

Supplementary information

Supplementary tables

Table S1. Standards for encouraged and limiting nutrients

	DV	MRV
Encouraged nutrient		
Vitamin A	800 µgRAE	-
Vitamin B2	1.4 mg	-
Vitamin E	14 mg α -TE	-
Vitamin C	100 mg	-
Iron	12 mg	-
Magnesium	320 mg	-
Zinc	12.5 mg	-
Linolenic acid	0.6 /%E	-
Arginine	2.66 g	-
Tyrosine	2.31 g	-
Ellagic acid	200 mg	-
Anthocyanin	320 mg	-
Limiting nutrient		
Saturated fatty acids	-	10 /%E
Fructose	-	50 g
BCAA	-	39 g
Methionine	-	0.2 g

DV, reference daily value; MRV, maximum recommended value.

Table S2. Animal diet formula (g/kg)

	LFD	HFD	HFD+ MN1	HFD+ MN2	HFD+ MN3	HFD+ EA
Casein	189.6	231	226.3	227.5	227.6	231
L-Cystine	2.8	3	3	3	3	3
Corn Starch	479.8	84	80.7	75.1	75.5	83.7
Maltodextrin	118.5	115	115	115	115	115
Sucrose	65.2	199.3	199.3	199.3	199.3	199.3
Cellulose	47.4	58	55.5	53.7	54	58
Soybean oil	23.7	29	12.1	18.3	17.5	29
Lard	19	204.7	204.7	204.7	204.7	204.7
Mineral Mix	9.5	12	12	12	12	12
Dicalcium Phosphate	12.3	15	15	15	15	15
Calcium Carbonate	5.2	6.3	6.3	6.3	6.3	6.3
Potassium Citrate·1H ₂ O	15.6	19	19	19	19	19
Vitamin Mix	9.5	12	12	12	12	12
Choline Bitartrate	1.9	2	2	2	2	2
Cholesterol	0	9.8	9.8	9.8	9.8	9.8
Mixed nut	0	0	27.3	27.3	27.3	0
Walnut	0	0	0	0	0	0
Ellagic acid	0	0	0	0	0	0.5
Total (g)	1000	1000	1000	1000	1000	1000
Calories (kcal/g)						
Protein	20%	20%	20%	20%	20%	20%
Carbohydrate	70%	35%	35%	35%	35%	35%
Fat	10%	45%	45%	45%	45%	45%
Total	100	100	100	100	100	100

LFD, low-fat diet group; HFD, high-fat diet group; HFD + MN1, high-fat diet added classical randomized controlled trial mixed nut formula; HFD + MN2, high-fat diet added commercially available mixed nut formula; HFD + MN3, high-fat diet added high-nutrient density mixed nut formula; HFD + EA, high-fat diet added ellagic acid.