

**SUPPLEMENTARY TABLES**

**Supplementary Table 1. Correlation analysis between FARSB and gene markers of different types of immune cells in TIMER.**

Description	Gene markers	LIHC			
		None		Purity	
		Cor	p	Cor	p
B cell	CD19	0.104214404	<b>0.044855959</b>	0.123222275	<b>0.022069116</b>
	CD79A	0.009098784	0.86134116	0.065729874	0.223313419
T cell (general)	CD3D	0.13202331	<b>0.010911543</b>	0.193218367	<b>0.000306289</b>
	CD3E	0.074806543	0.150425802	0.148842776	<b>0.005604865</b>
CD8+ T cell	CD2	0.07630841	0.14238052	0.14759635	<b>0.00602185</b>
	CD8A	0.054612411	0.294112414	0.10771003	<b>0.045588474</b>
Monocyte	CD8B	0.051108027	0.326232917	0.103877546	0.053898025
	CD86	0.227902052	<b>9.28E-06</b>	0.321041521	<b>1.04E-09</b>
TAM	CSF1R	0.170413981	<b>0.000982587</b>	0.261877949	<b>8.10E-07</b>
	CCL2	0.015387735	0.767683732	0.050524718	0.349455066
M1	CD68	0.198041898	<b>0.000123143</b>	0.260232284	<b>9.55E-07</b>
	IL10	0.19351693	<b>0.000176601</b>	0.263417657	<b>6.94E-07</b>
M2	IRF5	0.342494465	<b>1.20E-11</b>	0.330257517	<b>3.19E-10</b>
	PTGS2	0.089488535	0.085194697	0.162138779	<b>0.002522109</b>
Neutrophils	CD163	0.098560307	0.057878166	0.167432815	<b>0.00180423</b>
	VSIG4	0.103983914	<b>0.045334034</b>	0.170437314	<b>0.001485386</b>
Natural killer cell	MS4A4A	0.107166481	<b>0.039098229</b>	0.190328312	<b>0.000378108</b>
	CEACAM8	0.092546723	0.075013287	0.105631942	<b>0.04994983</b>
Dendritic cell	ITGAM	0.199818359	<b>0.000106654</b>	0.247485138	<b>3.28E-06</b>
	CCR7	-0.026760543	0.607393841	0.037815831	0.483865369
Dendritic cell	KIR2DL1	-0.061006804	0.24111643	-0.10800702	<b>0.044992072</b>
	KIR2DL3	0.05578367	0.283864589	0.077370512	0.151564189
Dendritic cell	KIR2DL4	0.090469125	0.081815425	0.104520449	0.052422101
	KIR3DL1	0.01425062	0.784412039	0.02654771	0.623144373
Dendritic cell	KIR3DL2	0.014435604	0.781683719	0.033815727	0.531315741
	KIR3DL3	-0.016457936	0.75203749	-0.025692059	0.63439114
Dendritic cell	HLA-DPB1	0.090507764	0.08168452	0.141637667	<b>0.008424901</b>
	HLA-DQB1	0.082969641	0.110607787	0.133072072	<b>0.013370518</b>
Dendritic cell	HLA-DRA	0.106968143	<b>0.039464442</b>	0.167836695	<b>0.001758002</b>
	HLA-DPA1	0.090221537	0.082658262	0.151197369	<b>0.004887274</b>
Dendritic cell	CD1C	0.107998249	<b>0.037593588</b>	0.154559938	<b>0.004005652</b>
	NRP1	0.341150496	<b>1.45E-11</b>	0.36117892	<b>4.54E-12</b>
Dendritic cell	ITGAX	0.255023667	<b>6.42E-07</b>	0.338787898	<b>1.03E-10</b>

Supplementary Table 2. Correlation analysis between FARSB and gene markers of different types of T cells in TIMER.

Description	Gene markers	LIHC			
		None		Purity	
		Cor	p	Cor	p
Th1	TBX21	0.027399618	0.598838329	0.076901146	0.154069672
	STAT4	0.080902958	0.119804803	0.111209167	<b>0.038967497</b>
	STAT1	0.33446271	<b>3.80E-11</b>	0.367536869	<b>1.79E-12</b>
	TNF	0.203474714	<b>7.90E-05</b>	0.291471837	<b>3.50E-08</b>
	IFNG	0.109722286	<b>0.034630629</b>	0.157165131	<b>0.003424378</b>
Th1-like	HAVCR2	0.219261558	<b>2.04E-05</b>	0.317018555	<b>1.71E-09</b>
	IFNG	0.109722286	<b>0.034630629</b>	0.157165131	<b>0.003424378</b>
	CXCR3	0.086112846	0.09769529	0.132382119	<b>0.013862588</b>
Th2	BHLHE40	0.084198559	0.105408017	0.091420974	0.089988453
	CD4	0.069225712	0.183360684	0.106725932	<b>0.047612294</b>
	STAT6	0.238593057	<b>3.36E-06</b>	0.236723394	<b>8.82E-06</b>
Treg	STAT5A	0.223716648	<b>1.36E-05</b>	0.248232305	<b>3.05E-06</b>
	FOXP3	0.002835359	0.956593623	0.031934105	0.55442141
	CCR8	0.269570005	<b>1.34E-07</b>	0.331493275	<b>2.71E-10</b>
Tfh	TGFB1	0.227853526	<b>9.32E-06</b>	0.299185418	<b>1.45E-08</b>
	BCL6	0.288111274	<b>1.60E-08</b>	0.293088647	<b>2.92E-08</b>
	CXCR5	0.09887179	0.057087145	0.171443675	<b>0.001390734</b>
Th17	STAT3	0.119264959	<b>0.021581149</b>	0.145202592	<b>0.006901458</b>
	IL17A	0.039882134	0.443737788	0.036839617	0.495230296
Resting Treg	FOXP3	0.002835359	0.956593623	0.031934105	0.55442141
	IL2RA	0.194934962	<b>0.000157871</b>	0.286485447	<b>6.10E-08</b>
	FOXP3	0.002835359	0.956593623	0.031934105	0.55442141
Effector Treg T-cell	CCR8	0.269570005	<b>1.34E-07</b>	0.331493275	<b>2.71E-10</b>
	TNFRSF9	0.254961042	<b>6.46E-07</b>	0.319365353	<b>1.28E-09</b>
	CX3CR1	0.184229114	<b>0.000360942</b>	0.210621573	<b>8.07E-05</b>
Effector T-cell	FGFBP2	-0.042022031	0.419651109	-0.044003761	0.415208552
	FCGR3A	0.160675109	<b>0.001905542</b>	0.206903301	<b>0.000108354</b>
Naïve T-cell	CCR7	-0.026760543	0.607393841	0.037815831	0.483865369
	SELL	0.144842055	<b>0.005186843</b>	0.206638327	<b>0.000110629</b>
	DUSP4	0.251501177	<b>9.25E-07</b>	0.331074964	<b>2.87E-10</b>
Effector memory T-cell	GZMK	-0.038247325	0.462657278	0.011063177	0.837767547
	GZMA	-0.028474848	0.584568099	0.012693592	0.814265555
	CD69	0.048514706	0.351411615	0.107365516	<b>0.046288607</b>
Resident memory T-cell	CXCR6	0.048757811	0.34900051	0.114055716	<b>0.034198995</b>
	MYADM	0.381063361	<b>2.87E-14</b>	0.417125963	<b>5.90E-16</b>
General	CCR7	-0.026760543	0.607393841	0.037815831	0.483865369
Memory T-cell	SELL	0.144842055	<b>0.005186843</b>	0.206638327	<b>0.000110629</b>
	IL7R	0.057227702	0.2715653	0.122670126	<b>0.022676564</b>
	HAVCR2	0.219261558	<b>2.04E-05</b>	0.317018555	<b>1.71E-09</b>
Exhausted T-cell	LAG3	0.116249475	<b>0.025145259</b>	0.138354618	<b>0.010085575</b>
	CXCL13	0.035933406	0.490185659	0.076175696	0.158003611
	LAYN	0.168927859	<b>1.09E-03</b>	0.201609819	<b>1.63E-04</b>