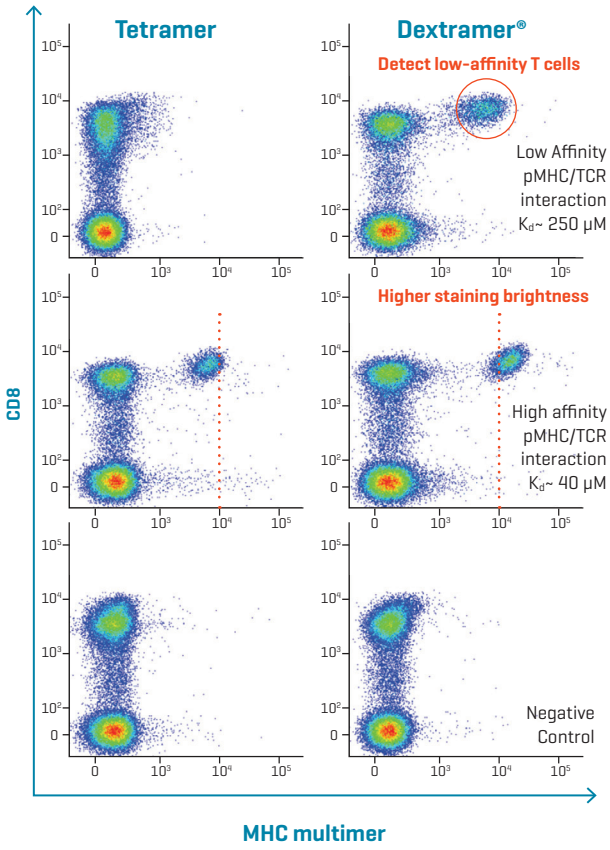
MHC Dextramer®

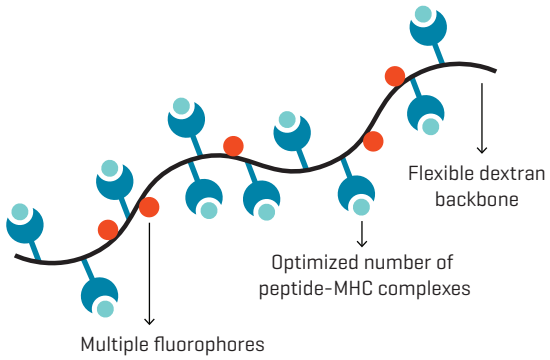
IMMUDEX®
PRECISION IMMUNE MONITORING

Highly Sensitive Monitoring of Antigen-specific T Cells by Flow Cytometry

Identify Low-Affinity CD8⁺ T Cells that Other Technologies Miss



Adapted from Dolton *et al.*, Clin Exp Immunol. 2014.

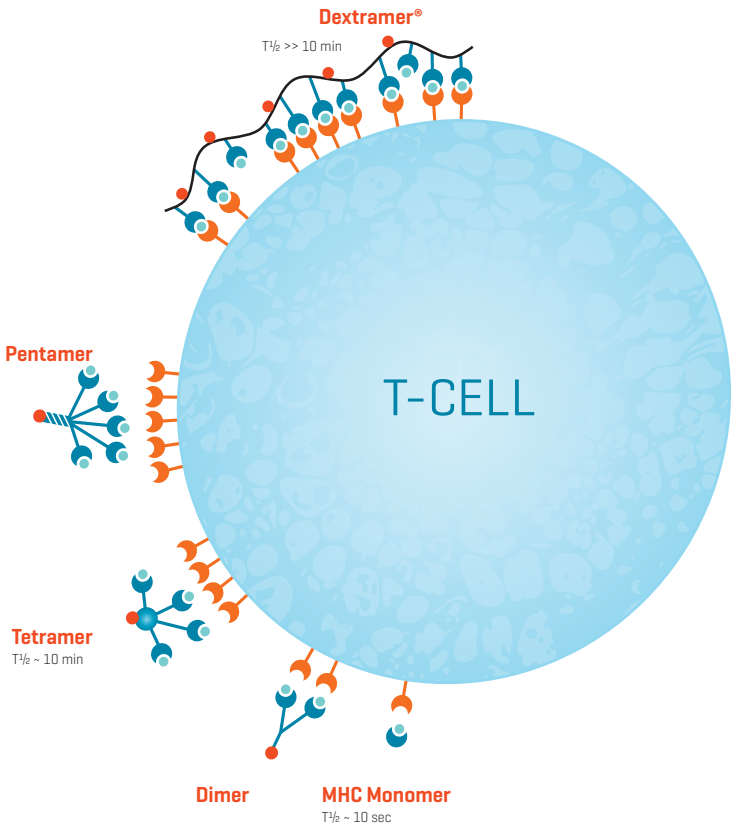


Applications of MHC Dextramer®

- Detection, isolation and enumeration of antigen-specific CD8⁺ and CD4⁺ T cells by flow cytometry
- Epitope discovery
- Characterization of vaccine responses
- Longitudinal studies of immunity

Reasons Why You Should Work with MHC Dextramer®

- High order multimers with exceptional avidity enabling sensitive detection and isolation of antigen-specific T cell populations with a broad range of TCR affinities.
- Ability to investigate the importance of MHC variability in disease with access to a growing and extensive list of over 90 MHC alleles and thousands of off-the-shelf epitopes.
- Rigorous quality control ensuring reliable and reproducible results.



IMMUDEX
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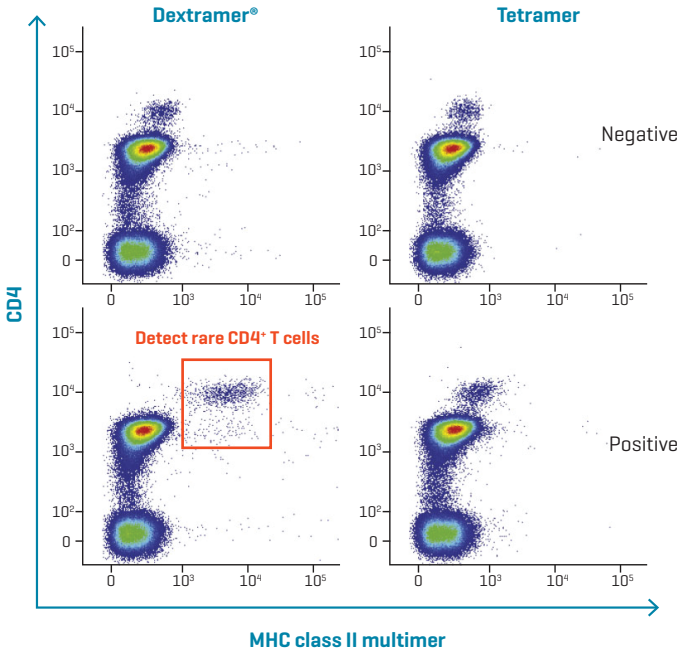
Reliable Detection of Rare Antigen-specific CD4⁺ T Cells

CD4⁺ T helper cells are crucial for the immune response of many diseases, given their role in recruiting and coordinating other immune cells.

However, antigen specific CD4⁺ T cells are notoriously difficult to detect in blood, in part because they are very limited in numbers and in part due to the low affinity interactions between the T cell receptors and MHC class II complexes.

MHC II Dextramer® reagents are designed for immune monitoring of antigen specific CD4⁺ T cells with superior sensitivity enabling detection of these rare cells in PBMC samples.

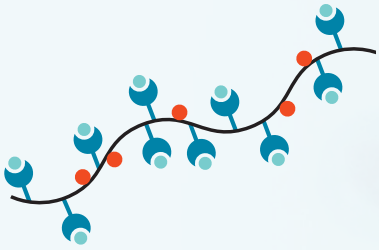
Detect CD4⁺ T Cells that Other Technologies Miss



Adapted from Dolton *et al.*, Clin Exp Immunol. 2014.

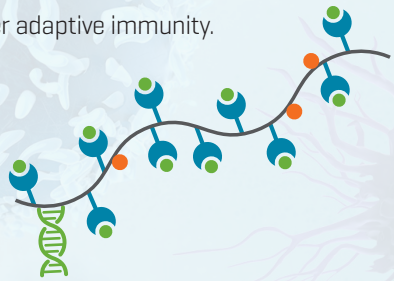
Reagents for Flow Cytometry and Beyond

Immudex provides a broad portfolio of products to enable you to decipher adaptive immunity.

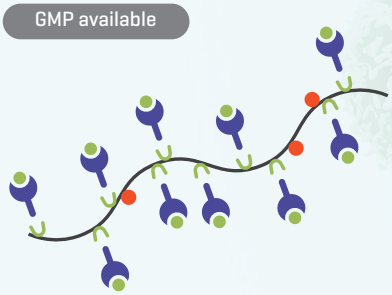


MHC Dextramer®
Flow Cytometry and In Situ staining
GMP available

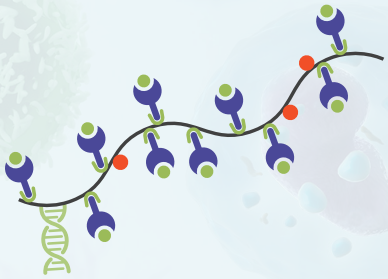
MHC Monomers
GMP available



dCODE Dextramer®
NGS and Single-Cell Multi-Omics



U-Load Dextramer®
Flow Cytometry and In Situ staining



U-Load dCODE Dextramer®
NGS and Single-Cell Multi-Omics

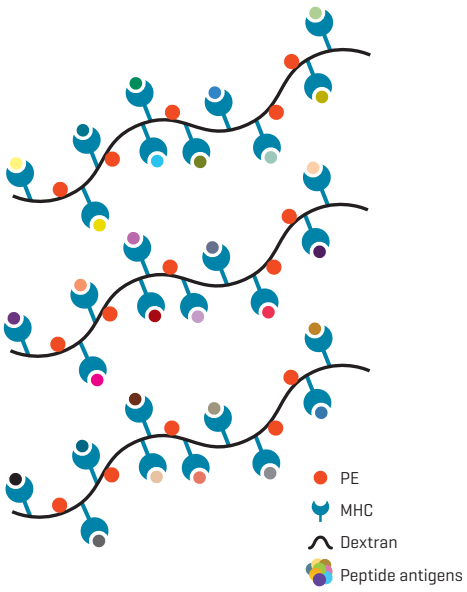
CONTACT IMMUDEX customer@immudex.com

MHC Dextramer® Negative Controls

Background staining can be allele-specific and donor-dependent.

We recommend using of **allele-matched** antigen presenting MHC Dextramer® and negative control Dextramer®. We also recommend evaluating the background in every donor.

We have developed a new class of negative control reagents based on a novel innovative design. We use peptide pools of enormous diversity to create MHC Dextramer® that differ fundamentally from our normal reagents.



Instead of presenting a single pMHC monomer, **MHC Dextramer® Peptide Pool Negative Controls** are decorated with MHC monomers that all present different peptides. In addition, no two MHC Dextramer® Peptide Pool Negative Control molecules are likely to be composed of the same combination of pMHCs.

As a result, MHC Dextramer® Peptide Pool Negative Controls are **unable to bind to T cells by antigen-specific TCR engagement**. Thus, they are the perfect control for the delineation of background-stained cell populations.

We also offer MHC I Dextramer® Negative Controls with empirically derived peptide sequences that have been found to give very low levels of background staining.

For MHC II we use Class II-associated invariant chain peptide (CLIP) as a negative control.

MHC Dextramer® Positive Controls

Depending on the experimental setup, the ideal positive control is:

- An MHC Dextramer® with an epitope derived from a widespread human virus (CMV, EBV or Flu)
- A pool of three Dextramer® with viral epitopes from CMV, EBV and Flu

Explore Non-conventional T Cells with Dextramer® Reagents

MR1 Dextramer®
Detect ligand-specific MAIT cells

CD1d Dextramer®
Detect NKT cells with confidence

HLA-E and HLA-G Dextramer®
Detect antigen-specific NK and T cells

MHC Alleles List

Available as Dextramer® Reagents and Ready-to-use MHC Monomers

MHC I	MHC II
HLA-A*0101	HLA-DPB1*0401
HLA-A*0201	HLA-DRB1*0101
HLA-A*0201mut	HLA-DRB1*0301
HLA-A*0211	HLA-DRB1*0401
HLA-A*0301	HLA-DRB1*0402
HLA-A*0302	HLA-DRB1*0701
HLA-A*1101	HLA-DRB1*1101
HLA-A*2301	HLA-DRB1*1301
HLA-A*2402	HLA-DRB1*1501
HLA-A*2902	HLA-DQ2.5
HLA-A*3303	
HLA-A*6801	
HLA-B*0702	
HLA-B*0801	
HLA-B*1302	
HLA-B*2705	
HLA-B*3501	
HLA-B*3902	
HLA-B*4201	
HLA-B*4403	
HLA-B*5101	
HLA-B*5701	
HLA-B*5703	
HLA-B*8101	
HLA-C*0304	
HLA-C*0602	
HLA-C*0702	
HLA-C*1502	
HLA-E*0103	
HLA-G*0101	
H-2 Dd	
H-2 Dk	
H-2 Kb	
H-2 Kd	
H-2 Kk	
H-2 Ld	
H-2 Db	
Mamu-A*01	
Mamu-A*08	
Mamu-B*17	
Qa-1b	

Alleles available as Loadable MHC Monomers

MHC I EASYMERS® POWERED BY IMMUNAWARE*	MHC II U-LOAD® MHC II MONOMERS
HLA-A*0101	HLA-DRB1*0101
HLA-A*0201	HLA-DRB1*0401
HLA-A*0203	HLA-DRB1*0701
HLA-A*0206	HLA-DRB1*1101
HLA-A*0301	
HLA-A*1101	
HLA-A*2301	
HLA-A*2402	
HLA-A*2407	
HLA-A*2501	
HLA-A*2601	
HLA-A*2902	
HLA-A*3002	
HLA-A*3101	
HLA-A*3201	
HLA-A*3601	
HLA-A*6801	
HLA-A*6802	
HLA-B*0702	
HLA-B*0801	
HLA-B*1401	
HLA-B*1501	
HLA-B*1502	
HLA-B*1509	
HLA-B*1801	
HLA-B*3501	
HLA-B*3508	
HLA-B*3701	
HLA-B*3801	
HLA-B*3901	
HLA-B*3906	
HLA-B*4001	
HLA-B*4101	
HLA-B*4402	
HLA-B*4403	
HLA-B*4601	
HLA-B*5101	
HLA-B*5201	
HLA-B*5501	
HLA-B*5701	
HLA-B*5702	
HLA-B*5801	
HLA-C*0303	
HLA-C*0304	
HLA-C*0401	
HLA-C*0501	
HLA-C*0602	
HLA-C*0701	
HLA-C*0702	
HLA-C*0802	
HLA-C*1203	
H-2 Db	
H-2 Kb	
H-2 Dd	
H-2 Ld	

MHC alleles available as Dextramer® Reagents via Custom Solutions and Services

HLA-A*0203	HLA-B*4101
HLA-A*0206	HLA-B*4402
HLA-A*2407	HLA-B*4601
HLA-A*2501	HLA-B*5201
HLA-A*2601	HLA-B*5501
HLA-A*3002	HLA-B*5702
HLA-A*3101	HLA-B*5801
HLA-A*3201	HLA-C*0303
HLA-A*3601	HLA-C*0401
HLA-A*6802	HLA-C*0501
HLA-B*1401	HLA-C*0701
HLA-B*1501	HLA-C*0802
HLA-B*1502	HLA-C*1203
HLA-B*1509	Mamu-A*04
HLA-B*1801	mMR1
HLA-B*3508	Other custom alleles upon request
HLA-B*3701	
HLA-B*3801	
HLA-B*3901	
HLA-B*3906	
HLA-B*4001	

VIEW FULL LIST

Need a Custom Allele or New Specificity?

Contact us and we will be happy to help!

*Immudex is the proud global distributor of easYmers® MHC I monomers powered by immunAware.

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