

Custom Tetramers by MBL Defining Specificity in Immunological Research

MHC Tetramers

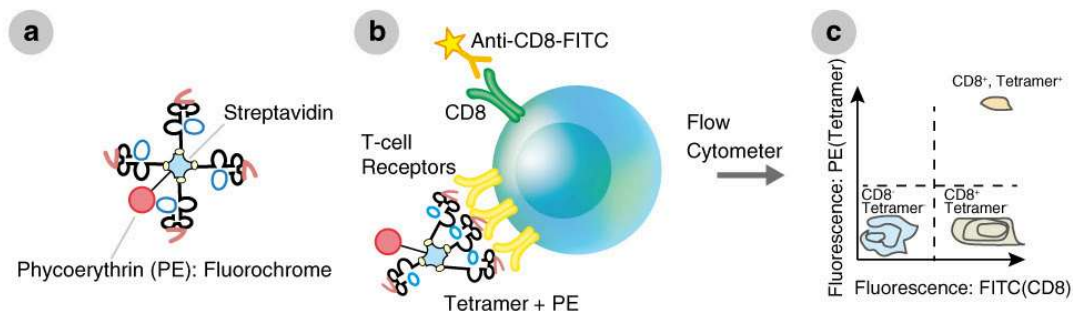
Useful Tools for Immune Monitoring

Infection Cancer immunology
Cell therapy Autoimmunity T cell neoantigen
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What are MHC tetramers?

MHC tetramers are complexes of four major histocompatibility complex (MHC) molecules, which are associated with a specific peptide and bound to a fluorochrome-conjugated streptavidin (a). Mainly, there are two types of tetramers, class I and class II. Class I tetramers bind to a distinct set of T cell receptors (TCRs) on a subset of CD8⁺ T cells (b). Class II tetramers bind to a distinct population of CD4⁺ T cells. Thus, by mixing tetramers with peripheral blood mononuclear cells (PBMCs) or whole blood and using flow cytometry as a detection system, all CD4⁺ or CD8⁺ T cells that are specific for one peptide in the context of a particular MHC allele can be detected, regardless of functionality (b, c). Simply stated, MHC tetramer reagents allow measurement of a cellular immune response directed toward single peptide specificity.

The heavy chain portion of MBL human and monkey class I tetramers contains a mutation to minimize non-specific binding of tetramers to CD8 on the cell surface, improving the specificity of these reagents to accurately discriminate the rare, antigen-specific T cells from the general CD8⁺ T cell population.



[Learn more about MHC tetramers](#)

MBL can manufacture custom MHC tetramers or biotinylated monomers of your interest. The available alleles are listed as follows:

HLA-A	HLA-B	HLA-C	HLA-E	Mouse	Chicken	Rhesus Macaque
A*01:01	B*07:02	Cw*01:02	E*01:01	H-2K ^b	BF2*1201	Mamu-A*90120-5
A*02:01	B*08:01	Cw*03:03	E*01:03	H-2K ^d	BF2*1501	
A*02:06	B*15:01	Cw*03:04		H-2D ^b		
A*02:07	B*15:02	Cw*08:01		H-2D ^d		
A*03:01	B*35:01	Cw*12:02		H-2D ^k		
A*11:01	B*40:01	Cw*15:02		H-2L ^d		
A*23:01	B*40:02			H-2K ^K		
A*24:02	B*40:06			A2K ^b		
A*26:01	B*42:01			(Chimera)		
A*29:02	B*52:01			A24K ^b		
A*31:01	B*54:01			(Chimera)		
A*33:03						

Human Class II	
DRB1*01:01	DRB1*11:01
DRB1*04:01	DRB1*12:02
DRB1*04:10	DRB1*14:01
DRB1*04:05	DRB1*14:06
DRB1*07:01	DRB1*15:01
DRB1*08:02	DRB1*15:02
DRB1*08:03	DRB4*01:01
DRB1*09:01	

Custom Tetramer Order Form

MBL featured products

In addition to custom services, MBL offers a diverse range of approximately one thousand catalog products.

- [Human Class I](#) - Cancer, Virus, Bacteria etc.
- [Mouse Class I](#) - Cancer, Virus, OVA etc.
- [Human Class II](#) - Virus, Bacteria, Allergen, CLIP etc.
- [Mouse Class II](#) - MOG, OVA, CLIP etc.
- [CD1d](#) - NKT cell related research
- [HLA-E](#) - NK cell related research
- [Chicken Class I](#)

We also provide a custom tetramer kit, enabling you to create your own MHC tetramers using our licensed peptide exchange technique.

- [QuickSwitch™ Custom Tetramer Kits](#)
Kits for preparation of custom tetramers in the laboratory using our proprietary peptide exchange technology.
- [QuickSwitch™ Peptide Screening Kit](#)
For screening MHC binding peptides and creating custom MHC tetramers

Explore Full Catalog Product Lineup



If you're searching for **TCR tetramers** or **custom mouse class II MHC tetramers**, please reach out to us using the button below↓↓

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