

**Table S1.** Deamination hotspots in A3G transgenic mice. Each of the hotspots appeared once in the sequenced region. Shown is the fraction of sequences containing the G to A change. There were no deamination hotspots for either virus in the A3A transgenic mice.

| SEQUENCE         | A3G <sup>high</sup> |       | A3G <sup>low</sup> |      |
|------------------|---------------------|-------|--------------------|------|
|                  | DNA                 | RNA   | DNA                | RNA  |
| <b>M-MLV</b>     |                     |       |                    |      |
| TAT <u>G</u> GGC | 0.20                | 0.06  | 0                  | 0    |
| TATT <u>G</u> GG | 0.30                | 0.06  | 0.21               | 0    |
| CTC <u>A</u> GGG | 0.13                | 0.06  | 0.15               | 0    |
| ATG <u>A</u> GGG | 0.23                | 0.09  | 0                  | 0    |
| CCCC <u>G</u> GG | 0.10                | 0     | 0.06               | 0    |
| ATGT <u>G</u> GG | 0.28                | 0.01  | 0.11               | 0.05 |
| TATT <u>G</u> GG | 0.35                | 0.11  | 0.04               | 0.03 |
| TCAT <u>G</u> GG | 0.25                | 0.045 | 0.02               | 0    |
| CGCC <u>G</u> GG | 0.10                | 0     | 0                  | 0    |
|                  |                     |       |                    |      |
| <b>MMTV</b>      |                     |       |                    |      |
| CCT <u>G</u> GGG | 0.14                |       | 0.08               |      |
| AAAT <u>G</u> GG | 0.14                |       | 0.04               |      |
| AAA <u>A</u> GGG | 0.11                |       | 0.06               |      |
| ACC <u>A</u> GGG | 0.07                |       | 0.02               |      |
| TAT <u>A</u> GGG | 0.11                |       | 0                  |      |
| AGGT <u>G</u> GG | 0.05                |       | 0                  |      |
| TCG <u>A</u> GGG | 0.07                |       | 0                  |      |