Supplementary Figure 1.

(A)Tumour weight (in mg) measured on day 15 post B16F10 (2mm^3) implantation; each dot represents an individual tumour. (B) Density of CD8$^+$ IFN-ɣ$^+$ T cells in tumours as determined by flow cytometry following co-culture with B16F10 or MC57 cells in vitro. (C) Density of CD4$^+$ IFN-ɣ$^+$ T cells in tumours as determined by flow cytometry following co-culture with B16F10 or MC57 cells in vitro. Statistical analysis by *t*-test (nonparametric). *N*=4.

Supplementary Figure 2.

(A) Tumour weight (mg) measured on day 15 post B16F10 (2mm^3) implantation; each dot represents an individual tumour. (B) Density of CD4$^+$ T cells in treated and untreated tumours in each group, as determined by flow cytometry. The densities were determined by dividing the total number of CD8$^+$ T cells in each tumour by the tumour weight (in mg), pre-gated on tumour infiltrating lymphocytes (TILs). (C) Representative FACS plots showing the total number of CD4$^+$ T cells in treated and untreated tumours in each group, pre-gated on TILs. (D and E) Percentage (%) of intratumoural and peritumoural CD4$^+$ T cells in both biologic groups. (F) Representative immunohistochemistry (IHC) stained for CD4$^+$ T cells to assess intratumoural and peritumoural cells, arrows point to CD4$^+$ T.

Supplementary Figure 3.

(A) Percentage (%) of CD4$^+$ T cells in peripheral blood 48h post anti-CD4$^+$ mAb administration post tumour implantation; each dot represents an individual tumour. Depletion efficacy was ~99%. (B) Tumour weight (in mg) measured on day 15 post B16F10 (2mm^3) implantation; each dot represents an individual tumour. (C) Density of CD8$^+$ T cells in tumours as determined by flow cytometry. The densities were determined by dividing the total number of CD8$^+$ T cells in each tumour (pre-gated on TILs) by the tumour weight (in mg). (D) Density of CD4$^+$ T cells in tumours as determined by flow cytometry. The densities were determined by dividing the total number of CD4$^+$ T cells in each tumour (pre-gated on TILs) by the tumour weight (in mg). (E) Representative FACS plots showing the percentage (%) of CD8$^+$ T cells in peripheral blood. Statistical analysis by t-test (nonparametric). *N*=4 or 5.

Supplementary Figure 4.

(A) A cartoon illustrating the intratumoural injection to study the depot effect using AF488-$CuMV_{TT}$ or AF488-$CuMV_{TT}$ formulated with MCT. (B) Percentage (%) $CD11b^{+}$ AF488-$CuMV_{TT}$ cells in tumour after 1 or 5 days of intratumoural injection. A mock group was included. *N*=3.

Supplementary Figure 5.

(A and B) Go Gene Ontology and KEGG pathways enrichment were analysed to identify biological processes and pathways significantly enriched with upregulated and downregulated genes in tumours for each biological group. Enrichment scores showing gene count and statistical significance as determined with Fisher's exact test and presented for the top 30 Biological process-related GO terms and the top 30 KEGG pathways.