

# **Supplementary Figure 2.**

#### Replicates Figure 1 A-C

**PLIN1 replicates relative to figure 1D.** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin during all the culture period and lysates were analysed by western blot. Blots represent 3 independent experiments and are cropped on the right panels for clearer comparison among groups.



#### Replicates Figure 1 D-H

**CAV-1 replicates relative to figure 1D.** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were treated with 0, 0.04, 0.4, 4 or 40 nM of leptin during all the culture period and lysates were analysed by western blot. Blots are from 5 independent experiments and are cropped on the right for clearer comparison among groups. In **G** are shown 2 independent experiments.



I-L

**. PPARγ replicates relative to figure 1D.** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin during all the culture period and lysates were analysed by western blot. Blots are from 4 independent experiments, and are cropped on the right panels for clearer comparison among groups. "Expo" means exposition time.



**Precursor SREBP1C** 

#### Replicates Figure 1 M-O

**SREBP1C replicates relative to figure 1D.** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin during all the culture period and lysates were analysed by western blot. Blots are from 3 independent experiments and are cropped on the right panels for clearer comparison among groups. "Ex" means exposition time.

Μ



Phospho JAK2 (pJAK2), total JAK2 (JAK2), phospho AKT (pAKT) and total AKT (AKT) replicates relative to Figure 2A. 3T3-L1 cells were differentiated up to 17 days and then stimulated for 20 min with the indicated concentrations of leptin. Phosphorilation of (A-C) JAK2 and (D-F) AKT were evaluated by western blot from 3 different experiments (



**TNF-** $\alpha$  **replicates relative to figure 3A.** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin during all the culture period and lysates were analysed by western blot. Blots are from 3 independent experiments and are cropped on the right panels for clearer comparison among groups. "Expo" means exposition time.



#### Replicates Figure 4 A-E

**PLIN1 replicates relative to figure 4C. (A-E)** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin, in the presence or absence of insulin from day 0 on. Lysates were analysed by western blot. Blots are from 5 independent experiments and are cropped on the right for clearer comparison among groups. "Expo" means exposition time.



### F-H

**CAV-1 replicates relative to figure 4C.** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin, in the presence or absence of insulin from day 0 on. Lysates were analysed by western blot. Blots are from 3 independent experiments and are cropped on the right for clearer comparison among groups.



#### Replicates Figure 4 I-J

**cSREBP1C replicates relative to figure 4C. (A-C)** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin, in the presence or absence of insulin from day 0 on. Lysates were analysed by western blot. Blots are from 2 independent experiments and are cropped on the right for clearer comparison among groups.



## Replicates Figure 4 K-M

**PPARγ replicates relative to figure 4C. (A-C)** 3T3-L1 preadipocytes (day -1) and adipocytes (days 3, 10 and 17) were trated with 0, 4 or 40 nM of leptin, in the presence or absence of insulin from day 0 on. Lysates were analysed by western blot. Blots are from 2 independent experiments and are cropped on the right for clearer comparison among groups.





## A-E.

CAV-1 replicates relative to figure 5C. Retroperitoneal ASCs differentiated into adipocytes for 5 or 12 days were trated with 0, 4 or 40 nM of leptin during all the culture period. Lysates were analysed by Western blot for CAV-1. Blots are from 5 independent experiments as can be followed by the  $\beta$ -actin lanes. "Expo" means exposition time.



#### Replicates Figure 5 F-K.

**SREBP1C and PPARy replicates relative to figure 5C.** Retroperitoneal ASCs differentiated into adipocytes for 5 or 12 days were trated with 0, 4 or 40 nM of leptin during all the culture period. Lysates were analysed by Western blot for SREBP1C (**F-H**) and for PPARy (**I-K**). Blots are from 4 independent experiments and some blots were done from the same samples/membranes as can be seen by the  $\beta$ -actin similar lanes (2 pairs A /D; B/E, C and F are from 2 other experiments). "Expo" means exposition time.



### L-T.

**CAV-1, PPARγ and PLIN1 replicates relative to figure 5D.** Subcutaneous ASCs differentiated into adipocytes for 5 or 12 days were trated with 0, 4 or 40 nM of leptin during all the culture period **(L-Q)**. Adipocytes with 12 days of differentiation **(R-T)**. Lysates were analysed by Western blot for the expression of CAV-1 **(L-N)**, PPARγ **(O-Q)** and PLIN1 **(R-T)**. Blots are from 3 independent experiments.



A-C.

**PPARγ, cSREBP1C and PLIN1 replicates relative to figure 7D.** Subcutaneous ASCs were differentiated into adipocytes for 5 days and trated with 0, 4 or 40 nM of leptin, in the presence or absence of insulin from day 0 on. Lysates were analysed by Western blot for the expression of PLIN1 (A), PPARγ (B) and cSREBP1C (C). Blots represent 3 independent experiments and same the last panel (cSREBP1C) is from a different experiment.



## Replicates Figure 7 D-F.

**PPARy replicates relative to figure 7E.** Retroperitoneal ASCs differentiated into adipocytes for 5 or 12 days were trated with 0, 4 or 40 nM of leptin, in the presence or absence of insulin from day 0 on. Lysates were analysed by Western blot for PPARy expression. Blots are from 3 independent experiments.



### Replicates Figure 7 G-H.

**cSREBP1C and CAV-1 replicates relative to figure 7E.** Retroperitoneal ASCs differentiated into adipocytes for 12 days were trated with 0, 4 or 40 nM of leptin, in the presence or absence of insulin from day 0 on. Lysates were analysed by Western blot for the expression of CAV-1 (G) and cSREBP1C (H). Blots are from 3 independent experiments.