

**Table S1** The composition of the basal diet and water.

| Basal diet                            | Concentration (g/kg) | Water    | Concentration (mg/L) |
|---------------------------------------|----------------------|----------|----------------------|
| Corn                                  | 658.7                | Arsenic  | 0.01                 |
| Soybean meal                          | 50.0                 | Cadmium  | 0.005                |
| Cottonseed meal                       | 80.0                 | Chromium | 0.05                 |
| Rapessed meal                         | 60.0                 | Lead     | 0.01                 |
| Limestone                             | 85.5                 | Mercury  | 0.01                 |
| Dicalcium phosphate                   | 15.0                 | Selenium | 0.01                 |
| Salt                                  | 2.0                  | Aluminum | 0.2                  |
| NaHCO <sub>3</sub>                    | 2.0                  | Ferrum   | 0.3                  |
| Choline chloride                      | 1.0                  | Copper   | 1.0                  |
| Distillers dried grains with solubles | 40.0                 | Zinc     | 1.0                  |
| 65% Lysine                            | 4.1                  |          |                      |
| Premix *                              | 0.4                  |          |                      |
| DL-Methinine                          | 1.3                  |          |                      |
| Threonine                             | 0.5                  |          |                      |

Premix \*: Supplied the following per kilogram of complete diet: VA, 4.4 mg; cholecalciferol, 40 µg; DL- $\alpha$ -tocopheryl acetate, 10.0 mg; vitamin K<sub>3</sub>, 3.0 mg; vitamin B<sub>12</sub>, 10 µg; thiamine, 3.5 mg; riboflavin, 8.0 mg; pyridoxine, 4.5 mg; folic acid, 1.0 mg; pantothenic acid, 5.0 mg; biotin, 0.02 mg; Se (as NaSeO<sub>3</sub>), 0.3 mg; and I (as KIO<sub>3</sub>), 0.4 mg.

**Table S2.** Instrumental parameters for the ICP-MS

|                         | Parameters |
|-------------------------|------------|
| Frequency (MHz)         | 27.12      |
| Reflect power (kW)      | 1.55       |
| Sampling depth (mm)     | 5.0        |
| Torch-H (mm)            | 0.01       |
| Torch-V (mm)            | -0.39      |
| Carrier gas (L/min)     | 1.05       |
| Nebuliser pump (rpm)    | 40         |
| S/C temperature (°C)    | 2.7        |
| Oxide ions (156/140)    | <2.0%      |
| Doubly charged (70/140) | <3.0%      |
| Nebuliser type          | Concentric |

**Table S3.** Gene-special primers for qPCR quantification of mRNA levels

| Gene      | GeneBank       | Primer sequence (5'→3')         | Primer length(bp) |
|-----------|----------------|---------------------------------|-------------------|
| NF-κB     | NM_205134      | Forward: TCAACGCAGGACCTAAAGACAT | 22                |
|           |                | Reverse: GCAGATAGCCAAGTTCAGGATG | 22                |
| iNOS      | NM_204961      | Forward: CCTGGAGGTCCTGGAAGAGT   | 20                |
|           |                | Reverse: CCTGGGTTTCAGAAGTGGC    | 19                |
| COX-2     | NM_001167718   | Forward: TGTCTTTTCACTGCTTTCCAT  | 21                |
|           |                | Reverse: TTCCATTGCTGTGTTTGAGGT  | 21                |
| PTGEs     | NM_001194983   | Forward: GTTCCTGTCATTCGCCTTCTAC | 22                |
|           |                | Reverse: CGCATCCTCTGGGTTAGCA    | 19                |
| TNF-a     | NM_204267      | Forward: GCCCTTCTGTAAACCAGATG   | 20                |
|           |                | Reverse: ACACGACAGCCAAGTCAACG   | 20                |
| Cyt C     | NM_001079478   | Forward: AGGCAAGCACAAAGACTGGA   | 19                |
|           |                | Reverse: CTGACTATCACCAAGAACCACC | 21                |
| Bcl-2     | Z11961.1       | Forward: ATCGTCGCCTTCTTCGAGTT   | 20                |
|           |                | Reverse: ATCCCATCCTCCGTTGTCT    | 20                |
| Bax       | XM_001235092.3 | Forward TCCATTCAGGTTCTCTTGACC   | 21                |
|           |                | Reverse: GCCAAACATCCAAACACAGA   | 20                |
| caspase-9 | XM_424580.5    | Forward:ATTCCTTTCCAGGCTCCATC    | 20                |
|           |                | Reverse:CACTCACCTTGTCCTCCAG     | 20                |
| caspase-3 | NM_204725      | Forward: CATCTGCATCCGTGCCTGA    | 19                |
|           |                | Reverse: CTCTCGGCTGTGGTGGTGAA   | 20                |
| p53       | NM_205264.1    | Forward:                        | 29                |
|           |                | GAGATGCTGAAGGAGATCAATGAG        | 20                |
|           |                | Reverse: GTGGTCAGTCCGAGCCTTTT   |                   |
| GAPDH     | K01458         | Forward: AGAACATCATCCCAGCGT     | 18                |
|           |                | Reverse: AGCCTTCACTACCCTCTTG    | 19                |