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**Supplemental figure 1. Effect of cilnidipine on the PA-induced Drp1-FLNA complex formation in HepG2.** Supplemental images of PLA between Drp1 and FLNA. PLA signals are shown as white spots counterstained with phalloidin (green) and DAPI (blue). HepG2 cells were treated with 30 M of PA with or without cilnidipine. Scale bars: 10 m.

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**Supplemental figure 2. Changes in mRNA expression levels related to mitochondria fusion, inflammation, and ER stress in ob/ob mice.** (A-C) Gene expression of mitochondrial fusion-related proteins. The expression of Opa1 (A), Mfn1 (B), and Mfn2 (C). (D-F) Gene expression of inflammation-related proteins. The expression of IL-6 (D), TNF- (E), and IL-1 (F). (G) The expression level of ATF6 gene. Data are means ± SEM (n=5 mice in each group). Significance was determined using one-way ANOVA followed by Tukey’s comparison test.

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**Supplemental figure 3. Changes in mRNA expression levels related to mitochondria fusion, inflammation, and ER stress in WT mice fed HFD.** (A-C) Gene expression of mitochondrial fusion-related proteins. The expression of Opa1 (A), Mfn1 (B), and Mfn2 (C). (D-F) Gene expression of inflammation-related proteins. The expression of IL-6 (D), MCP-1 (E), and ICAM-1 (F). (G, H) Gene expression of ROS-related proteins. The expression of SOD1 (G), and SOD2 (H). (I, J) Gene expression of ER stress-related proteins. The expression of chop (I), and p62 (J). (K) mRNA expression of PINK1. Data are means ± SEM (n=5 mice in each group). Significance was determined using one-way ANOVA followed by Tukey’s comparison test.

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**Supplemental figure 4. Effect of 1,4-DHP on the PA-induced Drp1-FLNA complex formation in HepG2.** Representative images of PLA between Drp1 and FLNA. PLA signals are shown as white spots counterstained with phalloidin (green) and DAPI (blue). HepG2 cells were treated with 30 M of PA with or without 1,4-DHP. Scale bars: 10 m.

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**Supplemental figure 5. Changes in mRNA expression levels related to mitochondria fusion, inflammation, and ER stress in ob/ob mice fed HFD.** (A-C) Gene expression of mitochondrial fusion-related proteins. The expression of Opa1 (A), Mfn1 (B), and Mfn2 (C). (D) The expression of IL-6. (E, F) Gene expression of ROS. The expression of SOD1 (E), and SOD2 (F). (G, H) Gene expression of ER stress. The expression of XBP1 (G), and p62 (H). Data are means ± SEM (n=5 mice in each group). Significance was determined using one-way ANOVA followed by Tukey’s comparison test.

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**Supplemental figure 6. Knockdown efficiencies of siRNAs for Drp1 and FLNA in HepG2.** (A, B) mRNA expression levels of Drp1 (A), and FLNA (B) in HepG2 cells. Data are means ± SEM (n=3 in each group). Significance was determined using two-way ANOVA followed by Tukey’s comparison test.

Supplementary Table 1 Primer list

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Gene |  | Primer Sequence (5’ - 3’) |
| 1 | Drp1 | Forward | GATGCCATAGTTGAAGTGGTGAC |
|  |  | Reverse | CCACAAGCATCAGCAAAGTCTGG |
| 2 | FLNA | Forward | CTTATCGCGCTGTTGGAGGT |
|  |  | Reverse | GCCACCGACACGTTCTCAA |
| 3 | Opa1 | Forward | TGGAAAATGGTTCGAGAGTCAG |
|  |  | Reverse | CATTCCGTCTCTAGGTTAAAGCG |
| 4 | Mfn1 | Forward | ATGGCAGAAACGGTATCTCCA |
|  |  | Reverse | CTCGGATGCTATTCGATCAAGTT |
| 5 | Mfn2 | Forward | GTGGAATACGCCAGTGAGAAGC |
|  |  | Reverse | CAACTTGCTGGCACAGATGAGC |
| 6 | IL-6 | Forward | AAGGGCCAGGGATCTGTAAG |
|  |  | Reverse | TCTCTTGTTGCTCCCCAAAG |
| 7 | TNF-alpha | Forward | ATGAGCACAGAAAGCATGATCCGC |
|  |  | Reverse | CCAAAGTAGACCTGCCCGGACTC |
| 8 | IL-1 beta | Forward | ATGGCAACTGTTCCTGAACTCAACT |
|  |  | Reverse | CAGGACAGGTATAGATTCTTTCCTTT |
| 9 | MCP-1 | Forward | TTAAAAACCTGGATCGGAACCAA |
|  |  | Reverse | GCATTAGCTTCAGATTTACGGGT |
| 10 | ICAM1 | Forward | GTGTGCCATGCCTTTAGCTC |
|  |  | Reverse | CTGATCTTTCTCTGGCGGTT |
| 11 | SOD1 | Forward | AACCAGTTGTGTTGTCAGGAC |
|  |  | Reverse | CCACCATGTTTCTTAGAGTGAGG |
| 12 | SOD2 | Forward | CAGACCTGCCTTACGACTATGG |
|  |  | Reverse | CTCGGTGGCGTTGAGATTGTT |
| 13 | ATF6 | Forward | TCGCCTTTTAGTCCGGTTCTT |
|  |  | Reverse | GGCTCCATAGGTCTGACTCC |
| 14 | XBP1 | Forward | CTGAGTCCGAATCAGGTGCAG |
|  |  | Reverse | GTCCATGGGAAGATGTTCTGG |
| 15 | p62 | Forward | GCTGCCCTATACCCACATCT |
|  |  | Reverse | CGCCTTCATCCGAGAAAC |
| 16 | chop | Forward | CACCACACCTGAAAGCAGAA |
|  |  | Reverse | CGTTTCCTGGGGATGAGATA |
| 17 | PINK1 | Forward | CTTATAGGAAAGGGCCCGGATGTCG |
|  |  | Reverse | GATGATGTTAGGGTGTGGGGCAAGC |
| 18 | 18srRNA | Forward | ATTAATCAAGAACGAAAGTCGCAGGT |
|  |  | Reverse | TTTAAGTTTCAGCTTTGCAACCATACT |
| 19 | Human 18srRNA | Forward | CTACCACATCCAAGGAAGCA |
|  |  | Reverse | TTTTTCGTCACTACCTCCCCG |