Supplementary Figures.

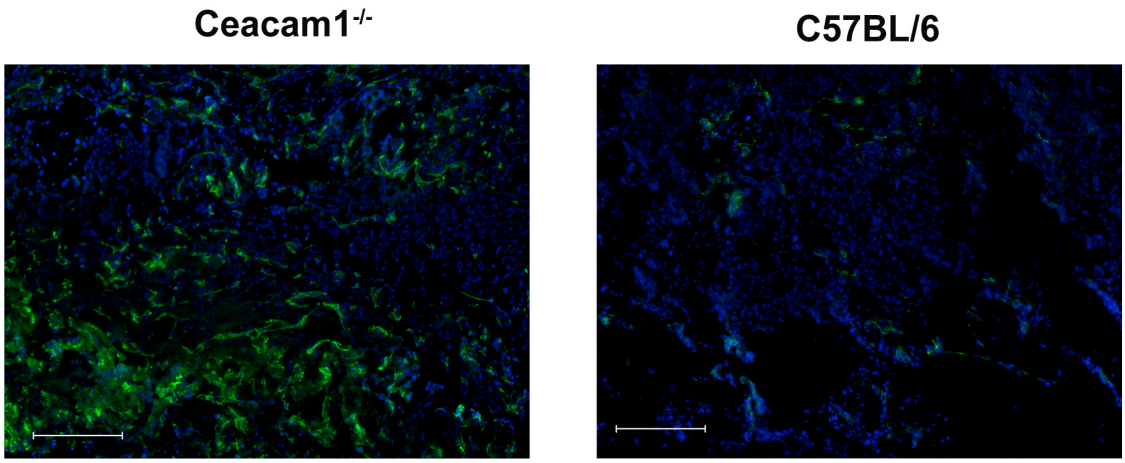

Figure S1. B16 tumors from Ceacam1$^{-/-}$ mice have increased vascular density compared to WT mice. Representative immunofluorescent analysis of CD31 expression in tumors from Ceacam1$^{-/-}$ mice vs WT controls.

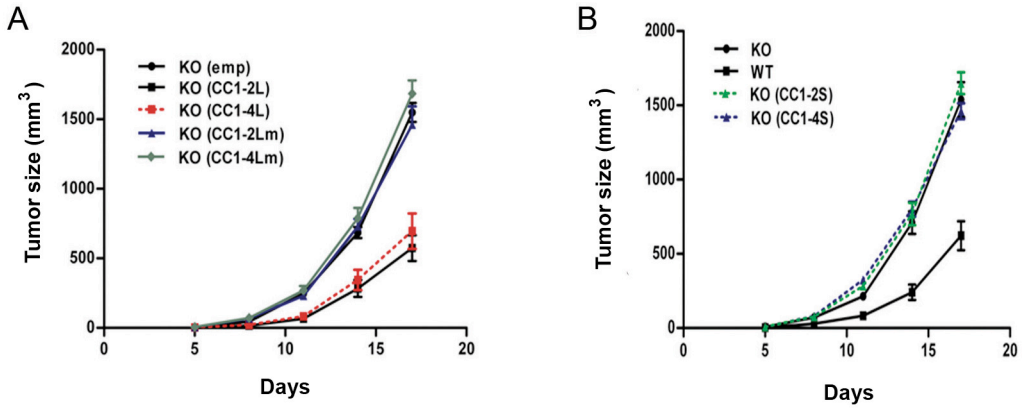

Figure S2. B16 tumor growth in bone marrow reconstituted CEACAM1$^{-/-}$ mice. A. CEACAM1$^{-/-}$ (KO) mice were reconstituted with bone marrow stem cells expressing empty vector (emp), CEACAM1-2L (CC1-2L), CEACAM1-4L (CC1-4L) or ITIM mutated versions (CC1-2Lmut or CC1-4Lmut) and tumor size measured over 17 days. **B**. Same experiment with short isoforms of CEACAM1 (CC1-2S or CC1-4S). Data from two independent experiments.

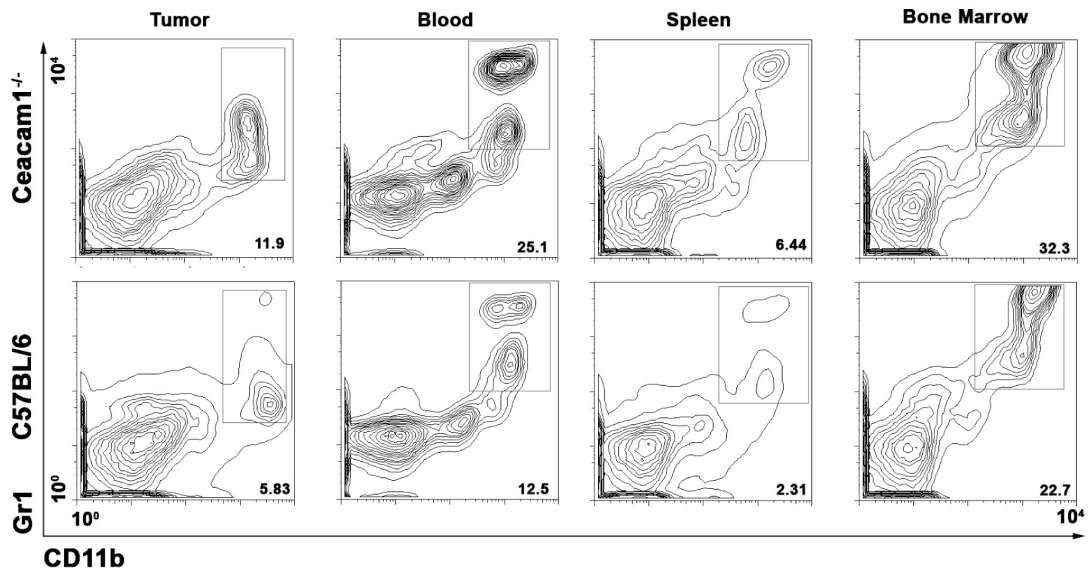

Figure S3. Increased expression of Gr1+CD11b+ myeloid cells in tumor, blood, spleen and bone marrow of Ceacam1$^{-/-}$ mice compared to WT controls. Representative flow analysis of each tissue taken from animals 17 days after tumor implantation.

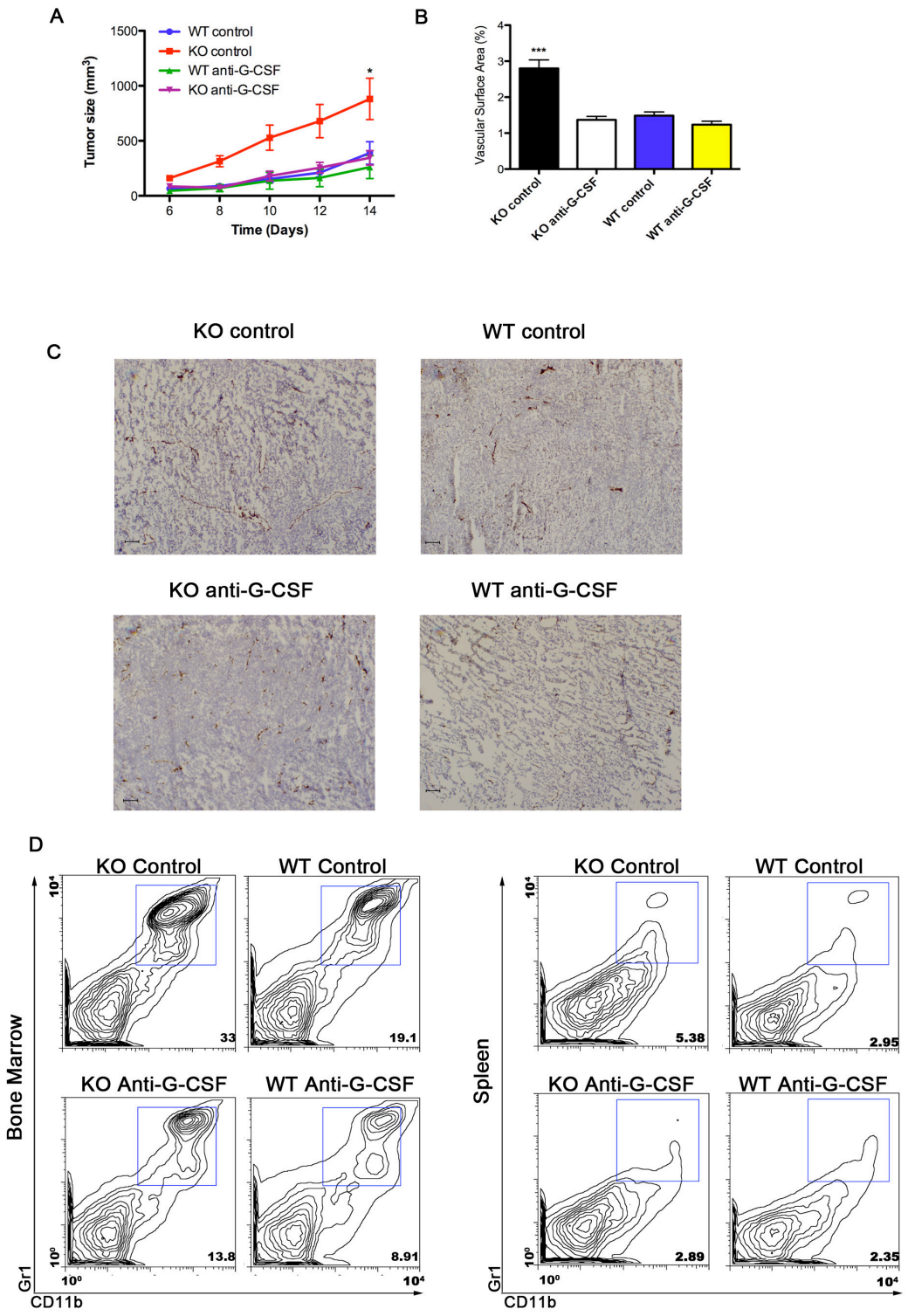

Figure S4. Anti-G-CSF treatment reduces tumor size, vascular density and infiltrating Gr1+ cells in tumor bearing Ceacam1$^{-/-}$ mice compared to WT controls. **A**. Tumor size over time in antibody treated vs isotype control treated mice (n=6 mice in each group, *P<0.01). **B**. Quantitation of blood vessels based on CD31 staining (***P<0.001). **C**. Representative immunohistochemical staining for CD31 from tumors in antibody vs isotype control treated mice. **D**. Flow analysis of Gr1+CD11b cells from tumors in antibody vs isotype control treated mice.

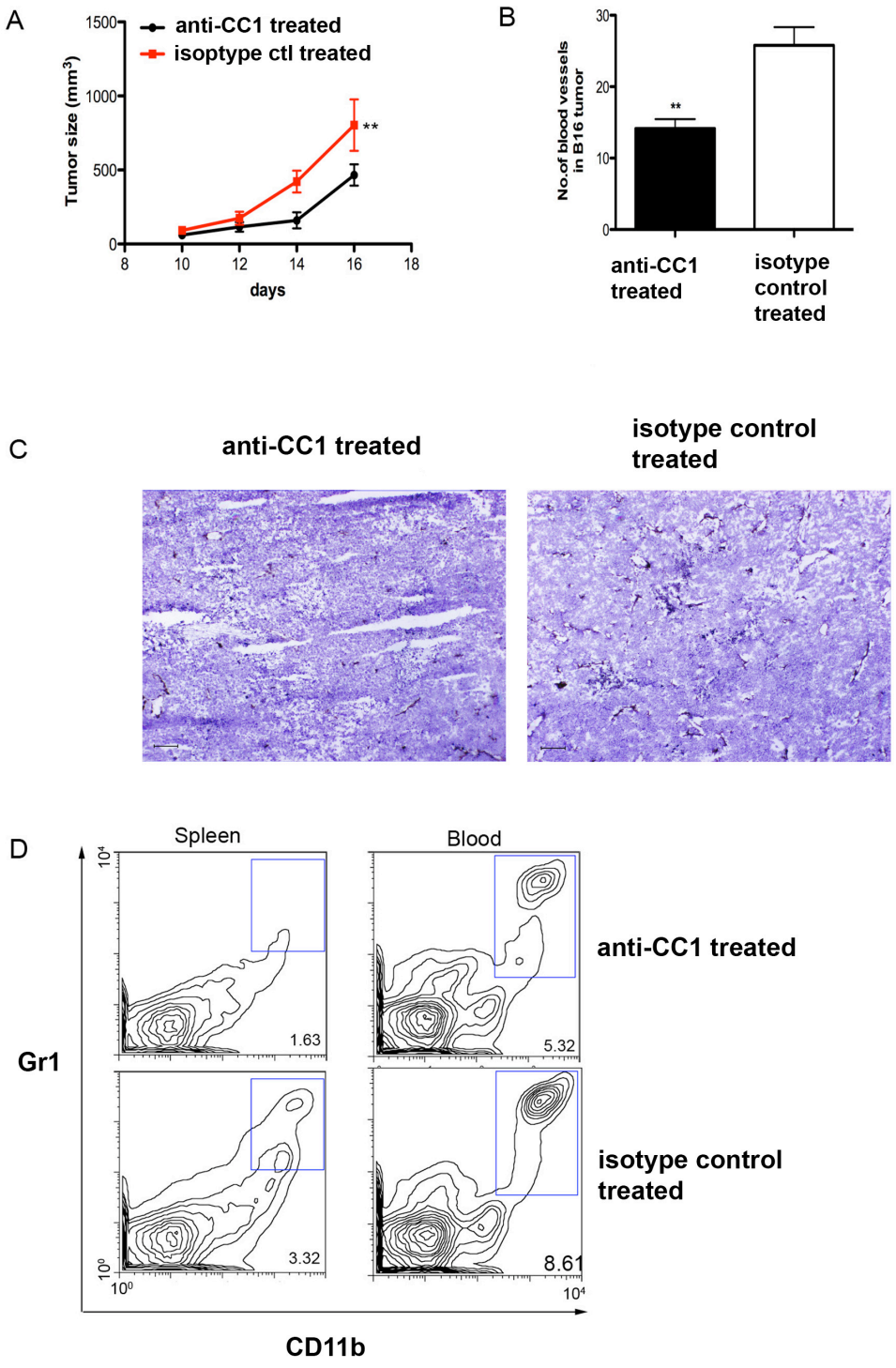

Figure S5. Anti-CEACAM1 treatment reduces tumor size, vascular density and numbers of Gr1+ cells in tumor bearing WT mice. **A**. Tumor size over time in antibody treated vs isotype control treated WT mice (n=6 mice in each group, **P<0.001). **B**. Quantitation of blood vessels based on CD31 staining (**P<0.001). **C**. Representative immunohistochemical staining for CD31 from tumors in antibody vs isotype control treated mice. **D**. Flow analysis of Gr1+CD11b cells from spleen and blood in antibody vs isotype control treated mice.

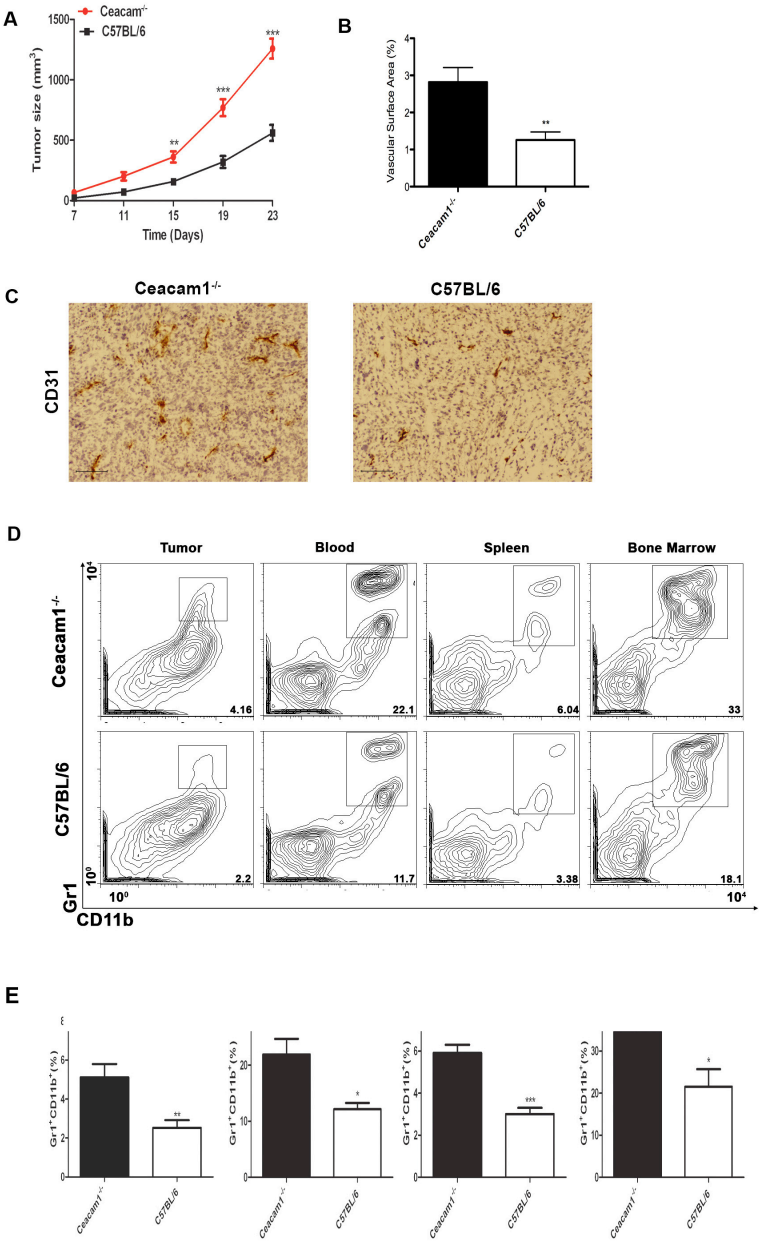

Figure S6. MC38 colon tumor growth and angiogenesis are enhanced in Ceacam1-/- mice. (A) MC38 colon tumor cells were implanted s.c. into Ceacam1-/- and C57BL/6 mice and tumor growth was measured (n=6 mice per group from three independent experiments). Data represent mean ± SEM. **0.001< P ≤ 0.01, *** P ≤ 0.001. **(B)** Blood vessels in tumors were counted based on the immunohistological analysis with anti-CD31 of frozen tumor tissue collected from mice in (A) after 23 days. More than 8 fields of view were analyzed. Data represent mean ± SEM, **0.001< P ≤ 0.01. (**C**) Immunohistochemistry staining of mouse MC38 tumor tissue collected from mice in (A) after 23 days with anti-CD31 antibody. (**D**) Representative flow cytometric analysis showing Gr1+CD11b+ myeloid population Ceacam1-/- and C57BL/6 tumor-bearing mice. The mean percentage of Gr1+CD11b+ cells is shown in (**E**), (n=8 mice per group from two independent experiments). Data represent mean ± SEM. *0.01< P ≤0.05, **0.001< P ≤ 0.01 *** P ≤ 0.001.