

Combine Antigen-Specific T-Cell Analysis with Multi-Omics Analysis

dCODE Dextramer® (RiO) products are DNA barcoded MHC Dextramer® reagents designed to be compatible with BD Rhapsody™ Single-Cell Analysis System. Characterize T-cell populations at a single cell level and obtain a deeper understanding and new insights into the complexity of the immune system.

Discover What You Can Do with dCODE Dextramer® (RiO)

Determine T-cell antigen-specificity at single-cell resolution, providing simultaneous information on gene expression and surface markers expression. In this example, disease-specific CD4+ T cells were detected within thousands of PBMC to obtain their gene expression profiling at the single-cell level.

oq10 (Number of molecules per cell)

Detection of Antigen-Specific T-Cell Populations





Gene Expression Profiling of Antigen-Specific T-Cell Populations



Gene expression profiling was determined for each cell identified by dCODE Detramer[®] (RiO). Comparing gene expression of EBV-positive population vs. EBV-negative, it was possible to define the differential gene expression.

Key Features of dCODE Dextramer® (RiO)

- High-avidity binding to T-cell receptors thanks to multiple MHC-peptide complexes
- Massive multiplexing screening thanks to the unique barcode for each MHC-peptide specificity
- Enrichment of low-frequency cells thanks to PE fluorochromes
- Multiparametric analysis with BD Rhapsody™ Single-Cell Analysis System



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dCODE Dextramer® (RiO) Experimental Workflow

Get the most out of your sample. Combine dCODE® technology with BD's multi-omics solutions and obtain full immunological profiling in just one workflow.



dCODE Dextramer® (RiO) Products

- I MHC dCODE Dextramer® (RiO) for the detection of CD8+ and CD4+ antigen-specific T cells
- I dCODE Klickmer® to create personalized dCODE Dextramer® (RiO) by loading your choice of biotinylated molecules (for B-cell research and much more)
- U-Load dCODE Dextramer[®] (RiO) to produce in your own lab. Detect T cells with your choice of peptide-receptive MHC alleles
- I CD1d dCODE Dextramer® (RiO) ready to use or customizable for the detection of NKT cells

dCODE Dextramer® Product Grades



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 validated by a quality control



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' catalog are available. List of alleles on Immudex' website
 Peptide binding validated by a quality control
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