

Polypeptide Schematics

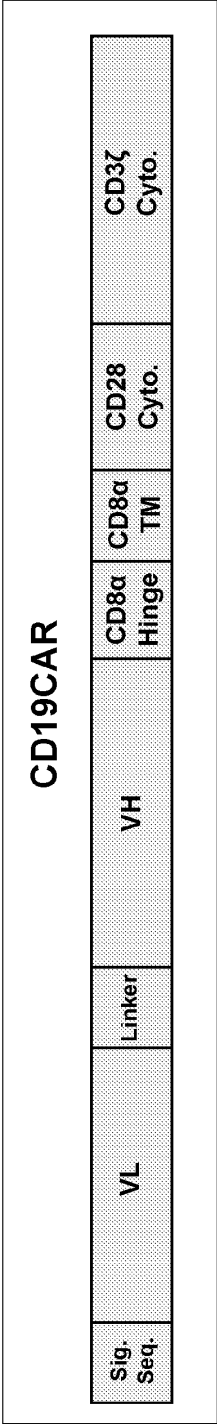


FIG. 1A

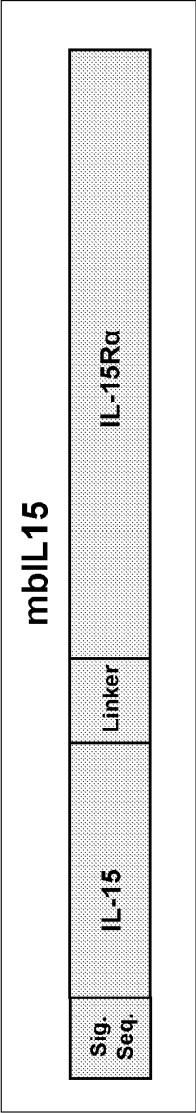


FIG. 1B

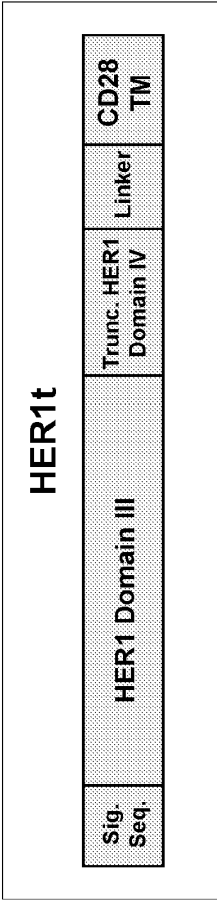


FIG. 1C

Genetic Modification Using Sleeping Beauty to
Generate CD19CAR-mbIL15-HER1t T Cells

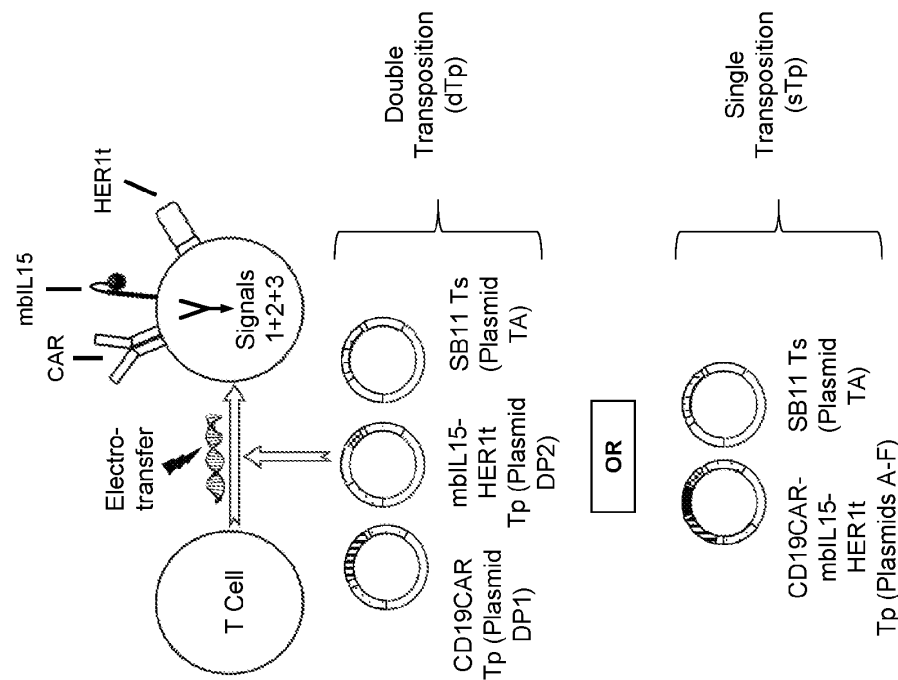


FIG. 2

Day 1 Post-Electroporation

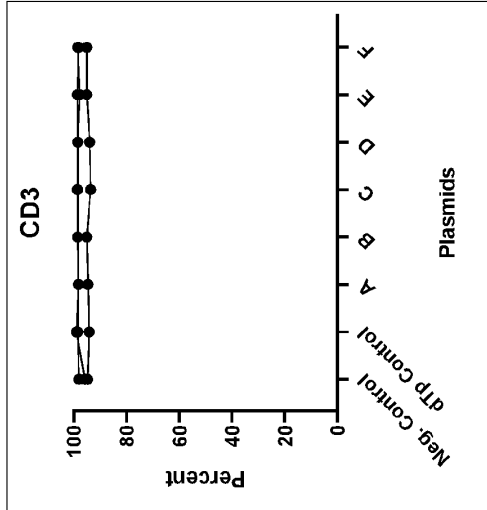
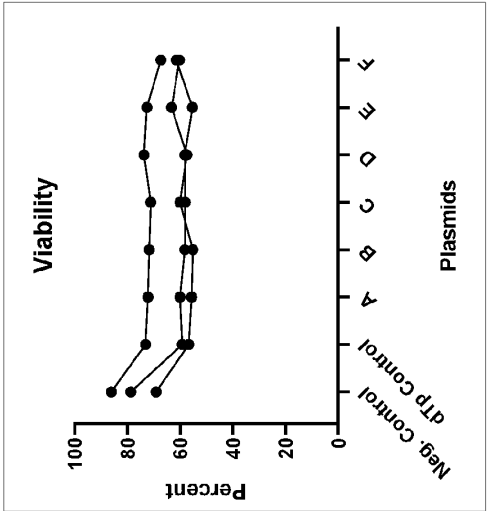


FIG. 3A

FIG. 3B

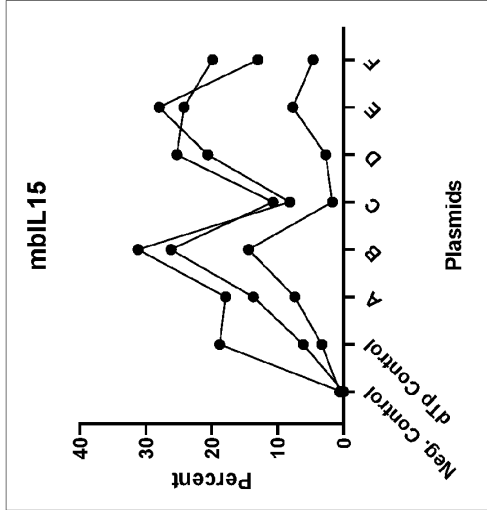
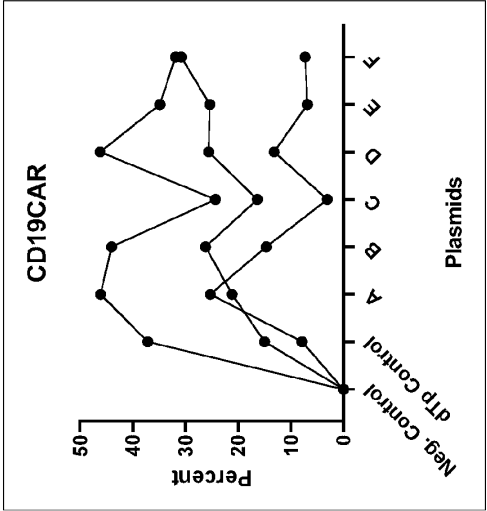


FIG. 3C

FIG. 3D

Day 1 Post-Electroporation

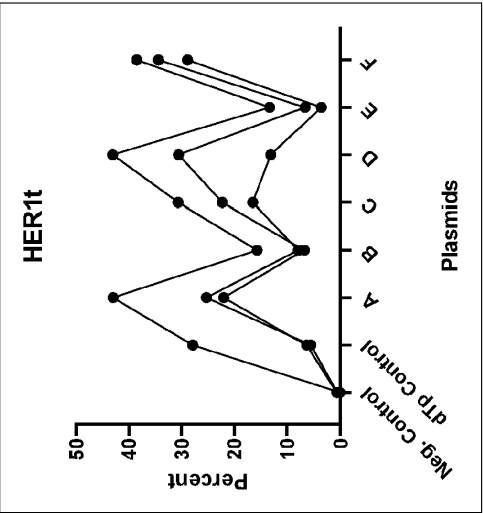


FIG. 3E

Transgene Co-Expression by Flow Cytometry: dTp Control

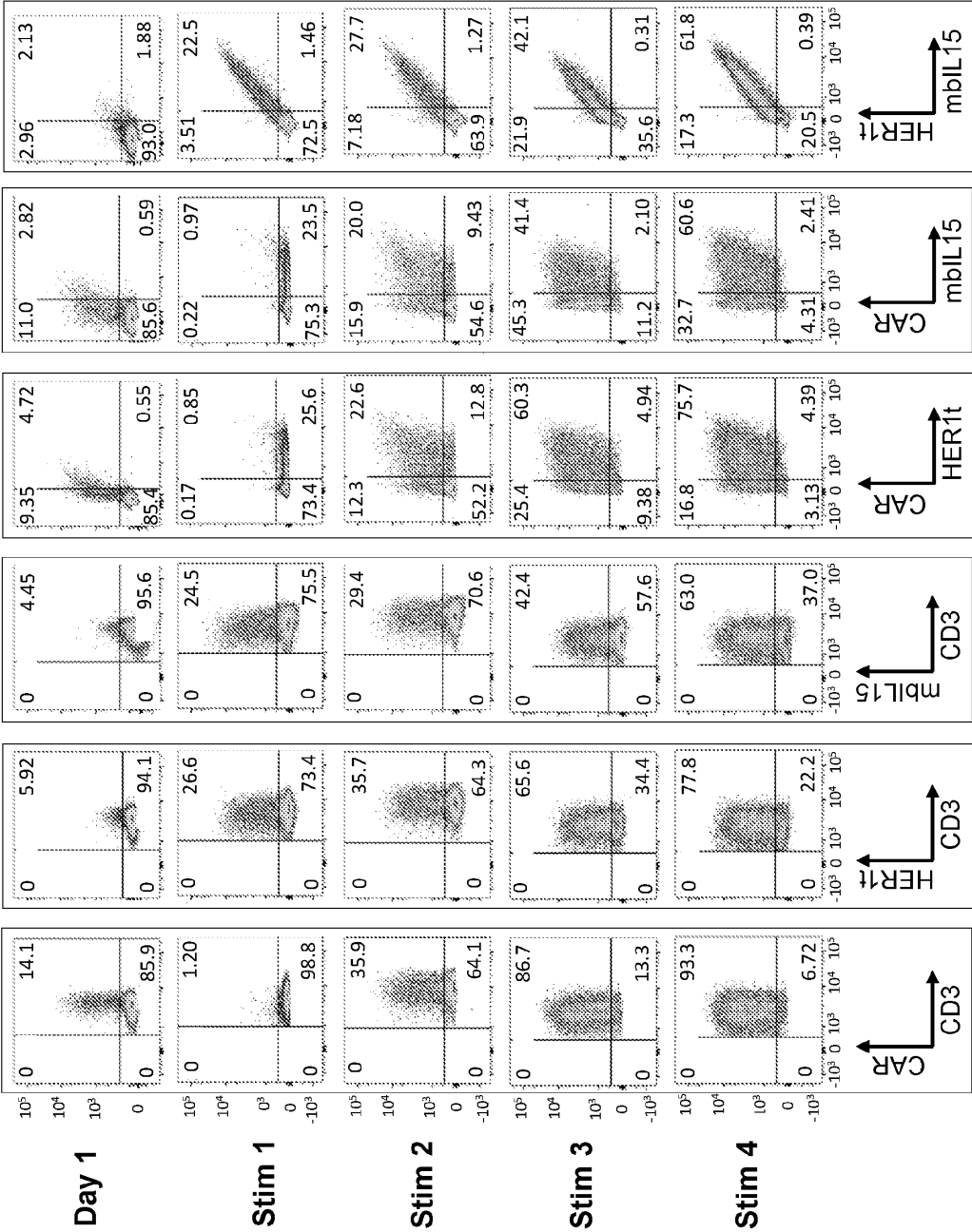


FIG. 4A

FIG. 4B

FIG. 4C

FIG. 4D

FIG. 4E

FIG. 4F

Transgene Co-Expression by Flow Cytometry: Plasmid A

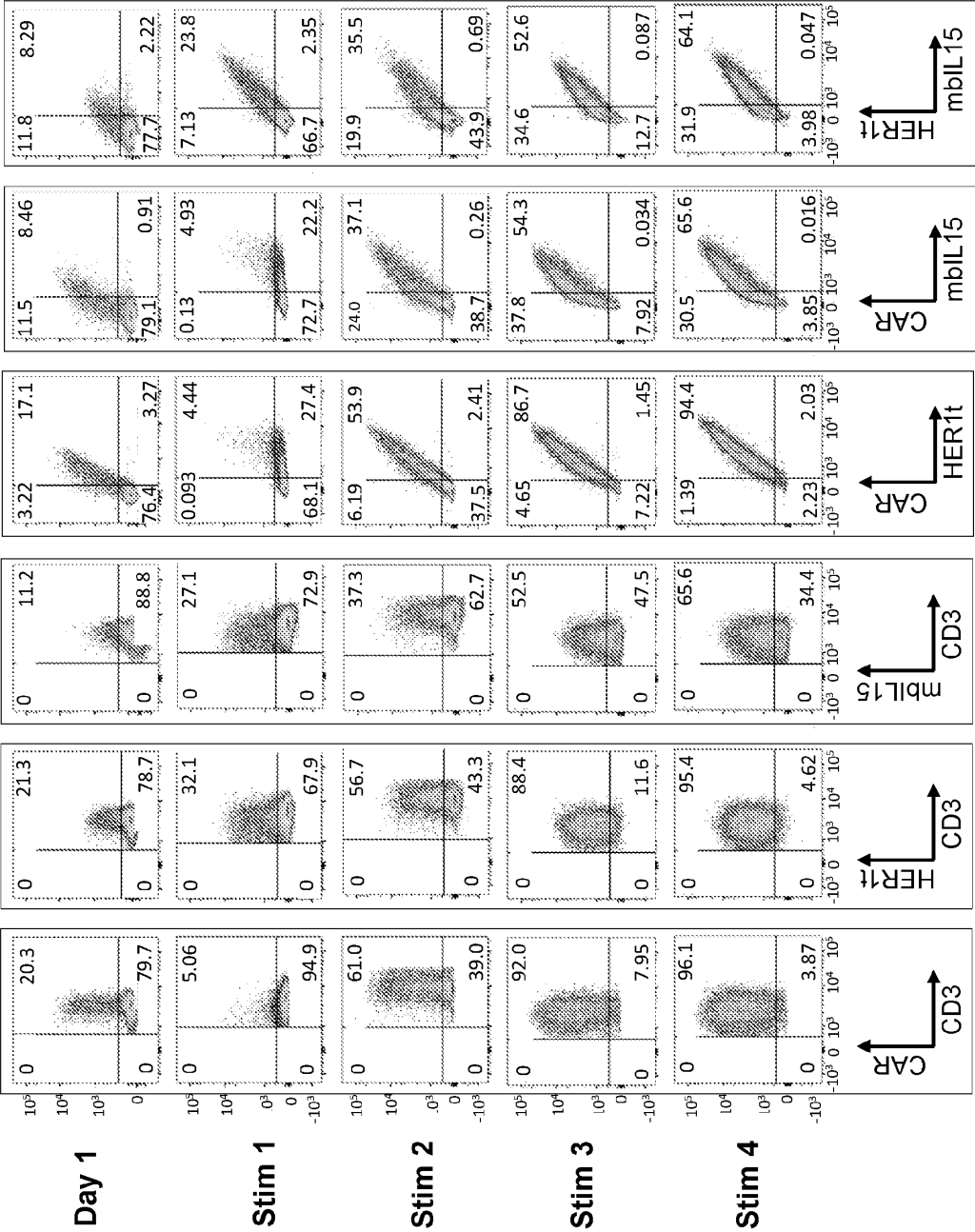


FIG. 5A

FIG. 5B

FIG. 5C

FIG. 5D

FIG. 5E

FIG. 5F

Transgene Co-Expression by Flow Cytometry: Plasmid B

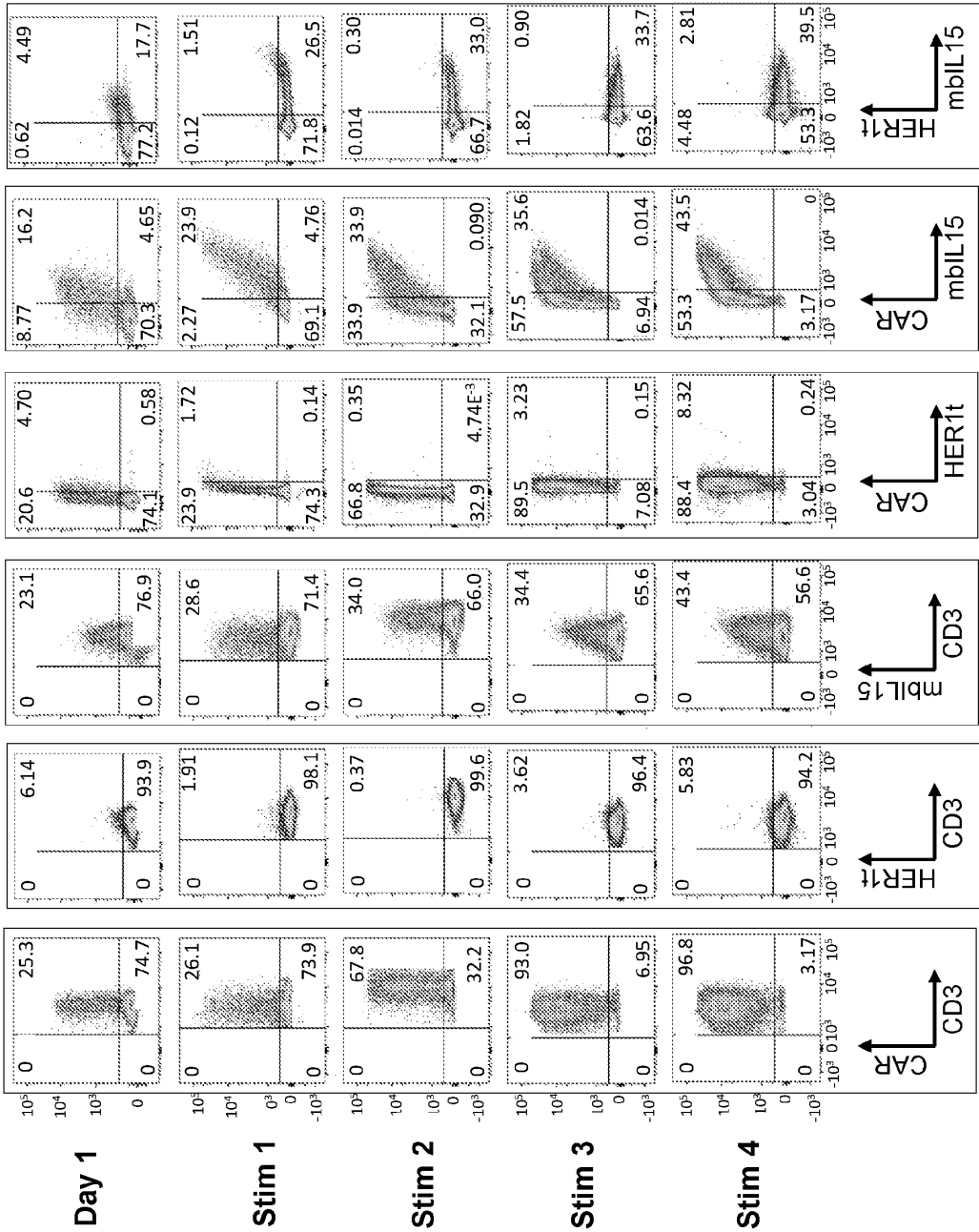


FIG. 6A

FIG. 6B

FIG. 6C

FIG. 6D

FIG. 6E

FIG. 6F

Transgene Co-Expression by Flow Cytometry: Plasmid C

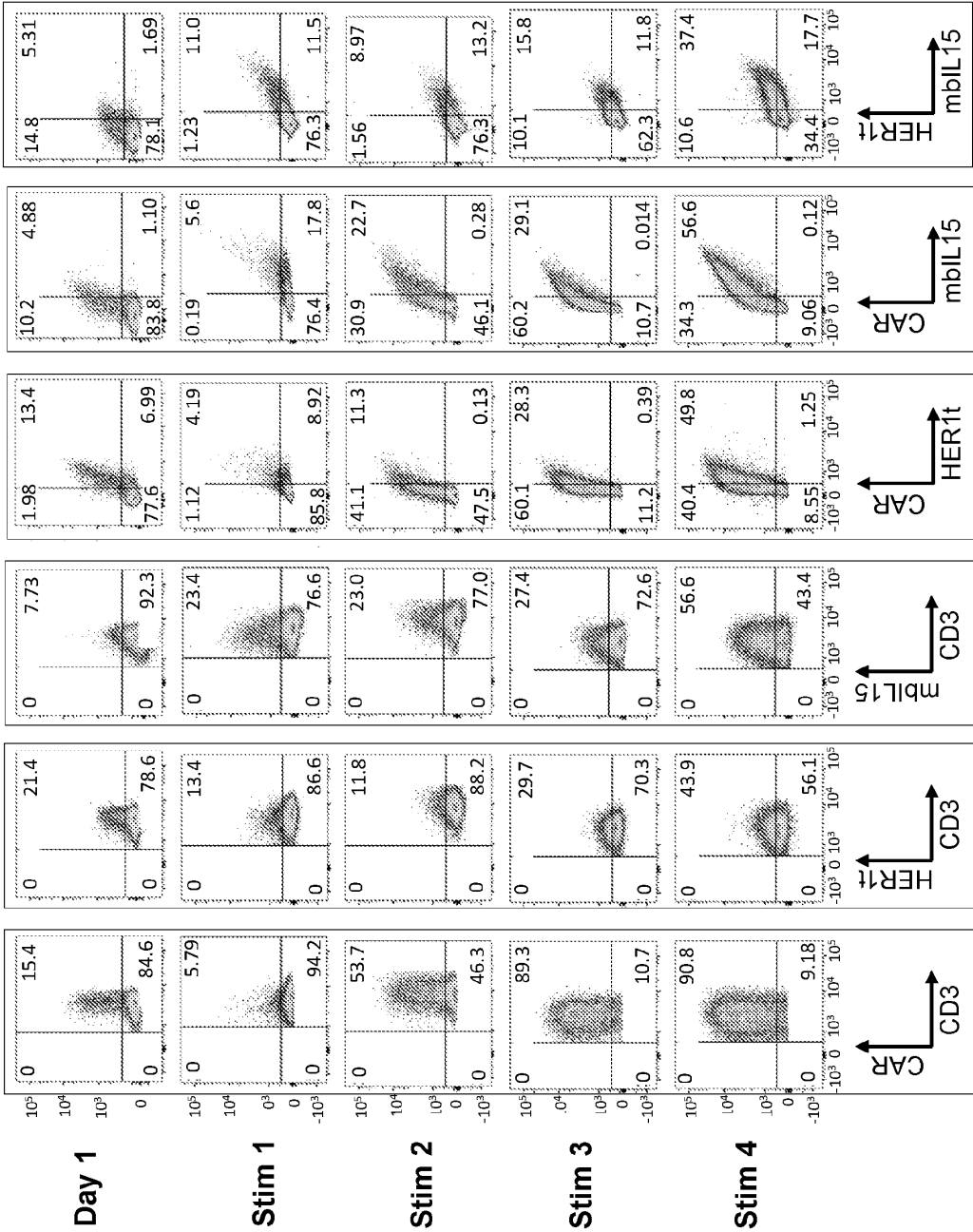


FIG. 7A FIG. 7B FIG. 7C FIG. 7D FIG. 7E FIG. 7F

Transgene Co-Expression by Flow Cytometry: Plasmid D

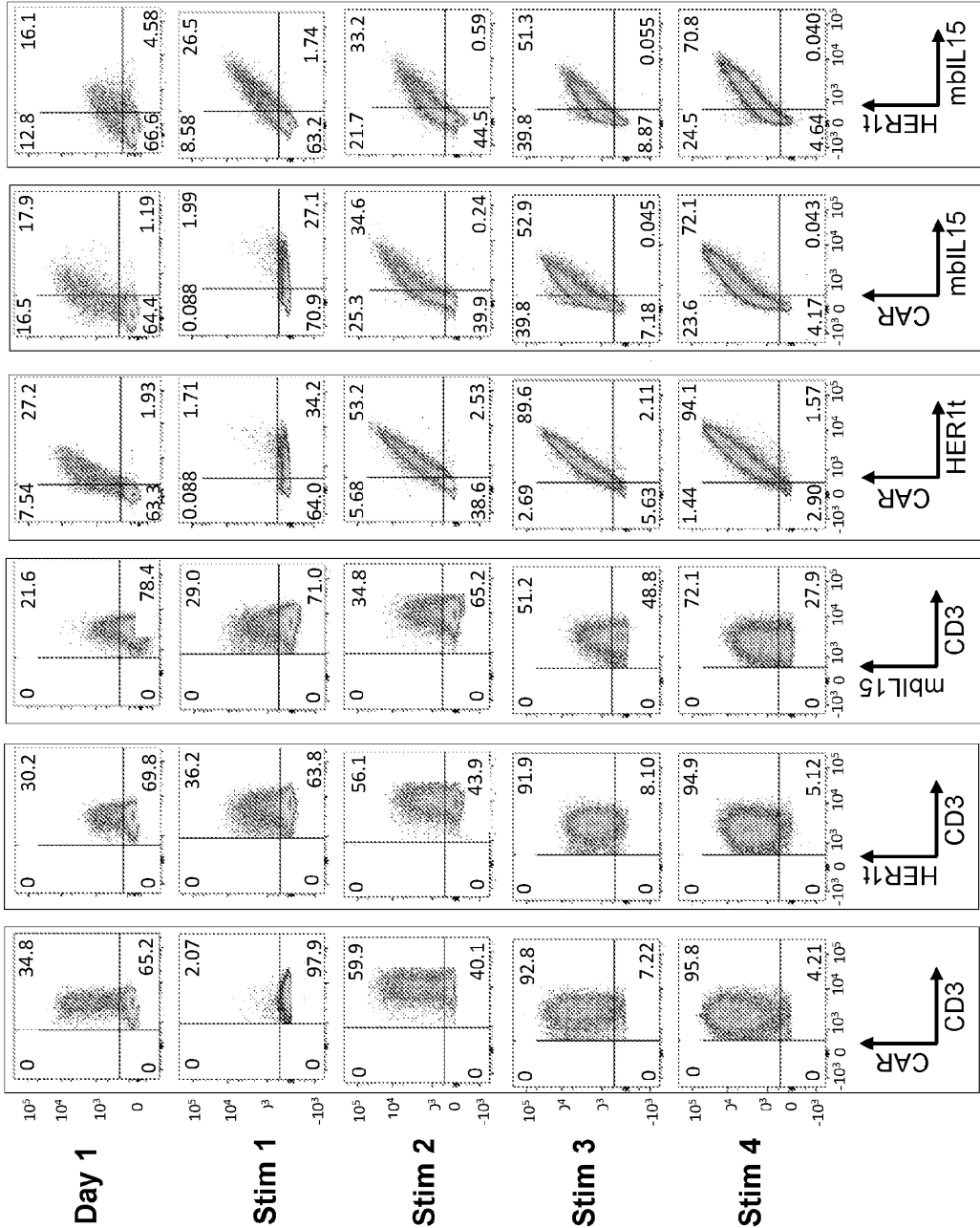


FIG. 8A

FIG. 8B

FIG. 8C

FIG. 8D

FIG. 8E

FIG. 8F

Transgene Co-Expression by Flow Cytometry: Plasmid E

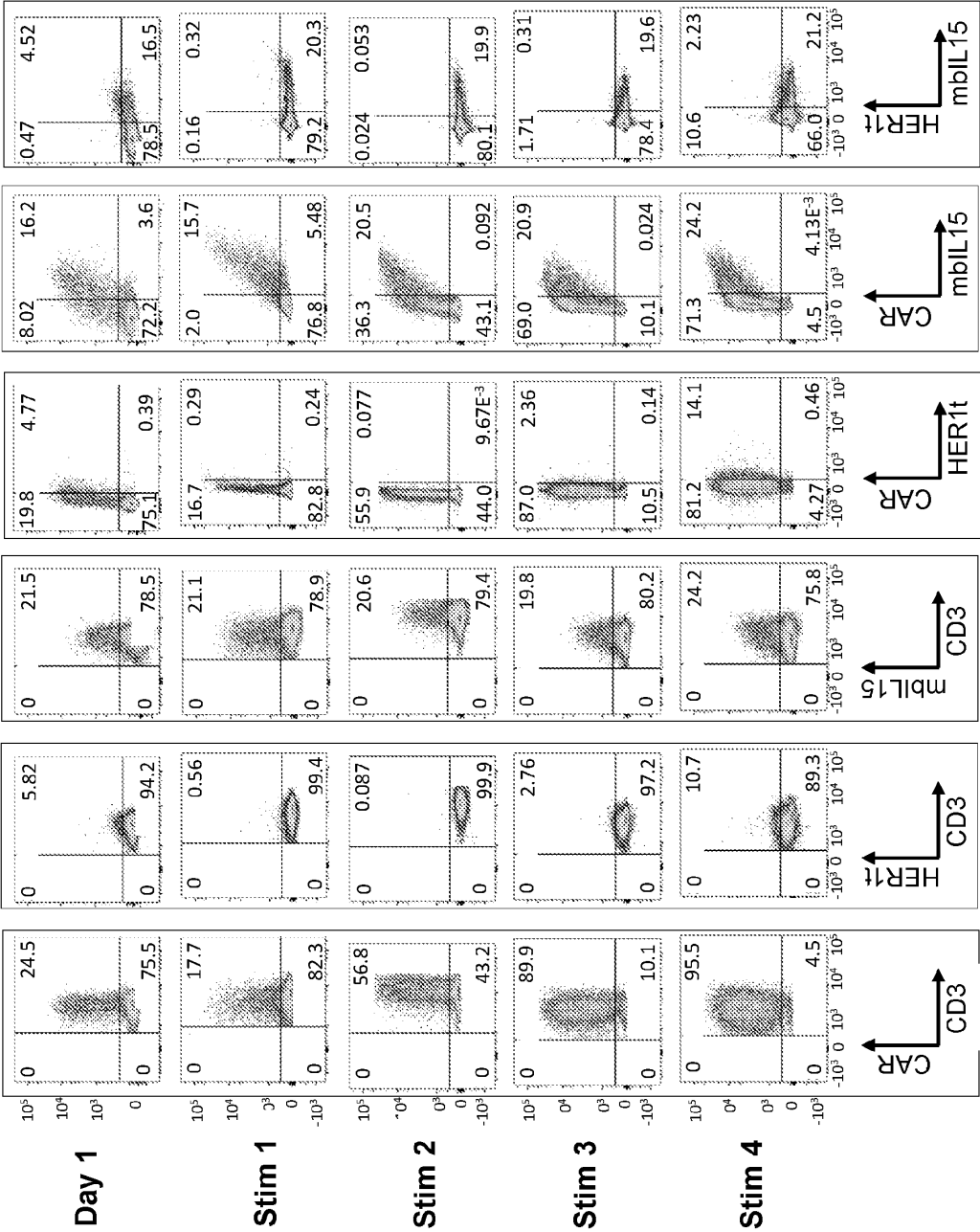
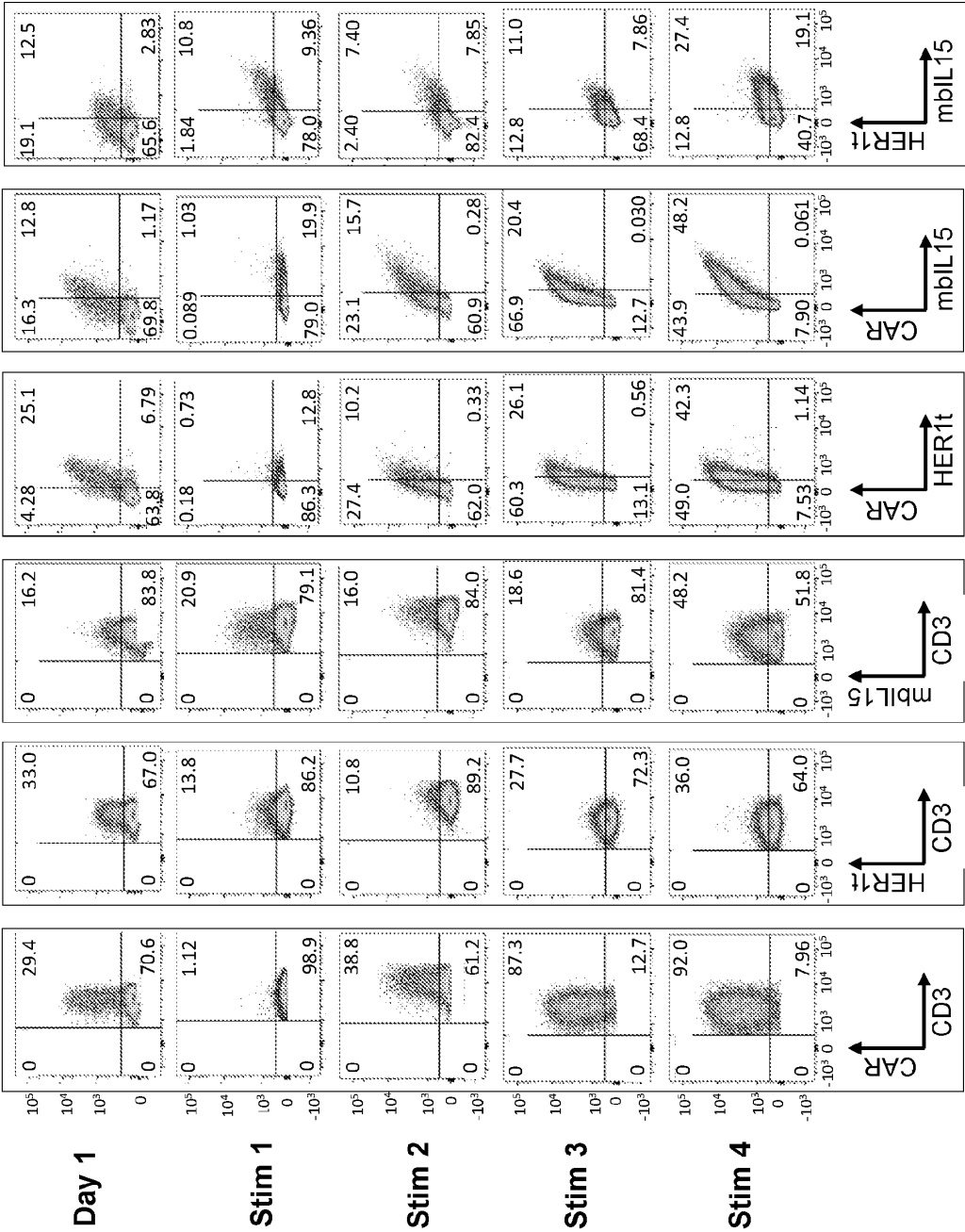


FIG. 9A FIG. 9B FIG. 9C FIG. 9D FIG. 9E FIG. 9F

Transgene Co-Expression by Flow Cytometry: Plasmid F



Transgene Expression by Flow Cytometry

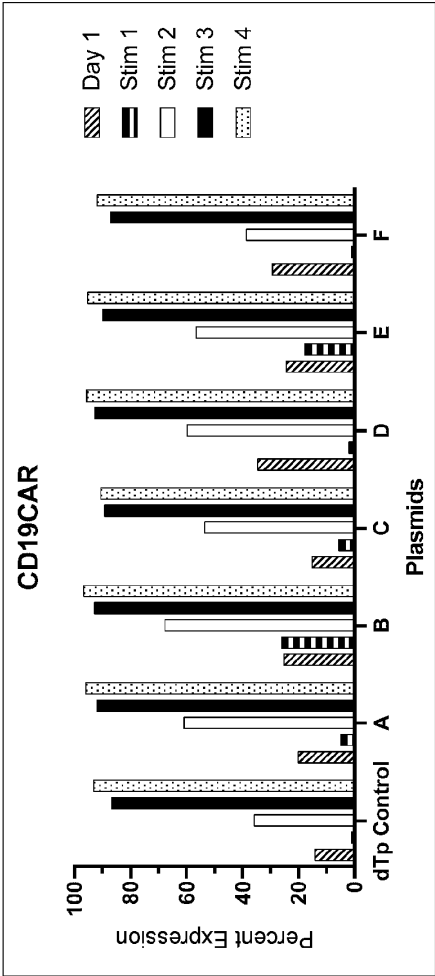


FIG. 11A

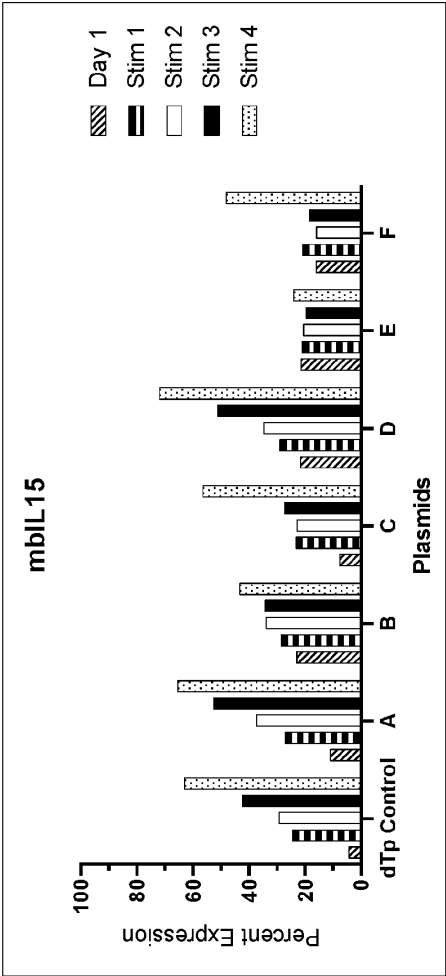


FIG. 11B

Transgene Expression by Flow Cytometry

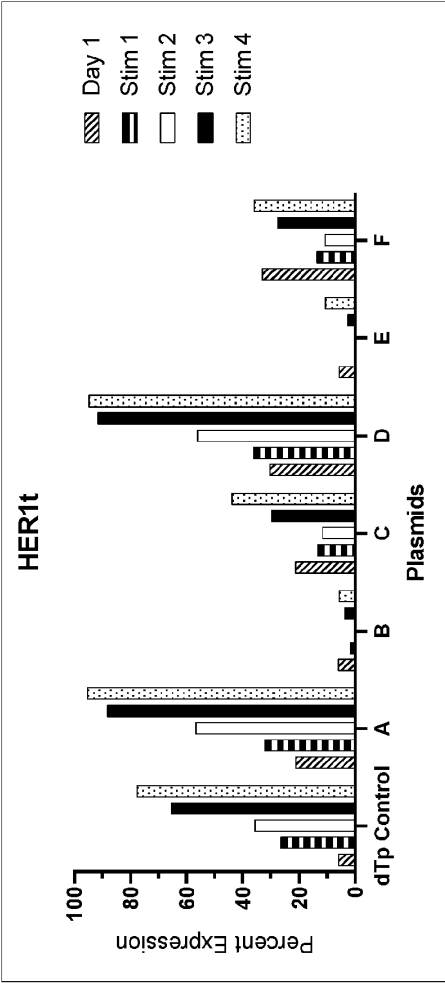


FIG. 11C

Transgene Expression by Western Blot

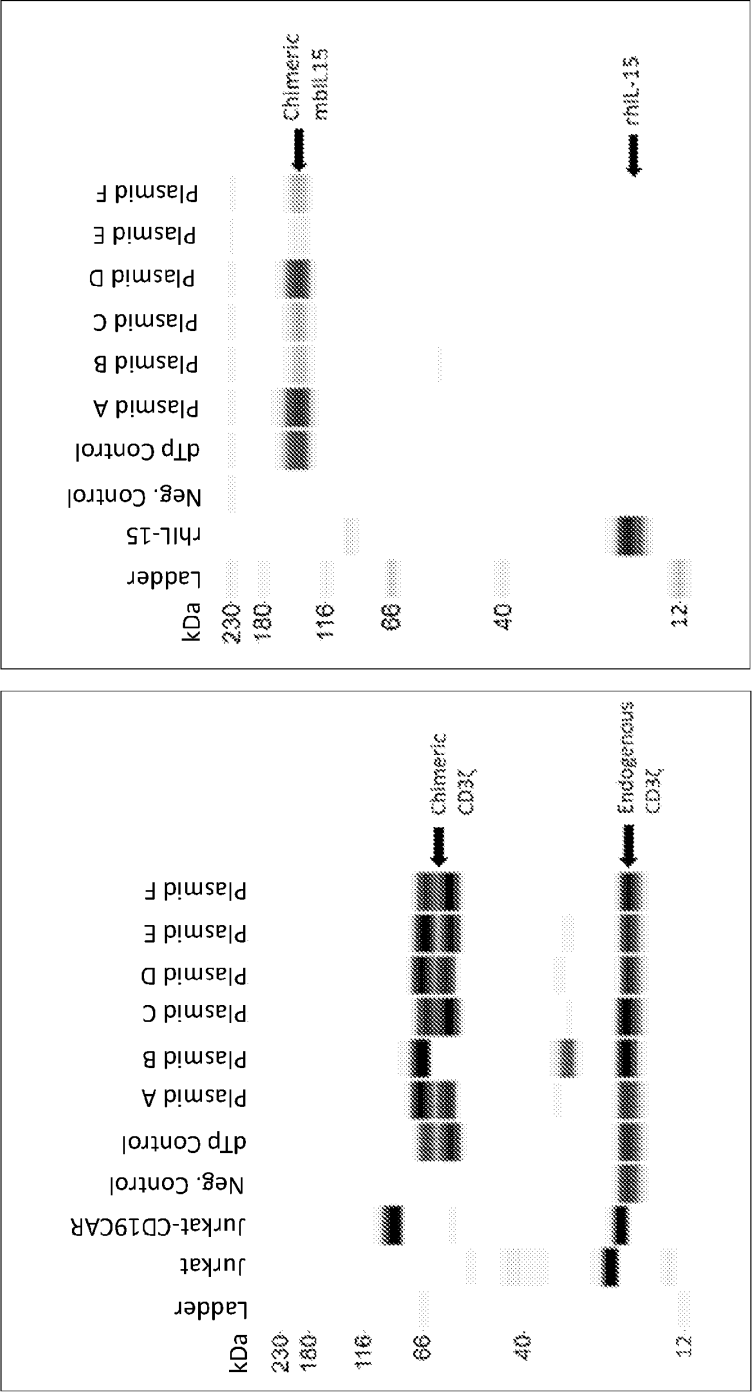


FIG. 12A

FIG. 12B

Transgene Expression by Western Blot

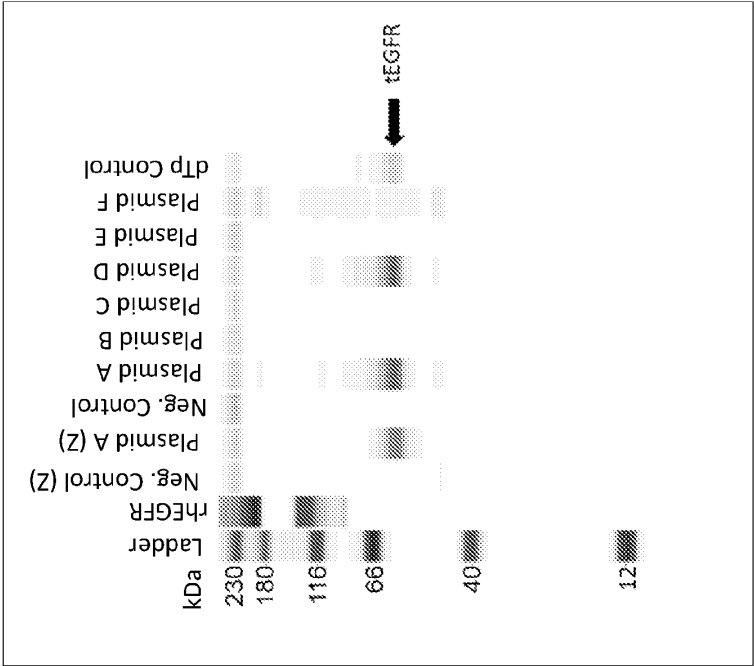


FIG. 12C

Cell Expansion of ex vivo Expanded Cells

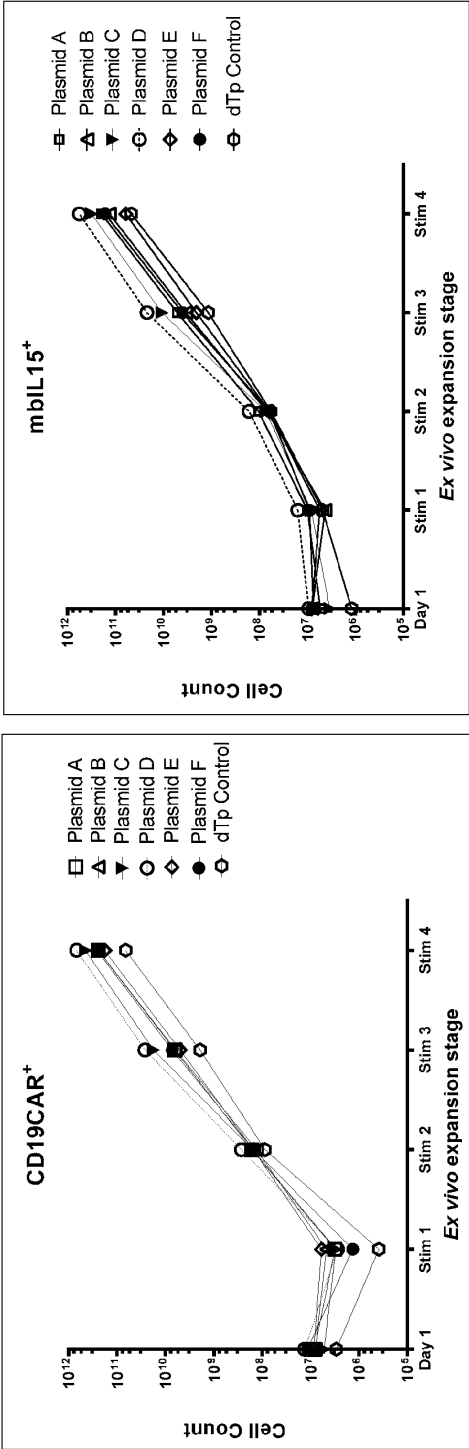


FIG. 13B

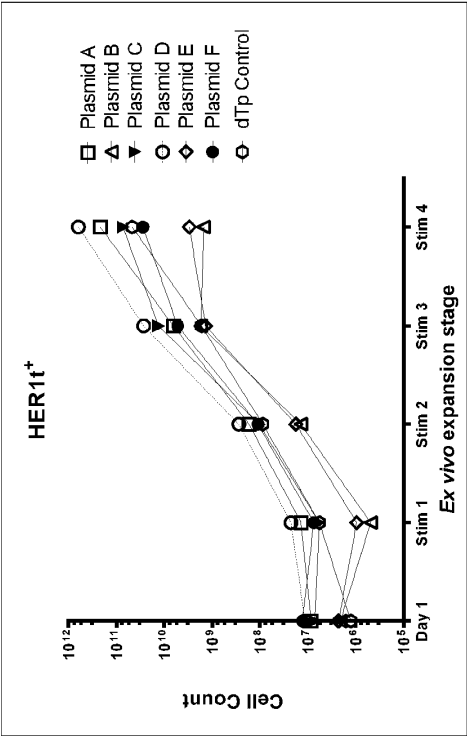


FIG. 13C

Cytotoxic Activity of ex vivo Expanded Cells

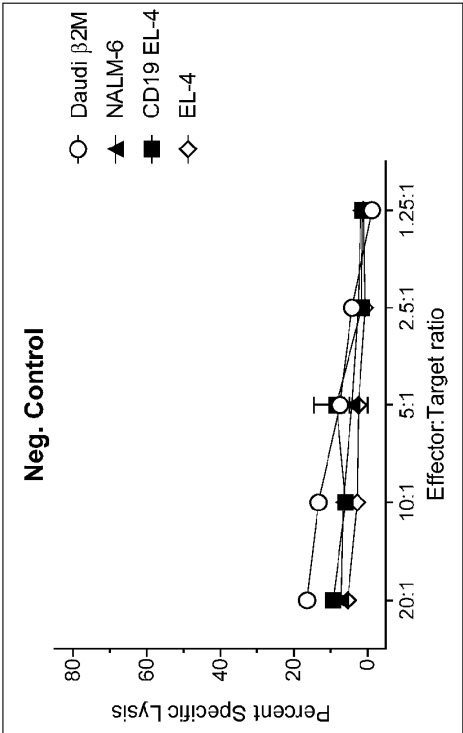


FIG. 14A

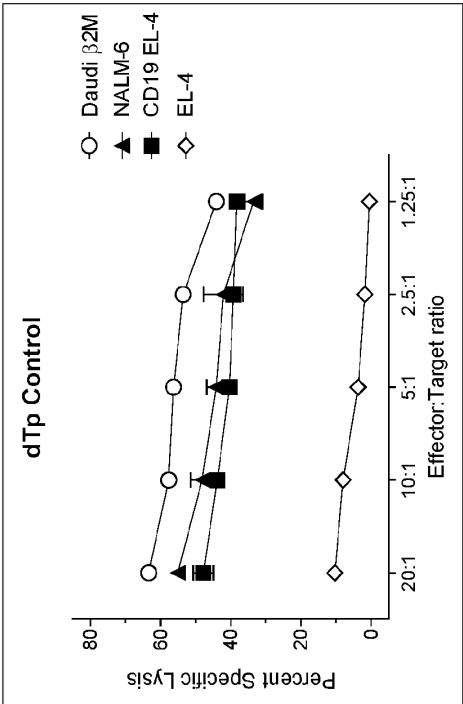


FIG. 14B

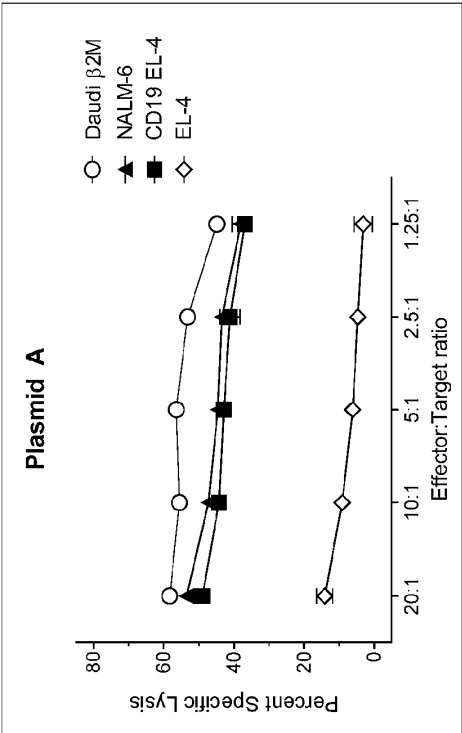


FIG. 14C

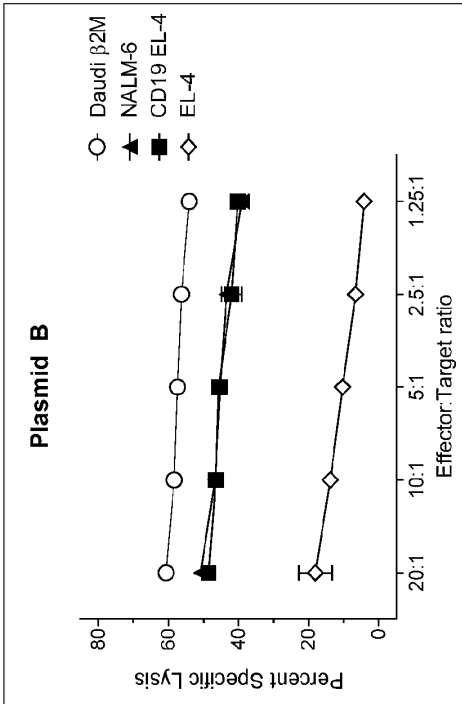


FIG. 14D

Cytotoxic Activity of ex vivo Expanded Cells

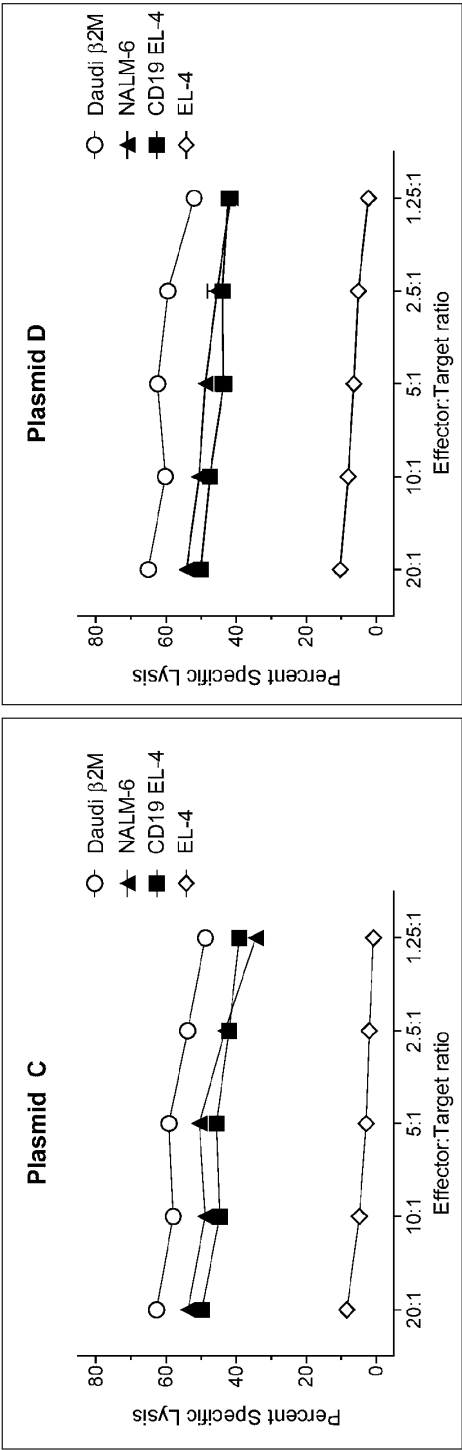


FIG. 14E

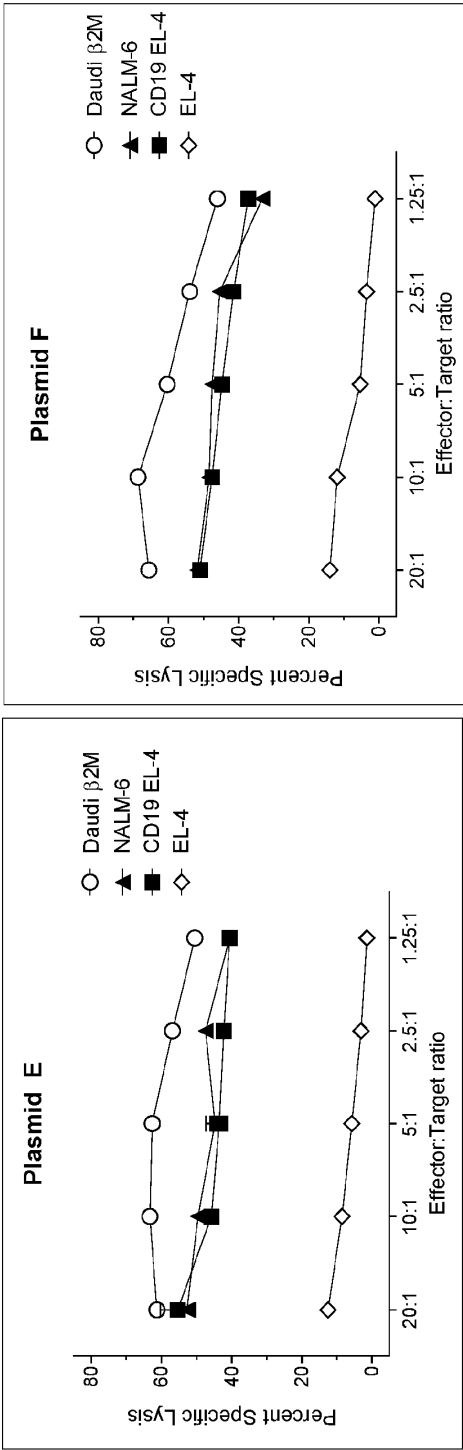


FIG. 14G

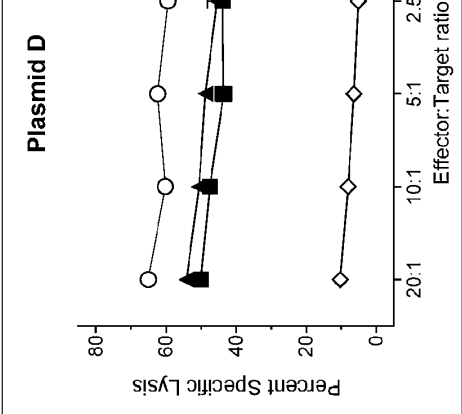


FIG. 14F

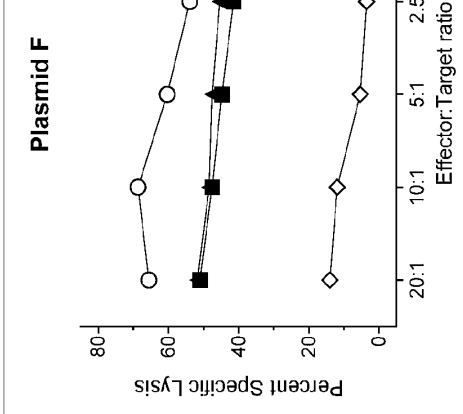


FIG. 14H

ADCC of ex vivo Expanded Cells

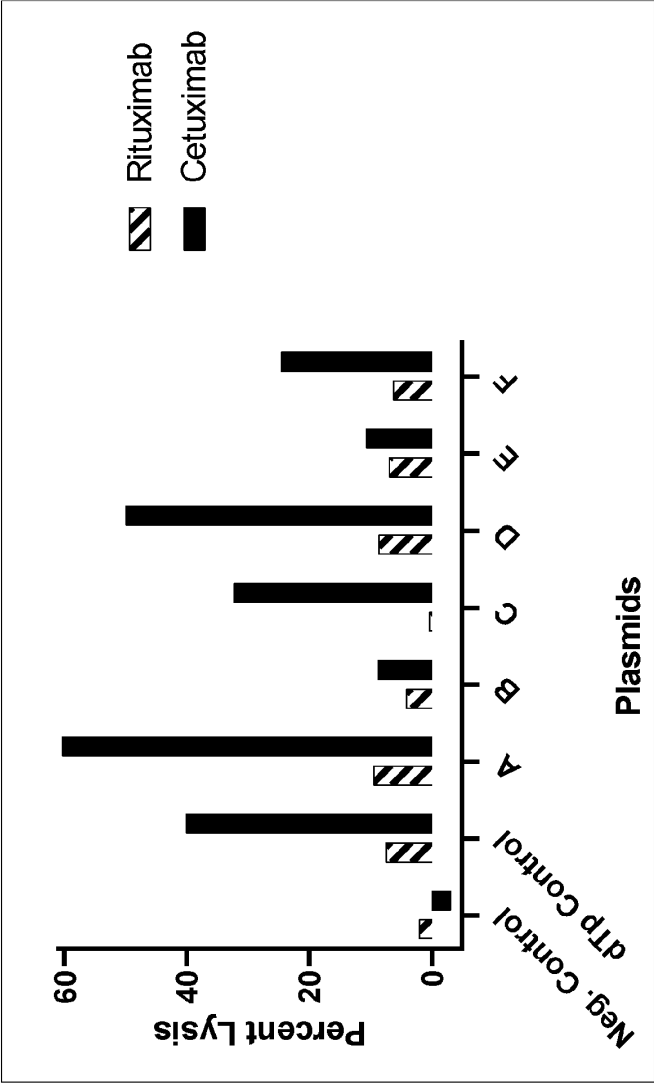


FIG. 15

Transgene Copy Number of ex vivo Expanded Cells

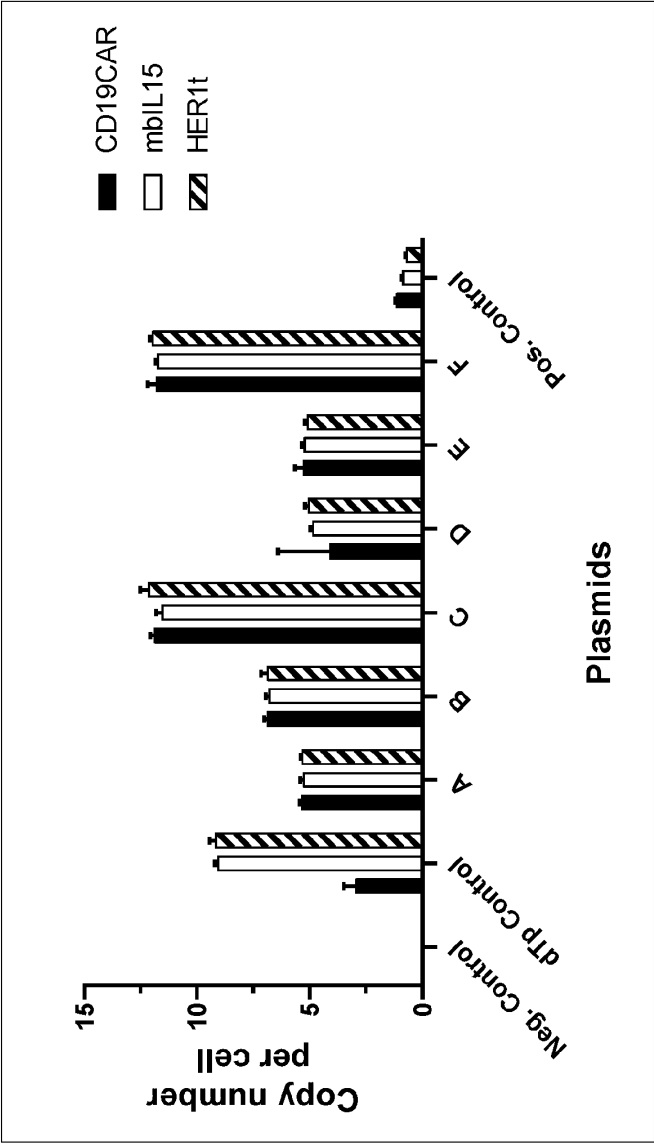


FIG. 16

Cell Expansion of ex vivo Expanded Cells

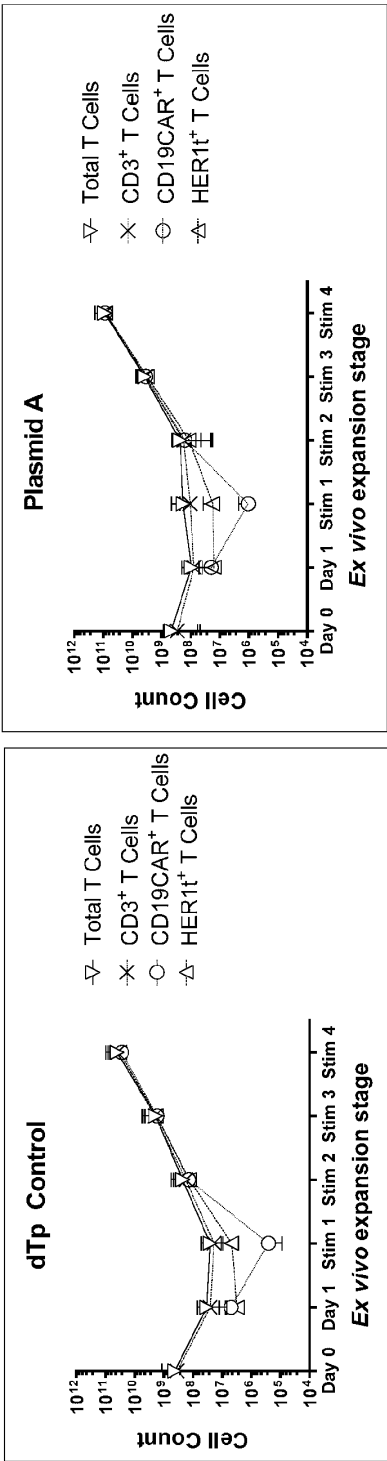


FIG. 17A

FIG. 17B

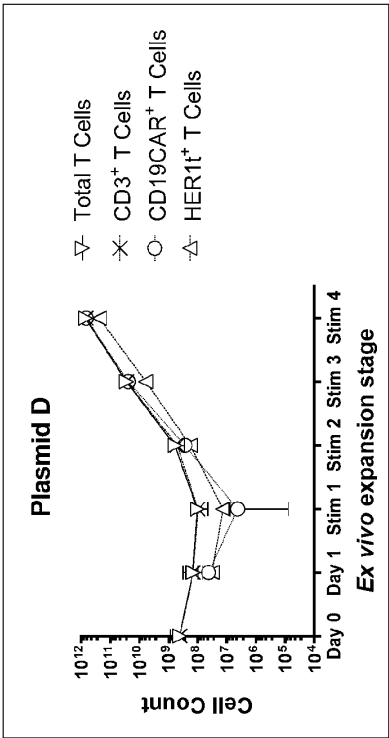


FIG. 17C

CD19CAR/HER1t Subpopulation Heterogeneity

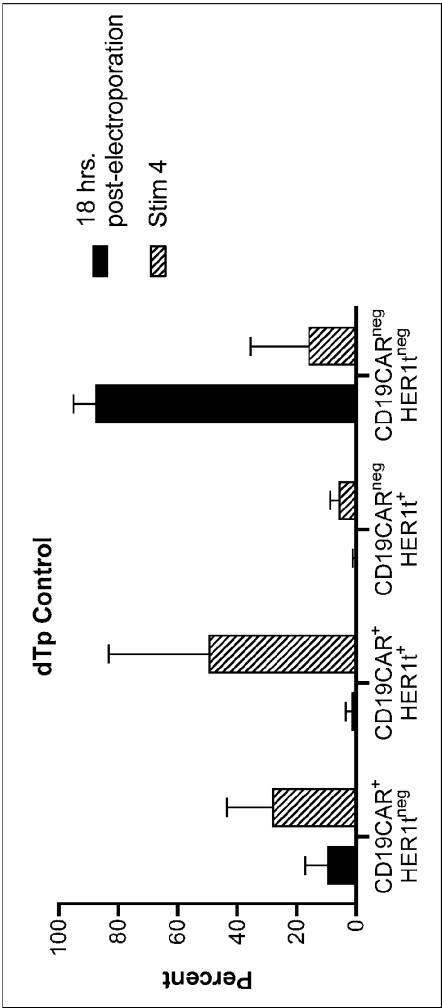


FIG. 18A

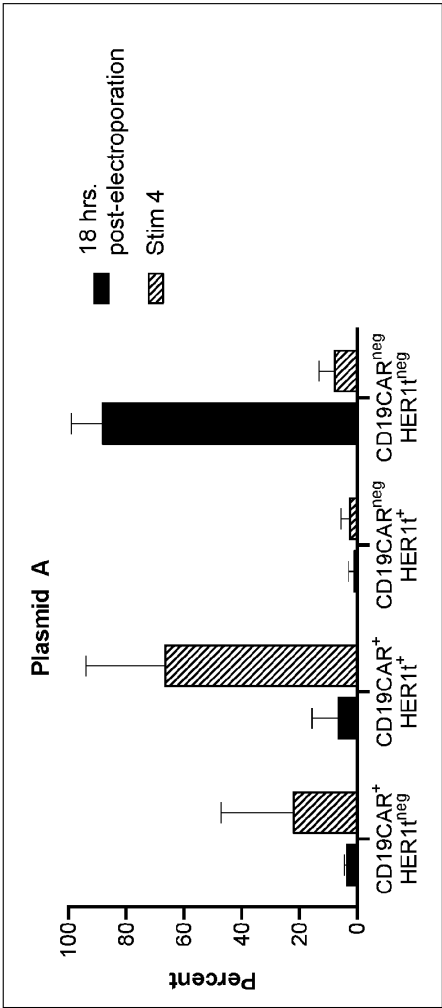


FIG. 18B

CD19CAR/HER1t Subpopulation Heterogeneity

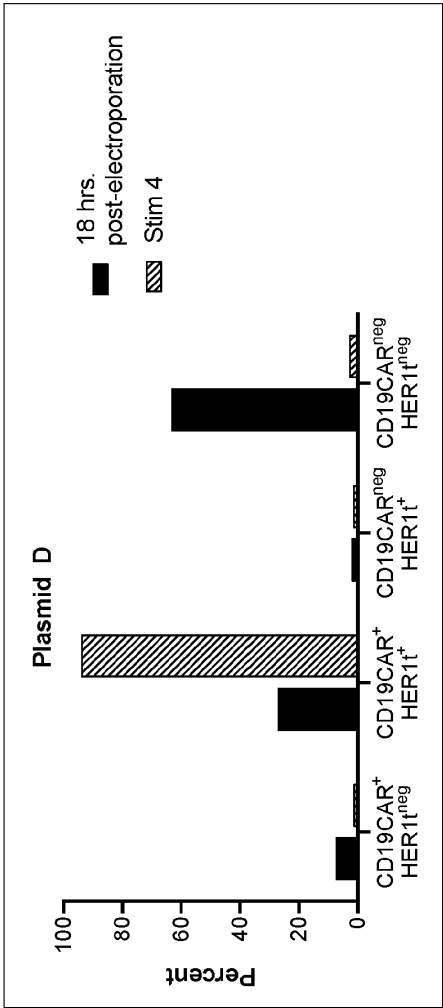


FIG. 18C

Cytotoxic Activity of ex vivo Expanded Cells

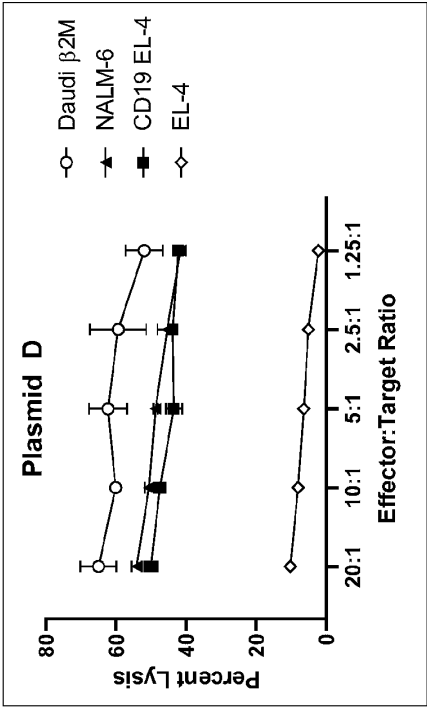
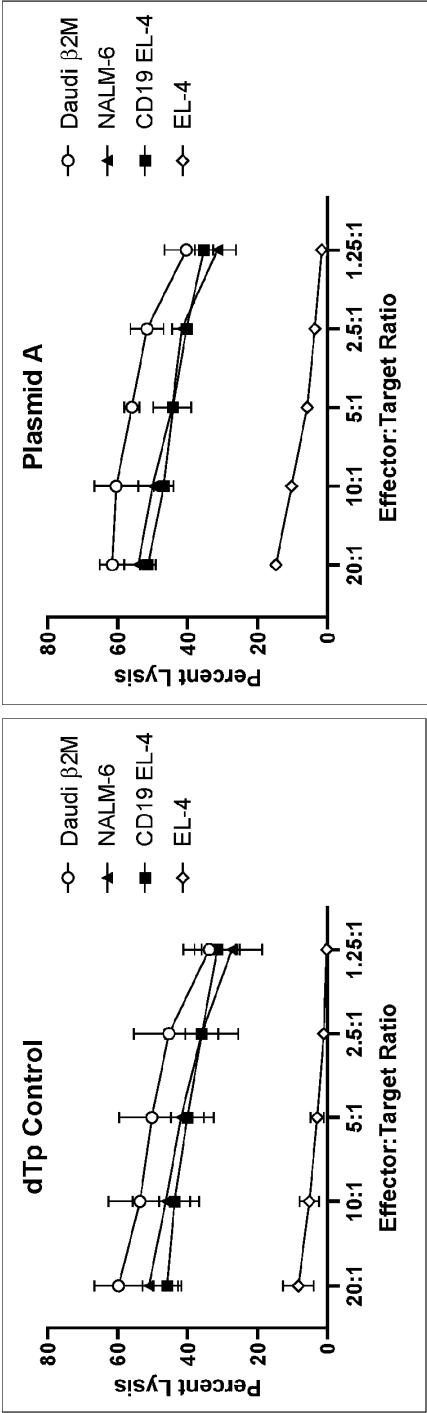


FIG. 19B

ADCC of ex vivo Expanded Cells

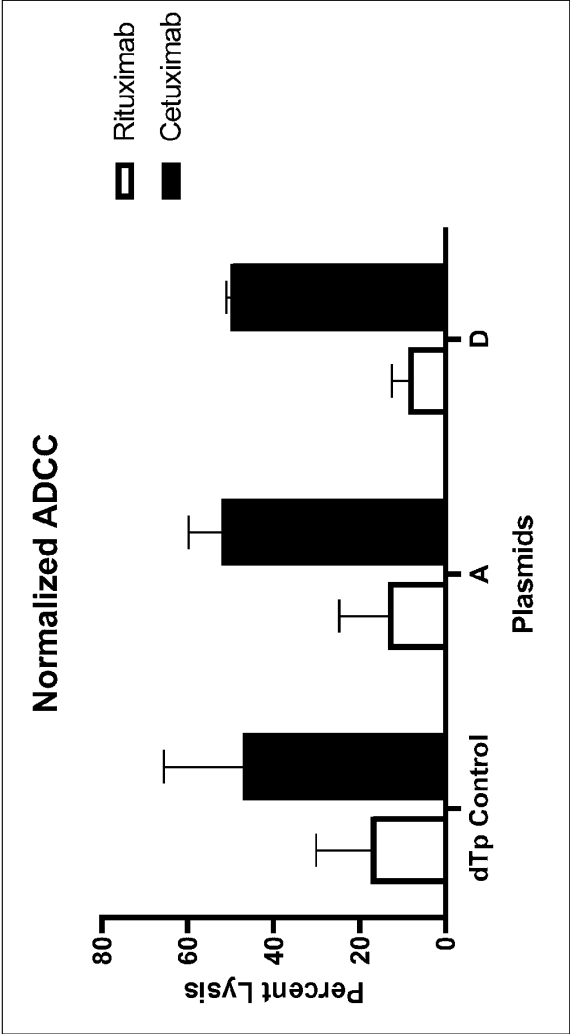


FIG. 20

Transgene Copy Number of ex vivo Expanded Cells

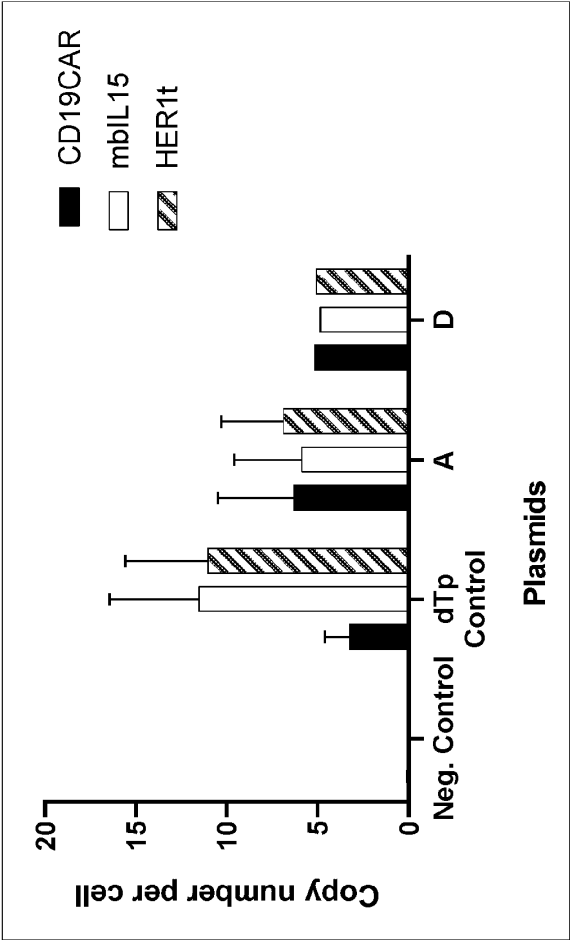
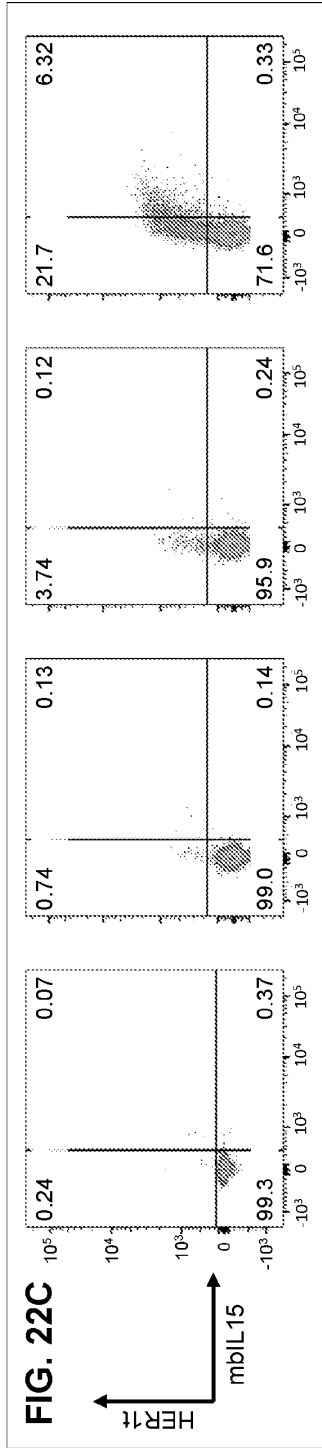
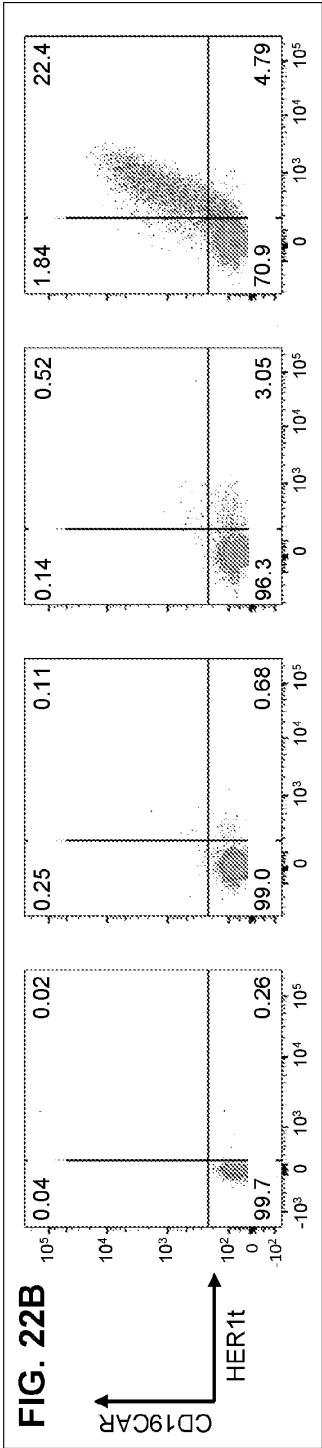
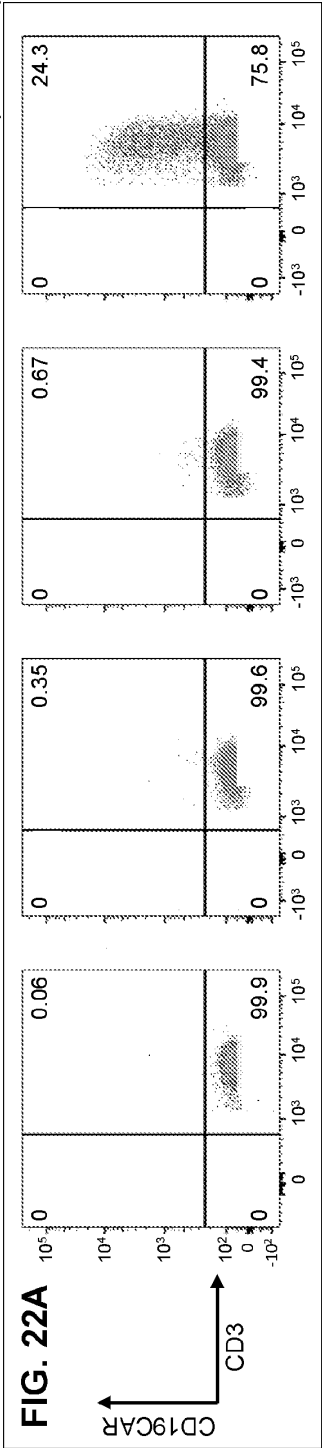


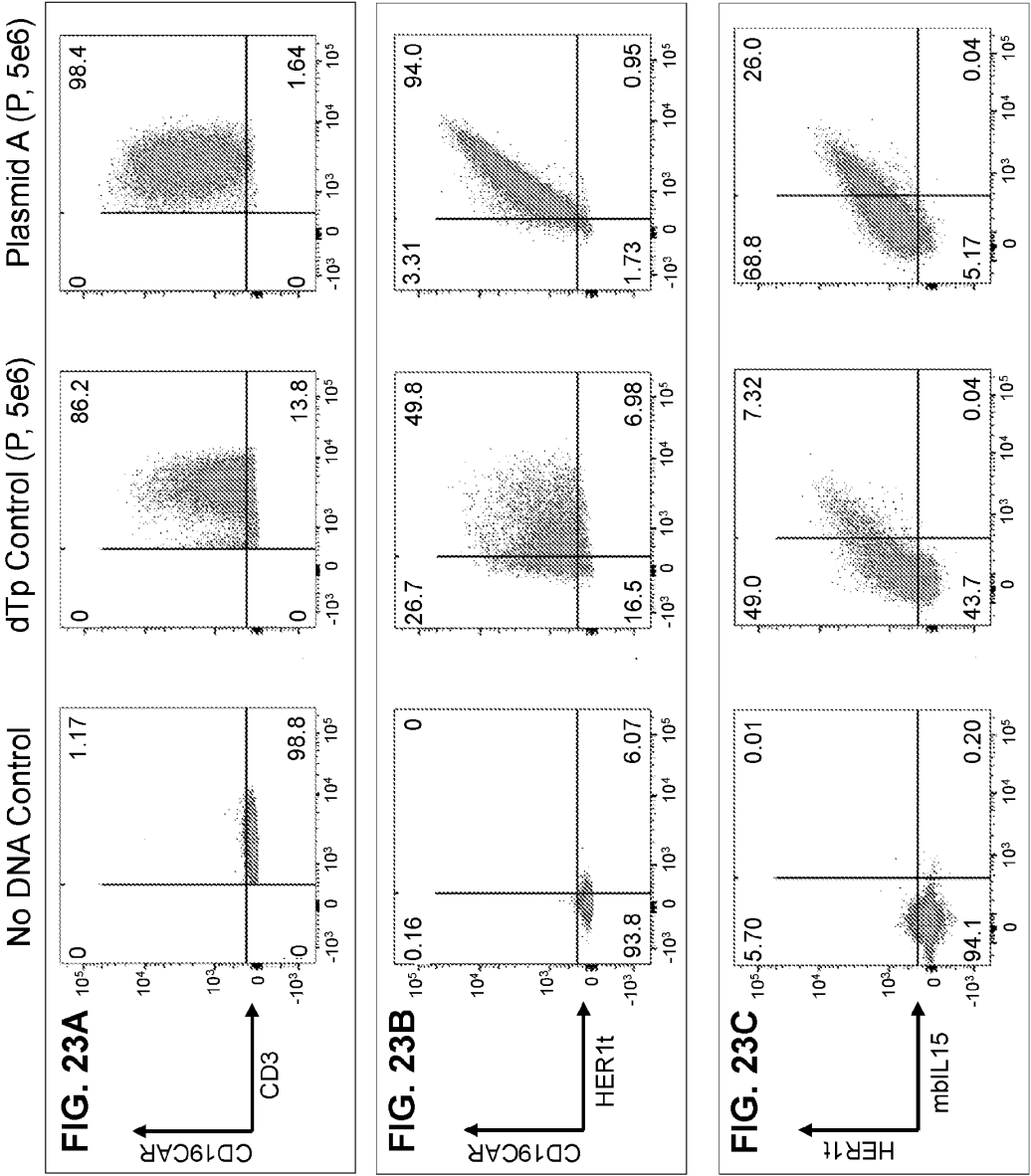
FIG. 21

Phenotype of T Cells Generated by RPM Technology

No DNA Control dTp Control (P, 5e6) Plasmid A (P, 5e6) Plasmid A (T, 1e6) and Plasmid A (T, 0.5e6)



Phenotype of ex vivo Expanded PBMC-Derived RPM T Cells



NALM-6 Tumor Burden in Individual Mice

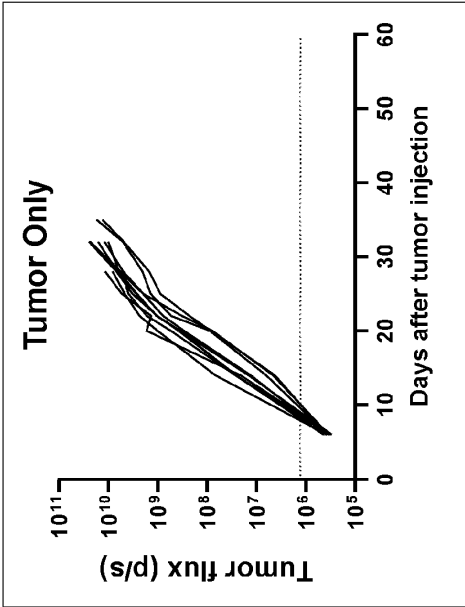


FIG. 24A

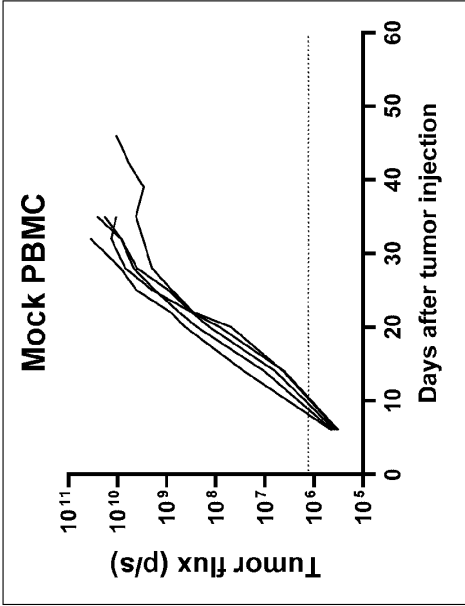


FIG. 24B

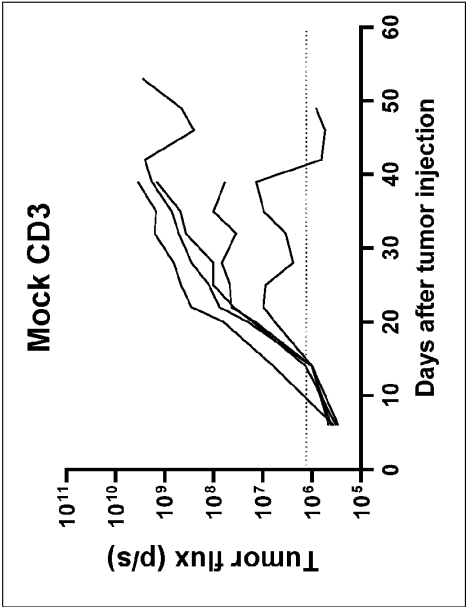


FIG. 24C

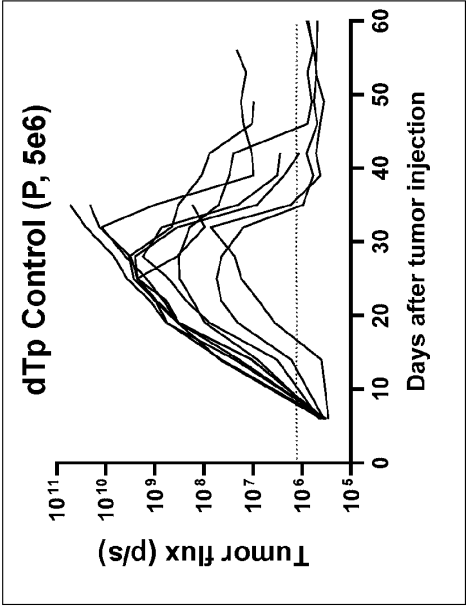


FIG. 24D

NALM-6 Tumor Burden in Individual Mice

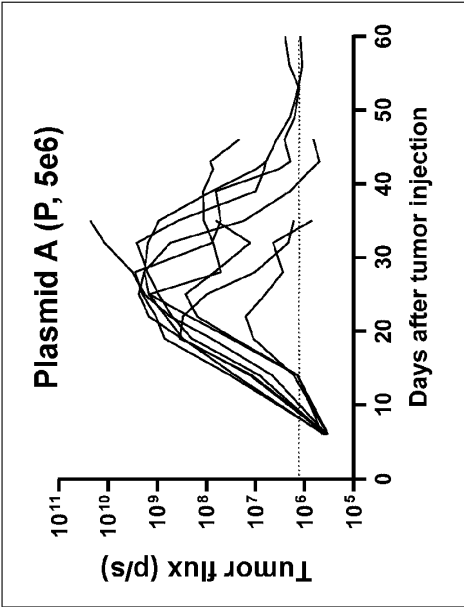


FIG. 24E

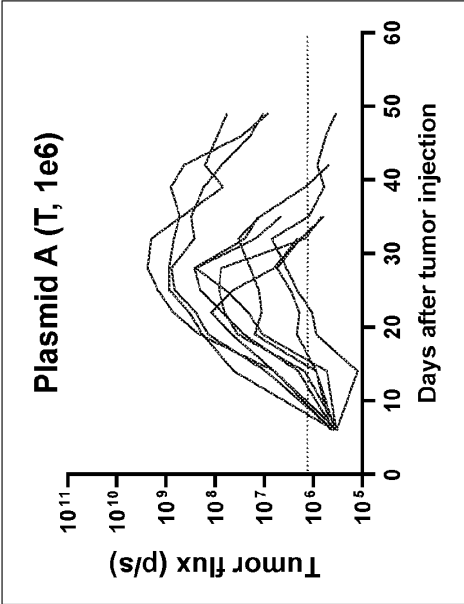


FIG. 24F

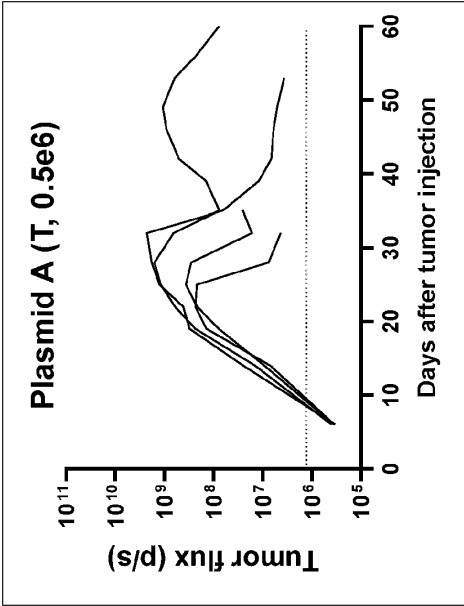


FIG. 24G

NALM-6 Tumor Burden in Individual Mice

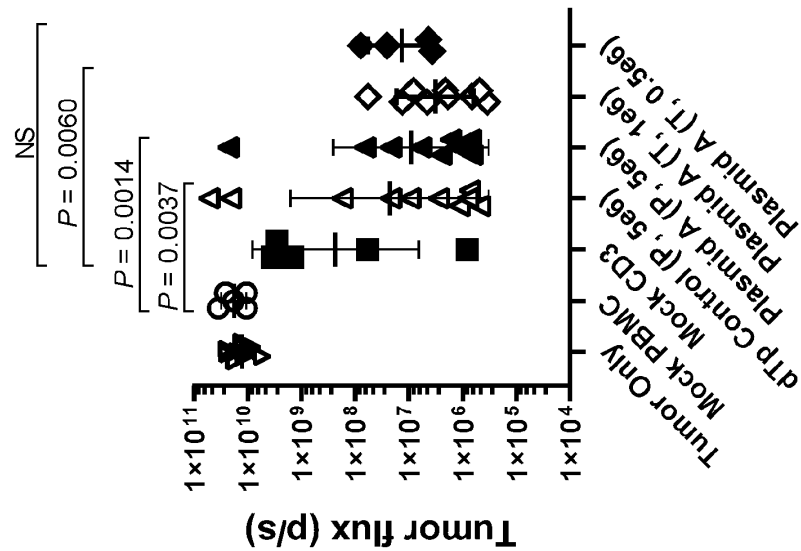


FIG. 25

Kaplan-Meier Survival Curves – Overall Survival

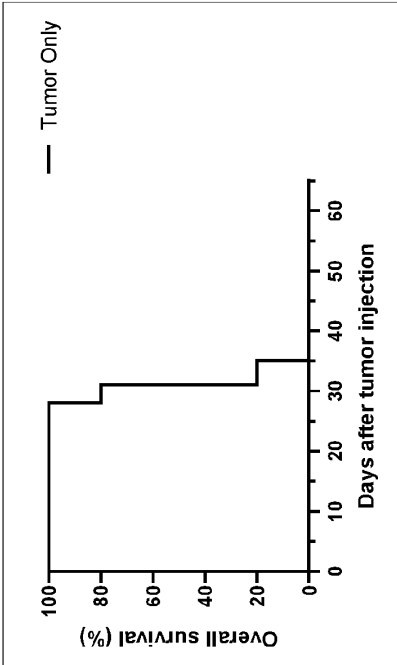


FIG. 26A

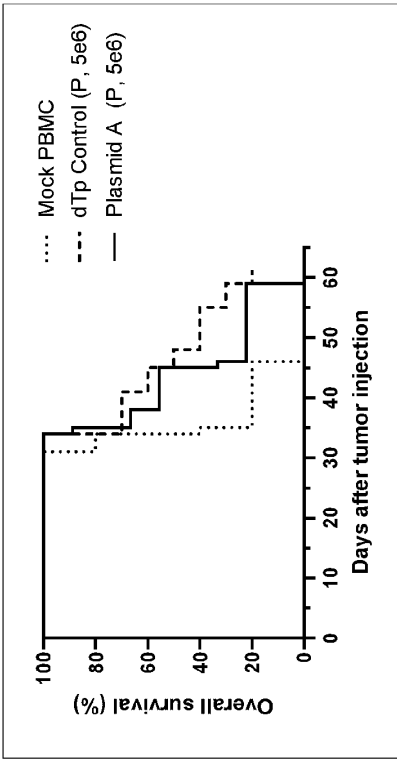


FIG. 26B

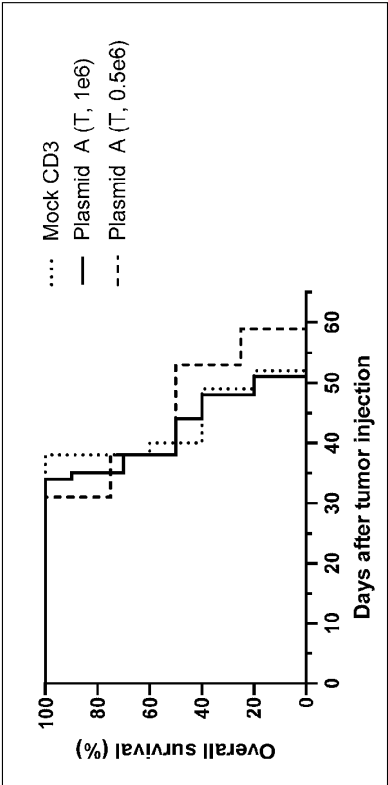


FIG. 26C

Kaplan-Meier Survival Curves – xGvHD-Free Survival

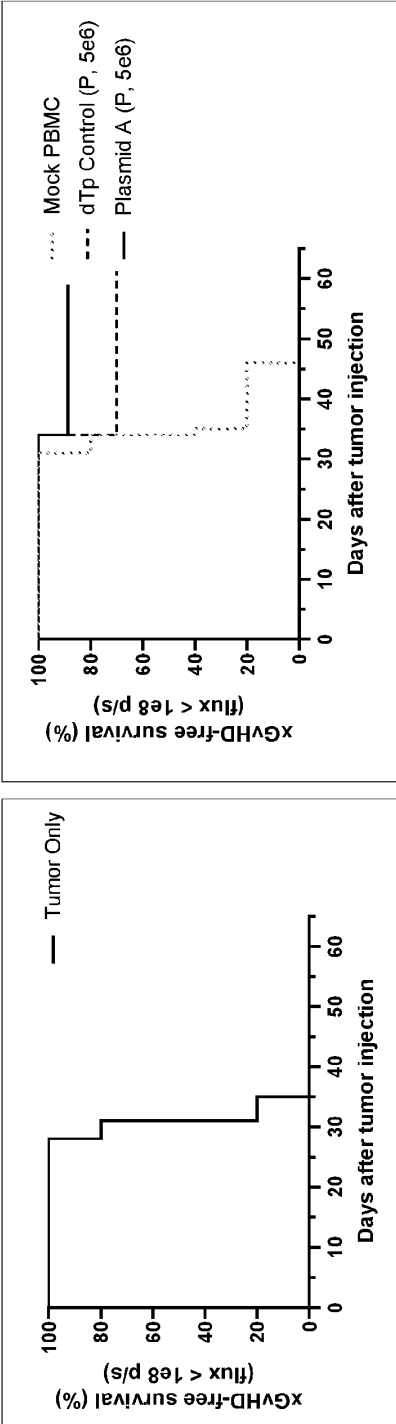


FIG. 27A

FIG. 27B

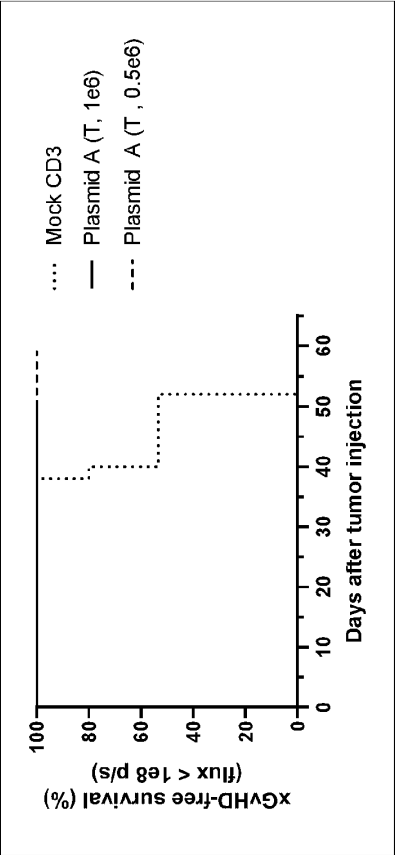


FIG. 27C

T Cell Persistence in Tumor-Bearing Mice

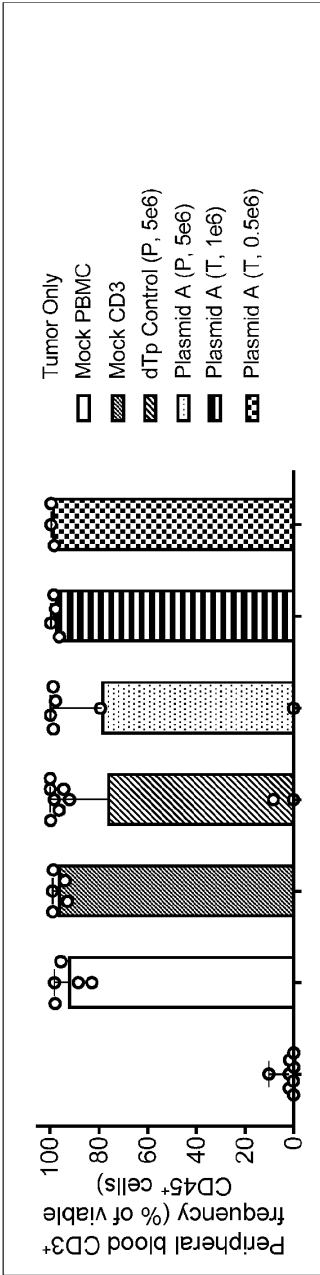


FIG. 28A

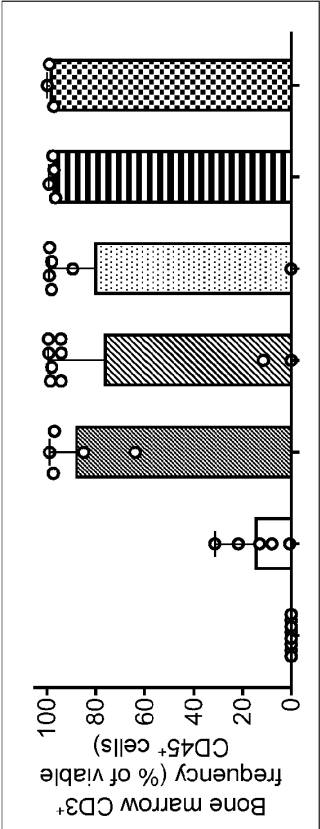


FIG. 28B

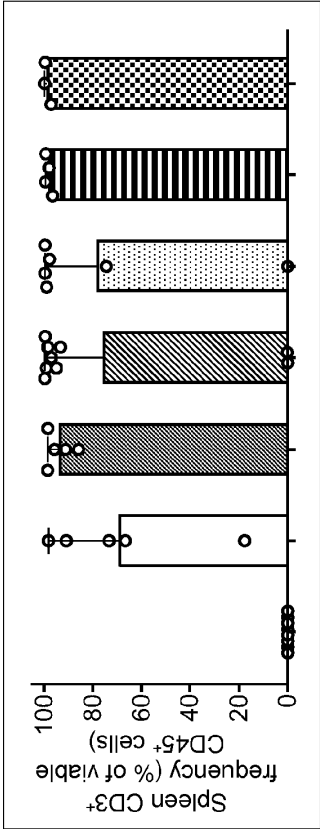


FIG. 28C

CD19CAR Expression in Human T Cells Detected in PB of Tumor-Bearing Mice

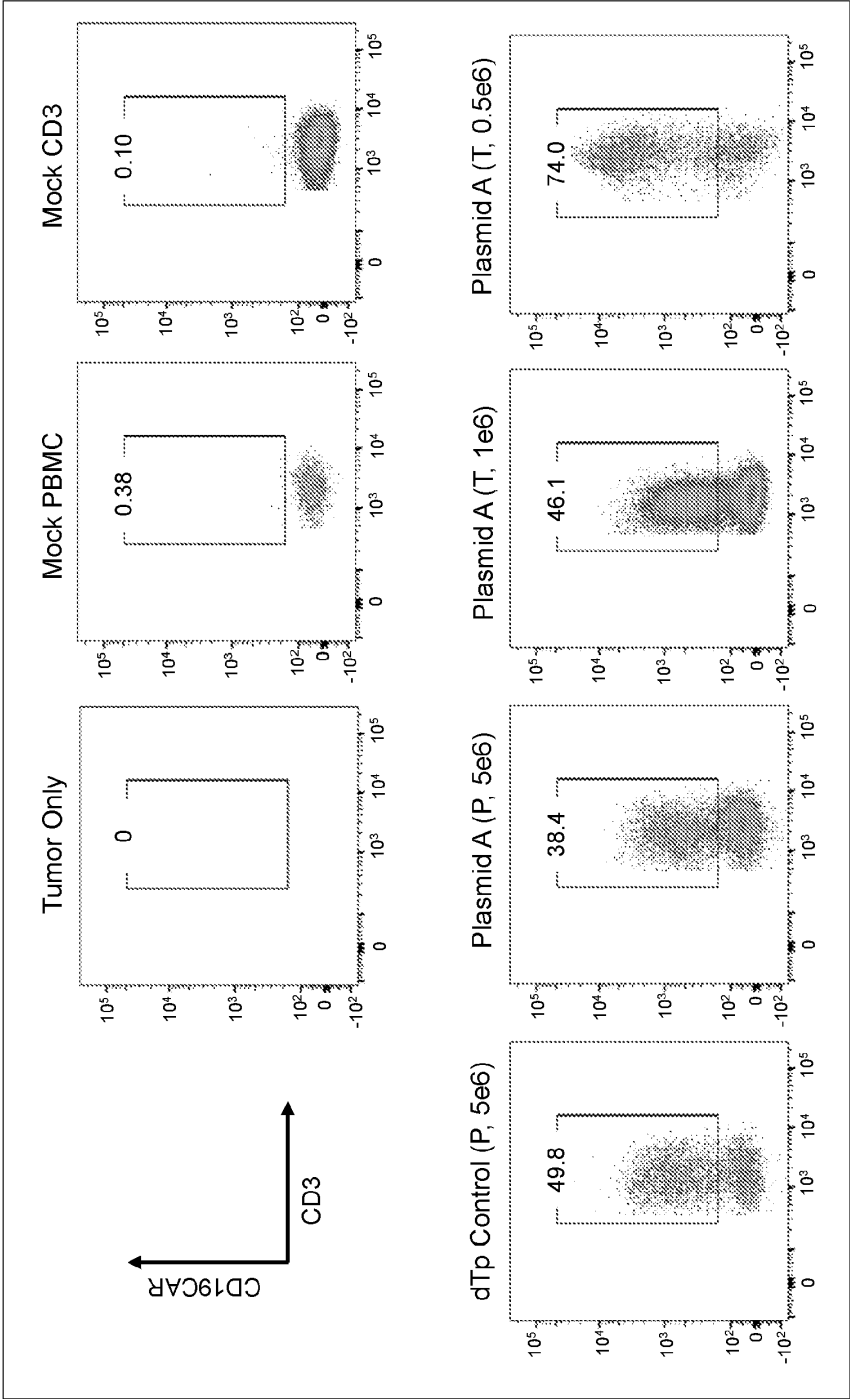


FIG. 29A

CD19CAR Expression in Human T Cells Detected in PB,
BM, and Spleen of Tumor-Bearing Mice

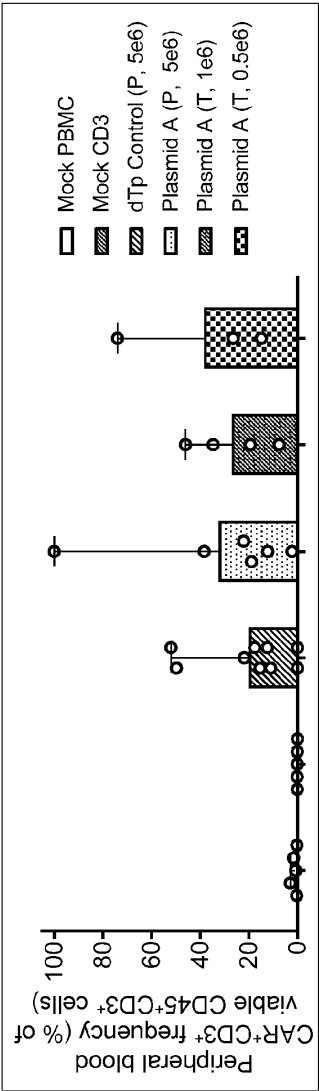


FIG. 29B

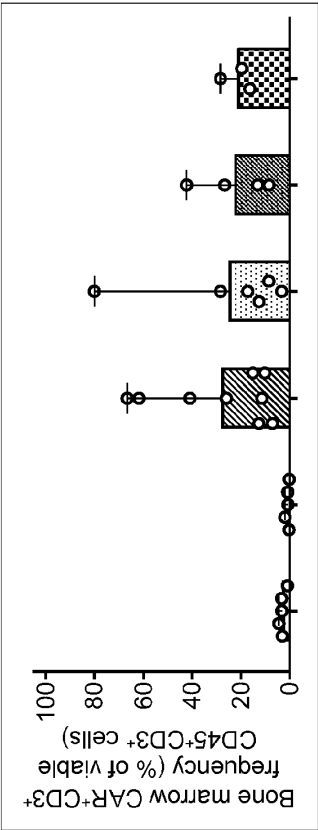


FIG. 29C

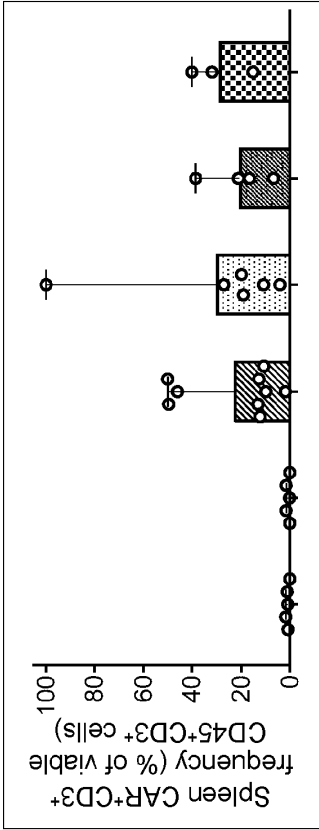


FIG. 29D

CD19CAR/HER1t Co-Expression in Human T Cells
Detected in PB of Tumor-Bearing Mice

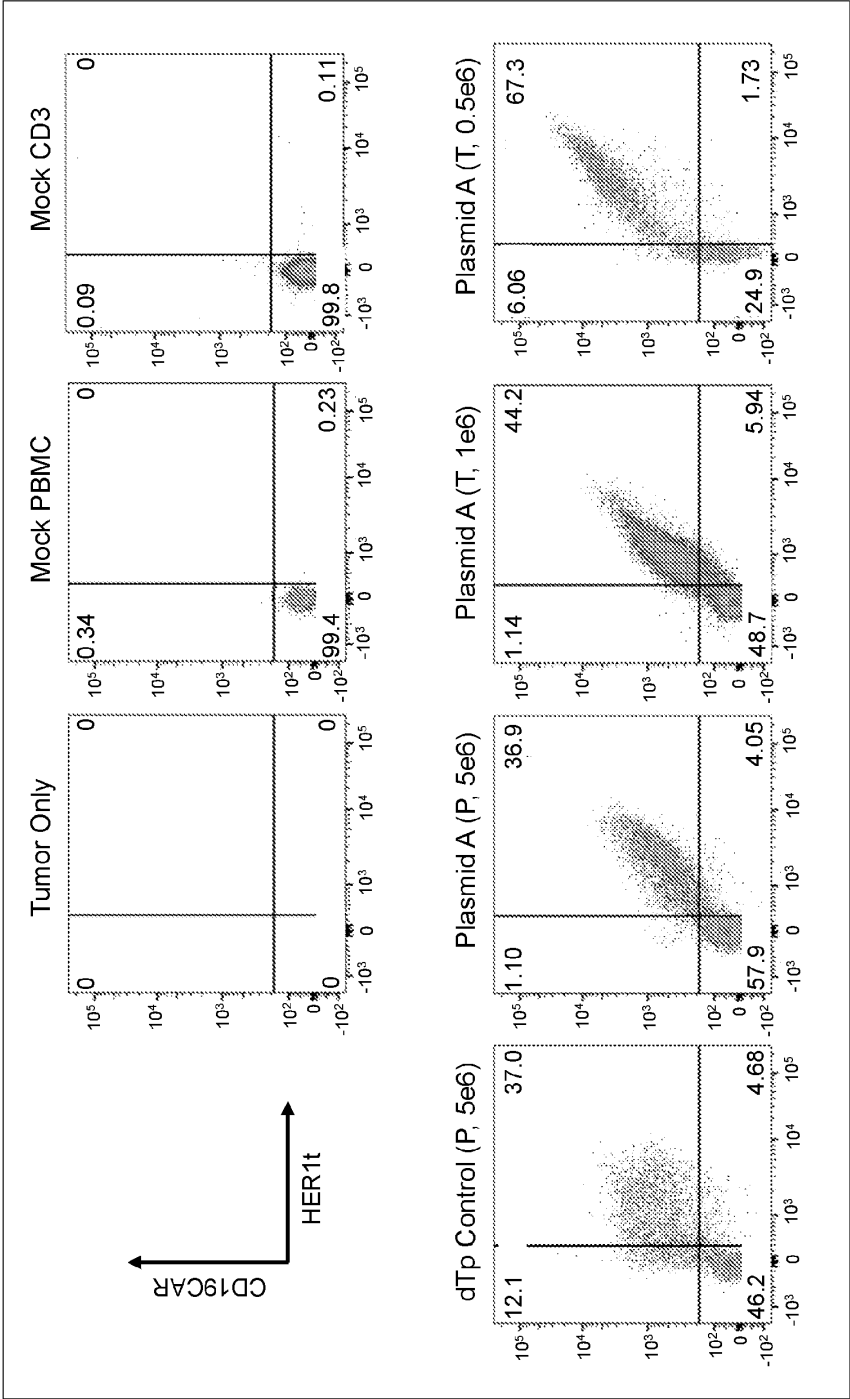


FIG. 30

HER1t/mbIL15 Co-Expression in Human T Cells
Detected in PB of Tumor-Bearing Mice

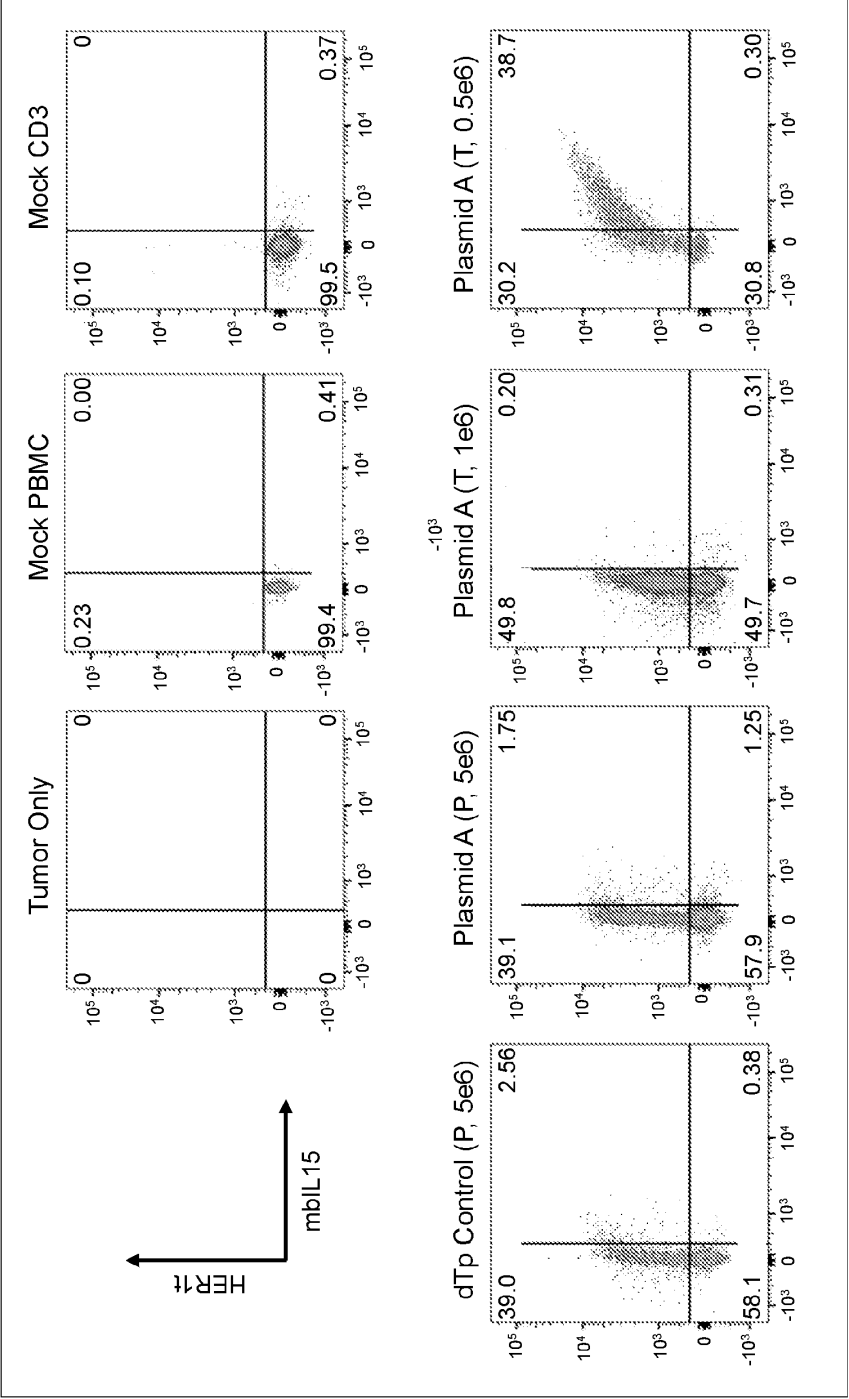


FIG. 31

Memory Phenotype of Human T Cells Detected in PB of Tumor-Bearing Mice

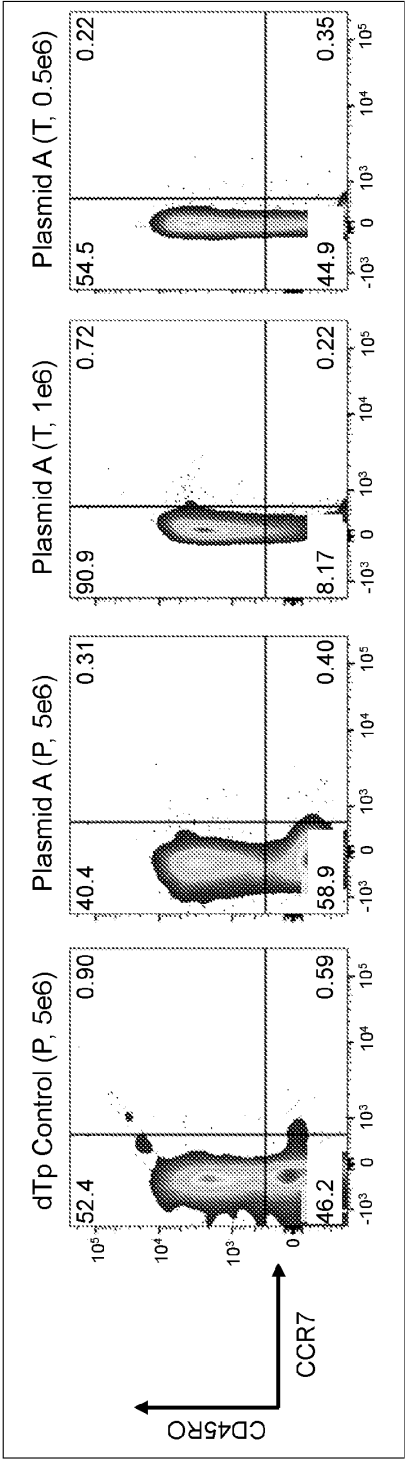


FIG. 32A

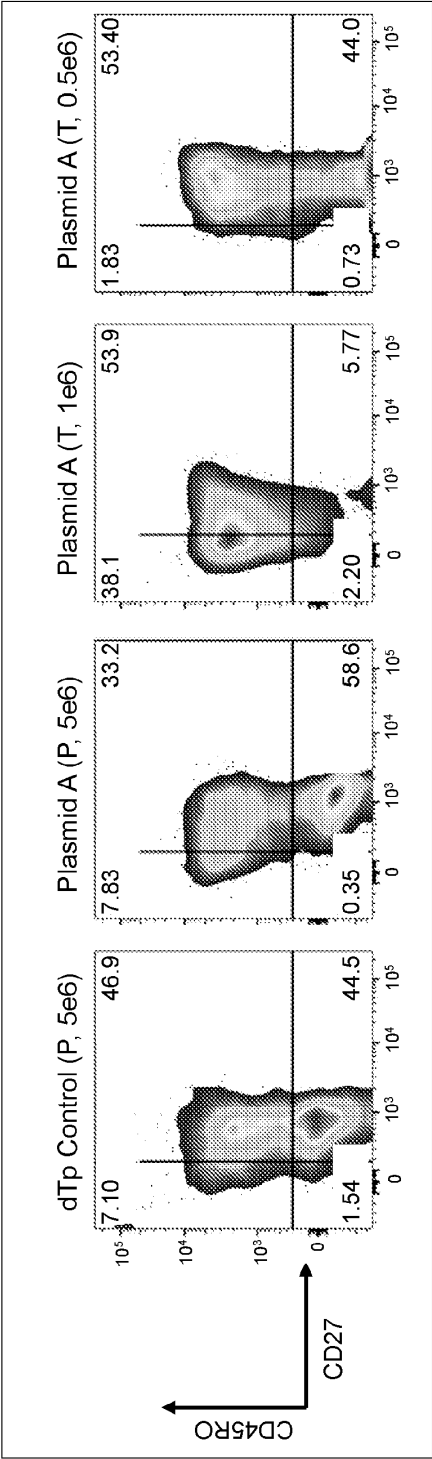


FIG. 32B

Memory Phenotype of Human T Cells Detected in PB of Tumor-Bearing Mice

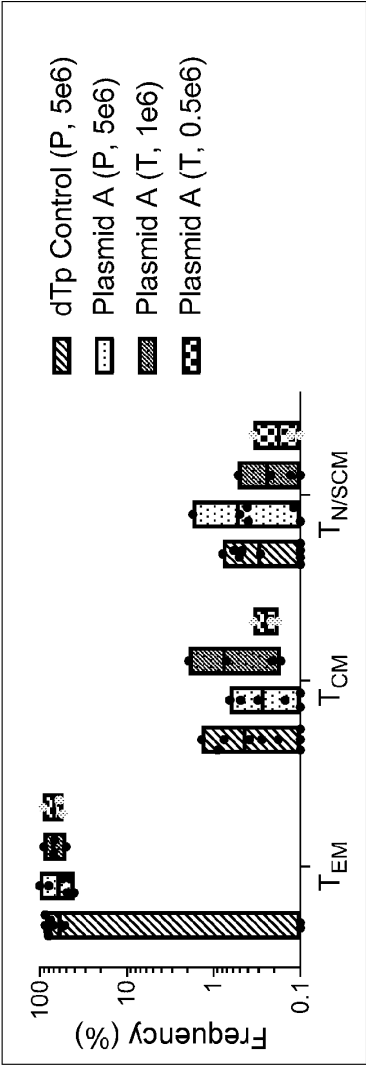


FIG. 33A

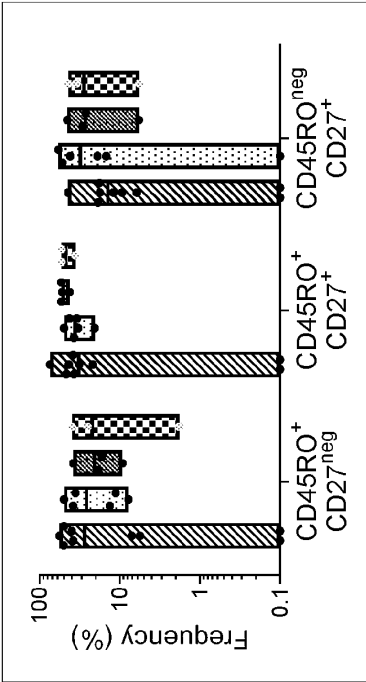


FIG. 33B