

SUPPLEMENTARY INFORMATION

Defining quantification methods and optimizing protocols for microarray hybridization of circulating microRNAs.

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Table S1. RNA contents in five different concentrations of miRNA-Ref samples.

Table S2. 260/230 and 260/280 ratios provided by the Nanodrop on miRNA-Ref and plasma samples at different concentrations.

Table S3. RNA contents in five different concentrations of plasma samples.

Table S4. Percentage of miRNA in miRNA-Ref samples according to the Bio-SmallChip electropherograms.

Table S5. List of miRNAs detected in the miRNA-Ref arrays.

Table S6. List of miRNAs detected in the human plasma arrays.

Table S2: 260/230 and 260/280 ratios of miRNA-Ref and plasma samples

| miRNA-Ref | | | plasma samples | | |
|------------------------|--------------------|--------------------|------------------------|--------------------|--------------------|
| Nanodrop (ng/ μ L) | 260/230 ratio | 260/280 ratio | Nanodrop (ng/ μ L) | 260/230 ratio | 260/280 ratio |
| 9.40 | 2.03 | 1.93 | 18.40 | 0.17 | 1.28 |
| 9.60 | 2.29 | 1.78 | 16.20 | 0.16 | 1.27 |
| 8.60 | 2.25 | 2.31 | 19.80 | 0.19 | 1.26 |
| 22.60 | 1.94 | 2.03 | 27.80 | 0.14 | 1.21 |
| 22.40 | 2.03 | 1.96 | 26.60 | 0.14 | 1.20 |
| 22.30 | 1.91 | 1.86 | 27.60 | 0.14 | 1.21 |
| 30.20 | 1.93 | 1.95 | 39.80 | 0.13 | 1.22 |
| 29.90 | 1.94 | 2.01 | 36.50 | 0.12 | 1.22 |
| 29.70 | 1.95 | 2.02 | 41.20 | 0.13 | 1.22 |
| 40.20 | 1.99 | 1.97 | 54.50 | 0.15 | 1.21 |
| 40.30 | 1.91 | 1.99 | 50.30 | 0.14 | 1.21 |
| 40.00 | 1.89 | 1.97 | 46.40 | 0.13 | 1.21 |
| 46.60 | 1.95 | 1.99 | 61.10 | 0.14 | 1.19 |
| 46.60 | 1.94 | 1.98 | 57.40 | 0.13 | 1.19 |
| 46.90 | 1.94 | 1.99 | 62.60 | 0.14 | 1.17 |
| <i>Mean (SD)</i> | 1.99 (0.12) | 1.98 (0.11) | | 0.14 (0.02) | 1.22 (0.03) |

Table 4: Percentage of miRNA in miRNA-Ref samples

| 10 ng/μL working dilution | % of miRNA |
|---|-------------------|
| 1 | 21 |
| 2 | 21 |
| 3 | 20 |
| 4 | 21 |
| 5 | 23 |
| 6 | 23 |
| 7 | 25 |
| 8 | 24 |
| 9 | 23 |
| 10 | 23 |
| <i>Mean (SD)</i> | 22 (1.58) |

Table S5: List of miRNAs detected in the miRNA-Ref arrays

| | | |
|----------------|-------------------|---------------------|
| hsa-mir-1224 | hsa-mir-523 | hsa-miR-1228 |
| hsa-mir-124-1 | hsa-mir-525 | hsa-miR-122 |
| hsa-mir-124-2 | hsa-mir-525 | hsa-miR-1231 |
| hsa-mir-124-3 | hsa-mir-548ai | hsa-miR-1238 |
| hsa-mir-197 | hsa-mir-548ai | hsa-miR-124-star |
| hsa-mir-200b | hsa-mir-550a-1 | hsa-miR-1246 |
| hsa-mir-20b | hsa-mir-550a-2 | hsa-miR-1247 |
| hsa-mir-20b | hsa-mir-550a-3 | hsa-miR-124 |
| hsa-mir-214 | hsa-mir-572 | hsa-miR-125a-3p |
| hsa-mir-23a | hsa-mir-629 | hsa-miR-125a-5p |
| hsa-mir-302c | hsa-mir-663 | hsa-miR-125b-1-star |
| hsa-mir-30c-2 | hsa-mir-885 | hsa-miR-125b-2-star |
| hsa-mir-3154 | hsa-mir-933 | hsa-miR-125b |
| hsa-mir-3180-1 | hsa-mir-935 | hsa-miR-1260b |
| hsa-mir-3180-3 | hsa-mir-941-3 | hsa-miR-1268 |
| hsa-mir-3180-4 | hsa-mir-941-4 | hsa-miR-1268b |
| hsa-mir-339 | hsa-mir-99b | hsa-miR-126 |
| hsa-mir-3648 | hsa-let-7a | hsa-miR-127-3p |
| hsa-mir-3656 | hsa-let-7b | hsa-miR-1271 |
| hsa-mir-3676 | hsa-let-7c | hsa-miR-1275 |
| hsa-mir-3679 | hsa-let-7d-star | hsa-miR-1280 |
| hsa-mir-3687 | hsa-let-7d | hsa-miR-1281 |
| hsa-mir-3960 | hsa-let-7e | hsa-miR-1287 |
| hsa-mir-423 | hsa-let-7f | hsa-miR-128 |
| hsa-mir-4449 | hsa-let-7g | hsa-miR-129-3p |
| hsa-mir-4466 | hsa-let-7i | hsa-miR-129-5p |
| hsa-mir-4469 | hsa-miR-100 | hsa-miR-1296 |
| hsa-mir-4485 | hsa-miR-103a | hsa-miR-1301 |
| hsa-mir-4523 | hsa-miR-105 | hsa-miR-1307 |
| hsa-mir-4634 | hsa-miR-106a | hsa-miR-130a |
| hsa-mir-4758 | hsa-miR-106b-star | hsa-miR-130b |
| hsa-mir-4758 | hsa-miR-106b | hsa-miR-1323 |
| hsa-mir-4785 | hsa-miR-107 | hsa-miR-132 |
| hsa-mir-4787 | hsa-miR-10a | hsa-miR-133a |
| hsa-mir-485 | hsa-miR-10b-star | hsa-miR-133b |
| hsa-mir-500b | hsa-miR-10b | hsa-miR-134 |
| hsa-mir-502 | hsa-miR-1180 | hsa-miR-135a-star |
| hsa-mir-5095 | hsa-miR-1202 | hsa-miR-137 |
| hsa-mir-516a-1 | hsa-miR-1207-5p | hsa-miR-138-1-star |
| hsa-mir-516a-2 | hsa-miR-1224-5p | hsa-miR-138-2-star |
| hsa-mir-516b-1 | hsa-miR-1225-5p | hsa-miR-138 |
| hsa-mir-518e | hsa-miR-1226 | hsa-miR-139-3p |
| hsa-mir-520g | hsa-miR-1228-star | hsa-miR-139-5p |

| | | |
|---------------------|-------------------|--------------------|
| hsa-miR-140-3p | hsa-miR-1909 | hsa-miR-219-2-3p |
| hsa-miR-140-5p | hsa-miR-191-star | hsa-miR-21 |
| hsa-miR-141 | hsa-miR-1910 | hsa-miR-22-star |
| hsa-miR-143-star | hsa-miR-1915 | hsa-miR-221 |
| hsa-miR-143 | hsa-miR-191 | hsa-miR-222 |
| hsa-miR-145 | hsa-miR-192-star | hsa-miR-223 |
| hsa-miR-1469 | hsa-miR-192 | hsa-miR-224-star |
| hsa-miR-146a | hsa-miR-193a-5p | hsa-miR-224 |
| hsa-miR-146b-5p | hsa-miR-193b-star | hsa-miR-2277-5p |
| hsa-miR-148a | hsa-miR-193b | hsa-miR-22 |
| hsa-miR-148b | hsa-miR-194-star | hsa-miR-2392 |
| hsa-miR-149-star | hsa-miR-194 | hsa-miR-23a-star |
| hsa-miR-149 | hsa-miR-195 | hsa-miR-23a |
| hsa-miR-150-star | hsa-miR-196a | hsa-miR-23b-star |
| hsa-miR-150 | hsa-miR-196b | hsa-miR-23b |
| hsa-miR-151-3p | hsa-miR-1972 | hsa-miR-23c |
| hsa-miR-151-5p | hsa-miR-1973 | hsa-miR-24-2-star |
| hsa-miR-151b | hsa-miR-197 | hsa-miR-24 |
| hsa-miR-152 | hsa-miR-199a-3p | hsa-miR-25-star |
| hsa-miR-153 | hsa-miR-199a-5p | hsa-miR-25 |
| hsa-miR-154 | hsa-miR-199b-3p | hsa-miR-26a |
| hsa-miR-155 | hsa-miR-199b-5p | hsa-miR-26b |
| hsa-miR-1587 | hsa-miR-19a | hsa-miR-27a-star |
| hsa-miR-15a | hsa-miR-19b | hsa-miR-27a |
| hsa-miR-15b | hsa-miR-1 | hsa-miR-27b-star |
| hsa-miR-16 | hsa-miR-200a-star | hsa-miR-27b |
| hsa-miR-17-star | hsa-miR-200a | hsa-miR-28-3p |
| hsa-miR-17 | hsa-miR-200b-star | hsa-miR-28-5p |
| hsa-miR-181a-2-star | hsa-miR-200b | hsa-miR-2861 |
| hsa-miR-181a-star | hsa-miR-200c | hsa-miR-296-3p |
| hsa-miR-181a | hsa-miR-202 | hsa-miR-299-3p |
| hsa-miR-181b | hsa-miR-203 | hsa-miR-299-5p |
| hsa-miR-181c-star | hsa-miR-204 | hsa-miR-29a |
| hsa-miR-181c | hsa-miR-205 | hsa-miR-29b-1-star |
| hsa-miR-181d | hsa-miR-206 | hsa-miR-29b-2-star |
| hsa-miR-1825 | hsa-miR-20a | hsa-miR-29b |
| hsa-miR-182 | hsa-miR-20b-star | hsa-miR-29c-star |
| hsa-miR-183 | hsa-miR-20b | hsa-miR-29c |
| hsa-miR-184 | hsa-miR-210 | hsa-miR-302a-star |
| hsa-miR-185 | hsa-miR-2110 | hsa-miR-302a |
| hsa-miR-187 | hsa-miR-212 | hsa-miR-302b |
| hsa-miR-188-5p | hsa-miR-214-star | hsa-miR-302c-star |
| hsa-miR-18a-star | hsa-miR-214 | hsa-miR-302c |
| hsa-miR-18a | hsa-miR-215 | hsa-miR-302d-star |
| hsa-miR-18b | hsa-miR-216b | hsa-miR-302d |
| hsa-miR-1908 | hsa-miR-217 | hsa-miR-30a-star |

| | | |
|-------------------|------------------|--------------------|
| hsa-miR-524-3p | hsa-miR-629-star | hsa-miR-874 |
| hsa-miR-524-5p | hsa-miR-629 | hsa-miR-875-3p |
| hsa-miR-525-3p | hsa-miR-638 | hsa-miR-877 |
| hsa-miR-525-5p | hsa-miR-642b | hsa-miR-885-3p |
| hsa-miR-526a | hsa-miR-652 | hsa-miR-885-5p |
| hsa-miR-526b | hsa-miR-654-3p | hsa-miR-891a |
| hsa-miR-527 | hsa-miR-654-5p | hsa-miR-9-star |
| hsa-miR-532-3p | hsa-miR-660 | hsa-miR-92a-1-star |
| hsa-miR-532-5p | hsa-miR-663 | hsa-miR-92a |
| hsa-miR-542-5p | hsa-miR-664-star | hsa-miR-92b-star |
| hsa-miR-543 | hsa-miR-665 | hsa-miR-92b |
| hsa-miR-548ak | hsa-miR-671-5p | hsa-miR-93-star |
| hsa-miR-550a-star | hsa-miR-675-star | hsa-miR-933 |
| hsa-miR-550a | hsa-miR-675 | hsa-miR-934 |
| hsa-miR-551b-star | hsa-miR-7-1-star | hsa-miR-935 |
| hsa-miR-572 | hsa-miR-708 | hsa-miR-939 |
| hsa-miR-574-3p | hsa-miR-720 | hsa-miR-93 |
| hsa-miR-574-5p | hsa-miR-744 | hsa-miR-940 |
| hsa-miR-578 | hsa-miR-760 | hsa-miR-941 |
| hsa-miR-584 | hsa-miR-762 | hsa-miR-98 |
| hsa-miR-598 | hsa-miR-766 | hsa-miR-99a |
| hsa-miR-602 | hsa-miR-767-5p | hsa-miR-99b-star |
| hsa-miR-625 | hsa-miR-769-5p | hsa-miR-99b |
| hsa-miR-628-3p | hsa-miR-770-5p | hsa-miR-9 |

