**Leptin receptor-deficient *db/db* mice show significant heterogeneity in response to high non-heme iron diet**

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**Supplemental Table**: Primer sequences

|  |  |  |
| --- | --- | --- |
|   | forward | reverse |
| Il-1ß | TGCCACCTTTTGACAGTGATG | TGATGTGCTGCTGCGAGATT |
| Il-10 | GGCGCTGTCATCGATTTCTC | ATGGCCTTGTAGACACCTTGG |
| Il-6 | AGTTCCTCTCTGCAAGAGACTTC | AAGTAGGGAAGGCCGTGGTT |
| TnFα | GTCCCCAAAGGGATGAGAAGT | GCTCCTCCACTTGGTGGTTT |
| CD11c | GCAGACACTGAGTGATGCCA | TCGGAGGTCACCTAGTTGGG |
| CD11b | CATCCCCCTGCAAGTACCTC | GGGGGACAGTAGAAACAGCC |
| CD206 | GGCTGATTACGAGCAGTGGA | CATCACTCCAGGTGAACCCC |
| Aif1  | ATCAACAAGCAATTCCTCGATGA | CAGCATTCGCTTCAAGGACATA |
| Dmt1 | GCAGTGGTTAGCGTGGCTTATT | AGACAGACCCAATGCAATCAAA |
| Fpn | CCCTGCTCTGGCTGTAAAAG | GGTGGGCTCTTGTTCACATT |
| Tfr  | GTTTTTGTGAGGATGCAGACTATCC | GCTGAGGAACTTTCTGAGTCAATG |
| Fth | TGATGAAGCTGCAGAACCAG | GTGCACACTCCATTGCATTC |
| Ftl | AATGGGGTAAAACCCAGGAG | AGATCCAAGAGGGCCTGATT |
| Hmox1 | TGCTCGAATGAACACTCTGG | AAGGCGGTCTTAGCCTC |
| Adiponectin | TGACGACACCAAAAGGGCTC | CACAAGTTCCCTTGGGTGGA |
| Leptin | TGACACCAAAACCCTCATCA | TGAAGCCCAGGAATGAAGTC |
| Ipo8 | ACAAGCTCTGCTGACTGTGC | CAGTGTCCTTCGGTGCTCTG |
| B2M | CTCGGTGACCCTGGTCTTTC | TTGAGGGGTTTTCTGGATAGCA |
| Atcb | CTGTCGAGTCGCGTCCA | TCATCCATGGCGAACTGGTG |

**Supplemental Figure** **1**



**Comparison between detection results of the green channel and channel subtraction** (green minus red). (A) Section of the original image. (B) Green channel. (C) Red channel. (D) Channel subtraction (green minus red channel). (E) Corrected segmentation of the green channel. (F) Raw segmentation of the green channel. (G) Corrected segmentation of channel subtraction. (H) raw segmentation of channel subtraction. Red arrows: Processing steps from grayscale images to corrected segmentation.

**Supplemental Figure** **2**

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**Blood glucose concentration in mice fed with high iron (*n*=57) and standard diet (*n*=42) after 4 months.** A separation into two subgroups of the high iron group is recognisable. Separation line was manually set at 13.5 mmol/l. Experiments were repeated six times.

**Supplemental Figure 3**



**Blood glucose concentration in mice fed with high iron (*n*=57) and standard diet (*n*=42) before starting the diet at 12 weeks of age.** At the start of the experiment there were no significant differences in blood glucose levels between the groups. p values are above the graphs (ANOVA).