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Table S1 Body measurement data of Ermin pig and Hebao pig (wang et al., 2011)

Breed	Sex	Body Weight (kg)	Body length (cm)	Body height (cm)	Circumference (cm)	Spine number
Ermin pig	Male	227.10±8.70	152.20±0.81	89.10±0.71	147.30±0.89	35
	Female	181.40±10.27	147.20±1.26	84.00±0.42	137.90±1.25	35
Hebao pig	Male	93.30±0.76	124.50±0.47	63.50±0.72	105.25±0.96	34
	Female	81.80±0.64	106.75±0.60	59.60±0.60	97.00±0.98	34

Table S2 Gene ontology enrichment analysis for genes in the yellow module

Class	ID	Description	Gene number	Q-value
Biological Process	GO:0044255	cellular lipid metabolic process	38	1.84E-06
Biological Process	GO:0006629	lipid metabolic process	44	1.84E-06
Cellular Component	GO:0001533	cornified envelope	5	0.000175376
Cellular Component	GO:0030057	desmosome	5	0.001386936
Biological Process	GO:0046486	glycerolipid metabolic process	18	0.001476409
Biological Process	GO:0008610	lipid biosynthetic process	22	0.00154499
Biological Process	GO:0060429	epithelium development	33	0.002163421
Biological Process	GO:0018149	peptide cross-linking	6	0.002163421
Biological Process	GO:0044710	single-organism metabolic process	103	0.003082204
Biological Process	GO:0044281	small molecule metabolic process	48	0.003209151
Biological Process	GO:0043588	skin development	13	0.003209151
Biological Process	GO:0006631	fatty acid metabolic process	15	0.003879192
Biological Process	GO:0016042	lipid catabolic process	15	0.003879192
Biological Process	GO:0031424	keratinization	4	0.003879192
Biological Process	GO:1901615	organic hydroxy compound metabolic process	19	0.005827007
Molecular Function	GO:0003824	catalytic activity	129	0.005930316
Cellular Component	GO:0005811	lipid particle	7	0.006958703
Biological Process	GO:0030216	keratinocyte differentiation	8	0.007373908
Biological Process	GO:0035336	long-chain fatty-acyl-CoA metabolic process	4	0.007897133
Cellular Component	GO:0042599	lamellar body	38	0.010736356
Biological Process	GO:0044242	cellular lipid catabolic process	3	0.011658041
Biological Process	GO:0030855	epithelial cell differentiation	11	0.011658041
Biological Process	GO:0006650	glycerophospholipid metabolic process	20	0.011658041
Biological Process	GO:0048662	negative regulation of smooth muscle cell proliferation	13	0.011658041

Biological Process	GO:0006066	alcohol metabolic process	5	0.011658041
Biological Process	GO:0048513	animal organ development	15	0.017758895
Biological Process	GO:0035337	fatty-acyl-CoA metabolic process	62	0.019887505
Biological Process	GO:0006641	triglyceride metabolic process	4	0.019887505
Biological Process	GO:0008544	epidermis development	7	0.019887505
Biological Process	GO:0019637	organophosphate metabolic process	12	0.019887505
Biological Process	GO:0043542	endothelial cell migration	29	0.019999461
Biological Process	GO:0006633	fatty acid biosynthetic process	10	0.021282736
Biological Process	GO:0007166	cell surface receptor signaling pathway	8	0.022436663
Biological Process	GO:0032868	response to insulin	55	0.022976037
Biological Process	GO:0052547	regulation of peptidase activity	10	0.023409838
Molecular Function	GO:0016746	transferase activity, transferring acyl groups	16	0.025689688
Biological Process	GO:0009913	epidermal cell differentiation	14	0.026191886
Biological Process	GO:0010466	negative regulation of peptidase activity	9	0.026308242
Biological Process	GO:0044283	small molecule biosynthetic process	12	0.026308242
Biological Process	GO:0032869	cellular response to insulin stimulus	18	0.028186796
Biological Process	GO:0070887	cellular response to chemical stimulus	9	0.028186796
Biological Process	GO:0009888	tissue development	54	0.028186796
Molecular Function	GO:0033293	monocarboxylic acid binding	41	0.028504086
Biological Process	GO:0019216	regulation of lipid metabolic process	6	0.029834741
Biological Process	GO:0006663	platelet activating factor biosynthetic process	12	0.029834741
Biological Process	GO:0035962	response to interleukin-13	2	0.029834741
Biological Process	GO:0035963	cellular response to interleukin-13	2	0.029834741
Biological Process	GO:0046469	platelet activating factor metabolic process	2	0.029834741
Biological Process	GO:0043434	response to peptide hormone	2	0.031428207
Biological Process	GO:0032787	monocarboxylic acid metabolic process	11	0.031428207

Biological Process	GO:0042127	regulation of cell proliferation	17	0.031428207
Biological Process	GO:0071310	cellular response to organic substance	33	0.031428207
Biological Process	GO:0006636	unsaturated fatty acid biosynthetic process	46	0.031428207
Biological Process	GO:0050891	multicellular organismal water homeostasis	5	0.031428207
Biological Process	GO:0033561	regulation of water loss via skin	5	0.031842257
Biological Process	GO:0046503	glycerolipid catabolic process	4	0.033880984
Biological Process	GO:0010565	regulation of cellular ketone metabolic process	5	0.033880984
Biological Process	GO:0006665	sphingolipid metabolic process	7	0.034474693
Molecular Function	GO:0016755	transferase activity, transferring amino-acyl groups	8	0.03463752
Molecular Function	GO:0016289	CoA hydrolase activity	4	0.037550739
Molecular Function	GO:0042015	interleukin-20 binding	4	0.037550739
Biological Process	GO:0006639	acylglycerol metabolic process	2	0.038174931
Biological Process	GO:0045017	glycerolipid biosynthetic process	7	0.039719003
Biological Process	GO:0006638	neutral lipid metabolic process	8	0.039719003
Biological Process	GO:0030104	water homeostasis	7	0.039721332
Biological Process	GO:0010875	positive regulation of cholesterol efflux	5	0.042158639
Biological Process	GO:0006644	phospholipid metabolic process	3	0.042158639
Biological Process	GO:1901565	organonitrogen compound catabolic process	14	0.042158639
Biological Process	GO:0006637	acyl-CoA metabolic process	12	0.046533706
Biological Process	GO:0035383	thioester metabolic process	6	0.046533706
Cellular Component	GO:0005640	nuclear outer membrane	6	0.04876628
Molecular Function	GO:0030414	peptidase inhibitor activity	3	0.049114099

Table S3 Primers used for the qRT-PCR validation

Gene	Upstream primer	Downstream primer	Product length(bp)
<i>FABP3</i>	CTGGGAGTGGAGTTTGATGAGAC	CCATGGGTGAGTGTCAGGAT	164
<i>LIPE</i>	CGCACAATGACACAGTCACTGGT	AGGCAGCGGCCGTAGAAGCA	497
<i>FASN</i>	GCTTGTCCTGGGAAGAGTGTA	AGGAACTCGGACATAGCGG	115
<i>SCD</i>	AAGGAACTAGAAGGCTGCTC	TGTAGAGCAGCAGCCATCAC	211
<i>PPARG</i>	CACTCCACACTATGAAGACA	ACAGGCTCCACTTTGATG	111
<i>ACSL1</i>	CTCATAGCGATTGTGGTT	CAGTCTCAGCATGTCTTC	135
<i>ACSL3</i>	ATTGGCTGTCCTATGAAGAAGT	CATTCTGCTCTGGTCTCACA	118
<i>ACSS3</i>	AGAACGATGTGACGTGGAG	GAGGAGGCGTTTTGGAGTT	140
<i>ACLY</i>	CCTTATCCTGAATGTAGACGGTTT	AATGAAGCCCATACTCCTTCC	151

Table S4 Summary of identified pig transcripts

Gene	Taxa	Latin name	Breed	Ensembl ID or TRINITY ID
<i>LIPE</i>	Big	<i>Sus scrofa</i>	Ermin	TRINITY_DN3808_c0_g1_i1
		<i>Sus scrofa</i>	Jinhua	ENSSSCT00060099954,ENSSSCT00060099783,ENSSSCT00060099844,ENSSSCT00060100058
		<i>Sus scrofa</i>	Bamei	ENSSSCT00050063750,ENSSSCT00050063732,ENSSSCT00050063741
		<i>Sus scrofa</i>	Duroc	ENSSSCT00000058198,ENSSSCT00000003352
		<i>Sus scrofa</i>	Largewhite	ENSSSCT00025010621,ENSSSCT00025010592,ENSSSCT00025010605,ENSSSCT00025010641
		<i>Sus scrofa</i>	Meishan	ENSSSCT00040045965,ENSSSCT00040045859,ENSSSCT00040045913,ENSSSCT00040046012
		<i>Sus scrofa</i>	Hampshire	ENSSSCT00035058557,ENSSSCT00035058527,ENSSSCT00035058544,ENSSSCT00035058564
		<i>Sus scrofa</i>	Barkshire	ENSSSCT00065027793,ENSSSCT00065027763,ENSSSCT00065027753,ENSSSCT00065027770
		<i>Sus scrofa</i>	Pietrain	ENSSSCT00055015443,ENSSSCT00055015366
		<i>Sus scrofa</i>	Rongchang	ENSSSCT00030028053,ENSSSCT00030028032,ENSSSCT00030028012
	Small	<i>Sus scrofa</i>	Landrace	ENSSSCT00045058234,ENSSSCT00045058147,ENSSSCT00045058302
		<i>Sus scrofa</i>	Hebao	TRINITY_DN10856_c0_g1_i1
		<i>Sus scrofa</i>	Tibetan	ENSSSCT00015070418,ENSSSCT00015070241,ENSSSCT00015070019
		<i>Sus scrofa</i>	Wuzhishan	ENSSSCT00005031110
		<i>Sus scrofa</i>	Ermin	TRINITY_DN2410_c0_g3_i2
		<i>Sus scrofa</i>	Jinhua	ENSSSCT00060100242,ENSSSCT00050034243,ENSSSCT00050034249
		<i>Sus scrofa</i>	Bamei	ENSSSCT00050034236
		<i>Sus scrofa</i>	Duroc	ENSSSCT00000002067,ENSSSCT00000002066
		<i>Sus scrofa</i>	Largewhite	ENSSSCT00025105825,ENSSSCT00025105841,ENSSSCT00025105850
		<i>Sus scrofa</i>	Meishan	ENSSSCT00040101023,ENSSSCT00040101067
<i>PLIN1</i>	Big	<i>Sus scrofa</i>	Hampshire	ENSSSCT00035076116,ENSSSCT00035076125,ENSSSCT00035076132
		<i>Sus scrofa</i>	Barkshire	ENSSSCT00065059885,ENSSSCT00065059895,ENSSSCT00065059891
		<i>Sus scrofa</i>	Pietrain	ENSSSCT00055032144,ENSSSCT00055032243

<i>KRT10</i>	Small	<i>Sus scrofa</i>	Rongchang	ENSSSCT00030034415,ENSSSCT00030034420
		<i>Sus scrofa</i>	Landrace	ENSSSCT00045047800,ENSSSCT00045047928,ENSSSCT00045048018
		<i>Sus scrofa</i>	Hebao	TRINITY_DN117_c1_g1_i1
		<i>Sus scrofa</i>	Tibetan	ENSSSCT00015033266,ENSSSCT00015033341
		<i>Sus scrofa</i>	Wuzhishan	ENSSSCT00005040738,ENSSSCT00005040777
		<i>Sus scrofa</i>	Ermin	TRINITY_DN660_c0_g1_i26,TRINITY_DN660_c0_g1_i32
		<i>Sus scrofa</i>	Jinhua	ENSSSCT00060012558
		<i>Sus scrofa</i>	Bamei	ENSSSCT00050055551
		<i>Sus scrofa</i>	Duroc	ENSSSCT00000028214
	Big	<i>Sus scrofa</i>	Largewhite	ENSSSCT00025057168
		<i>Sus scrofa</i>	Meishan	ENSSSCT00040005962,ENSSSCT00040005967
		<i>Sus scrofa</i>	Hampshire	ENSSSCT00035053061
		<i>Sus scrofa</i>	Barkshire	ENSSSCT00065003363
		<i>Sus scrofa</i>	Pietrain	ENSSSCT00055050718
	Small	<i>Sus scrofa</i>	Rongchang	ENSSSCT00030043492,ENSSSCT00030043505
		<i>Sus scrofa</i>	Landrace	ENSSSCT00045014925,ENSSSCT00045014872
		<i>Sus scrofa</i>	Hebao	TRINITY_DN4410_c0_g1_i7
		<i>Sus scrofa</i>	Tibetan	ENSSSCT00015060935
		<i>Sus scrofa</i>	Wuzhishan	ENSSSCT00005049067
		<i>Sus scrofa</i>	Ermin	TRINITY_DN989_c1_g1_i1,TRINITY_DN989_c1_g1_i5
		<i>Sus scrofa</i>	Jinhua	ENSSSCT00060108051
		<i>Sus scrofa</i>	Bamei	ENSSSCT00050075236
		<i>Sus scrofa</i>	Duroc	ENSSSCT00000093198,ENSSSCT00000001738
		<i>Sus scrofa</i>	Largewhite	ENSSSCT00025009259
<i>PNPLA1</i>	Big	<i>Sus scrofa</i>	Meishan	ENSSSCT00040010269
		<i>Sus scrofa</i>	Hampshire	ENSSSCT00035013219

SCD	Small	<i>Sus scrofa</i>	Barkshire	ENSSSCT00065045787
		<i>Sus scrofa</i>	Pietrain	ENSSSCT00055021313
		<i>Sus scrofa</i>	Rongchang	ENSSSCT00030101583,ENSSSCT00030101552
		<i>Sus scrofa</i>	Landrace	ENSSSCT00045051875
		<i>Sus scrofa</i>	Hebao	TRINITY_DN4410_c0_g1_i7
		<i>Sus scrofa</i>	Tibetan	ENSSSCT00015071165
		<i>Sus scrofa</i>	Wuzhishan	ENSSSCT00005047873
		<i>Sus scrofa</i>	Ermin	TRINITY_DN4_c0_g1_i4
		<i>Sus scrofa</i>	Jinhua	ENSSSCT00060087410,ENSSSCT00060087395
		<i>Sus scrofa</i>	Bamei	ENSSSCT00050105969,ENSSSCT00050105951,ENSSSCT00050105956
		<i>Sus scrofa</i>	Duroc	ENSSSCT00000074035
		<i>Sus scrofa</i>	Largewhite	ENSSSCT00025077027,ENSSSCT00025076897
	Big	<i>Sus scrofa</i>	Meishan	ENSSSCT00040032128,ENSSSCT00040032165,ENSSSCT00040032079
		<i>Sus scrofa</i>	Hampshire	ENSSSCT00035046939,ENSSSCT00035046926,ENSSSCT00035046934
		<i>Sus scrofa</i>	Barkshire	ENSSSCT00065076049,ENSSSCT00065076040,ENSSSCT00065076045
		<i>Sus scrofa</i>	Pietrain	ENSSSCT00055005503,ENSSSCT00055005482,ENSSSCT00055005489
		<i>Sus scrofa</i>	Rongchang	ENSSSCT00030094149,ENSSSCT00030094183,ENSSSCT00030094112
		<i>Sus scrofa</i>	Landrace	ENSSSCT00045024773,ENSSSCT00045024728,ENSSSCT00045024757
		<i>Sus scrofa</i>	Hebao	TRINITY_DN14965_c0_g1_i1
		<i>Sus scrofa</i>	Tibetan	ENSSSCT00015091855
		<i>Sus scrofa</i>	Wuzhishan	ENSSSCT00005045161,ENSSSCT00005045104,ENSSSCT00005045125
		<i>Sus scrofa</i>	Ermin	TRINITY_DN4012_c3_g1_i2,TRINITY_DN4012_c3_g1_i1
		<i>Sus scrofa</i>	Jinhua	ENSSSCT00060067622
		<i>Sus scrofa</i>	Bamei	ENSSSCT00050074711,ENSSSCT00050074717
FABP5	Big	<i>Sus scrofa</i>	Duroc	ENSSSCT00000006747,ENSSSCT00000054753
		<i>Sus scrofa</i>	Largewhite	ENSSSCT00025078212,ENSSSCT00025078334

IVL	Small	<i>Sus scrofa</i>	Meishan	ENSSSCT00040078336
		<i>Sus scrofa</i>	Hampshire	ENSSSCT00035029459,ENSSSCT00035029468
		<i>Sus scrofa</i>	Barkshire	ENSSSCT00065036041,ENSSSCT00065036047
		<i>Sus scrofa</i>	Pietrain	ENSSSCT00055018290,ENSSSCT00055018258
		<i>Sus scrofa</i>	Rongchang	ENSSSCT00030059372,ENSSSCT00030059354
		<i>Sus scrofa</i>	Landrace	ENSSSCT00045012791,ENSSSCT00045012750
		<i>Sus scrofa</i>	Hebao	TRINITY_DN1794_c5_g1_i1,TRINITY_DN1794_c5_g1_i2
		<i>Sus scrofa</i>	Tibetan	ENSSSCT00015035652
		<i>Sus scrofa</i>	Wuzhishan	ENSSSCT00005026127
		<i>Sus scrofa</i>	Ermin	TRINITY_DN2334_c0_g1_i7,TRINITY_DN2334_c0_g1_i3
		<i>Sus scrofa</i>	Jinhua	ENSSSCT00060024020
		<i>Sus scrofa</i>	Bamei	ENSSSCT00050049597,ENSSSCT00050049604
		<i>Sus scrofa</i>	Duroc	ENSSSCT00000007226
		<i>Sus scrofa</i>	Largewhite	ENSSSCT00025080485
	Big	<i>Sus scrofa</i>	Meishan	-
		<i>Sus scrofa</i>	Hampshire	ENSSSCT00035004873
		<i>Sus scrofa</i>	Barkshire	ENSSSCT00065045213
		<i>Sus scrofa</i>	Pietrain	ENSSSCT00055012667
		<i>Sus scrofa</i>	Rongchang	-
	Small	<i>Sus scrofa</i>	Landrace	ENSSSCT00045061697
		<i>Sus scrofa</i>	Hebao	TRINITY_DN1877_c0_g1_i4,TRINITY_DN1877_c0_g1_i2
		<i>Sus scrofa</i>	Tibetan	ENSSSCT00015081463
		<i>Sus scrofa</i>	Wuzhishan	ENSSSCT00005020065

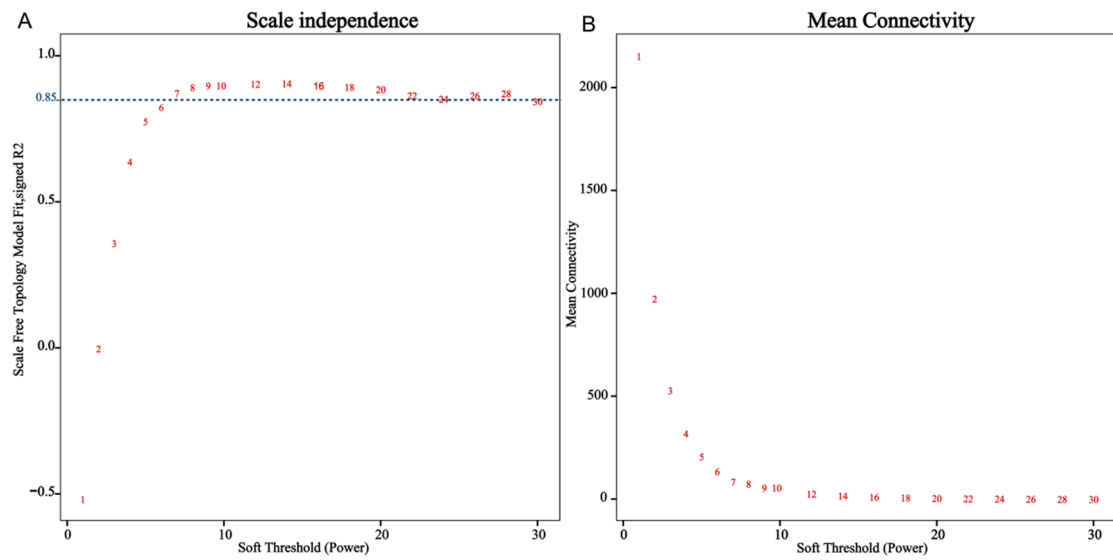


Figure S1 Determination of soft threshold. The abscissa represents the soft threshold (β). (A) Ordinate corresponds to the index of scale free network model. (B) The average link degree of each soft threshold.

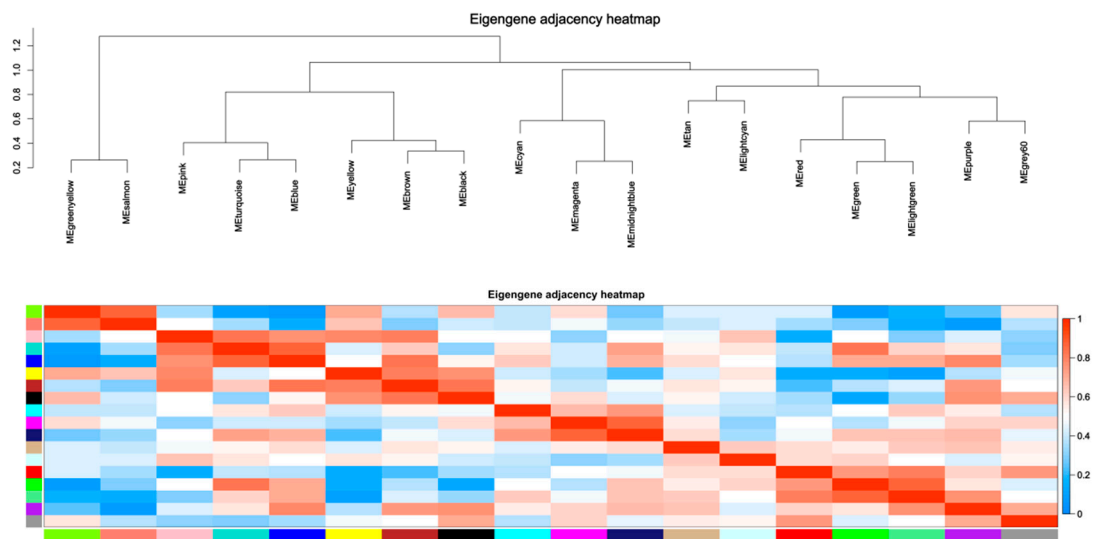


Figure S2 Heat map of inter-module correlation.