SUPPLEMENTARY FIGURE LEGENDS

Supplementary Fig. S1. Migratory CD103$^+$ DCs are the main mediators of cross-priming at the tumor-draining LNs

Magnetically presorted CD11c$^+$ DCs from tumor-draining LNs of WT and *Batf3*$^{-/-}$ mice bearing MC38-OVA tumors were FACS-sorted into CD11c^{hi}MHC-II^{int}CD11b$^+$, CD11c^{hi}MHC-II^{int}CD8α$^+$, CD11c^{int}MHC-II^{hi}CD103$^+$ and CD11c^{int}MHC-II^{hi}CD103$^-$, and cocultured with purified naive CD8$^+$ OT-I OVA-specific T cells over a range of DC:T cell ratios. (A) Representative gating for FACS sorting of the indicated dendritic cell subpopulations. (B) Percentages of IFN-γ-positive OT-I T cells at all ratios tested upon coculture with the indicated DC subsets. (C) IFN-γ concentrations in the culture supernatants. (D) Numbers of proliferating OT-I cells by Cell Violet dye dilution.

Supplementary Fig. S2. CTLs against the Adpgk neoantigen of MC38 are induced by anti-CD137 and anti-PD-1 mAbs in a fraction of WT mice, but not in *Batf3*$^{-/-}$ mice

WT or *Batf3*$^{-/-}$ mice were s.c. inoculated with 5 x 10^5 MC38 cells. Mice were injected i.p. with 100 μg anti-PD-1 and 100 μg anti-CD137 mAbs, or with vehicle (control) on days 12 and 14 after tumor inoculation. On day 16, tumors and tumor-draining LNs were excised. (A) Tumors were stained with MHC-I dextramers for Adpgk (H-2D^b-ASMTNMELM). Percentage of Adpgk-specific CD8$^+$ T cells among tumor-infiltrating lymphocytes. (B) LN cell suspensions were restimulated overnight in the presence of

Adpgk soluble peptide and BrefeldinA, and stained for intracellular IFN-γ. Percentage of IFN-γ cells among $CD8^+$ T cells. Mann-Whitney two-tailed test. * $p < 0.05$

Supplementary Fig. S3. Systemic sFlt3L and local intratumoral poly-ICLC expand and mature DCs in B16-OVA bearing mice

(A) WT mice were injected hydrodynamically in the tail vein with 10 μg sFlt3L-coding plasmid in 2 ml saline buffer. 10 days later, spleens and inguinal LNs were analyzed by flow cytometry to assess the absolute numbers of the indicated DC subsets. Numbers on each column indicate fold increase over baseline. (B-D) WT B16-OVA-bearing mice administered with hydrodynamic gene transfer with sFlt3L or control empty plasmid and received poly-ICLC or control buffer i.t. on day 11 post-tumor cell inoculation. (B-C) 24 or (D) 72 hours after poly-ICLC injection, mice were sacrificed and tumors, tumor-draining LNs and spleens were stained for flow cytometry to detect CD40 and PD-L1 expression on the gated DC subsets indicated in the figure.

Supplementary Fig. S4. Combinations of immunomodulatory anti-CD137 and anti-PD-1 mAbs synergize with sFlt3L and poly-ICLC against grafted B16F10 and B16-OVA melanomas.

(A) WT B16F10-bearing mice (n = 6 per group) administered with hydrodynamic gene transfer with sFlt3L or control empty plasmid received i.p. injections of anti-CD137 mAb and anti-PD-1 mAb, controlled by vehicle buffer, on days 4, 7 and 10. Poly-ICLC or control buffer was administered i.t. on day 7. On the left, tumor areas (mean ± SEM). On the right, overall survival. (B) WT B16-OVA bearing mice (n = 7 per group) were

treated as in (A). Mice treated with the quadruple combination remained alive and tumor-free 80 days after tumor cell inoculation. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$