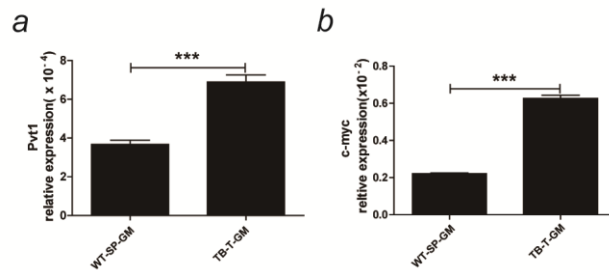


## Supplementary Figures

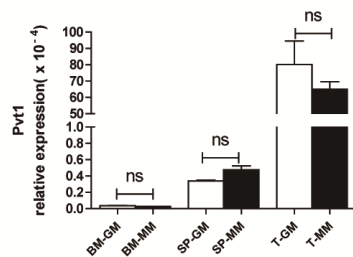
### Supplementary Figure 1



### Supplementary Figure 1. Pvt1 and c-myc are highly expressed in CT26 tumor-expanded G-MDSCs.

In total,  $2 \times 10^6$  CT26 colon cancer cells were implanted via *s.c.* injection into BALB/c mice. After 4 weeks, a single-cell suspension derived from tumor tissues was obtained, and G-MDSCs were sorted. Splenocytes from wild-type (WT) BALB/c mice were collected, and G-MDSCs were isolated. (a) Pvt1 and (b) c-myc expression in total RNA was measured via qRT-PCR. \*\*\* $p < 0.001$ .

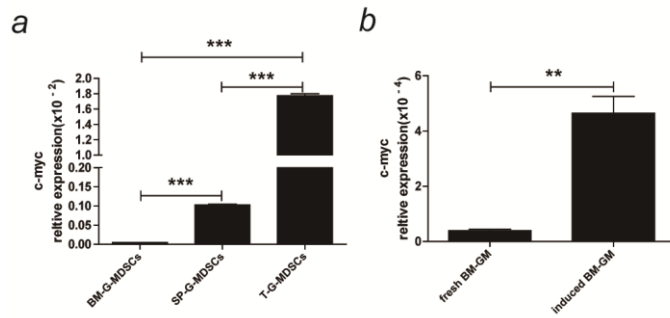
### Supplementary Figure 2



### Supplementary Figure 2. The expression of Pvt1 in G-MDSCs and M-MDSCs was not significantly different.

In total,  $2 \times 10^6$  Lewis lung carcinoma (LLC) cells were implanted via *s.c.* injection into C57BL/6 mice. After 4 weeks, bone marrow cells, splenocytes and single-cell suspension of tumor tissues were collected. Then, G-MDSCs and M-MDSCs were isolated using an MDSC Isolation Kit. The expression level of Pvt1 in total RNA was detected using qRT-PCR. ns: no significance.

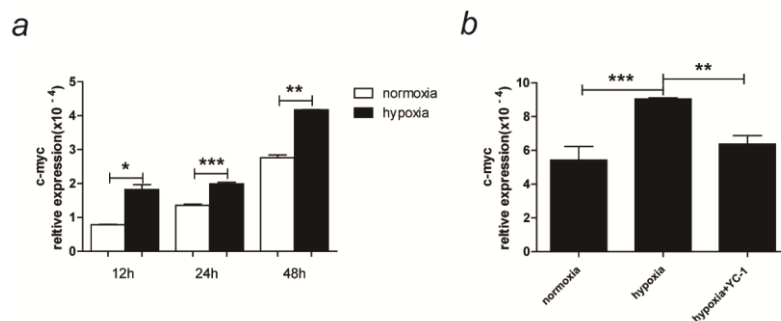
### Supplementary Figure 3



#### Supplementary Figure 3. c-myc is highly expressed in G-MDSCs with stronger suppression.

In total,  $2 \times 10^6$  Lewis lung carcinoma (LLC) cells were implanted via *s.c.* injection into C57BL/6 mice. After 4 weeks, bone marrow cells, splenocytes and a single-cell suspension of tumor tissues were obtained, and G-MDSCs were isolated. **(a)** qRT-PCR was used to detect the mRNA level of c-myc. Fresh G-MDSCs isolated from bone marrow (BM) from WT C57BL/6 mice served as the control. Bone marrow cells ( $1 \times 10^6$ ) from WT C57BL/6 mice were plated in 24-well plates in 1 ml of RPMI 1640 medium with 10% FBS, 20 ng/ml IL-6 and 20 ng/ml GM-CSF, and after 3 days, the cells were collected, and G-MDSCs were sorted. **(b)** The mRNA level of c-myc in total RNA was measured via qRT-PCR. \*\*\* $p < 0.001$ , and \*\* $p < 0.01$ .

### Supplementary Figure 4



#### Supplementary Figure 4. c-myc expression changes are consistent with changes in Pvt1 expression in G-MDSCs under hypoxic stress.

G-MDSCs isolated from spleens of TB mice were cultured in an incubator at 37 °C (20% O<sub>2</sub>, 5% CO<sub>2</sub>) (normoxic conditions) or in a sealed box containing an anaerobic bag to consume oxygen (O<sub>2</sub> < 0.1%, 5% CO<sub>2</sub>) (hypoxic conditions). **(a)** The c-myc mRNA level was measured via qRT-PCR. YC-1, a specific inhibitor of HIF-1 $\alpha$ , was used to block hypoxia. **(b)** The mRNA level of c-myc was detected via qRT-PCR in G-MDSCs in the normoxia, hypoxia, and hypoxia+YC-1

groups. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , and \* $p < 0.05$ .