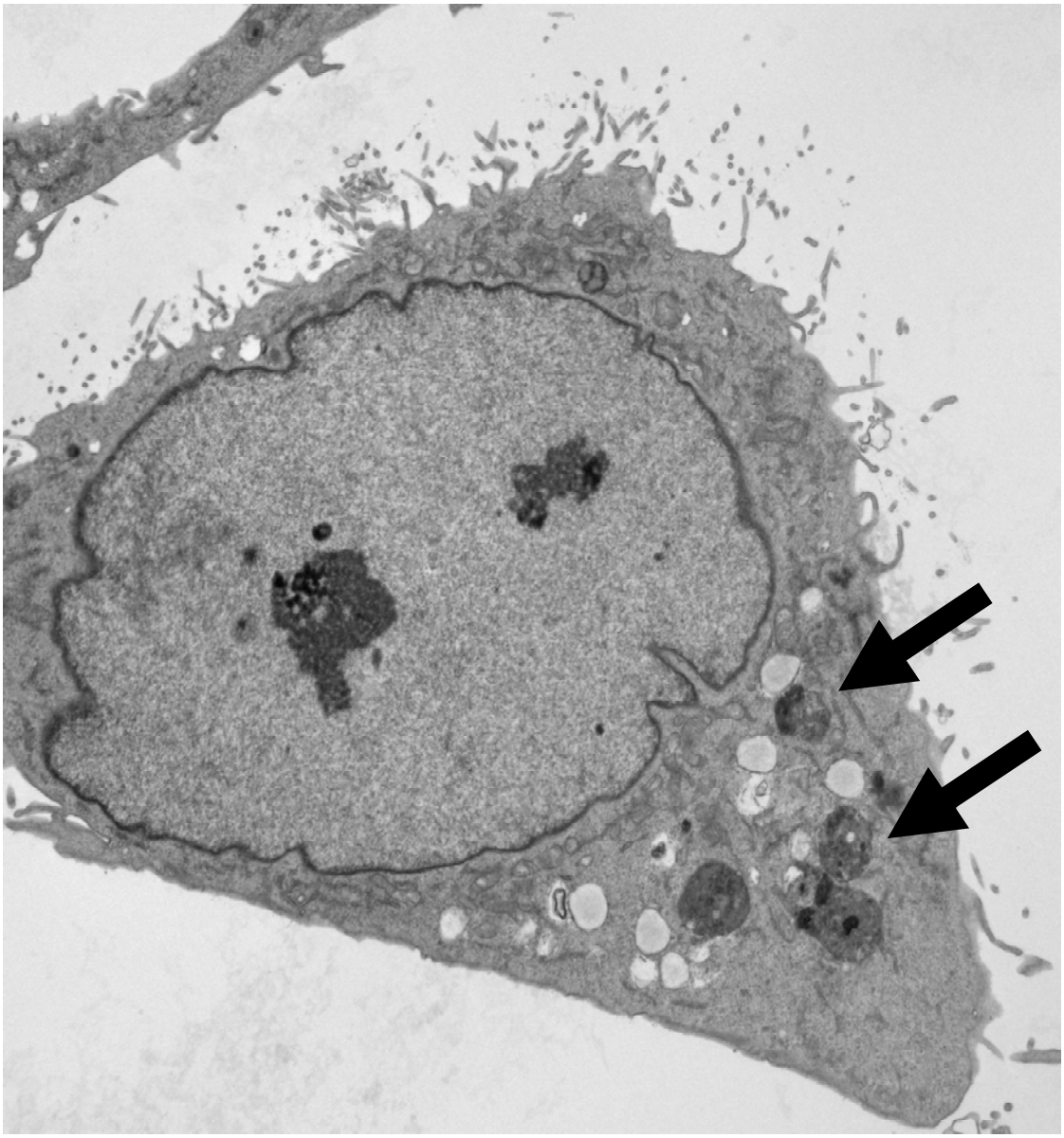
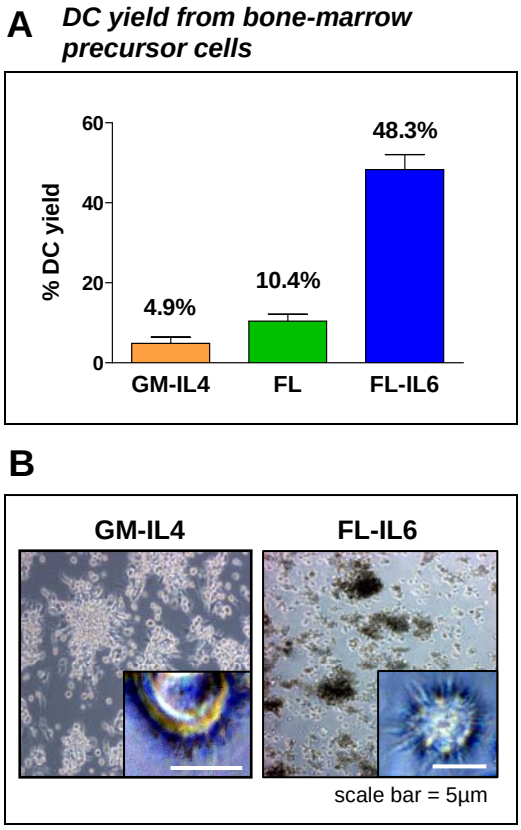
Supplemental Figure 1.



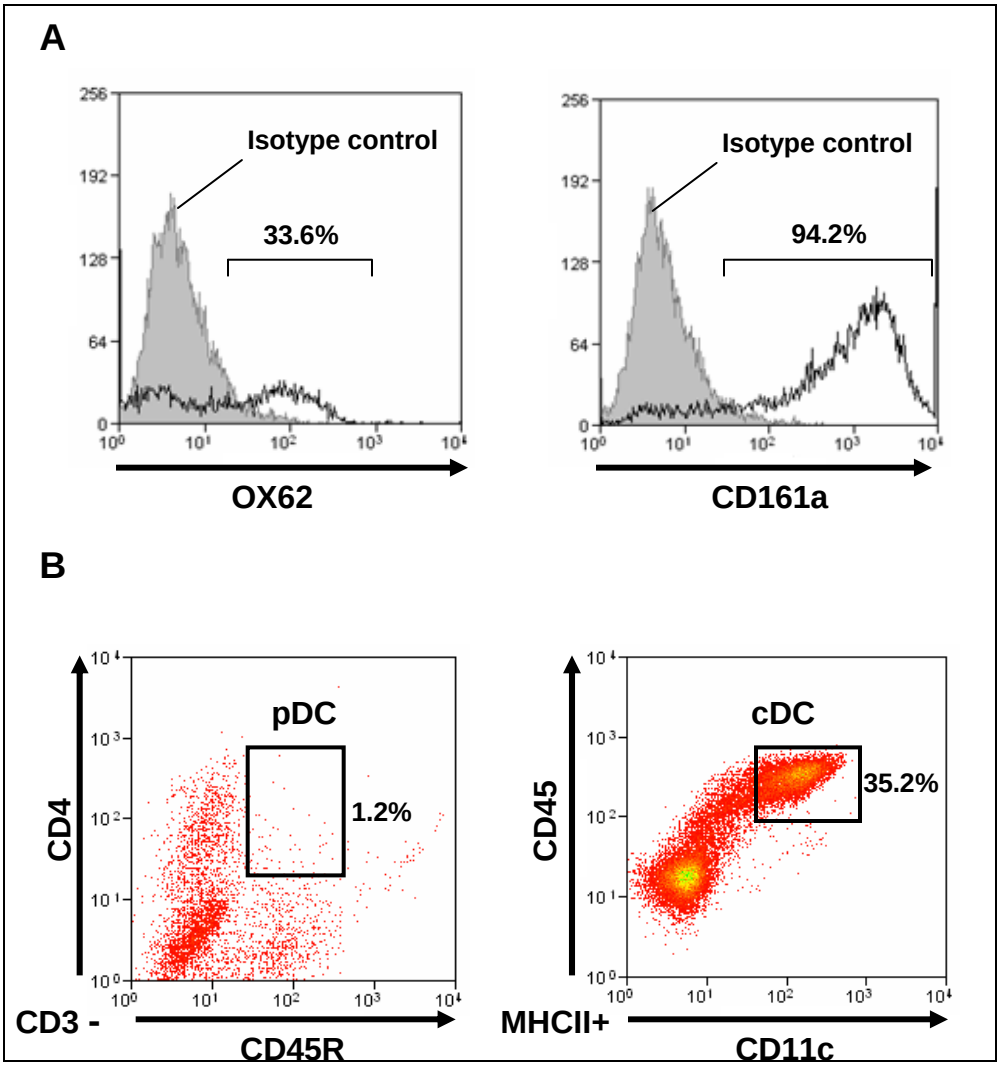
Supplemental Figure 1. Electron microscopic image showing evidence of autophagy in CNS1 tumor cells treated with Ad-TK/GCV. Arrows indicate autophagic vesicles, a hallmark of autophagy.

Supplemental Figure 2.



Supplemental Figure 2. Characterization of bone marrow-derived dendritic cells (DCs) induced by Flt3L+IL-6 or GM-CSF+IL-4. **A,** Yield of DCs from bone marrow precursor cells. Ten million bone marrow cells were cultured in RPMI conditioned media supplemented with 100 µg/ml Flt3L + 50 µg/ml IL-6 (FL-IL6), 100 µg/mL Flt3L (FL) or 10 µg/mL GM-CSF + 10 µg/mL IL-4 (GM-IL4) every 2-3 days. Loosely attached cells were harvested at day 7-8 and counted using trypan blue dye exclusion. Values indicate the average number of DCs yielded from bone marrow precursor cells (% DC yield). **B,** Micrographs show the morphology of FL-IL6-induced and GM-IL4-induced DCs after 7 days in culture. Insets show higher magnification images of cells that exhibit typical long cytoplasmic processes. Scale bar = 5µm. .

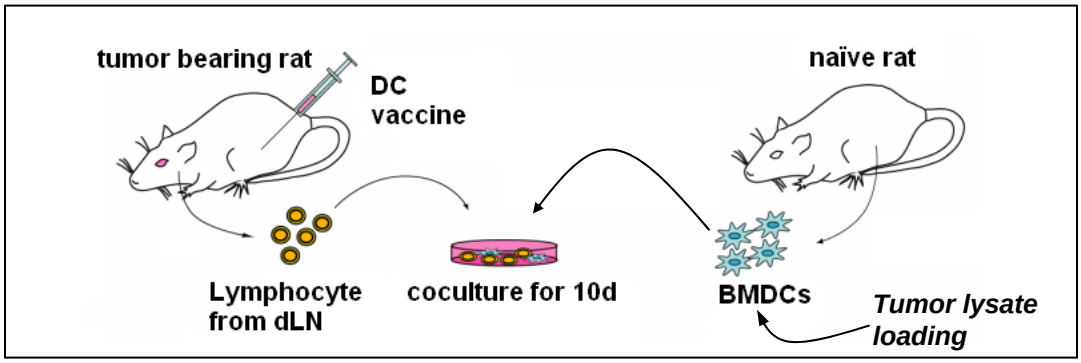
Supplemental Figure 3.



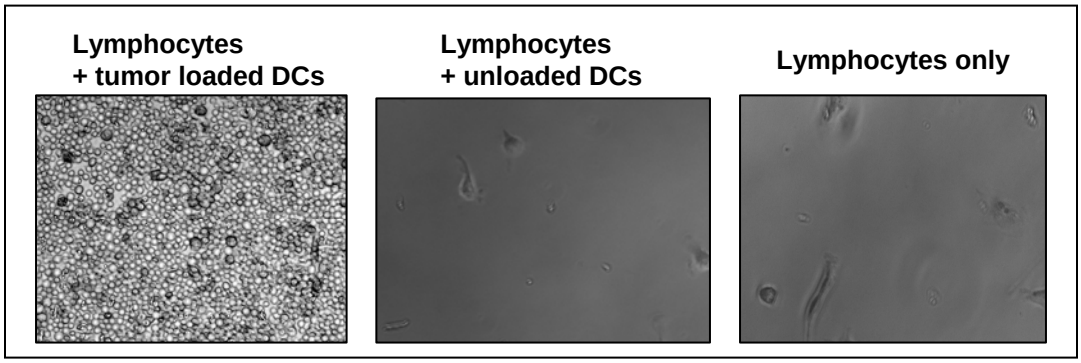
Supplemental Figure 3. Flt3L + IL-6 generated DC express high levels of CD161a rather than OX62 and consist mainly of conventional DC. Ten million bone marrow cells were cultured in RPMI conditioned media supplemented with 100 µg/ml Flt3L + 50 µg/ml IL-6 (FL-IL6). Loosely attached cells were harvested at day 7. Surface molecules OX-62, CD161a, CD3, CD4, CD45R, CD11c, CD45R and MHCII were stained and measured by flow cytometry. A, Representative histogram and corresponding percentage of OX62+ or CD161a+ cells are shown. B, Representative dot plot and the proportion of plasmacytoid DC (pDC; CD3- CD4+ CD45R+) and conventional DC (cDC; CD11c+ CD45^{high} MHCII+) from FL-IL6 generated DCs are shown.

Supplemental Figure 4.

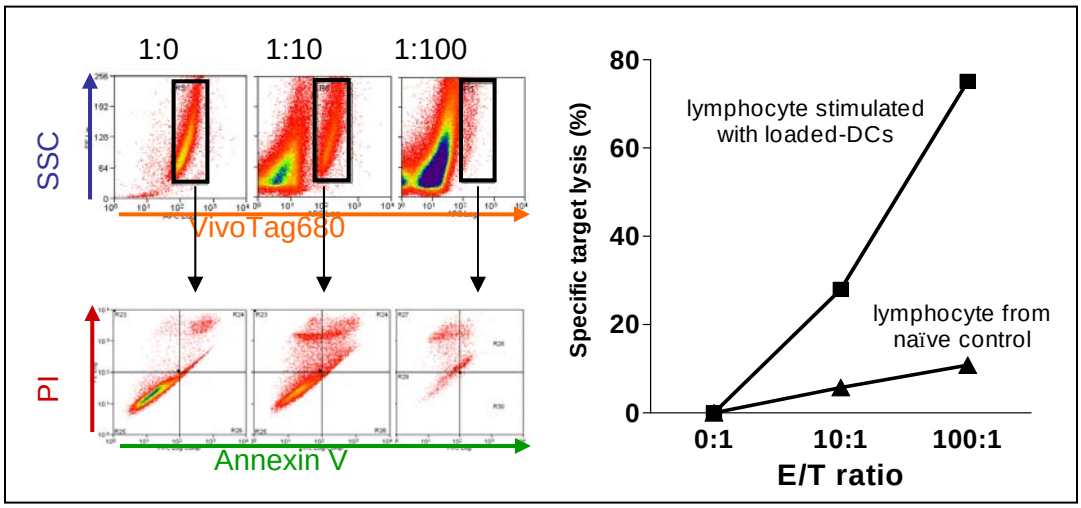
A *Diagram indicating the source of lymphocytes and tumor loaded DCs*



B *Tumor loaded DCs stimulate lymphocyte proliferation*



C *Anti-tumor cytotoxic effect of lymphocytes stimulated with tumor-loaded DCs*



Supplemental Figure 4. Flt3L + IL-6 induced DC stimulates cytotoxic lymphocytes. A, Schematic depicting T cell stimulatory activity of FL-IL6-induced DC. FL-IL6-induced BMDCs from naïve Lewis rats were loaded with Ad-TK/GCV treated dying tumor cells for 5h and then cocultured for 10 days with lymphocytes derived from the cervical lymph nodes from CNS1 tumor bearing rats treated with FL-IL6 DC vaccine. **B,** Photos of individual lymphocyte cultures after 10-day co-culture with tumor-loaded DCs, unloaded DCs or without DCs. Lymphocytes incubated with unloaded DCs, or without DCs, failed to proliferate and eventually died during the incubation . **C,** Cytotoxicity of lymphocytes pulsed with tumor-loaded DCs were tested by flow cytometry. CNS1 cells stained with VivoTag 680 were cultured with increasing numbers of lymphocytes pulsed with tumor-loaded DCs, or lymphocytes from a naïve rat as a control. After 5 h coincubation, cell death of CNS1 tumor cells was assessed by Annexin V-FITC and PI staining followed by flow cytometry. Cells positive for either Annexin-V or PI were considered to be dead. Data are represented as the percentage of dead tumor cells in the co-culture.