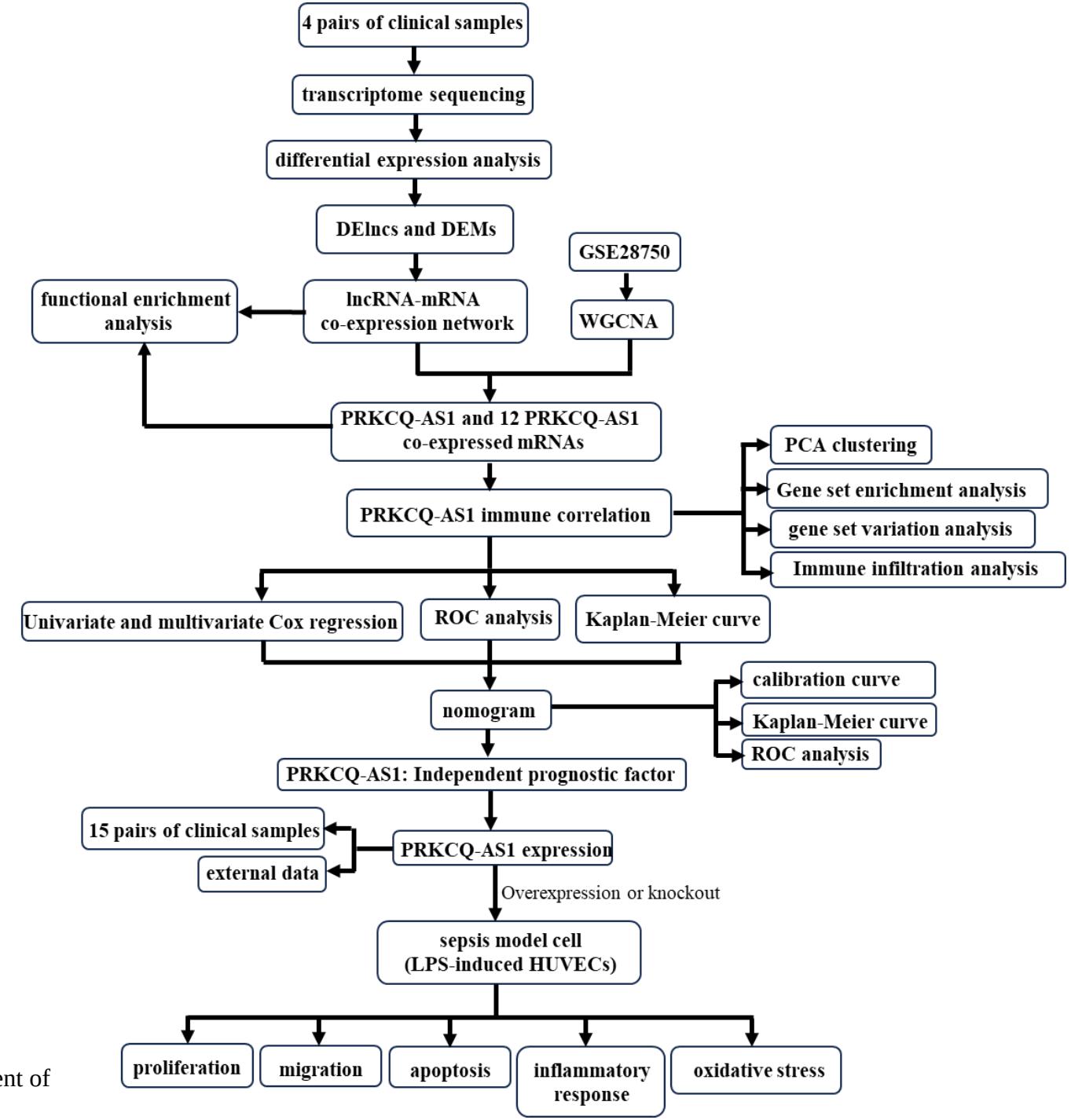
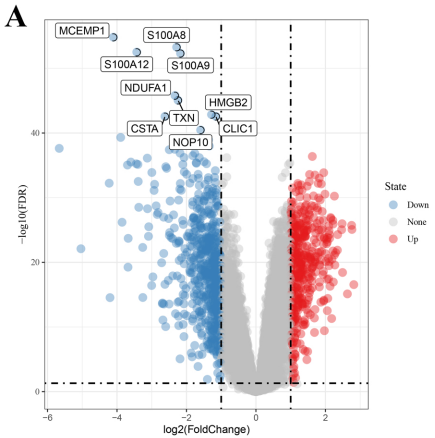


Figure S1: the flow chart of the research content of this



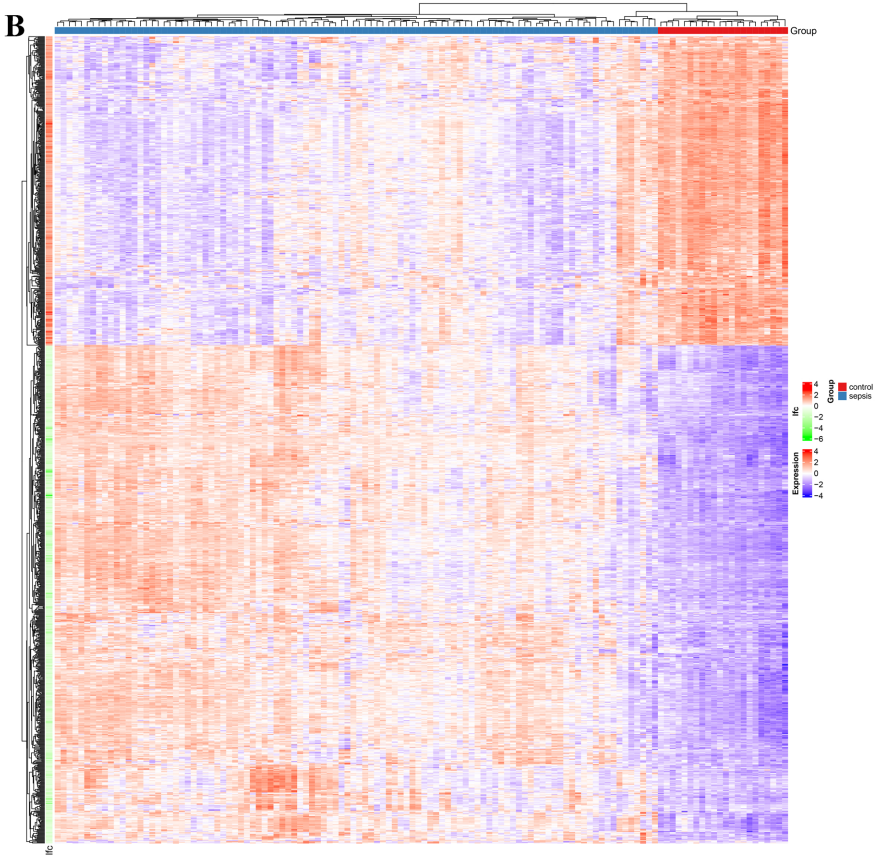


Figure S2. Differential expression of lncRNAs in GSE95223. A: Volcano plot shows the differential expression of lncRNAs between sepsis group and control group in GSE95223. B:Heat map shows the differential expression of lncRNAs between sepsis group and control group in GSE95223.

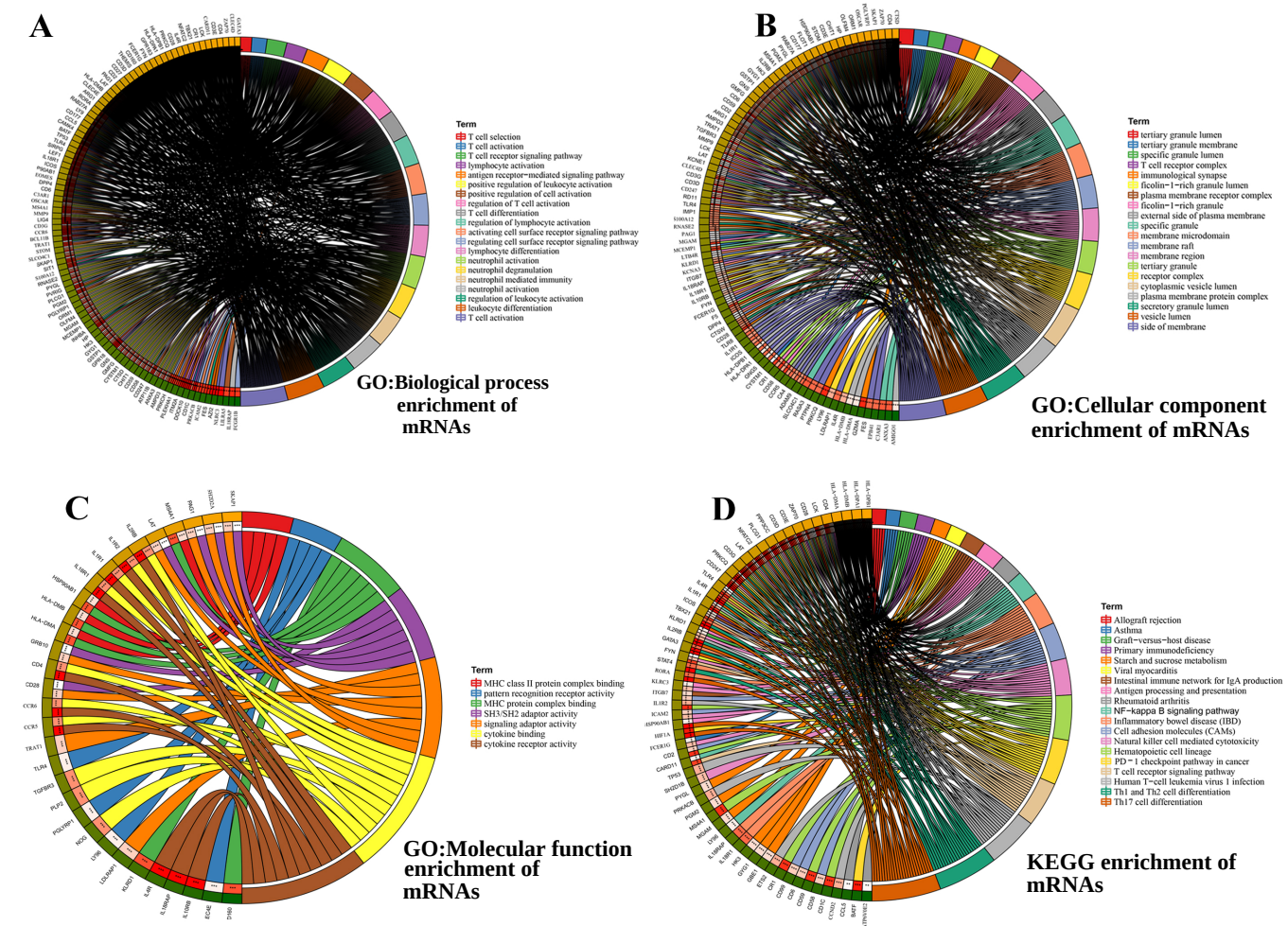


Figure S3. GO and KEGG enrichment analysis. A：Biological process enrichment of mRNAs. B：Cellular component enrichment of mRNAs. C: Molecular function enrichment of mRNAs. D: KEGG enrichment of mRNAs.

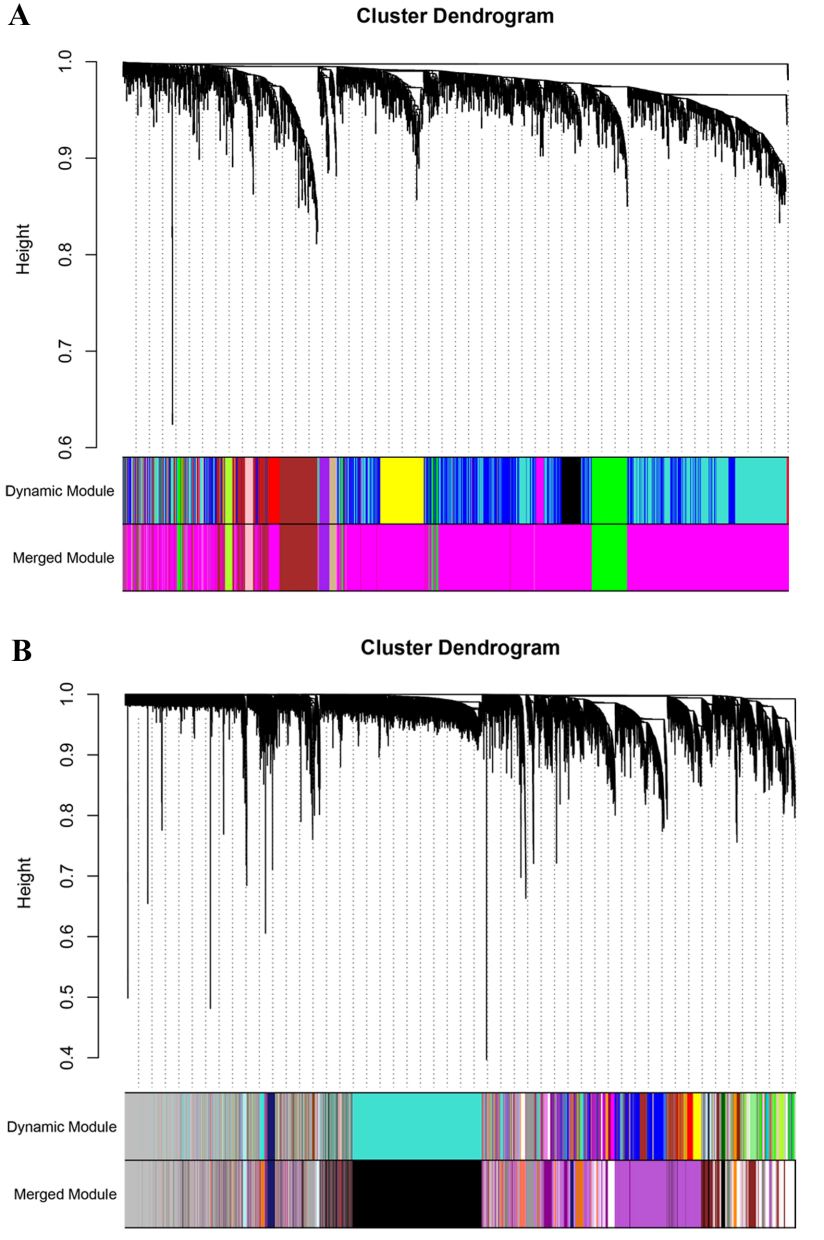


Figure S4. A: Dendrogram of all differentially expressed lncRNAs clustered based on a dissimilarity measure; B:Dendrogram of all differentially expressed mRNAs clustered based on a dissimilarity measure.

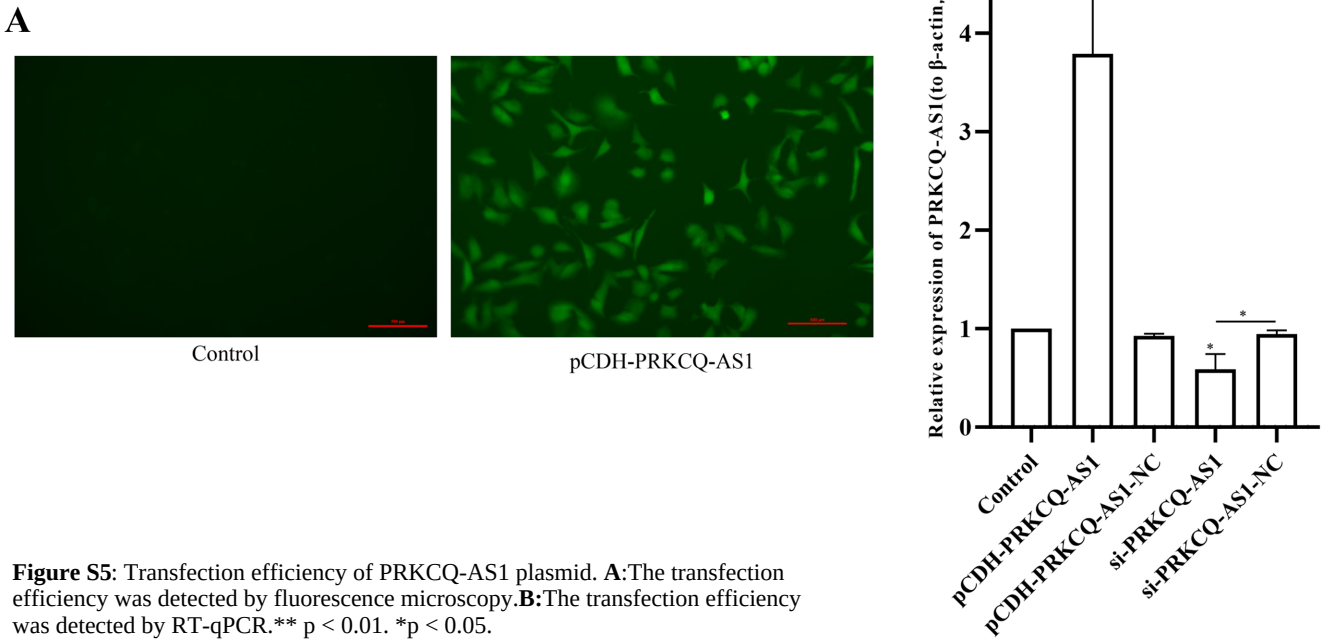


Figure S5: Transfection efficiency of PRKCQ-AS1 plasmid. **A**:The transfection efficiency was detected by fluorescence microscopy.**B:**The transfection efficiency was detected by RT-qPCR.** $p < 0.01$. *$p < 0.05$.

Supplementary Material 1: Sequencing analysis report of the target fragment (PRKCQ-AS1 (ENST000000663449)) in overexpression plasma.

ENST00000663449.1 lentiviral expression plasmid

Result analysis report

Sequencing analysis

The sequencing results are as follows: yellow is the target sequence, green is the restriction sites.

CCCGGGGAGTTAATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGCCTGGAGACGCCATCCACGCTGTTTTGACCTCCAT
AGAAGATTCTAGAGCTAGCGAATTCACTTGTCGCCCAGCTGCGAACTGGAGCGGGAGGCGGCGGCCGGAGGGCCCAGGA
CAGCCCCGGGAGGGCGGCGAGGCGGAGCAGGAGCGCCCCGGCTCCGGCCACATTCTCAGAGTCAGGAAAAGGGGCGA
GAGGCCACATGTCTCCCTCTCGCCCAACTGAAAACGAAACGGCGCTCCAGCAGATTGGGTGGAAAGAGCTGGGTCTCTTT
TCTCTGTTTTTCACGCTAGAAAGGGCTTGTAAACATTGTTCCTTTTAAAATGACCTACCCCAGGCATTTGTTTGGGCACACTT
CTGTCCTGGGGTCATCGTTCCTAGGTGGCTTCGGACCTGGGACTTTTCCTGTATCTGCACATTGTCGTTTTATACACAATTGC
CAAGGTGGGACTGCTTTCAACTTTACTGTGCTTGAAGCTGCAAAGGTTCTGCCCTGATGTTTCCTGGAATAATGCTGAGGAC
TGCCTTTCGGGTAGCCGCCCTATTCAGTTCACTTCATCTCGGAAATACCTGACCCCTGCCTTGGATCCAGCGGCCCTCCTG
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AAGGAACCCAGGACACGACTTTGCTTTTCTTTTGGACCTAGTTGGTGATTATACTCTGTCTCCCATGGAGACCACGTCTTGC
ATCCTTCCTTCTATATGGGATTTAGGATAGAAATTAAAAAGAAAACATATTATTTTGAGTCTTGATTTGGAGAAAGGTAGTATTCA
GGAGGAAGTAGGCTATGATACACATAGAAAATTTGAGGACAGTGTTACTTAACAAGGACATTTCTGTCTCTGCAGAAGTCACA
GCTTGGAGGAAACCAGTTTGCACTATTTGATGAGGAATTTGGCCACCAAACCACTGATACTTTCCCAAAGGTTTGGCAGAAA
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AAGAGAAAGATAATGTGTGAATATTAGTTAATATTTATCGTACATTTACTACCTGTGTCGAAGCGTAGTGTTACACACTTAATTTC
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GTTAAACAAATGATTTCCTAAGCTCATTCAGCTAATAAACGGTAGGGGACTGCTTGACACCAGTCCAGTTGACCCTCAAATCC
ATGATTTCTGCCACCATATTCACAGAAACAAGACAAGAGCTGAAAATATAGCCTGACTCTTGAAACAGTCAAAGAATTGTGTAT
GTTTATGAAAGTTCTGATTAATAAGATATTCTGAGGACAAAAGACAAGGCATGGGTAGAGGGGCAATGTGTAGATTAGAATGTA
TCACAATGCCCACTAAATAGTAAAACCATAGAAAATGAAATTTAATCCTTACTGTGTAGAATATTTAGAGTAGATTGTTTTTGCG
GCCGCGAAGGATCTGCGATTCGCTCCCGGCCCACGGGTTT

Supplementary Material 2: Sequencing analysis report of the target fragment (PRKCQ-AS1(ENST000000663449)) in si-PRKCQ-AS1.

Sequence Report of siRNA

Product ID	Product Name	Target sequence
siG2112090133416159	**si-h-ENST00000663449_001**	**ACTGTGCTTGAAGCTGCAA**
siG2112090133417251	**si-h-ENST00000663449_002**	**GAAGTCACAGCTTGGAGGA**
siG2112090133418343	**si-h-ENST00000663449_003**	**ACAGATGAGACAATTGAGA**
siG2112090133419435	**si-h-ENST00000646820_001**	**CCACATTGCTTATCTCTTT**
siG2112090133420527	**si-h-ENST00000646820_002**	**CCCACCTTACGTATGTGAA**
siG2112090133421619	**si-h-ENST00000646820_003**	**CTCAAACCTCAACAACAAA**

Table S1. Information on clinical samples

Organism	Source	sample id	age	gender	Sequence ID	Notes
Homo sapiens	Peripheral blood，sepsis	HB016503	65	FEMALE	GP1_1	For Sequence
Homo sapiens	Peripheral blood，sepsis	HB016733	68	FEMALE	GP1_2	
Homo sapiens	Peripheral blood，sepsis	HB016995	75	MALE	GP1_3	
Homo sapiens	Peripheral blood，sepsis	HB017859	76	MALE	GP1_4	
Homo sapiens	Peripheral blood，sepsis	HB014599-R	85	FEMALE	/	For qPCR
Homo sapiens	Peripheral blood，sepsis	HB016053	33	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB016054	34	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB016996	75	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB017711	79	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB017859	78	FEMALE	/	
Homo sapiens	Peripheral blood，sepsis	HB017860	88	FEMALE	/	
Homo sapiens	Peripheral blood，sepsis	HB019203	65	FEMALE	/	
Homo sapiens	Peripheral blood，sepsis	HB020407	57	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB020408	68	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB020584	49	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB020585	52	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB021343	82	MALE	/	
Homo sapiens	Peripheral blood，sepsis	HB021344	77	FEMALE	/	
Homo sapiens	Peripheral blood，sepsis	HB021345	76	FEMALE	/	
Homo sapiens	Peripheral blood，control	HB018651	66	FEMALE	GP2_1	For Sequence
Homo sapiens	Peripheral blood，control	HB018652	45	FEMALE	GP2_2	
Homo sapiens	Peripheral blood，control	HB018653	55	MALE	GP2_3	
Homo sapiens	Peripheral blood，control	HB018657	58	MALE	GP2_4	
Homo sapiens	Peripheral blood，control	HB012517	55	MALE	/	For qPCR
Homo sapiens	Peripheral blood，control	HB010907	54	MALE	/	
Homo sapiens	Peripheral blood，control	HB010948	30	MALE	/	
Homo sapiens	Peripheral blood，control	HB010975	41	MALE	/	
Homo sapiens	Peripheral blood，control	HB011054	43	MALE	/	
Homo sapiens	Peripheral blood，control	HB011041	48	FEMALE	/	
Homo sapiens	Peripheral blood，control	HB011013	59	MALE	/	
Homo sapiens	Peripheral blood，control	HB011024	39	MALE	/	
Homo sapiens	Peripheral blood，control	HB011147	66	MALE	/	
Homo sapiens	Peripheral blood，control	HB011199	32	MALE	/	
Homo sapiens	Peripheral blood，control	HB011284	53	FEMALE	/	
Homo sapiens	Peripheral blood，control	HB011317	55	MALE	/	
Homo sapiens	Peripheral blood，control	HB011328	58	MALE	/	
Homo sapiens	Peripheral blood，control	HB012710	54	MALE	/	
Homo sapiens	Peripheral blood，control	HB011446	53	MALE	/	

Table S2. The sequences of primers.

Gene symbol	Primer	Sequences (5'-3')
PRKCQ-AS1	Forward primer	TGGAGACCACGTCTTGCATC
	Reverse primer	GGTACTCTGGTGAGCCACTC
Bax	Forward primer	TACTTTGCCAGCAAACTGG
	Reverse primer	ATGGTTCTGATCAGTTCCG
Bcl-2	Forward primer	GGATGCCTTTGTGGAACTG
	Reverse primer	GTCTTCAGAGACAGCCAGG
caspase1	Forward primer	TGGAGACATCCCACAATGG
	Reverse primer	TCTCTTCACTTCCTATGAGA
NLRP3	Forward primer	AACACTCTCGGAGACAAGG
	Reverse primer	TGCAGTTGTCTAATTCCAACAC
IL-1β	Forward primer	ATTGCTCAAGTGTCTGAAGC
	Reverse primer	ACAAGTCATCCTCATTGCCA
GAPDH	Forward primer	CATTTCCTGGTATGACAACGA
	Reverse primer	GGGTCTTACTCCTTGGAGG
β-actin	Forward primer	GGATTACAGCTCACCATGG
	Reverse primer	ATAGGAATCCTTCTGACCCA