Supplementary

Table1 GEO dataset information summary

	GSE76925
Organism	Homo sapiens
Experiment type	Expression profiling by array
Platforms	GPL10558
Diagnosis(number)	
Normal	40
COPD	111
Age(number)	
<50	4
50-70	123
>70	24
Gender(number)	
Female	84

Male	67
Packyears(number)	
<60	93
60-100	49
>100	9
Bmi(number)	
<18.5	6
18.5-24.9	57
>24.9	86
NA	2
Total	151

COPD: chronic obstructive pulmonary disease

NA:not available

Supplementary

Table2 GEO dataset information summary

	GSE8545
Organism	Homo sapiens
Experiment type	Expression profiling by array
Platforms	GPL570
Diagnosis(number)	
non-smoker	18
Smoker without COPD	18
Smoker with COPD	18
Age(number)	
<50	39
50-70	15
>70	0

Gender(number)	
Female	13
Male	41
Packyears(number)	
<60	50
60-100	4
>100	0
Total	54

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Table3 GEO dataset information summary

	GSE5058
Organism	Homo sapiens
Experiment type	Expression profiling by array
Platforms	GPL570
Diagnosis(number)	
non-smoker	12
Smoker without COPD	12
early COPD	9
COPD	9
Age(number)	
<50	27
50-70	12

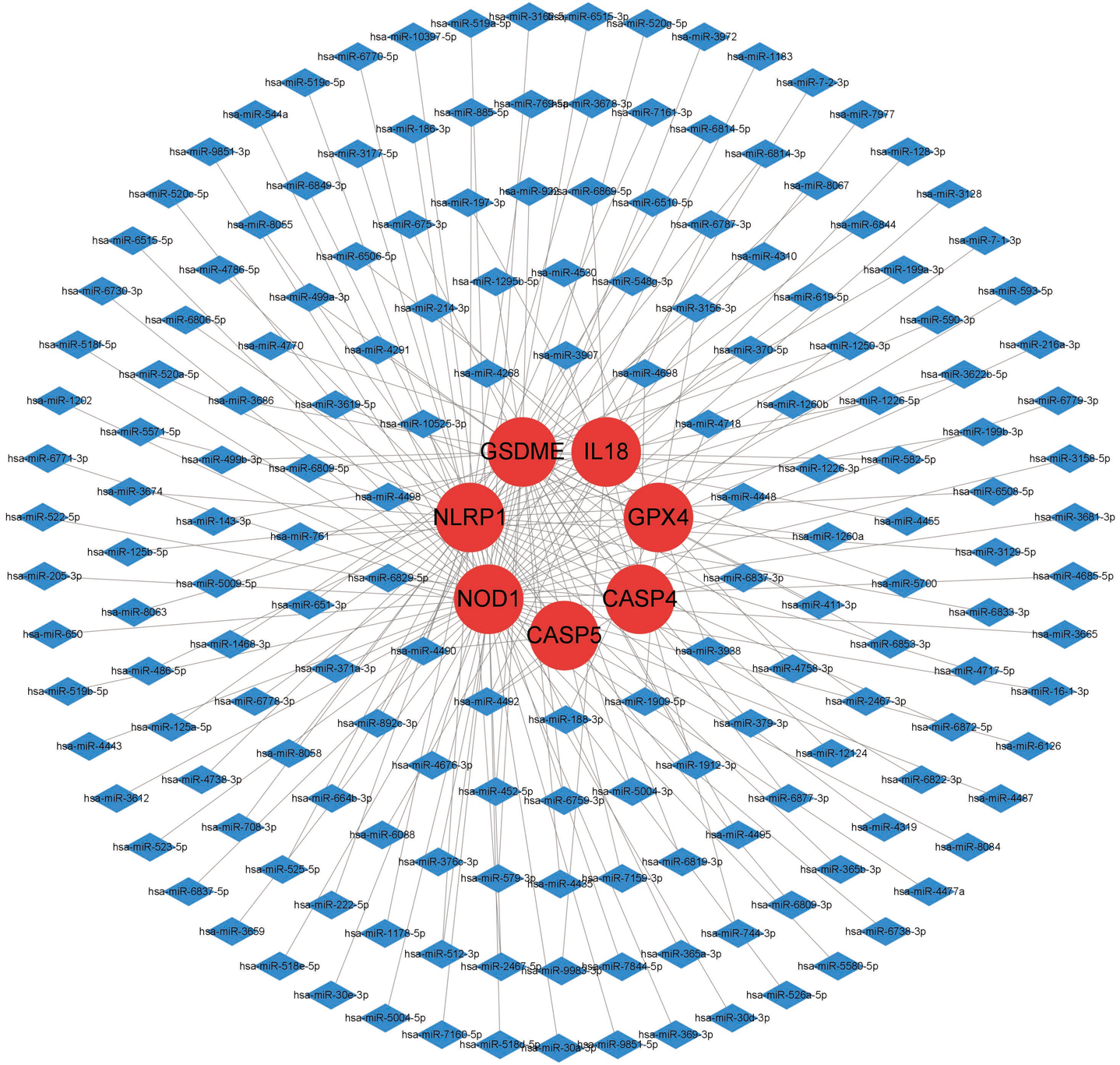
>70	0
Gender(number)	
Female	9
Male	30
Packyears(number)	
<60	36
60-100	3
>100	
Total	39

Supplementary

Table4 Human Clinical baseline data

	COPD	Normal control
Organism	Blood	Blood
Diagnosis(number)		
non-smoker	16	17
Smoker without COPD		3
Smoker with COPD	16	
Age(number)		
<50		3
50~	2	9
60~	4	3
70~	16	3
>80	10	2

Gender(number)		
Female	4	9
Male	28	11
Packyears(number)		
No smoking	16	18
<60		
60-100	1	
100~1000	11	1
>1000	4	1
Total	32	20


GSDME
IL18
NLRP1
GPX4
NOD1
CASP4
CASP5
hsa-miR-3162-5p
hsa-miR-6515-3p
hsa-miR-519a-5p
hsa-miR-520g-5p
hsa-miR-10397-5p
hsa-miR-3972
hsa-miR-6770-5p
hsa-miR-1183
hsa-miR-519c-5p
hsa-miR-7-2-3p
hsa-miR-544a
hsa-miR-769-5p
hsa-miR-3678-3p
hsa-miR-885-5p
hsa-miR-7161-3p
hsa-miR-7977
hsa-miR-186-3p
hsa-miR-6814-5p
hsa-miR-9851-3p
hsa-miR-3177-5p
hsa-miR-6814-3p
hsa-miR-128-3p
hsa-miR-6849-3p
hsa-miR-6869-5p
hsa-miR-8067
hsa-miR-520c-5p
hsa-miR-197-3p
hsa-miR-6510-5p
hsa-miR-3128
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hsa-miR-675-3p
hsa-miR-6787-3p
hsa-miR-6844
hsa-miR-6515-5p
hsa-miR-6506-5p
hsa-miR-4310
hsa-miR-7-1-3p
hsa-miR-4786-5p
hsa-miR-1295b-5p
hsa-miR-4580
hsa-miR-548g-3p
hsa-miR-199a-3p
hsa-miR-6730-3p
hsa-miR-499a-3p
hsa-miR-214-3p
hsa-miR-3156-3p
hsa-miR-619-5p
hsa-miR-593-5p
hsa-miR-6806-5p
hsa-miR-590-3p
hsa-miR-518f-5p
hsa-miR-4770
hsa-miR-4291
hsa-miR-3907
hsa-miR-370-5p
hsa-miR-1250-3p
hsa-miR-216a-3p
hsa-miR-520a-5p
hsa-miR-4268
hsa-miR-4698
hsa-miR-3622b-5p
hsa-miR-1202
hsa-miR-3686
hsa-miR-3619-5p
hsa-miR-1260b
hsa-miR-1226-5p
hsa-miR-6779-3p
hsa-miR-10526-3p
hsa-miR-4718
hsa-miR-5571-5p
hsa-miR-199b-3p
hsa-miR-6771-3p
hsa-miR-499b-3p
hsa-miR-6809-5p
hsa-miR-1226-3p
hsa-miR-582-5p
hsa-miR-3158-5p
hsa-miR-3674
hsa-miR-4498
hsa-miR-4448
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hsa-miR-4455
hsa-miR-3681-3p
hsa-miR-761
hsa-miR-1260a
hsa-miR-125b-5p
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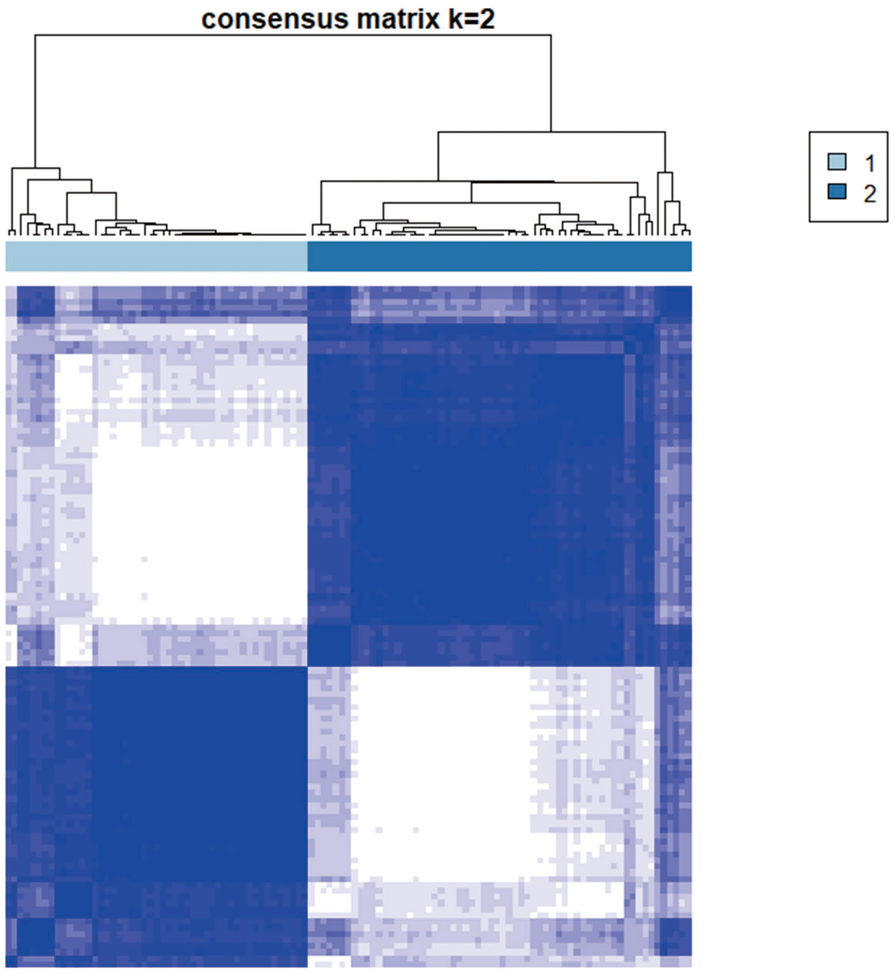
hsa-miR-525-5p
hsa-miR-579-3p
hsa-miR-7159-3p
hsa-miR-365b-3p
hsa-miR-6837-5p
hsa-miR-4485
hsa-miR-4477a
hsa-miR-222-5p
hsa-miR-6809-3p
hsa-miR-3659
hsa-miR-1178-5p
hsa-miR-744-3p
hsa-miR-6738-3p
hsa-miR-512-3p
hsa-miR-365a-3p
hsa-miR-518e-5p
hsa-miR-2467-5p
hsa-miR-9983-3p
hsa-miR-7844-5p
hsa-miR-5580-5p
hsa-miR-30e-3p
hsa-miR-526a-5p
hsa-miR-5004-5p
hsa-miR-30d-3p
hsa-miR-7160-5p
hsa-miR-369-3p
hsa-miR-518d-5p
hsa-miR-9851-5p
hsa-miR-30d-5p

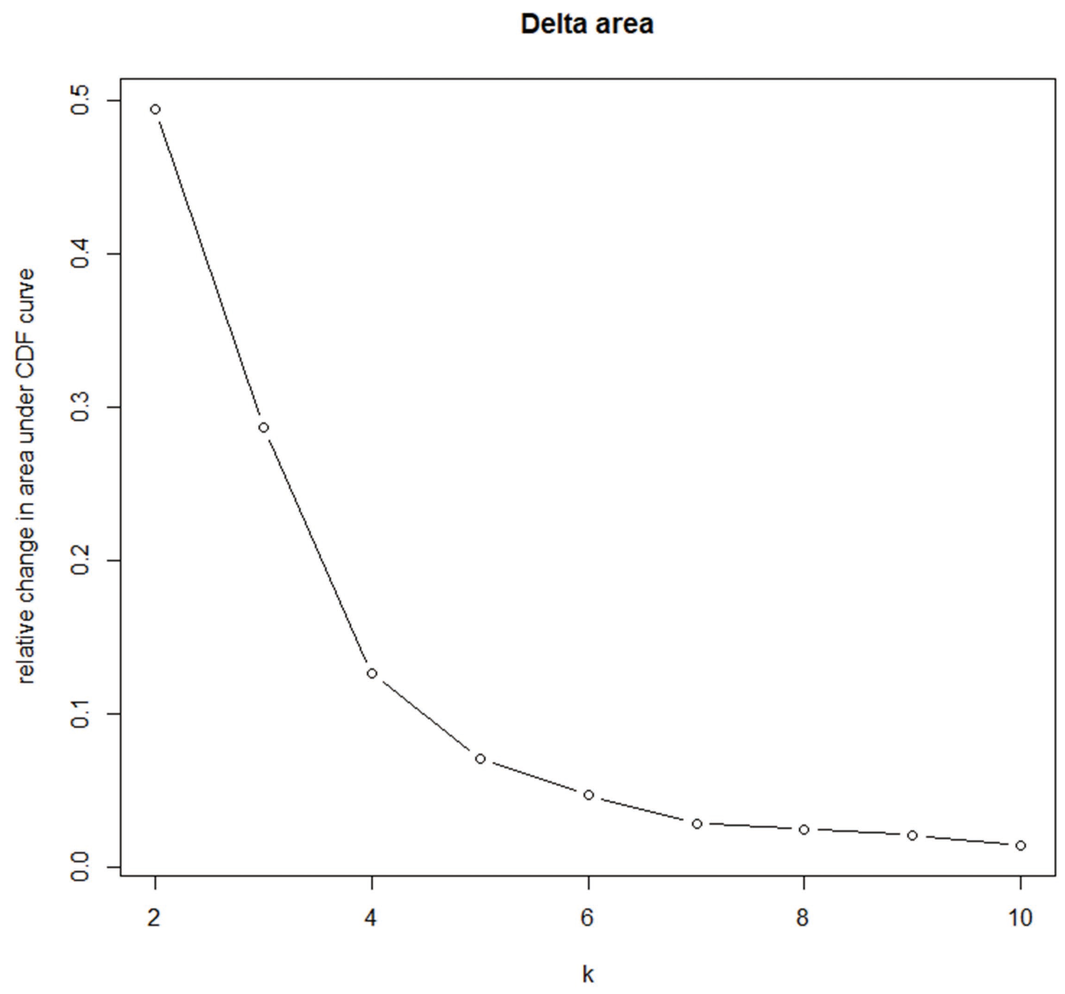
Supplementary

Figure1 Analysis of miRNA-pyroptosis diagnostic marker interaction network

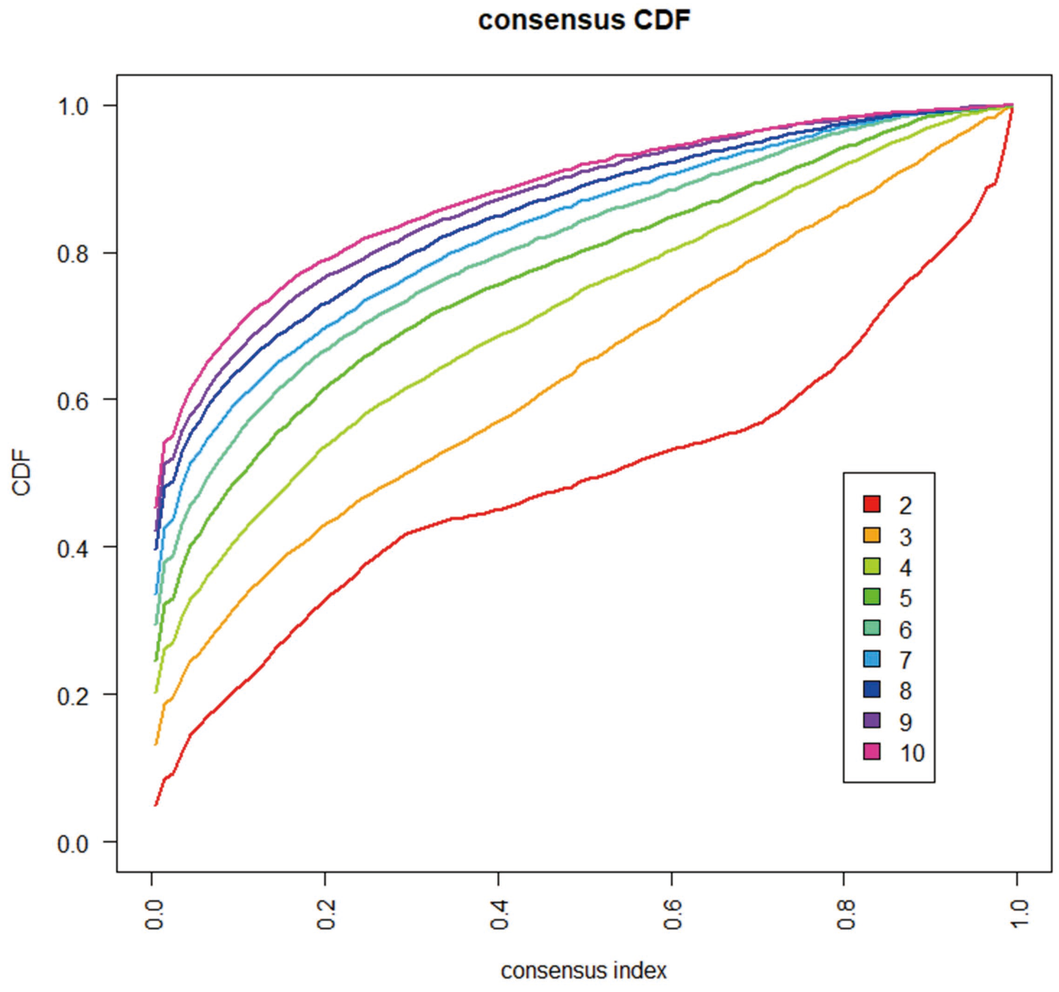
A


consensus matrix k=2
1
2

B


Delta area
relative change in area under CDF curve
0.0
0.1
0.2
0.3
0.4
0.5
2
4
6
8
10
k

C


consensus CDF
CDF
0.0
0.2
0.4
0.6
0.8
1.0
consensus index
2
3
4
5
6
7
8
9
10

D

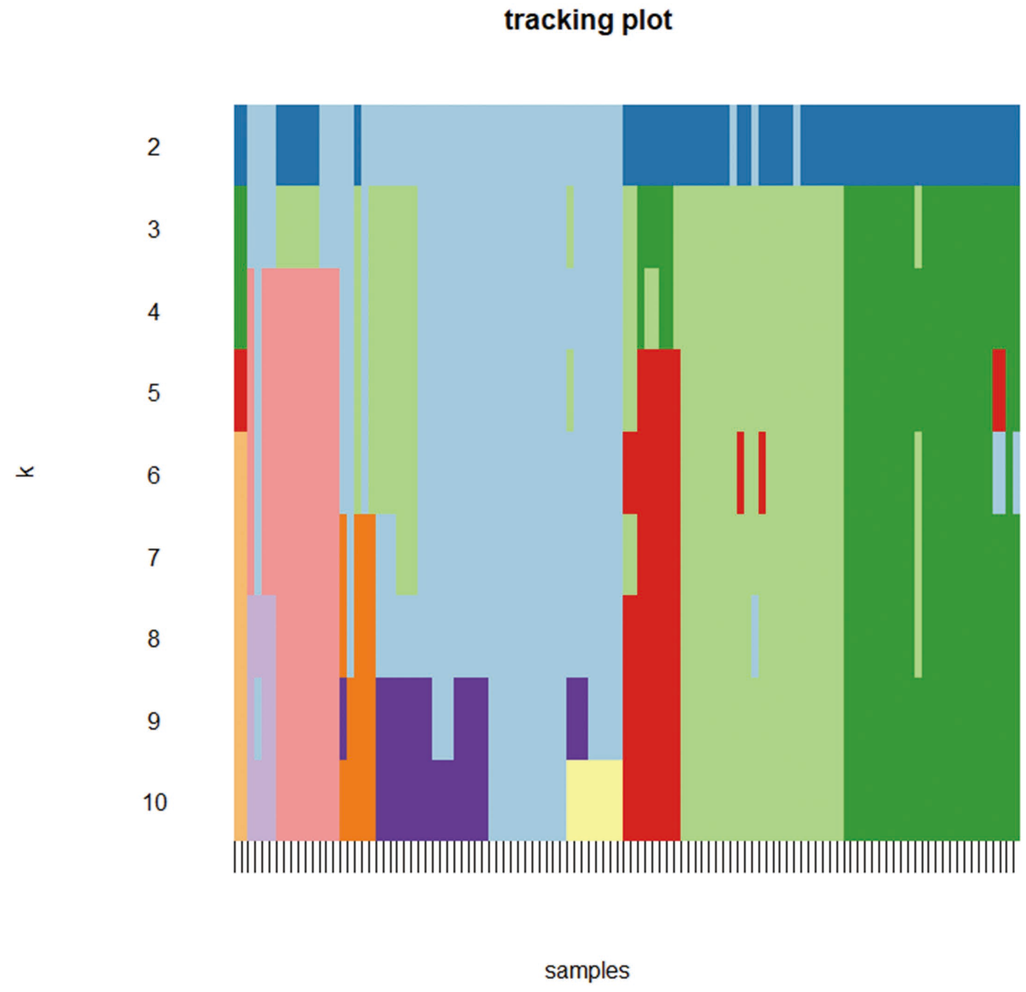
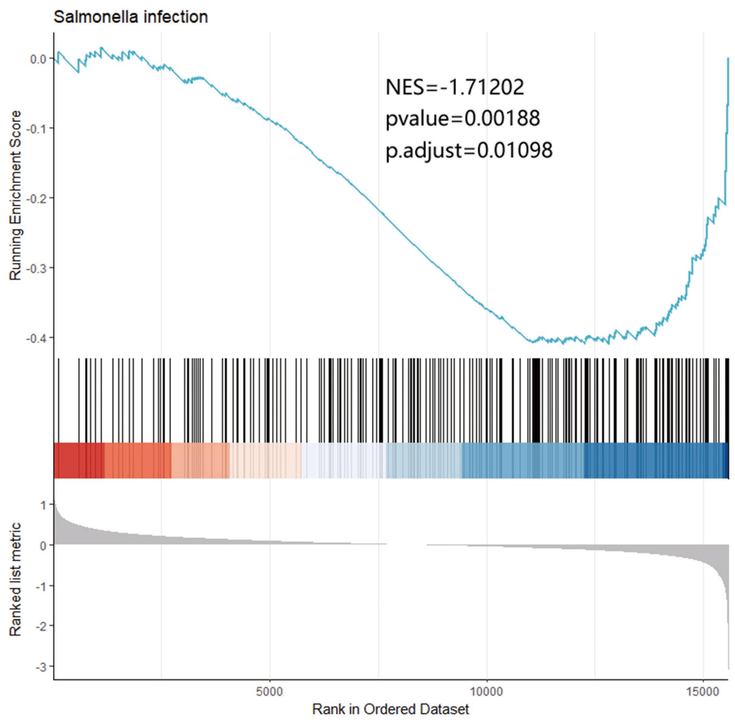
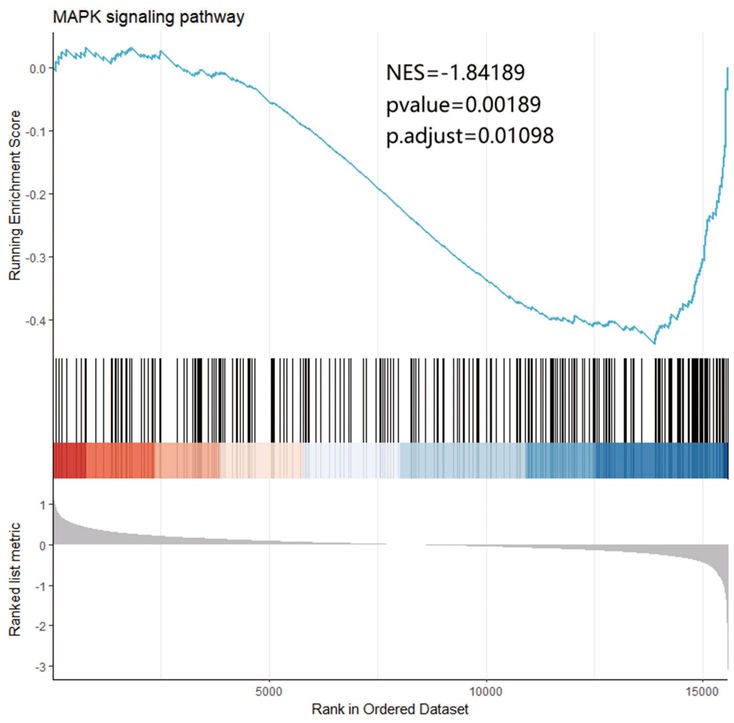

tracking plot
k
2
3
4
5
6
7
8
9
10
samples

Figure2 Consensus clustering analysis A Consensus clustering when k=2 B. Consensus clustering cumulative d istribut ion function (CDF) C. Relative change in the area under the CDF curve when k from 2 to 10 D. Tracking plot; CDF: cumulative distribution function

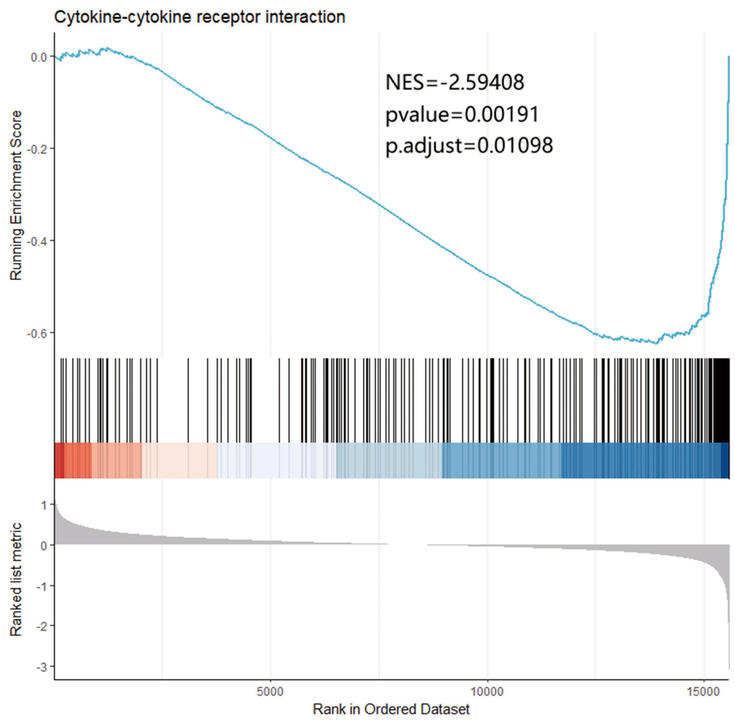
A


Salmonella infection
NES=-1.71202
pvalue=0.00188
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

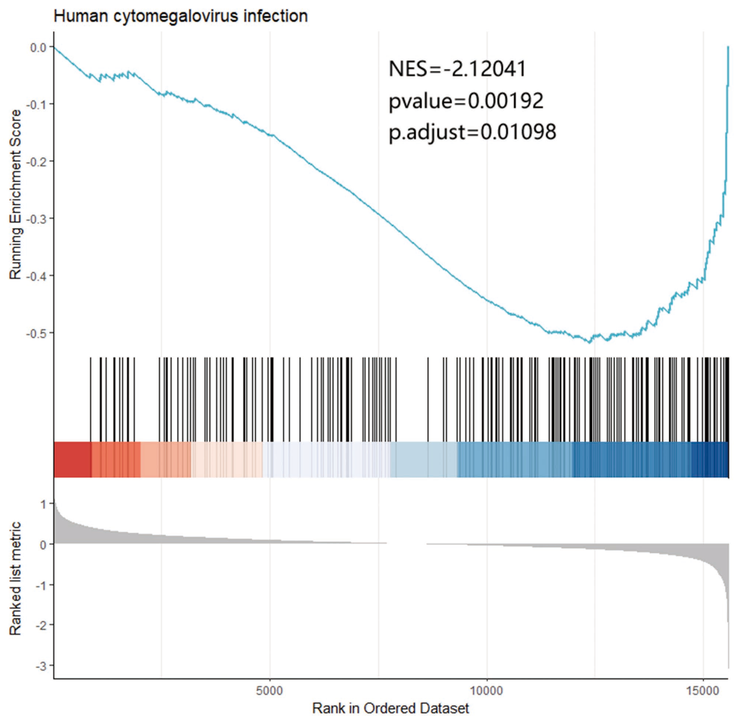
B


MAPK signaling pathway
NES=-1.84189
pvalue=0.00189
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

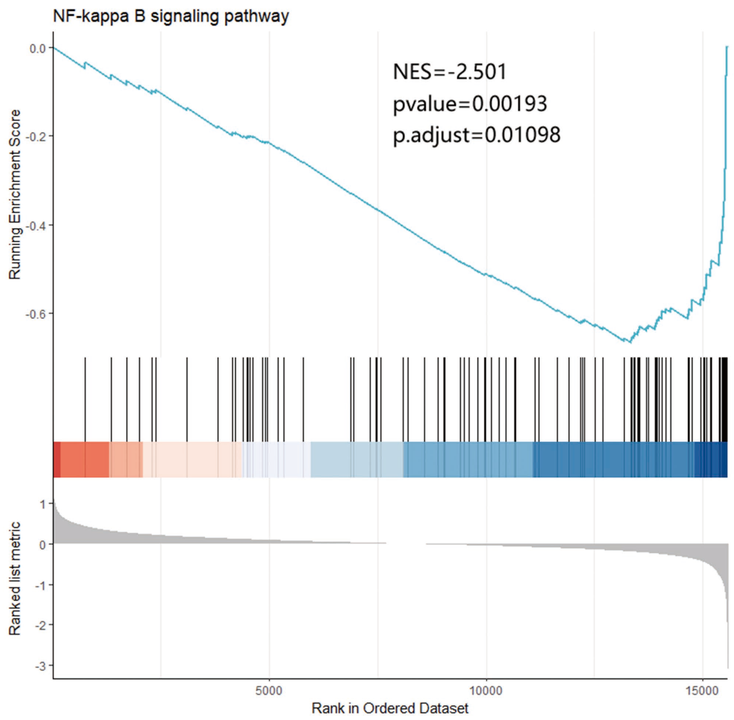
C


Cytokine-cytokine receptor interaction
NES=-2.59408
pvalue=0.00191
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

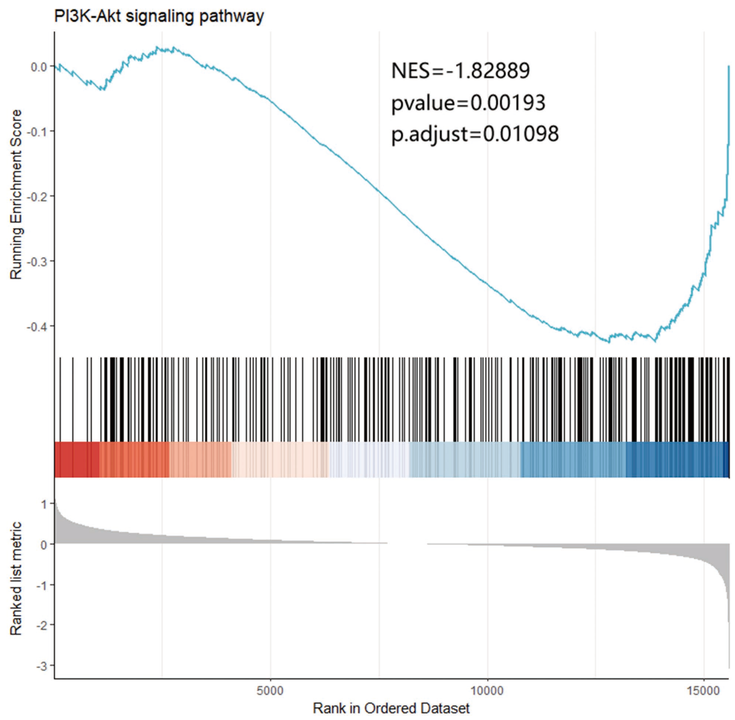
D


Human cytomegalovirus infection
NES=-2.12041
pvalue=0.00192
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

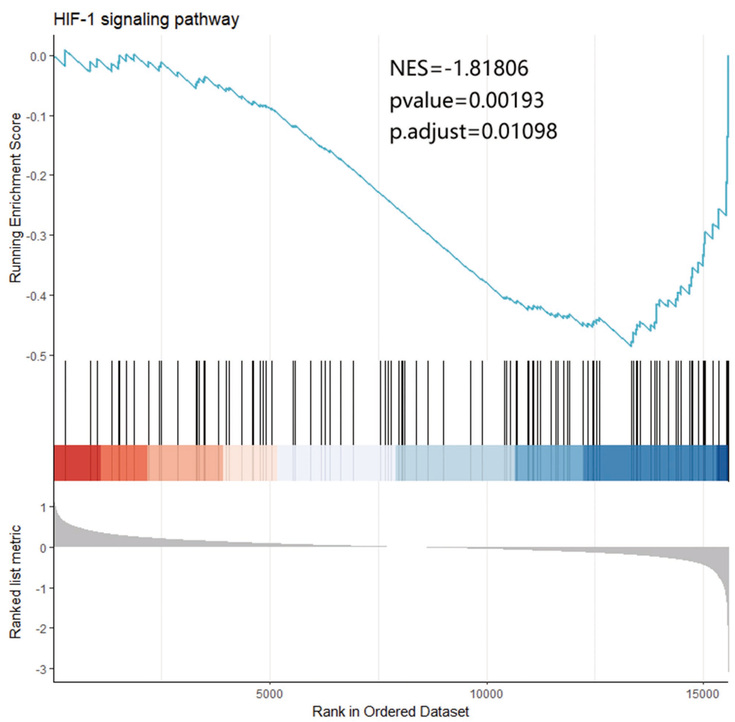
E


NF-kappa B signaling pathway
NES=-2.501
pvalue=0.00193
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

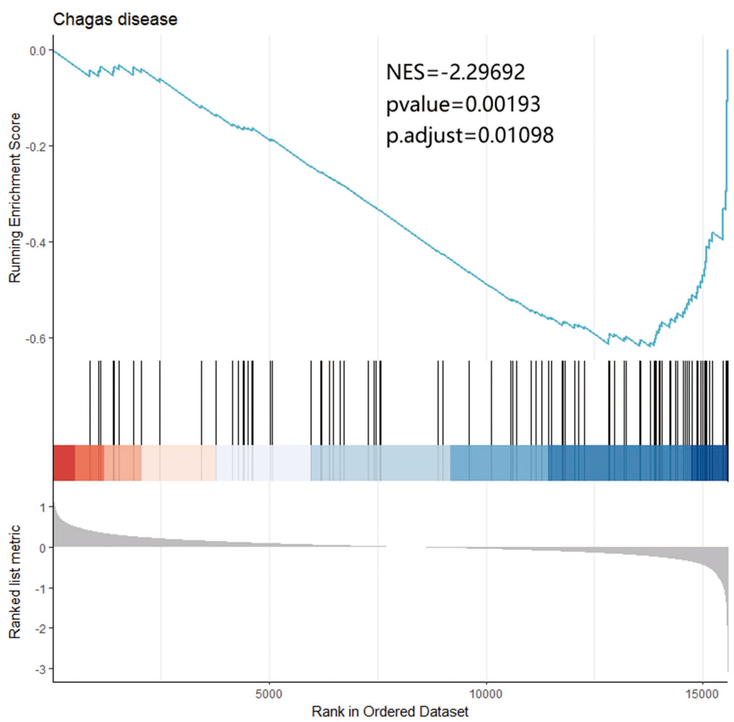
F


PI3K-Akt signaling pathway
NES=-1.82889
pvalue=0.00193
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

G


HIF-1 signaling pathway
NES=-1.81806
pvalue=0.00193
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

H


Chagas disease
NES=-2.29692
pvalue=0.00193
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

I

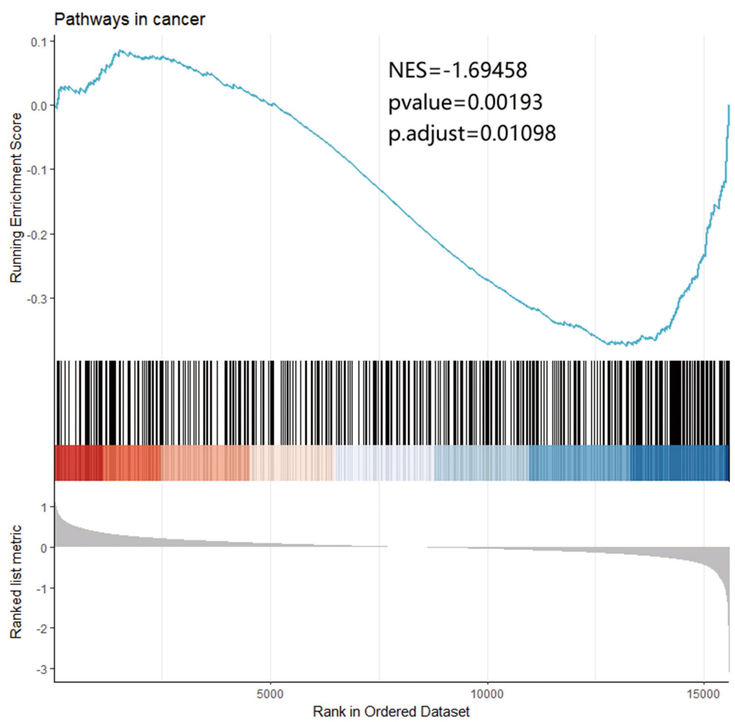

Pathways in cancer
NES=-1.69458
pvalue=0.00193
p.adjust=0.01098
Running Enrichment Score
Ranked list metric
Rank in Ordered Dataset

Figure3　GSEA (A) Salmonella infection (B) MAP K signaling pathway (C) Cytokine-cytokine receptor interaction (D) Human cytomegalovirus infection (E) NF-kappa B signaling pathway (F) PI3K-Akt signaling pathway (G) HIF-1 signaling pathway (H) Chagas disease I. Pathways in cancer GSEA: gene set enrichment analysis; MAPK: mitogen-activated protein kinase; NF-κB: nuclear factor-κB; PI3K-Akt: phosphatidylinositol-3-kinase; HIF: hypoxia-inducible factors