Supplementary information

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Supplementary table S1. Ingredients and nutrients composition of the basal diet[a]

Ingredients	**g/kg**	**Nutrition component**	**g/kg**
Corn	660	Analyzed composition	
Soybean meal	263	NE[c], (Kcal/kg)	2464.7
Fish meal	30	Crude protein	191.2
Soybean oil	15	Lysine	12.4
L-Lysine-HCL	2	Methionine	3.9
DL-methionine	1	Calcium	8.5
Dicalcium phosphate	10	Total phosphorus	6.6
Limestone	6	DON	-
Sodium chloride	3		
vitamin-mineral-premix[b]	10		

[a] "-" means lower than the detection limit of 250 μg/kg for DON; experimental groups consisted of piglets fed with different dietary conditions: Control: basal diet; HSE group: basal diet + 300 mg/kg hesperidin (HSE); DON: basal diet+1.5 mg/kg DON; DON+HSE group: basal diet+1.5 mg/kg DON + 300 mg/kg HSE. The concentrations of DON were measured in Control, HSE, DON and DON+HSE group groups, resulting in values of -, -,1.53 and 1.55 mg/kg, respectively.

[b] Premix provided per kg diet: copper, 6 mg; iron, 100 mg; manganese, 4 mg; zinc, 100 mg; iodine, 0.14 mg; selenium, 0.30 mg; vitamin A, 11,375 IU; vitamin D3, 3,500 IU; vitamin E, 28 mg; vitamin K, 3.5 mg; vitamin B_1, 3.5 mg; vitamin B_2, 8.75 mg; niacin, 35 mg; pantothenic, 17.5 mg; vitamin B_6, 4.2 mg; vitamin B_{12}, 42 μg; biotin, 175 μg; folic acid, 1.75 mg.

[c] NE was calculated from data provide by Feed Database in China (2022).

Gene	Primer	Primer sequence (5′-3′)	Accession No.	length
ACSL4[1]	Forward	GTAACTTGTGTGGCGGGCTCT	NM_001038694.1	462
	Reverse	ACTCTTCGAAGGCAAGTTGGG		
GPX4[2]	Forward	GAGCTGACGGTCAAGACCAA	NM_214407.1	252
	Reverse	TTGGTGACGATGCACACGTA		
HSPB1[3]	Forward	GAGCTGACGGTCAAGACCAA	NM_001007518.1	226
	Reverse	CAGGGATGGTGATCTCTGCC		
SLC7A11[4]	Forward	CTCCTTCATTCCAAATTTCCACTT	XM_021101587.1	238
	Reverse	ACAACCTTGGAGGGTTCTTGT		
TFRC[5]	Forward	ACGAGGGCGGGTTCTTTTG	NM_214001.1	371
	Reverse	TCTGTCTCTGAAGGCTCTGTTGGTA		
GAPDH[6]	Forward	ATGGTGAAGGTCGGAGTGAAC	NM001206359	235
	Reverse	CTCGCTCCTGGAAGATGGT		

Supplementary table S2. Primers used for real-time PCR

[1]*ACSL4*, acyl-CoA synthetase long chain family member 4; [2]*GPX4*, glutathione peroxidase 4; [3]*HSPB1*, heat shock protein family B (small) member 1; [4]*SLC7A11*, solute carrier family 7 member 11; [5]*TFRC*, transferrin receptor; [6]*GAPDH*, glyceraldehyde 3-phosphate dehydrogenase.

Supplementary table S3. List of antibodies used for western blot analysis[a]

Antibody	Isotype	Source
β-actin	Rabbit	Abclonal (Wuhan, China)
IP3Rs	Mouse	Santa Cruz Biotechnology (Santa Cruz, CA)
VDAC1	Mouse	Santa Cruz Biotechnology (Santa Cruz, CA)
GRP75	Mouse	HuaAn Biotechnology (Hangzhou, China)
Mfn1	Rabbit	Cell Signaling Technology (Boston, MA, USA)
Mfn2	Rabbit	Cell Signaling Technology (Boston, MA, USA)
MCU	Rabbit	HuaAn Biotechnology (Hangzhou, China)
MCUR1	Rabbit	HuaAn Biotechnology (Hangzhou, China)

IP3Rs, inositol 1,4,5-triphosphate receptors; VDAC1, voltage dependent anion-selective channel protein 1; GRP75, glucose regulated protein 75; Mfn1, mitofusin 1; Mfn2, mitofusin 2; MCU, mitochondrial calcium uniporter; MCUR1, mitochondrial calcium uniporter regulator 1.

Supplementary figure 1.

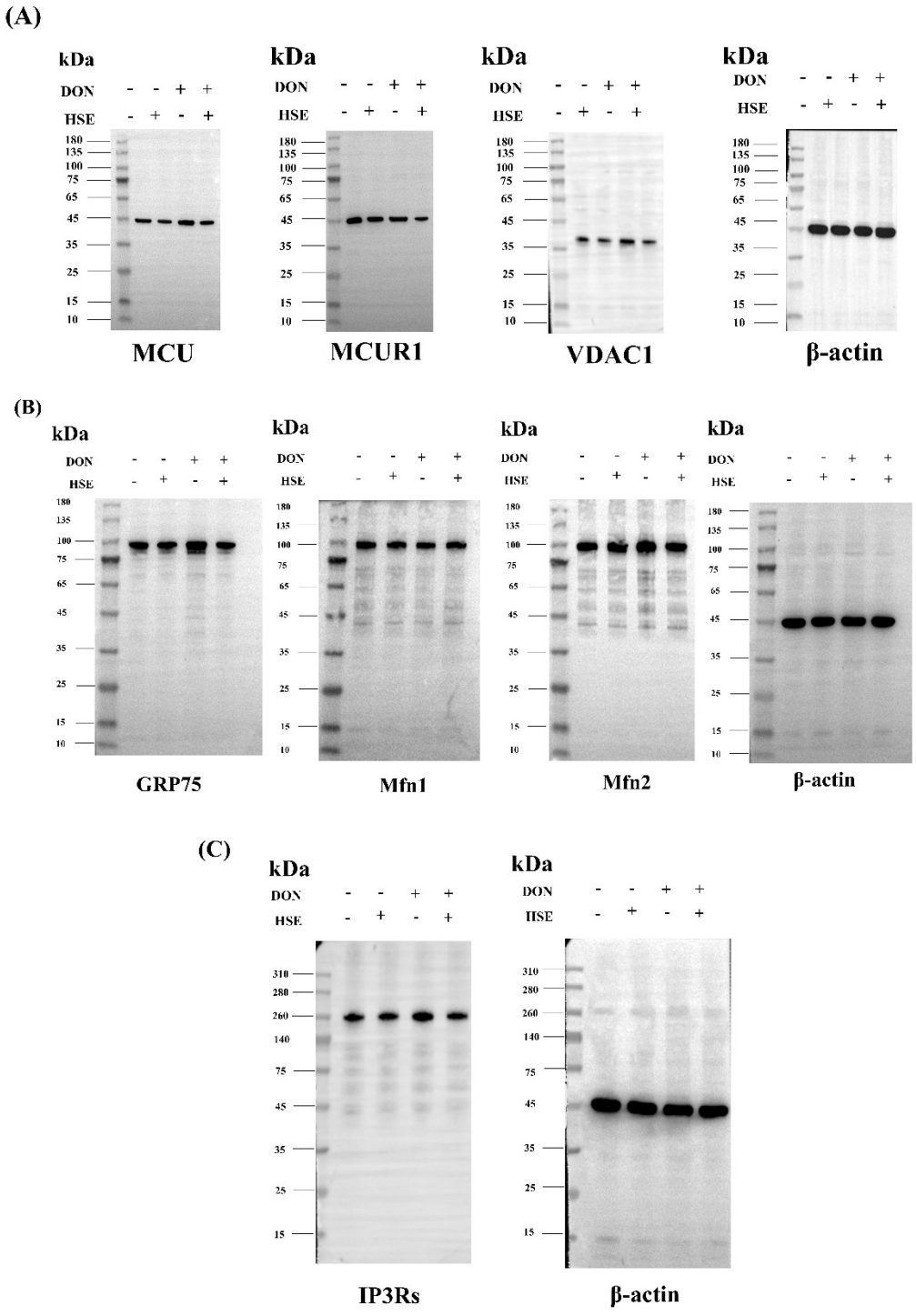

Figure S1: Original data of western blots for MCU, MCUR1 VDAC1 (A), GRP75, Mfn1, Mfn2 (B) and IP3Rs (C).