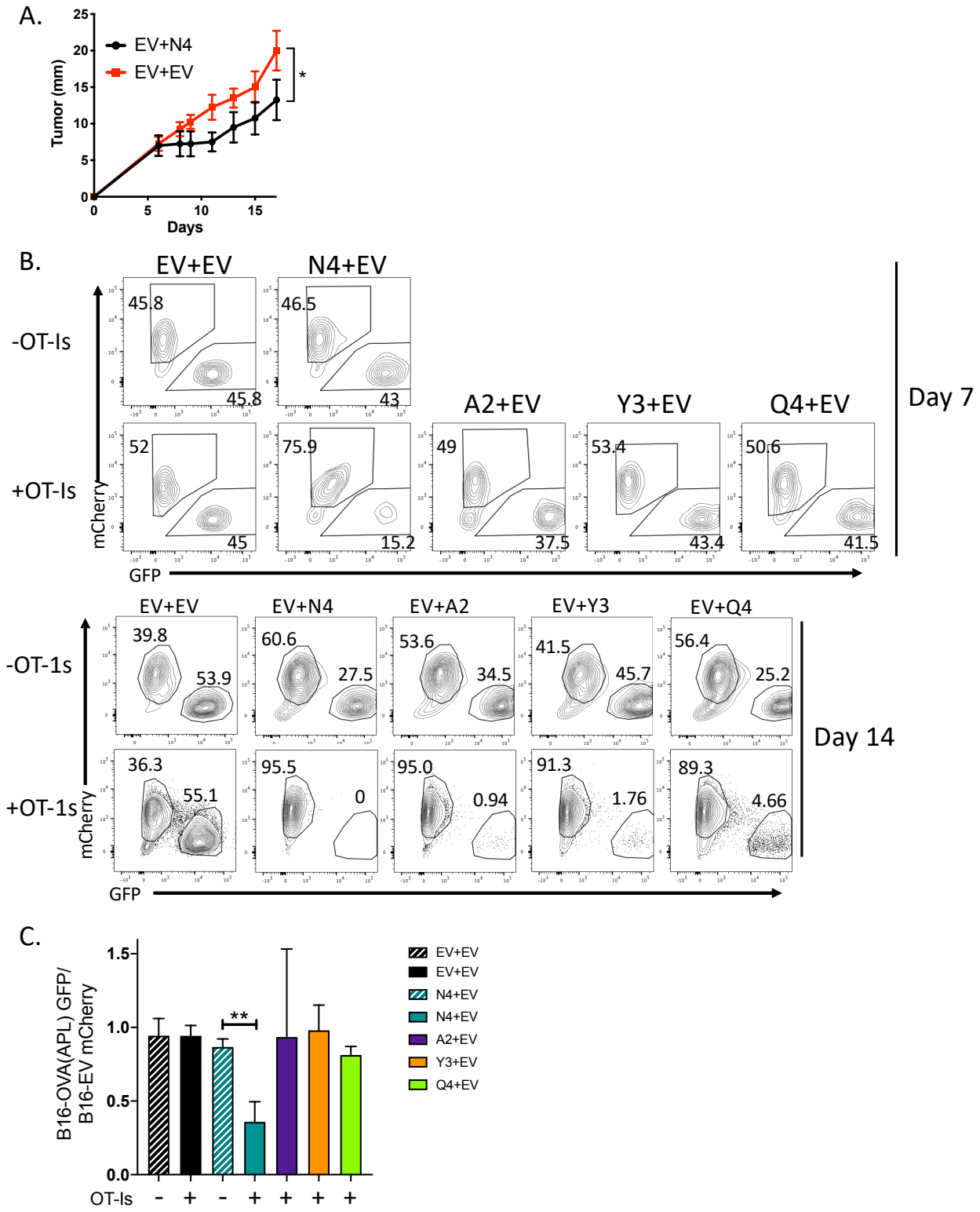
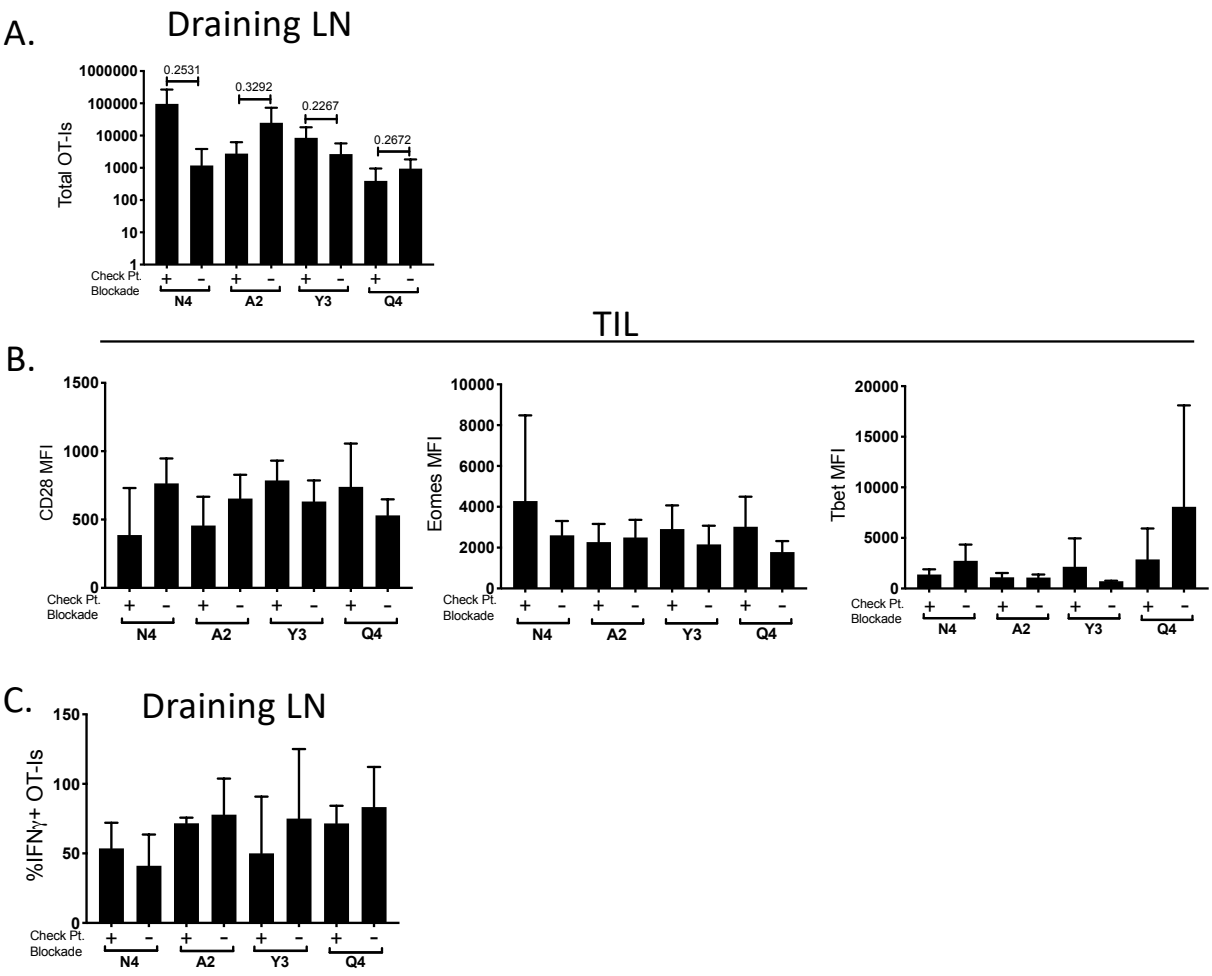
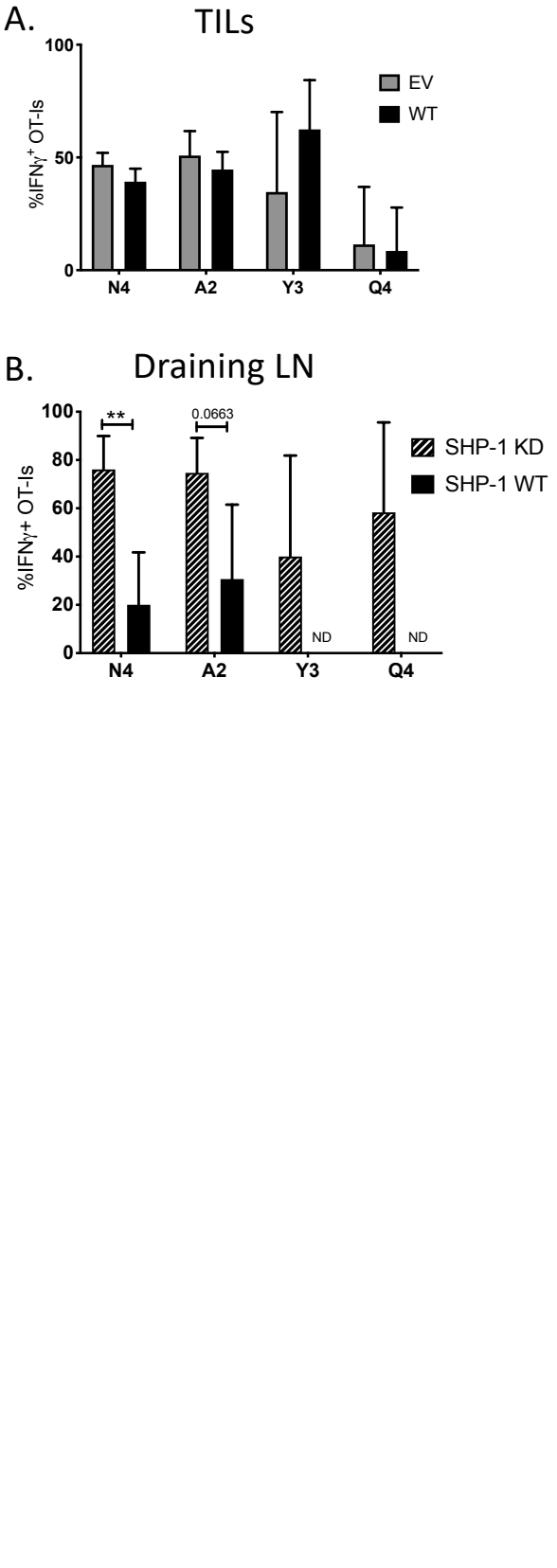
Supplemental Data



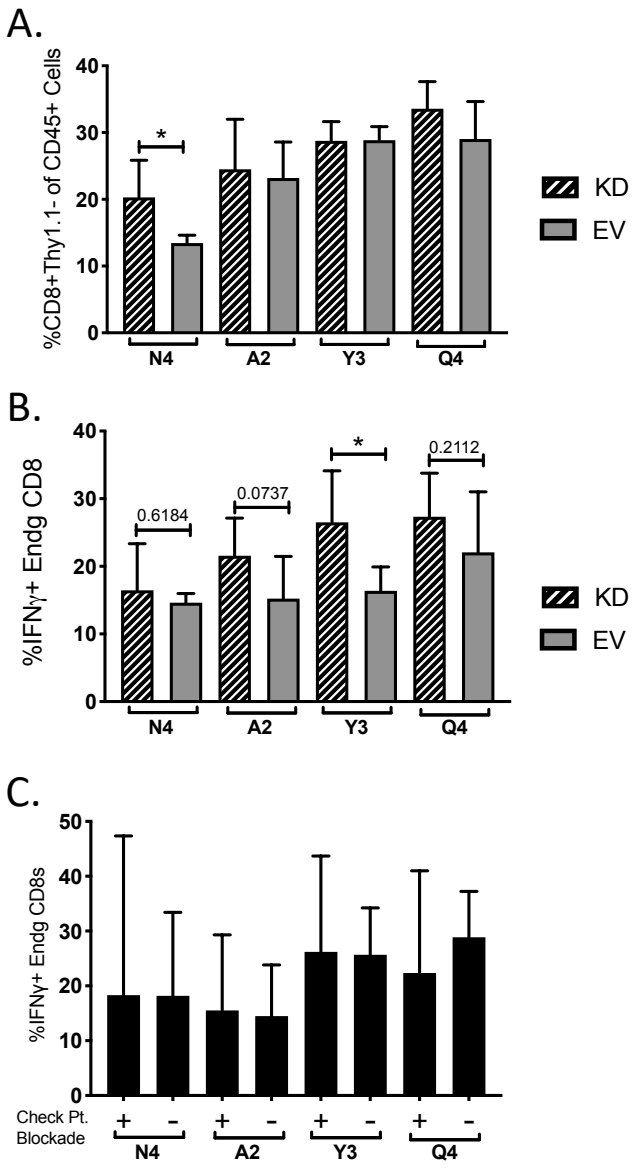
Supplementary Fig. S1: Tumor cells were implanted into recipient B6 mice at a 1:1 ratio of OVA(APL) expressing B16-F10 (GFP+) cells or empty vector controls (mCherry+). (A) Line graph indicates the growth curves of B16-F10 tumors made up of empty vector (EV) B16 cells co-transferred with N4 expressing tumor cells or EV controls in B6 recipient mice that received OT-I $CD8^+$ T cells. (B) Representative flow plots showing the proportions of tumor cell lines expressing EV ($mCherry^+$) or OVA(APL:N4, A2, Y3, Q4) (GFP^+) at day 7 and day 14 post implantation in recipient mice that were given OT-I T cells one day prior to tumor cell implantation. (C) Bar graph indicates the ratio of B16-$OVA(APL)^+$ tumor cells to EV^+ control tumor cells on day 7 post implantation. OT-I presence in recipient mice is indicated. Error bars indicate SD, and statistical significance was determined by unpaired *t* test $*p < 0.05$, $**p < 0.01$ (n=5 mice per group, representative of two independent experiments).



Supplementary Fig. S2: (A) Bar graph indicates the total number of OT-Is in the draining lymph nodes (Inguinal) from mice with B16-OVA(APL) tumors with (+) or without (-) CBT on day 7 and day 10 post tumor cell implantation. (B) Bar graphs indicate the expression of CD28, Eomes and T- bet in MFI on OT-I T cells isolated from B16-OVA(APL) tumors from CB treated (+) or untreated (-) mice. (C) Bar graphs show the production of IFNγ by OT-I $CD8^+$ T cells isolated from the draining lymph node following *ex vivo* OVA peptide restimulation. Error bars indicate SD, and the statistical significance was determined by unpaired *t* test (n = 8 mice per group, representative of two independent experiments).

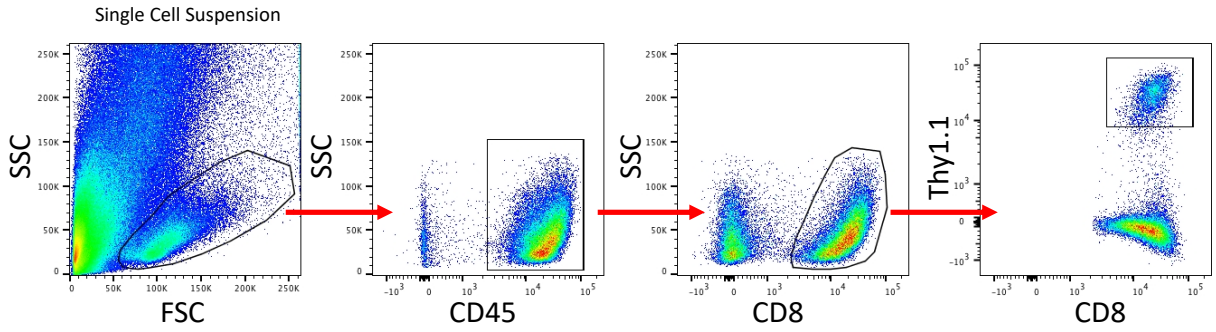

A.
TILs
%IFNγ+ OT-Is
100
50
0
EV
WT
N4
A2
Y3
Q4
B.
Draining LN
%IFNγ+ OT-Is
100
80
60
40
20
0
**
0.0663
SHP-1 KD
SHP-1 WT
ND
ND
N4
A2
Y3
Q4
C.
SHP-1 KD
WT
15min.
N4
180min.
N4
180min.
A2
180min.
Y3
180min.
Q4
pCD3ζ
Unstimulated
Stimulated
%pCD3ζ+
30
20
10
0
SHP-1 KD
SHP-1 WT
***
****
***
***
Unstim
N4-15
N4-180
A2-180
Y3-180
Q4-180

Supplementary Fig. S3: (A) Bar graph indicates IFNγ production by OT-I TIL either transduced (GFP^+) with an empty vector (EV, gray) or untransduced (GFP^-, black) at day 14 post tumor cell implantation following *ex vivo* OVA(APL) peptide restimulation. (B) Bar graph shows IFNγ production by SHP-1 KD (dashed) or WT (solid) OT-Is present in the draining (Inguinal) lymph nodes 14 days after tumor cell implantation following *ex vivo* peptide restimulation. (C) Representative flow plots show the levels of phosphorylated CD3ζ in SHP-1 KD or WT OT-Is following *in vitro* stimulation with the indicated OVA(APL) peptides (0.1uM). Unstimulated controls are shown for each condition. Bar graph indicates the frequency of pCD3ζ+ OT-1s based on unstimulated controls. Error bars indicate SD, and statistical significance was determined by unpaired *t* test $*p < 0.05$, $**p < 0.01$ (n=5 mice per group, representative of two independent experiments).



Supplementary Fig. S4: (A) Bar graph indicates the frequency of endogenous (Thy1.1$^-$) CD8$^+$ T cells in the tumor at day 14 of mice that received with SHP-1 KD (dashed) or EV (grey) OT-I T cells before tumor cell implantation. (B) Bar graphs show the frequency of IFNγ production by endogenous CD8$^+$ T cells in the tumor at day 14 of mice that received with SHP-1 KD (dashed) or EV (grey) OT-Is. (C) Bar graphs show the frequency of IFNγ production by endogenous CD8$^+$ T cells in the tumor at day 14 of mice that received OT-I T cells before tumor cell implantation

and were treated with (+) or without (-) CBT on day 7 and 10 post implantation. Cytokine levels measured following *ex vivo* peptide restimulation with appropriate OVA(APL). Error bars indicate SD, and statistical significance was determined by unpaired *t* test $*p < 0.05$, (n=10 mice per group, representative of two independent experiments).



Supplementary Fig. S5: Flow cytometry gating strategy for identifying OT-I T cells (Thy1.1$^+$) and endogenous CD8$^+$ T cells (Thy1.1$^-$) within single cell suspensions created from B16 melanoma tumors or draining lymph node sites.