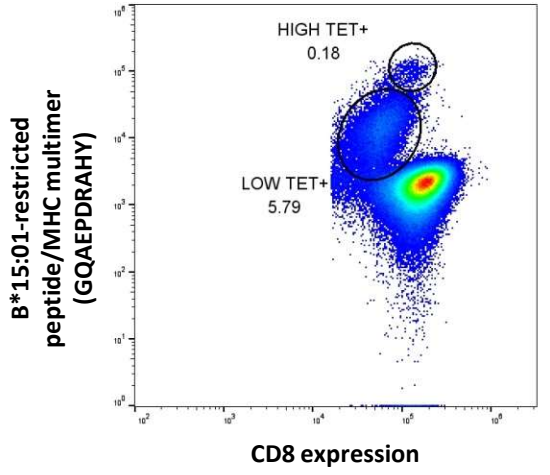
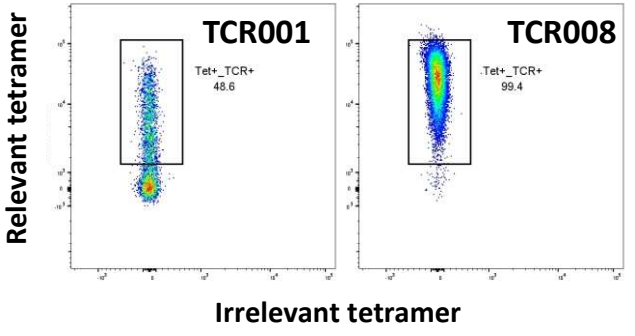


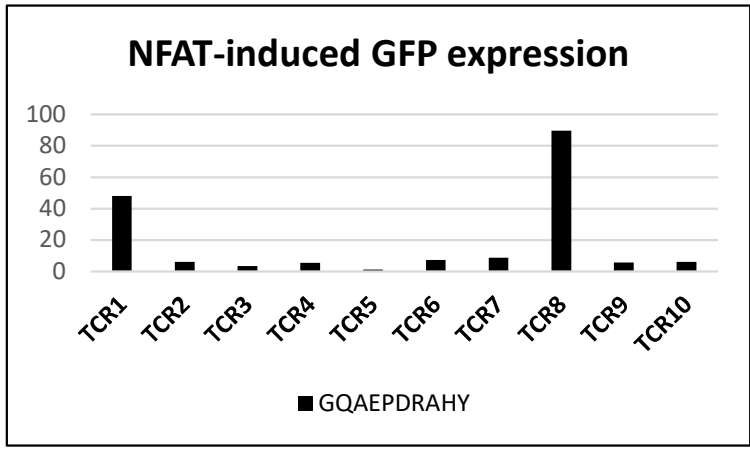
**B** Detection of B\*15:01-restricted E7 peptide-specific T cell



**C** Tetramer binding assay



**D** GFP test



**Pipeline of new HPV-specific TCR discovery. Case study of HLA-B\*15:01-restricted E7 epitope specific TCR discovery.** A) A schematic representation of antigen-TCR discovery and functional validation B) Detection of B\*15:01-restricted E7 peptide-specific T cells in PBMCs using pMHC multimer. C) Tetramer binding assay identified two promising TCRs reactive to B\*15:01-restricted E7 peptide after TCR transduction. D) NFAT-induced GFP expression across all 10 TCRs we identified demonstrated successful T cell activation by cognate peptide stimulation.