Supplementary Information

IL-11 induces differentiation of myeloid-derived suppressor cells through activation of STAT3 signalling pathway

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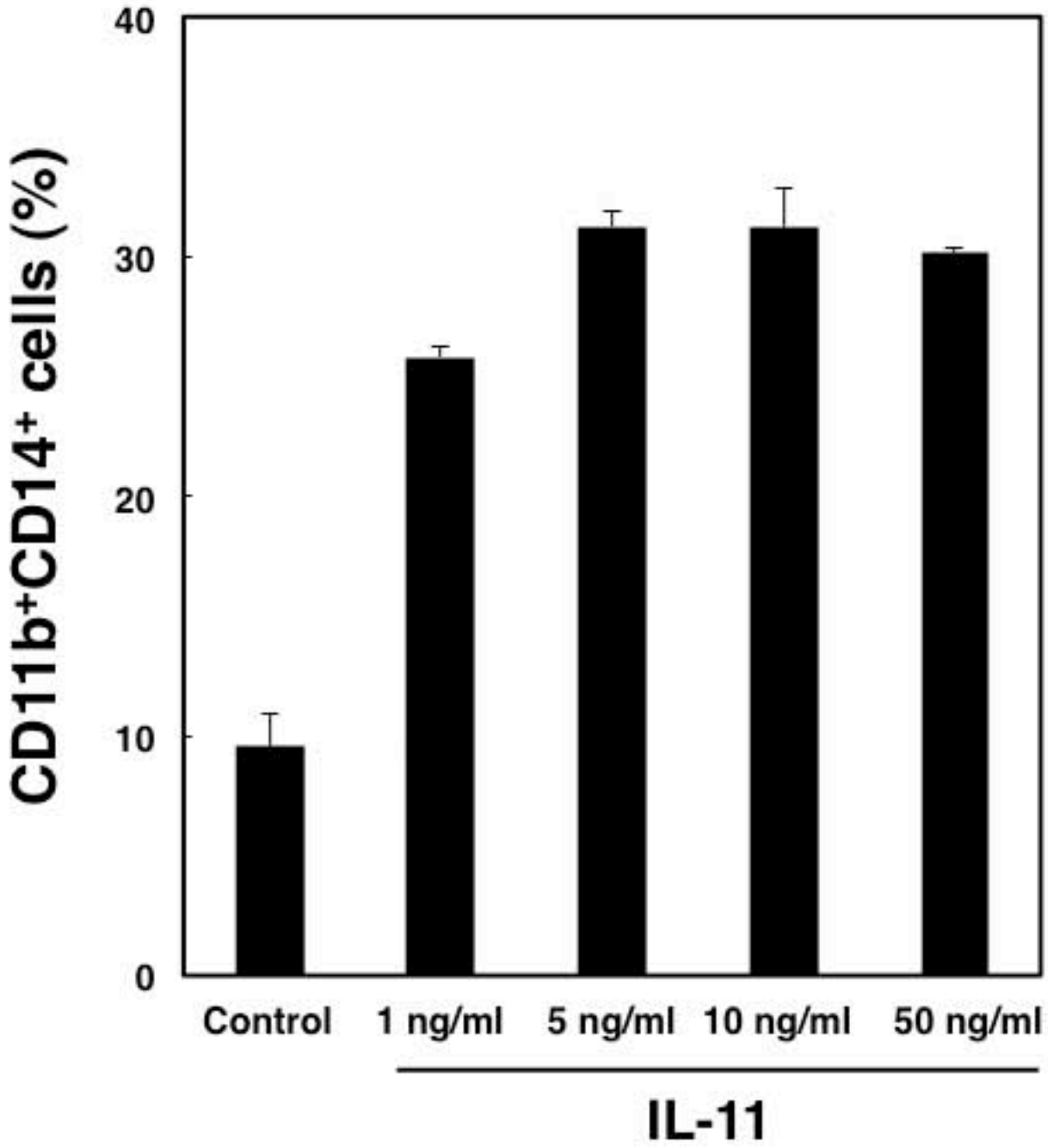

Figure S1: Dose-dependent induction of CD11b$^+$CD14$^+$ cells in the presence of IL-11.

PBMCs collected from blood of healthy donors were cultured with IL-11 (1, 5, 10, and 50 ng/ml) and GM-CSF (50 ng/ml) or GM-CSF alone for 7 days, and surface expression levels of CD11b and CD14 were analyzed by flow cytometry. Means and SDs for the representative data from three independent experiments are shown.

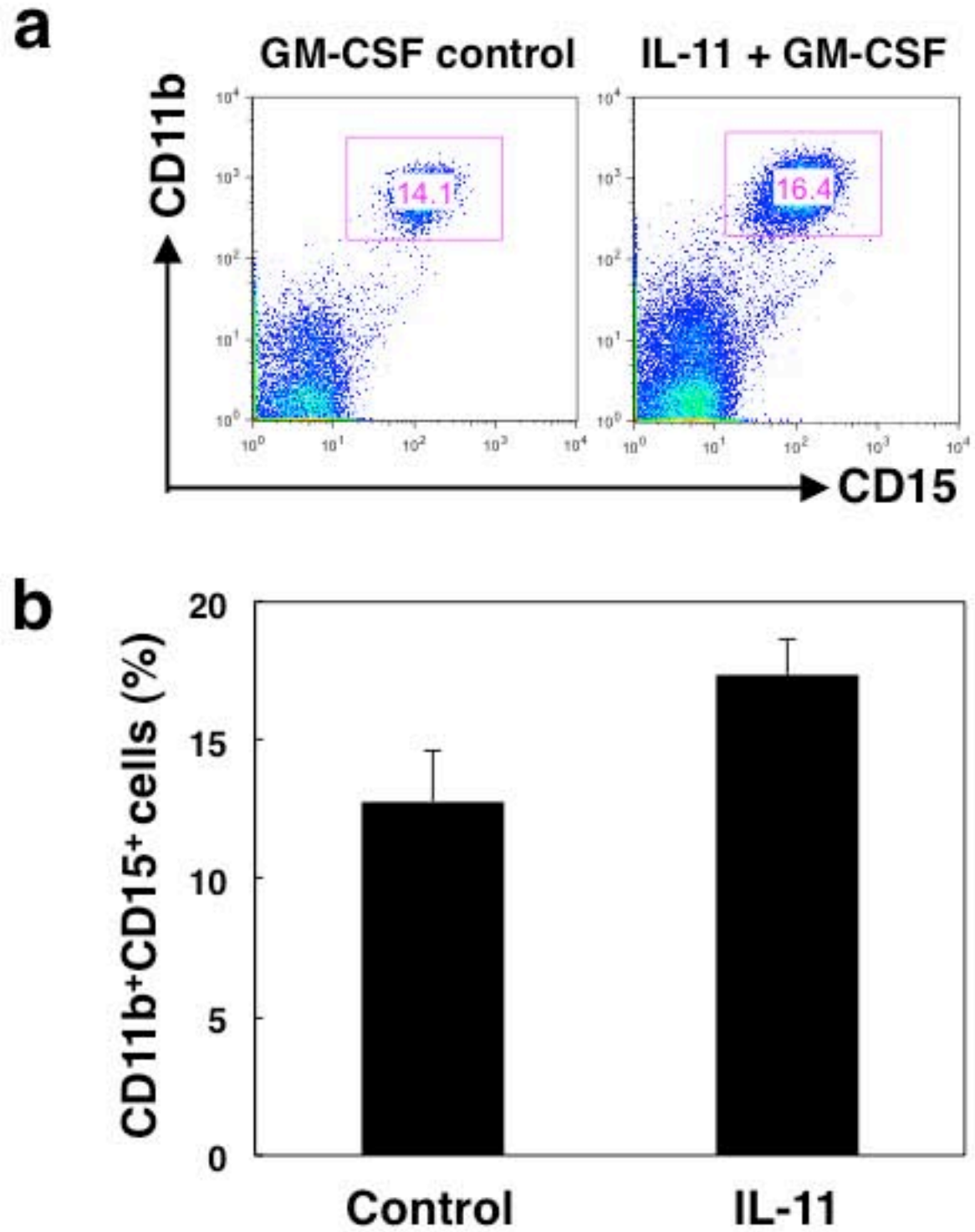

Figure S2: CD11b⁺CD15⁺ cells were not altered in the presence of IL-11.
PBMCs collected from blood of healthy donors were cultured with IL-11 (10 ng/ml) and GM-CSF (50 ng/ml) or GM-CSF alone for 7 days, and surface expression levels of CD11b and CD15 were analyzed by flow cytometry. a, Representative dot plots of CD11b⁺ and CD15⁺ cells. b, Means and SDs for the representative data from three independent experiments are shown.

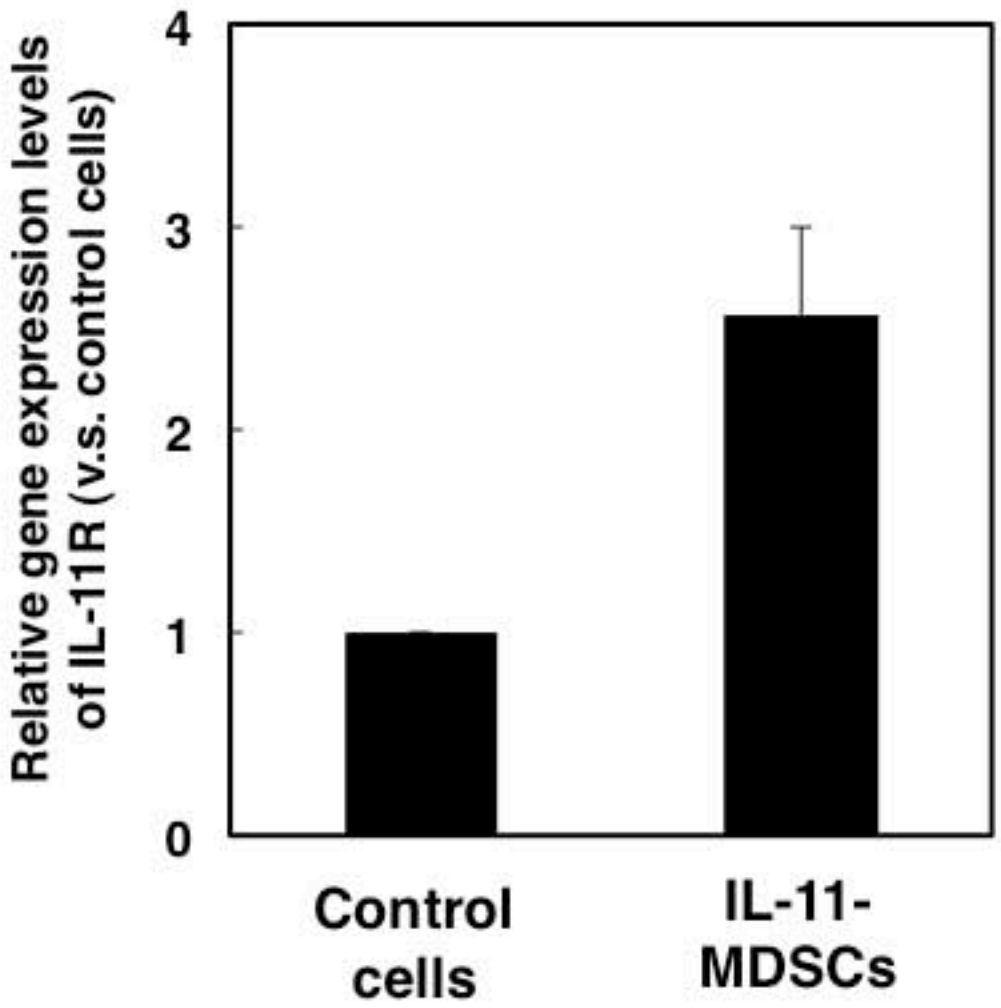

Figure S3: IL-11R gene expression level was enhanced in IL-11-induced CD11b$^+$CD14$^+$ cells.

CD11b$^+$CD14$^+$ cells were induced from PBMCs of healthy donors in the presence or absence of IL-11. Relative gene expression levels of IL-11R in control CD11b $^+$CD14$^+$ cells and IL-11-induced CD11b$^+$CD14$^+$ cells were evaluated by quantitative PCR. Means and SDs of the representative data are shown in the figure.

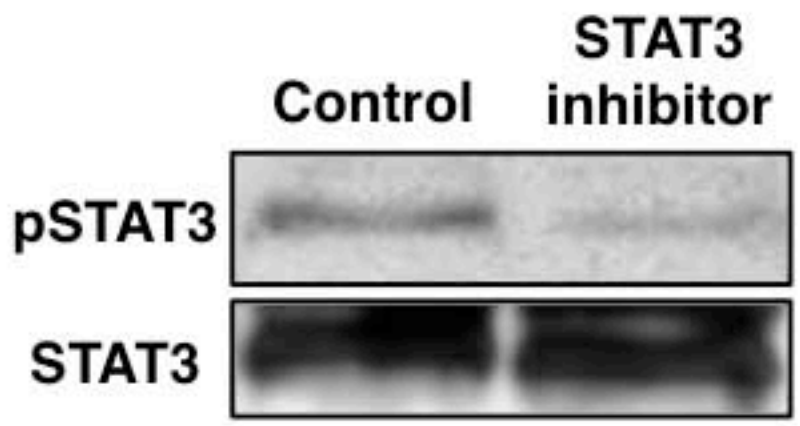

Figure S4: STAT3 inhibitor suppresses phosphorylation of STAT3 in IL-11-induced CD11b$^+$CD14$^+$ cells.

PBMCs were cultured in the presence of STAT3 inhibitor (6-Nitrobenzo[b] thiophene-1,1-dioxide, 10 μM, Calbiocham) or DMSO with IL-11 and GM-CSF for 7 days. CD11b$^+$CD14$^+$ cells were isolated by cell sorting. Total STAT3 and pSTAT3 were analyzed by immunoblotting. The representative data are indicated in the figure.

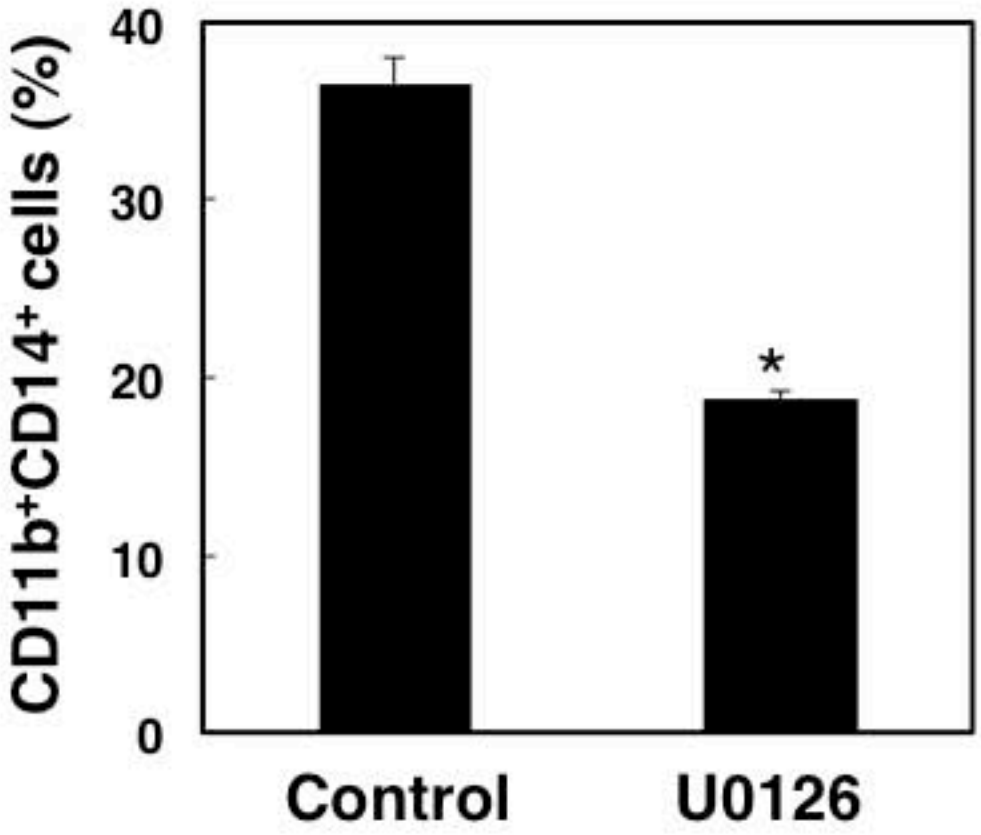

Figure S5: Induction of CD11b⁺CD14⁺ cells by IL-11 in the presence of MEK inhibitor.

PBMCs were cultured in the presence of MEK Inhibitor U0126 (10 μM) or DMSO with IL-11 and GM-CSF for 7 days. Percentages of the induced CD11b⁺CD14⁺ cells were determined by flow cytometry. Means and SDs of the representative data are shown in the figure.