



**Figure S1. Unsupervised consensus clustering by pyroptosis-related lncRNAs.** (A) Consensus clustering cumulative distribution function (CDF) for  $k=2$  to 9. (B) Relative change in area under the CDF curve for  $k=2$  to 9. (C) Tracking plot for  $k=2$  to 9.

**Table S1: List of 33 pyroptosis-related genes**

pyroptosis-related genes
AIM2
CASP1
CASP3
CASP4
CASP5
CASP6
CASP8
CASP9
ELANE
GPX4
GSDMA
GSDMB
GSDMC
GSDMD
GSDME
IL18
IL1B
IL6
NLR4
NLRP1
NLRP2
NLRP3
NLRP6
NLRP7
NOD1
NOD2
PJVK
PLCG1
PRKACA
PYCARD
SCAF11
TIRAP
TNF

**Table S2: Correlations between 20 pyroptosis-related genes and 166 pyroptosis-related lncRNAs.**

pyroptosis-related gene	lncRNA	cor	pvalue	Regulation
IL18	LINC02481	0.547539083	5.66E-22	postive
PJVK	AP006621.3	0.511171553	6.54E-19	postive
CASP5	LINC02195	0.549902835	3.47E-22	postive
CASP1	USP30-AS1	0.721016681	1.79E-43	postive
CASP4	USP30-AS1	0.543727953	1.23E-21	postive
CASP5	USP30-AS1	0.596793651	9.11E-27	postive
IL18	USP30-AS1	0.593488384	2.03E-26	postive
NLRC4	USP30-AS1	0.520332346	1.20E-19	postive
PYCARD	USP30-AS1	0.502427694	3.15E-18	postive
TIRAP	CCDC84-DT	0.501852637	3.49E-18	postive
CASP1	MIR223HG	0.645827797	1.96E-32	postive
CASP4	MIR223HG	0.550882798	2.83E-22	postive
IL18	MIR223HG	0.576924366	9.79E-25	postive
NLRC4	MIR223HG	0.721144846	1.70E-43	postive
NLRP3	MIR223HG	0.643979321	3.34E-32	postive
PYCARD	MIR223HG	0.571571506	3.27E-24	postive
SCAF11	AC025031.1	0.571559236	3.28E-24	postive
PYCARD	AC244090.1	0.575611744	1.32E-24	postive
PYCARD	SCOC-AS1	0.526732432	3.55E-20	postive
GSDMA	AL355607.2	0.548156571	4.98E-22	postive
CASP1	AC103760.1	0.527567086	3.02E-20	postive
NLRC4	AC103760.1	0.634201299	5.35E-31	postive
GSDMC	AL035665.1	0.537253454	4.54E-21	postive
NLRP2	BX284668.6	0.596701102	9.32E-27	postive
GSDMA	HOMER3-AS1	0.504728776	2.09E-18	postive
NLRC4	HOMER3-AS1	0.524089807	5.88E-20	postive
CASP4	LINC02611	0.51184167	5.78E-19	postive
CASP5	LINC02611	0.58595613	1.22E-25	postive
GSDMA	LINC02611	0.602988051	1.98E-27	postive
NLRC4	LINC02611	0.605215177	1.14E-27	postive
PYCARD	LINC02611	0.645888699	1.92E-32	postive
GSDMC	LINC00520	0.511090848	6.64E-19	postive
PYCARD	AL445524.1	0.512168508	5.45E-19	postive
CASP1	IRF1-AS1	0.611107504	2.55E-28	postive
NLRC4	AC245128.3	0.677351144	1.16E-36	postive
IL1B	AC002480.1	0.50934967	9.11E-19	postive
IL6	IL6-AS1	0.598131211	6.58E-27	postive
CASP1	AC022182.2	0.592016124	2.89E-26	postive
CASP4	AC022182.2	0.520066449	1.26E-19	postive
CASP5	AC022182.2	0.533715393	9.13E-21	postive
IL18	AC022182.2	0.561478957	3.00E-23	postive
NLRC4	AC022182.2	0.612866233	1.62E-28	postive
PYCARD	AC022182.2	0.570769666	3.91E-24	postive
ELANE	LINC02288	0.500410225	4.50E-18	postive
CASP1	LINC02273	0.504991094	2.00E-18	postive
IL18	LINC02273	0.531481158	1.41E-20	postive
PYCARD	LINC01357	0.61490755	9.58E-29	postive
CASP1	AC138207.5	0.715789352	1.36E-42	postive
CASP4	AC138207.5	0.574583136	1.66E-24	postive
CASP5	AC138207.5	0.611015256	2.61E-28	postive
IL18	AC138207.5	0.680781019	3.72E-37	postive
NLRC4	AC138207.5	0.817717023	1.50E-64	postive
NLRP3	AC138207.5	0.614906423	9.58E-29	postive

NLRC4	C9orf139	0. 533313405	9. 88E-21 postive
PYCARD	C9orf139	0. 679343242	6. 00E-37 postive
CASP1	AL357033. 4	0. 663884008	8. 56E-35 postive
CASP4	AL357033. 4	0. 516408021	2. 49E-19 postive
IL18	AL357033. 4	0. 674003167	3. 44E-36 postive
NLRC4	AL357033. 4	0. 636063728	3. 18E-31 postive
PYCARD	AL357033. 4	0. 576225705	1. 15E-24 postive
CASP1	LINC02285	0. 591677778	3. 13E-26 postive
CASP5	LINC02285	0. 504108984	2. 34E-18 postive
IL18	LINC02285	0. 571122236	3. 61E-24 postive
NLRC4	LINC02285	0. 706796135	4. 05E-41 postive
NLRP3	LINC02285	0. 532041903	1. 27E-20 postive
PYCARD	LINC02285	0. 679751316	5. 24E-37 postive
PYCARD	AC002059. 1	0. 585900108	1. 23E-25 postive
NLRP2	AC012462. 3	0. 51174397	5. 89E-19 postive
CASP1	AC012645. 3	0. 668258336	2. 17E-35 postive
IL18	AC012645. 3	0. 767871554	2. 12E-52 postive
NLRC4	AC012645. 3	0. 524740078	5. 20E-20 postive
PYCARD	AC012645. 3	0. 545288553	8. 98E-22 postive
CASP1	AC002091. 1	0. 577888446	7. 86E-25 postive
CASP4	AC002091. 1	0. 523128471	7. 06E-20 postive
IL18	AC002091. 1	0. 59973485	4. 44E-27 postive
NLRC4	AC002091. 1	0. 656742568	7. 67E-34 postive
NLRP3	AC002091. 1	0. 676311154	1. 63E-36 postive
CASP1	AC079015. 1	0. 679970914	4. 87E-37 postive
IL18	AC079015. 1	0. 69648457	1. 70E-39 postive
NLRC4	AC079015. 1	0. 538820784	3. 32E-21 postive
PYCARD	AC079015. 1	0. 512706616	4. 94E-19 postive
CASP1	IL10RB-DT	0. 504067418	2. 36E-18 postive
CASP4	IL10RB-DT	0. 516350453	2. 52E-19 postive
CASP5	IL10RB-DT	0. 588915014	6. 05E-26 postive
IL18	IL10RB-DT	0. 501860542	3. 49E-18 postive
NLRC4	IL10RB-DT	0. 699635075	5. 51E-40 postive
PYCARD	IL10RB-DT	0. 639870979	1. 08E-31 postive
PYCARD	CACNA1C-AS2	0. 521489071	9. 63E-20 postive
CASP1	U62317. 4	0. 580187641	4. 64E-25 postive
CASP5	U62317. 4	0. 572283755	2. 79E-24 postive
IL18	U62317. 4	0. 528148465	2. 70E-20 postive
NLRC4	U62317. 4	0. 583826484	2. 00E-25 postive
PYCARD	U62317. 4	0. 651852215	3. 33E-33 postive
CASP1	AC108134. 3	0. 589876445	4. 82E-26 postive
CASP4	AC108134. 3	0. 521945144	8. 83E-20 postive
NLRC4	AC108134. 3	0. 571495092	3. 33E-24 postive
NLRP3	AC108134. 3	0. 505919566	1. 69E-18 postive
PYCARD	AC108134. 3	0. 550599311	3. 00E-22 postive
CASP1	AC006369. 1	0. 563149152	2. 09E-23 postive
IL18	AC006369. 1	0. 590710115	3. 95E-26 postive
CASP1	PSMB8-AS1	0. 740037786	7. 27E-47 postive
CASP4	PSMB8-AS1	0. 507860114	1. 19E-18 postive
IL18	PSMB8-AS1	0. 532188017	1. 23E-20 postive
NLRC4	LINC02766	0. 513431194	4. 32E-19 postive
NLRP6	TONSL-AS1	0. 500576286	4. 37E-18 postive
NLRP2	AC005332. 1	0. 697406786	1. 22E-39 postive
GSDMA	AC113346. 1	0. 520412374	1. 18E-19 postive

GSDMD	LINC01871	0. 519568242	1. 38E-19 postive
IL18	LINC01871	0. 637332026	2. 22E-31 postive
NLRC4	LINC01871	0. 535653483	6. 23E-21 postive
PYCARD	LINC01871	0. 562618544	2. 34E-23 postive
TIRAP	AP003486. 1	0. 526690138	3. 58E-20 postive
CASP1	AL391832. 3	0. 536165371	5. 63E-21 postive
NLRC4	AL391832. 3	0. 552654227	1. 96E-22 postive
NLRP3	AL391832. 3	0. 526879123	3. 45E-20 postive
NOD1	GARS1-DT	0. 584218522	1. 83E-25 postive
CASP1	LINC00861	0. 523901521	6. 10E-20 postive
IL18	LINC00861	0. 600455733	3. 71E-27 postive
IL18	AC002091. 2	0. 562121704	2. 61E-23 postive
NLRC4	AC002091. 2	0. 508920694	9. 84E-19 postive
NLRP3	AC002091. 2	0. 663686901	9. 10E-35 postive
CASP1	AC007728. 2	0. 513185997	4. 52E-19 postive
NOD2	AC007728. 2	0. 539306658	3. 01E-21 postive
NLRP6	OBSCN-AS1	0. 50300963	2. 84E-18 postive
CASP1	AL133371. 2	0. 689434316	1. 99E-38 postive
CASP4	AL133371. 2	0. 564880463	1. 43E-23 postive
GSDMA	AL133371. 2	0. 539075657	3. 15E-21 postive
IL18	AL133371. 2	0. 653952531	1. 78E-33 postive
NLRC4	AL133371. 2	0. 744963733	8. 60E-48 postive
NLRP3	AL133371. 2	0. 742228824	2. 83E-47 postive
PYCARD	AL133371. 2	0. 568307185	6. 75E-24 postive
TIRAP	AP000907. 2	0. 502504305	3. 11E-18 postive
NLRP2	AC112907. 3	0. 527557398	3. 03E-20 postive
PYCARD	AC008915. 3	0. 503085556	2. 81E-18 postive
GSDMA	AC027319. 1	0. 563831582	1. 80E-23 postive
PYCARD	AC027319. 1	0. 513006506	4. 67E-19 postive
NLRP6	AC022081. 1	0. 525527746	4. 47E-20 postive
NLRC4	AC011899. 2	0. 670106261	1. 20E-35 postive
NLRP3	AC011899. 2	0. 52971434	1. 99E-20 postive
PYCARD	AC011899. 2	0. 506008277	1. 66E-18 postive
CASP1	AC015911. 3	0. 592414822	2. 63E-26 postive
IL18	AC015911. 3	0. 604077343	1. 51E-27 postive
CASP1	TRG-AS1	0. 590808154	3. 86E-26 postive
IL18	TRG-AS1	0. 667375173	2. 87E-35 postive
CASP1	ANKRD44-AS1	0. 60322312	1. 87E-27 postive
IL18	ANKRD44-AS1	0. 596677883	9. 38E-27 postive
NLRC4	ANKRD44-AS1	0. 535015548	7. 07E-21 postive
PYCARD	ANKRD44-AS1	0. 531142137	1. 51E-20 postive
NLRP2	AL121658. 1	0. 682457764	2. 13E-37 postive
IL1B	LINC02269	0. 667359194	2. 88E-35 postive
CASP1	LINC01480	0. 63455761	4. 84E-31 postive
CASP4	LINC01480	0. 529069702	2. 26E-20 postive
CASP5	LINC01480	0. 534063868	8. 53E-21 postive
IL18	LINC01480	0. 667360862	2. 88E-35 postive
NLRC4	LINC01480	0. 59240849	2. 63E-26 postive
PYCARD	LINC01480	0. 624030699	8. 62E-30 postive
PYCARD	ENTPD3-AS1	0. 504155956	2. 32E-18 postive
NLRP3	AC138207. 1	0. 508279248	1. 11E-18 postive
NLRC4	AC083799. 1	0. 514466906	3. 57E-19 postive
CASP1	C9orf139	0. 560988948	3. 33E-23 postive
IL18	C9orf139	0. 563774356	1. 82E-23 postive

NLRC4	AL590764.1	0.682239208	2.29E-37 postive
PYCARD	AL590764.1	0.751033255	5.79E-49 postive
CASP1	AL162414.1	0.593021198	2.27E-26 postive
IL18	AL162414.1	0.597332115	7.99E-27 postive
NLRC4	AL162414.1	0.539052156	3.17E-21 postive
CASP1	AC009119.1	0.620249354	2.36E-29 postive
CASP4	AC009119.1	0.504351686	2.24E-18 postive
CASP5	AC009119.1	0.593685357	1.94E-26 postive
IL18	AC009119.1	0.532388152	1.18E-20 postive
NLRC4	AC009119.1	0.641379985	7.05E-32 postive
PYCARD	AC009119.1	0.650221867	5.40E-33 postive
PJVK	AL031673.1	0.532515623	1.16E-20 postive
SCAF11	PPFIA2-AS1	0.597819646	7.10E-27 postive
ELANE	AC129507.1	0.613236811	1.48E-28 postive
PJVK	AC026471.4	0.635370623	3.86E-31 postive
CASP1	AP002954.1	0.524881015	5.06E-20 postive
GSDMA	AP002954.1	0.505341387	1.88E-18 postive
NLRC4	AP002954.1	0.644587567	2.80E-32 postive
NLRP3	AP002954.1	0.506289612	1.58E-18 postive
PYCARD	AP002954.1	0.563772493	1.82E-23 postive
IL1B	AC023421.1	0.573616672	2.07E-24 postive
PYCARD	LINCO2391	0.517288569	2.12E-19 postive
NLRC4	LINCO1645	0.600325994	3.83E-27 postive
PJVK	AL731533.2	0.533079465	1.03E-20 postive
CASP1	TNRC6C-AS1	0.540489091	2.37E-21 postive
IL18	TNRC6C-AS1	0.621348992	1.76E-29 postive
NLRC4	TNRC6C-AS1	0.506376613	1.56E-18 postive
CASP1	AC018755.4	0.679791117	5.17E-37 postive
CASP4	AC018755.4	0.522720941	7.63E-20 postive
CASP5	AC018755.4	0.53290787	1.07E-20 postive
IL18	AC018755.4	0.624199007	8.24E-30 postive
NLRC4	AC018755.4	0.760647538	6.85E-51 postive
NLRP3	AC018755.4	0.550970435	2.78E-22 postive
PYCARD	AC018755.4	0.680947915	3.52E-37 postive
NOD1	CAPS2-AS1	0.514358327	3.64E-19 postive
SCAF11	CAPS2-AS1	0.661158994	1.99E-34 postive
GSDMC	AL031674.1	0.553739675	1.56E-22 postive
PJVK	PARD3-AS1	0.535689593	6.19E-21 postive
NLRC4	AC009831.3	0.504871914	2.04E-18 postive
PYCARD	AC009831.3	0.591547679	3.23E-26 postive
NLRC4	AC011899.3	0.565026792	1.39E-23 postive
CASP1	LINCO2528	0.511354088	6.32E-19 postive
GSDMA	AC131956.2	0.506019471	1.66E-18 postive
CASP5	SMIM25	0.514147574	3.79E-19 postive
GSDMA	SMIM25	0.587387759	8.68E-26 postive
NLRC4	SMIM25	0.558560928	5.61E-23 postive
PYCARD	SMIM25	0.517804197	1.92E-19 postive
CASP4	AC147067.1	0.540800325	2.23E-21 postive
CASP1	LINCO2773	0.5725502	2.63E-24 postive
NLRC4	LINCO2773	0.518651589	1.64E-19 postive
NLRP6	LINCO2870	0.529216658	2.20E-20 postive
CASP1	LINCO1871	0.667138748	3.09E-35 postive
CASP4	LINCO1871	0.538498082	3.54E-21 postive
CASP5	LINCO1871	0.626588304	4.32E-30 postive

PYCARD	AC138207. 5	0. 74712907	3. 31E-48 postive
CASP1	AC006033. 2	0. 506320203	1. 57E-18 postive
IL18	AC006033. 2	0. 52021886	1. 22E-19 postive
NLRC4	AC006033. 2	0. 514061674	3. 85E-19 postive
CASP1	AC110995. 1	0. 520098881	1. 25E-19 postive
CASP4	AC110995. 1	0. 509843011	8. 33E-19 postive
NLRC4	AC110995. 1	0. 672297351	5. 97E-36 postive
PYCARD	AC110995. 1	0. 511909292	5. 71E-19 postive
CASP1	LINC01150	0. 587016752	9. 47E-26 postive
IL18	LINC01150	0. 588185474	7. 19E-26 postive
NLRC4	LINC01150	0. 62833939	2. 69E-30 postive
NLRP3	LINC01150	0. 768741282	1. 38E-52 postive
PYCARD	LINC01150	0. 514936305	3. 27E-19 postive
CASP1	NCK1-DT	0. 700078083	4. 70E-40 postive
CASP4	NCK1-DT	0. 55697883	7. 85E-23 postive
CASP5	NCK1-DT	0. 533933369	8. 75E-21 postive
IL18	NCK1-DT	0. 620276562	2. 34E-29 postive
NLRC4	NCK1-DT	0. 539466725	2. 92E-21 postive
PYCARD	NCK1-DT	0. 547966999	5. 18E-22 postive
NOD1	AC005013. 1	0. 535832739	6. 01E-21 postive
PJVK	ZNF337-AS1	0. 535319695	6. 66E-21 postive
CASP1	PCED1B-AS1	0. 745988717	5. 48E-48 postive
CASP4	PCED1B-AS1	0. 610791121	2. 77E-28 postive
CASP5	PCED1B-AS1	0. 645179512	2. 36E-32 postive
GSDMA	PCED1B-AS1	0. 536281197	5. 50E-21 postive
IL18	PCED1B-AS1	0. 752255326	3. 33E-49 postive
NLRC4	PCED1B-AS1	0. 709166005	1. 68E-41 postive
NLRP3	PCED1B-AS1	0. 53393816	8. 74E-21 postive
PYCARD	PCED1B-AS1	0. 693971739	4. 11E-39 postive
TIRAP	AP001318. 2	0. 625483526	5. 83E-30 postive
PYCARD	AC005288. 1	-0. 521607336	9. 42E-20 negative
NLRC4	AC006272. 1	0. 50561386	1. 79E-18 postive
PYCARD	AC069281. 2	0. 560614067	3. 61E-23 postive
IL1B	LINC00973	0. 579790437	5. 08E-25 postive
GSDMA	GAPLINC	0. 586163207	1. 16E-25 postive
CASP1	U62317. 1	0. 677862979	9. 78E-37 postive
CASP4	U62317. 1	0. 507952096	1. 17E-18 postive
CASP5	U62317. 1	0. 680485797	4. 11E-37 postive
GSDMD	U62317. 1	0. 532905315	1. 07E-20 postive
IL18	U62317. 1	0. 594154213	1. 73E-26 postive
NLRC4	U62317. 1	0. 596122279	1. 07E-26 postive
PYCARD	U62317. 1	0. 606082137	9. 14E-28 postive
NLRP3	LINC02705	0. 552254514	2. 13E-22 postive
CASP1	CEP250-AS1	0. 679061776	6. 59E-37 postive
CASP4	CEP250-AS1	0. 587137783	9. 21E-26 postive
CASP5	CEP250-AS1	0. 581772335	3. 22E-25 postive
IL18	CEP250-AS1	0. 661611066	1. 73E-34 postive
NLRC4	CEP250-AS1	0. 756902319	3. 95E-50 postive
PYCARD	CEP250-AS1	0. 744199571	1. 20E-47 postive
CASP1	AL590764. 1	0. 707270134	3. 40E-41 postive
CASP4	AL590764. 1	0. 571091614	3. 64E-24 postive
CASP5	AL590764. 1	0. 635932883	3. 30E-31 postive
GSDMA	AL590764. 1	0. 559495669	4. 59E-23 postive
IL18	AL590764. 1	0. 716735528	9. 47E-43 postive

PYCARD	AC242842. 1	0. 53255029	1. 15E-20 postive
ELANE	LINC02289	0. 597042675	8. 58E-27 postive
SCAF11	AC007255. 1	0. 51091901	6. 85E-19 postive
PYCARD	AC020658. 5	0. 591567107	3. 22E-26 postive
CASP1	ITGB2-AS1	0. 604903004	1. 23E-27 postive
IL18	ITGB2-AS1	0. 641547375	6. 72E-32 postive
PYCARD	AC005840. 4	0. 569114773	5. 65E-24 postive
CASP1	IL6R-AS1	0. 543464862	1. 30E-21 postive
NLRC4	IL6R-AS1	0. 579162954	5. 87E-25 postive
PYCARD	IL6R-AS1	0. 525171803	4. 78E-20 postive
IL18	LINC00996	0. 605646135	1. 02E-27 postive
NLRP3	AC090559. 1	0. 718919438	4. 06E-43 postive
CASP1	LINC00892	0. 548925907	4. 25E-22 postive
IL18	LINC00892	0. 533557101	9. 42E-21 postive
SCAF11	AC034213. 1	0. 507823997	1. 20E-18 postive
CASP1	AC015819. 1	0. 662330838	1. 39E-34 postive
CASP4	AC015819. 1	0. 579677726	5. 22E-25 postive
CASP5	AC015819. 1	0. 592147636	2. 80E-26 postive
GSDMA	AC015819. 1	0. 538920124	3. 25E-21 postive
IL18	AC015819. 1	0. 675596924	2. 05E-36 postive
NLRC4	AC015819. 1	0. 658454033	4. 56E-34 postive
PYCARD	AC015819. 1	0. 650614632	4. 80E-33 postive
CASP1	CARD8-AS1	0. 57664394	1. 04E-24 postive
CASP4	CARD8-AS1	0. 587347713	8. 76E-26 postive
IL18	CARD8-AS1	0. 572566597	2. 62E-24 postive
NLRC4	CARD8-AS1	0. 670067131	1. 22E-35 postive
NLRP3	CARD8-AS1	0. 530847327	1. 60E-20 postive
TIRAP	AP003392. 1	0. 54859044	4. 55E-22 postive
CASP1	AL135818. 1	0. 536327079	5. 45E-21 postive
CASP5	AC124248. 1	0. 519519978	1. 39E-19 postive
NLRC4	AC124248. 1	0. 553155267	1. 76E-22 postive
PYCARD	AC124248. 1	0. 609874042	3. 50E-28 postive
NLRC4	AC084064. 1	0. 536756988	5. 01E-21 postive
NLRC4	DNMBP-AS1	0. 554540948	1. 32E-22 postive
IL18	MACORIS	0. 509097536	9. 53E-19 postive
NLRP3	MACORIS	0. 562467251	2. 42E-23 postive
PYCARD	MACORIS	0. 506752133	1. 46E-18 postive
IL18	AC004585. 1	0. 537911392	3. 98E-21 postive
CASP1	AC127521. 1	0. 536414788	5. 36E-21 postive
IL18	AC127521. 1	0. 607602655	6. 23E-28 postive
CASP1	LINC01678	0. 543021755	1. 42E-21 postive
CASP5	LINC01678	0. 511800653	5. 83E-19 postive
NLRC4	LINC01678	0. 7584598	1. 91E-50 postive
NLRP3	LINC01678	0. 591204585	3. 51E-26 postive
PYCARD	LINC01678	0. 571687352	3. 19E-24 postive
CASP1	AC005632. 3	0. 516527029	2. 44E-19 postive
IL18	AC005632. 3	0. 540780564	2. 24E-21 postive
NLRC4	AC005632. 3	0. 516883496	2. 28E-19 postive
NLRP2	AC026369. 3	0. 661505651	1. 79E-34 postive
ELANE	AC016596. 1	0. 5243086	5. 64E-20 postive
CASP1	ZEB2-AS1	0. 516752427	2. 34E-19 postive
NLRC4	ZEB2-AS1	0. 518487516	1. 69E-19 postive

NLRP3	AL731567.1	0.523512139	6.56E-20	postive
PYCARD	AC079210.1	0.541647338	1.88E-21	postive
NLRP3	AC012181.1	0.522229784	8.37E-20	postive
PYCARD	AC012360.2	0.576565357	1.06E-24	postive
PYCARD	HMGAI1P4	0.573320537	2.21E-24	postive
PYCARD	AP000238.1	0.517319064	2.10E-19	postive
SCAF11	LINC01719	0.574059029	1.87E-24	postive
PYCARD	U62317.2	0.532923207	1.07E-20	postive
IL18	LINC00539	0.50091031	4.12E-18	postive
PYCARD	AC011446.1	0.500587316	4.37E-18	postive
GSDMA	AL133342.1	0.518285933	1.76E-19	postive
IL18	AL133342.1	0.51282245	4.83E-19	postive
NLRC4	AL133342.1	0.512280544	5.34E-19	postive
PYCARD	AL133342.1	0.601263088	3.04E-27	postive
GSDMA	MIR3945HG	0.527139853	3.28E-20	postive
NLRP2	Z73429.1	0.547064612	6.24E-22	postive
IL18	LINC02084	0.5266393	3.61E-20	postive
IL1B	AL138828.1	0.677208337	1.21E-36	postive
CASP4	AL031775.1	0.569108389	5.65E-24	postive
NLRC4	AL031775.1	0.644394857	2.96E-32	postive
NLRC4	AC087672.2	0.555416316	1.09E-22	postive
PYCARD	AC087672.2	0.545498668	8.60E-22	postive
NLRP3	AC067945.2	0.501529129	3.70E-18	postive
CASP1	AC004865.2	0.585508935	1.35E-25	postive
CASP4	AC004865.2	0.519548085	1.39E-19	postive
IL18	AC004865.2	0.58273893	2.57E-25	postive
NLRC4	AC004865.2	0.568559891	6.38E-24	postive
PYCARD	AC004865.2	0.588436075	6.78E-26	postive
NLRP2	AL133299.1	0.622173655	1.42E-29	postive
NLRC4	LINC01374	0.528194301	2.68E-20	postive
PYCARD	LINC01374	0.532267207	1.21E-20	postive
CASP1	AC008105.3	0.507022876	1.39E-18	postive
IL18	AC008105.3	0.54663558	6.81E-22	postive
NLRP3	AC243960.3	0.530632741	1.67E-20	postive
CASP1	AL161785.1	0.57036726	4.28E-24	postive
CASP5	AL161785.1	0.525124077	4.83E-20	postive
GSDMA	AL161785.1	0.619791784	2.66E-29	postive
IL18	AL161785.1	0.577380044	8.82E-25	postive
NLRC4	AL161785.1	0.733887971	9.76E-46	postive
NLRP3	AL161785.1	0.655864575	1.00E-33	postive
PYCARD	AL161785.1	0.628937554	2.28E-30	postive
GSDMA	AC243829.4	0.616845154	5.78E-29	postive
GSDMC	AC243829.4	0.579771499	5.11E-25	postive
CASP1	AL023653.1	0.582911113	2.47E-25	postive
IL18	AL023653.1	0.693257135	5.28E-39	postive
CASP5	LINC02828	0.554643581	1.29E-22	postive
GSDMA	LINC02828	0.571722809	3.16E-24	postive
NLRC4	LINC02828	0.539456177	2.92E-21	postive
PYCARD	LINC02828	0.507374886	1.30E-18	postive
NLRC4	LINC01094	0.526323044	3.84E-20	postive
NLRP3	LINC01094	0.548051582	5.09E-22	postive
IL1B	AC092598.1	0.603047031	1.95E-27	postive
PYCARD	AC016876.3	0.528319169	2.61E-20	postive
CASP1	HLA-DQB1-AS1	0.511198859	6.51E-19	postive

**Table S3:** List of 809 differentially expressed immune-related lncRNAs between high-risk and low-risk groups in OS signature.



gene	logFC	pValue	fdr
EMILIN3	1.408409549	1.63E-07	3.96E-06
TBC1D10C	-1.049947832	7.77E-14	2.43E-11
LRRN1	1.060915857	4.44E-07	9.34E-06
IGKV1-6	-1.400873585	2.39E-09	1.03E-07
SLAMF7	-1.287858195	3.52E-13	7.24E-11
CILP2	1.095525464	7.33E-06	0.000103
IGLV1-47	-1.126616638	4.60E-08	1.31E-06
S1PR4	-1.03507634	1.42E-15	2.06E-12
CXCR3	-1.394432627	6.57E-16	1.27E-12
CD8A	-1.079972482	1.61E-11	1.41E-09
IGHV1-18	-1.109333693	3.28E-07	7.20E-06
IGLL5	-1.181111635	2.68E-09	1.11E-07
IGKV3-15	-1.068215163	1.60E-07	3.91E-06
IGHM	-1.06437717	1.20E-10	7.37E-09
DLK1	1.768913163	4.20E-06	6.57E-05
IGHV1-46	-1.226549817	4.29E-07	9.06E-06
FGFR3	1.134993295	4.42E-07	9.32E-06
IGHV4-34	-1.075734051	3.73E-08	1.09E-06
IGLV3-1	-1.055810816	9.35E-07	1.77E-05
CD5	-1.165384655	5.89E-15	3.59E-12
TRBV28	-1.183425698	1.81E-15	2.29E-12
CD3D	-1.092871205	1.61E-14	7.84E-12
SIT1	-1.156466649	2.94E-15	2.83E-12
IGHV3-23	-1.097121465	4.56E-09	1.72E-07
IGLV3-19	-1.159162949	2.48E-07	5.70E-06
LTB	-1.010071787	2.82E-16	1.26E-12
PTPN7	-1.026922233	4.11E-12	4.71E-10
CD8B	-1.310045485	1.29E-13	3.26E-11
DPYSL4	1.102188803	5.10E-08	1.43E-06
IGHV1-24	-1.396012852	5.63E-06	8.21E-05
IGLV2-23	-1.050297054	8.17E-07	1.58E-05
COL9A3	1.518539477	3.07E-05	0.000351
IGKV4-1	-1.068456212	8.80E-08	2.33E-06
SLAMF6	-1.136911666	9.03E-13	1.43E-10
ITGAL	-1.003855135	6.57E-16	1.27E-12
IGHV5-51	-1.068349589	1.50E-08	4.92E-07
IGLV4-69	-1.061572585	1.15E-06	2.12E-05
ETV7	-1.047089642	5.66E-14	1.87E-11
IGHGP	-1.13091107	1.69E-08	5.44E-07
IGLV1-44	-1.204281823	4.27E-09	1.64E-07
CD3E	-1.044188126	2.28E-14	9.76E-12
LINC01871	-1.093670281	7.71E-11	5.06E-09
IGHV3-21	-1.135914284	1.03E-07	2.67E-06
IGLV3-10	-1.096500121	2.27E-06	3.90E-05
CXCL11	-1.109801839	1.49E-11	1.35E-09
IGLV2-11	-1.056463905	2.89E-06	4.82E-05
NAPSB	-1.062500562	1.55E-13	3.82E-11
CD27	-1.084580366	5.00E-13	9.49E-11
IGKV1-16	-1.211334686	1.67E-06	2.93E-05
CCR5	-1.089429813	3.93E-14	1.52E-11
IGLV2-8	-1.206256617	3.80E-08	1.11E-06
IGHV4-39	-1.047181241	5.35E-07	1.10E-05
GZMH	-1.157349867	4.15E-15	2.86E-12
MDFI	1.119330798	1.25E-08	4.21E-07
SNX20	-1.088634042	4.79E-14	1.74E-11
IGHV3-15	-1.158753883	3.31E-07	7.25E-06
ADAMDEC1	-1.278157257	4.59E-10	2.35E-08
IGLV3-25	-1.174216743	6.55E-08	1.80E-06
CRABP1	1.69158865	6.44E-05	0.000647
CD2	-1.047747285	8.14E-15	4.28E-12
IGHV3-11	-1.168890467	1.96E-07	4.64E-06
GZMK	-1.159678945	5.09E-13	9.50E-11
IGHV3-30	-1.101877384	1.29E-06	2.34E-05
MEX3A	1.037048392	5.28E-09	1.96E-07
LCK	-1.162428121	4.18E-16	1.26E-12
IGLV6-57	-1.095846192	7.40E-06	0.000104
GBP5	-1.0544619	1.73E-11	1.48E-09
CRLF1	1.055626755	0.00020386	0.001684
IGKV1-9	-1.041304122	2.82E-06	4.72E-05
IGHV1-69D	-1.219709265	2.76E-09	1.13E-07
P2RY13	-1.084817266	1.15E-13	3.09E-11
IGHV3-33	-1.04205247	7.48E-08	2.02E-06
IGKV1-17	-1.086744479	1.18E-05	0.000156
ANKRD22	-1.255142898	1.60E-10	9.39E-09
SCX	1.000224158	2.52E-06	4.26E-05
RFLNA	1.035759378	0.000521405	0.00362

