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Supplemental Information

Enhanced Safety and Efficacy of Oncolytic VSV Therapy by Combination with T Cell Receptor Transgenic T Cells as Carriers

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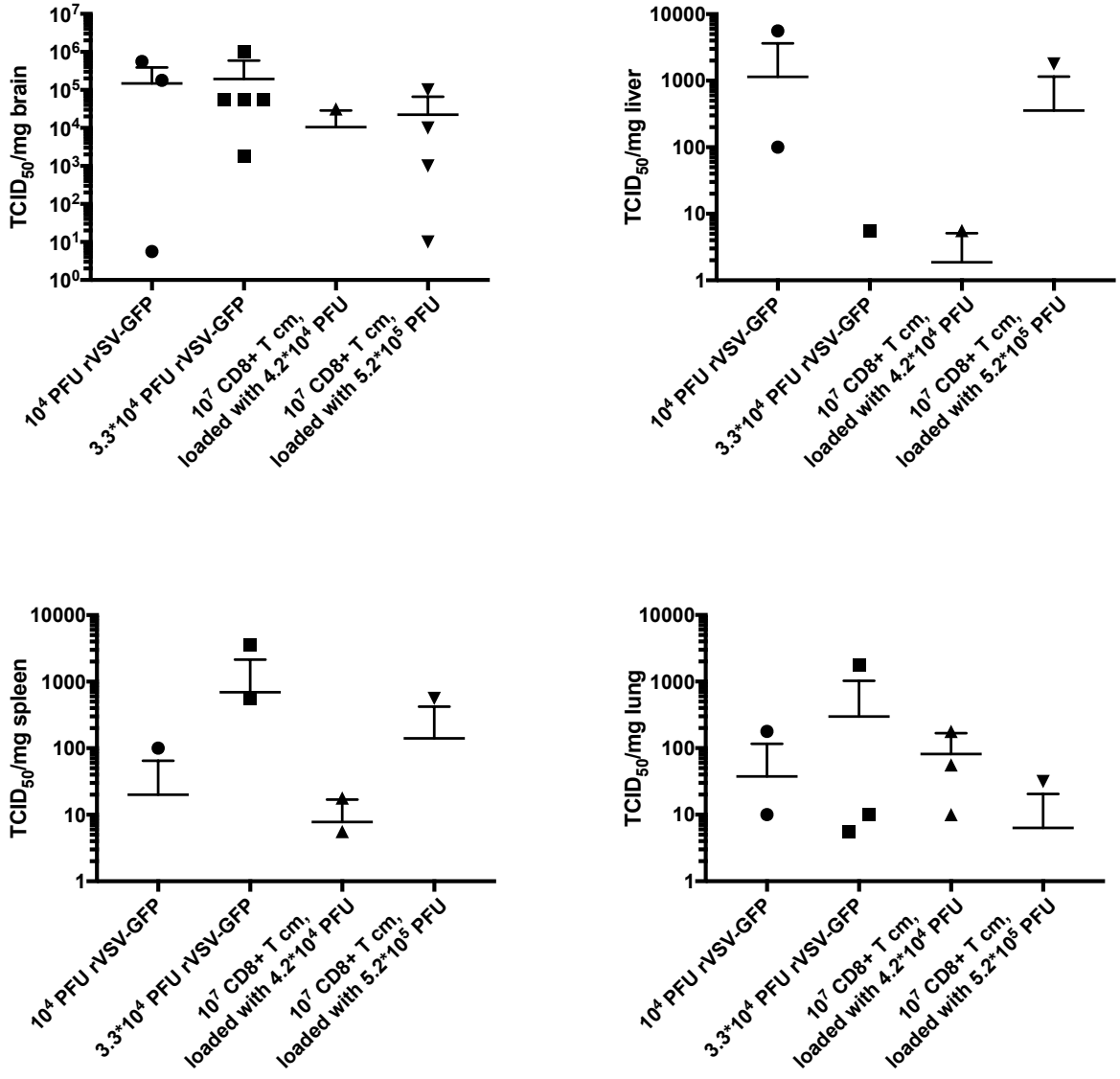
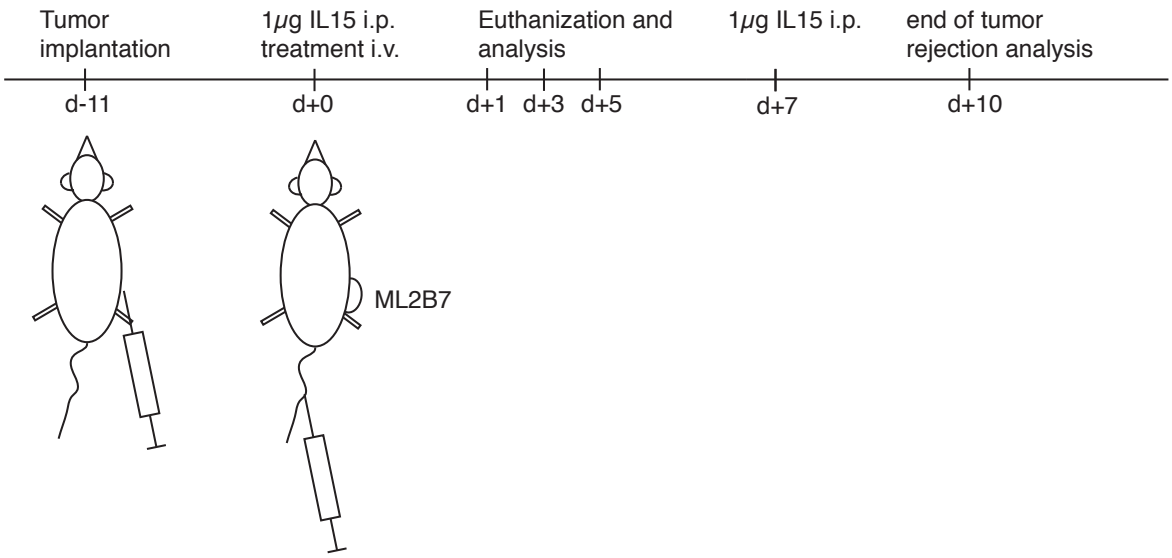


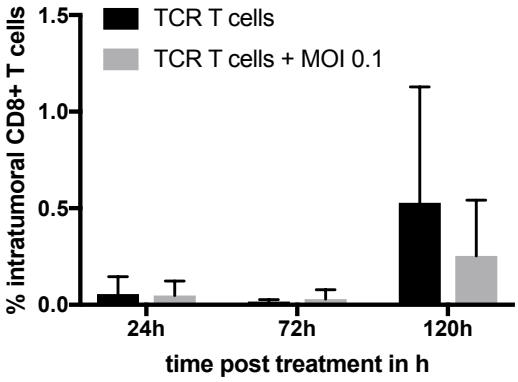
Supplementary Figure 1. VSV demonstrates off-target replication in NSG mice.

TCID50 assays were performed to quantify replication competent rVSV-GFP in the major organs of NSG mice following systemic treatment. Titers recovered from brain (A), liver (B), spleen (C) and lungs (D) are shown (N=3-6). Individual data points and means ± standard deviation are plotted. Replication competent virus was also found in some mice in the heart, kidney, intestine and pancreas (data not shown).



Supplementary Figure 2. Treatment model.

10^7 ML2B7 tumor cells were implanted subcutaneously into the right flank of NSG mice. After 11 days (for kinetic experiments) mice were tail vein injected with different therapies: 1. 10^7 TCR CD8+ T cm; 2. 10^7 control CD8+ T cm; 3. 10^7 TCR CD8+ T cm infected with rVSV-tk at MOI 0.1; 4. 10^7 control CD8+ T cm infected with rVSV-tk at MOI 0.1; 5. 10^4 PFU rVSV-tk, 6. PBS. On day 1,3 and 5 post injection mice were sacrificed and tumors were analyzed by FACS, TCID50 and histology. Tumor rejection was followed for 10 days after treatment. Survival was followed until ML2B7 tumors reached 2cm or mice showed severe signs of sickness, weight loss of more than 20% or were impaired in their ability to walk.



Supplementary Figure 3: Specific proliferation of TCR T cells in their target tumor.

Tumor bearing NSG mice were treated systemically with the indicated TCR cells, with or without rVSV-tk, and euthanized after 24h, 72h and 120h. The percentages of intratumoral CD8+ T cells were determined by FACS analysis. Mean and SD are given. N=3-5.

Listing of detailed numbers of used mice per group

Group	10^4 PFU VSV-GFP	$3.3*10^4$ PFU VSV-GFP	10^7 CD8+ T cm, MOI 0.1	10^7 CD8+ T cm, MOI 1
Figure 4A	6	6	3	6
Figure 4B	5	6	3	5

Supplementary table 1: Number of mice for figure 4

Group	TCR T cells	Control T cells	TCR T cells +VSV	Control T cells + VSV	VSV	PBS
Figure 5A	5	3	5	5	5	3
Figure 5B			6	6	4	

Supplementary table 2: Number of mice for figure 5

Group	TCR T cells	Control T cells	TCR T cells +VSV	Control T cells + VSV	VSV	PBS
Figure 6A	5	3	5	5	5	3
Figure 6B	5	3	5	5	5	3
Figure 6D	6	5	5	4	6	5

Supplementary table 3: Number of mice for figure 6

Group	10^4 PFU VSV-GFP	$3.3*10^4$ PFU VSV-GFP	10^7 CD8+ T cm, MOI 0.1	10^7 CD8+ T cm, MOI 1
Sup. Fig. 1A	5	6	3	5
Sup. Fig. 1B	5	6	3	5
Sup. Fig. 1C	5	6	3	4
Sup. Fig. 1D	5	6	3	5

Supplementary table 4: Number of mice for supplementary figure 1

Group	TCR T cells	TCR T cells + MOI 0.1 rVSV-tk
24h after therapy	3	4
72h after therapy	5	3
120h after therapy	5	5

Supplementary table 5: Number of mice for supplementary figure 3