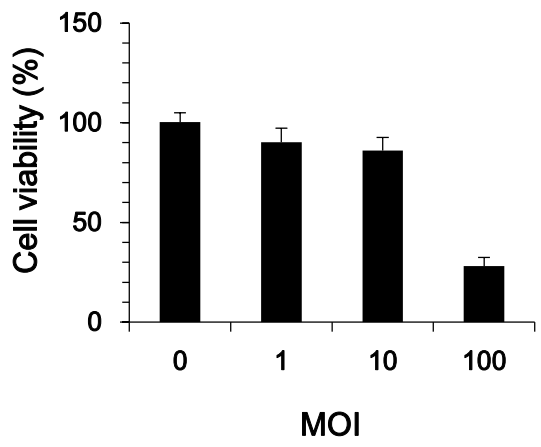
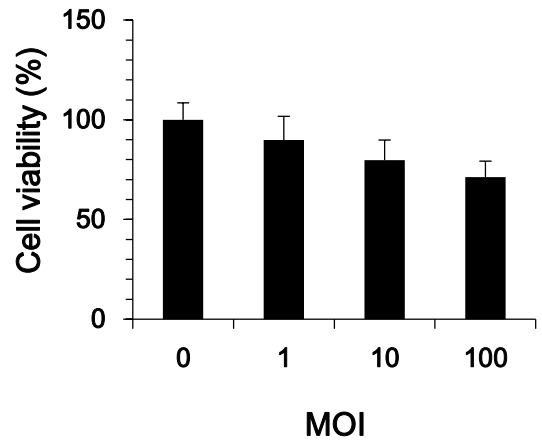


Supplementary Fig. S1

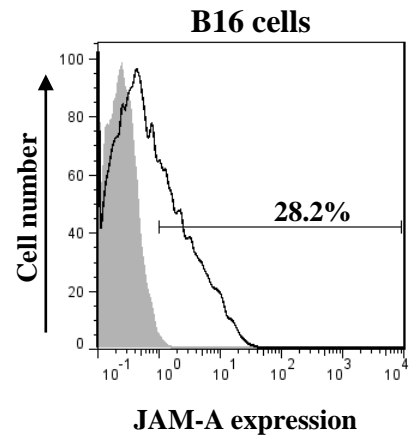
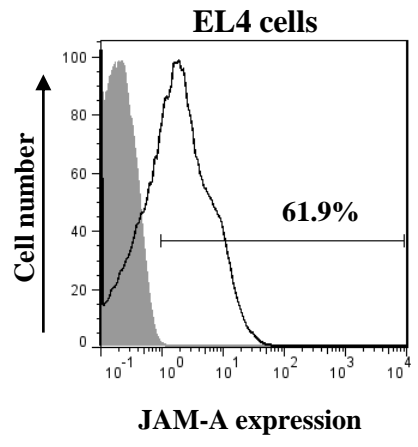
(A)



(B)



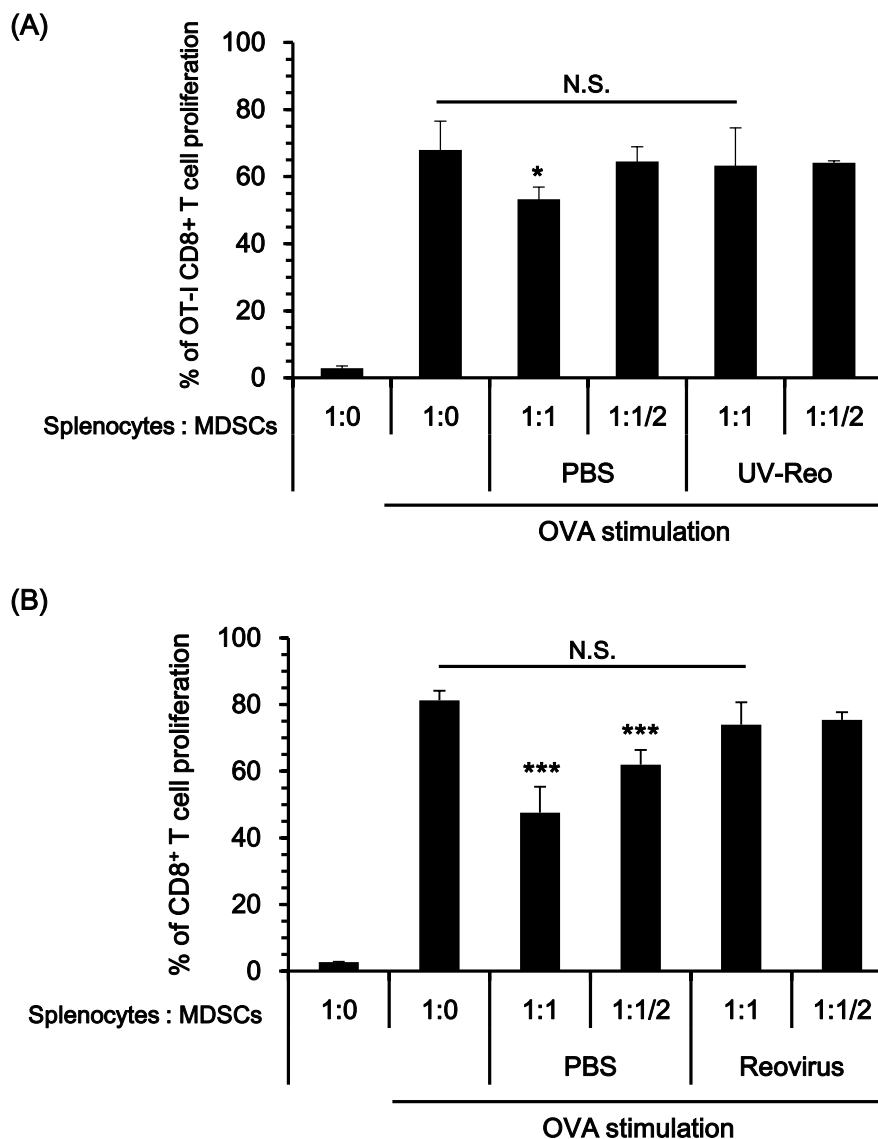
(C)



Supplementary Fig. S1

Cell viabilities of mouse tumor cells following reovirus infection *in vitro*. (A and B) EL4 cells (A) and B16 cells (B) were seeded in a 96-well plate. Twenty-four hours later, cells were infected with reovirus at the indicated MOIs. Cell viabilities were evaluated by an Alamarblue assay 48 h following infection. The data represent the means \pm S.D. (n=4). (C) JAM-A expression levels on EL4 and B16 cells were analyzed by flow cytometry.

Supplementary Fig. S2

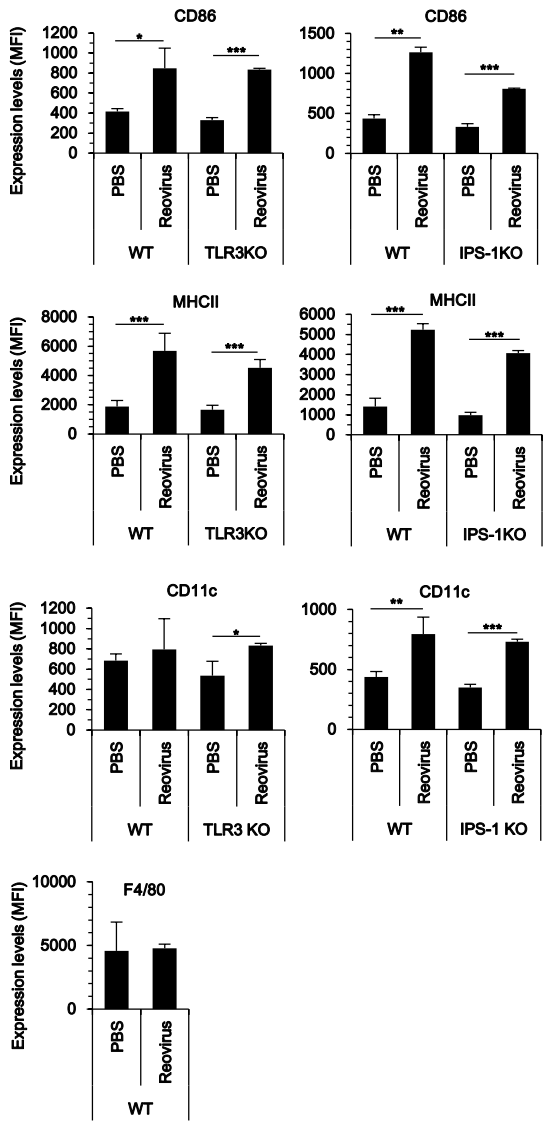


Supplementary Figure S2

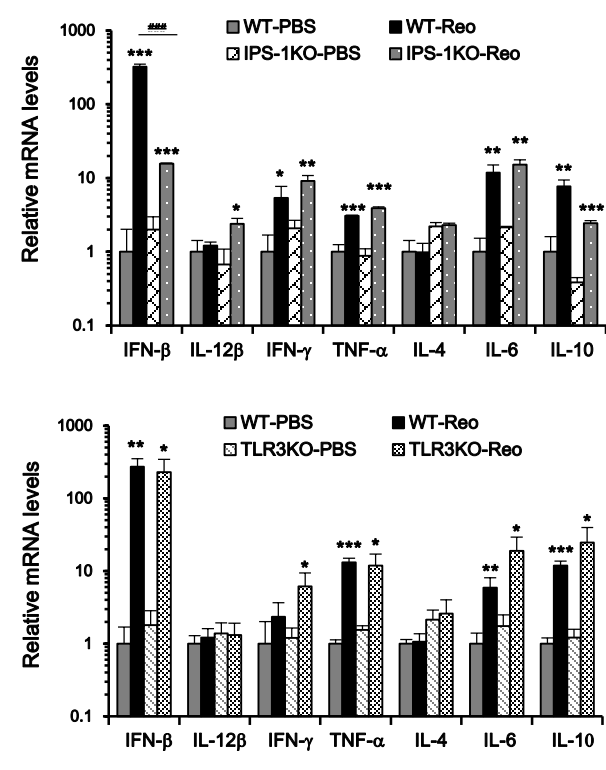
Suppressive activities of MDSCs on CD8⁺ T cell proliferation following administration of reovirus and UV-Reo. **(A)** Suppressive activities of MDSCs recovered from EL4 tumor-bearing mice on CD8⁺ T cell proliferation following UV-Reo administration. **(B)** Suppressive activities of MDSCs recovered from B16 tumor-bearing mice on CD8⁺ T cell proliferation following reovirus administration. Reovirus and UV-Reo were administered to tumor-bearing mice at a dose of 3×10^8 PFU/mouse. Splenic MDSCs were recovered from tumor-bearing mice 2 days after administration. MDSCs were co-cultured with CFSE-stained splenocytes from OT-I mice. Three days after co-culture, proliferation of CD8⁺ T cells was evaluated by measuring the CFSE intensity in CD8⁺ T cells using flow cytometry. The data represent the means \pm S.D. (n=4). *P < 0.05, ***P < 0.001, compared with OVA-stimulated splenocytes without MDSCs.

Supplementary Fig. S3

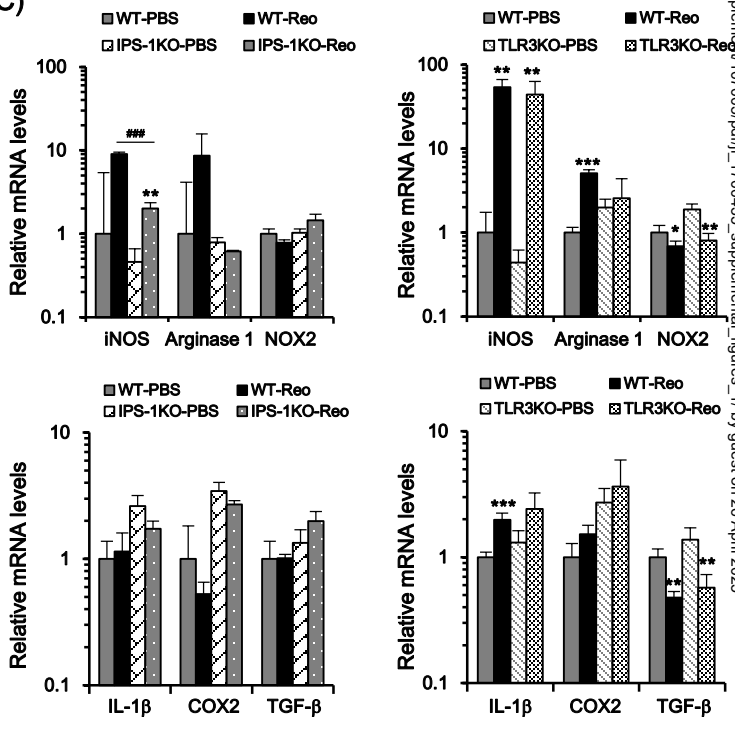
(A)



(B)



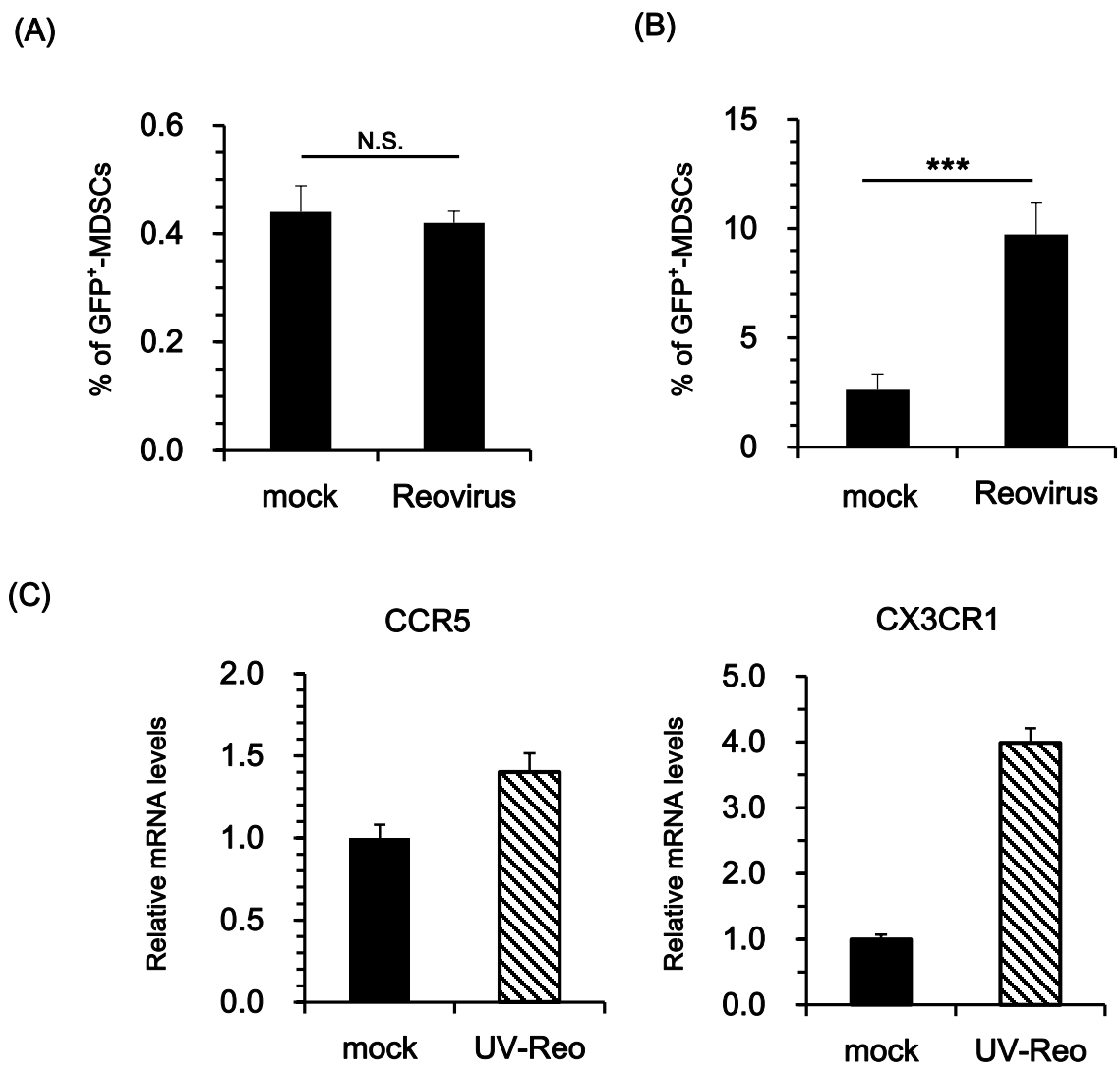
(C)



Supplementary Fig. S3

Activation of splenic MDSCs following reovirus administration. (A) Surface expression levels of CD86, MHCII, F4/80 and CD11c on splenic MDSCs following reovirus administration. (B and C) Expression levels of cytokines (B) and cellular factors (C) involved in the immunosuppressive activities of splenic MDSCs following reovirus treatment. Reovirus was intravenously administered to tumor-bearing WT, IPS-1 KO, and TLR3 KO mice at a dose of 3×10^8 PFU/mouse. Splenic MDSCs were recovered from the mice 2 days after administration, followed by flow cytometric analysis and real-time RT-PCR analysis. The data represent the means \pm S.D. ($n=4$). * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, compared with MDSCs recovered from PBS-treated mice. #### $P < 0.001$, compared with IPS-1 KO MDSCs.

Supplementary Fig. S4



Supplementary Fig. S4

Biodistribution of *in vitro*-generated MDSCs following transfer in tumor-bearing mice. (A and B) MDSCs were differentiated from bone marrow cells of GFP-transgenic mice. Following incubation of GFP⁺ MDSCs with reovirus for 24 h, GFP-MDSCs were transferred into tumor-bearing mice. Twenty-four hours later, cells were recovered from the spleen (A) and the tumor (B). GFP⁺ cells were detected by using flow cytometry. Data showed the percentage of GFP⁺-transferred MDSCs in the recovered blood cells. (C) mRNA levels of CCR5 and CX3CR1 in the MDSCs following reovirus treatment. UV-Reo was added to *in vitro*-generated MDSCs at an MOI of 5. Total RNA was extracted from the MDSCs 24 hours after treatment, followed by qRT-PCR analysis. The data represent the means \pm S.D. (n=4). ***P < 0.001, compared with mock-MDSCs.