



Figure S1 Heatmap showed the enrichment score of 15 immune-related pathways in three subtypes.

**Table S1** A list of 50 Gln-associated lncRNAs

Gene	Cor	P
<i>AC005261.1</i>	-0.274869	1.36E-08
<i>AC005332.4</i>	-0.343439	7.08E-13
<i>AC007996.1</i>	-0.263608	5.41E-08
<i>AC008393.1</i>	-0.287431	2.69E-09
<i>AC008875.3</i>	-0.389307	2.22E-16
<i>AC012146.1</i>	0.2625981	6.10E-08
<i>AC016747.1</i>	0.3411348	1.03E-12
<i>AC092747.4</i>	-0.325395	1.22E-11
<i>AC093157.1</i>	0.2671877	3.51E-08
<i>AC103740.1</i>	0.2705032	2.34E-08
<i>AC114776.1</i>	0.3507564	2.12E-13
<i>AC245297.2</i>	-0.257104	1.17E-07
<i>AL031985.3</i>	0.2592027	9.13E-08
<i>AL158206.1</i>	-0.340153	1.21E-12
<i>AL355987.4</i>	-0.296592	7.84E-10
<i>AL365181.3</i>	0.296473	7.97E-10
<i>AL365203.2</i>	0.2527365	1.94E-07
<i>AL445524.1</i>	0.2710701	2.18E-08
<i>AL450998.2</i>	-0.252114	2.08E-07
<i>AL606760.1</i>	0.266554	3.79E-08
<i>AP000766.1</i>	-0.444352	0
<i>AP000813.1</i>	-0.284419	3.99E-09
<i>AP002840.2</i>	-0.257234	1.15E-07
<i>BISPR</i>	-0.273768	1.56E-08
<i>CERS6-AS1</i>	0.2989965	5.64E-10
<i>CRNDE</i>	0.3256028	1.18E-11
<i>CRYZL2P-SEC16B</i>	0.3245427	1.39E-11
<i>EIF3J-DT</i>	-0.391705	0
<i>EPB41L4A-DT</i>	-0.259653	8.66E-08
<i>FAM111A-DT</i>	-0.272276	1.88E-08
<i>FAM13A-AS1</i>	-0.264626	4.78E-08
<i>FAM27C</i>	0.2968756	7.54E-10
<i>GABPB1-IT1</i>	-0.28285	4.90E-09
<i>GIHCG</i>	0.2753763	1.27E-08
<i>HEIH</i>	-0.268778	2.89E-08
<i>INTS6-AS1</i>	-0.316013	4.97E-11
<i>LINC00847</i>	-0.31915	3.12E-11
<i>LINC00893</i>	-0.327327	9.06E-12
<i>LINC00963</i>	0.263745	5.32E-08
<i>LINC00992</i>	0.2898783	1.94E-09
<i>LINC00996</i>	-0.29173	1.52E-09
<i>OIP5-AS1</i>	-0.258787	9.59E-08
<i>PAN3-AS1</i>	-0.278657	8.40E-09
<i>PCAT6</i>	0.2715488	2.05E-08
<i>PSMA3-AS1</i>	-0.404679	0
<i>RAD51-AS1</i>	-0.277301	9.98E-09
<i>SCAMP1-AS1</i>	-0.328556	7.50E-12
<i>SP2-AS1</i>	0.302742	3.35E-10
<i>TMEM99</i>	0.3471879	3.83E-13
<i>TUG1</i>	-0.267831	3.24E-08

Gln, glutamine; lncRNA, long non-coding RNA.