

Table S1. The diet composition.

	ND		HFFD	
	gm%	kcal%	gm%	kcal%
Protein	19.2	20	23.7	20
Carbohydrate	67.3	70	42.1	33.7
Fat	4.3	10	27.5	46.3
Total		100		100
kcal/gm	3.85		4.99	
Ingredient	gm	kcal	gm	kcal
Casein	200	800	200	800
L-Cystine	3	12	3	12
Corn Starch	315	1260	72.8	291.2
Maltodextrin 10	35	140	100	400
Sucrose	350	1400	253.9	1015.6
Cellulose, BW200	50	0	50	0
Soybean Oil	25	225	25	225
Lard	20	180	253.9	2282.1
Mineral Mix S10026	10	0	10	0
DiCalcium Phosphate	13	0	13	0
Calcium Carbonate	5.5	0	5.5	0
Potassium Citrate, 1 H ₂ O	16.5	0	16.5	0
Vitamin Mix V10001	10	40	10	40
Choline Bitartrate	2	0	2	0
Total	1055.05	4057	1015.6	5068.9

Table S2. The primer sequences

Gene	FORWARD PRIMER (5'-3')	REVERSE PRIMER (5'-3')
ATGL	ATGTTCCCGAGGGAGACCAA	GAGGCTCCGTAGATGTGAGTG
Cidea	TGACATTCATGGGATTGCAGAC	CATGGTTTGAAACTCGAAAAGGG
CTP1 α	TGGCATCATCACTGGTGTGTT	GTCTAGGGTCCGATTGATCTTTG
GAPDH	AATGGATTTGGACGCATTGGT	TTTGCACTGGTACGTGTTGAT
GLUT1	CAGTTCGGCTATAACACTGGTG	GCCCCGACAGAGAAGATG
GLUT2	GGCTAATTTCAAGGACTGGTT	TTTCTTTGCCCTGACTTCCT
GLUT3	CTCTTCAGGTCACCCAACTACGT	CCGCGTCCTTGAAGATTCC
GLUT4	TGATTCTGCTGCCCTTCTGT	GGACATTGGACGGCTCTCTCT
HSL	ACTGAGATTGAGGTGCTGTC	AGGTGAGATGGTAACTGTGAG
MCAD	AACACAACACTCGAAAGCGG	TTCTGCTGTTCCGTCAACTCA
PRDM16	GAAGTCACAGGAGGACACGG	CTCGCTCCTCAACACACCTC
PPAR α	AACATCGAGTGTCTGAATATGTGG	CCGAATAGTTGCGCGAAAGAA
UCP1	GGCAAAAACAGAAGGATTGC	TAAGCCGGCTGAGATCTTGT
PRDM16	GAAGTCACAGGAGGACACGG	CTCGCTCCTCAACACACCTC

Fig. S1

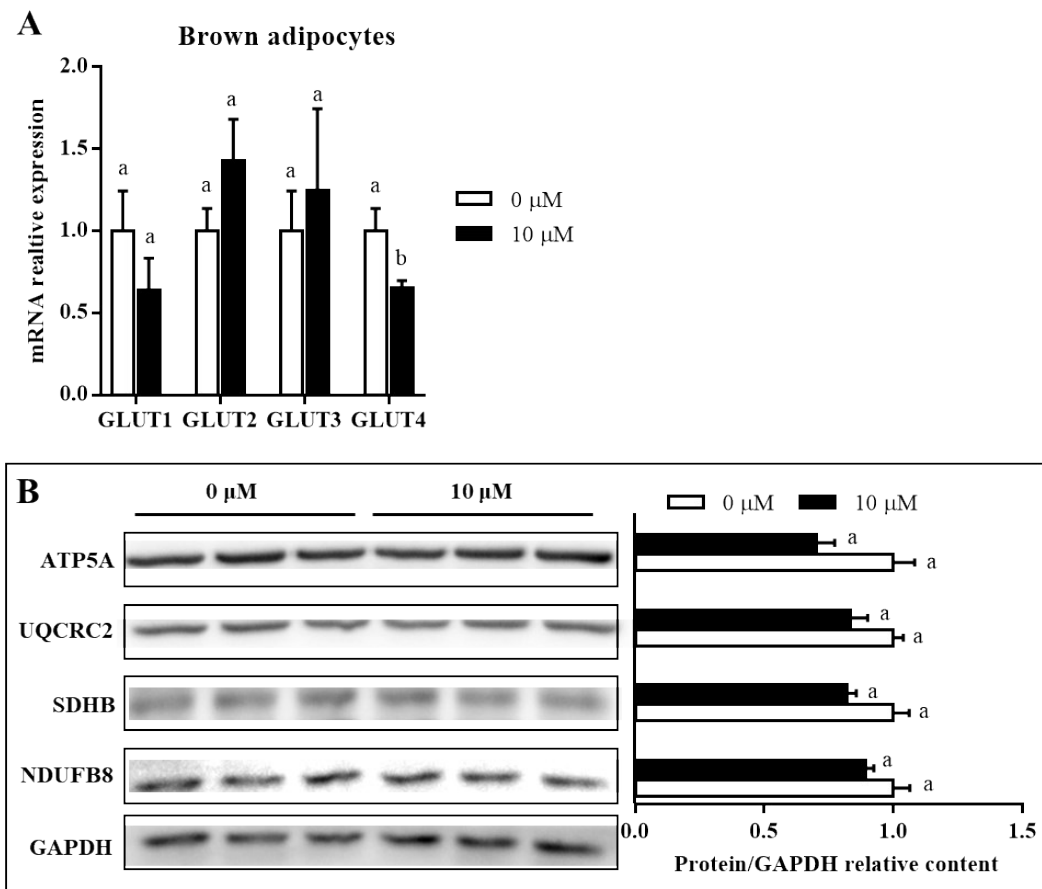


Fig. S1 DHB doesn't enhance the transportation of glucose and the function of mitochondrial in brown adipocytes. (A) The mRNA expression of GLUTs in brown adipocytes (n=6). (B) The protein of OXPHOS in brown adipocytes (n=3). Values are means $\pm$ SEMs. Different lowercase letters indicate a statistical difference, $p < 0.05$.