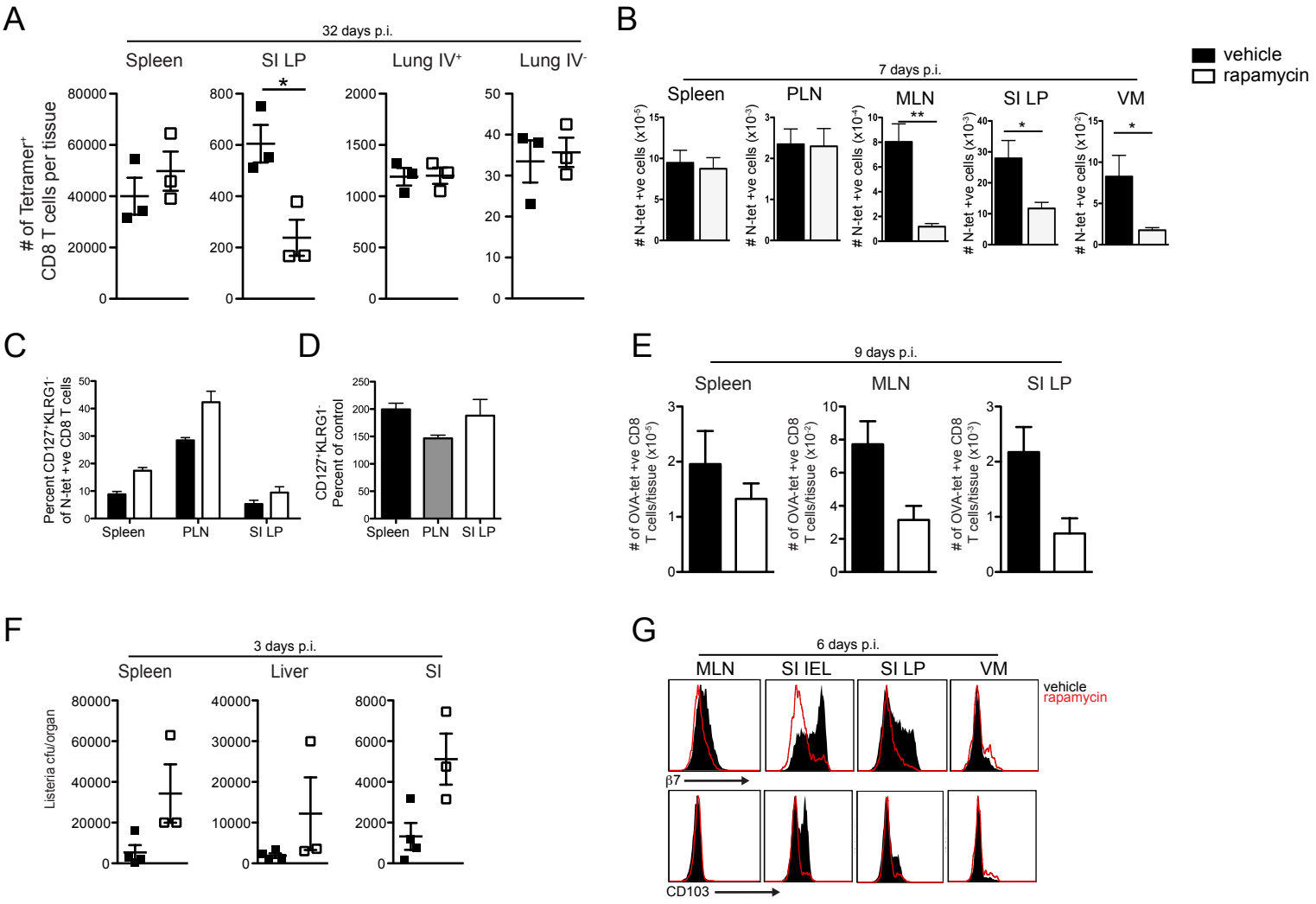
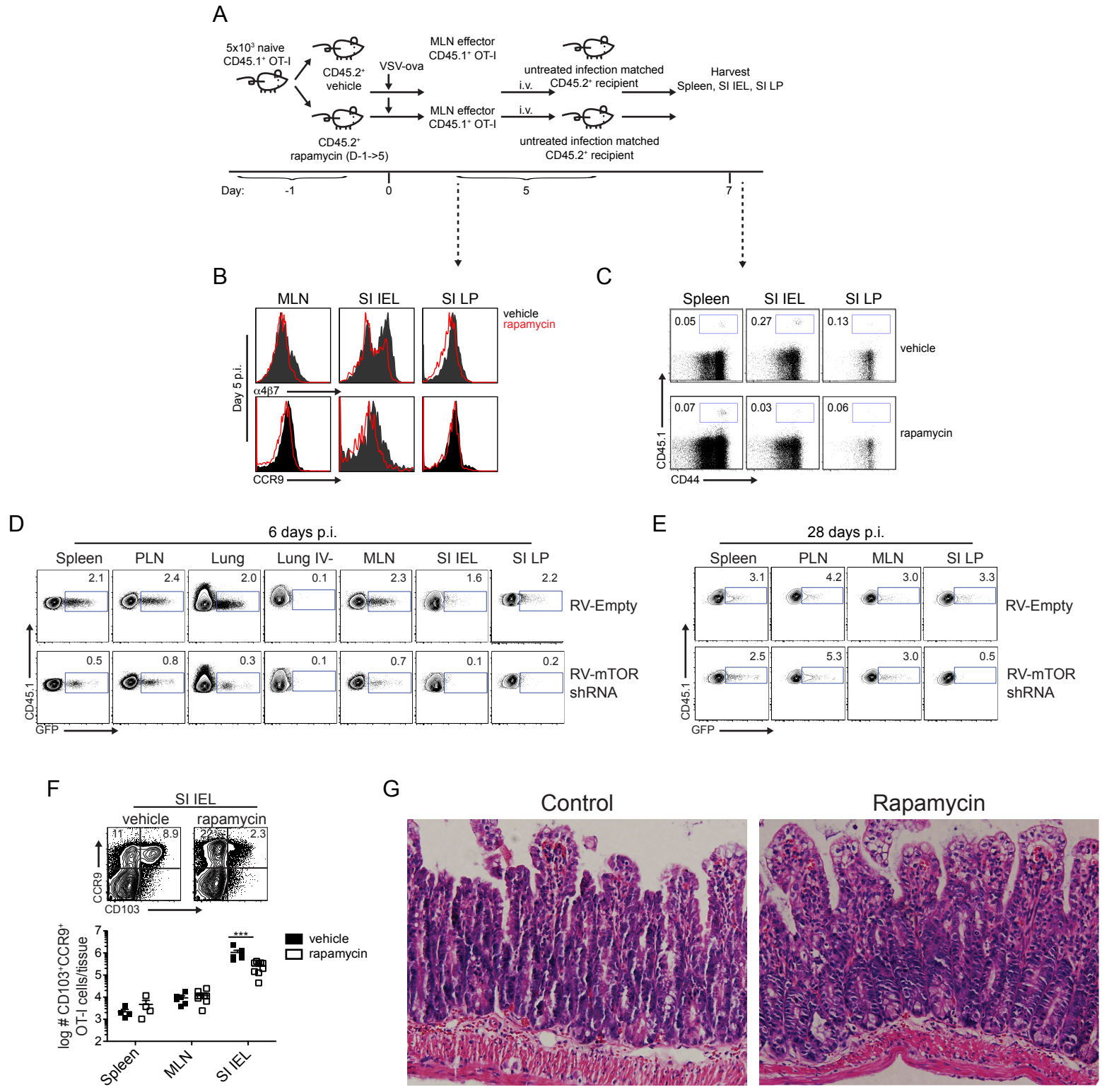


Supplemental Figure 1. (**A**) Total numbers of VSV-N tetramer$^+$ memory CD8 T cells in the spleen, SI LP, lung IV$^+$ (intravascular), lung IV$^-$ (vascular staining negative), 32 days post-immunization. To discriminate between vascular and lung tissue CD8 T cells, 3mg of CD8a-PE intravenously prior collection of lung tissue, as described (Anderson KG, 2012). (**B**) Total numbers of VSV-N tetramer$^+$ effector CD8 T cells in the spleen, PLN, MLN, SI LP, and VM, 7 days post-immunization treated with low-dose rapamycin. (**C**) Percent CD127^{hi}KLRG1$^-$ of total VSV-N tetramer$^+$ CD8 T cells in vehicle or rapamycin treated mice. (**D**) Percent of control: percent rapamycin CD127^{hi}KLRG1$^+$ divided by percent vehicle CD127^{hi}KLRG1$^-$ (One-way ANOVA p=0.5001). (**E**) Total number of OVA tetramer$^+$ effector CD8 T cells in the spleen, MLN, and SI LP 9 days post-infection with oral LM-ova. (**F**) Bacteria burdens from the spleen, liver, and small intestine (SI) 3 days after oral challenge with LM-ova. (**G**) Representative histograms of β7 and CD103 expression in the MLN, SI IEL, SI LP, and VM of vehicle (filled black histogram) and rapamycin (red line histogram) treated mice, 6 days post-immunization with VSV-ova.



Supplemental Figure 2. (**A**) Schematic for experimental design. Virus-specific effector CD8 T cells isolated from MLNs of vehicle or rapamycin treated mice were assessed for their ability to migrate into the small intestine. Day 5 CD45.1⁺ OT-I effectors were enriched from MLNs of vehicle or rapamycin treated mice (days -1 – 5) immunized with VSV-ova. Day 5 effectors were adoptively transferred into infection matched congenic recipient mice (day 5 post-immunization, VSV-ova). (**B**) Representative histograms of intestinal homing markers a4b7 and CCR9 expression in the MLN, SI IEL, and SI LP of vehicle (filled black histogram) and rapamycin treated (red line histogram) mice, 5 days p.i. with VSV-ova (**C**) The presence of CD45.1⁺ OT-I cells in the spleen, SI IEL, and SI LP was detected 2 days post-transfer (day 7 post-immunization) by flow cytometry (representative dot plots). Experiments were repeated twice with at least 3 mice per experimental group. (**D**) Representative dot plots gated on total CD8+CD45.1+ OT-I cells retrovirally transduced (GFP⁺ cells) with either empty GFP vector or a vector containing shRNA against mTOR. Gate and frequencies represent percent GFP⁺ of total OT-I cells in spleen, PLN, intravascular (lung IV⁺) and lung residents (lung IV⁻), MLN, SI IEL, and SI LP 6 days post-immunization with VSV-ova. (**E**) and 28 days post-immunization. (**F**) Graph and representative plots for numbers of CCR9⁺CD103⁺ OT-I cells isolated from the SI IEL of vehicle and rapamycin treated iFABP-ova mice 5 days post-immunization with VSV-ova. (**G**) Representative H&E histology slides of the small intestinal ileum in vehicle and rapamycin treated iFABP-ova mice, adoptively transferred with OT-Is and immunized with VSV-ova.