

Berkeley Lights Launches T Cell Receptor Sequencing Kit

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The T Cell Receptor Sequencing Kit (TCRseq Kit) allows users of Berkeley Lights platforms to more efficiently identify, recover, and sequence T cells of interest



Berkeley Lights, a leader in cell selection, on 6 March 2020 launched their new T Cell Receptor Sequencing Kit (TCRseq Kit). The TCRseq Kit enables users of Berkeley Lights' Beacon and Lightning instruments to recover functionally validated T cell receptors (TCRs) from a cell sample that has as few as 10,000 input cells. The TCRseq Kit enables Berkeley Lights platform users to first characterize the T cell function using the Berkeley Lights Cell Therapy Development Suite and then only sequence the T cells that matter. This therefore functionally replaces existing methodologies that require re-expressing hundreds of TCRs in the hopes of identifying the rare sequence that imparts an ideal specificity.

"We're excited to announce the launch of the TCRseq Kit, an advanced tool that enables recovery of alpha/beta chain sequences specific TCRs from single cells and increases TCR recovery to over 70%," said John Proctor, Ph.D., Senior Vice President of Marketing at Berkeley Lights. "We are building a Cell Therapy Development Suite of tools to help our customers better characterize T cells with the Beacon and Lightning instruments."

After performing a T cell functional assay on the Beacon or Lightning instrument, the user selects single human T cells of interest and exports them from the company's OptoSelect chip to a well plate. Using reagents provided in the TCRseq Kit, RNA from single T cells is recovered and V(D)J regions of the TCR alpha and beta chains are amplified. The resulting cDNA is ready for the user to index and sequence using sequencing platforms. The TCRseq Kit includes reagents and protocols for processing up to 192 single human T cells.