

Table S1. Basal diet formulation and nutritional values

Ingredients	Percentage (%)	Nutrition component	Content
Corn	58.2	Crude protein (%)	20.3
Wheat bran	2.0	Metabolizable energy (MJ/kg)	12.3
Soybean meal	30.0	Calcium (%)	1.0
Soybean oil	2.5	Available phosphorus (%)	0.43
Cottonseed meal	3.0	Methione (%)	0.60
CaCO ₃	1.0	Methione+cystine (%)	0.90
CaHPO ₄	2.0	Lysine (%)	1.10
Salt	0.3	Tryptophan (%)	0.22
L-Lysine (%)	0.15	Threonine (%)	0.69
DL-Methione (%)	0.3		
Choline chloride	0.2		
Vitamin premix ¹	0.05		
Mineral premix ²	0.3		

¹Vitamin premix provided per kg of diet: retinyl acetate, 10280 IU; cholecalciferol 2280 IU; dl- α -tocopheryl acetate, 17.12 mg; menadione, 6.82 mg; thiamin, 2.28 mg; riboflavin, 5.68 mg; pantothenic acid, 12.25 mg; pyridoxine, 2.28 mg; niacin, 22.84 mg; biotin, 0.18 mg; folic acid, 1.12 mg.

²Mineral premix provided per kg of diet: iron, 100 mg; copper, 8 mg; manganese, 20 mg; zinc, 100 mg; iodine, 0.7 mg.

Table S2. List of primers used for Q-PCR analysis¹

	Forward primer (5' to 3' direction)	Reverse primer (5' to 3' direction)
<i>NRF2</i>	ACGCTTTCTTCAGGGGTAGC	GTTCGGTGCAGAAGAGGTGA
<i>NQO1</i>	CGCACCTGAGAAAACCTCT	AAGCACTCGGGGTTCTTGAG
<i>HO1</i>	GTCGTTGGCAAGAAGCATCC	GGGCCTTTTGGGCGATTTTC
<i>GCLC</i>	GGACGCTATGGGGTTTGAA	AGGCCATCACAATGGGACAG
<i>GSTA2</i>	GATGGAGTCAATTCGGTGGC	GCACCATCTTCATCCCATCG
<i>GSTA3</i>	CACTATGCCAACACACGAGG	GGGCTCTCTCCTTCAGATCC
<i>β-actin</i>	ACCCCAAAGCCAACAGAG	CCAGAGTCCATCACAATACCAG

¹*GCLC*, glutamate-cysteine ligase catalytic subunit; *GSTA2*, glutathione S-transferase alpha 2; *GSTA3*, glutathione S-transferase alpha 3; *HO1*, heme Oxygenase-1; *NQO1*, NAD(P)H: quinone oxidoreductase-1; *NRF2*, nuclear factor erythroid-2 related factor 2.

Table S3. Name, type, dilution, and source of primary antibodies¹

Antibody	Isotype	Dilution	Source
Primary Antibody			
NRF2	Rabbit	1:1000	ABclonal (Wuhan, China)
NQO1	Rabbit	1:1000	ABclonal (Wuhan, China)
HO1	Rabbit	1:1000	ABclonal (Wuhan, China)
GCLC	Rabbit	1:1000	ABclonal (Wuhan, China)
GSTA2	Rabbit	1:1000	ABclonal (Wuhan, China)
GSTA3	Rabbit	1:1000	ABclonal (Wuhan, China)
β-actin	Rabbit	1:10000	ABclonal (Wuhan, China)
Secondary Antibody			
HRP labelled Antibody	Goat anti rabbit	1:10000	ABclonal (Wuhan, China)

¹GCLC, glutamate-cysteine ligase catalytic subunit; GSTA2, glutathione S-transferase alpha 2;

GSTA3, glutathione S-transferase alpha 3; HO1, heme Oxygenase-1; NQO1, NAD(P)H:quinone

oxidoreductase-1; NRF2, nuclear factor erythroid-2 related fa