

Supplementary Information

Crebl2 regulates cell metabolism in muscle and liver cells

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Supplementary Table Legends

Suppl. Table 1: Genes induced 2-fold by 12 h rapamycin treatment ($p < 0.05$) in TSC2^{-/-} MEFs treated with either control Renilla Luciferase siRNA or Crebl2 siRNA.

Suppl. Table 2: Gene ontology for genes listed in main Figure 1B.

Suppl. Table 3: Genes at least 2-fold upregulated ($p < 0.05$) by Rapamycin in C2C12 myoblasts.

Suppl. Table 4: Genes at least 2-fold downregulated ($p < 0.01$) by Crebl2 siRNA in C2C12 myoblasts.

Suppl. Table 5: Genes at least 2-fold upregulated ($p < 0.01$) by Crebl2 siRNA in C2C12 myoblasts.

Suppl. Table 6: Genes at least 2-fold downregulated ($p < 0.01$) by Crebl2 siRNA in Hepa1-6 cells.

Suppl. Table 7: Genes at least 2-fold upregulated ($p < 0.01$) by Crebl2 siRNA in Hepa1-6 cells.

Legends for Supplementary Figures

Supplementary Figure 1: Cellular localization of Crebrf and Crebl2.

(A) Expression of 3xHA-Crebrf in TSC2^{-/-} MEFs. 3xHA-Crebrf shows nuclear and/or cytoplasmic localization, and this varies from cell to cell. FITC - anti-HA, blue - DAPI, red - Rhodamine-Phalloidin. Scale bar = 10 μ m.

(B) Expression of 3xHA-Crebrf in 293T HEK cells. 3xHA-Crebrf is predominantly cytoplasmic with some nuclear staining. FITC - anti-HA, blue - DAPI, magenta - Cy5-Phalloidin. Scale bar = 10 μ m.

(C) Expression of GFP-Crebrf in 293T HEK cells. GFP-Crebrf is predominantly nuclear. green - GFP signal, blue - DAPI, magenta - Cy5-Phalloidin. Scale bar = 10 μ m.

(D) Expression of V5-Crebl2 in TSC2^{-/-} MEFs. V5-Crebl2 is predominantly nuclear and forms small speckles within the nucleus. green - anti-V5, blue - DAPI, red - Rhodamine-Phalloidin. Scale bar = 25 μ m.

(E) Expression of HA-Crebl2 in TSC2^{-/-} MEFs. HA-Crebl2 localization varies between cells and is either cytoplasmic or nuclear. green - anti-HA, blue - DAPI, red - Rhodamine-Phalloidin. Scale bar = 25µm.

(F) Expression of myc-Crebl2 in TSC2^{-/-} MEFs. myc-Crebl2 is nuclear and forms large nuclear speckles. green - anti-myc, blue - DAPI, red - Rhodamine-Phalloidin
Scale bar = 25µm.

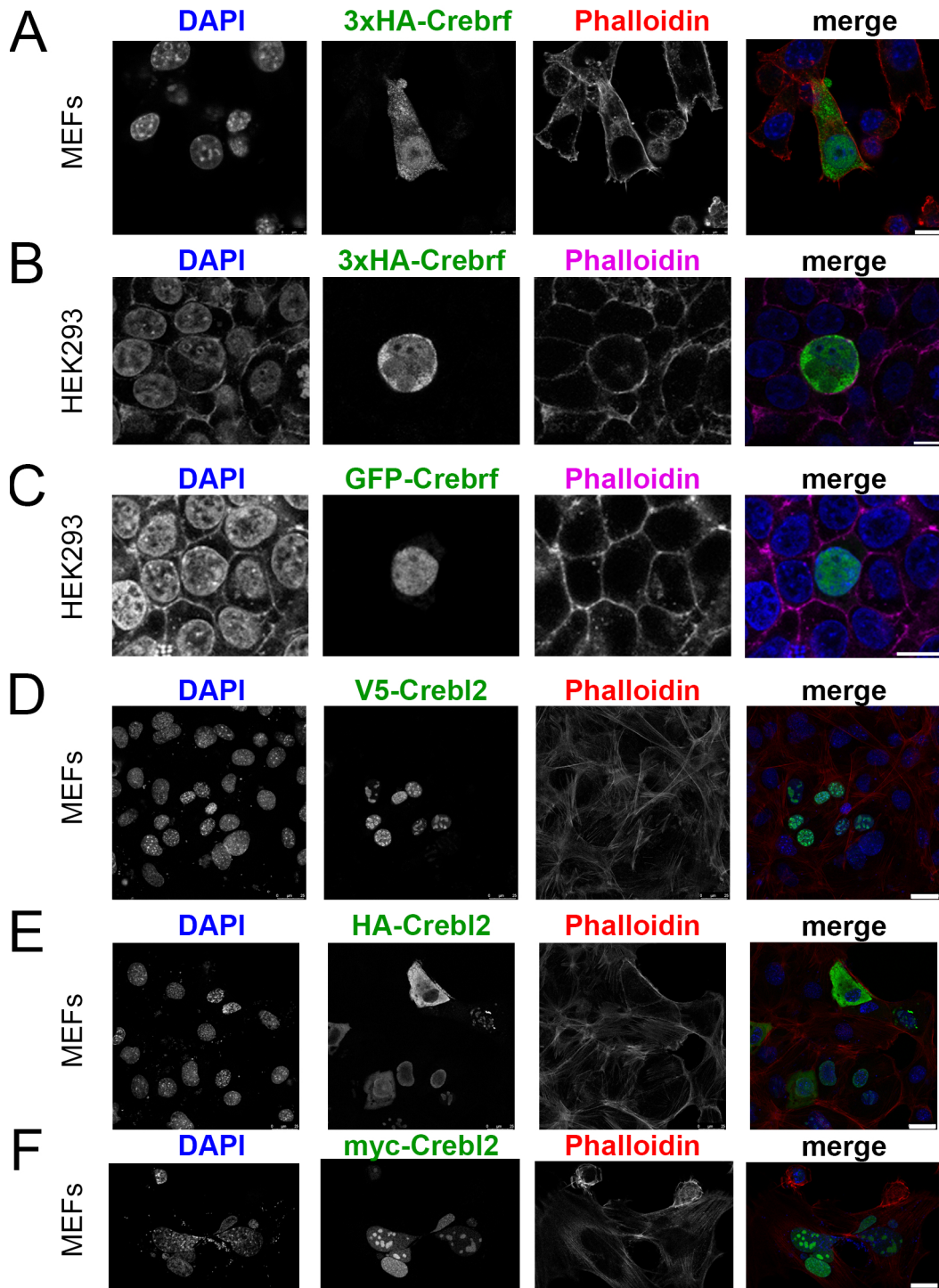
Supplementary Figure 2: Crebrf induction upon rapamycin treatment and knockdown efficiency of Crebl2 in C2C12 and Hepa1-6 cells.

(A) mRNA levels of Crebrf in C2C12 and Hepa1-6 cells treated with 20nM rapamycin for 14 and 12 hours, respectively.

(B) and **(C)** Knockdown of Crebl2 with siRNA #1 of Crebl2 for 2.5 days in C2C12 cells (B) or 3 days in Hepa1-6 cells (C).

Error bars: SD ****ttest<0.001

Supplementary Figure 1



Supplementary Figure 2

