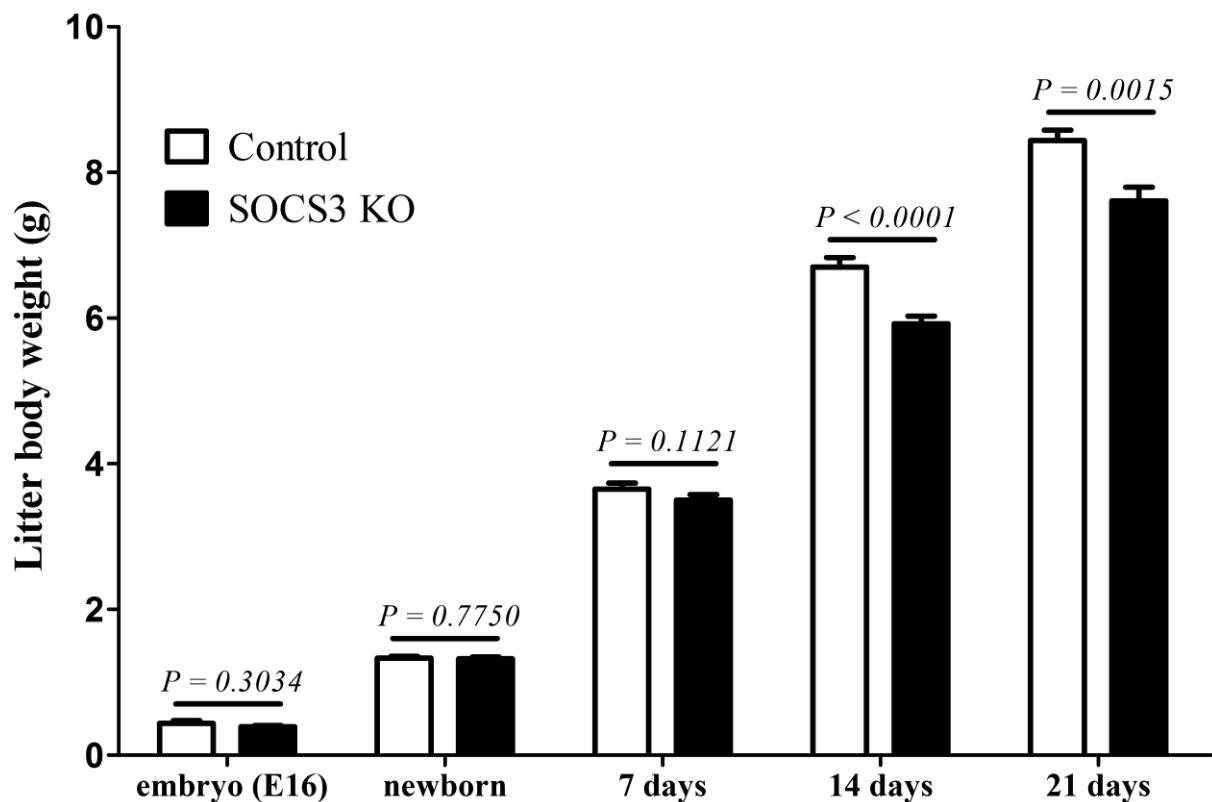
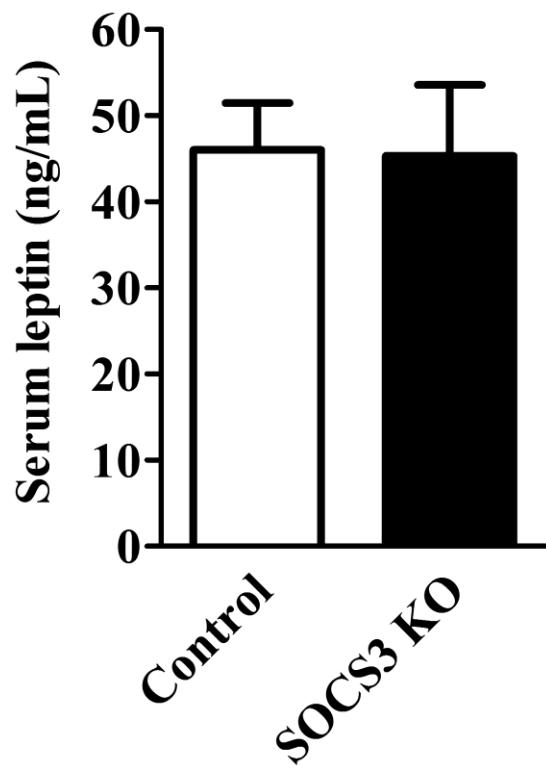


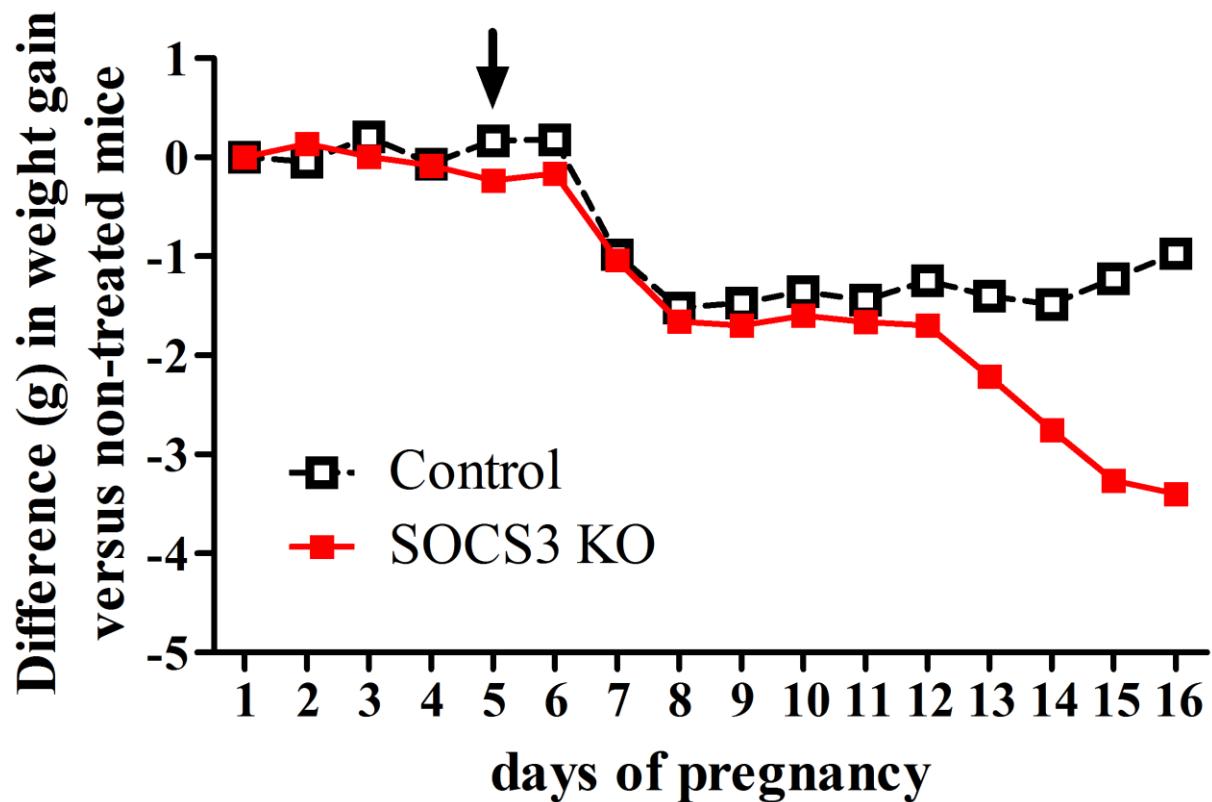
**Supplemental Figure 1 Hypothalamic gene expression in pregnant control and SOCS3 KO mice ( $n = 8/\text{group}$ ). \*  $p < 0.05$ .**



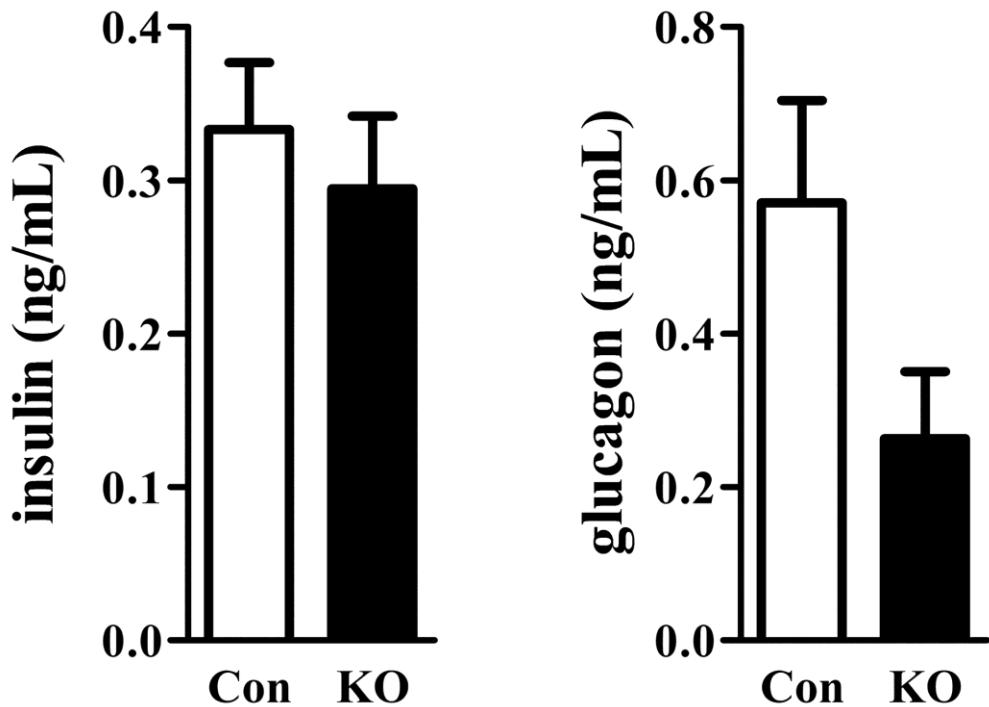
**Supplemental Figure 2 Body weight of the pups from control and SOCS3 KO dams.**



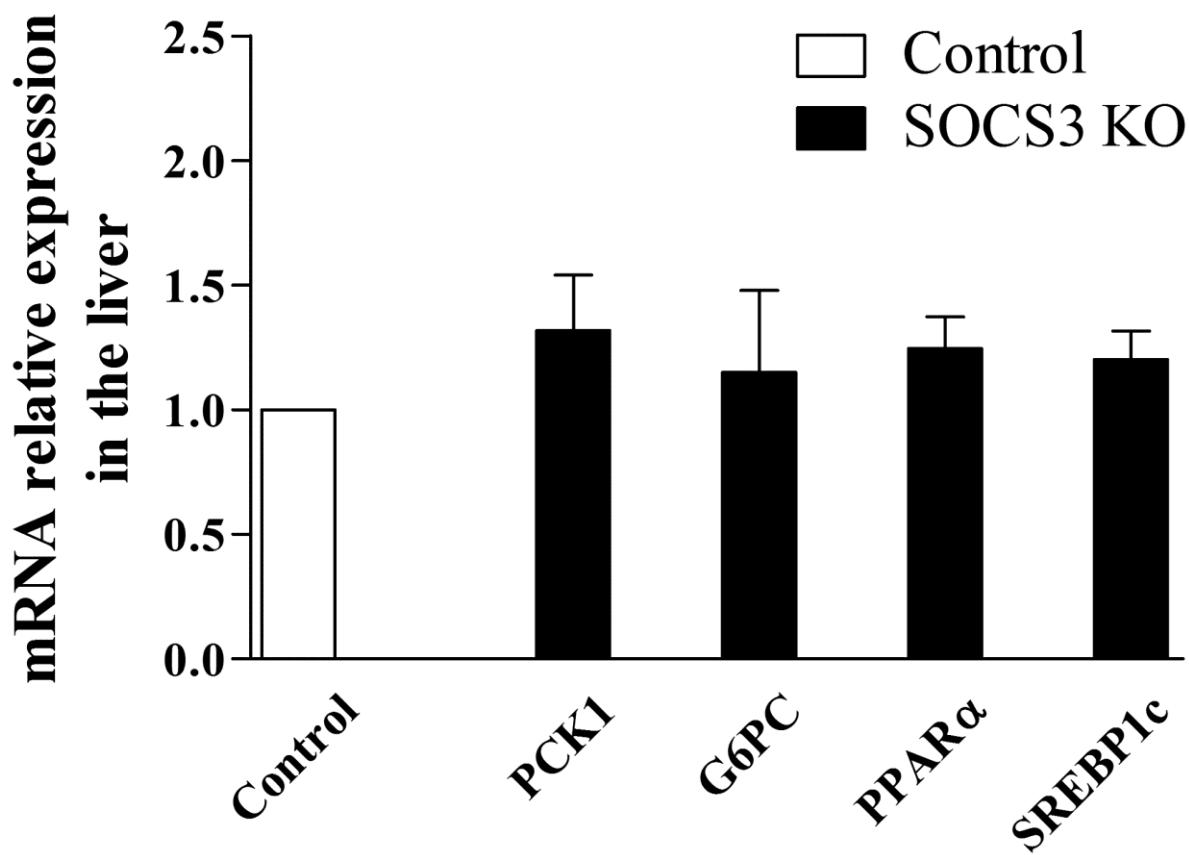
**Supplemental Figure 3 Serum leptin levels of leptin-treated control and *SOCS3* KO mice.** A micro-osmotic pump (model 1002; Alzet) was implanted s.c. at day 5 of pregnancy to infuse 0.5  $\mu$ g leptin/h and serum leptin levels were analyzed at day 16 of pregnant;



**Supplemental Figure 4 Difference in the weight gain compared to non-leptin treated mice.** The arrow indicates the day (P5) that the osmotic pumps containing leptin were implanted into the animals. These results represent a different analysis from the data shown in Figures 3B and 3C.



**Supplemental Figure 5 Hormone levels in pregnant control and SOCS3 KO mice.** No significant changes were observed in the serum concentrations of insulin ( $p = 0.56$ ) and glucagon ( $p = 0.07$ ) between the groups ( $n = 8/\text{group}$ ).



**Supplemental Figure 6 Gene expression in the liver of pregnant control and SOCS3 KO mice ( $n = 8/\text{group}$ ).**

**Supplemental Table 1 Primer sequences.**

Gene of interest	Accession no.	Forward primer (5'-3')	Reverse primer (5'-3')	Product size (bp)
ABCC8	NM_011510.3	GTCTTCTGGAACAGCGCCT	GTCCTGAGGCAATACCTGGG	63
ABCC9	NM_021041.2	ATCGACATGGCCACGGAAAA	GAGACACGGTGAGCTATGGT	91
ACTB	Mm_00607939_s1	-	-	115
Cyclophilin A	NM_008907.1	TATCTGCACTGCCAAGACTGAGT	CTTCTTGCTGGTCTTGCATTCC	128
GAPDH	GU21402.1	CTCCCACCTCTTCCACCTTCG	CCACCACCCCTGTTGCTGTAG	110
G6PC	NM_008061.3	GCTGGAGTCTTGTCAAGGCAT	CGGAGGCTGGCATTGTAGAT	74
KCNJ11	NM_010602.3	GCTGTCCCAGAAAGGGCATTA	CCTCCTCTCTCGAGTACGGT	94
KCNJ8	NM_008428.4	CATGGAGAACAGTGGCCTGG	CGCAGACGTGAATGACCTGA	64
Ob-Ra	NM_001122899.1	AATGACGCAGGGCTGTATGT	ATGGACTGTTGGGAAGTTGG	238
Ob-Rb*	Mm01265583_m1	-	-	74
Ob-Re	NC_000070.6	TGAAGATGATGGAATGAAGTGG	AGTTGGCATCCTTATTTGAGGT	161
PRKCδ	NM_011103.3	AACTGGTCCCTCCTGGAGAA	AGGGGATTCACCTTGGGCT	63
PRKCθ	NM_008859.2	GTCAGGGAGAGGCAGTGAAC	TCTGCCCATTTCTGATTCCAC	72
PTP1B	NM_011201.3	GGCGTGGTCATGCTAAC	GCCAATACTGGCACATTTAA	61
PTPN11	NM_011202.3	AACGACGGCAAGTCCAAAGT	TGCTCCACCAGGTCTGTCAAG	107
PTPN2	NM_008977.3	GTGATCCATTGCAGTGC	TTCCATCAGAACAGACAGGTAT	75
PTPRε*	Mm00448493_m1	-	-	68
SH2B1	NM_001081459.2	CCATGGTGTCTTCTTGGTAC	GTCCCTCCTCATTAGTGAC	113
SOCS1*	Mm00782550_s1	-	-	88
SOCS3*	Mm00545913_s1	-	-	76

\*, TaqMan Gene Expression Assay (Applied Biosystems).