

Supplemental Material

Table S1: Basal diet formulation and nutritional values¹.

Ingredients	Content, g/kg
Corn	638
Roasted soybean	300
CaCO ₃	10.0
CaHPO ₄	21.0
Salt	3.0
Choline	2.0
Mineral premix ²	5.0
Vitamin premix ³	0.5
Amino acid premix ⁴	19.6
Total	1000
Nutrient composition (calculated):	
Metabolic energy, MJ/kg	13.4
Crude protein, %	18.0
Lysine, %	1.08
Methionine, %	0.69
Methionine + cysteine, %	0.92
Calcium, %	1.02
Available phosphorus, %	0.47
Selenium, mg/kg	0.047

¹The analyzed Se concentrations in the BD, SS, SY and OH-SeMet diets were 0.047, 0.345, 0.351, and 0.338 mg/kg, respectively. BD, basal diet; SS, BD supplemented with 0.3 mg Se/kg as sodium selenite; SY, BD supplemented with 0.3 mg Se/kg as seleno-yeast; OH-SeMet, BD supplemented with 0.3 mg Se/kg as hydroxy-selenomethionine.

²Trace mineral premix provided per kg diet: FeSO₄•7H₂O, 379 mg; CuSO₄•5H₂O, 31.3 mg; ZnSO₄•7H₂O, 177 mg; MnSO₄•5H₂O, 154 mg; and KI, 0.5 mg.

³Vitamin premix provided per kg diet: retinyl acetate, 1500 IU; cholecalciferol, 200 IU; rac- α -tocopheryl acetate, 50 mg; menadione, 5 mg; thiamin, 1.8 mg; riboflavin, 3.6 mg; calcium pantothenate, 10 mg; niacin, 35 mg; pyridoxol, 3.5 mg; *d*-biotin, 0.15 mg; and folacin, 0.55 mg.

⁴Amino acid premix provided per kg diet: *L*-lysine, 4,630 mg; *DL*-methionine, 4,160 mg; *L*-threonine, 2,600 mg; *L*-tryptophan, 355 mg; *L*-isoleucine, 2,010 mg; *L*-valine, 2,435 mg; *L*-phenylalanine, 1,365 mg; and *L*-arginine, 2,570 mg.

Table S2: Name, type, dilution, and source of primary antibodies¹.

Antibody	Isotype	Dilution	Source
GPX1	Rabbit	1:1000	Abcam (Cambridge, MA)
GPX4	Rabbit	1:1000	ABclonal (Wuhan, China)
SELENON	Rabbit	1:1000	ABclonal (Wuhan, China)
SELENOP	Rabbit	1:1000	Abcam (Cambridge, MA)
SELENOS	Rabbit	1:1000	ABclonal (Wuhan, China)
SELENOW	Rabbit	1:1000	Made by our Lab
TXNRD1	Rabbit	1:1000	Abcam (Cambridge, MA)
TXNRD2	Rabbit	1:1000	Abcam (Cambridge, MA)
CLAUDIN1	Rabbit	1:1000	ABclonal (Wuhan, China)
CLAUDIN2	Rabbit	1:1000	ABclonal (Wuhan, China)
OCCLUDIN	Rabbit	1:1000	ABclonal (Wuhan, China)
GAPDH	Rabbit	1:1000	ABclonal (Wuhan, China)
ACTIN	Rabbit	1:10000	ABclonal (Wuhan, China)

¹ ACTIN, β -actin; GAPDH, glyceraldehyde-3-phosphate dehydrogenase; GPX1 and 4, glutathione peroxidase 1 and 4; SELENON, P, S, W, selenoprotein N, P, S, W; TXNRD1 and 2, thioredoxin reductase 1 and 2.

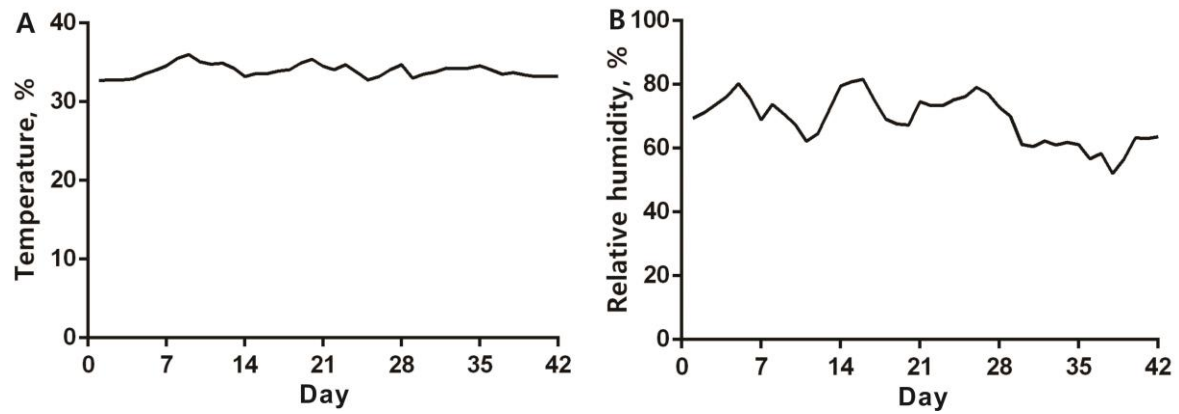


Figure S1: Daily average temperature (A) and humidity (B) of the environment. The temperature and humidity were recorded every hour from 9:00 a.m. to 5:00 p.m., and then the daily average temperature and humidity were calculated by these eight hours.

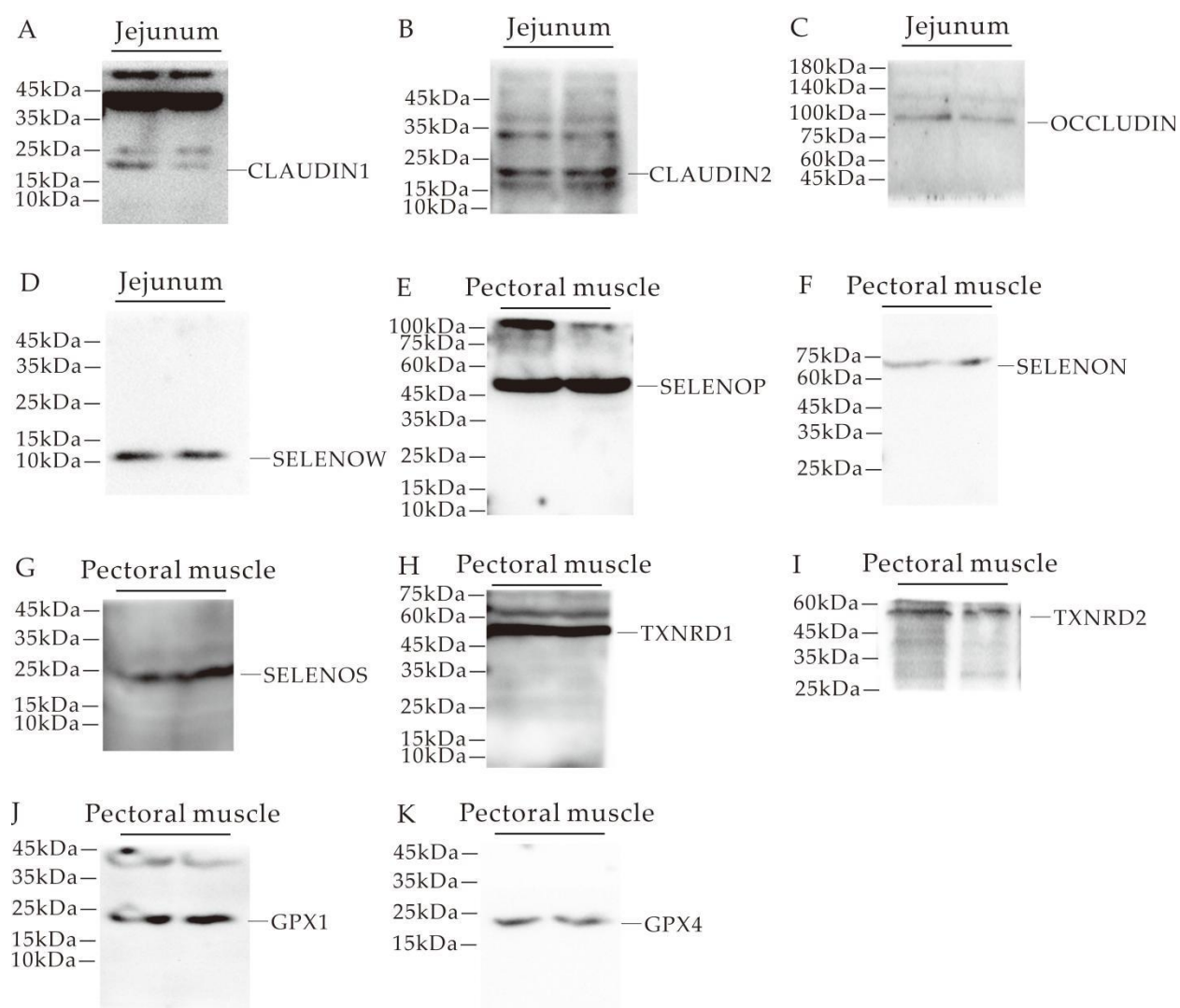


Figure S2: Validation of the specificity of antibodies against and the correct bands of CLAUDIN1, CLAUDIN2, OCCLUDIN, SELENOW, SELENOP, SELENON, SELENOS, TXNRD1, TXNRD2, GPX1 and GPX4, Western blot gel bands of CLAUDIN1 (A), CLAUDIN2 (B), OCCLUDIN (C) and SELENOW (D) were verified with broiler jejenum samples, and SELENOP (E), SELENON (F), SELENOS (G), TXNRD1 (H), TXNRD2 (I), GPX1 (J) and GPX4 (K) were verified with broiler pectoral muscle samples.