**Supplementary Table 1.** Levels of PPP2CA mRNA and their diagnostic performance in hepatocellular carcinoma, based on data from 41 microarrays in the GEO and TCGA databases.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ID | n1 | n2 | M ± SD(n1) | | | M±SD(n2) | | | t | P1 | TP | FP | TN | FN | AUC | P2 |
| GSE10143 | 80 | 307 | 12.716 | ± | 0.875 | 11.782 | ± | 0.764 | 9.455 | <0.001 | 62 | 51 | 256 | 18 | 0.817 | <0.001 |
| GSE101685 | 24 | 8 | 9.193 | ± | 1.135 | 9.282 | ± | 0.303 | -0.217 | 0.829 | 15 | 2 | 6 | 9 | 0.625 | 0.296 |
| GSE101728 | 7 | 7 | 8.382 | ± | 0.286 | 7.879 | ± | 0.169 | 3.999 | 0.002 | 6 | 0 | 7 | 1 | 0.939 | 0.006 |
| GSE107170 | 119 | 188 | 9.868 | ± | 0.682 | 9.597 | ± | 0.565 | 3.781 | <0.001 | 75 | 78 | 110 | 44 | 0.618 | <0.001 |
| GSE112790 | 183 | 15 | 10.420 | ± | 0.438 | 10.29 | ± | 0.299 | 1.103 | 0.271 | 82 | 3 | 12 | 101 | 0.611 | 0.152 |
| GSE115019 | 12 | 12 | 2.045 | ± | 0.398 | 1.806 | ± | 0.334 | 1.590 | 0.126 | 7 | 2 | 10 | 5 | 0.667 | 0.166 |
| GSE121248 | 70 | 37 | 10.712 | ± | 0.351 | 10.36 | ± | 0.300 | 5.198 | <0.001 | 51 | 9 | 28 | 19 | 0.783 | <0.001 |
| GSE12941 | 10 | 10 | 9.646 | ± | 0.326 | 9.315 | ± | 0.393 | 2.047 | 0.056 | 9 | 4 | 6 | 1 | 0.680 | 0.174 |
| GSE131329 | 53 | 14 | 9.596 | ± | 0.438 | 9.577 | ± | 0.289 | 0.151 | 0.880 | 17 | 1 | 13 | 36 | 0.520 | 0.817 |
| GSE14323 | 55 | 60 | 9.105 | ± | 0.439 | 9.132 | ± | 0.283 | -0.386 | 0.700 | 12 | 8 | 52 | 43 | 0.490 | 0.858 |
| GSE14520 | 22 | 21 | 7.480 | ± | 0.259 | 7.456 | ± | 0.185 | 0.352 | 0.727 | 5 | 1 | 20 | 17 | 0.536 | 0.688 |
| GSE17548 | 17 | 20 | 7.515 | ± | 0.575 | 7.469 | ± | 0.334 | 0.305 | 0.763 | 12 | 10 | 10 | 5 | 0.553 | 0.583 |
| GSE33006 | 3 | 3 | 10.536 | ± | 0.074 | 10.731 | ± | 0.240 | -1.343 | 0.251 | 3 | 3 | 0 | 0 | 0.222 | 0.275 |
| GSE39791 | 72 | 72 | 9.842 | ± | 0.330 | 9.456 | ± | 0.218 | 8.273 | <0.001 | 23 | 1 | 71 | 49 | 0.840 | <0.001 |
| GSE41804 | 20 | 20 | 9.431 | ± | 0.375 | 9.548 | ± | 0.246 | -1.165 | 0.252 | 11 | 10 | 10 | 9 | 0.443 | 0.534 |
| GSE45050 | 6 | 10 | 10.358 | ± | 0.224 | 10.217 | ± | 0.214 | 1.251 | 0.232 | 3 | 1 | 9 | 3 | 0.700 | 0.193 |
| GSE46408 | 6 | 6 | 11.853 | ± | 0.764 | 10.922 | ± | 0.402 | 2.642 | 0.025 | 4 | 4 | 2 | 2 | 0.889 | 0.025 |
| GSE46444 | 88 | 48 | 12.338 | ± | 0.720 | 12.114 | ± | 0.829 | 1.571 | 0.120 | 79 | 34 | 14 | 9 | 0.556 | 0.283 |
| GSE50579 | 67 | 10 | 9.970 | ± | 0.485 | 9.335 | ± | 0.523 | 3.821 | <0.001 | 54 | 2 | 8 | 13 | 0.821 | 0.001 |
| GSE54236 | 81 | 80 | 9.905 | ± | 0.430 | 9.690 | ± | 0.348 | 3.483 | 0.001 | 27 | 8 | 72 | 54 | 0.642 | 0.002 |
| GSE54238 | 26 | 30 | 7.075 | ± | 0.914 | 6.469 | ± | 0.658 | 2.874 | 0.006 | 13 | 1 | 29 | 13 | 0.724 | 0.004 |
| GSE55092 | 49 | 91 | 6.778 | ± | 0.449 | 6.770 | ± | 0.315 | 0.115 | 0.909 | 10 | 4 | 87 | 39 | 0.492 | 0.884 |
| GSE56140 | 35 | 34 | 10.572 | ± | 0.313 | 10.387 | ± | 0.186 | 3.006 | 0.004 | 14 | 1 | 33 | 21 | 0.689 | 0.007 |
| GSE57957 | 39 | 39 | 11.607 | ± | 0.241 | 11.258 | ± | 0.182 | 7.207 | <0.001 | 34 | 10 | 29 | 5 | 0.873 | <0.001 |
| GSE59259 | 8 | 8 | 11.306 | ± | 0.468 | 11.496 | ± | 0.128 | -1.110 | 0.286 | 2 | 0 | 8 | 6 | 0.328 | 0.248 |
| GSE62232 | 81 | 10 | 10.113 | ± | 0.366 | 9.766 | ± | 0.307 | 2.878 | 0.005 | 69 | 3 | 7 | 12 | 0.764 | 0.007 |
| GSE64041 | 60 | 65 | 9.744 | ± | 0.343 | 9.541 | ± | 0.282 | 3.631 | <0.001 | 33 | 11 | 54 | 27 | 0.727 | <0.001 |
| GSE65372 | 39 | 15 | 13.099 | ± | 0.224 | 12.853 | ± | 0.916 | 1.029 | 0.320 | 39 | 12 | 3 | 0 | 0.431 | 0.434 |
| GSE6764 | 34 | 40 | 8.874 | ± | 0.334 | 8.488 | ± | 0.259 | 5.594 | <0.001 | 21 | 4 | 36 | 13 | 0.813 | <0.001 |
| GSE74656 | 5 | 5 | 8.042 | ± | 0.152 | 7.620 | ± | 0.166 | 4.206 | 0.003 | 5 | 1 | 4 | 0 | 0.720 | 0.251 |
| GSE76427 | 115 | 52 | 12.286 | ± | 0.345 | 12.122 | ± | 0.263 | 3.036 | 0.003 | 72 | 19 | 33 | 43 | 0.639 | 0.004 |
| GSE84005 | 38 | 38 | 10.490 | ± | 0.389 | 10.070 | ± | 0.335 | 5.045 | <0.001 | 30 | 10 | 28 | 8 | 0.791 | <0.001 |
| GSE84402 | 13 | 14 | 8.882 | ± | 0.893 | 8.233 | ± | 0.635 | 2.189 | 0.038 | 7 | 1 | 13 | 6 | 0.709 | 0.065 |
| GSE84598 | 22 | 22 | 11.729 | ± | 0.297 | 11.360 | ± | 0.208 | 4.766 | <0.001 | 17 | 18 | 4 | 5 | 0.847 | <0.001 |
| GSE87630 | 64 | 30 | 10.990 | ± | 0.535 | 10.851 | ± | 0.174 | 1.873 | 0.064 | 36 | 2 | 28 | 28 | 0.624 | 0.053 |
| GSE89377 | 40 | 67 | 10.614 | ± | 0.274 | 10.457 | ± | 0.180 | 3.216 | 0.002 | 25 | 12 | 55 | 15 | 0.690 | 0.001 |
| GSE98383 | 16 | 58 | 10.101 | ± | 0.509 | 9.541 | ± | 0.397 | 4.696 | <0.001 | 14 | 16 | 42 | 2 | 0.818 | <0.001 |
| GSE98620 | 36 | 13 | 14.072 | ± | 0.232 | 13.769 | ± | 0.986 | 1.097 | 0.293 | 36 | 12 | 1 | 0 | 0.442 | 0.541 |
| GSE45436 | 95 | 39 | 9.406 | ± | 0.655 | 9.011 | ± | 0.420 | 4.160 | <0.001 | 50 | 2 | 37 | 45 | 0.730 | <0.001 |
| GSE60502 | 18 | 18 | 7.057 | ± | 0.595 | 7.119 | ± | 0.547 | 2.309 | 0.027 | 16 | 9 | 9 | 2 | 0.694 | 0.046 |
| GSE36376 | 240 | 193 | 11.364 | ± | 0.420 | 10.548 | ± | 0.358 | 21.847 | <0.001 | 213 | 29 | 164 | 27 | 0.9290 | <0.001 |
| TCGA | 361 | 50 | 11.388 | ± | 0.360 | 11.328 | ± | 0.306 | 1.117 | 0.265 | 266 | 28 | 22 | 95 | 0.5580 | 0.182 |
| RNA-seq | 116 | 114 | 17.941 | ± | 6.162 | 12.363 | ± | 2.981 | 8.761 | <0.001 | 80 | 12 | 102 | 36 | 0.791 | <0.001 |

AUC, area under the receiver operating characteristic curve; GEO, Gene Expression Omnibus; HCC, Hepatocellular carcinoma; TCGA, The Cancer Genome Atlas; M ± SD, mean ± standard deviation; n1, Hepatocellular carcinoma (cases); n2, non-tumor (cases); TP, true positive (cases); TN, true negative (cases); FP, false positive (cases); FN, false negative (cases).