

Supplementary Figure Legends

Supplementary Figure 1. Effect of GlcN on M1/M2 marker gene expression in IL-4-stimulated bone marrow-derived macrophage (BMDM)

Mouse BMDM cells were pretreated with GlcN (5 mM) for 2 h and stimulated with IL-4 (20 ng/mL). At 24 h, RT-PCR was performed to analysis of *Mgl-1*, *Arg-1*, *Relma* (M1 marker), *Mmr* (M2 marker) mRNA expression. *Gapdh* was used as a control. Gels are representative of three independent experiments.

Supplementary Figure 2. Effects of LPS on survival rate in adult zebrafish

Zebrafish (n=5, each group) were subjected to intraperitoneal injection with LPS (100, 500, 1,000, and 2,000 µg/g) or PBS. Survival of control and LPS-injected zebrafish was recorded over 4 days.

Supplementary Figure 3. The LPS-induced O-GlcNAcylation changes in proteins of lung tissue

Mice were intraperitoneal injected with PBS or LPS (5 mg/kg). Total lysates from lung after 10 min and 6 h LPS challenge were prepared and O-GlcNAcylation levels were analyzed by Western blotting using the CTD110.6 antibody. Representative Western blot images were shown and quantified a spectral mode of O-GlcNAcylation using Image J. Blots are representative of three independent experiments.

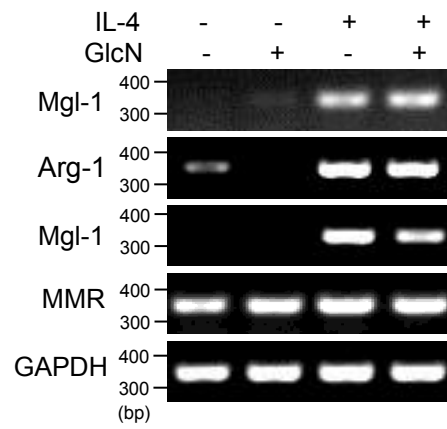
Supplementary Figure 4. Changes in O-GlcNAcylation, OGT, and OGA levels in various cell types in response to LPS and/or GlcN

Cells were pre-treated with GlcN (5 mM) for 2 h, followed by stimulation with LPS (100 ng/ml) for 24 h. Whole cell lysates were prepared and subjected to western blot analysis using O-GlcNAc, OGT, and OGA antibody. GAPDH was used as control. Blots are representative of three independent experiments.

Supplemental Figure 5. Effect of PUGNAc on LPS-induced IL-1β secretion in RAW264.7 cells

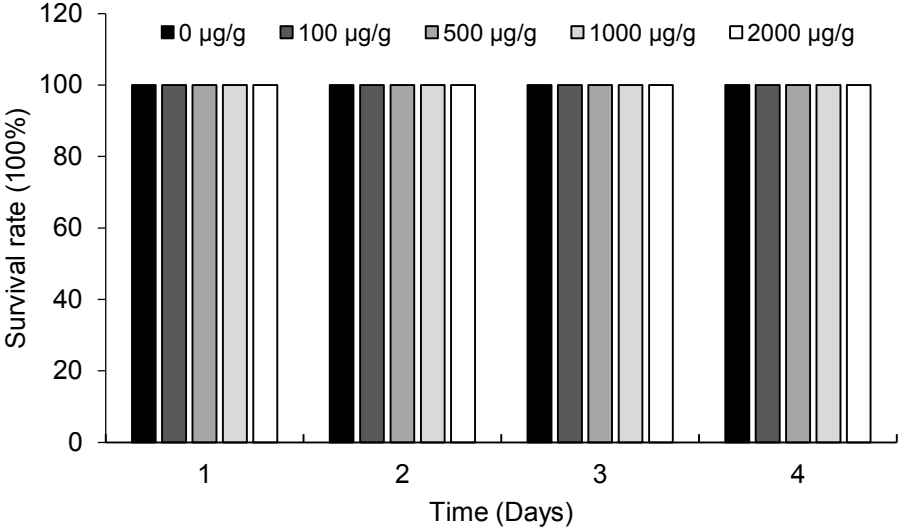
RAW264.7 cells were pre-treated with PUGNAc (50 µM) for 1 h, followed by stimulation with LPS (100 ng/ml) for 24 h. (A) Levels of IL-1β in culture medium were determined via ELISA assay. (B) Secreted IL-1β were measured by Western blotting using anti-IL-1β antibody. All values are presented as means ± SEM. *denotes significantly increased from untreated control (*p<0.05).

Supplemental Fig. 1

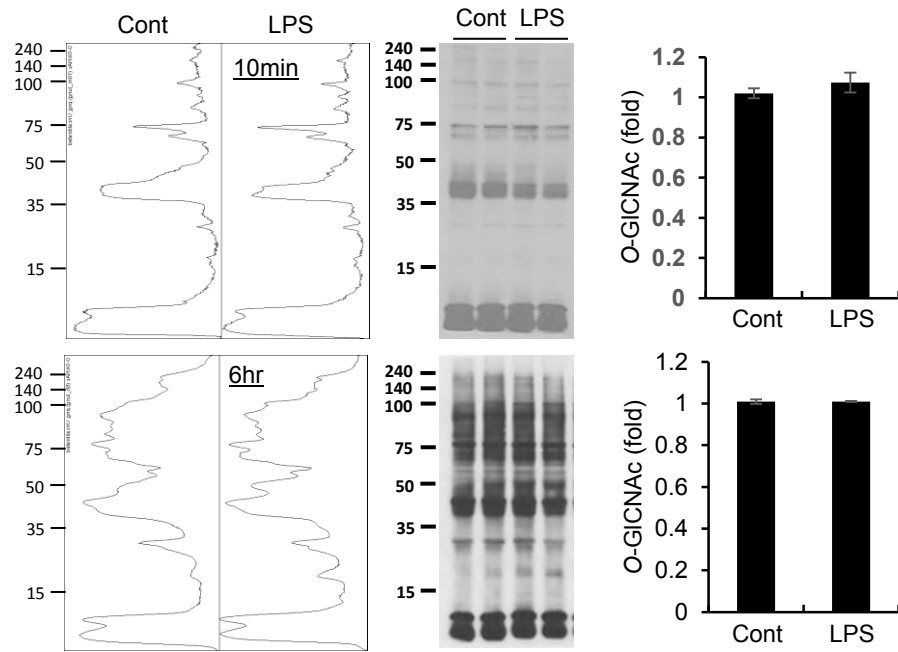


Supplemental Fig. 2

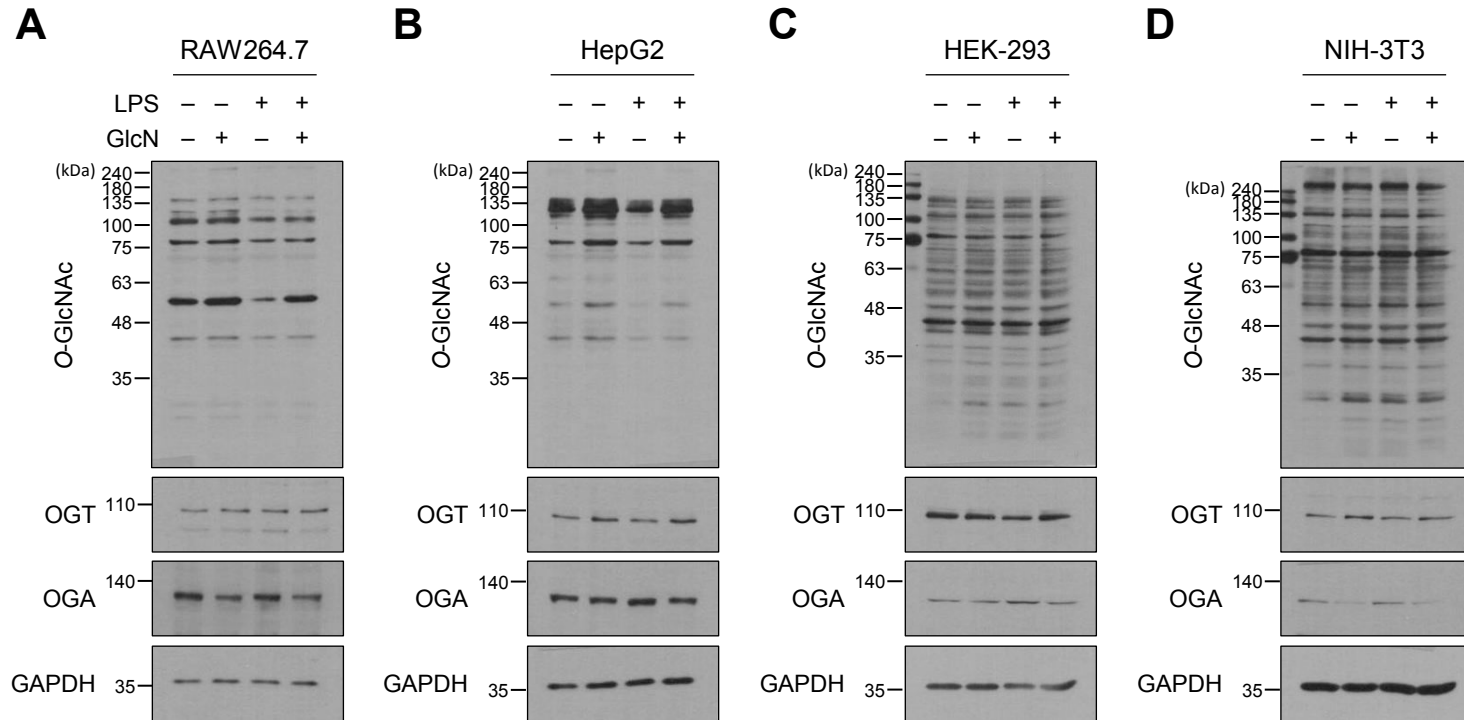
Time (h)	Number of zebrafish survived				
	Cont	LPS			
		100 µg/g	500 µg/g	1000 µg/g	2000 µg/g
0	5	5	5	5	5
2	5	5	5	5	5
6	5	5	5	5	5
12	5	5	5	5	5
24	5	5	5	5	5
48	5	5	5	5	5
72	5	5	5	5	5
96	5	5	5	5	5



Supplemental Fig. 3

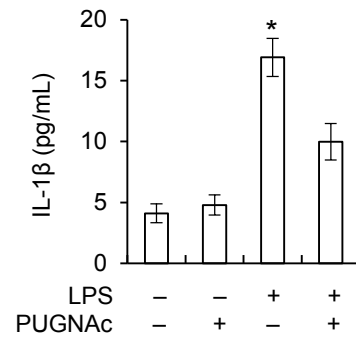


Supplemental Fig. 4



Supplemental Fig. 5

A



B

