Supplemental Table S1. Milk replacer composition and diet formulation

Ingredient	g/ 100 g of dry powder
Whey	55.57
Sodium caseinate	14.06
Whey protein concentrate	12.67
Delactosed whey	6.43
Edible lard	5.50
Dicalcium phosphate	2.76
Other#	3.01
Total	100.00
Calculated nutrition composition	
Energy, Kcal/g	4.23
Crude protein, %	31.25
Crude fat, %*	7.50
Lactose, %	43.18
Calcium, %	1.48
Phosphorus, %	1.32
Lysine, %	3.06
Methionine, %	1.29
Tryptophan, %	0.47
Isoleucine, %	1.80
Histidine, %	0.71
Phenylalanine, %	1.25
Threonine, %	1.62
Leucine, %	3.07
Valine, %	1.93

[#]Other, g/kg diet: mineral premix, 6.3; D/L-methionine, 6.2; potassium sorbate, 5.6; L-lysine HCl, 4.5; calcium chloride, 4.1; vitamin premix, 1.4; flavor additive, 0.6; emulsifier, 0.6; flow agent, 0.5; tetrasodium pyrophosphate, 0.3; antioxidant 0.01; Milk Specialties, Eden Prairie, MN 55344. *Whey products contributed another 2% of fat to the dry powder.

Supplemental Table S2. Experimental Dietary formulation (1 kg milk)

	Diets			
	SUC	TMPA	TC5	TC6
Components	Kg			
Basal dry powder	0.1280	0.1280	0.1280	0.1280
Soybean Oil	0.0259	0.0237	0.0237	0.0237
TC6				0.0064
TC5			0.0068	
T2M		0.0064		
Succinate	0.0048			
Glycerol	0.0016			
Water	0.8397	0.8419	0.8415	0.8419
Total	1	1	1	1

SUC, glycerol-succinate; TMPA, triglyceride of 2-methylpentanoic acid; TC5, triglyceride of valeric acid; TC6, triglyceride of hexanoic acid;

Supplemental Table S3. Primers used in this study with expected amplicon size post RT-qPCR. Gene Bank numbers provided to demonstrate the genes of the pig genome referenced.

	Forward primer (5'-3'), Sen	Reverse primer (5'-3'), Anti	Amplicon Size, bp	NCBI (Gene Bank)
ACOX	GGTCCATCCACGCTGTCTTA	CACGTGGGTGACTTGAGACT	119	NM_001101028.1
BBOX	AACTGGCGGTTACTTCACGG	CCACATCCCAGTCGGCATAA	91	XM_003122909.5
FABP2	CAACGAGTGGATAATGGAAAAGAGT	CCTCTTGGCTTCTACTCCTTCA	99	NM_001031780.1
CPT1A	GCTGACGATGGTTATGGGGT	TCCCGAAGCGATGAGAATCC	109	NM_001129805.1
CPT1B	GCCTGACCTATGAAGCCTCG	TGAACGAAGGCTGTGGACTC	94	NM_001007191.1
PPARα	GCTGGACGACAGTGACCTTT	AGCACATGCACGATACCCTC	117	NM_001044526.1
RXRα	GTCCTCTTCAACCCGGACTC	CTGCTCGGGGTACTTGTGTT	114	DQ279926.1
TMLHE	CGGCACACTGACACTACCTATT	AATCCATCTACCAGCAGTGTCC	104	XM_003135511.3
OCTN1	CCCACCCTGGTCAGGAACAT	GGCAGAACTCTGTTGTAAGCAC	110	NM_001145752.1
OCTN2	ATCAGATGCTCAGGGTCAAAGG	CCAGGAGGAAGGAGTCCATTTT	108	XM_013995112.1
ALD	GACTAGCTGCCGGTGTCTTC	AACTCCACAGGGCTGACATT	112	XM_021089487.1
RPL9	GCAACTGTTCGCACCATCTG	CGACGTTGATGGGGAAGTGA	109	NM_001243481.1