Miltenyi Biotec

MHC multimers for T cell analytics

Maximum flexibility. Minimum time. Unparalleled precision.

Antigen-specific immunotherapies can revolutionize cancer, infection, and autoimmune care, yet reliable flow cytometry of T cells remains a major challenge. Designed with innovative MHC multimer technology, our MHC MACSimers offer exceptional precision and simplicity in detecting, analyzing, and sorting even the rarest antigen-specific T cells.

- **Maximum TCR avidity and stability**
- **Enhanced brightness for superior T cell detection sensitivity and improved staining performance**
- **Minimum time with fast and easy protocol**
- **Flexible peptide loading**
- **Standardized TCR T analysis**

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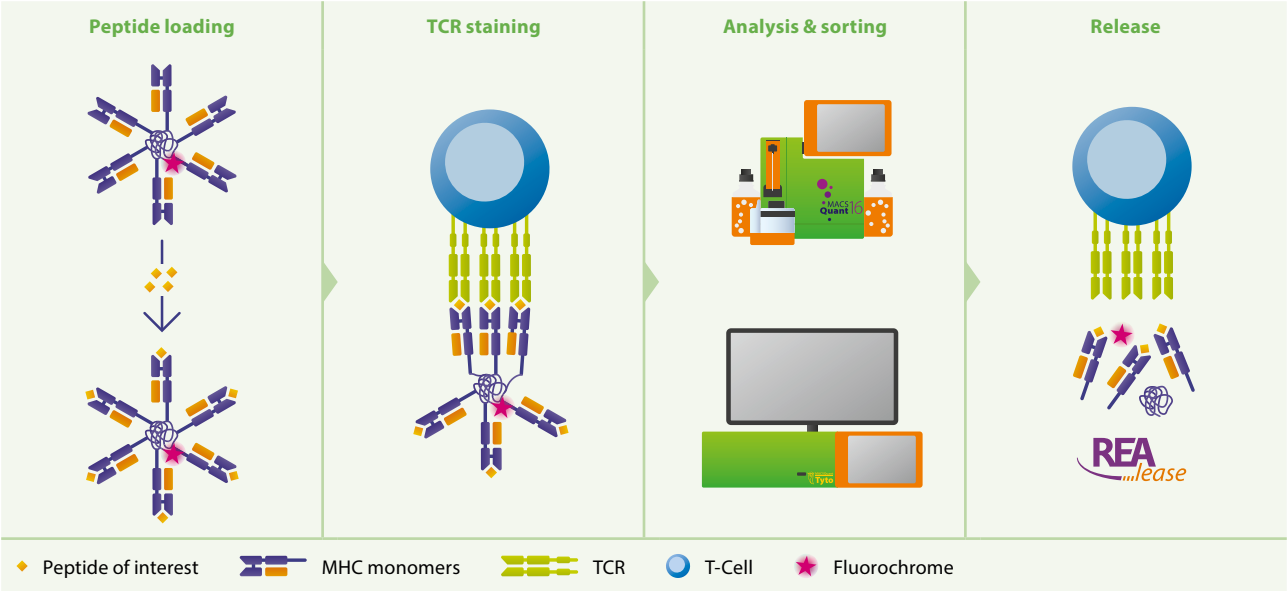


Figure 1: MHC MACSimer workflow for analysis and sorting of antigen-specific T cells. MHC MACSimers consist of MHC monomers multimerized on a fluorescently labeled backbone, and can be loaded with a peptide of interest. Peptide-loaded MHC MACSimers form highly specific and stable complexes with the T cell receptor (TCR) of their cognate T cells and enable antigen-specific T cell analysis on the MACSQuant® Analyzer, or TCR-based cell sorting using the MACSQuant Tyto® Cell Sorter. For further downstream applications, MHC MACSimers can be gently detached using REAlease® Technology.

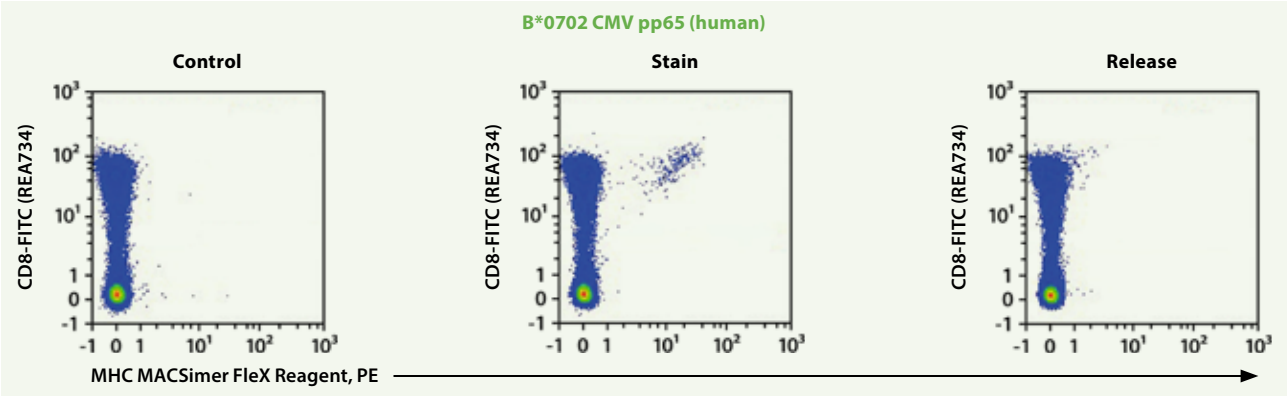


Figure 2: Detection of human antigen-specific CD8⁺ T cells using the MHC MACSimer FleX Kit. PE-conjugated MHC MACSimer B*0702 FleX Kit loaded with human cytomegalovirus (CMV) antigen pp65 (TPRVTGGGAM) was used to detect CMV-specific T cells from human PBMCs (Stain). As control, allele-matched MHC MACSimer control reagents were used (Control). MHC MACSimers were released from the cells via REAlease Technology (Release). CD8-FITC co-staining was performed with REAfinity® CD8 Antibody (REA734).

Seamlessly integrate MHC MACSimers into your flow cytometry panels! Select an MHC allele from our FleX Kit portfolio and simply load MHC MACSimers with your antigen of interest from our MACSpep Single Peptide portfolio, for fast TCR and epitope screening. Alternatively, opt for our ready-to-stain, peptide-loaded MHC MACSimers, tailored for standardized, reliable TCR analytics across cell therapy development workflows.

LEARN MORE

Transform complex TCR analytics into simple workflows with our growing MACSimers portfolio. Start here!

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