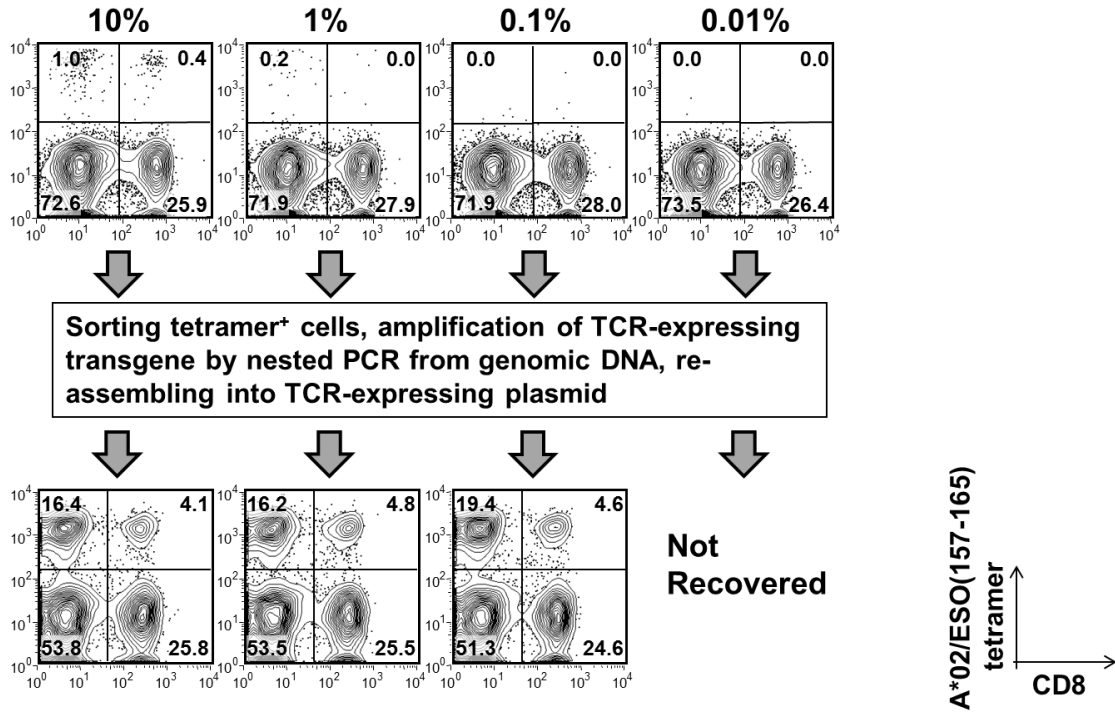


Percentage of AL-TCR-expressing plasmid



Supplementary Figure S4

Recovery of tumor antigen-specific TCR from a plasmid library. HLA-A*02-restricted NY-ESO-1(157-165)-specific AL-TCR-expressing retroviral plasmid was mixed with an irrelevant TCR-expressing plasmid at indicated ratios. Polyclonally activated T cells were infected by retroviral vectors prepared from mixed plasmids and were stained by A*02/NY-ESO-1(157-165) tetramer. AL-TCR-encoding transgene was amplified from genomic DNA of tetramer+ T cells that were isolated by flow cytometry and was re-assembled into TCR-expressing plasmid. Polyclonally activated T cells were infected by retroviral vectors prepared from re-assembled plasmids and were stained by A*02/NY-ESO-1(157-165) tetramer.