Supplementary Materials

Supplementary Figure Legends

Supplementary Figure 1. Analysis of B and T cells in spleens of 3-week-old mice

Total splenocytes were isolated from spleens of 3-week-old mice, stained for B220-V450, CD3ε-APC (BD Biosciences), CD19-APC, and CD20-PE (eBiosciences), followed by flow cytometric analyses. All numbers represent percentage of cells in each gate. **(Top)** Representative flow cytometry plots indicating percentages of $CD3^+$ and $B220^+$ populations in spleens of 3-week-old mice. **(Middle and Bottom)** Representative flow cytometry plots indicating frequencies of B cells with B cell markers B220, CD19, and CD20.

Supplementary Figure 2. Immunophenotypes of pre-tumor B cells

Total splenocytes were isolated from spleens of 3-week-old mice, stained for B220-V450, IgM-FITC, IgD-PE, CD138-PE, GL-7-FITC, Fas-PE-Cy7 (BD Biosciences), followed by flow cytometric analyses. **A)** Representative flow cytometry plots demonstrating frequencies of $CD138^+$ cells (a plasma cell marker). **B)** Representative flow cytometry plots demonstrating frequency of immature B cells (IgM^+ IgD^-) and mature B cells (IgM^+ IgD^+). **C)** Representative flow cytometry plots demonstrating frequencies of germinal center B cells (Fas^+ $GL\text{-}7^+$).

Supplementary Figure 3. Histology of tumor-bearing lymph nodes of transgenic mice

Tumor-bearing lymph nodes were isolated from mice, fixed in 10% buffered formalin phosphate, and embedded in paraffin. Tissue sections from indicated genotypes were stained with hematoxylin and eosin (H&E). Tumor cells were monomorphic and round with deep blue nuclei. Infiltration of macrophages engulfing apoptotic cells was frequent and gave the "starry sky" appearance of tumors in all genotypes (X20).

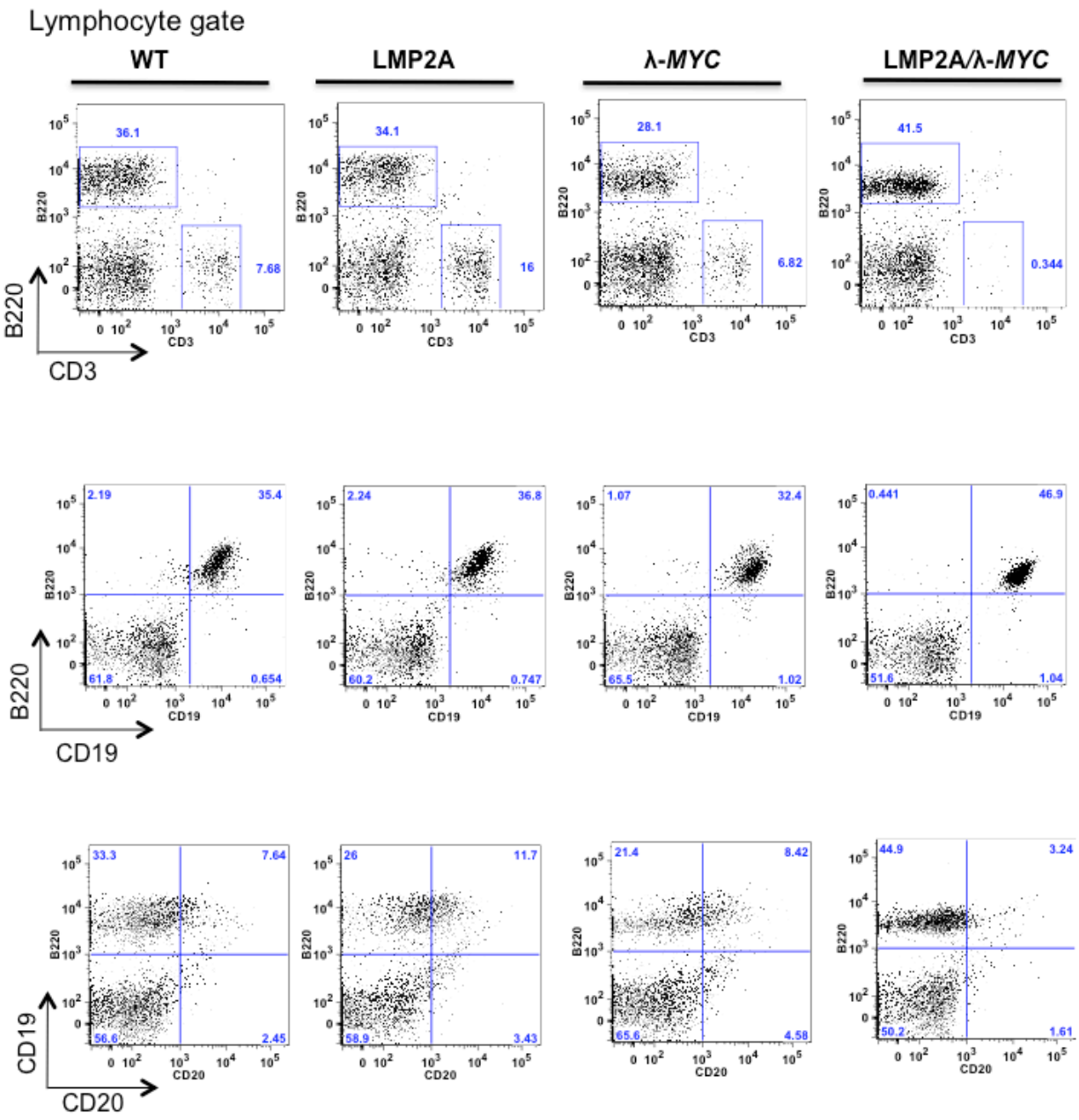
Supplementary Figure 4. Phenotypes of pre-tumor mice

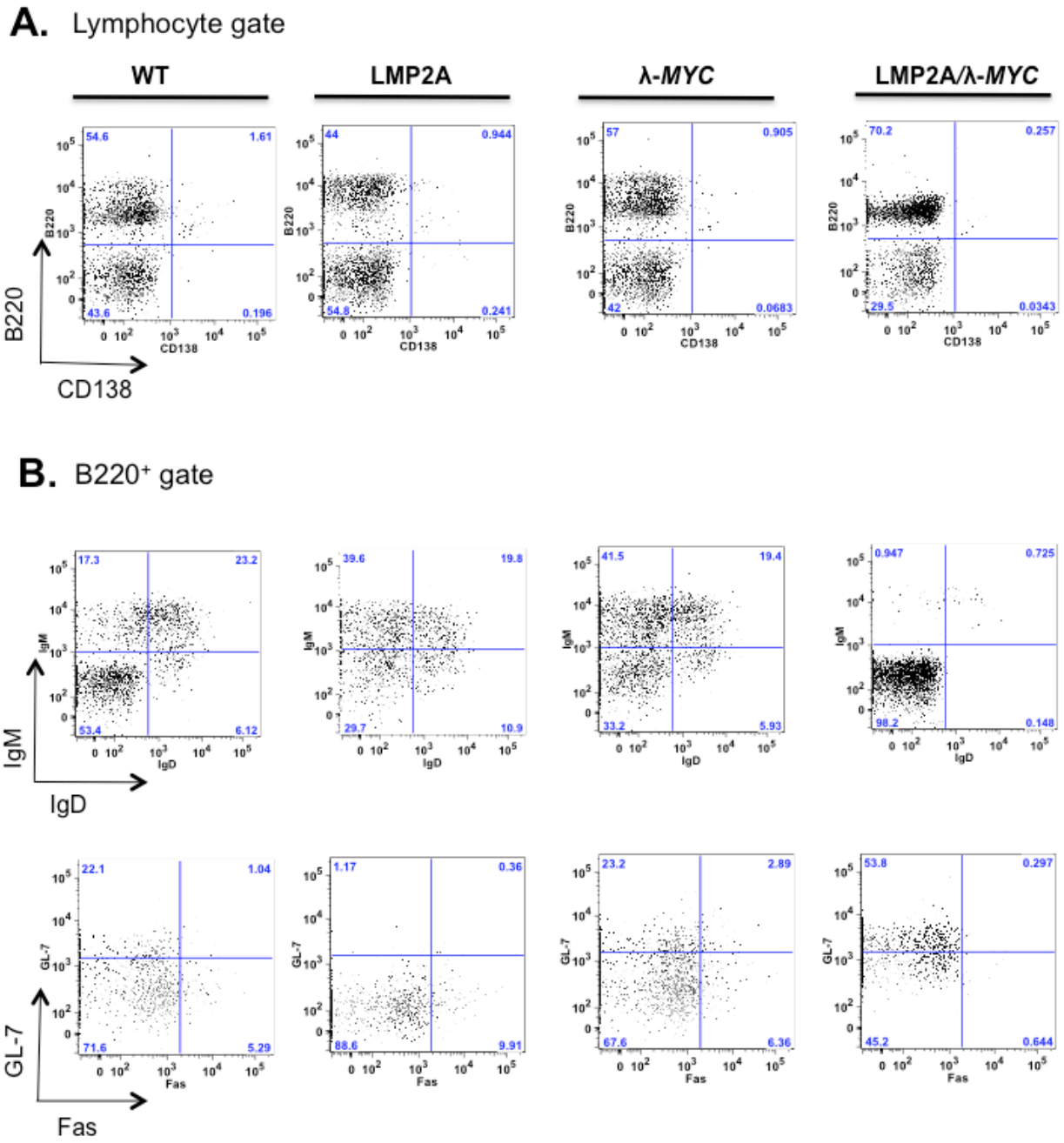
A) Total splenocytes were harvested from 3-week-old mice, stained for CD19-APC (y-axis) and CD3ε-FITC (x-axis), and analyzed by flow cytometry. Percentages of cells in each quadrant are indicated. **B)** Spleen weights from 3-week-old mice were normalized and were shown as percentage of body weight. Data shown as mean ± SD.

Supplementary Figure 5. Upregulation of Cks1 in LMP2A/λ-*MYC* pre-tumor B cells

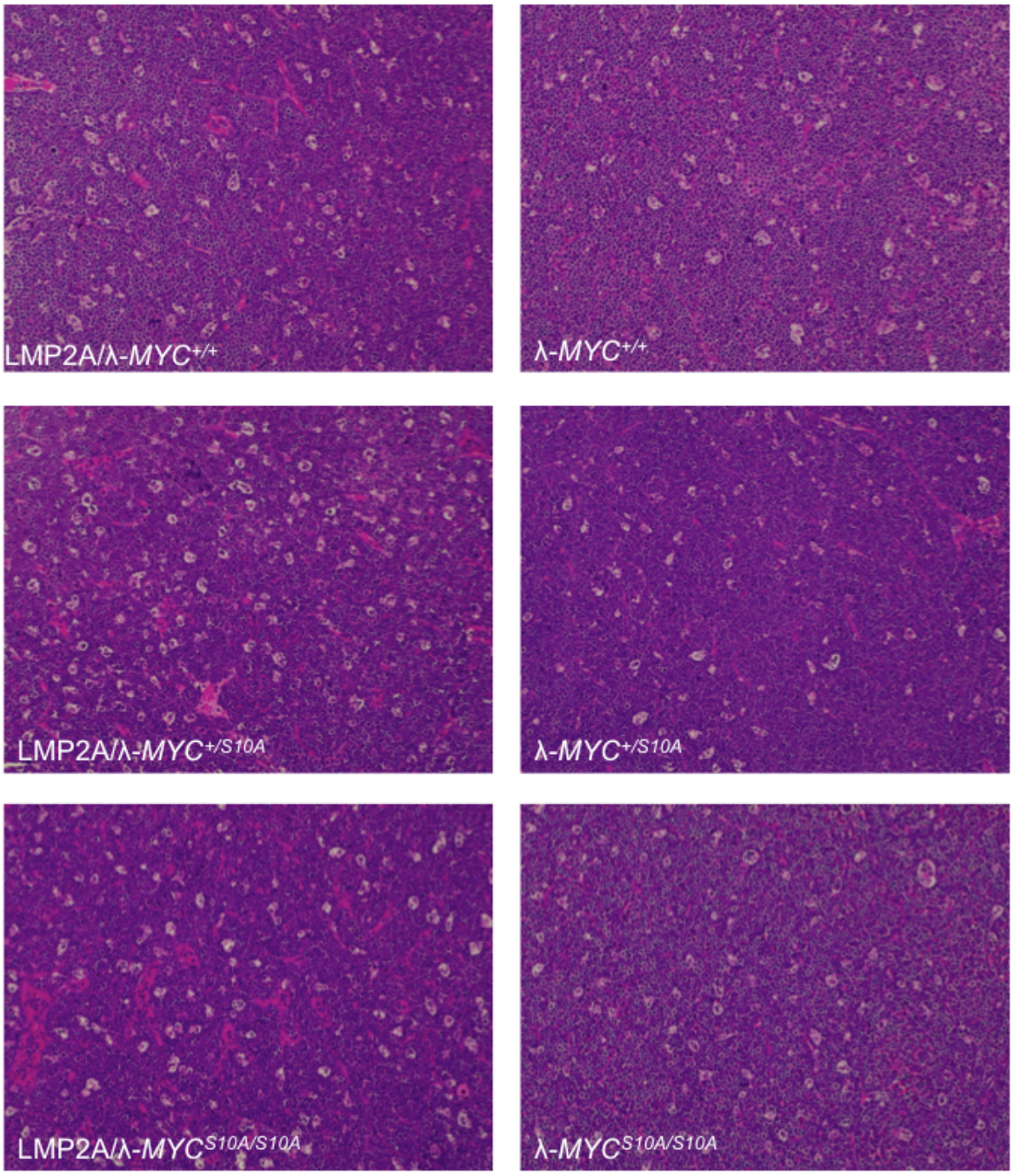
A) Western blot analyses of Cks1 and Skp2 in purified pre-tumor B cells from LMP2A/λ-*MYC* and λ-*MYC* mice. **B)** qRT-PCR of *Cks1* mRNA levels in LMP2A/λ-*MYC* and λ-*MYC* pre-tumor B cells. The fold change was analyzed using *Cks1* levels in λ-*MYC* as a control group. The difference was analyzed using Student-*t* test and shown as mean ± SD.

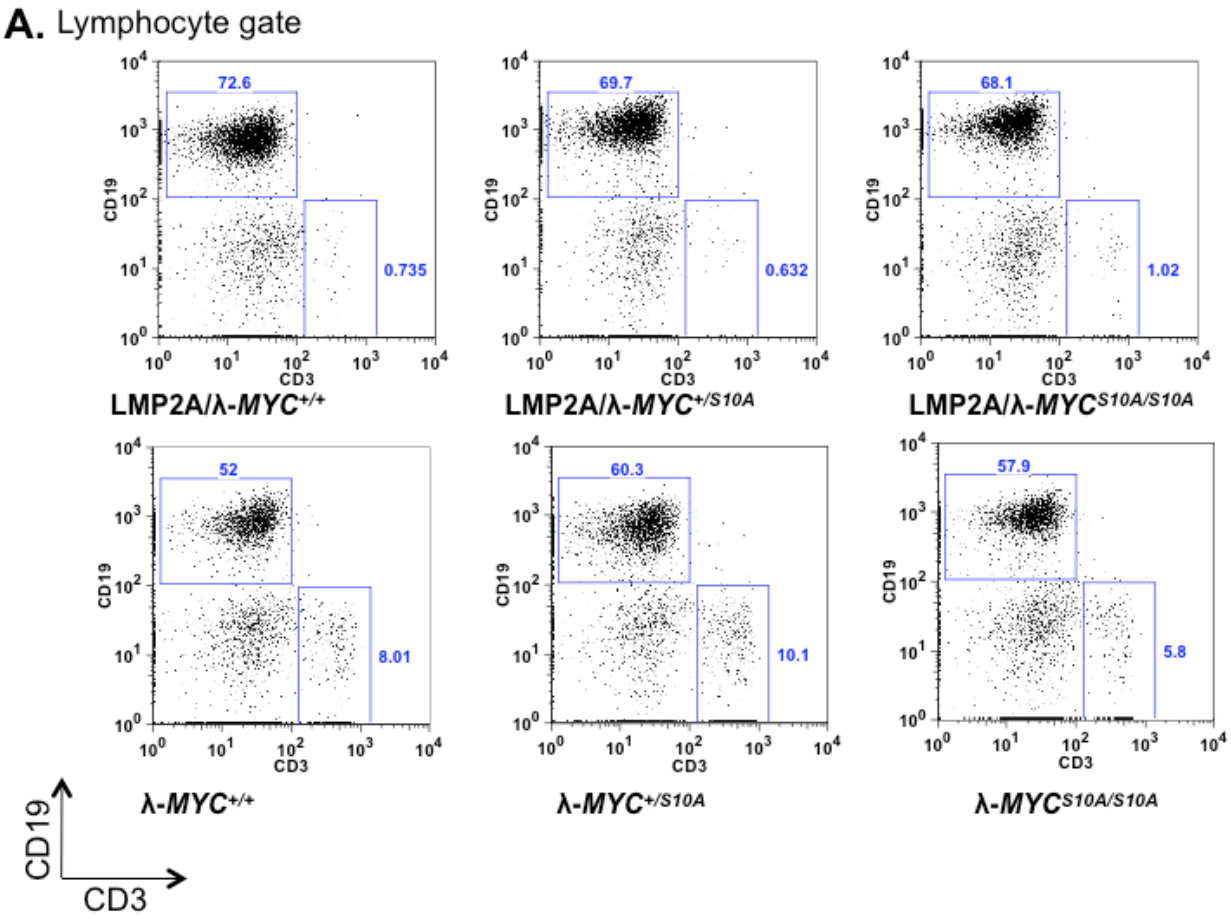
Fish_Supplementary Fig.1

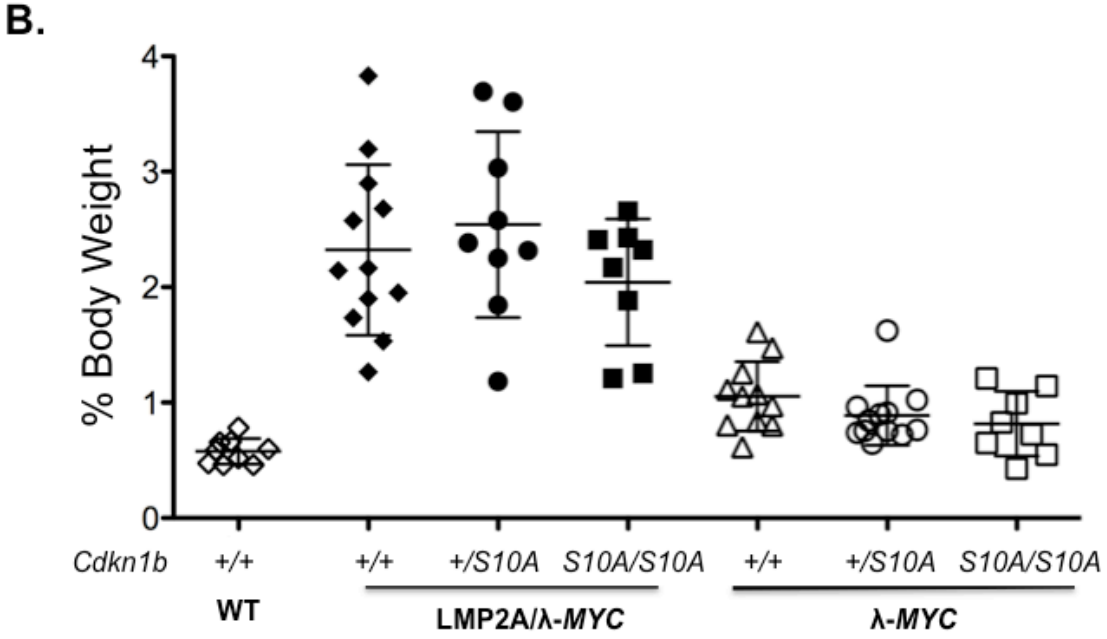



A. Lymphocyte gate
WT
LMP2A
λ-MYC
LMP2A/λ-MYC
B220
CD138
54.6
1.61
43.6
0.196
44
0.944
54.8
0.241
57
0.905
42
0.0683
70.2
0.257
29.5
0.0343
B. B220+ gate
IgM
IgD
17.3
23.2
53.4
6.12
39.6
19.8
29.7
10.9
41.5
19.4
33.2
5.93
0.947
0.725
98.2
0.148
GL-7
Fas
22.1
1.04
71.6
5.29
1.17
0.36
88.6
9.91
23.2
2.89
67.6
6.36
53.8
0.297
45.2
0.644

Fish_Supplementary Fig.3




A. Lymphocyte gate
72.6
0.735
69.7
0.632
68.1
1.02
LMP2A/λ-MYC+/+
LMP2A/λ-MYC+/S10A
LMP2A/λ-MYCS10A/S10A
52
8.01
60.3
10.1
57.9
5.8
λ-MYC+/+
λ-MYC+/S10A
λ-MYCS10A/S10A
CD19
CD3


B.
% Body Weight
0
1
2
3
4
Cdkn1b +/+ +/+ +/S10A S10A/S10A +/+ +/S10A S10A/S10A
WT
LMP2A/λ-MYC
λ-MYC

Fish_Supplementary Fig. 5