

Table S1. Diet composition.

	High Fat-Fish oil		High Fat		High Fat + Vit D		High Fat-Fish oil + vit D	
	g	kcal%	g	kcal%	g	kcal%	g	kcal%
Protein	24.2	20	24.2	20	24.2	20	24.2	20
Carbohydrate	38.2	32	38.2	32	38.2	32	38.2	32
Fat	26	48	26	48	26	48	26	48
Total		100		100		100		100
kcal/g	4.84		4.84		4.84		4.84	
Ingredient	g	kcal	g	kcal	g	kcal	g	kcal
Casein, 30 mesh	200	800	200	800	200	800	200	800
L-Cystine	3	12	3	12	3	12	3	12
Corn Starch	38	152	38	152	38	152	38	152
Maltodextrin 10	100	400	100	400	100	400	100	400
Sucrose	173	691	173	691	173	691	173	691
Cellulose	50	0	50	0	50	0	50	0
Soybean Oil	25	225	25	225	25	225	25	225
Lard	144	1296	193	1737	144	1296	193	1737
Vitamin D IU	200	0	200	0	1000	0	1000	0
Menhaden Oil, Nutegrity	49	441	0	0	49	441	0	0
Mineral Mix, S10026	10	0	10	0	10	0	10	0
DiCalcium Phosphate	13	0	13	0	13	0	13	0
Calcium Carbonate	5.5	0	5.5	0	5.5	0	5.5	0
Potassium Citrate, 1 H2O	16.5	0	16.5	0	16.5	0	16.5	0
Vitamin Mix, V10001	10	40	10	40	10	40	10	40

Choline Bitartrate	2	0	2	0	2	0	2	0
Vitamin E Acetate, 50% (500 IU/g)	0.13	0	0.13	0	0.13	0	0.13	0
Total	839	4057	839	4057	839	4057	839	4057

Table S2. Primer Information

Primer Name	Forward	Reverse
Fasn	TGTATCCTGCTGTCCAACCT	GGCTTGTCTGCTCTAACTG
Ppara	ATCCACGAAGCCTACCTGAA	AATCGGACCTCTGCCTCTT
Cpt1a	GAGACAGACACCATCCAACAC	GAGCCAGACCTTGAAGTAACG
Cpt2	CAGCACAGCATCGTACCCA	TCCCAATGCCGTTCTCAAAAT
Mcp-1	ACTTCTATGCCTCCTGCTCAT	CCTGCTTGTGATTCTCCTGTAG
DGat2	CCTCATCGCCGCCTACTC	GAGCCAGGTGACAGAGAAGAT
Chrebp	GACTCGGACTCGGATACG	GCTGTGGATGACCTGTGA
Pklr	TTCCTCCGAGTTGGTGAT	TGGCTAGATGGCAGATGT
G6p	AACGCCTTCTATGTCCTCTTTC	GTTGCTGTAGTAGTCGGTGTCC
18S	GTTGCTGTAGTAGTCGGTGTCC	TGCCAGAGTCTCGTTCGTTA