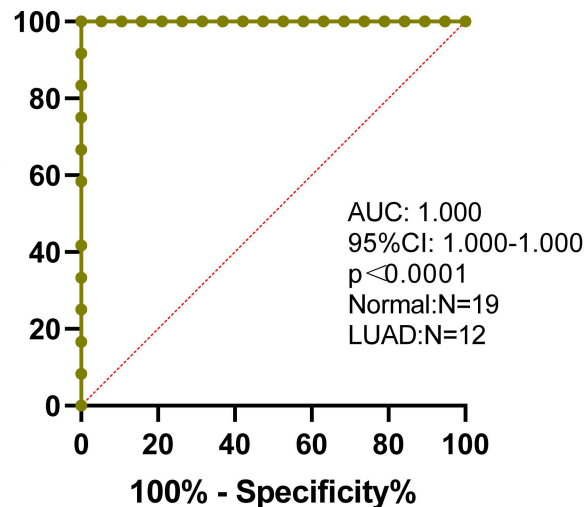
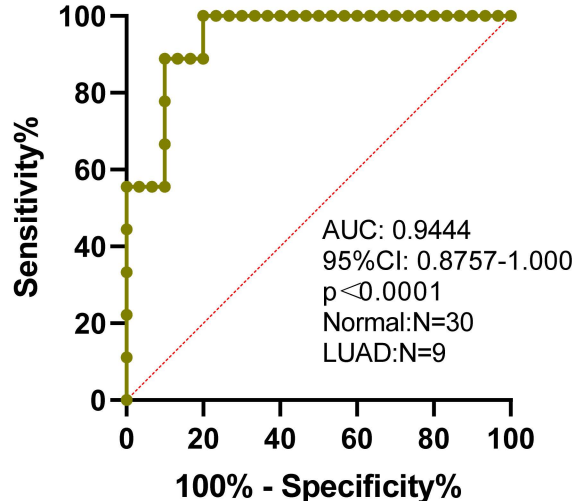
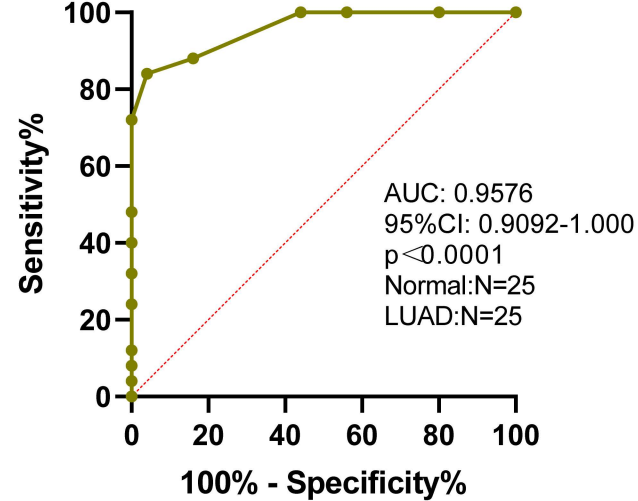
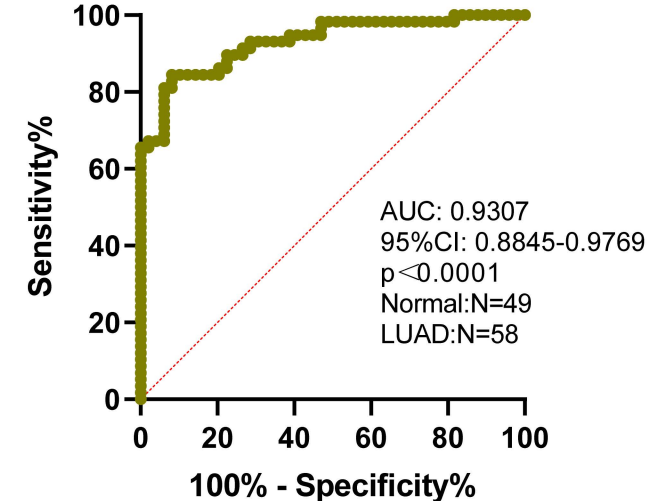
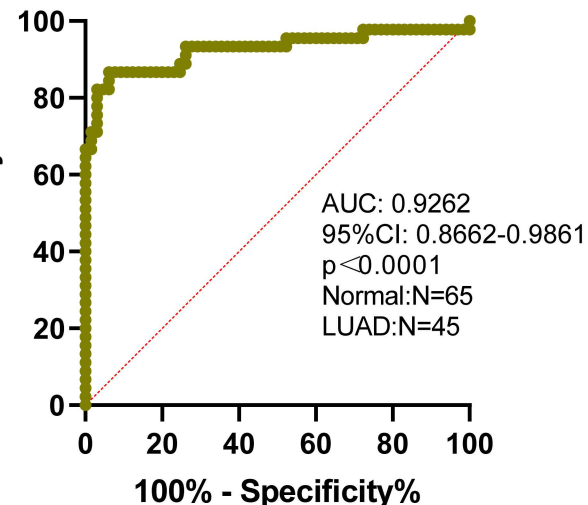
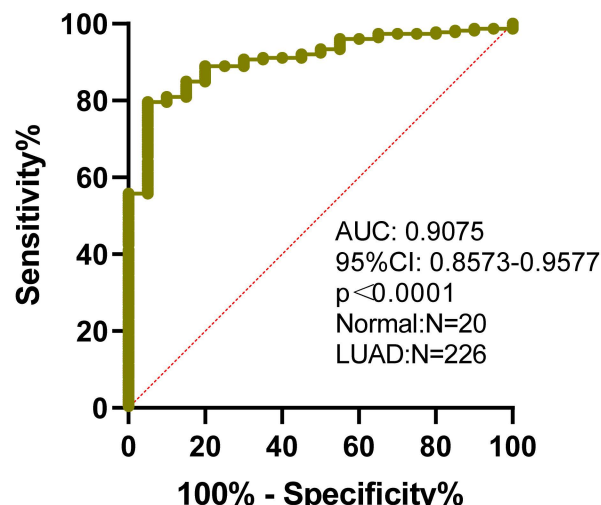
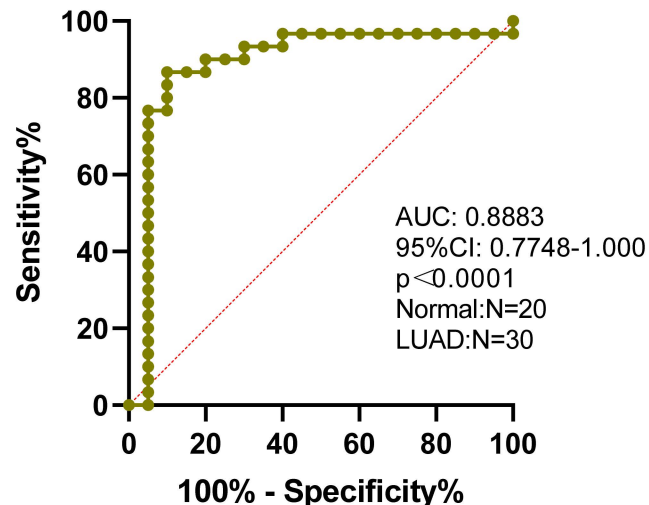
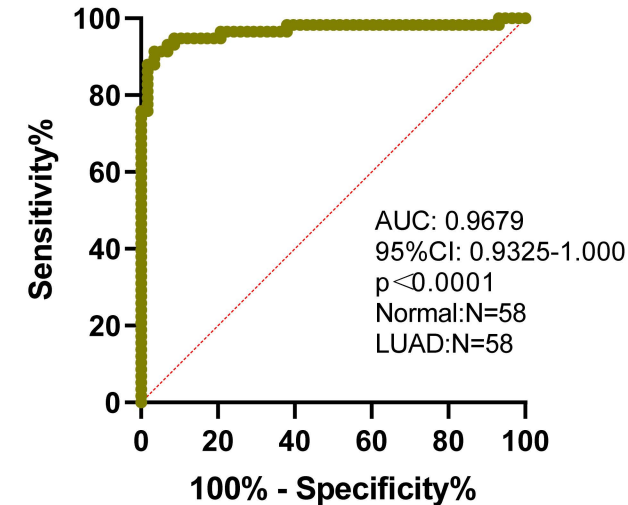
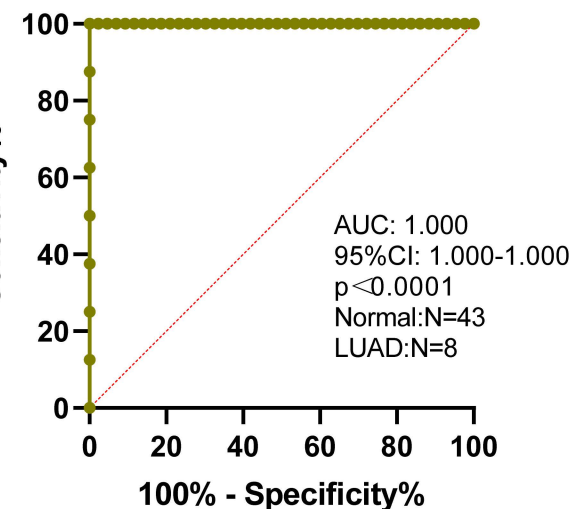
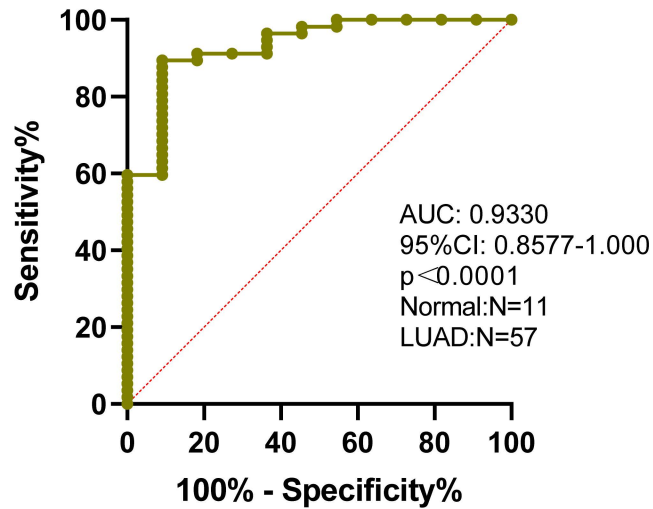
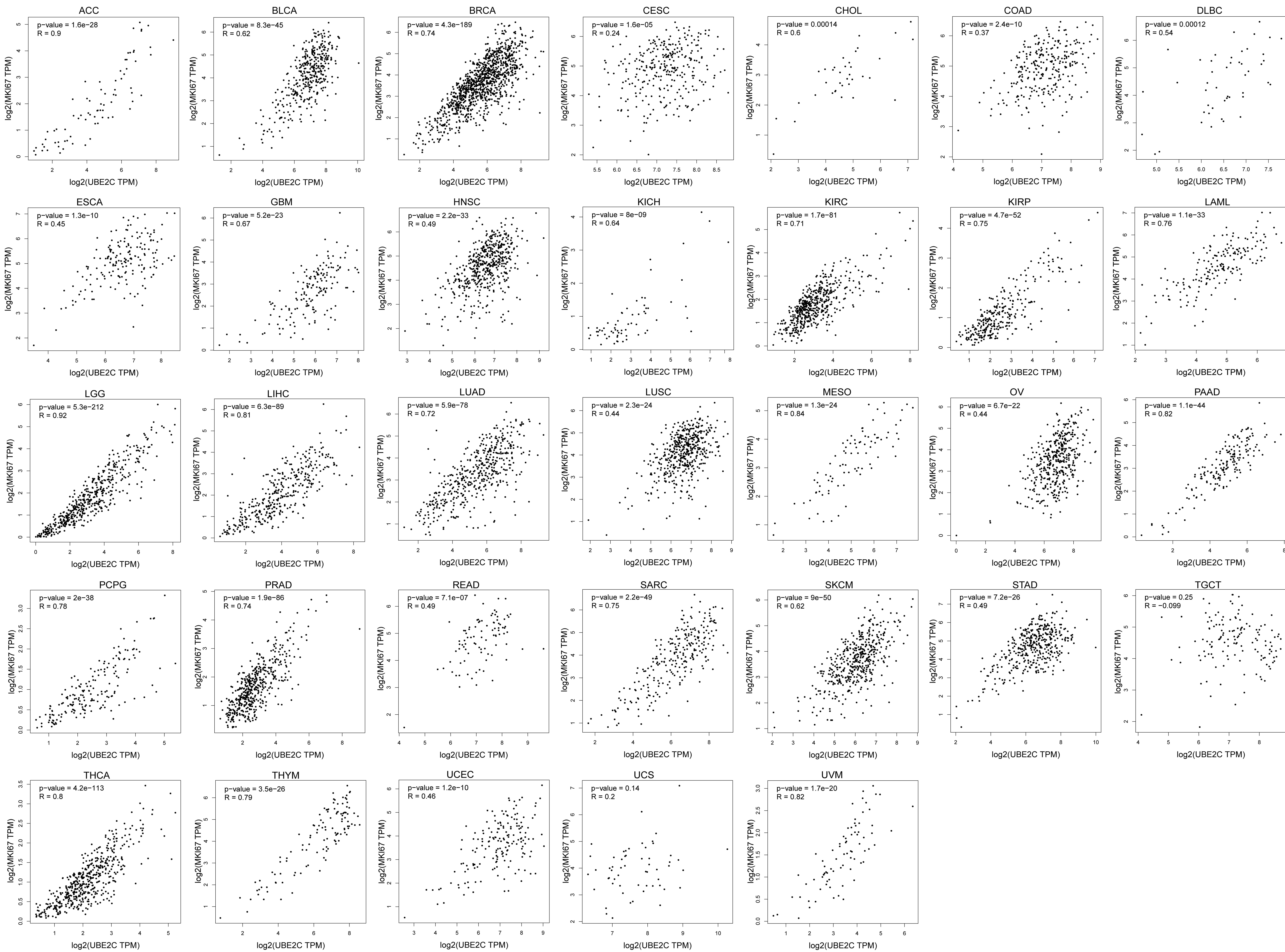


Supplementary Figure1 Receiver operating characteristic (ROC) curve analysis between LUAD patients and healthy control of the expression of UBE2C from GEO databases.

Supplementary Figure2 The scatter plots for correlation analysis of Ki67 and UBE2C expression in pan-cancer.

GSE1037**GSE2088****GSE7670****GSE10072****GSE19188****GSE31210****GSE31908****GSE32863****GSE40275****GSE116959**



Supplementary Table 1 The mRNA expression of cell cycle and apoptosis related genes correlated with UBE2C in LUAD

Cell cycle-related genes			Apoptosis-related genes		
Gene	R	<i>p</i>	Gene	R	<i>p</i>
CDC45	0.53	0	ACTG1	0.32	1.00E-12
_CDT1	0.5	0	BIRC5	0.82	8.30E-120
DBF4	0.59	0	CASP2	0.34	7.00E-15
DBF4B	0.5	0	CASP3	0.25	2.00E-08
MCM2	0.53	0	DFFA	-0.37	3.00E-17
MCM4	0.53	0	FOS	-0.38	1.40E-17
MCM6	0.54	0	GZMB	0.41	2.80E-21
MCM7	0.54	0	ITPR1	-0.33	9.00E-14
MTBP	0.54	0	LMNB1	0.66	1.40E-62
ORC6	0.58	0	LMNB2	0.63	8.40E-56
RBL1	0.5	0	MAP2K2	0.25	4.10E-08
CCNB1	0.64	0	MAPK8	0.24	1.70E-07
CCNB2	0.6	0	PARP1	0.26	4.00E-09
AURKB	0.86	9.30E-142	PARP2	0.44	2.60E-24
CDCA5	0.82	1.10E-118	PTPN13	-0.36	8.40E-16
ESCO2	0.61	8.00E-50	TRADD	-0.24	5.90E-08
SGO1	0.81	3.30E-111	PMAIP1	0.4	2.10E-20
CCNA2	0.81	3.50E-111	DFFA	0.3	1.70E-11
CDC20	0.86	6.50E-145	ACTB	0.3	7.90E-12
CDC25A	0.75	5.40E-87	ERN1	-0.22	6.20E-07
CDC25C	0.62	0.00E+00	FADD	0.23	4.50E-07
CDK1	0.8	1.80E-109	GADD45G	-0.2	1.40E-05
CDK2	0.57	7.90E-44	ITPR2	0.21	2.60E-06
CDK4	0.53	3.00E-36	PARP3	-0.24	8.30E-08
CHEK1	0.75	6.90E-89	PARP4	-0.24	6.10E-08
CHEK2	0.59	8.30E-46	PDPK1	-0.22	1.60E-06
FBXO5	0.7	1.10E-71	MAPK10	-0.45	2.40E-25
PCNA	0.59	9.50E-47			
PKMYT1	0.73	4.90E-80			
PLK1	0.79	1.30E-103			
PRKDC	0.5	1.40E-31			
SKP2	0.6	4.50E-48			
ESPL1	0.58	0			
CDK1	0.53	0			

Supplementary Table 2 Correlation between the expression of UBE2C and specific immune infiltration cell markers in lung adenocarcinoma based on TIMER and GEPIA2 database.

Description	Gene markers	TIMER		GEPIA2	
		R	p	R	p
CD8+ T cell	CD8A	0.162	3.20E-04	0.16	0.00031
	IL2RA	0.195	1.27E-05	0.15	0.00072
	CD8B	0.168	1.83E-04	0.14	0.0019
T cell (general)	CD3D	0.054	2.32E-01	0.034	0.45
	CD3E	0.024	5.96E-01	-0.045	0.32
	CD2	0.026	5.66E-01	-0.044	0.33
B cell	CD19	0.065	1.47E-01	-0.066	0.15
	MS4A1	0.189	2.30E-05	-0.18	4.60E-05
	CD79A	0.075	9.44E-02	-0.11	0.015
Monocyte	CD86	0.06	1.80E-01	0.027	0.55
	CD14	0.101	2.43E-02	0.066	0.14
	CD33	0.167	1.91E-04	-0.16	0.00052
TAM	CD115 (CSF1R)	0.072	1.13E-01	-0.085	0.061
	CCL2	0.086	5.62E-02	0.067	0.14
	CD68	0.016	7.16E-01	-0.045	0.33
M0 Macrophage	IL10	0.011	8.13E-01	0.00051	0.99
	CD206(MRC1)	0.229	2.85E-07	-0.24	1.50E-07
	EFEMP2	0.047	3.02E-01	-0.013	0.77
M1 Macrophage	CD163	0.032	4.77E-01	0.08	0.078
	INOS (NOS2)	0.037	4.17E-01	0.068	0.13
	IRF5	0.079	7.84E-02	0.073	0.11
M2 Macrophage	COX2(PTGS2)	0.011	8.05E-01	0.027	0.56
	VSIG4	0.045	3.14E-01	-0.058	0.2
	MRC1	0.229	2.85E-07	-0.24	1.50E-07
Neutrophils	CD209	0.073	1.04E-01	0.04	0.38
	MS4A4A	0.068	1.32E-01	-0.091	0.045
	CD66b (CEACAM8)	0.369	2.57E-17	-0.39	3.80E-19
Natural killer cell	CD11b (ITGAM)	0.079	7.87E-02	-0.12	0.0087
	B3GAT1	0.249	2.19E-08	-0.23	3.80E-07
	KIR3DL1	0.023	6.04E-01	0.13	0.0043
Natural killer cell	CD7	0.284	1.28E-10	0.24	1.20E-07
	CCR7	0.195	1.29E-05	-0.18	5.80E-05
	KIR2DL1	0.084	6.20E-02	0.073	1.10E-01
	KIR2DL3	0.188	2.53E-05	0.16	3.30E-04
	KIR2DL4	0.418	3.18E-22	0.39	3.30E-19
	KIR3DL1	0.105	1.98E-02	0.13	4.30E-03
	KIR3DL2	0.169	1.56E-04	0.11	1.80E-02
KIR3DL3	0.203	5.48E-06	0.19	3.40E-05	
	B3GAT1	0.249	2.19E-08	-0.23	3.80E-07

	CD7	0.284	1.28E-10	0.24	1.20E-07
	KIR2DS4	0.118	8.58E-03	0.11	1.20E-02
	HLA-DPB1	-0.349	1.37E-15	-0.32	7.00E-13
Dendritic cell	HLA-DQB1	-0.235	1.38E-07	-0.18	7.40E-05
	HLA-DRA	-0.281	2.17E-10	-0.27	8.10E-10
	HLA-DPA1	-0.292	3.53E-11	-0.28	4.60E-10
	BDCA-1(CD1C)	-0.462	2.16E-27	-0.44	7.50E-24
	BDCA-4(NRP1)	0.012	7.89E-01	-0.0077	8.70E-01
	THBD	-0.281	2.09E-10	-0.28	4.20E-10
	CD11c (ITGAX)	0.01	8.24E-01	-0.0034	9.40E-01
	T-bet (TBX21)	0.066	1.45E-01	0.036	4.40E-01
Th1	STAT4	-0.063	1.65E-01	-0.05	2.70E-01
	STAT1	0.355	4.54E-16	0.33	1.70E-13
	IFN- γ (IFNG)	0.332	3.49E-14	0.29	1.10E-10
	CCR5	0.032	4.80E-01	-0.018	7.00E-01
	CCR1	0.039	3.93E-01	0.017	7.10E-01
	IL12RB1	0.05	2.71E-01	0.016	7.30E-01
	TNF- α (TNF)	0.035	4.33E-01	0.022	6.30E-01
	GATA3	0.033	4.59E-01	0.025	5.90E-01
Th2	STAT6	-0.308	2.86E-12	-0.26	1.10E-08
	STAT5A	-0.075	9.46E-02	-0.086	5.80E-02
	CCR8	0.008	8.59E-01	-0.016	7.20E-01
	HAVCR1	-0.093	3.88E-02	-0.12	1.00E-02
	CCR4	-0.24	6.98E-08	-0.25	3.50E-08
	IL13	-0.005	9.09E-01	-0.066	1.50E-01
	CXCR5	-0.106	1.89E-02	0.0026	9.60E-01
Tfh	ICOS	0.061	1.75E-01	0.033	4.70E-01
	BCL6	-0.129	4.20E-03	-0.12	9.60E-03
	CXCR3	0.089	4.81E-02	0.059	1.90E-01
	IL21	0.183	4.34E-05	0.16	4.60E-04
	STAT3	-0.201	6.76E-06	-0.19	2.30E-05
Th17	IL21R	0.102	2.37E-02	0.058	2.00E-01
	IL23R	-0.176	8.88E-05	-0.19	2.20E-05
	CCR6	-0.398	3.62E-20	-0.37	3.90E-17
	IL17A	0.117	9.54E-03	0.11	1.20E-02
	FOXP3	0.071	1.14E-01	0.063	1.70E-01
Treg	NT5E	-0.091	4.40E-02	-0.089	4.90E-02
	IL7R	-0.161	3.42E-04	-0.15	1.40E-03
	CCR8	0.008	8.59E-01	-0.016	7.20E-01
	STAT5B	-0.101	2.45E-02	-0.11	1.50E-02
	TGF β (TGFB1)	-0.072	1.12E-01	-0.039	3.90E-01
	PD-1 (PDCD1)	0.247	2.89E-08	0.2	1.60E-05
T cell exhaustion	CTLA4	0.143	1.41E-03	0.093	4.10E-02
	LAG3	0.309	2.16E-12	0.28	6.50E-10

TIM-3 (HAVCR2)	0.046	3.06E-01	0.027	5.60E-01
GZMB	0.472	9.88E-29	0.41	2.80E-21
PDL1(CD274)	0.234	1.55E-07	0.22	7.50E-07
