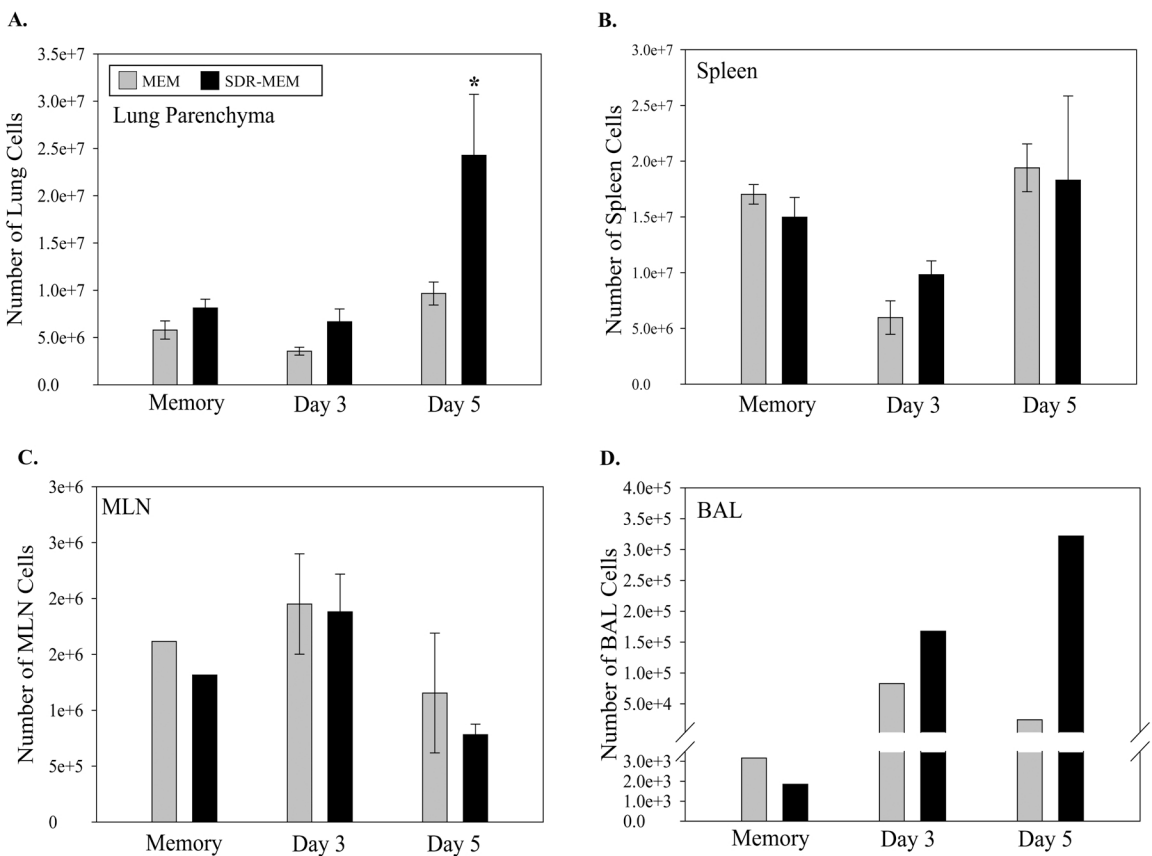
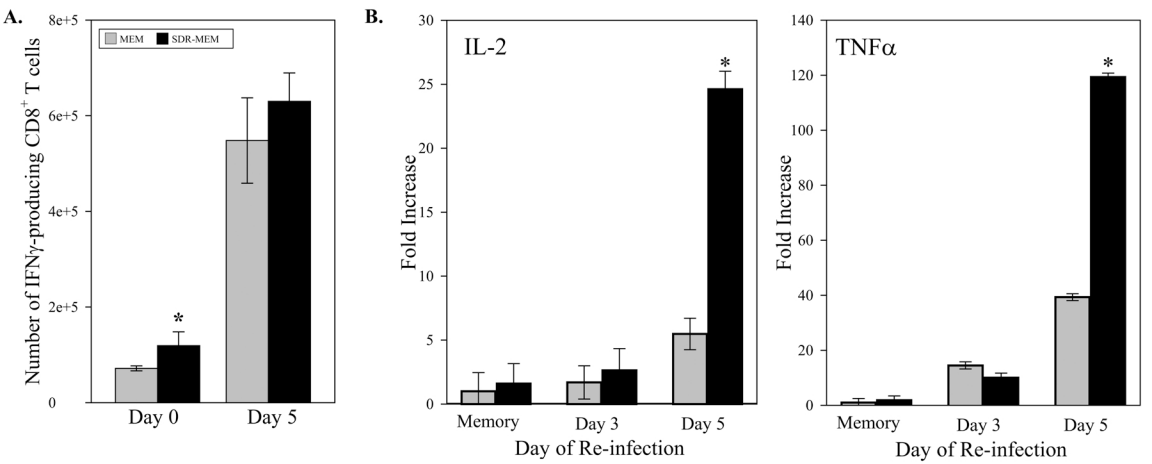
Supplementary Figure 1. SDR increased the size of the lung $CD8^+$ T cell population during A/PR/8/34 re-challenge. Mice were subjected to SDR and primary influenza infection as described. Flow cytometry data for a resting memory timepoint and days 3 and 5 after re-infection with A/PR/8/34 virus is shown. In A-C, bars represent group mean +/- SEM; n=4-6 per group. In D and the memory timepoint of C, the bars represent the measured value for the pooled sample by group each day. ANOVA indicated group-wise differences in the lung parenchyma (A) by stress, day post-infection, and stress*day, all $p<0.05$. No differences were detected in the spleen or MLN samples.*SDR>MEM, $p<0.05$ by individual t-test.

Supplementary Figure 2. SDR alterated cellularity and function of lung parenchymal cells during resting memory after X-31 priming. (A) Mouse lungs were sampled 2-3 months following resolution of a primary X-31 infection. When lung $CD8^+$T cells were stimulated ex-vivo with NP366-74 peptide and stained for intra-cellular IFNγ production, there was a significant increase in the number of IFNγ-producing NP_{366-74} cells isolated from SDR-MEM lungs when compared with MEM lung cells during resting memory, but not during A/PR/8 challenge. (B) Lung gene expression was assessed using semi-quantitative real-time PCR during resting memory and challenge infection with A/PR/8/34 influenza virus. Bars indicate group mean ±SEM. Statistical comparisons were done using non-parametric 95% confidence intervals.


A.
MEM
SDR-MEM
Lung Parenchyma
Number of Lung Cells
3.5e+7
3.0e+7
2.5e+7
2.0e+7
1.5e+7
1.0e+7
5.0e+6
0.0
*
Memory
Day 3
Day 5
B.
Spleen
Number of Spleen Cells
3.0e+7
2.5e+7
2.0e+7
1.5e+7
1.0e+7
5.0e+6
0.0
Memory
Day 3
Day 5
C.
MLN
Number of MLN Cells
3e+6
3e+6
2e+6
2e+6
1e+6
5e+5
0
Memory
Day 3
Day 5
D.
BAL
Number of BAL Cells
4.0e+5
3.5e+5
3.0e+5
2.5e+5
2.0e+5
1.5e+5
1.0e+5
5.0e+4
3.0e+3
2.0e+3
1.0e+3
0.0
Memory
Day 3
Day 5


A.
MEM
SDR-MEM
Number of IFNγ-producing CD8+ T cells
8e+5
6e+5
4e+5
2e+5
0
*
Day 0
Day 5
B.
IL-2
Fold Increase
30
25
20
15
10
5
0
*
Memory
Day 3
Day 5
Day of Re-infection
TNFα
Fold Increase
140
120
100
80
60
40
20
0
*
Memory
Day 3
Day 5
Day of Re-infection