Supplementary Information

Loss of progesterone receptor membrane component 1 promotes hepatic steatosis via the induced *de novo* lipogenesis

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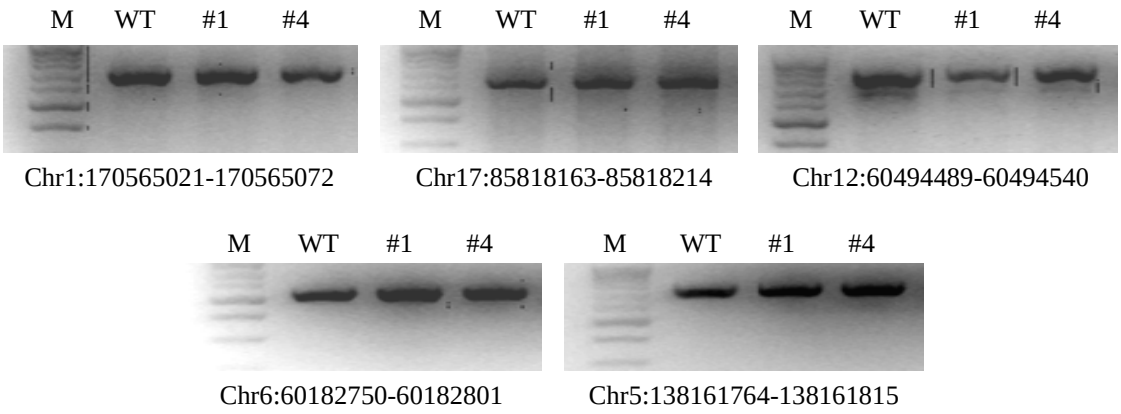


Fig. S1. Analysis of off-target effects of TALEN targeting the *Pgrmc1* gene. T7E1 assays examining the putative off-target effects of *Pgrmc1*-TALEN. The integrity of potential off-target sites as listed in Table 1 was examined in founder mice.

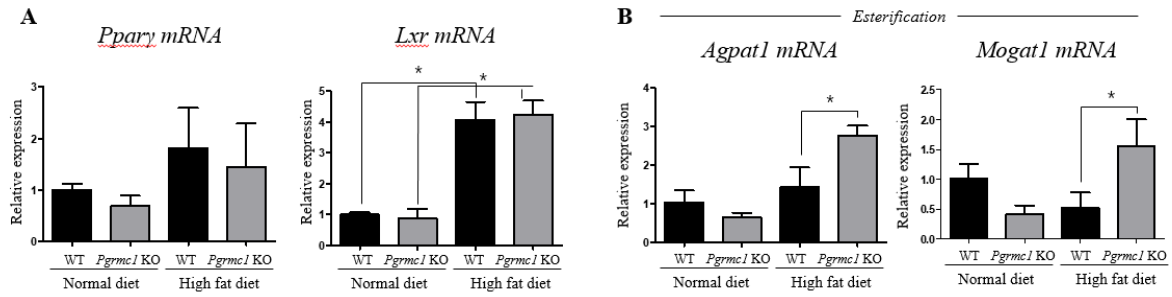


Fig. S2. Transcriptional regulators and TG esterification enzymes related to *Srebp1* gene. Major fatty acid synthesis transcriptional regulator genes which are on the crosstalk with SREBP-1 (A). Genes regulates TG esterification in liver (B). After fed a high fat diet for 1 month, mRNA levels were determined by quantitative RT-PCR. *Rplp0* mRNA was used as an internal control. Values represent means ± SD at least 3 experiments. *, $P<0.05$. Number of mice used in experiment for normal diet group is at least 3 and for high fat diet groups is at least 4 for each group.

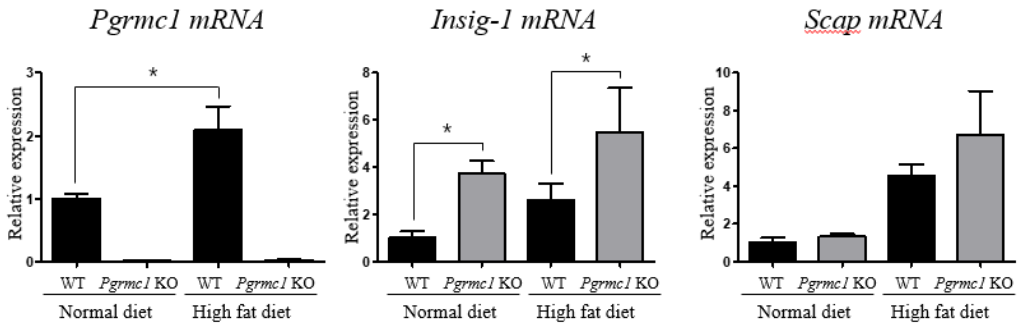


Fig. S3. Structural components related to *Srebp-1* gene. Genes forming complex with *Srebp-1* in endoplasmic reticulum. After fed a high fat diet for 1 month, mRNA levels were determined by quantitative RT-PCR. *Rplp0* mRNA was used as an internal control. Values represent means ± SD at least 3 experiments. *, $P<0.05$. Number of mice used in experiment for normal diet group is at least 3 and for high fat diet groups is at least 4 for each group.

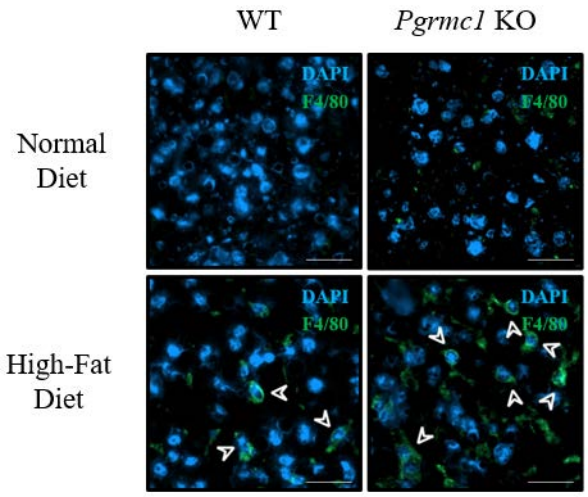


Fig. S4. Immunofluorescence staining of mouse macrophage marker, F4/80. Cytoplasm stained with green represents positive for F4/80. Nucleus stained with blue representing DAPI was used as an internal control. Number of mice used in experiment for normal diet group is at least 3 and for high fat diet groups is at least 4 for each group.

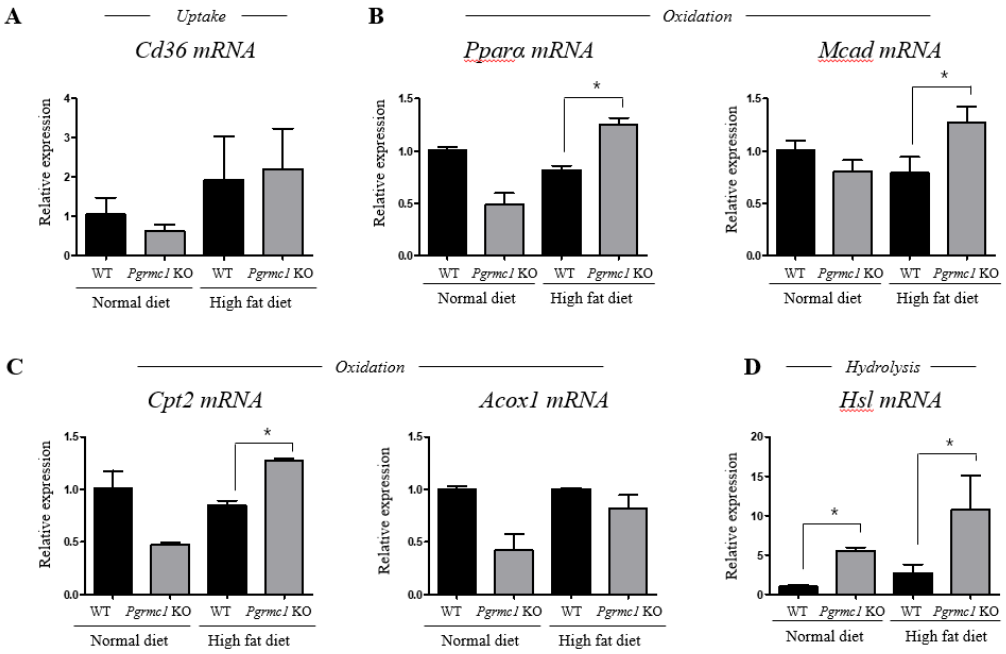


Fig. S5. Levels of fatty acid metabolic genes increased with TG accumulation. Genes related to fatty acid uptake, oxidation, and hydrolysis (A - D). After fed a high fat diet for 1 month, mRNA levels were determined by quantitative RT-PCR. *Rplp0* mRNA was used as an internal control. Values represent means ± SD at least 3 experiments. *, $P<0.05$. Number of mice used in experiment for normal diet group is at least 3 and for high fat diet groups is at least 4 for each group.

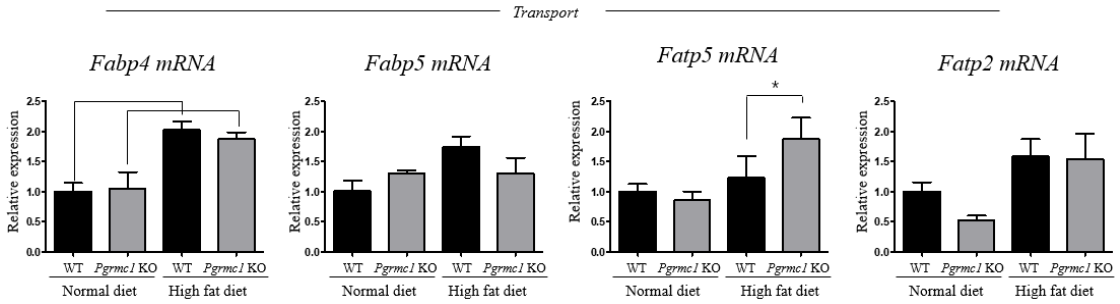


Fig. S6. Levels of fatty acid transport related genes. After fed a high fat diet for 1 month, mRNA levels were determined by quantitative RT-PCR. *Rplp0* mRNA was used as an internal control. Values represent means ± SD at least 3 experiments. *, $P<0.05$. Number of mice used in experiment for normal diet group is at least 3 and for high fat diet groups is at least 4 for each group.

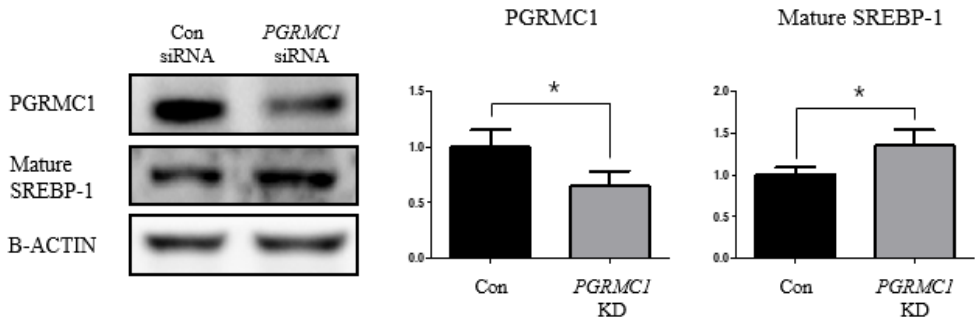


Fig. S7. Level of mature SREBP-1 protein in *PGRMC1* siRNA transfection. After transfected with siRNA, cells were treated with fatty acids (Palmitic acid; 330μM, Oleic acid; 660μM) for 24 hrs. Beta actin was used as an internal control. Values represent means ± SD at least 3 experiments. *, $P<0.05$. All experiments were repeated at least 3 times.

Fig. 1B

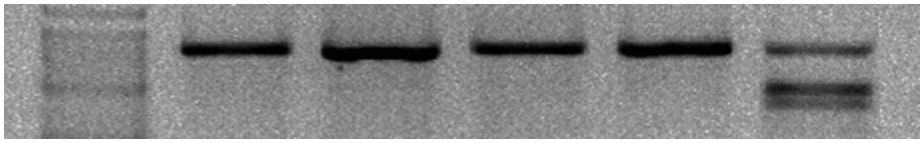


Fig. 1C

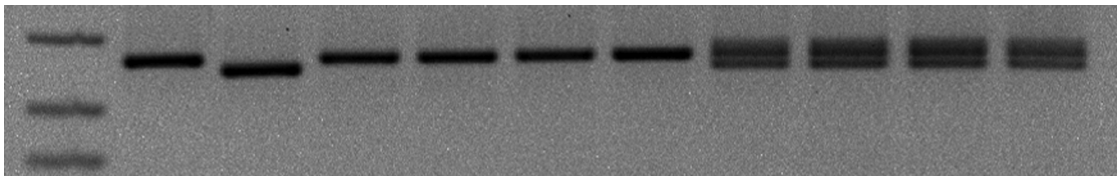


Fig 4B PGRMC1

Fig4B Srebp1 precursor

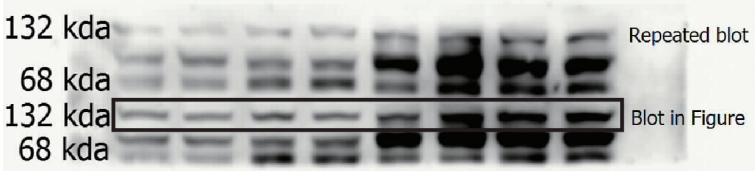


Fig4B Srebp1 mature

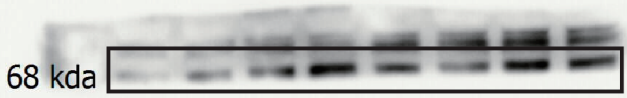


Fig 4B Beta actin


Fig7E PGRMC1
25 kda
25 kda
Blot in figure
Repeated blot

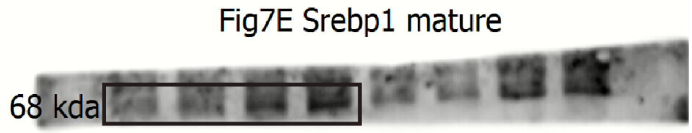


Fig7E Srebp1 mature
68 kda

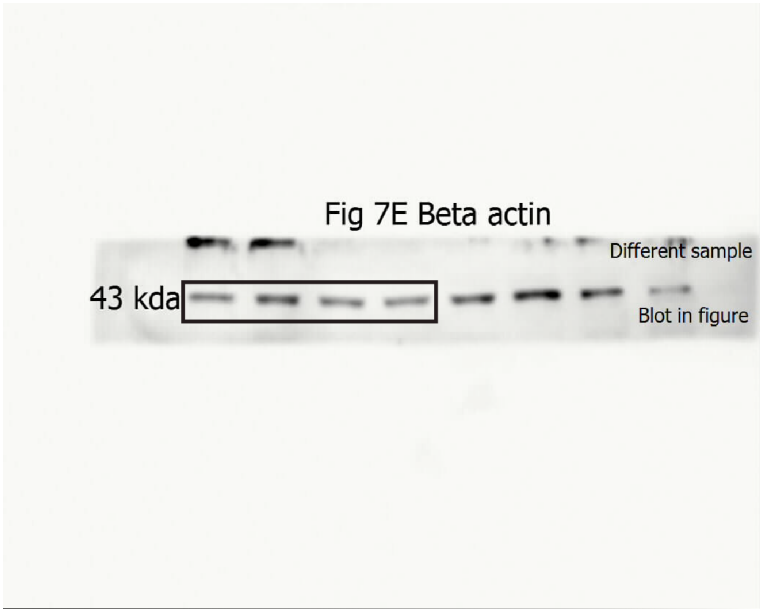


Fig 7E Beta actin
43 kda
Different sample
Blot in figure


Fig7F PGRMC1
25 kda
25 kda
Blot in figure
Repeated blot

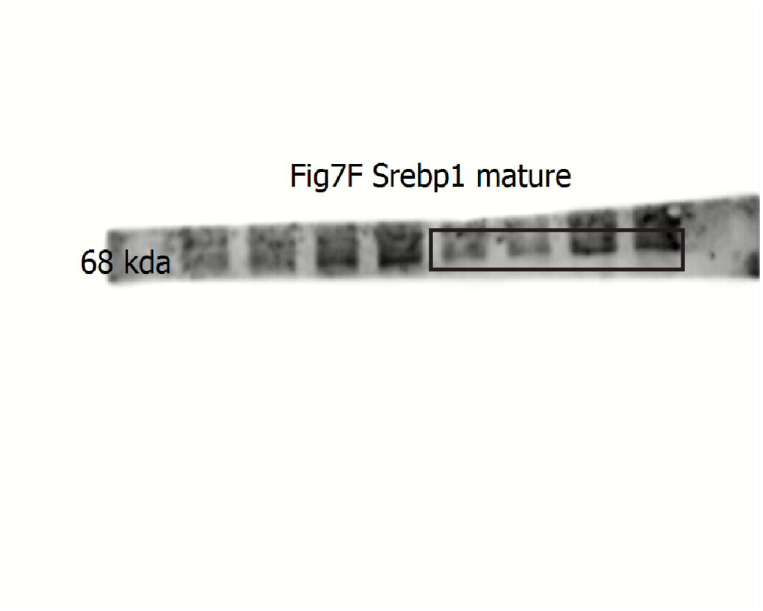


Fig7F Srebp1 mature
68 kda

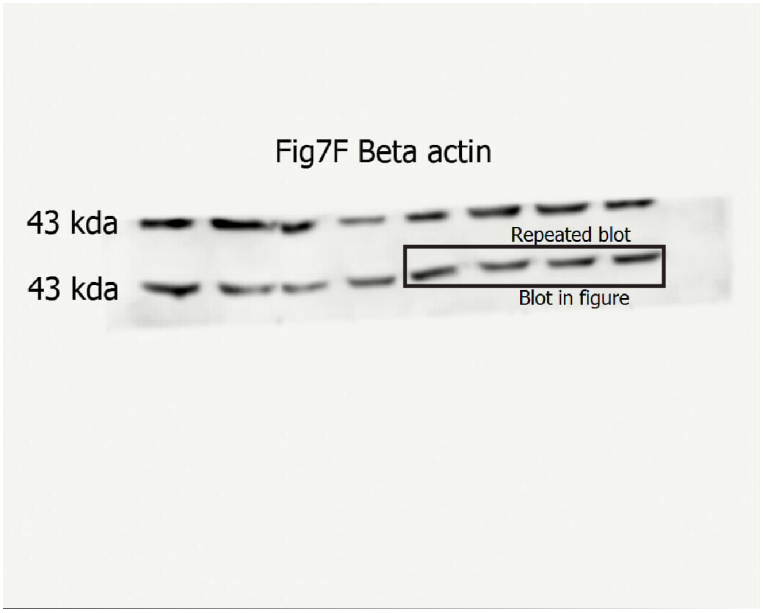
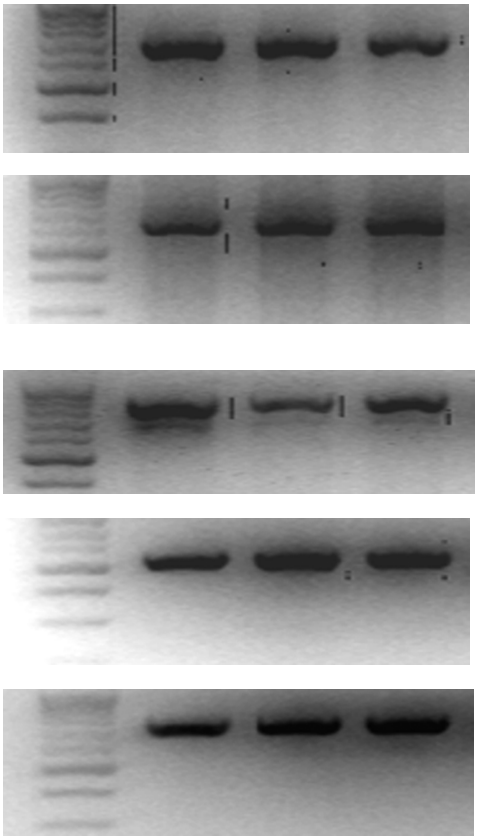
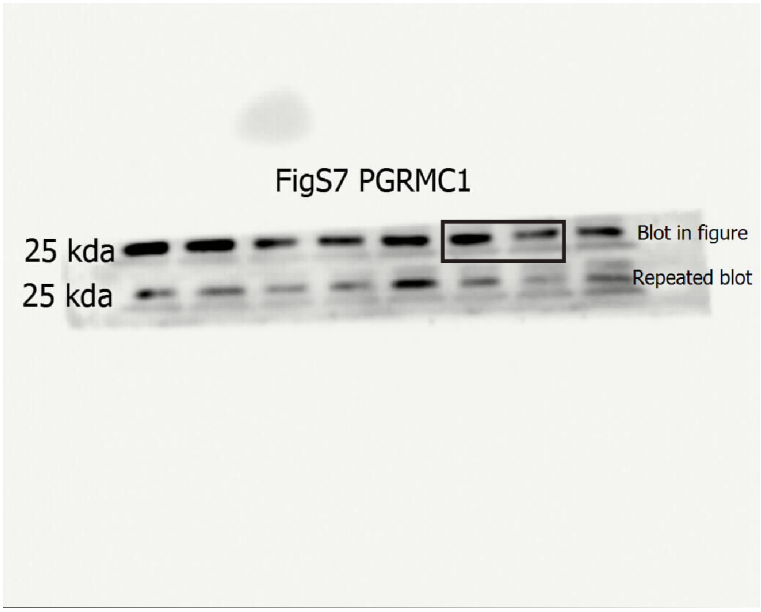


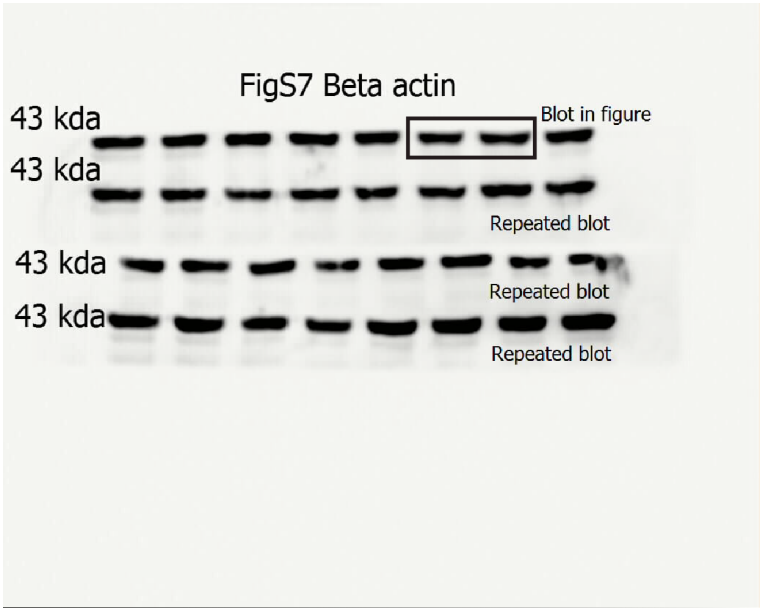
Fig7F Beta actin
43 kda
43 kda
Repeated blot
Blot in figure

Fig S1




FigS7 PGRMC1
25 kda
25 kda
Blot in figure
Repeated blot


FigS7 Srebp1 mature
68 kda


FigS7 Beta actin
43 kda
43 kda
43 kda
43 kda
Blot in figure
Repeated blot
Repeated blot
Repeated blot