**Supplemental Figure Legends**

**Figure S1. Characterization of aAVC-OVA**

**(A)** aAVC-OVA were established using NIH3T3 as vector cells by loading with α-GalCer and co-electroporation with OVA and CD1d mRNA. **(B, C)** Eight hours after electroporation, CD1d expression **(B)** and the amounts of OVA protein **(C)** were assessed by flow cytometry **(**solid, aAVC-OVA; bold, NIH3T3; shaded, isotype**)** and ELISA (ITEA Inc.). **(D)** In addition, the NKT cell stimulating capacity of aAVC was examined by co-culturing aAVC-OVA with the Vα14 iNKT cell hybridoma 1.2, kindly provided by Dr. M. Kronenberg (La Jolla Inst., La Jolla, CA) and measuring IL-2 production.

**Figure S2.** **Analysis of T cells in spleen and TIL after immunization of tumor-bearing mice with aAVC-OVA**

C57BL/6 mice were injected with 2x105 MO4 cells s.c. and then treated with or without 5x105 aAVC-OVA at day 7. The frequency of CD4 T cells, CD8 T cells in the spleen and TIL was analyzed at day14 by flow cytometry. (n=4-7)

**Figure S3. Phagocytosis and maturation of splenic dendritic cells after administration of aAVCs**

 **(A)** Phenotypic analysis of CD8a+ and CD8a- DC subsets in the spleen 16 hours and 40 hours after an administration of aAVCs. (n=4) **(B)** Uptake of CFSE-labeled aAVCs by DCs (left) and CD86 expression of DCs (middle) at 12 hours after administration of CFSE-labeled aAVCs was measured by flow cytometry (shaded, isotype; blue naïve CD8+DCs, red, aAVC-injected CD8+DCs, green, aAVC-phagocytosed CD8+DCs). Immunofluorescent staining (right): sorted CD11c+DC cells by MACS for analysis by confocal microscopy. (green, aAVC fragments; red ,CD86; blue, DAPI) (n=5)

**Figure S4. Confirmation of depletion of the XCR1+ subset of DCs in DT-treated XCR1-DTR-venus mice.**

After gating on CD11c+MHC class II+ DCs, XCR1+ DCs in spleen (A, B) and superficial LNs (C, D) from XCR1-DTR-venus mice were analyzed by venus expression. After treating with DT (diphteria toxin), DC subsets were analyzed using mAbs for CD8a, CD11b and CD103. Cell number of splenic DC subsets (B) and SLN DC subsets (D) from DT-treated or untreated XCR1-DTR-venus mice are shown. (n=3)

**Figure S5. Induction of an OVA-specific T cell response by aAVC-OVA in a dose-dependent manner**

C57BL/6 mice were immunized with aAVC-OVA (5x105 or 1x104 cells /mouse). One week later, the frequency of OVA-tetramer+ CD8+ T cells in spleen was assessed. Numbers are mean ±SEM.(n=5)