

**Table S1. The formulation and composition (dry matter basis) of the experimental diets**

Ingredient (g/kg)	CD	HFD
Casein	207	207
Gelatin	50	50
Fish meal	120	120
Soybean oil	15.2	65.2
Fish oil	15.2	65.2
Corn starch	379.15	379.15
Vitamin premix <sup>1</sup>	15	15
Mineral premix <sup>2</sup>	28.2	28.2
CMC	25	25
Cellulose	140	40
Choline chloride	5	5
BHT	0.25	0.25
Total	1000	1000
Composition		
Dry matter (%)	91.12	92.06
Crude protein (%)	33.61	33.28
Crude lipid (%)	4.24	14.03
Ash (%)	5.08	5.71

<sup>1</sup> Mineral premix, (g/kg): 314.0 g CaCO<sub>3</sub>; 469.3 KH<sub>2</sub>PO<sub>4</sub>; 147.4 g MgSO<sub>4</sub>·7H<sub>2</sub>O; 49.8 g NaCl; 10.9 g Fe(II) gluconate; 3.12 g MnSO<sub>4</sub>·H<sub>2</sub>O; 4.67 g ZnSO<sub>4</sub>·7H<sub>2</sub>O; 0.62 g CuSO<sub>4</sub>·5H<sub>2</sub>O; 0.16 g KJ; 0.08 g CoCl<sub>2</sub>·6H<sub>2</sub>O; 0.06 g NH<sub>4</sub> molybdate; 0.02 g NaSeO<sub>3</sub>.

<sup>2</sup> Vitamin premix, (mg or IU/kg): 500,000 I.U. (international units) Vitamin A, 50,000 I.U. Vitamin D3, 2500 mg Vitamin E, 1000 mg Vitamin K3, 5000 mg Vitamin B1, 5000 mg Vitamin B2, 5000 mg Vitamin B6, 5000 µg Vitamin B12, 25,000 mg Inositol, 10,000 mg Pantothenic acid, 100,000 mg Cholin, 25,000 mg Niacin, 1000 mg Folic acid, 250 mg Biotin, 10,000 mg Vitamin C.

**Table S2. Primers used in the present study**

Usage	Gene	Primer name	Sequence (5' to 3')	Size (bp)
	EF1a	E1F	CTACGTGACCATTGATGCC	
		E1R	AACACCAGCAGCAACGATCA	106
	SOCS-1	qS1F	TTCTTCACGCTGCCTACCACG	
		qS1R	GCAAAGAGTGGAAAGACCG	113
	SOCS-2	qS2F	AACAACACCGGAGCTGTGGAA	
		qS2R	TGCAGGATCTCTTGCGCTCA	119
qRT-PCR	SOCS-3	qS3F	ACCCTCAGTGTCAAGACAGCCTC	
		qS3R	AGAACGCGACTCAAAGTGGGAA	121
	IGF-1	qIGF1F	TAGACACGCTGCAGTTGTCTGTG	
		qIGF1R	AAGCAGCACTCGTCCACGATG	109
	TNF $\alpha$	qTaF	CAGAAGCACTAAAGGCGAAGAAC	
		qTaR	TTCTAGATGGATGGCTGCCTTG	98
	IFN $\gamma$	qI $\gamma$ F	CACATCCCAGCAGAGATGAAC	
		qI $\gamma$ R	GTCACTAGGAAATACGGGTTCCC	102
	IL1- $\beta$	qILF	GAGCACAGAATTCCAGGATGAAAG	
		qILR	TGAAC TGAGGTGGTCCAGCTGT	101
Plasmid construction	pSOCS-1-pGL3	pS1F	CGACCGTCTGAGAAGTACCAACCTCACA	
		pS1R	GGAAGATCTGGATCCGTATGGCTGTAA	1084
	pSOCS-2-pGL3	pS2F	CGACCGTACGAGGTCACTGAGTTCACAGTC	
		pS2R	GGAAGATCTGGACAAGTCCAACCTTCAG	1995
	pSOCS-3-pGL3	pS3F	CGACCGTAGAGTGTGAGCACTCTATCAG	
		pS3R	GGAAGATCTAGAGGGTTGTCAGTAGGCAA	1879
	IGF-1-pcDNA3.1	IF	CCCAAGCTTGTGGGGATGTCTAGCGCTTTTC	
		IR	CGCGGATCCGCTCCTCCCTACATTCTGTA	564

**Table S3. The weight gain and visceral fat deposition of juvenile Nile tilapia fed CD or HFD for four weeks**

Parameter	CD	HFD
<sup>1</sup> WG	100.78 ± 2.49	120.25 ± 3.94 <sup>#</sup>
<sup>2</sup> MFI	0.81 ± 0.14	1.79 ± 0.13 <sup>#</sup>

<sup>1</sup>Weight gain = Final weight – initial weight/ Initial weight x 100%, (n = 3).

<sup>2</sup>Mesenteric fat index (MFI) (100% × visceral adipose tissue weight / wet body weight)  
(n = 6)