

Supplementary table 1: The diet composition and dietary nutritional profile

Component	Control diet	Control diet +Prebiotic (%)
Starch	50	45
Casein	20	20
Sucrose	10	10
Soybean oil	10	10
cellulose	5	5
Vitamin mixture	1	1
Mineral mixture ^a	3.5	3.5
Choline chloride ^a	0.2	0.2
Methionine	0.3	0.3
Prebiotic (Fructooligosaccharides (FOS))	0	5

^aThe composition of the mixtures can be found in AOAC.⁸⁶ Modified AIN-76A.⁸⁷

Supplementary table 2: The detailed organ weight and organ index data expressed in average ± SEM for all experimental groups

Groups Name/ Parameters	Liver weight	Liver Index	Spleen weight	Spleen Index	Kidney weight	Kidney Index
Control	2.21±0.21 ^a	5.2±0.54	0.15±0.009 ^a	0.37±0.02 1	0.6±0.02	1.4±0.05
Restraint	1.45±0.04	6.59±0.2	0.20±0.019	0.93±0.08	0.41±0.0	1.8±0.06

Stress (RS)	b	3	b	7	1	
RS+PBS	1.46±0.10 b	6.33±0.8 4	0.22±0.019 b	0.93±0.06 0	0.43±0.0 1	1.8±0.09
RS+Pre	1.73±0.07 b	7.21±0.4 2	0.19±0.012 b	0.78±0.06 1	0.45±0.0 3	1.8±0.10
RS+Pro-1	1.93±0.09 c	6.15±0.4 7	0.16±0.014 ac	0.57±0.03 8	0.49±0.0 2	1.5±0.12
RS+Pro-2	2.07±0.07 c	6.73±0.3 7	0.15±0.016 ac	0.51±0.07 2	0.52±0.0 1	1.6±0.09
RS+Pre+Pro-1	1.94±0.09 c	6.04±0.4 6	0.17±0.015 ac	0.49±0.05 6	0.51±0.0 3	1.5±0.13
RS+Pre+Pro-2	1.99±0.08 c	6.09±0.3 5	0.16±0.012 ac	0.45±0.03	0.48±0.0 1	1.4±0.07

Alphabets indicate significant differences a = p < 0.05, b = p < 0.01, c = p < 0.001.

Supplementary table 3: Gene primers table:

Gene name	Sense Primer (5'-----3')	Anti-sense Primer (5'----- ---3')	Annealing Temp.	Product length (bp)
GAPDH	TGTGTCCGTCGTGGATCTGA	TTGCTGTTGAAGTCGCGGAG	60°C	150
StAR	CTGCAGCAAGCACTGTGTGG	GGGATAACAGCTCAGACGGTAGAGA	60°C	87
P450 _{scc}	GGAGGAGATCGTGGA CCCTGA	TGGAGGCATGTTGAGCATGG	60°C	91
17 β HSD	AATGTGCTTTCCATTTG CAAGGT	ATGCCACTGGCAGAGGAGATG	60°C	98

TNF-Alpha	AGCCGATGGGTTGTAC CTTGTCTA	TGAGATAGCAAATCGG CTGACGGT	63°C	103
IL-6	ATCCAGTTGCCTTCTT GGGACTGA	TAAGCCTCCGACTTGTG AAGTGGT	63°C	134
IL-10	CTGCTATGCTGCCTGC TCTT	GCAGTATGTTGTCCAGC TGG	60.5°C	181