**Supplementary Table S1. The statistical significance of survival analysis for the three downregulated lncRNAs**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **gene** | **DE.Pvalue** | **log2FC** | **DE.padj** | **log2HR** | **HR** | **se(HR)** | **Zscore** | **log-rank.Pvalue** |
| CTD-2284J15.1 | 1.37E-12 | -1.27 | 7.48E-10 | -0.13 | 0.92 | 0.07 | -1.83 | 6.79E-02 |
| RP11-612B6.2 | 1.58E-12 | -1.34 | 8.18E-10 | -0.10 | 0.93 | 0.06 | -1.71 | 8.68E-02 |
| RP4-601P9.2 | 2.86E-12 | -4.49 | 1.26E-09 | -0.03 | 0.98 | 0.02 | -1.73 | 8.40E-02 |

**Supplementary Table S2. The expression levels of six prognostic lncRNAs in the six pairs of HCC and non-tumor tissues.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene** | **Sample** | **Raw** | **Normalized** |
| LINC01134 | control 1 | 1.0038581 | 0.124347195 |
| LINC01134 | sample 1 | 5.1549619 | 3.120244485 |
| LINC01134 | control 2 | 1.0049608 | 0.141040056 |
| LINC01134 | sample 2 | 1.3736561 | 0.259826332 |
| LINC01134 | control 3 | 1.0023151 | 0.096286126 |
| LINC01134 | sample 3 | 1.9589696 | 0.190764672 |
| LINC01134 | control 4 | 1.0170644 | 0.262373419 |
| LINC01134 | sample 4 | 1.0431735 | 0.151481576 |
| LINC01134 | control 5 | 1.0439879 | 0.424053789 |
| LINC01134 | sample 5 | 1.7953046 | 0.22905826 |
| LINC01134 | control 6 | 1.0197392 | 0.282375405 |
| LINC01134 | sample 6 | 1.7683313 | 0.079093101 |
| RHPN1−AS1 | control 1 | 1.0021268 | 0.0922826 |
| RHPN1−AS1 | sample 1 | 1.3099086 | 0.145539334 |
| RHPN1−AS1 | control 2 | 1.007079 | 0.168571164 |
| RHPN1−AS1 | sample 2 | 2.5602349 | 0.15222455 |
| RHPN1−AS1 | control 3 | 1.000885 | 0.059509877 |
| RHPN1−AS1 | sample 3 | 1.2246123 | 0.052309883 |
| RHPN1−AS1 | control 4 | 1.0034813 | 0.118107719 |
| RHPN1−AS1 | sample 4 | 1.8391785 | 0.231320639 |
| RHPN1−AS1 | control 5 | 1.0396038 | 0.401935376 |
| RHPN1−AS1 | sample 5 | 2.1988986 | 2.405965387 |
| RHPN1−AS1 | control 6 | 1.0227511 | 0.303380467 |
| RHPN1−AS1 | sample 6 | 4.3946976 | 0.46773628 |
| NRAV | control 1 | 1.0049046 | 0.14023769 |
| NRAV | sample 1 | 1.4203338 | 0.082908342 |
| NRAV | control 2 | 1.0001642 | 0.025625983 |
| NRAV | sample 2 | 1.0267283 | 0.153004197 |
| NRAV | control 3 | 1.0017862 | 0.084565016 |
| NRAV | sample 3 | 1.1462952 | 0.033705097 |
| NRAV | control 4 | 1.006754 | 0.164642133 |
| NRAV | sample 4 | 4.2699433 | 0.211278522 |
| NRAV | control 5 | 1.048476 | 0.445649967 |
| NRAV | sample 5 | 2.2043512 | 0.164882353 |
| NRAV | control 6 | 1.0248819 | 0.317436124 |
| NRAV | sample 6 | 2.280211 | 0.6768466 |
| CMB9−22P13.1 | control 1 | 1.0035575 | 0.11939493 |
| CMB9−22P13.1 | sample 1 | 0.6063274 | 0.05677046 |
| CMB9−22P13.1 | control 2 | 1.007669 | 0.175481177 |
| CMB9−22P13.1 | sample 2 | 1.7997112 | 0.448606736 |
| CMB9−22P13.1 | control 3 | 1.0007768 | 0.05575427 |
| CMB9−22P13.1 | sample 3 | 1.8818796 | 2.123711852 |
| CMB9−22P13.1 | control 4 | 1.0031807 | 0.112884729 |
| CMB9−22P13.1 | sample 4 | 1.6197741 | 0.133638209 |
| CMB9−22P13.1 | control 5 | 1.0396403 | 0.402124194 |
| CMB9−22P13.1 | sample 5 | 4.7231313 | 1.142272536 |
| CMB9−22P13.1 | control 6 | 1.0079741 | 0.178951132 |
| CMB9−22P13.1 | sample 6 | 1.5854192 | 0.149115327 |
| MKLN1−AS | control 1 | 1.0035575 | 0.11939493 |
| MKLN1−AS | sample 1 | 6.3886164 | 0.787665661 |
| MKLN1−AS | control 2 | 1.0002002 | 0.028299503 |
| MKLN1−AS | sample 2 | 14.299981 | 5.618360941 |
| MKLN1−AS | control 3 | 1.000885 | 0.059509877 |
| MKLN1−AS | sample 3 | 1.1642278 | 0.256383115 |
| MKLN1−AS | control 4 | 1.0014617 | 0.076493195 |
| MKLN1−AS | sample 4 | 2.3253197 | 0.368109601 |
| MKLN1−AS | control 5 | 1.0513088 | 0.458803349 |
| MKLN1−AS | sample 5 | 1.3102269 | 0.35180437 |
| MKLN1−AS | control 6 | 1.0007568 | 0.05503073 |
| MKLN1−AS | sample 6 | 1.3400868 | 0.229533698 |
| MAPKAPK5−AS1 | control 1 | 1.0018383 | 0.085790102 |
| MAPKAPK5−AS1 | sample 1 | 1.1456318 | 0.064478219 |
| MAPKAPK5−AS1 | control 2 | 1.0011253 | 0.067109013 |
| MAPKAPK5−AS1 | sample 2 | 1.8807084 | 0.111821767 |
| MAPKAPK5−AS1 | control 3 | 1.0026156 | 0.102352827 |
| MAPKAPK5−AS1 | sample 3 | 1.6158856 | 0.069023304 |
| MAPKAPK5−AS1 | control 4 | 1.0022189 | 0.094262894 |
| MAPKAPK5−AS1 | sample 4 | 1.1330239 | 0.276743674 |
| MAPKAPK5−AS1 | control 5 | 1.0779939 | 0.569334327 |
| MAPKAPK5−AS1 | sample 5 | 1.4628462 | 0.05135936 |
| MAPKAPK5−AS1 | control 6 | 1.0007568 | 0.05503073 |
| MAPKAPK5−AS1 | sample 6 | 1.5349282 | 0.273045854 |