

Supplemental Data 6: Frequency of arginine and aspartic acid in naïve cells

Results are averaged from the TCR repertoire from 3 B6 spleens			
Number of unique sequences	53,499	53,499	53,499
Query	"R" @ 6	"D" @ 7	"RD" @ 6-7
Number of positive results	5,381	4,025	1,320
Percentage of unique sequences with "positive" result	10.1%	7.5%	2.5%

To determine whether the enrichment of "R" or "D" was significant, we compared their occurrence in the normal TCR β repertoire. We queried the splenic TCR β repertoire from three C57BL/6 mice representing over 1.1 million reads and ~53,000 unique sequences each. The average frequency of "R", "D", or "RD" at CDR3 β position 6, 7, or 6-7, was 10.1%, 7.5%, and 2.5% respectively, indicating "R," "D," and "RD," were significantly enriched in the clonally expanded TB10.4₄₋₁₁-specific CD8⁺ T cells. Testing using the Chi-square with Yates' correction shows that the frequency of R, D, or RD in the clonally expanded sequences is significantly increased in the four cloned sequences compared to the normal splenic repertoire of B6 mice ($P < 0.0001$).