SUPPLEMENTARY DATA

Identification of potential hub genes associated with atopic dermatitis-like recombinant human epidermal model using integrated transcriptomic and proteomic analysis
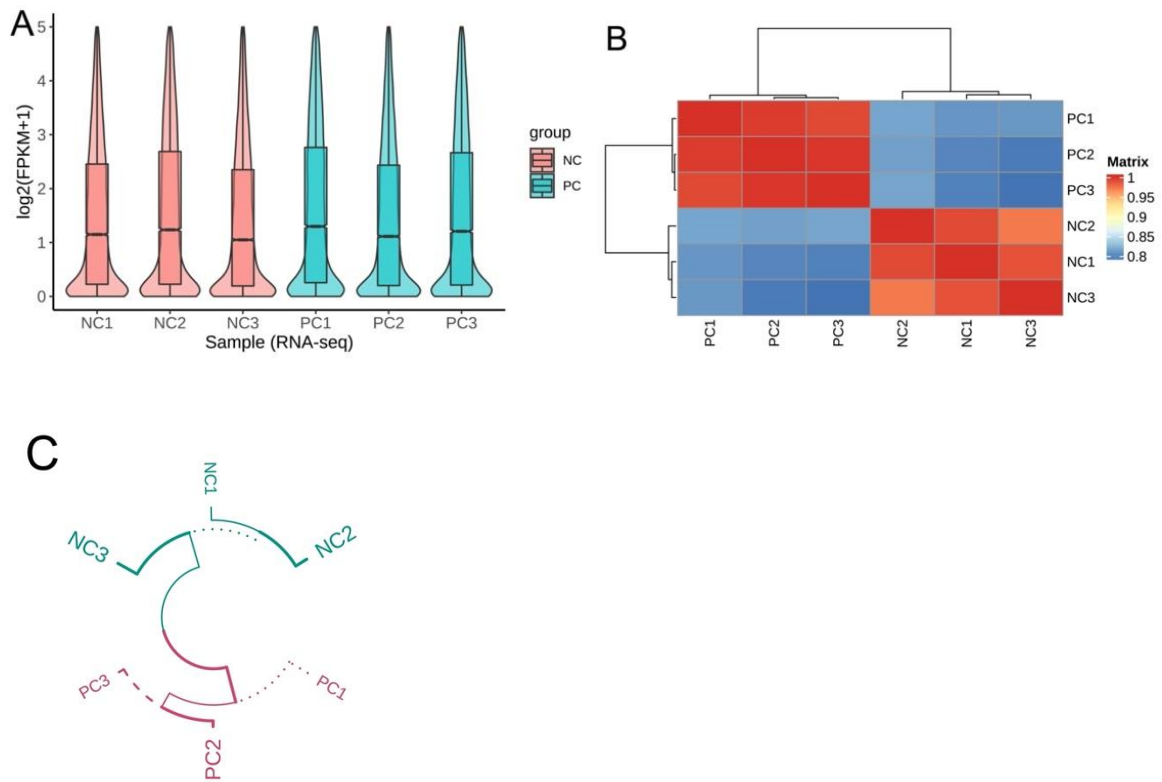
Figure S1. Diagram of gene expression level distribution in samples. A: Box diagram of gene expression level distribution in samples; B: Heatmap of correlation between samples; C: Clust between samples; PC: Inflammatory cocktail positive control group; NC: Normal control group.

Figure S2. Diagram of protein expression level distribution in samples. A: Box diagram of protein abundance level in samples; B: Heatmap of correlation between samples; C: Clust between samples; PC: Inflammatory cocktail positive control group; NC: Normal control group.
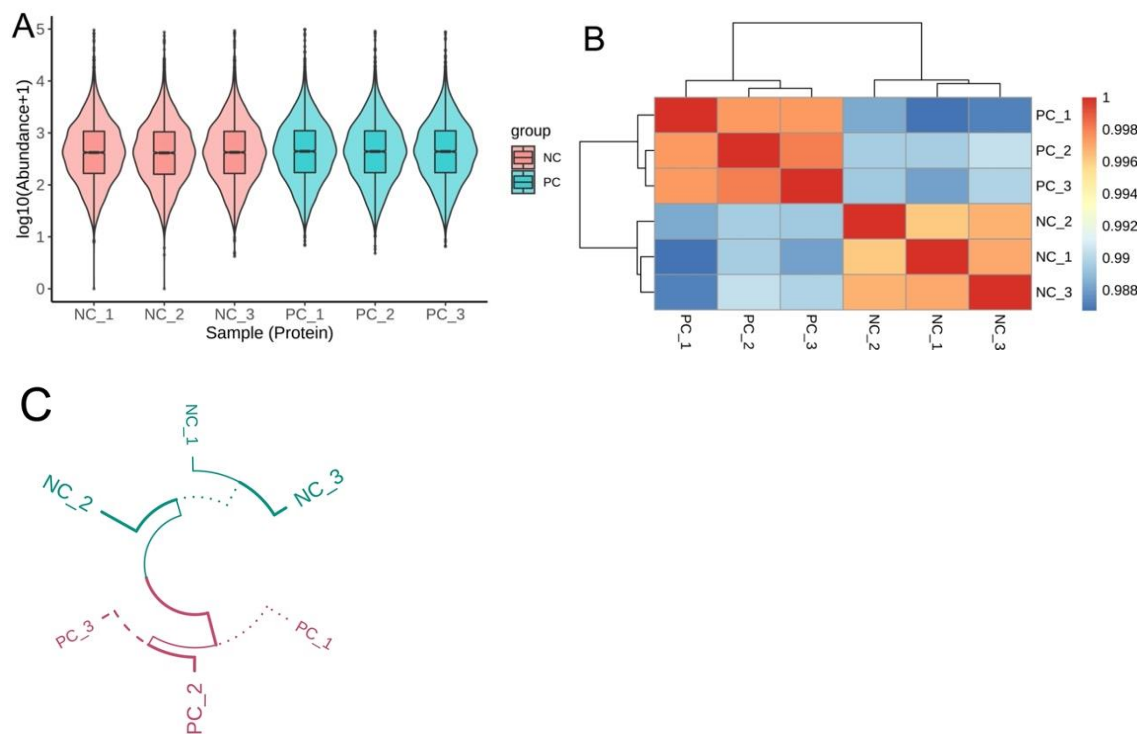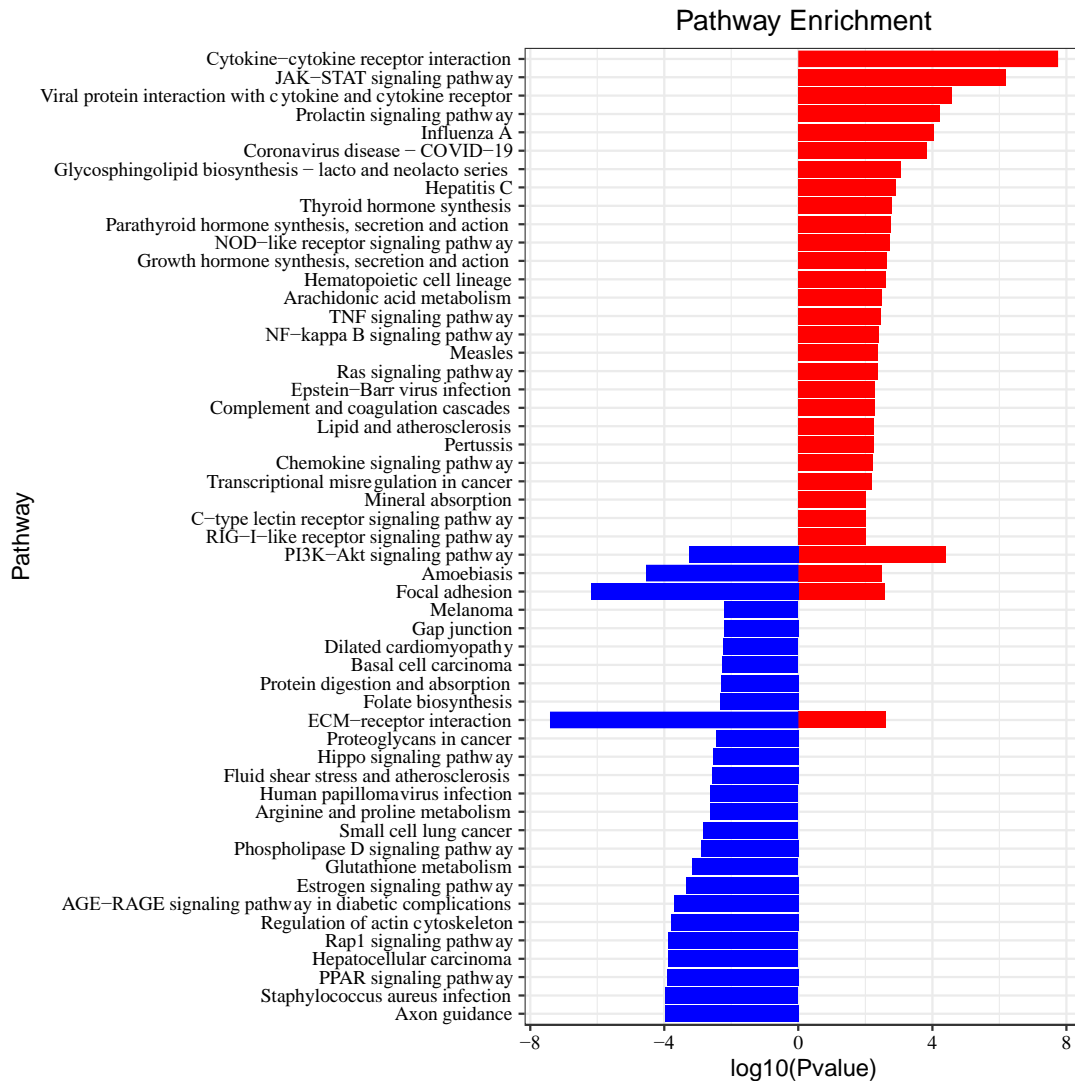

Figure S3. Kyoto Encyclopedia of Genes and Genomes pathway to the upregulated and downregulated differential genes. JAK-STAT: Janus kinases signal transducer and activator of transcription; PI3K-Akt: Phosphatidylinositol 3-kinase protein kinase B; ECM: Extracellular matrix; PPAR: Peroxisome proliferator-activated receptor.
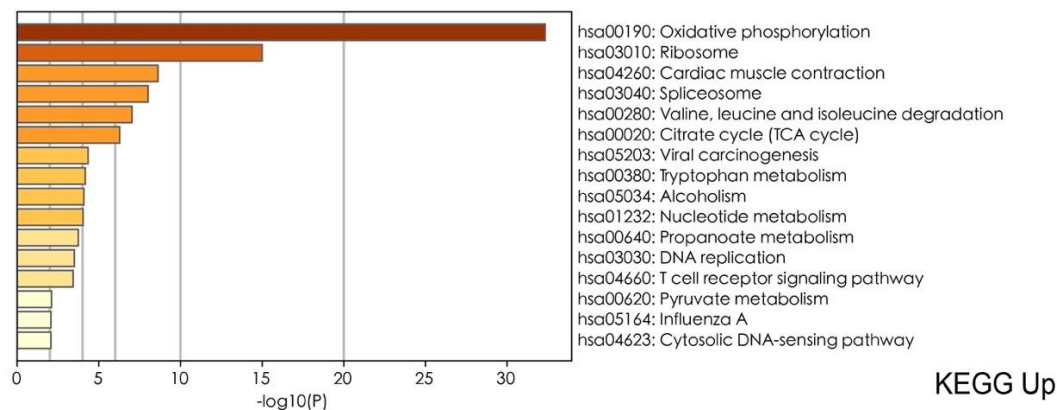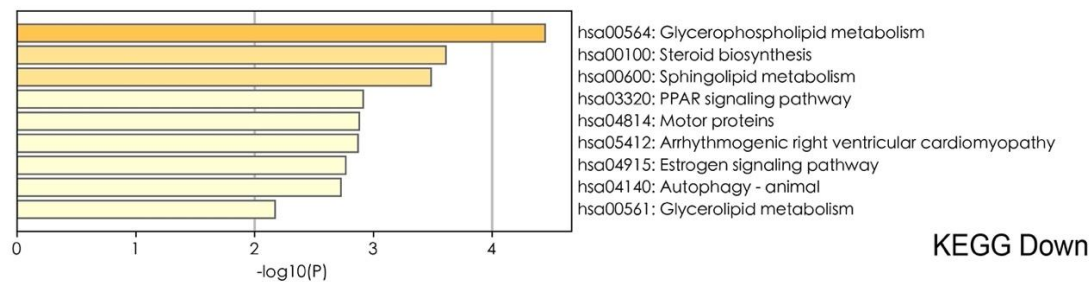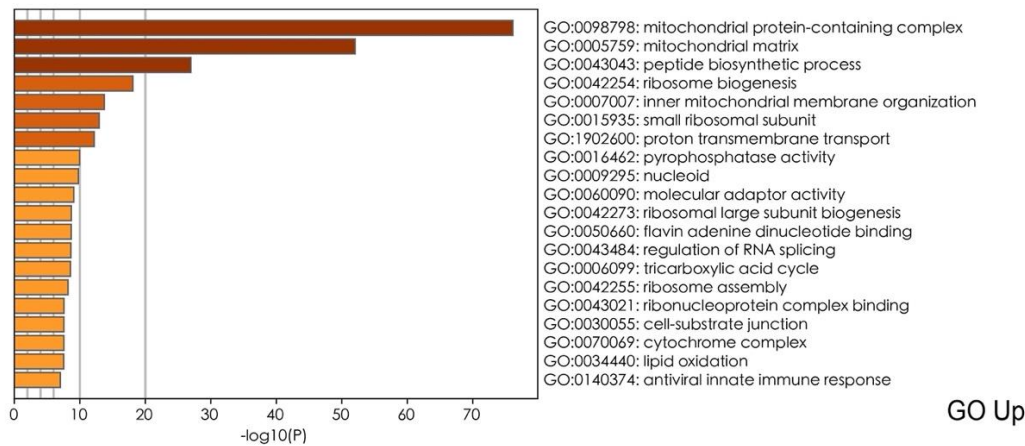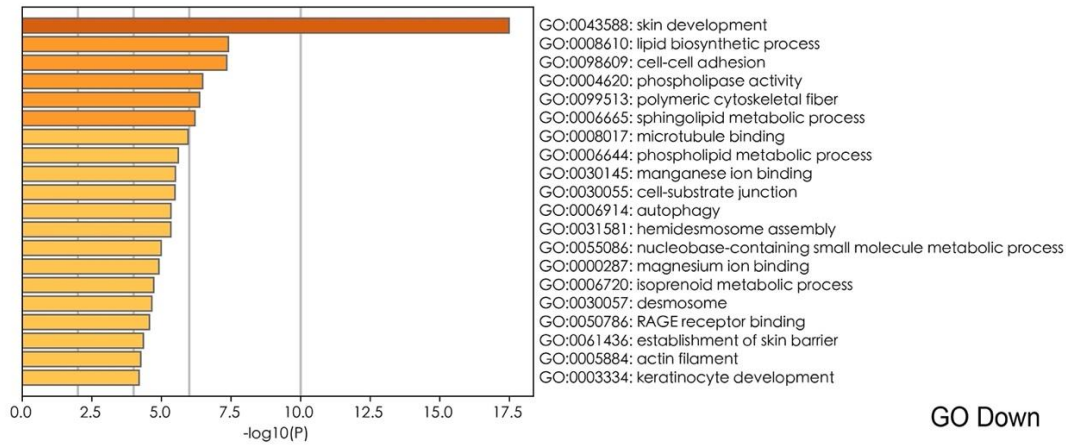
Figure S4. Gene ontology terms and Kyoto Encyclopedia of Genes and Genomes pathway to the upregulated and downregulated differential proteins. PPAR: Peroxisome proliferator-activated receptor.

Table S1. The versions of software

Software	Version
Trim galore	0.6.10
Hisat2	2.2.1
Samtools	1.1
FeatureCounts	2.0.1
Trinity	2.11.0
FastQC	0.11.9

Table S2. The versions of software

Software	Version
Tidyverse	1.3.1
Ggplot2	3.3.5
Ggsci	2.9
Hrbrthemes	0.8.0
Pheatmap	1.0.12
Circlize	0.4.12
Dendextend	1.14.0
Factoextra	1.0.7
ClusterProfiler	4.6.2
Enrichplot	1.10.2

Table S3. QPCR primer bank

Gene	Forward Primer	Reverse Primer
STAT3	CAGCAGCTTGACACACGGTA	AAACACCAAAGTGGCATGTGA
FLG	TGAAGCCTATGACACCACTGA	TCCCCTACGCTTTCTTGTCCT
IVL	TCCTCCAGTCAATACCCATCAG	CAGCAGTCATGTGCTTTTCCT
DDX58	TGTGCTCCTACAGGTTGTGGA	CACTGGGATCTGATTCGCAAAA
SPRR1B	CTGCCCTTCAATAGTCACTCCAG	CTGCCCTTCAATAGTCACTCCAG
IFIH1	TCGAATGGGTATTCCACAGACG	GTGGCGACTGTCCTCTGAA
DSG1	GCAGAAACGTGAATGGATCAAGT	AATTTTGGCGATTGGGTTCCT
COL17A1	ACCAGCAATGGCTATGCTAAAA	GCCTCGTGTGCTTCCAGTT
ITGA6	ATGCACGCGGATCGAGTTT	TTCCTGCTTCGTATTAACATGCT
TLR2	ATCCTCCAATCAGGCTTCTCT	GGACAGGTCAAGGCTTTTACA
TLR3	TTGCCTTGTATCTACTTTTGGGG	TCAACACTGTTATGTTTGTGGGT
POSTN	CTCATAGTCGTATCAGGGGTCG	ACACAGTCGTTTTCTGTCCAC
LOR	CTCACCCTTCCTGGTGCTT	CTCACCCTTCCTGGTGCTT
ACTN	CTCCATCCTGGCCTCGCTGT	GCTGTCACCTTCACCGTTCC
GADPH	GAAGGTCGGAGTCAACGGATT	TGACGGTGCCATGGAATTTG

STAT3: Signal transducer and activator of transcription 3; FLG: Filaggrin; IVL: Involucrin; DDX58: DEAD (Asp-Glu-Ala-Asp) box polypeptide 58; SPRR1B: Small proline rich protein 1B; IFIH1: Interferon induced with helicase C domain 1; DSG: Desmoglein 1; COL17A1: Collagen type XVII alpha 1 chain; ITGA6: Integrin subunit alpha 6; TLR2: Toll-like receptor 2; TLR3: Toll-like receptor 3; POSTN: Periostin; LOR: Loricrin; ACTN: Alpha actinin 3; GADPH: Glyceraldehyde-3-phosphate dehydrogenase.