

Table S1. The 26 significant differentially expressed tsRNAs in PC serum compared with healthy controls.

	tRF_ID	Type	Length	CPM Normal	CPM PC	Fold Change (PC/Normal)
1	tRF-Pro-AGG-004	tRF-5c	30	16.27127	1126.97	69.26132
2	tRF-Gln-CTG-034	tRF-2	14	24.40691	791.2768	32.42019
3	tRF-Leu-CAG-002	tRF-3a	18	16.27127	341.6877	20.99944
4	tRF-Ile-AAT-019	tRF-3a	18	16.27127	257.7644	15.84168
5	tRF-Gly-CCC-045	tRF-3a	18	12.20346	191.8247	15.71888
6	tRF-Pro-AGG-005	tRF-5c	31	48.81382	701.359	14.36804
7	tRF-Thr-CGT-009	tRF-5a	15	28.47473	365.6658	12.84176
8	tRF-Pro-AGG-002	tRF-5c	28	16.27127	179.8356	11.05234
9	tRF-Leu-CAA-001	tRF-3a	18	40.67819	443.5946	10.90497
10	tRF-Ser-AGA-005	tRF-5b	23	248.1369	23.97808	0.096632
11	tRF-Val-AAC-006	tRF-5a	16	374.2393	35.96713	0.096107
12	tRF-Gly-GCC-032	tRF-5a	16	138.3058	11.98904	0.086685
13	tRF-Pro-AGG-011	tRF-3b	19	414.9175	29.97261	0.072238
14	tRF-Ser-AGA-004	tRF-5a	16	508.4773	35.96713	0.070735
15	tRF-Gly-TCC-016	tRF-5c	32	187.1197	11.98904	0.064072
16	tRF-Ile-TAT-003	tRF-3a	18	191.1875	11.98904	0.062708
17	tiRNA-Lys-TTT-001	tiRNA-5	29	203.3909	11.98904	0.058946
18	tRF-Gly-TCC-055	tRF-1	14	215.5944	11.98904	0.055609
19	tRF-Ala-AGC-057	tRF-3b	22	227.7978	11.98904	0.05263
20	tRF-Glu-TTC-025	tRF-5c	32	227.7978	11.98904	0.05263
21	tRF-Val-CAC-005	tRF-5b	23	244.0691	11.98904	0.049122
22	tRF-Ser-GCT-003	tRF-1	17	370.1715	17.98356	0.048582
23	tRF-Leu-CAG-019	tRF-3b	22	252.2048	11.98904	0.047537
24	tRF-Ser-GCT-005	tRF-5a	14	3522.731	125.8849	0.035735
25	tiRNA-Val-CAC-001	tiRNA-5	34	1073.904	11.98904	0.011164
26	tRF-Ser-GCT-024	tRF-5a	15	27087.6	275.748	0.01018

Table S2. Clinical significance of serum tRF-Pro-AGG-004 and tRF-Leu-CAG-002 expression in serum from 204 patients with pancreatic cancer.

Serum tRF-Pro-AGG-004				Serum tRF-Leu-CAG-002	
	n	Mean±SD	pValue	Mean±SD	p Value
Sex			0.1039		0.5056
Male	127	5.80E-08±7.48E-08		2.93E-07±1.28E-06	
Female	77	3.94E-08±4.90E-08		1.77E-07± 2.20E-07	
Age(years)			0.1947		0.4576
<Median(62)	86	4.99E-08±6.51E-08		1.76E-07±2.21E-07	
≥Median(62)	118	6.91E-08±1.02E-07		3.03E-07±1.33E-06	
Metastasis			5.61E-06		0.0069
Negative	177	5.52E-08±7.98E-08		2.56E-07±1.07E-06	
Positive	27	1.75E-07 ± 1.32E-07		9.04E-07±2.27E-06	

Table S3. The clinical features of samples with other types of diseases.

Case No.	Age	Gender	Cancer subtype	Case No.	Age	Gender	Cancer subtype
1	63	F	pancreatic ductal adenocarcinoma	43	42	M	hepatocellular carcinoma
2	51	M	pancreatic ductal adenocarcinoma	44	30	M	hepatocellular carcinoma
3	65	M	pancreatic ductal adenocarcinoma	45	39	M	hepatocellular carcinoma
4	84	M	pancreatic ductal adenocarcinoma	46	52	F	hepatocellular carcinoma
5	70	M	pancreatic ductal adenocarcinoma	47	47	M	hepatocellular carcinoma
6	49	M	pancreatic ductal adenocarcinoma	48	44	M	hepatocellular carcinoma
7	52	M	pancreatic ductal adenocarcinoma	49	47	M	hepatocellular carcinoma
8	70	F	pancreatic ductal adenocarcinoma	50	54	M	hepatocellular carcinoma
9	54	M	pancreatic ductal adenocarcinoma	51	74	M	hepatocellular carcinoma
10	63	M	pancreatic ductal adenocarcinoma	52	55	M	hepatocellular carcinoma
11	65	M	pancreatic ductal adenocarcinoma	53	78	M	hepatocellular carcinoma
12	58	M	adenosquamous carcinoma	54	53	F	hepatocellular carcinoma
13	57	F	adenosquamous carcinoma	55	29	M	hepatocellular carcinoma
14	71	M	pancreatic ductal adenocarcinoma	56	65	M	hepatocellular carcinoma
15	56	F	pancreatic ductal adenocarcinoma	57	55	M	hepatocellular carcinoma
16	52	M	pancreatic ductal adenocarcinoma	58	46	M	hepatocellular carcinoma
17	57	M	pancreatic ductal adenocarcinoma	59	53	M	hepatocellular carcinoma
18	51	M	pancreatic ductal adenocarcinoma	60	51	F	hepatocellular carcinoma
19	62	F	pancreatic ductal adenocarcinoma	61	61	F	hepatocellular carcinoma
20	55	F	pancreatic ductal adenocarcinoma	62	60	F	hepatocellular carcinoma
21	46	F	pancreatic ductal adenocarcinoma	63	58	F	hepatocellular carcinoma
22	69	M	pancreatic ductal adenocarcinoma	64	72	M	hepatocellular carcinoma
23	44	M	pancreatic ductal adenocarcinoma	65	53	M	hepatocellular carcinoma
24	64	M	pancreatic ductal adenocarcinoma	66	67	F	hepatocellular carcinoma
25	46	M	pancreatic ductal adenocarcinoma	67	63	F	hepatocellular carcinoma
26	52	F	pancreatic ductal adenocarcinoma	68	53	M	hepatocellular carcinoma
27	72	M	pancreatic ductal adenocarcinoma	69	55	M	hepatocellular carcinoma
28	71	M	pancreatic ductal adenocarcinoma	70	52	M	hepatocellular carcinoma
29	64	F	pancreatic ductal adenocarcinoma	71	62	F	hepatocellular carcinoma
30	62	M	adenosquamous carcinoma	72	38	M	hepatocellular carcinoma
31	77	F	pancreatic ductal adenocarcinoma	73	86	F	hepatocellular carcinoma
32	61	M	hepatocellular carcinoma	74	49	M	hepatocellular carcinoma
33	49	M	hepatocellular carcinoma	75	67	M	hepatocellular carcinoma
34	69	M	hepatocellular carcinoma	76	42	M	hepatocellular carcinoma
35	64	M	hepatocellular carcinoma	77	30	M	hepatocellular carcinoma
36	67	F	hepatocellular carcinoma	78	39	M	hepatocellular carcinoma
37	60	F	hepatocellular carcinoma	79	52	F	hepatocellular carcinoma
38	52	M	hepatocellular carcinoma	80	67	F	breast carcinoma
39	55	M	hepatocellular carcinoma	81	58	F	breast carcinoma
40	45	M	hepatocellular carcinoma	82	56	F	breast carcinoma
41	49	M	hepatocellular carcinoma	83	38	F	breast carcinoma
42	67	M	hepatocellular carcinoma	84	58	F	breast carcinoma

85	72	F	breast carcinoma	129	60	F	breast carcinoma
86	83	F	breast carcinoma	130	65	F	breast carcinoma
87	64	F	breast carcinoma	131	48	F	breast carcinoma
88	68	F	breast carcinoma	132	55	F	breast carcinoma
89	46	F	breast carcinoma	133	39	F	breast carcinoma
90	39	F	breast carcinoma	134	65	F	breast carcinoma
91	45	F	breast carcinoma	135	67	F	breast carcinoma
92	54	F	breast carcinoma	136	47	F	breast carcinoma
93	47	F	breast carcinoma	137	33	F	breast carcinoma
94	51	F	breast carcinoma	138	60	F	breast carcinoma
95	39	F	breast carcinoma	139	36	F	breast carcinoma
96	49	F	breast carcinoma	140	34	F	non-small-cell lung carcinoma
97	46	F	breast carcinoma	141	70	M	non-small-cell lung carcinoma
98	39	F	breast carcinoma	142	36	F	non-small-cell lung carcinoma
99	42	F	breast carcinoma	143	50	F	non-small-cell lung carcinoma
100	64	F	breast carcinoma	144	71	M	non-small-cell lung carcinoma
101	34	F	breast carcinoma	145	66	M	non-small-cell lung carcinoma
102	35	F	breast carcinoma	146	76	M	non-small-cell lung carcinoma
103	48	F	breast carcinoma	147	53	M	non-small-cell lung carcinoma
104	53	F	breast carcinoma	148	52	M	non-small-cell lung carcinoma
105	65	F	breast carcinoma	149	55	M	non-small-cell lung carcinoma
106	36	F	breast carcinoma	150	68	F	non-small-cell lung carcinoma
107	59	F	breast carcinoma	151	65	F	non-small-cell lung carcinoma
108	51	F	breast carcinoma	152	72	F	non-small-cell lung carcinoma
109	51	F	breast carcinoma	153	26	F	non-small-cell lung carcinoma
110	74	F	breast carcinoma	154	59	M	non-small-cell lung carcinoma
111	72	F	breast carcinoma	155	65	F	non-small-cell lung carcinoma
112	83	F	breast carcinoma	156	60	F	non-small-cell lung carcinoma
113	64	F	breast carcinoma	157	70	M	non-small-cell lung carcinoma
114	68	F	breast carcinoma	158	68	M	non-small-cell lung carcinoma
115	46	F	breast carcinoma	159	69	F	non-small-cell lung carcinoma
116	39	F	breast carcinoma	160	79	M	non-small-cell lung carcinoma
117	45	F	breast carcinoma	161	79	M	non-small-cell lung carcinoma
118	54	F	breast carcinoma	162	45	M	non-small-cell lung carcinoma
119	47	F	breast carcinoma	163	55	M	non-small-cell lung carcinoma
120	51	F	breast carcinoma	164	68	M	non-small-cell lung carcinoma
121	39	F	breast carcinoma	165	68	M	non-small-cell lung carcinoma
122	49	F	breast carcinoma	166	71	M	non-small-cell lung carcinoma
123	46	F	breast carcinoma	167	61	M	non-small-cell lung carcinoma
124	39	F	breast carcinoma	168	52	F	non-small-cell lung carcinoma
125	42	F	breast carcinoma	169	72	M	non-small-cell lung carcinoma
126	64	F	breast carcinoma	170	36	F	non-small-cell lung carcinoma
127	34	F	breast carcinoma	171	59	F	non-small-cell lung carcinoma
128	35	F	breast carcinoma	172	51	F	non-small-cell lung carcinoma

173	67	M	non-small-cell lung carcinoma	207	72	M	hepatocirrhosis
174	60	M	non-small-cell lung carcinoma	208	58	M	hepatocirrhosis
175	55	M	non-small-cell lung carcinoma	209	67	M	hepatocirrhosis
176	45	M	non-small-cell lung carcinoma	210	88	M	hepatocirrhosis
177	82	F	non-small-cell lung carcinoma	211	71	M	hepatocirrhosis
178	59	F	non-small-cell lung carcinoma	212	67	M	hepatocirrhosis
179	71	M	non-small-cell lung carcinoma	213	53	M	hepatocirrhosis
180	79	M	non-small-cell lung carcinoma	214	72	F	hepatocirrhosis
181	66	M	non-small-cell lung carcinoma	215	38	M	hepatocirrhosis
182	47	M	non-small-cell lung carcinoma	216	32	M	hepatitis
183	26	F	non-small-cell lung carcinoma	217	41	M	hepatitis
184	32	F	non-small-cell lung carcinoma	218	66	F	hepatitis
185	33	M	non-small-cell lung carcinoma	219	47	F	hepatitis
186	49	M	non-small-cell lung carcinoma	220	28	F	hepatitis
187	56	F	non-small-cell lung carcinoma	221	29	M	hepatitis
188	32	M	non-small-cell lung carcinoma	222	66	F	hepatitis
189	39	F	non-small-cell lung carcinoma	223	38	M	hepatitis
190	45	M	non-small-cell lung carcinoma	224	21	M	hepatitis
191	66	M	non-small-cell lung carcinoma	225	31	F	hepatitis
192	58	M	non-small-cell lung carcinoma	226	15	F	hepatitis
193	64	F	hepatocirrhosis	227	38	M	hepatitis
194	51	F	hepatocirrhosis	228	51	F	hepatitis
195	57	F	hepatocirrhosis	229	70	M	hepatitis
196	76	M	hepatocirrhosis	230	29	M	hepatitis
197	44	F	hepatocirrhosis	231	44	M	hepatitis
198	53	F	hepatocirrhosis	232	53	F	hepatitis
199	61	M	hepatocirrhosis	233	55	M	hepatitis
200	68	M	hepatocirrhosis	234	37	M	hepatitis
201	81	F	hepatocirrhosis	235	39	M	hepatitis
202	58	F	hepatocirrhosis	236	59	M	hepatitis
203	75	F	hepatocirrhosis	237	35	M	hepatitis
204	56	M	hepatocirrhosis	238	59	F	hepatitis
205	67	M	hepatocirrhosis	239	32	M	hepatitis
206	22	F	hepatocirrhosis				

Table S4. Clinical features of 20 PC patients.

Case No.	Age	Gender	TNM stage	Cancer subtype
1	64	M	IV	pancreatic ductal adenocarcinoma
2	51	M	II	pancreatic ductal adenocarcinoma
3	66	M	III	pancreatic ductal adenocarcinoma
4	73	M	II	pancreatic ductal adenocarcinoma
5	64	M	III	pancreatic ductal adenocarcinoma
6	65	M	II	pancreatic ductal adenocarcinoma
7	63	F	IV	pancreatic ductal adenocarcinoma
8	52	M	IV	pancreatic ductal adenocarcinoma
9	44	F	III	pancreatic ductal adenocarcinoma
10	53	F	III	pancreatic ductal adenocarcinoma
11	54	M	IV	pancreatic ductal adenocarcinoma
12	72	M	II	pancreatic ductal adenocarcinoma
13	71	M	III	pancreatic ductal adenocarcinoma
14	65	M	II	pancreatic ductal adenocarcinoma
15	73	F	IV	pancreatic ductal adenocarcinoma
16	66	M	II	pancreatic ductal adenocarcinoma
17	59	M	III	pancreatic ductal adenocarcinoma
18	77	M	III	pancreatic ductal adenocarcinoma
19	76	F	II	pancreatic ductal adenocarcinoma
20	56	M	III	pancreatic ductal adenocarcinoma

Table S5. Clinicopathologic characteristics of tRF-Pro-AGG-004 and tRF-Leu-CAG-002 expression in cohort 1 (60 PC patients).

		Tissue tRF-Pro-AGG-004		Tissue tRF-Leu-CAG-002	
Characteristics	n	ISH score (Mean±SD)	P Value	ISH score (Mean±SD)	P Value
Sex			0.3835		0.576
Male	35	2.17±1.06		2.57±1.1	
Female	25	2.44±1.1		2.4 ± 1.09	
Age(years)			0.9129		0.8256
<Median(66.5)	30	2.3±1.08		2.53±1.08	
≥Median(66.5)	30	2.27±1.08		2.47±1.08	

Table S6. Clinicopathologic characteristics of tRF-Pro-AGG-004 and tRF-Leu-CAG-002 expression in cohort 2 (75 PC patients).

Tissue tRF-Pro-AGG-004				Tissue tRF-Leu-CAG-002	
Characteristics	n	ISH score (Mean±SD)	<i>P</i> Value	ISH score (Mean±SD)	<i>P</i> Value
Sex			0.1218		0.9158
Male	49	2.36±1.16		3.23±0.91	
Female	26	2.81±1.23		3.21± 1.06	
Age(years)			0.2955		0.6837
<Median(62)	36	2.36±1.2		3.18±1.03	
≥Median(62)	39	2.65±1.19		3.27±0.9	

Table S7. tRF-Pro-AGG-004 pathway enrichment analysis.

Pathwayenrichment analysis				
SourceDB	Term.id	Term.name	Intersection	P value
Gene Ontology	GO:0048747	muscle fiber development	TTN/OBSL1/HDAC4/KLHL40/GPX1/HDAC9/FLN C/SMO/BIN3/NEBL/MYOM1/AFG3L2/MYBPC2	2.88E-07
Gene Ontology	GO:0055002	striated muscle cell development	OBSCN/ACTN2/TTN/OBSL1/HDAC4/KLHL40/GP X1/BVES/HDAC9/FLNC/SMO/BIN3/ADRA1A/NE BL/SIX4/ALPK3/MYH10/MYOM1/AFG3L2/MYBP C2	2.34E-06
Gene Ontology	GO:0050650	chondroitin sulfate proteoglycan biosynthetic process	B3GALT6/BCAN/B3GAT2/DSE/CHST12/CHST3/C HST9/NCAN	4.99E-06
Gene Ontology	GO:0055001	muscle cell development	OBSCN/ACTN2/TTN/OBSL1/HDAC4/KLHL40/GP X1/BVES/HDAC9/FLNC/SMO/BIN3/ADRA1A/NE BL/SIX4/ALPK3/MYH10/MYOM1/AFG3L2/MYBP C2	6.97E-06
Gene Ontology	GO:0050654	chondroitin sulfate proteoglycan metabolic process	B3GALT6/BCAN/ARSB/B3GAT2/DSE/CHST12/C HST3/CHST9/NCAN	1.12E-05
Gene Ontology	GO:0098742	cell-cell adhesion via plasma-membrane adhesion molecules	CNTN2/NECTIN3/CLSTN2/ADGRL3/PCDHGB1/P CDHGB2/PCDHGA7/CLDN12/PTPRD/NTNG2/FA T3/APOA1/DSCAML1/ROBO3/MAP2K5/CDH15/ MAPK7/DSC1/MBP/ADGRL1/LRFN3/CDH22/CEL SR1/PLXNB3	1.32E-05
Gene Ontology	GO:0030206	chondroitin sulfate biosynthetic process	B3GALT6/BCAN/DSE/CHST12/CHST3/CHST9/ NCAN	1.52E-05
Gene Ontology	GO:0007266	Rho protein signal transduction	CNKSR1/ARHGEF2/OBSCN/ARHGEF4/FARP2/T RIO/COL1A2/ADRA1A/DNMBP/ARHGEF17/APO A1/SPATA13/SPATA13/MCF2L/RASGRF1/ARHGE F18/ARHGEF1/EPS8L1/CDC42EP1/CELSR1	3.16E-05
Gene Ontology	GO:0030204	chondroitin sulfate metabolic process	B3GALT6/BCAN/ARSB/DSE/CHST12/CHST3/CH ST9/NCAN	3.53E-05
Gene Ontology	GO:0035023	regulation of Rho protein signal transduction	ARHGEF2/OBSCN/ARHGEF4/FARP2/TRIO/ADR A1A/DNMBP/ARHGEF17/APOA1/SPATA13/SPAT A13/MCF2L/RASGRF1/ARHGEF18/ARHGEF1/EP S8L1	4.06E-05
KEGG	hsa04972	Pancreatic secretion	CELA3B/ATP1A2/TRPC1/PLA2G12A/ITPR3/ADC Y1/CFTR/SLC4A2/RAP1B/PLCB2/ADCY7/ATP1A 3/GNAS	8.48E-05
KEGG	hsa04934	Cushing syndrome	TCF7L1/TCF7/ITPR3/ADCY1/TCF7L2/KMT2A/RA P1B/PLCB2/USP8/ARMC5/ADCY7/AIPL1/DVL2/ AXIN2/APC2/GNAS	0.000174
KEGG	hsa04724	Glutamatergic synapse	PPP3R1/GRM2/TRPC1/ITPR3/ADCY1/GRM3/GRK 2/SLC38A1/PLCB2/JMJD7/PLA2G4B/GNB5/ADC Y7/GNAS	0.000265
KEGG	hsa04726	Serotonergic synapse	TRPC1/KCNN2/DUSP1/ITPR3/KCND2/HTR5A/TP H1/KCNJ5/PLCB2/JMJD7/PLA2G4B/GNB5/GNAS/ MAOB	0.000289
KEGG	hsa04390	Hippo signaling pathway	PRKCZ/TCF7L1/GLI2/WWTR1/DLG1/TCF7/PPP2 CA/SCRIB/TCF7L2/TEAD4/DVL2/AXIN2/SMAD2 /APC2/WTIP	0.000635
KEGG	hsa05165	Human papillomavirus infection	PRKCZ/COL9A2/TCF7L1/STAT1/DLG1/TCF7/PPP 2CA/COL1A2/HEY1/SCRIB/IFNA13/IFNA1/TCF7 L2/ATM/ITGA7/TRAF3/UBE3A/DVL2/AXIN2/SLC 9A3R1/APC2/AKT2/GNAS/IKBKG	0.001049
KEGG	hsa05225	Hepatocellular carcinoma	TCF7L1/TCF7/ARID1B/TCF7L2/IGF2/IGF1R/DVL 2/AXIN2/SMAD2/APC2/KEAP1/SMARCA4/DPF1/ AKT2/TXNRD2	0.001278
KEGG	hsa04918	Thyroid hormone synthesis	ATP1A2/GPX1/ITPR3/ADCY1/GPX2/PLCB2/ADC Y7/ATP1A3/GNAS	0.001467
KEGG	hsa04971	Gastric acid secretion	ATP1A2/ITPR3/ADCY1/CFTR/SLC4A2/PLCB2/AD CY7/ATP1A3/GNAS	0.001774
KEGG	hsa05217	Basal cell carcinoma	TCF7L1/GLI2/TCF7/SMO/TCF7L2/DVL2/AXIN2/ APC2	0.002021

Table S8. tRF-Leu-CAG-002 pathway enrichment analysis.

Pathway enrichment analysis				
SourceDB	Term.id	Term.name	Intersection	P value
Gene Ontology	GO:0072665	protein localization to vacuole	VPS13D/LAMTOR5/MON1A/SORL1/VPS4A/GGA3/TRAPPC8/CACNG7	4.64E-05
Gene Ontology	GO:0023061	signal release	KCNC4/ILDR2/SOX11/KLF7/PASK/WNT7A/CACNA2D2/CYB5R4/OPRM1/ADRA1A/NRXN2/PDX1/CYP19A1/EXOC3L1/SREBF1/GIT1/RASL10B/FBXL20/BRSK1/IL11/CHRNA4/PLA2G6/CDK16	0.000175
Gene Ontology	GO:1903522	regulation of blood circulation	GSTM2/CACNA1S/CACNA2D2/HRH2/PLN/ADRA1A/KCNE3/SCN4B/SCN3B/HCN4/ATP2A1/SREBF1/TBX2/ACE/SPTBN4/CACNG7/FGF13	0.000176
Gene Ontology	GO:0008016	regulation of heart contraction	GSTM2/CACNA1S/CACNA2D2/PLN/ADRA1A/KCNE3/SCN4B/SCN3B/HCN4/ATP2A1/SREBF1/TBX2/SPTBN4/CACNG7/FGF13	0.000227
Gene Ontology	GO:0051651	maintenance of location in cell	RER1/VPS13D/ARHGAP21/HK1/SORL1/ATP2A1/SPTBN4/TMSB15B	0.000556
Gene Ontology	GO:0060047	heart contraction	GSTM2/CACNA1S/CACNA2D2/PLN/ADRA1A/KCNE3/SCN4B/SCN3B/HCN4/ATP2A1/SREBF1/TBX2/ACE/SPTBN4/CACNG7	0.00074
Gene Ontology	GO:0003014	renal system process	CD34/HYAL2/AQP1/ADRA1A/KCNMA1/ADCY6/CORO2B/COMT/BCR	0.000867
Gene Ontology	GO:0061337	cardiac conduction	CACNA1S/CACNA2D2/PLN/KCNE3/SCN4B/SCN3B/HCN4/ATP2A1/SPTBN4/CACNG7	0.000918
Gene Ontology	GO:0061462	protein localization to lysosome	LAMTOR5/SORL1/VPS4A/GGA3/CACNG7	0.000981
Gene Ontology	GO:0003015	heart process	GSTM2/CACNA1S/CACNA2D2/PLN/ADRA1A/KCNE3/SCN4B/SCN3B/HCN4/ATP2A1/SREBF1/TBX2/ACE/SPTBN4/CACNG7	0.001041
KEGG	hsa04614	Renin-angiotensin system	PREP/MAS1/ACE	0.014548
KEGG	hsa00592	alpha-Linolenic acid metabolism	PLA2G4B/ACOX1/PLA2G6	0.018281
KEGG	hsa04514	Cell adhesion molecules (CAMs)	CD34/PDCD1/TIGIT/NRXN2/SPN/GLG1/COSLG/CLDN5	0.019145
KEGG	hsa04924	Renin secretion	CACNA1S/AQP1/KCNMA1/ADCY6/ACE	0.019815
KEGG	hsa04261	Adrenergic signaling in cardiomyocytes	CACNA1S/CACNA2D2/PLN/ADRA1A/SCN4B/ADCY6/ATP2A1/CACNG7	0.019853
KEGG	hsa05414	Dilated cardiomyopathy (DCM)	CACNA1S/CACNA2D2/PLN/ADCY6/ATP2A1/CACNG7	0.021596
KEGG	hsa00564	Glycerophospholipid metabolism	ACHE/PLPP5/PLA2G4B/PCYT2/PLD3/PLA2G6	0.023638
KEGG	hsa04270	Vascular smooth muscle contraction	CACNA1S/PPP1R12B/ADRA1A/KCNMA1/ADCY6/PLA2G4B/PLA2G6	0.030249
KEGG	hsa00480	Glutathione metabolism	GSTM4/GSTM2/GSTM5/IDH2	0.037677
KEGG	hsa05210	Colorectal cancer	RALB/RALA/TGFBR1/AXIN2/BBC3	0.045323