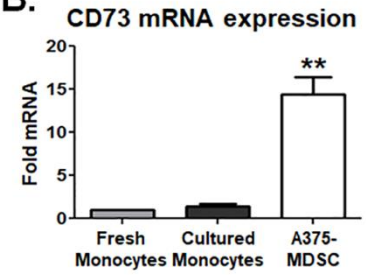
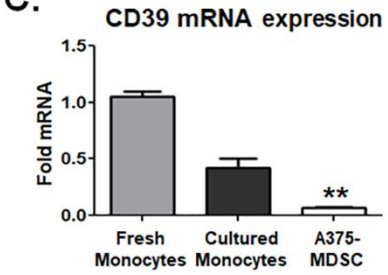
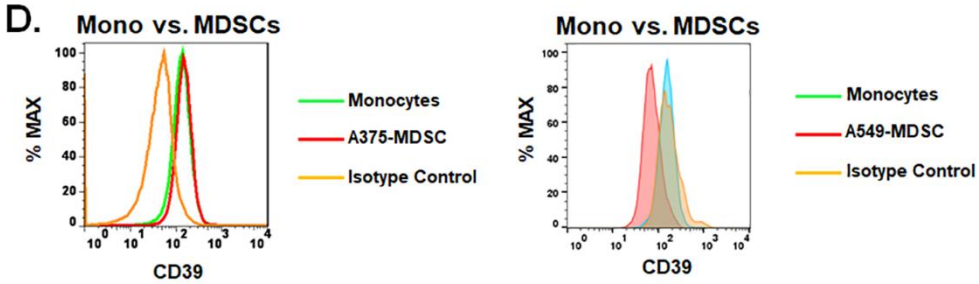
Supplemental Figure 1

A.

Gene	Fold Change	*P*-Value
	Mono vs. M-MDSC	Mono vs. M-MDSC
CD73	**16.654**	**7.23E-05**
CD39	**-3.3516**	**0.0503**
IL-6	6.32013	2.56E-06
VEGF A	3.44231	1.11E-05
ARG2	5.70656	1.01E-06
IDO1	1.88184	0.0004
NOX4	7.2177	3.99E-08

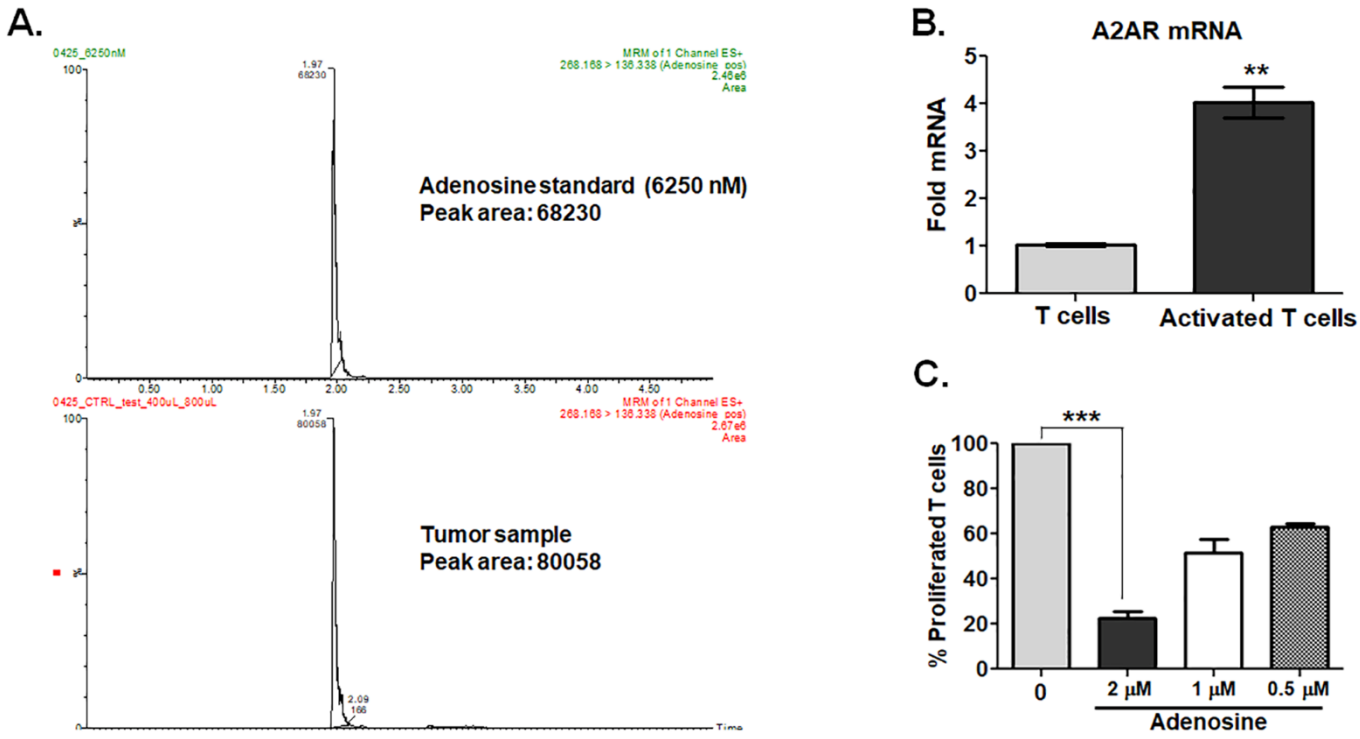






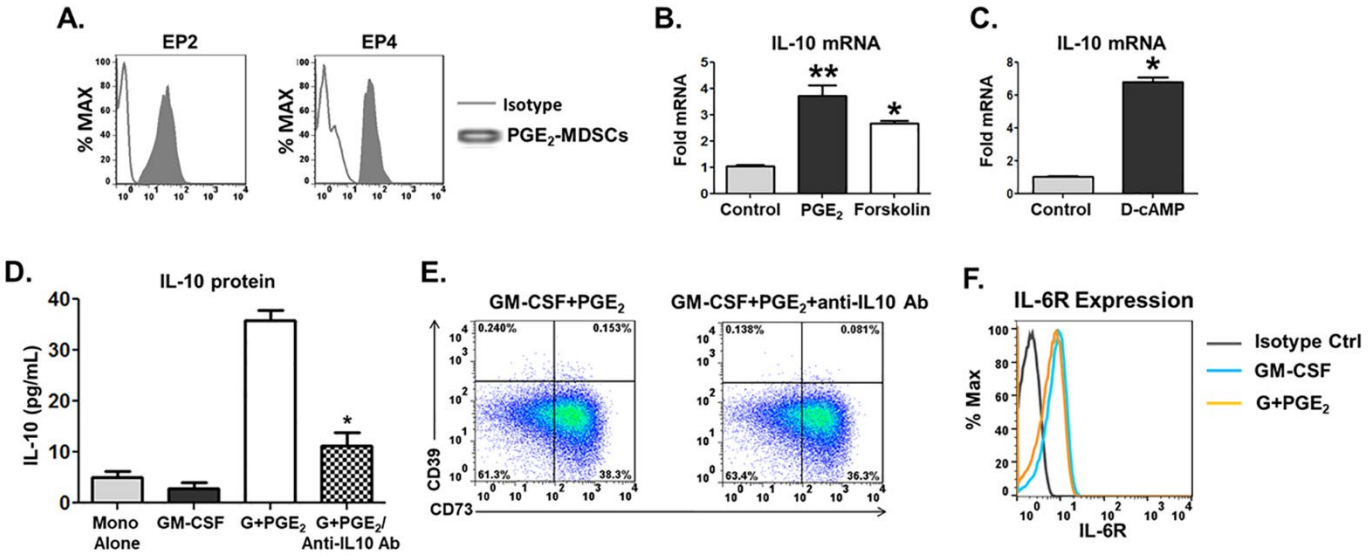
Supplemental Figure 1. A–C. Microarray analysis **(A)** and quantitative RT-PCR analysis show that CD73 mRNA expression is increased **(B)** and CD39 mRNA expression is decreased **(C)** when compared to the expression levels in cultures monocytes. **D.** Representative histograms showing the expression of CD39 in A549 and A375 tumor cell-induced human M-MDSCs and cultures monocytes alone. Data, mean ± SEM of three independent experiments with monocytes from 3 different donors, *P* values: **, p<0.001.

Supplemental Figure 2



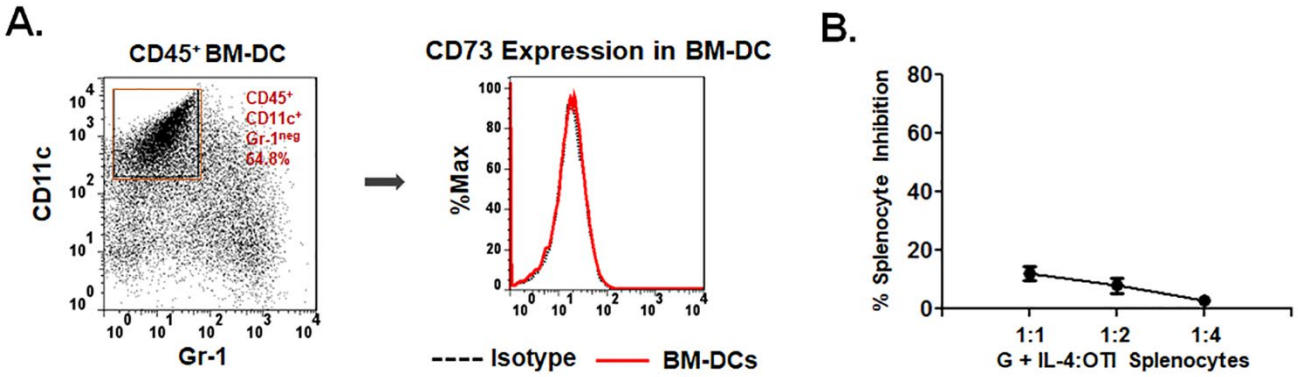
Supplemental Figure 2. A. Ion chromatogram showing the adenosine in reference standard and in the test tumor sample. **B.** Quantitative PCR analysis of A2AR mRNA in human T cells alone or in T cells that were activated with anti-CD3/anti-CD28 antibodies (n = 3). Data, mean ± SEM, *P* values: **, p<0.001. **C.** Human T cells were activated with anti-CD3 and anti-CD28 in the absence or presence of different doses of adenosine and proliferation was measured using $^{[3H]}$-thymidine incorporation. Data, mean ± SEM, P values: ***, p<0.001.

Supplemental Figure 3



Supplemental Figure 3. A. Representative flow cytometry histograms show that PGE_2-induced human monocytic MDSCs express both EP2 and EP4 receptors. **B.** Bar graph showing the IL-10 mRNA expression in $CD14^+$ monocytes treated with either vehicle (Control), or PGE_2 (1 µM), or Forskolin (10 µM) for 16 hours. Data, mean ± SEM, *P* values: **, p<0.001; *, p<0.01. **C.** Bar graph showing the IL-10 mRNA expression in human $CD14^+$ monocytes treated with either vehicle (Control), or D-cAMP (100 µM) for 16 hours. Data, mean ± SEM, *P* values: *, p<0.01. **D.** Bar graph showing the IL-10 protein expression in untreated human $CD14^+$ monocytes or in monocytes treated with either GM-CSF (10 ng/mL), or GM-CSF and PGE_2 (1 µM), or GM-CSF and PGE_2/human anti-IL-10 antibody (5 µg/mL) for 16 hours. Data, mean ± SEM, *P* values: *, p<0.01. **E.** Human $CD14^+$ monocytes are treated with either GM-CSF + PGE_2/vehicle, or GM-CSF + PGE_2/anti-IL-10 antibody for 48 hours, and representative dot plots show the expression of CD39/CD73 in the treated monocytes. **F.** Human $CD14^+$ monocytes treated with either GM-CSF, or GM-CSF and PGE_2 and representative flow cytometry histogram shows the surface expression of IL-6 receptor.

Supplemental Figure 4



Supplemental Figure 4. A, B. Murine bone marrow (BM) cells from naïve C57BL/6 were cultured with either GM-CSF (40 ng/mL) and GM-CSF and IL-4 (10 ng/mL) for 5 days and analyzed by flow cytometry for CD11c, Gr-1, CD39 and CD73 expression and T cell immunosuppressive activity. **A.** Accumulation of $CD45^{+}CD11c^{+}Gr\text{-}1^{neg}$ dendritic cells and expression of CD73 within the $CD45^{+}CD11c^{+}Gr\text{-}1^{neg}$ dendritic cell population are shown in representative histogram. **B.** BM cells were cultured with GM-CSF + IL-4 for 5 days. Cells were harvested and added to splenocytes purified from OT-I transgenic mice at 1:1, 1:2 and 1:4 ratio in the presence of ovalbumin (250 µg/mL) per well for 4 days and T cell proliferation was measured by $^{[3H]}$thymidine incorporation.