

Supplementary Table S2. Calculation of probability values (CHITEST) and false discovery rate (FDR) for miRNAs whose expression is altered in at least 45% of the tumors, excluding the miRNAs deregulated miRNAs in more than 90 % of the patients.

| miRNA | Observed range (TCGA data) | | | | | Expected range | | | | | CHITEST (p value) | FDR |
|----------------|----------------------------|---------------------|----------------|-------------------|-------|-------------------|---------------------|----------------|-------------------|-------|----------------------|-----------|
| | Classical (50) | Mesenchymal (56) | Neural (27) | Proneural (55) | Total | Classical (50) | Mesenchymal (56) | Neural (27) | Proneural (55) | Total | | |
| hsa-mir-379 | 47 | 47 | 25 | 48 | 167 | 44 | 50 | 24 | 49 | 167 | 0.94838614 | 0.9483861 |
| hsa-mir-9* | 27 | 21 | 13 | 27 | 88 | 23 | 26 | 13 | 26 | 88 | 0.64572222 | 0.6652896 |
| hsa-mir-769-5p | 43 | 53 | 21 | 40 | 157 | 42 | 47 | 23 | 46 | 157 | 0.62803307 | 0.6672851 |
| hsa-mir-320 | 24 | 24 | 10 | 31 | 89 | 24 | 27 | 13 | 26 | 89 | 0.61629703 | 0.6759387 |
| hsa-mir-370 | 24 | 29 | 16 | 21 | 90 | 24 | 27 | 13 | 26 | 90 | 0.57459155 | 0.6512038 |
| hsa-mir-299-5p | 25 | 31 | 15 | 21 | 92 | 24 | 27 | 13 | 27 | 92 | 0.56723605 | 0.6650354 |
| hsa-mir-15b | 46 | 42 | 17 | 44 | 149 | 40 | 44 | 21 | 44 | 149 | 0.55988779 | 0.6798637 |
| hsa-mir-451 | 23 | 22 | 13 | 32 | 90 | 24 | 27 | 13 | 26 | 90 | 0.54775189 | 0.6897616 |
| hsa-mir-376a | 20 | 30 | 16 | 23 | 89 | 24 | 27 | 13 | 26 | 89 | 0.53335448 | 0.6974636 |
| hsa-mir-23a | 49 | 54 | 23 | 39 | 165 | 44 | 49 | 24 | 48 | 165 | 0.41103372 | 0.5590059 |
| hsa-mir-149 | 36 | 49 | 17 | 34 | 136 | 36 | 41 | 20 | 40 | 136 | 0.39942805 | 0.5658564 |
| hsa-mir-29c | 47 | 42 | 16 | 47 | 152 | 40 | 45 | 22 | 44 | 152 | 0.39048826 | 0.5772435 |
| hsa-mir-210 | 38 | 50 | 18 | 34 | 140 | 37 | 42 | 20 | 41 | 140 | 0.38104901 | 0.5888939 |
| hsa-mir-25 | 45 | 40 | 15 | 45 | 145 | 39 | 43 | 21 | 42 | 145 | 0.37706612 | 0.610488 |
| hsa-mir-93 | 40 | 34 | 19 | 49 | 142 | 38 | 42 | 20 | 42 | 142 | 0.36267714 | 0.6165511 |
| hsa-mir-106b | 43 | 37 | 16 | 48 | 144 | 38 | 43 | 21 | 42 | 144 | 0.3525261 | 0.6308362 |
| hsa-mir-29b | 45 | 35 | 20 | 51 | 151 | 40 | 45 | 22 | 44 | 151 | 0.26334662 | 0.4974325 |
| hsa-mir-377 | 26 | 42 | 24 | 36 | 128 | 34 | 38 | 18 | 37 | 128 | 0.25447242 | 0.5089448 |
| hsa-mir-487b | 27 | 27 | 11 | 40 | 105 | 28 | 31 | 15 | 31 | 105 | 0.21017079 | 0.4466129 |
| hsa-mir-15a | 42 | 31 | 13 | 35 | 121 | 32 | 36 | 17 | 35 | 121 | 0.18634326 | 0.4223781 |
| hsa-mir-142-3p | 26 | 44 | 15 | 26 | 111 | 30 | 33 | 16 | 32 | 111 | 0.14578767 | 0.3540558 |
| hsa-mir-383 | 34 | 26 | 8 | 31 | 99 | 26 | 29 | 14 | 29 | 99 | 0.13804116 | 0.3610307 |
| hsa-mir-195 | 37 | 22 | 13 | 32 | 104 | 28 | 31 | 15 | 30 | 104 | 0.10735952 | 0.3041853 |
| hsa-mir-92b | 45 | 31 | 23 | 32 | 131 | 35 | 39 | 19 | 38 | 131 | 0.08631044 | 0.2667777 |
| hsa-mir-148a | 29 | 40 | 13 | 19 | 101 | 27 | 30 | 15 | 30 | 101 | 0.06128502 | 0.2083691 |
| hsa-mir-10b | 33 | 26 | 19 | 49 | 127 | 34 | 38 | 18 | 37 | 127 | 0.056904 | 0.2149707 |
| hsa-mir-34a | 38 | 46 | 14 | 21 | 119 | 32 | 35 | 17 | 35 | 119 | 0.0150595 | 0.0640029 |
| hsa-mir-106a | 34 | 18 | 11 | 41 | 104 | 28 | 31 | 15 | 30 | 104 | 0.0088728 | 0.0430965 |
| hsa-mir-155 | 43 | 53 | 16 | 24 | 136 | 36 | 41 | 20 | 40 | 136 | 0.00723736 | 0.0410117 |
| hsa-let-7i | 39 | 18 | 12 | 22 | 91 | 24 | 27 | 13 | 27 | 91 | 0.00464277 | 0.0315708 |
| hsa-mir-20a | 34 | 18 | 9 | 46 | 107 | 28 | 32 | 15 | 31 | 107 | 0.00083188 | 0.0070709 |
| hsa-mir-130b | 33 | 15 | 9 | 44 | 101 | 27 | 30 | 15 | 30 | 101 | 0.00041455 | 0.0046982 |
| hsa-mir-222 | 13 | 21 | 18 | 50 | 102 | 27 | 30 | 15 | 30 | 102 | 1.8352E-05 | 0.000312 |
| hsa-mir-221 | 11 | 15 | 17 | 47 | 90 | 24 | 27 | 13 | 26 | 90 | 1.5926E-06 | 5.415E-05 |

The table shows the number of patients with alterations in the respective miRNA in each GBM subtype (observed range). The expected number of patients with alterations in the corresponding miRNA (expected range) was calculated using the formula: TS*TA/TP, where TS is the total number of patients in the specific subtype (indicated between brackets), TA is the sum of the number of patients with alterations in the four subtypes and TP is the total number of patients (188). Probability values were calculated using the Excel CHITEST function (Microsoft Excel 2003, Microsoft, USA). This algorithm uses the chi-square test (χ^2) to calculate the probability of the differences between two supplied data sets (observed and expected frequencies) to be simply due to sampling error or to be real. The FDR is a statistical method used in multiple hypothesis testing to correct for multiple comparisons. The FDR of a set of predictions is the expected percent of false predictions in the set of predictions. Changes were considered significant ($p<0.05$) if the FDR was smaller than 0.05.