



Supplementary Figure 1. LeY T cells are present in the peripheral blood (PB) and bone marrow (BM) for extended periods after infusion. Genomic DNA was extracted from patient peripheral blood (PB), bone marrow (BM) or GMP grade product at the timepoints indicated. PCR for the LeY transgene was then performed, and the reaction product was then run on agarose gels as depicted. The LeY transgene is arrowed at approximately 100 bp. All samples run on the gel are PB unless otherwise specified. Timepoints prior to infusion are designated as D-12, D-1; all other timepoints are post-adoptive transfer and designated in hours, days or months. Negative controls include pSAMEN, lysis buffer and water. pSAMEN plasmid served as a positive control. (bp = base pairs for DNA molecular weight ladder)

Supplementary Table 1. Release criteria for radio-labeled T cell product product for T cell tracking studies.

Release criteria for 111-In labeled product	Required result
Volume	50ml
Dose activity at release time	<14MBq
Labeling of syringe	Complies with specifications

Supplementary Table 2. Release criteria for manufactured T cell product for therapeutic administration.

Release criteria for T cell product	Required Result
Volume	100ml
Viability	Viable \geq 70%
Cell count	$\geq 5 \times 10^8$ cells
Sterility in process (Day-7)	No bacterial or fungal contamination (after 5 days)
Gram stain – finished product	No bacterial contamination detected
Endotoxin Assay	<2.5EU/ml In process testing (Day-2)
TCR gamma gene clonality assay	Negative In process testing (Day -12, -9, and 2)
Labeling of bags (primary and outer)	Complies with specifications

Supplementary Table 3. Primer and probe set used to detect LeY transcripts in CAR-T cell product and patient samples.

LeY (forward) primer	CCA AGC TGC AAA TCA CAG ATT ACA
LeY (reverse) primer	GCA CGA AGT GGC TGA AGT ACA TG
LeY (probe)	6FAM -ACG ACG ATG ACA AGC TGA GCA ACT CCA -TAMRA
am (forward) primer	CAC CAG CTC ATG GGC AAT G
am (reverse) primer	GGT GCT GGT GAA CTG ACT ATT GG
am (probe)	VIC -CAT GTG CAC CCT CAT CAC GGC CA- TAMRA