

Supplementary Information

Table S1. Mineral content of original DSW and balanced DSW used in this study (Ex. Hardness 4531).

Major Elements	Balanced DSW (mg/kg)	Original DSW (mg/kg)
Ca	294	417
Mg	922	1299
Na	51	10,794
Cl	596	18,607
SO ₄	59	2624

Table S2. Primers for quantitative real-time polymerase chain reaction analysis.

	Forward	Reverse
PEPCK	CTGGCACCTCAGTGAAGACA	TCGATGCCTTCCCAGTAAAC
G6Pase	ATGACTTTGGGATCCAGTCG	TGG AACCAGATGGGAAAGAG
GS	GAACTGAGCAGGGCTTTT	GGG CCTGGG AACTTAAAGC
LGP	CCAGAGTGCTCTACCCCAAT	CCACAAAGTACTCCTGTTTCAGC
GK	TCCCTGTAAGGCACGAAGACAT	ATTGCCACCACATCCATCTCA
CS	TGCCCACACAAGCCATTTG	CTGACACGTCTTTGCCAACTT
GLUT1	CTTCTCTGTCGGCCTCTTTGT	ACAGCTCCAAGATGGTGACCT
GLUT4	TCGTCATTGGCATTCTGGTTG	AGCTCGTTCTACTAAGAGCAC
ACO	CAGCACTGGTCTCCGTCATG	CTCCGGACTACCATCCAAGATG
CPT1a	ACCCTGAGGCATCTATTGACAG	ATGACATACTCCCACAGATGGC
MCAD	GGC AAATGCCTGTGATTCTT	CCATTGCGATCTTGAAACCT
SIRT1	GACGCTGTGGCAGATTGTTA	GGAATCCCACAGGAGACAGA
SIRT4	CGCTGCTCAAGATCCCTAAG	GCGACACAGCTACTCCATCA
SIRT6	GGCTACGTGGATGAGGTGAT	GGCTCAGCCTTGAGTGCTAC

Figure S1. Effects of BDSW on the expression of sirtuin family genes in muscles (A) and livers (B) of mice fed the ND, HFD, and HFD with BDSW for 20 weeks. Each value represents the mean $\pm$ SEM ($n = 8$ per group). * $P < 0.05$, ** $P < 0.01$: Significant difference vs. HFD-fed group. ND, normal diet; HFD, high-fat diet.

