**Supplementary Data**

Table S1. Composition and nutrient levels of experimental diet.

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| Ingredient | Amount (g/kg) |
| Casein, 30 Mesh | 223 |
| L-Cysteine | 3.3 |
| Corn Starch | 236.25 |
| Maltodextrin 10 | 79 |
| Sucrose | 126 |
| Cellulose, BW200 | 56 |
| Soybean Oil | 28 |
| Cocoa Butter | 172.75 |
| Mineral Premix S100211 | 11.15 |
| Dicalcium Phosphate | 14.5 |
| Calcium Carbonate | 6 |
| Potassium Citrate | 18 |
| Vitamin Premix V100011 | 11.15 |
| Choline Bitartrate | 2.25 |
| Cholesterol | 12.5 |
| Blue Dye, FD&C #1 | 0.05 |
| Yellow Dye, FD&C #5  Nutrient Levels  Energy, kcal/g  Protein, g/kg  Carbohydrate, g/kg  Fat, g/kg | 0.05  4.5  230  450  200 |

1Vitamin and mineral premix provided the following per kilogram of diet: Vitamin A, 4457 IU as Vitamin A Acetate; Vitamin D, 1,114 IU as Vitamin D3; Vitamin E, 55 IU as Vitamin E Acetate; Vitamin K, 0.55mg as Menadione Sodium Bisulfite; Biotin, 0.22mg as Biotin (1.0%); 11µg Vitamin B12­; 2.2mg Folic Acid; 33mg Niacin; Pantothenic Acid, 17.8mg as Calcium Pantothenate; Vitamin B6, 7.8mg as Pyridoxine-HCL; Vitamin B2, 6.7mg as Riboflavin; Vitamin B1­, 6.7mg as Thiamin HCL; Na, 1.1g as Sodium Chloride; Cl, 1.8g as Sodium Chloride; Mg, 0.6g as Magnesium Oxide; S, 0.37g as Magnesium Sulfate 7 H2O; Cr, 2.2mg as Chromium Potassium Sulfate 12 H2O; Cu, 6.7mg as Cupric Carbonate; I, 0.22mg as Potassium Iodate; Fe, 50mg as Ferric Citrate; Mn, 65.7mg as Manganous Carbonate; Se, 0.18mg as Sodium Selenite; Zn, 32mg as Zinc Carbonate.

Table S2. Specific primer sequences used for quantitative real-time PCR. GAPDH: Glyceraldehyde 3-phosphate dehydrogenase; CD36: Cluster of differentiation 36; HMG-CoA Reductase: 3-hydroxy-3-methyl-glutaryl-coenzyme A reductase; TNFα: Tumor necrosis factor alpha.

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| Target Gene | Forward (5’-3’) | Reverse (5’-3’) |
| GAPDH | ATTGTCAGCAATGCATCCTG | ATGGACTGTGGTCATGAGCC |
| CD36 | GATCGGAACTGTGGGCTCAT | GGTTCCTTCTTCAAGGACAACTTC |
| PPARγ | TTGCTGAACGTGAAGCCCATCGAGG | GTCCTTGTAGATCTCCTGGAGCAG |
| HMG-CoA Reductase | CAGGATGCAGCACAGAATGT | CTTTGCATGCTCCTTGAACA |
| TNFα | CCACCACGCTCTTCTGTCTAC | AGGGTCTGGGCCATAGAACT |

Caecal PCoA 2

Figure S1. PCoA of cecal microbiota separated by Bray Curtis distance metric. Grouping circles represent 95% confidence interval for each group.

Alpha Diversity

Figure S2. Alpha diversity measures of cecal microbiota.