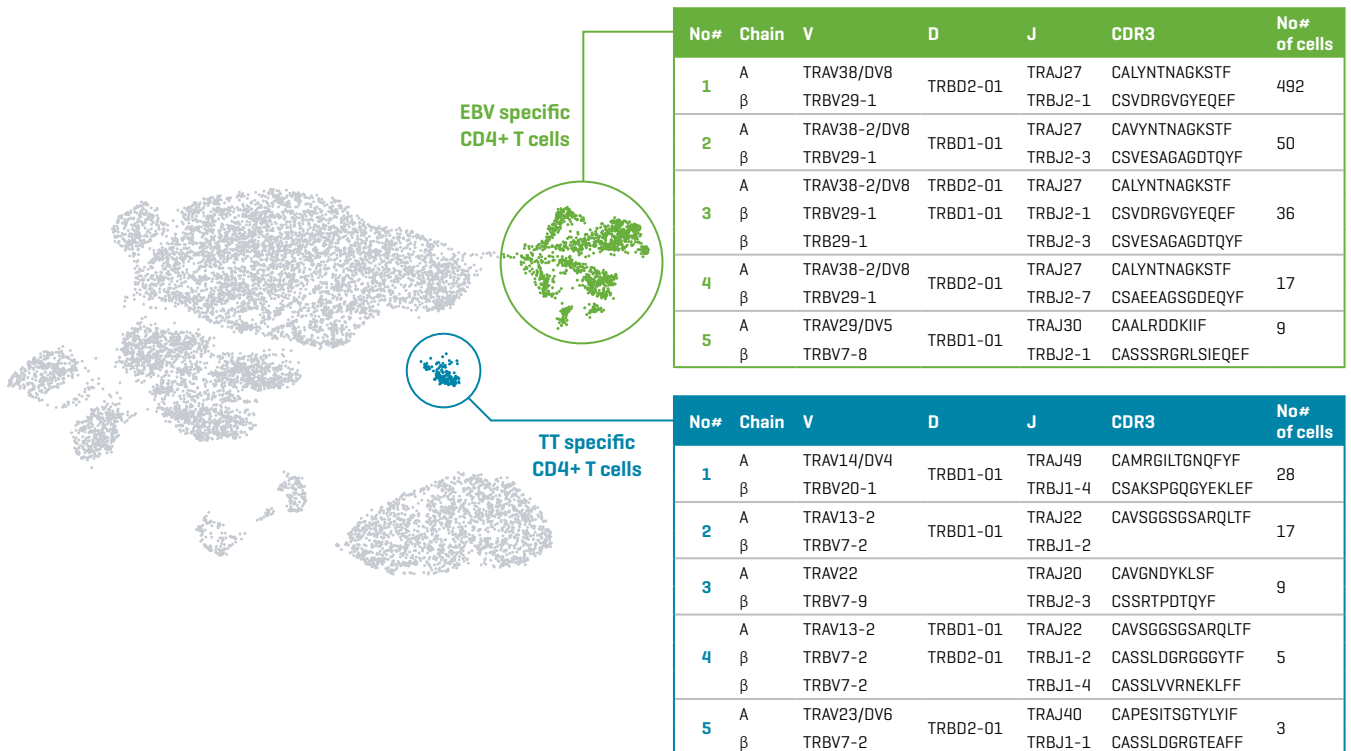
The barcode-containing DNA oligonucleotide of dCODE Dextramer® (10x) is designed to be compatible with the 10x Chromium system for collecting and processing of many thousands of single cells.

- Up to 1,000 unique barcodes available
- Broadest allele coverage (MHC I and II)
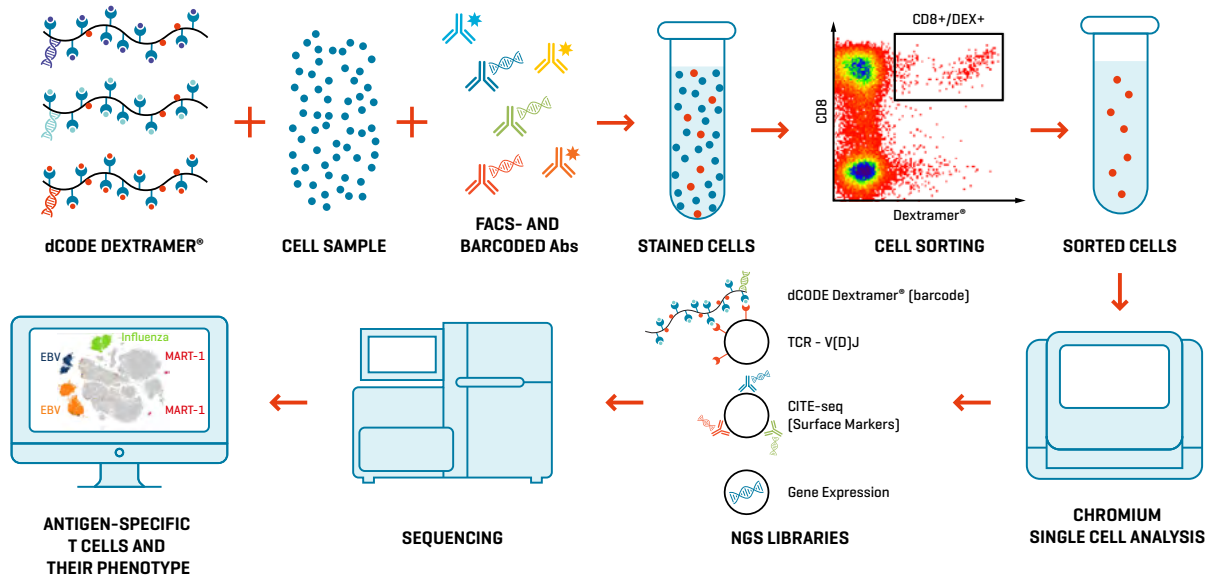- Tried, tested and published technology

Identify Antigen-Specific TCR Clonotypes with MHC dCODE Dextramer®

Couple information about gene expression, surface proteins, and V(D)J sequences with antigen specificity at the single-cell level.

EBV specific CD4+ T cells

No#	Chain	V	D	J	CDR3	No# of cells
1	A	TRAV38/DV8	TRBD2-01	TRAJ27	CALYNTNAGKSTF	492
	β	TRBV29-1		TRBJ2-1	CSVDRGVGYEQEF	
2	A	TRAV38-2/DV8	TRBD1-01	TRAJ27	CAVYNTNAGKSTF	50
	β	TRBV29-1		TRBJ2-3	CSVESAGAGDTQYF	
3	A	TRAV38-2/DV8	TRBD2-01	TRAJ27	CALYNTNAGKSTF	36
	β	TRBV29-1	TRBD1-01	TRBJ2-1	CSVDRGVGYEQEF	
	β	TRB29-1		TRBJ2-3	CSVESAGAGDTQYF	
4	A	TRAV38-2/DV8	TRBD2-01	TRAJ27	CALYNTNAGKSTF	17
	β	TRBV29-1		TRBJ2-7	CSAEEAGSGDEQYF	
5	A	TRAV29/DV5	TRBD1-01	TRAJ30	CAALRDDKIIF	9
	β	TRBV7-8		TRBJ2-1	CASSSRGRLSIEQEF	

TT specific CD4+ T cells

No#	Chain	V	D	J	CDR3	No# of cells
1	A	TRAV14/DV4	TRBD1-01	TRAJ49	CAMRGILTGNQFYF	28
	β	TRBV20-1		TRBJ1-4	CSAKSPGQGYEKLEF	
2	A	TRAV13-2	TRBD1-01	TRAJ22	CAVSGGSGSARQLTF	17
	β	TRBV7-2		TRBJ1-2		
3	A	TRAV22		TRAJ20	CAVGNDYKLSF	9
	β	TRBV7-9		TRBJ2-3	CSSRTPDTQYF	
4	A	TRAV13-2	TRBD1-01	TRAJ22	CAVSGGSGSARQLTF	5
	β	TRBV7-2	TRBD2-01	TRBJ1-2	CASSLDGRGGGYTF	
	β	TRBV7-2		TRBJ1-4	CASSLVVRNEKLFF	
5	A	TRAV23/DV6	TRBD2-01	TRAJ40	CAPESITSGTYLYIF	3
	β	TRBV7-2		TRBJ1-1	CASSLDGRGTEAFF	

Transform Your Research with MHC dCODE Dextramer® (10x)

Get the most out of your sample. Achieve comprehensive immunological profiling by combining dCODE Dextramer® technology with 10x's Single-Cell immune profiling solutions.
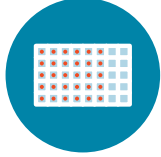

dCODE DEXTRAMER® + **CELL SAMPLE** + **FACS- AND BARCODED Abs** → **STAINED CELLS** → **CELL SORTING** (CD8+/DEX+) → **SORTED CELLS**

dCODE Dextramer® (barcode)
TCR - V(D)J
CITE-seq (Surface Markers)
Gene Expression

ANTIGEN-SPECIFIC T CELLS AND THEIR PHENOTYPE ← **SEQUENCING** ← **NGS LIBRARIES** ← **CHROMIUM SINGLE CELL ANALYSIS**

dCODE Dextramer® (10x) Products

- **MHC dCODE Dextramer® (10x)**: Ready-to-use gold standard for single-cell characterization of antigen-specific T cells
- **dCODE Klickmer®**: Create custom dCODE Dextramer® reagents loaded with biotinylated ligands of your choice (for B cell research and much more)
- **U-Load dCODE Dextramer® (10x)**: Save time and money by making dCODE reagents in the lab with a simple one hour protocol charging U-Load dCODE Dextramer with biotinylated peptide-MHC complexes of your choice
- **CD1d dCODE Dextramer® (10x)**: for single-cell characterization of NKT cells
- **MR1 dCODE Dextramer®**: for single-cell characterization of MAIT cells

dCODE Dextramer® Product Grades

EXPLORE

Reagent panels (16, 32, 48, 64, 80, 96, nx96 specificities) designed for large screenings (i.e. epitope discovery and neo-antigen screening)

- Selected MHC I alleles available
- Peptide binding based on peptide-MHC affinity prediction, not verified by a quality control

GOLD

Single reagents designed for the analysis of few antigen specificities (i.e., monitoring of a small number of antigen-specific populations or validation of large screening findings)

- All MHC I and MHC II alleles from Immudex's catalog are available. List of alleles on Immudex's website
- Peptide binding verified by a quality control