**Supplementary Table 1. Composition and nutrient level of experimental diet**

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| --- | --- | --- | --- |
| Ingredients | % | Nutrient level | Content |
| Corn | 28.31 | Digestible energy (calculated, MJ/kg) | 14.78 |
| Extruded corn | 24.87 | Crude Protein (%) | 19.68 |
| Soybean meal | 8.50 | Calcium (%) | 0.81 |
| Extruded full-fat soybean | 10.30 | Available phosphorus (%) | 0.55 |
| Fish meal | 4.20 | Lysine | 1.35 |
| Whey powder | 7.00 | Methionine | 0.42 |
| Soybean protein concentrate | 8.00 | Methionine + cysteine | 0.60 |
| Soybean oil | 2.00 | Threonine | 0.79 |
| Sucrose | 4.00 | Tryptophan | 0.22 |
| Limestone | 0.90 |  |  |
| Dicalcium phosphate | 0.50 |  |  |
| NaCl | 0.30 |  |  |
| L -LysineHCl (78%) | 0.47 |  |  |
| DL -Methionine | 0.15 |  |  |
| L -Threonine (98.5%) | 0.13 |  |  |
| Tryptophan (98%) | 0.03 |  |  |
| Chloride choline | 0.10 |  |  |
| Vitamin premix 1 | 0.04 |  |  |
| Mineral premix 2 | 0.20 |  |  |
| Total | 100 |  |  |

1 The vitamin premix provided the following per kg of diet: 9000 IU of VA, 3000 IU of VD 3, 20 IU of VE, 3 mg of VK 3, 1.5 mg of VB1, 4 mg of VB 2, 3 mg of VB6, 0.02 mg of VB12, 30 mg of niacin, 15 mg of pantothenic acid, 0.75 mg of folic acid, and 0.1 mg of biotin. 2 The mineral premix provided the following per kg of diet: 100 mg Fe, 6 mg Cu, 100 mg Zn, 4 mg Mn, 0.30 mg I, 0.3 mg Se.

**Supplementary Table 2. The sequences of primers used for real-time PCR**

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| --- | --- | --- | --- |
| Gene | Primer sequence (5’ –3’) | Annealing temperature (℃) | Product size (bp) |
| β-Actin | F: TGGAACGGTGAAGGTGACAGC | 62.84 | 177 |
| R: GCTTTTGGGAAGGCAGGGACT | 62.90 |
| TLR4 | F: TTACAGAAGCTGGTTGCCGT | 59.89 | 152 |
| R: TCCAGGTTGGGCAGGTTAGA | 60.47 |
| MYD88 | F: CCATTCGAGATGACCCCCTG | 59.89 | 184 |
| R: TCAGCAATGGACCAGACGCAG | 62.97 |
| NF-κB | F: GTGTGTAAAGAAGCGGGACCT | 60.27 | 139 |
| R: CACTGTCACCTGGAAGCAGAG | 60.61 |
| R: CACACATCTCCTTTCTCATTGC | 57.65 |
| Ho-1 | F: CGCTCCCGAATGAACAC | 55.66 | 112 |
| R: GCTCCTGCACCTCCTC | 55.92 |
| Nrf-2 | F: GCCCCTGGAAGCGTTAAAC | 59.12 | 67 |
| R: GGACTGTATCCCCAGAAGGTTGT | 61.65 |
| BAX | F: AAGCGCATTGGAGATGAACT | 57.88 | 121 |
| R: TGCCGTCAGCAAACATTTC | 57.14 |
| Bcl-2 | F: ATGTGTGTGGAGAGCGTCAA | 59.61 | 142 |
| R: GCCCATACAGCTCCACAAAG | 58.90 |
| Caspase-3 | F: GGAATGGCATGTCGATCTGGT | 63.00 | 105 |
| R: ACTGTCCGTCTCAATCCCA | 61.78 |

Toll-like receptor 4, TLR4; myeloid differentiation factor 88, MyD88; nuclear factor-κB, NF-κB; nuclear factor erythroid-derived 2-related factor 2, Nrf2; heme oxygenase-1, HO-1; B-cell lymphoma-2-associated X protein, BAX; B-cell lymphoma-2, BCL-2; cysteinyl aspartate-specific proteinase-3, caspase-3.