C.T.L. CERI Peptides



A Positive Control for the Functionality of CD8+ T Cells

Consisting of 32 peptides of Cytomegalo- Epstein Barr, and Flu viruses the CEF peptide pool has been widely used as a positive control for CD8+ T cell functionality. Due to insufficient epitope coverage, however, the CEF pool fails in ~48% of the test cases, even in Caucasians. With CERI we introduce a universal CD8+ T cell positive control which, consisting of 124 dominant epitopes of CMV, EBV, RSV, and Influenza virus, works in ~96% of test cases. (For the specifics, please see *Lehmann et al., Cells, 2021. 10, 248*).

Monitoring antigen-specific T cell immunity relies upon functional tests which require both T cells and antigen-presenting cells to be uncompromised. The collection of blood, its storage and shipment from the clinical site to the test laboratory, as well as the subsequent isolation, cryopreservation and thawing of peripheral blood mononuclear cells (PBMC)before the actual test is performed, can introduce numerous variables that may jeopardize the assay results.

Therefore, no T cell test is valid without assessing the functional fitnessof the PBMC being utilized. This canonly be accomplished through theinclusion of positive controls that actually evaluate the performance of the antigen-specific T cells.

Aiming to detect CD8+ T cells in Caucasians only, the 32 CEF peptides were not intended as a universal positive control. In contrast, the 124 CERI peptides were selected based on peptide binding predictions for a broad range of HLA class I alleles expressed in all human races, and diverse ethnic subpopulations. Consisting of immune dominant peptides of CMV, EBV, RSV, and Influenza viruses for all common HLA Class I alleles expressed in the human population we introduce the CERI peptide pool as a universal CD8+ T cell positive control.



Join the team of researchers who are using the CERI peptide pool for CD8+ T cell functionality assessment. Contact us today.

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