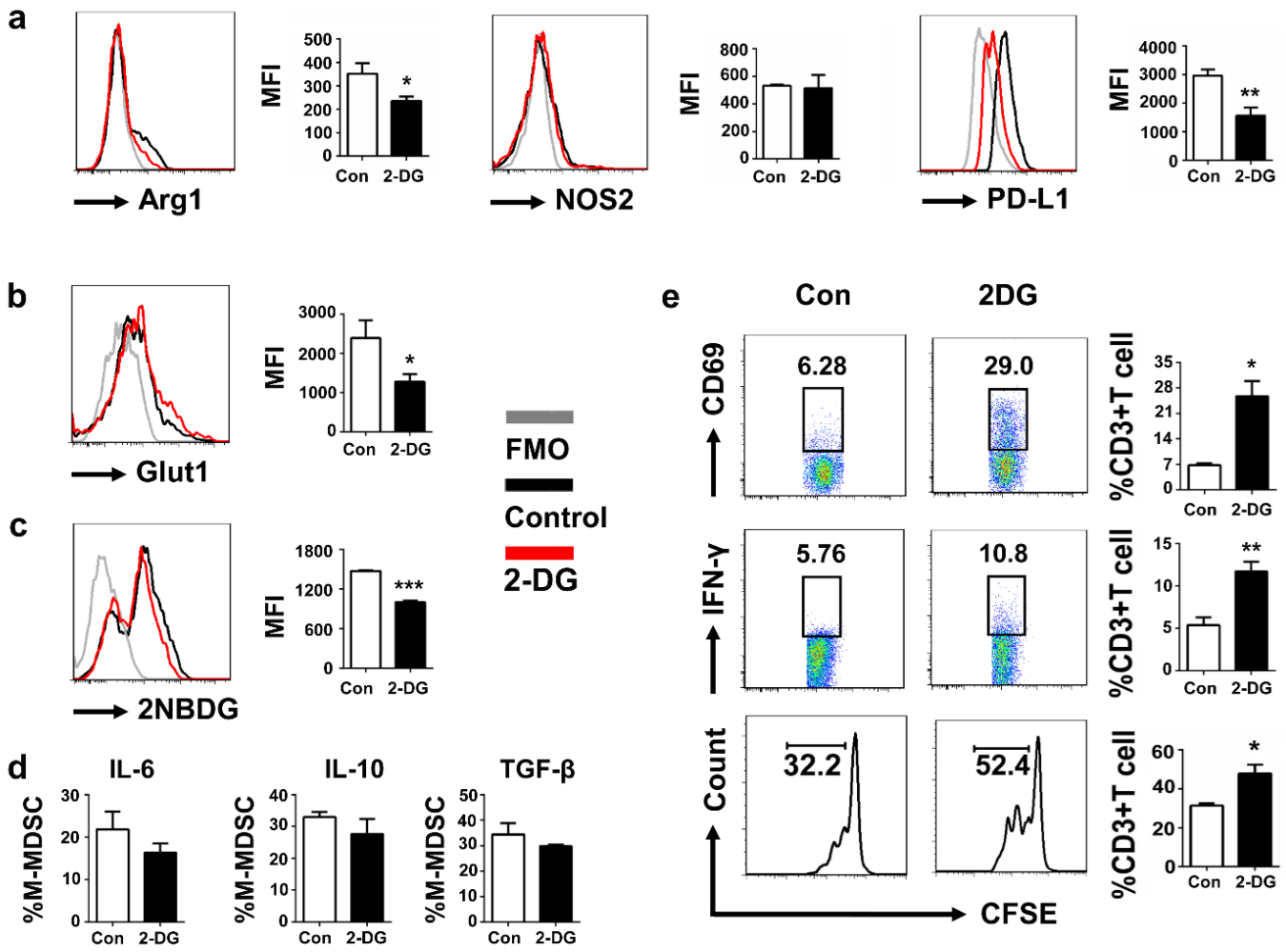
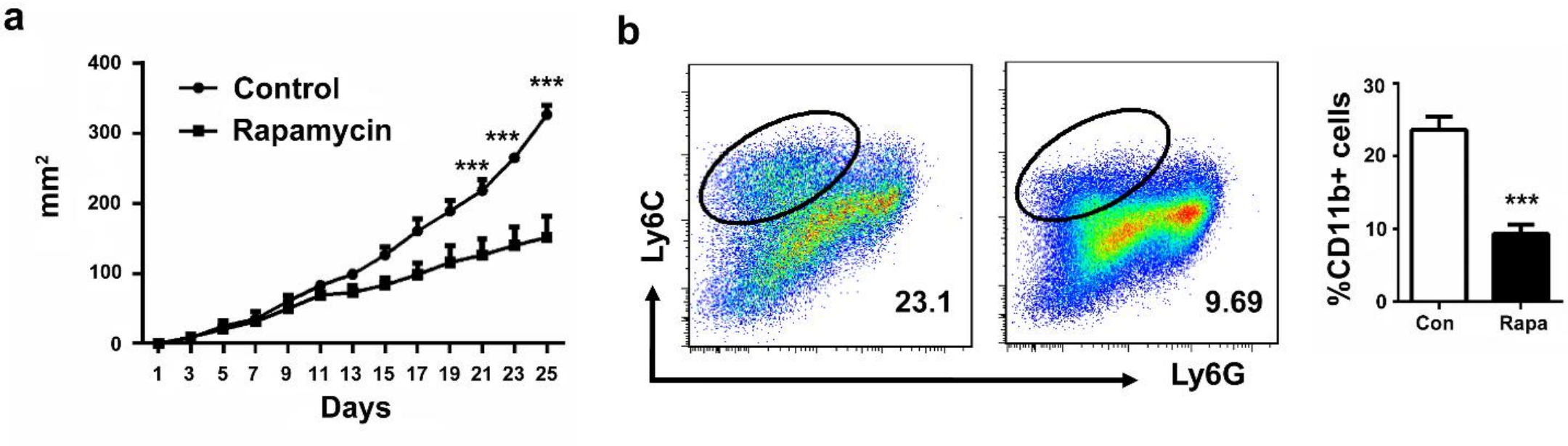
Supplementary Figure 1



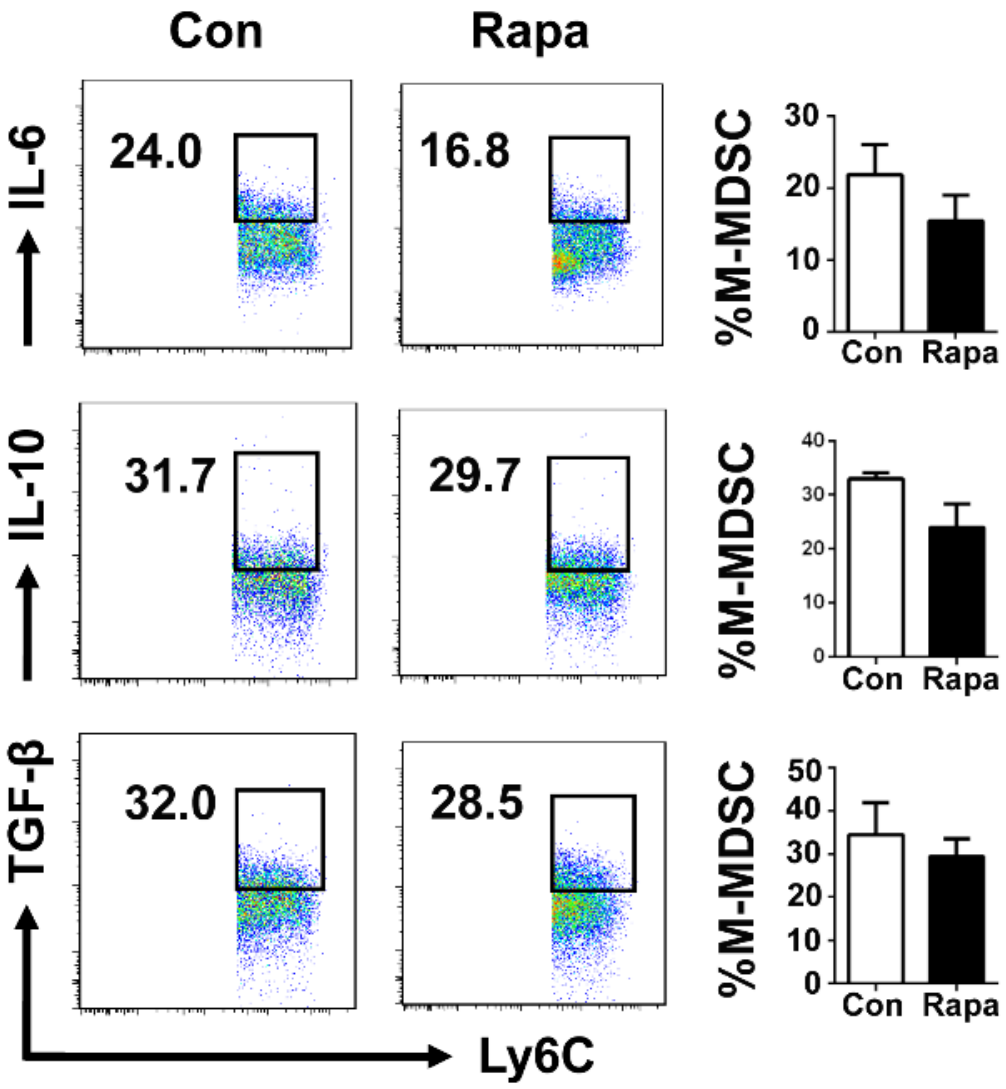
Supplementary Figure.1 2-DG inhibition reduced the suppressive functions of tumor M-MDSC (a) Tumor M-MDSC were isolated and pretreated with 10μg/mL 2-DG for 24h.Arg1, NOS2, PD-L1 and (b) Glut1 expression of tumor M-MDSC from control group and 2-DG pretreated group were detected by flow cytometry. (c) Tumor bearing mice were injected 50μg 2-DG per mouse by intraperitoneal route and 24h later injected 200μg 2NBDG per mouse by intravenous route. 2NBDG incorporation of tumor M-MDSC from PBS control group and 2-DG pretreated group were detected by flow cytometry 4h later. (d) Tumor M-MDSC were isolated and pretreated with 10μg/mL 2-DG for 24h. And then IL-6, IL-10 and TGF-β percentage of tumor M-MDSC from PBS control group and 2-DG pretreated group were measured by flow cytometry. (e) CD3+ T cells were isolated by MACS and cocultured with 2-DG pretreated or PBS pretreated tumor M-MDSC respectively in a 48 well plate precoated with anti-CD3 (5 μg/mL) antibody and soluble anti-CD28 (2 μg/mL) antibody. CD69 and IFN-γ expression of CD3+T cells were measured 24h later and proliferation of T cells labeled with CFSE was measured 72h later (M-MDSC: T ratio = 1:4).Data are pooled from three independent experiments and expressed as mean ±SEM. *P <0.05; **P < 0.01; ***P < 0.001.

Supplementary Figure 2



Supplementary Figure.2 Rapamycin reduced the tumor growth and the percentage of tumor M-MDSC. C57BL/6 mice were implanted with 1×10^6 3LL tumor cells and treated with 10μg rapamycin (solved in 2% DMSO+30% PEG 300+5% Tween 80+ddH2O) in situ every 2 days for 5 times from day 3 when the tumors were palpable. Tumor areas were monitored every 2 days. Mice were sacrificed 25days after tumor inoculation. Tumor M-MDSCs were detected by flow cytometry. Data are pooled from three independent experiments and expressed as mean ±SEM. *P <0.05; **P < 0.01; ***P < 0.001.

Supplementary Figure 3



Supplementary Figure.3 Rapamycin effects on the cytokines expression of tumor M-MDSC. C57BL/6 mice were implanted with 1×10^6 3LL tumor cells and treated with 10μg rapamycin (solved in 2% DMSO+30% PEG 300+5% Tween 80+ddH2O) in situ every 2 days for 5 times from day 3 when the tumors were palpable. IL-6, IL-10 and TGF-β expression of tumor M-MDSC from control group and rapamycin treated group were detected by flow cytometry. Data are pooled from three independent experiments and expressed as mean ±SEM. *P <0.05; **P < 0.01; ***P < 0.001.

Supplementary Table 1

F6P	fructose-6-phosphate
FBP	fructose 1,6-bisphosphate
GAP/DHAP	glyceraldehyde 3-phosphate/dihydroxyacetone phosphate
2,3GP	2,3-bisphosphoglycerate
3PG	3-Phosphoglyceric acid
PEP	phosphoenolpyruvate
PYR	pyruvate
LAC	lactate
E4P	Erythrose 4-phosphate
D5P	D-Xylulose 5-phosphate
S7P	sedoheptulose-7-phosphate
CIT	citrate
AKG	alpha-ketoglutarate
SUC	succinate
FUM	fumarate
MAL	malate
NADPH	nicotinamide adenine dinucleotide phosphate, reduced
NADP	nicotinamide adenine dinucleotide phosphate
NADH	nicotinamide adenine dinucleotide, reduced
NAD	nicotinamide adenine dinucleotide
ATP	adenosine triphosphate
ADP	adenosine diphosphate
GSH	Glutathione
GSSG	Glutathione disulfide
ASP	aspartate
Glu	glutamic acid
Gln	glutamine
Cys	cysteine
Gly	glycerin
IMP	inosine monophosphate

Supplementary Table 2

Arg1	forward：	CTCCAAGCCAAAGTCCTTAGAG
	reverse：	AGGAGCTGTCATTAGGGACATC
NOS2	forward：	GTTCTCAGCCCAACAATACAAGA
	reverse：	GTGGACGGGTCGATGTCAC
PD-L1	forward：	GCTCCAAAGGACTTGTACGTG
	reverse：	TGATCTGAAGGGCAGCATTTC
Glut1	forward：	CAGTTCGGCTATAACACTGGTG
	reverse：	GCCCCCGACAGAGAAGATG
Hk2	forward：	ATGATCGCCTGCTTATTCACG
	reverse：	CGCCTAGAAATCTCCAGAAGGG
Gpi	forward：	TCAAGCTGCGCGAACTTTTTG
	reverse：	GGTTCTTGGAGTAGTCCACCAG
Tpi	forward：	CCAGGAAGTTCTTCGTTGGGG
	reverse：	CAAAGTCGATGTAAGCGGTGG
Eno1	forward：	TGCGTCCACTGGCATCTAC
	reverse：	CAGAGCAGGCGCAATAGTTTTA
Pkm2	forward：	CGCCTGGACATTGACTCTG
	reverse：	GAAATTCAGCCGAGCCACATT
Ldha	forward：	TGTCTCCAGCAAAGACTACTGT
	reverse：	GACTGTACTTGACAATGTTGGGA
Mct4	forward：	TCACGGGTTTCTCCTACGC
	reverse：	GCCAAAGCGGTTCACACAC