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2 **Supplemental Figure 1.** PLZF expression is regulated by fasting/refeeding in different
3 metabolic tissues. A and B, RT-qPCR and Western blot analyses of PLZF expression in BATs,
4 WATs and SMs from mice subjected to 16 h fasting and 20 h re-feeding. ** $P < 0.01$ vs. Refed
5 group.

6

7 **Supplemental Figure 2.** Liver-specific knockdown of PLZF suppresses hepatic
8 gluconeogenesis. A, Body weight and basal blood glucose levels. ** $P < 0.01$ vs. Scrb/Fed
9 group; # $P < 0.05$ vs. Scrb/Fasted group. n.s., no significant difference. B, Gene expression
10 analysis in the liver of mice transduced with scramble siRNA or PLZF siRNA through
11 tail-vein injection. ** $P < 0.01$ vs. Scrb/Fed group; ### $P < 0.01$ group vs. Scrb/Fasted group. C-E,
12 GTT, PTT and ITT assays. For C-E, * $P < 0.05$ and ** $P < 0.01$ vs. siPLZF. F, PLZF and
13 gluconeogenic gene expression in AML-12 cells transfected by siRNA encoding Scrb or
14 siPLZF for 36 h. Cell were then treated with Dex (1 μ M) for 12 h. G, Glucose output assays in
15 mouse primary hepatocytes treated as F. For F and G, * $P < 0.05$ and ** $P < 0.01$ vs. Scrb; ### $P < 0.01$
16 vs. Scrb/Dex.

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18 **Supplemental Figure 3.** FoxO1 does not alter PLZF expression *in vitro*. RT-qPCR (A) and
19 Western blot (B) analyses of PLZF expression in AML-12 cells transfected with indicated
20 plasmids.

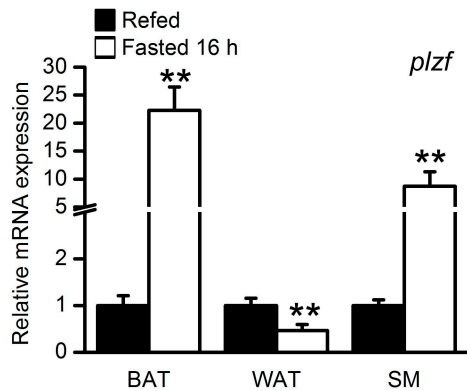
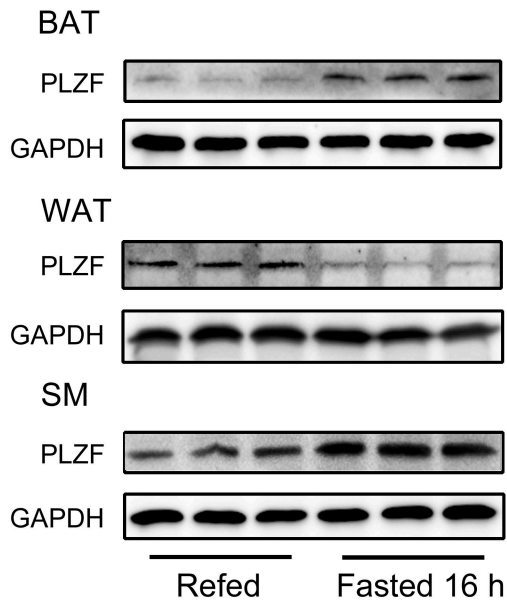
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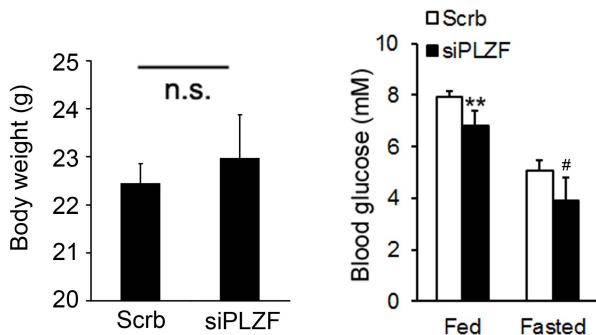
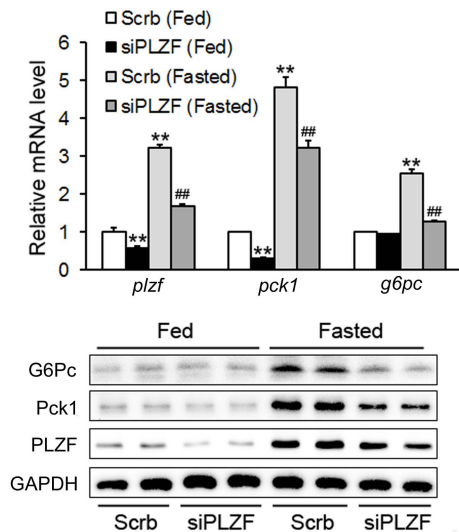
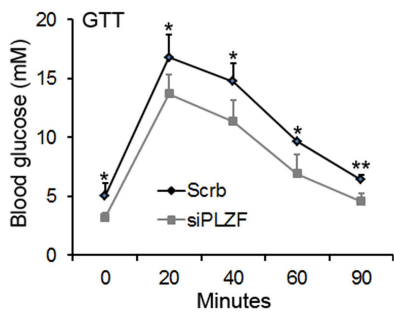
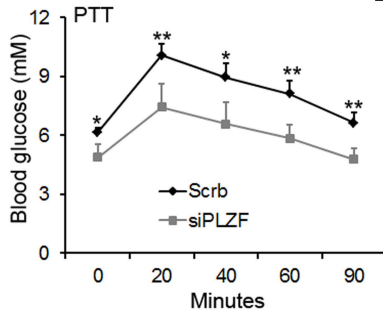
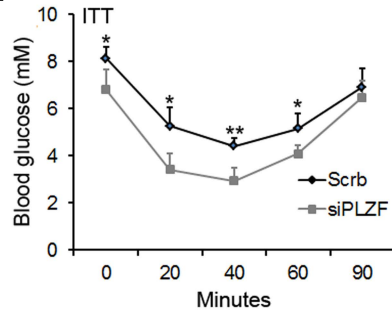
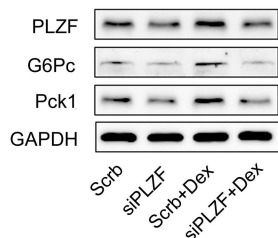
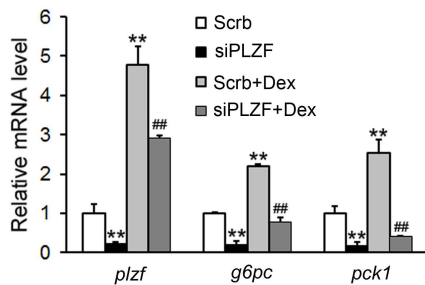
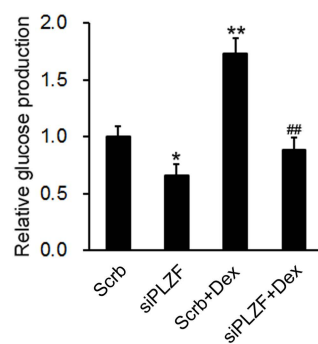
22 **Supplemental Figure 4.** PGC-1 α activates PLZF expression *in vitro*. A, PLZF and

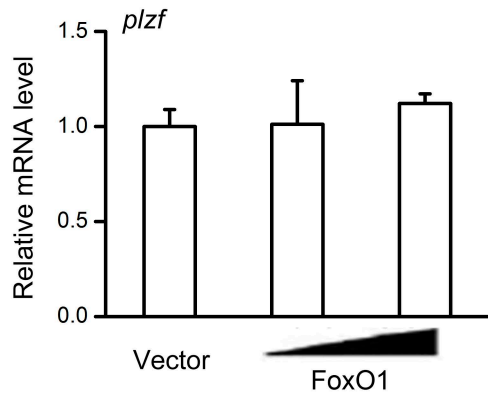
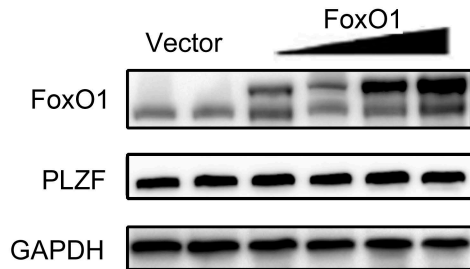
23 gluconeogenic gene expression in AML-12 cells infected by ad-GFP or ad-PGC-1 α . * P <0.05
24 and ** P <0.01 vs. ad-GFP. B, Suppression of PLZF by PGC-1 α knockdown *in vitro*. ** P <0.01
25 vs. ad-Scrb.

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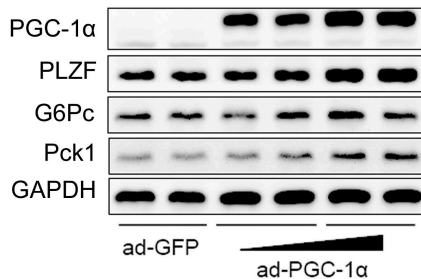
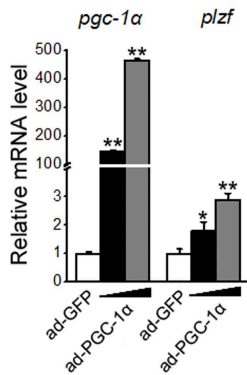
27 **Supplemental Figure 5.** GR is essential in Dex-induced PLZF activation. A, Reporter gene
28 analysis of AML-12 cells transfected with indicated plasmids for 36 h. Cells were then treated
29 with Dex (1 μ M) for 12 h. ** P <0.01 vs. *plzf-luc* group. B, PLZF and GR expression in
30 AML-12 cells transfected by siRNA encoding scrb or siGR for 36 h. Cells were then treated
31 with Dex (1 μ M) for 12 h. ** P <0.01 vs. Dex/Scrb.

A**B**

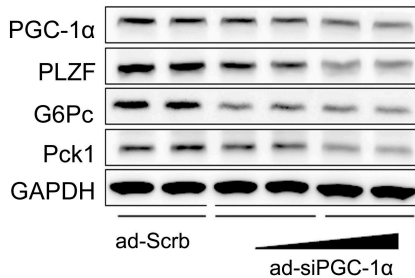
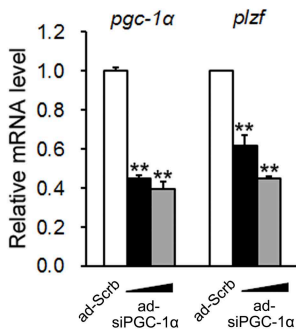
A**B****C****D****E****F****G**

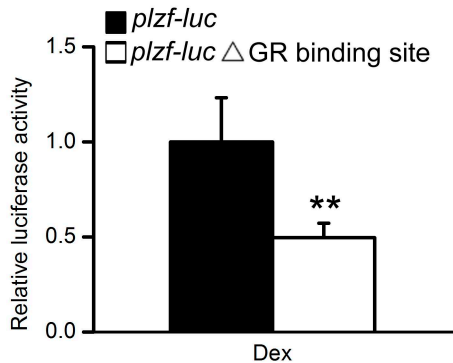
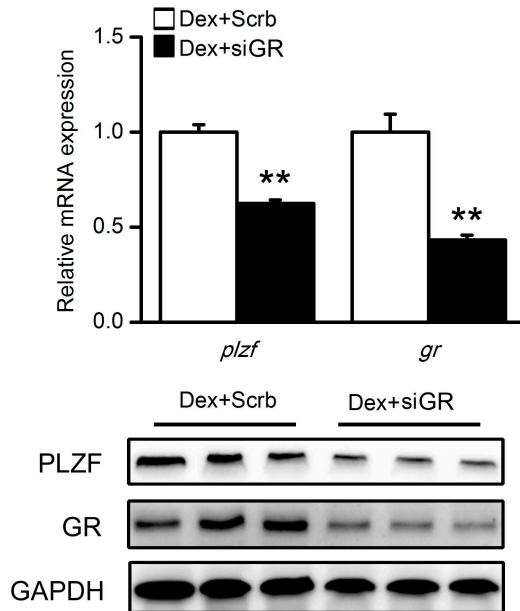
A**B**

A



B



A**B**

Supplemental Table 1. Sequences of siRNA oligonucleotides.

Gene	Sense	Antisense
<i>mplzf1</i>	5'-UAGAGUAUAGUGCUGGCUGUUUCGG-3'	5'-CCGAAACAGCCAGCACUAUACUCUA-3'
<i>mplzf2</i>	5'-UGCACAUGGAGACCGGACGUCACUG-3'	5'-CAGUGACGUCCGGUCUCCAUGUGCA-3'
<i>mplzf3</i>	5'-UGCUCUUUGUGCCUGAAAGCGUUUC-3'	5'-GAAACGCUUUCAGGCACAAAGCGCA-3'

Supplemental Table 2. Primers used for the plasmid construction of mouse *plzf* promoter

(Restriction enzyme sites are underlined).

Gene	Sense	Antisense
<i>mplzf</i>	5'-CGAC <u>CGTCG</u> CTGAGA	5'- <u>CCGCTCGAGCGG</u> TTGAGA
promoter	CCTGGGAGTGTCAA-3'	TGACAAACCGTAGG-3'

Supplemental Table 3. Primers used for real-time PCR.

Gene	Sense	Antisense
<i>m36B4</i>	5'-GAAACTGCTGCCTCACATCCG-3'	5'-GCTGGCACAGTGACCTCACACG-3'
<i>mplzf</i>	5'-AACGGTTCCTGGACAGTTTG-3'	5'-CAAATTCATCCAGGCAATGTC-3'
<i>mpgc-1a</i>	5'-AGCCGTGACCACTGACAACGAG-3'	5'-GCTGCATGGTTCTGAGTGCTAAG-3'
<i>mpck1</i>	5'-CATATGCTGATCCTGGGCATAAC-3'	5'-CCCACACAGCAGACAGAAGA-3'
<i>mg6pc</i>	5'-GACCTCCTGTGGACTTTGGA-3'	5'-CTTCCGGTACATGCTGGAGT-3'
<i>mgr</i>	5'-TGCTATGCTTTGCTCCTGATCTG-3'	5'-TGTCAGTTGATAAAACCGCTGCC-3'