

**Supplemental Table 1.** Composition of experimental diets

Ingredients (g/kg)	Con	HFD	TMAO	L-carnitine
Casein	200	200	200	200
Cornstarch	450	250	247	245
Sucrose	200	200	200	200
Corn oil	50	50	50	50
Lard	0	200	200	200
Mineral mix	35	35	35	35
Vitamin mix	10	10	10	10
Cellulose	50	50	50	50
Choline bitartrate	2	2	2	2
DL-methionine	3	3	3	3
TMAO • 2H <sub>2</sub> O	--	--	3	--
L-Carnitine				5

**Supplemental Table 2.** Primers used during the real-time PCR assay

Gene	Forward/reverse primer
SREBP-1c	5'-GTG AGC CTG ACA AGC AAT CA-3'
	5'-ACC AAG CCA GCA AAT ACA CC-3'
FAS	5'- CTT CGC CAA CTC TAC CAT GG-3'
	5'- TTC CAC ACC CAT GAG CGA GT-3'

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ACC-1	5'- ATC CAG GCC ATG TTG AGA CG-3'
	5'- AGA TGT GCT GGG TCA TGT GG-3'
PPAR- $\alpha$	5'-CAG CGA GTA GCG CAT AGT CA-3'
	5'- GGA TGT CAC ACA CAA TTC -3'
ATGL	5'- AAC ACC AGC ATC CAG TTC AA-3'
	5'- GGT TCA GTA GGC CAT TCC-3'
CPT-1	5'-AAA GAT CAA TVG GAC CCT AGA-3
	5'-CAG CGA GTA GCC CAT AGT CA-3
$\beta$ -actin	5'-GCAGATGTGGATCAGCAAGC-3'
	5'-GTCAAAGAA AGGGTGTA A ACG-3'

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