

Additional file 1

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Title: Supplementary figures and tables

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Figure S4: The Performance of PriMir.

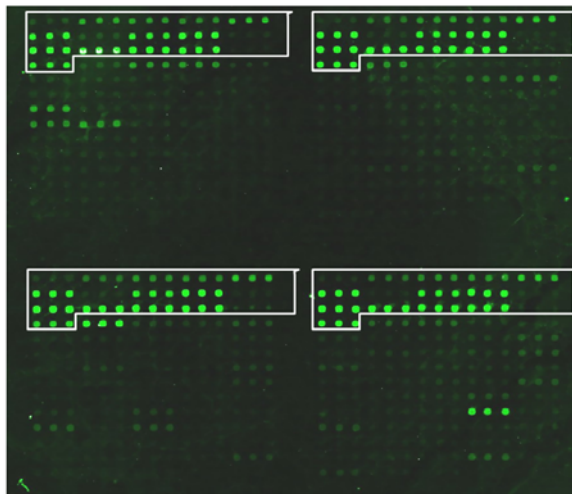
Figure S5: The score distribution of the five features that gave the strongest contribution pre-miRNA stem-loop identification.

Table S1: 22 ml-ncRNAs encoding known miRNAs

Table S2: Information on all 102 me-ncRNAs.

Table S3: List of probes for microarray.

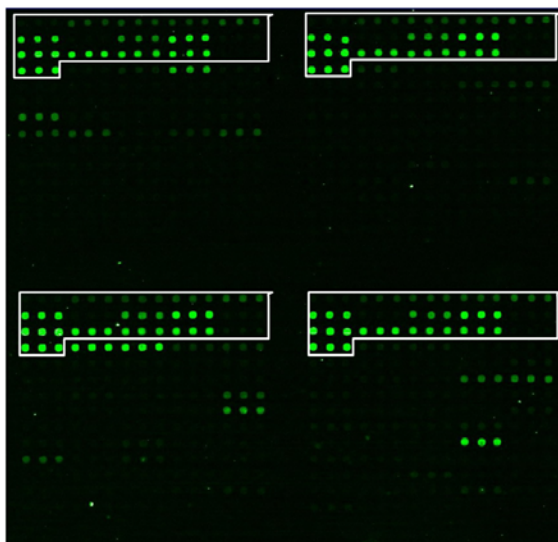
Table S4: List of stem-loop RT-PCR primers



brain and thymus of 0-day neonate C57 BL/6 mice



brain of male adult C57 BL/6 mice



15 days old fetuses

Figure S1. Detection of miRNAs with microarrays. Low molecular weight RNAs (<200 nt) from (1) brain and thymus of 0-day neonate mice, (2) brain of adult male mice, and (3) 15 days old fetuses of C57 BL/6 mice were hybridized to microarrays with probes specific for the predicted miRNAs. White frames indicate control probes.

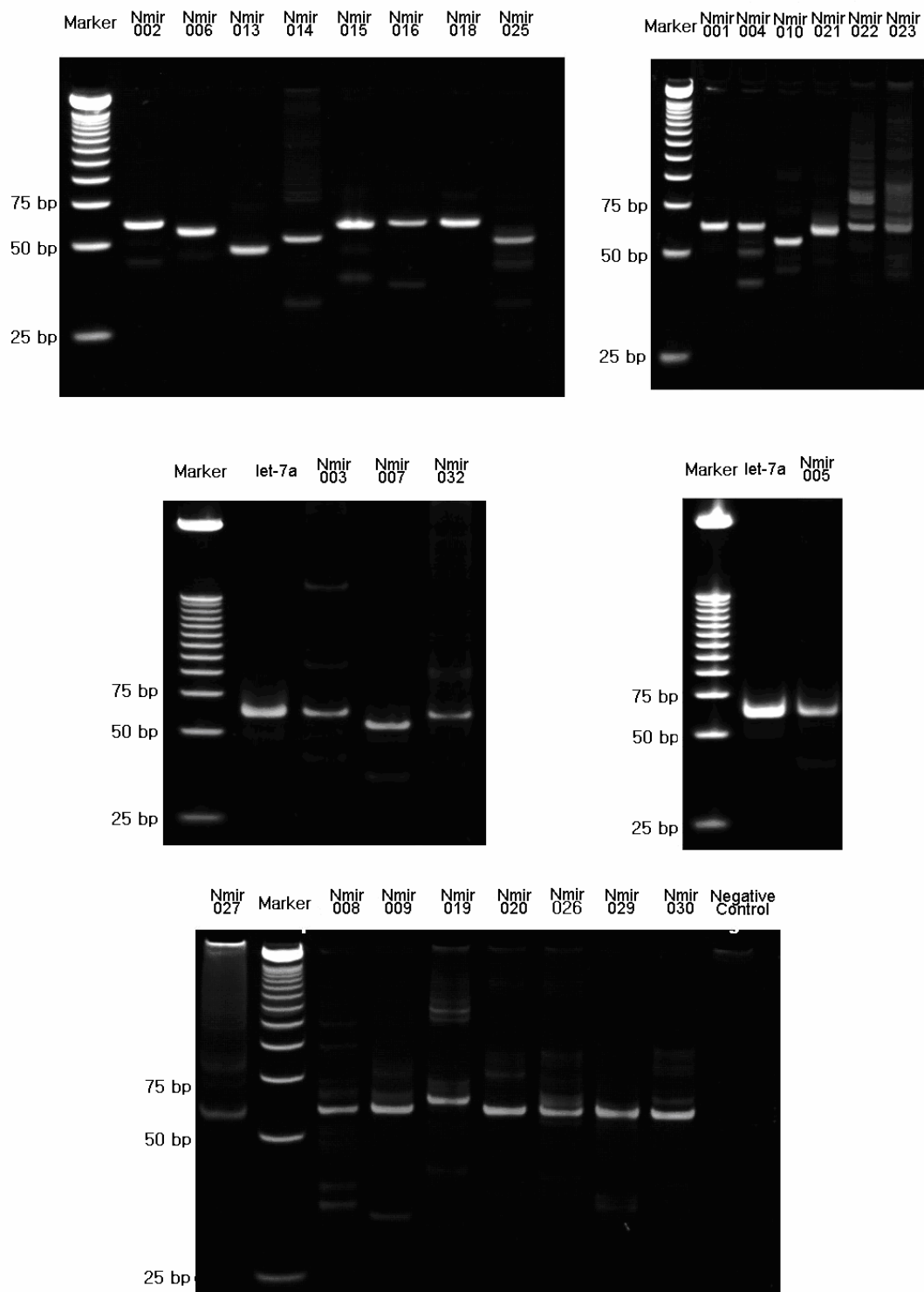


Figure S2. Detection of miRNAs with stem-loop RT-PCR. Low molecular weight (<200nt) RNAs were extracted from different tissues in 3 developmental stages: 1) brain and thymus of 0-day neonate C57 BL/6 mice, 2) brain of male adult C57 BL/6 mice, and 3) whole body of 15-day embryonic C57 BL/6 mice, and then mixed. 10 ng of the mixed RNAs were used as templates for RT reactions. Stem-loop RT-PCR of

let-7a was included as a positive control; and the same RT-PCR reaction as Nmir_002 was performed without reverse transcriptase as a negative control. 26 of the 32 miRNAs microarray detected were detected by stem-loop RT-PCR.

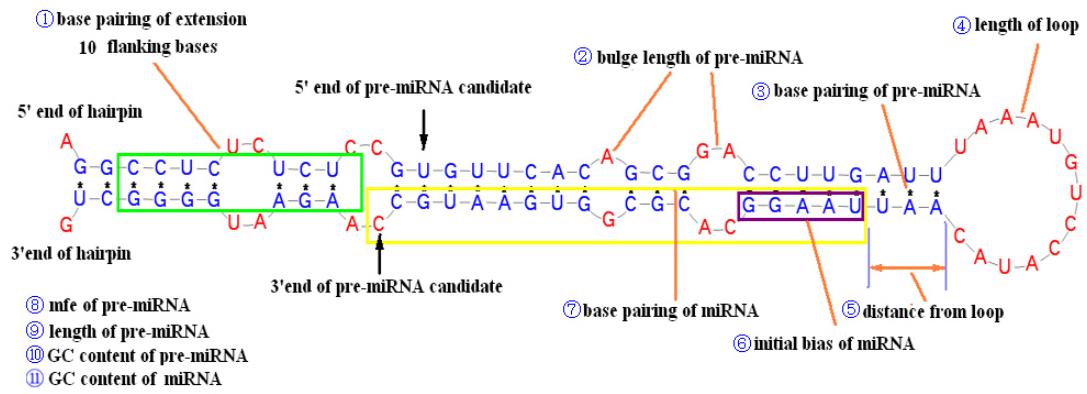


Figure S3. Illustration of the 11 features used by PriMir

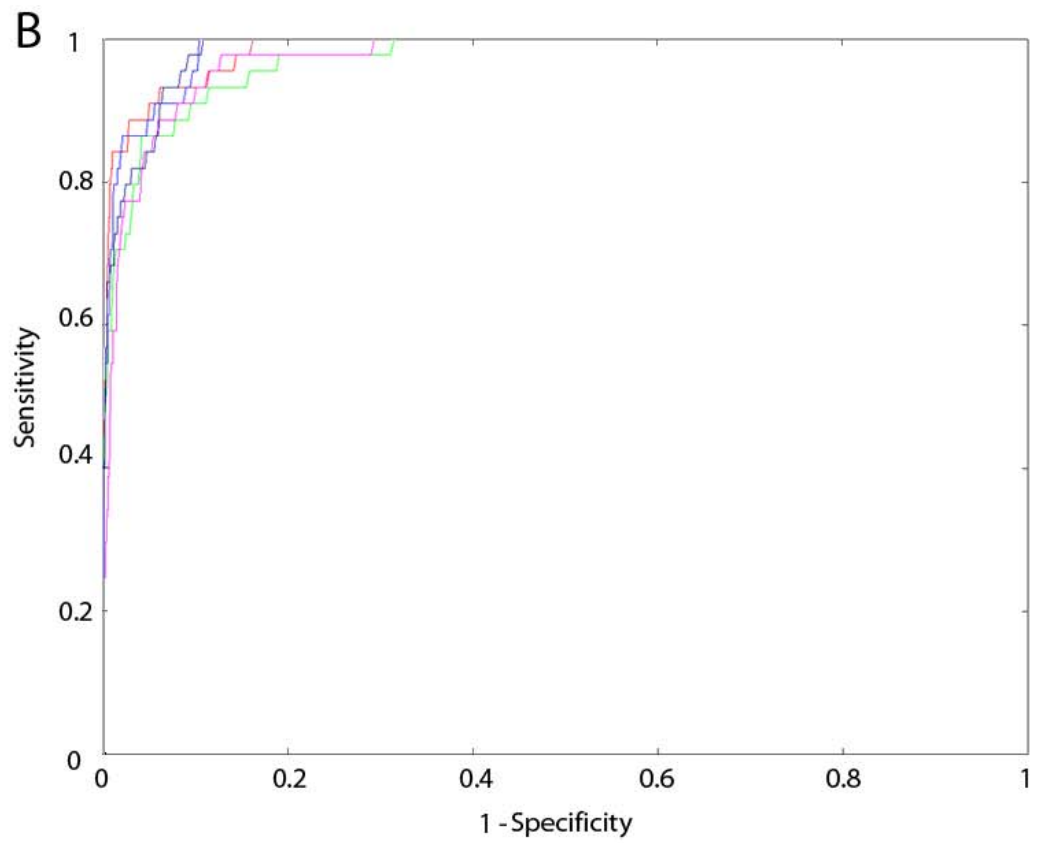
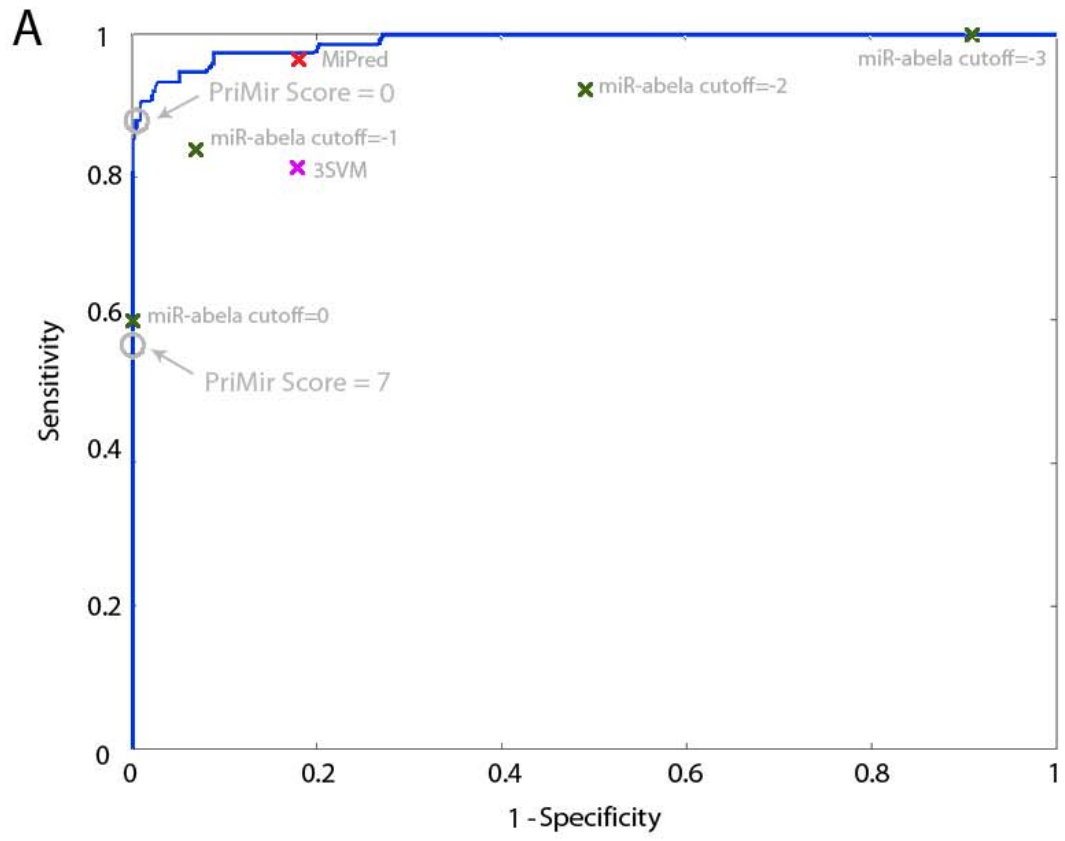


Figure S4: The performance of PriMir. A. The PriMir ROC curve. The blue line represents the PriMir ROC curve. The Area Under Curve (AUC) is about 0.99. A PriMir score of 0 corresponds to a specificity of 0.99 and a sensitivity of 0.893, and the PriMir score of 7 corresponds to a specificity of 1 and a sensitivity of 0.56. The red crosses indicate sensitivity and 1-specificity for MiPred, the pink cross indicates the prediction results for 3SVM, and the green crosses indicates prediction results obtained with miR-abela with three different cutoff values. B. ROC-curves from the cross-validation of PriMir. The training and background sets were both divided evenly into five parts. Four parts were used for training of PriMir, and remaining set was used to test the trained PriMir. The five different curves represent the results of five independent tests, resulting in AUC values of 0.984, 0.971, 0.984, 0.972 and 0.983.

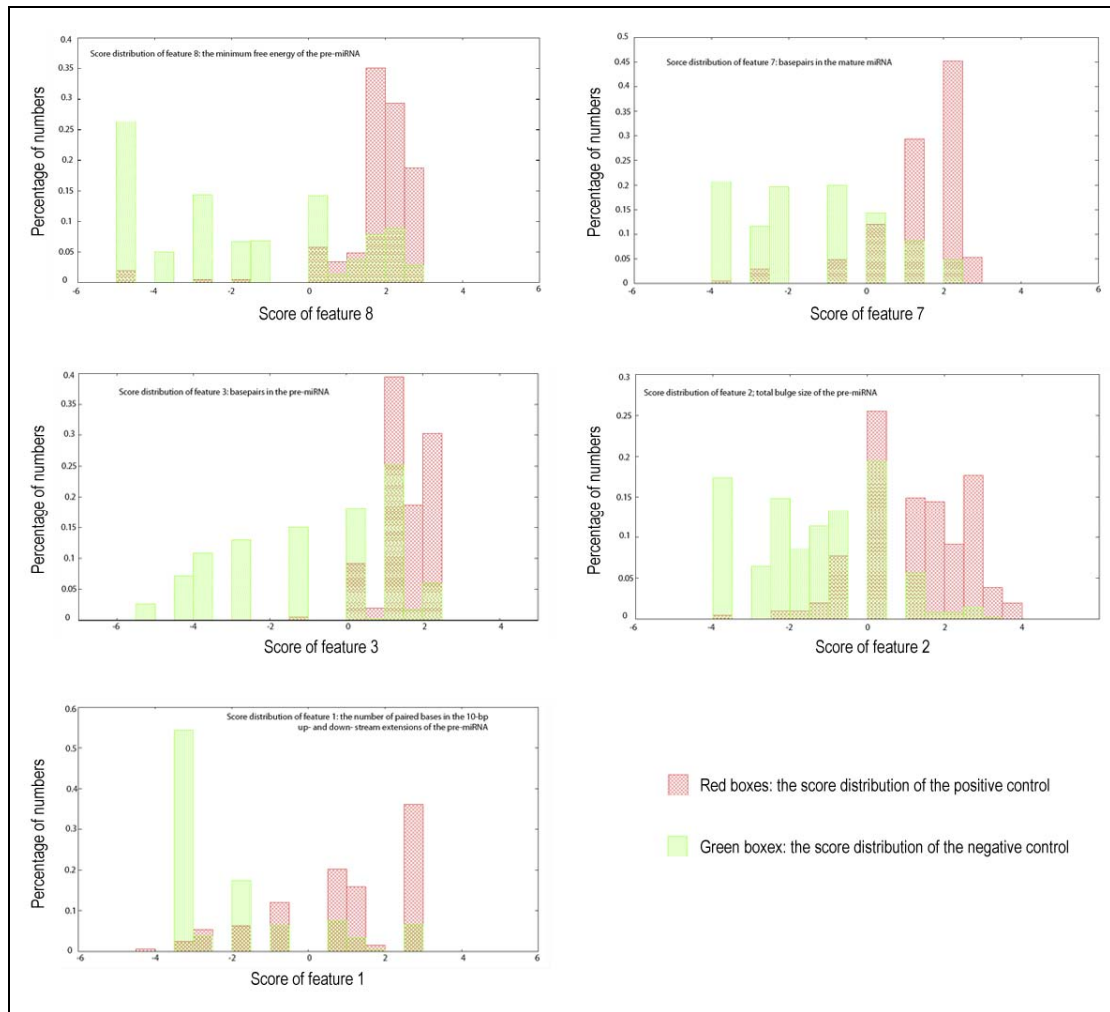


Figure S5: The score distribution of the five features that gave the strongest contribution pre-miRNA stem-loop identification.

Table S1. 22 ml-ncRNAs encoding known miRNAs

| me-ncRNA ID | Clone Id in FANTOM3 | miRNA |
|-------------|---------------------|----------------|
| MENC_001 | D630033A02 | mmu-let-7i |
| MENC_002 | A930011O12 | mmu-mir-124a-1 |
| MENC_003 | 8030499P14 | mmu-mir-130a |
| MENC_004 | F930027K19 | mmu-mir-144 |
| | | mmu-mir-451 |
| MENC_005 | 4833445I07 | mmu-mir-191 |
| | | mmu-mir-425 |
| MENC_006 | G630041I22 | mmu-mir-202 |
| MENC_007 | 4631405K08 | mmu-mir-205 |
| MENC_008 | 4831414J02 | mmu-mir-133b |
| | | mmu-mir-206 |
| MENC_009 | 6720427I07 | mmu-let-7d |
| MENC_010 | C030026K10 | mmu-mir-22 |
| MENC_011 | 9130016C20 | |
| MENC_012 | 2210403K04 | |
| MENC_013 | 5930426H09 | mmu-mir-331 |
| MENC_014 | D230012O04 | mmu-mir-214 |
| MENC_015 | 9830169G21 | mmu-mir-223 |
| MENC_016 | 5330411G14 | mmu-mir-377 |
| MENC_017 | B230304K20 | mmu-mir-378 |
| MENC_018 | D930047H10 | mmu-mir-138-2 |
| MENC_019 | B130046N22 | mmu-mir-100 |
| MENC_020 | E130002N09 | mmu-mir-181b-1 |
| MENC_021 | 2010103J01 | mmu-mir-215 |
| MENC_022 | 6430411K18 | mmu-mir-433 |

Table S2: Information on all 102 me-ncRNAs.

The table includes data on all me-ncRNAs corresponding to previously known miRNAs and experimentally verified miRNA, and data on me-ncRNA candidates without experimental support

| ID of me-ncRNAs | Clone Id in FANTOM3 | sequence of the contained pre-miRNA | miRNA sequence | name of miRNA ^a | Detected by microarray ^b | RT-PCR ^b | Conserved ^c | |
|-----------------|---------------------|---|---------------------------|------------------------------|-------------------------------------|---------------------|------------------------|-----------|
| | | | | | | | Me-ncRNA | Pre-miRNA |
| MENC_001 | D630033A02 | UGAGGUAGUAGUUUGUCGUGUGGUCGGGUUGUGACAUUGCCCGCUGUGGAGAUACUCGCGCAAGCUACUGCCUUGCU | UGAGGUAGUAGUUUGUCGUGUGGUC | mmu-let-7i (miRBase 8.0) | D | NA | NC | C |
| MENC_002 | A930011012 | UGUUCACAGCGGACCUUGAUUUAAAUGUCCAACAUAUAAAGGCACGCGGUGAAUGCCAA | UAAGGCACGCGGUGAAUGCC | mmu-mir-124a-1 (miRBase 8.0) | D | NA | NC | C |
| MENC_003 | 8030499P14 | GCUCUUUCACAUUGUCUACUGCUAACGUGUACCGGAGCAGUGCAUUGUUAAAAGGGCAU | CAGUGCAUUGUUAAAAGGGCAU | mmu-mir-130a (miRBase 8.0) | D | NA | NC | |
| MENC_004 | F930027K19 | GGGAUAUCAUAUACUGUAAGUUUGUGAUGAGACACUACAGUAUAGAUAGUAUCUAG | GGGAUAUCAUAUACUGUAA | Nmir_001 | D | D | NC | C |
| | | UACAGUAUAGAUAGUACUAG | UACAGUAUAGAUAGUACUAG | mmu-mir-144 (miRBase 8.0) | D | NA | | |
| | | AAACCGUUACCAUACUGAGUUAGUAUUGUAACGGUUCUC | AAACCGUUACCAUACUGAGUU | mmu-mir-451 (miRBase 8.0) | ND | NA | | C |
| MENC_005 | 4833445I07 | CAACGGAAUCCAAAAGCAGCUGUUGUCUCCAGAGCAUCCAGCUCACUUGGAUUUCGUUCC | CAACGGAAUCCAAAAGCAGCU | mmu-mir-191 (miRBase 8.0) | D | NA | C | C |
| | | AUGACACGAUCACUCCCGUUGAGUGGGCACCAAGAAGCCAUCGGAAUUGUGUCCGCC | AUCGGAAUUGUGUCCGCC | mmu-mir-425 (miRBase 8.0) | NA | NA | | C |
| MENC_006 | G630041I22 | UCCUAUGCAUAUACUUCUUGUGGAUCUGGUCUAAAGAGGUAUAGCGCAUGGGAAGA | AGAGGUAUAGCGCAUGGGAAGA | mmu-mir-202 (miRBase 8.0) | D | NA | NC | C |
| MENC_007 | 4631405K08 | GUCCUUCAUUCCACCGGAGUCUGUCUUAUGCCAACCAGAUUUCAGUGGAGUGAAGCUCAG | UCCUUCAUUCCACCGGAGUCUG | mmu-mir-205 (miRBase 8.0) | D | NA | NC | C |
| MENC_008 | 4831414J02 | GCUGGCAAACGGAACCAAGUCCGUCUCCUGAGAGGUUUGGUCCCUUCAACCAGCUA | UUGGUCCCUUCAACCAGCUA | mmu-mir-133b (miRBase 8.0) | D | NA | NC | C |
| | | ACAUGCUCUUUAUACCUCAUAGAUUUCUACAGCACUAUGGAAUGUAAGGAAGUGUGUGG | UGGAAUGUAAGGAAGUGUGUGG | mmu-mir-206 (miRBase 8.0) | ND | NA | NC | NC |
| MENC_009 | 6720427I07 | AGAGGUAGUAGGUUGCAUAGUUUAGGGCAGAGAUUUUGCCACAAGGAGUUAACUUAACGACCUUGCUUUCU | AGAGGUAGUAGGUUGCAUAGU | mmu-let-7d (miRBase 8.0) | D | NA | NC | C |
| MENC_010 | C030026K10 | | | | | | NC | |
| MENC_011 | 9130016C20 | AGUUCUUCAGUGGCAAGCUUUUGUCCUGACCCAGCUAAAGCUGCCAGUUGAAGAACUGU | AAAGCUGCCAGUUGAAGAACUGU | mmu-mir-22 (miRBase 8.0) | D | NA | NC | C |
| MENC_012 | 2210403K04 | | | | | | NC | |
| MENC_013 | 5930426H09 | UUCUAGGUAGGUCCAGGGAUCCAGAUCAAAACAGGCCUUGGGCCUUAUCCUAGAACC | GCCCUUGGGCCUUAUCCUAGAA | mmu-mir-331 (miRBase 8.0) | D | NA | NC | C |
| MENC_014 | D230012004 | UGCCUGUCUACACUUGCUGUGCAGAACAUCGUCUACCUUGUACAGCAGGCACAGACAGGCAGU | UGCCUGUCUACACUUGCUGUGC | Nmir_002 | D | D | NC | C |

| | | | | | | | | |
|----------|------------|--|-------------------------|--------------------------------------|----|----|----|----|
| | | | ACAGCAGGCACAGACAGGCAG | mmu-mir-214 (miRBase 8.0) | D | NA | | |
| MENC_015 | 9830169G21 | UGUAUUUGACAAGCUGAGUUGGACACUCUGUGUGUAGAGUGUCAGUUUGCAAUACCCC | UGUCAGUUUGCAAUACCCC | mmu-mir-223 (miRBase 8.0) | D | NA | NC | C |
| MENC_016 | 5330411G14 | AGAGGUUGCCUUGGUGAAUUCGCUUUUAUGUUGAAUCACACAAAGGCAACUUUGU | AUCACACAAAGGCAACUUUGU | mmu-mir-377 (miRBase 8.0) | D | NA | NC | C |
| MENC_017 | B230304K20 | CUCCUGACUCCAGGUCCUGUGUUACCUCGAAUAGCACUGGACUUGGAGUCAGAAGGC | ACUGGACUUGGAGUCAGAAGGCC | Nmir_003 (miRBase 9.2: mmu-mir-422b) | D | D | NC | C |
| | | | CUCCUGACUCCAGGUCCUGUGU | mmu-mir-378 (miRBase 8.0) | ND | NA | | |
| MENC_018 | D930047H10 | AGCUGGUGUUGAAUCAGGCCGACGAGCAGCGCAUCCUUACCCGGCUAUUUCACGACACCAGGGUU | AGCUGGUGUUGAAUC | mmu-mir-138-2 (miRBase 8.0) | NA | NA | NC | C |
| MENC_019 | B130046N22 | AACCCGUAGAUCGAAACUUGUGCUGAUUCGACACAAAGCUGUCUAUAGGUUAG | AACCCGUAGAUCGAAACUUGUG | mmu-mir-100 (miRBase 8.0) | NA | NA | NC | NC |
| MENC_020 | E130002N09 | AACAUUCAUUGCUGUCGGUGGUUGAACUGUGAGAAAAGCUCACUGAACAAUUGAAUGCAAC | AACAUUCAUUGCUGUCGGUGGG | mmu-mir-181b-1 (miRBase 8.0) | NA | NA | NC | C |
| MENC_021 | 2010103J01 | AUGACCUAUGAUUUGACAGACCGUGCAGCUGUGUUGUCUGCAUUCUGUAGGCCAAUA | AUGACCUAUGAUUUGACAGAC | mmu-mir-215 (miRBase 8.0) | NA | NA | NC | NC |
| MENC_022 | 6430411K18 | UACGGUGAGCCUGCAUUUUUCAGAGAGGCUAGAUCUUGUUGAGAGGAUCAUGAUGGGUCCUGGUGU | UACGGUGAGCCUGCAUUUUUC | mmu-mir-433 (miRBase 8.0) | NA | NA | NC | C |
| MENC_023 | A130074J23 | CUGAGGGGCAGAGAGCAGACUUUCUUAUUUCCAAAAGCUCGGUCUGAGGCCCUUCAGUC | CUGAGGGGCAGAGAGCAGACU | Nmir_004 | D | D | NC | C |
| | | | AGCUCGGUCUGAGGCCCUUCAG | Nmir_005 (miRBase 9.2: mmu-mir-423) | D | D | | |
| MENC_024 | 1110017L17 | UCUACUCUUGACCAAAGUUUGUAAGAAACAUAACAGAAUUUGGGACGGGAGGGAGGAU | AUUUGGGACGGGAGGGAGGAU | Nmir_006 | D | D | NC | NC |
| MENC_025 | 9830134K06 | | | | | | NC | |
| MENC_026 | 2010209012 | AGGAAGCCUUGGAGGGCUGGAGGUGAUGGAUUUCCUCCGGUUCAGGGUCCACC | AGGAAGCCUUGGAGGGCUGGAGG | Nmir_007 (miRBase 9.2: mmu-mir-671) | D | D | NC | C |
| MENC_027 | 2400007E14 | GAGGUUUCUGCUGCCGUGAGAUAGUAAACUGUCGUUUCGGGCGGGGCGUGGACGCCUCG | GGC CGGGCGUGGACGCCUCG | Nmir_008 | D | D | C | C |
| MENC_028 | 2610025H06 | CUCUCCCUACCACCUGCCUUCUCCUGCUGGAGCAGGCAAGGAGAGGGUGAAGGGAG | CUCUCCCUACCACCUGCCUCU | Nmir_009 | D | D | C | NC |
| | | | GCAAGGAGAGGGUGAAGGGAG | Nmir_010 | D | D | | |
| MENC_029 | 2900029M20 | GCGCCGACGCGGGGCCUGGCCAGUCUUUGCAGUAGAGCCCAUCUCUCUGGCGUUG | GCGCCGACGCGGGGCCGUU | Nmir_011 | D | ND | C | C |

| | | | | | | | | |
|----------|------------|---|------------------------|------------------------|---|----|----|----|
| MENC_030 | 6330521N15 | UCGCCUUGUCGUACUUGAGCUUUGCAUGGCGUCGCGGGGAGCCUCCCGGGCGAUG | CGGGGAGCCUCCGGGGCGAUG | Nmir_012 | D | ND | NC | C |
| MENC_031 | 9330164G18 | UUCCCUUCUUCUUGGCCGGGUUGCCUCCGCCAGCUACCCCGGAGGAGCAGGAGGGA | CCCCGAGGAGCAGGAGGGA | Nmir_013 | D | D | NC | C |
| MENC_032 | 9330178L02 | CACACUAAUACAGUAGUCUUUGGAACACCAUGGACUCUCUGAUGGGUGAGGAG | CUCUCUGAUGGGUGAGGAG | Nmir_014 | D | D | NC | NC |
| MENC_033 | A330012E03 | CUUUGGAUGGAGAAAGAGGGGGAAGUGCGAGCCUUCUACUCGUUCUGCCGGUGAG | CUUUGGAUGGAGAAAGAGGGGG | Nmir_015 | D | D | NC | NC |
| | | | UCAACUCGUUCUGCCGGUGAG | Nmir_016 | D | D | | |
| MENC_034 | A430080L19 | CGCGGGGCCGGCUUUUUUCCGCCUUGCGGUGGACUAGAAAGGAGUACCCCGGGA | CGCGGGGCCGGCUUUUUUCC | Nmir_017 | D | ND | NC | NC |
| MENC_035 | A530020N14 | AGGUCAAGGUACACAGGGGAUAGAAAUUUUUCUGUAUUAUCUGUUUACCUUUGACCUAA | AGGUCAAGGUACACAGGGGAUC | Nmir_018 | D | D | C | C |
| MENC_036 | B130042C21 | | | | | | C | |
| MENC_037 | C920030H05 | | | | | | C | |
| MENC_038 | 4931433A09 | AGCGAUGGCCGAAUCUGCUUCCUUGGUUAGAUAUGAUGGUAUUCAGAUUCGCUCAUUCGUUGA | AGCGAUGGCCGAAUCUGCUUCC | Nmir_019 | D | D | NC | NC |
| MENC_039 | D930019D21 | | | | | | NC | |
| MENC_040 | B230208K21 | AAGCUAGAAGAGGGCGGAGCCUGGAGGGGACACCCGGGCCGCCUCUCUGGUCCUUA | GCCCGCCUCUCUGGUCCUUA | Nmir_020 | D | D | NC | NC |
| MENC_041 | B830003K07 | AUCCUUGAGUAGAGUAGAGGGCCCGCAGUCGCGGUCUACUCCGGGGGUCC | CGCUGUACUCCGGGGGUCC | Nmir_021 | D | D | C | C |
| MENC_042 | C130030E18 | GGAGUUGUUGUAAUUGGACUUGAUAAAUGUUUAGAGGUGCAGUAGGCAUGACUU | AGAGGUGCAGUAGGCAUGACUU | Nmir_022 | D | D | C | C |
| MENC_043 | C530029I03 | CCUUCUUCUUCUCCUGAGACUAGGCCGGCAGUGGCCUCCUGAAGAGGAACAAGUGUG | CCUUCUUCUUCUCCUGAGACA | Nmir_023 | D | D | NC | NC |
| MENC_044 | C530039003 | | | | | | NC | |
| MENC_045 | C920016N10 | CCGCCGGGCCUGCAAUUAUGAAGGAGCAGCCUCAUUGCGGGCACCGGGCAUCCGAGCA | CCGCCGGGCCUGCAAUUAUGAA | Nmir_024 | D | ND | NC | C |
| | | | GCGGGCACCGGGCAUCCGAGCA | Nmir_025 | D | D | | |
| | | GUUCUGCUCCUUGGAGGAGGUUCUGUUGCACACCUUCUCUUCAGGUAGAUAAACAU | GUUCUGCUCCUUGGAGGAGG | Nmir_026 | D | D | | NC |
| MENC_046 | E330019P22 | GCUCUGGAUGCGUUGAUGGUGGCUCCUUGGGGCCACCACAGUCCACCACGCGGUAG | CACCAGUCCACCACGCGGUAG | Nmir_027 | D | D | NC | C |
| MENC_047 | F730021I03 | UUUCUCUGUACCUGCCGAGGGUUCUCCUCCAGCCGCGAGCGGCGUAGAGGAGGG | GCCAGCGGCGUAGAGGAGGG | Nmir_028 | D | ND | NC | NC |
| MENC_048 | F830003A04 | AGCAACCUCCUAGGGUUGUUGAGAAUAAAUGAACUCGAGCAGCCUGAGGAGGGGUG | UGCAGCAGCCUGAGGAGGGCU | Nmir_029 | D | D | NC | NC |
| MENC_049 | F830206C10 | | | | | | NC | |
| MENC_050 | F830211N05 | CUCCCCUCGUCUCUCUGGUGGUAUUUUUUUCUCCUACCGGAGCAGAGGAUCUGGAGGU | GAGCAGCAGGGAUCUGGAGGU | Nmir_030 | D | D | NC | C |
| MENC_051 | 10C0030C13 | ACUGGCGGAAAGGGCCACAGUGGACUUGUACACUGAUGCCCUAACCCGUCAGUCC | CUGAUGCCCUAACCCGUCAGU | Nmir_031 (mirBase_9.2: | D | ND | NC | C |

| | | | | | | | | |
|----------|------------|--|----------------------------|--|----|----|----|----|
| | | | | mmu-mir-675-3p) | | | | |
| MENC_052 | M5C1091A08 | CCCUCAGGCCACCAGAGCCCAGAUACCCAGAAAUCGGCUCUGGGUCUGUGGGGAG | GAAAUUCGGCUCUGGGUCUGUGGGAG | Nmir_032 (mirBase_9.2: mmu-mir-760) | D | D | NC | C |
| MENC_053 | A430024D24 | AGGUACGGUUGCCACGUGAACACACAUUGUCUGUGAGCAUGUGGUUAGGCCGCCUCA | | | ND | NA | NC | NC |
| MENC_054 | K430345014 | GCCACCACUCCUGAGAGCCGGGGAUACCCAUCGCGACGUCACGGAGGAGUCGAGGCGCGG | | | ND | NA | NC | C |
| MENC_055 | A130028J20 | CUUUUUAUGAGAGUUGAGAAGGCCUGGCCUUUGCCUUUUGUUUCUUAUGAGAAGGU | | | ND | NA | NC | C |
| MENC_056 | A430106D13 | GAAUGUGAUUGCUUUGCAUGACUGCAAUGGAGAUUCAACAGAGCCAUCAUUGUUC | | | ND | NA | NC | C |
| MENC_057 | A930005K04 | UCGCCAUCUGCCCCAGUUGGAGCGCAAGUCCUCCAGGUGGCGAGAUCAUCGACGACA | | | ND | NA | NC | NC |
| MENC_058 | 2610301N02 | GGGACACCCUUUGAAGAGUGUAAGUAAUUCUUUAUUAUCACAUUAAAAAGGGUGCCUU | | | ND | NA | NC | NC |
| MENC_059 | 2610301G21 | | ND | NC | | | | |
| MENC_060 | 5330400K14 | GAGAGGUGUUGCUUUUGCCAAGAAGGCCACUUGGUCUUGGCAGAAGGCAGAGGCCUGCCC | | | ND | NA | NC | NC |
| MENC_061 | 9930009J05 | GAUCGGUACCCUCUGGGAACUGUGGGCUCUUAUACAGCUCAGGCGGUGGUUUGAUUCA | | | ND | NA | NC | NC |
| MENC_062 | B130001P19 | UUUCUGGCCAGUGAAGAGAUCAUAUAACCAGCUGGAAGCUCUGUACUGCCAGGCAUC | | | ND | NA | NC | NC |
| MENC_063 | D430036I17 | GUCUUGGACCAGAGGCCCAAGAUACCAGACUGGUGCUUGGAGCCGACAGGCCGGAUAG | | | ND | NA | NC | NC |
| MENC_064 | D630021F02 | GGAGAUAGGUUUGCACACUGUCUUGAGAACAAGUCCAGUGAGGAAUCCUGAUCUCUG | | | ND | NA | NC | NC |
| | | UGCGGUGUGUGUCCCCACCACGGCACUUGCCUUGUGGUGUCGGACUACAACCCAAC | | | ND | NA | | NC |
| MENC_065 | F930104J06 | AGUGUGAGAAGACAAAUGAGAUACGUUAUGAAAGGUAACUGUAUUGUUUCUGCUCUGC | | | ND | NA | NC | C |
| MENC_066 | I920046F24 | UGCCUGCAUCUGAUUGGUCUGUGGGGUAUUAUCUGAUAGCUAAUUGAUGGAGGCGAG | | | ND | NA | NC | NC |
| MENC_067 | A130050K09 | CAUAGGCUCCUUAUGCUUGAACUCUUGGUCUCUAGUUCUAGGACUUGUUUGGGAGUCUGUGG | | | ND | NA | NC | NC |
| MENC_068 | 6720435L14 | GAGGAAGUCCGGCAGACUUGGGCUACAUUCUGGCCAGUUGACUUGGGGAGUUCUGU | | | ND | NA | NC | C |
| MENC_069 | 4732419F12 | CUCUGGUGAAGCCUGGCUACUCUGAGAGAGUGGCCAGUUAUCAGCUGCAGCU | | | ND | NA | NC | NC |
| MENC_070 | A830006M23 | CCAGGACCCACCUCUGACUGAGCCUAGUGGCAGCCAGGUGACUUGCAAGCUUUGGGU | | | ND | NA | NC | NC |
| MENC_071 | B230380C22 | AGUGGCUUGCUAUUCUGGUAUCACUCCUACUACCCUGGUGAGAAACUAAGCAACAGCCUUC | | | ND | NA | NC | NC |
| MENC_072 | A230053F13 | CAUUCUGCAGCCAGUGGCCUCGUCUACCUUACAGGUACACAGGGUUAUGUAGGACGGG | | | ND | NA | NC | NC |
| MENC_073 | 1110014E10 | GGUUCAGCUAUGGUGCUAAUCAAUAGGUUUUCAGUGUCAGGUUCAAGCUGAAUGCCA | | | ND | NA | C | C |

| | | | | | | | | |
|----------|------------|---|----|--|----|----|----|----|
| MENC_074 | 2010208G19 | UUUGGGGAACUGCUGGAUUGCCUAAUUGUAGAGAGGUGUGUUGCUUGCCUGGGUAGUCCCAAAGA | | | ND | NA | C | NC |
| MENC_075 | 2010013M14 | UGCAUGUCUGUACUUGCUGAGUUUCUGUGUCCUGCAGCAGUGGUCAGAAACUUGCUA | | | ND | NA | NC | NC |
| MENC_076 | D130042G11 | AGGGGAGUUUUUUCAAAGAAUGGCUUCCAUAUUUAAGGAAACCCUCCCCAC | | | ND | NA | NC | C |
| MENC_077 | 3526402003 | UGCCCCUGACCCACUGCUUUUGCUGUACAUAGAGGCUAAGUGGGUGAAGUGGCAGG | | | ND | NA | C | C |
| MENC_078 | 4. 93E+20 | UUAUCCGGUCCCUAAUCCUUAGGUACUUCACGACGUUGGGUGAGGGGAGCUGGAAGAU | | | ND | NA | NC | C |
| MENC_079 | 4930573F14 | UGAGCCACUUGGCCAUUUUAAAGGCUACACUUGAUUUAAAUGGGACCAAGUUCAUCAUG | | | ND | NA | NC | NC |
| MENC_080 | 5830407M18 | CCAUGAGCUGCUCGCCUACAGCCUGGUCUCCAACUGCGGGUGAGCAGCUCUGGUG | | | ND | NA | NC | NC |
| MENC_081 | 6030458J16 | GGGUCUGGGCUGGAAAAUCCUGGUGUUUGAAUUGUUCAGGUCCAGUUCAGACUCUUG | | | ND | NA | NC | C |
| MENC_082 | G530004A22 | | NC | | | | | |
| MENC_083 | G530143B20 | | NC | | | | | |
| MENC_084 | I530014C21 | | NC | | | | | |
| MENC_085 | 7420435F03 | CGCCUGGGCCUCAUGGAAUUGAUUGCUUUCGCAAGAUUCUGUAAGGGCCAGGUGUC | | | ND | NA | NC | NC |
| MENC_086 | 9330159N21 | UUUCUUGGUCUGCCUGGCCUGUAAAUGUGUAUGAUAGAGCUAUCAGGCAUCGUAAGGCAACA | | | ND | NA | NC | NC |
| MENC_087 | 9430042D23 | UGUGUUUGAUGCCAUAUUGGUUGCCAGUGGCACCGAGGUUGGCAUCAGACCCUUCUU | | | ND | NA | NC | C |
| MENC_088 | 9630058L18 | UCACAUACAAAAGUUGGGAUCUUGGGCCAGAAGUCCCAUCUUCUUGUGUGGAGA | | | ND | NA | C | C |
| MENC_089 | 2610025H06 | | | | | | | |
| MENC_090 | 6030473A16 | | | | | | | |
| MENC_091 | 9. 93E+25 | GUGUGUGAUGUGUAUGUAGGCAAAUUAUACAUUUUAUACAUACACAGGUGCAUACAC | | | ND | NA | NC | C |
| MENC_092 | A130012M23 | AUGCUUGGGAAGGAGCCACCUUGCUAUGGAAAGGAGUGGACUCCUGUUCAGCAUAG | | | ND | NA | NC | NC |
| MENC_093 | A330041B18 | UUUUGUCUCCUCUGCAGUCUGACUGGUUCUCAGUGAUGAUGAGGACAAAGGAGAGAGUA | | | ND | NA | NC | C |
| MENC_094 | A430103D08 | AAAAGGCUACCCUACUACUACCUCAAGUUGAUGGGAUGGAGAAAGCACUUUAC | | | ND | NA | NC | NC |
| MENC_095 | A430080K14 | GUUUGCUCAUUCCCUUCGGAUUUAGGUACGGUAAAUUUGGAAGAGGUGGGGAGCG | | | ND | NA | C | C |
| MENC_096 | I730043G20 | | C | | | | | |
| MENC_097 | A630093L23 | UGCGAGGAUUGAAUUGGCUAUCUCUGUAUGAGAAUGGCAUCAAUGGGAUCCUUGCAGA | | | ND | NA | C | C |

| | | | | | | | | |
|----------|------------|--|----|--|----|----|----|----|
| MENC_098 | D030040M08 | | | | | | C | |
| MENC_099 | A730069D24 | UCGGCAAACUCCAAGAUACAGAGGACAUUCUUGACAGAUGUGUCUUGGAAGAGUCGGAGAGU | | | ND | NA | NC | NC |
| MENC_100 | B230339C10 | GCAGUUCUGACAUUUUGGUGUGUUCAUUGUUGGGCUAUGCACAGAAUGUCCUACUGUCUU | | | ND | NA | NC | C |
| MENC_101 | B230399F14 | UUUGUUUUUCCUGCUUCCUUUUUCCCAUGGAGCGUGGGGAGCAGGGCCUCAGAGCAAAGU | | | ND | NA | NC | C |
| MENC_102 | B230206C19 | | NC | | | | | |

^a : Nmir_XXX indicates predicted miRNAs which have not yet been registered in miRBase 8.0

^b : D: detected; ND: not detected; NA: not applicable

^c : C: conserved between mouse and human; NC: not conserved between mouse and human;

Table S3: List of probes for microarray

| | |
|----------|---|
| PROBE_1 | TTTTTTTTTTTTTTTTTACCCGACCAACAGCACAAACTACTAC |
| PROBE_2 | TTTTTTTTTTTTTTTTTAGGCAGTAGCTTGCGCAGTTATCTCC |
| PROBE_3 | TTTTTTTTTTTTTTTTTTAAATCAAGGTCCGCTGTGAACA |
| PROBE_4 | TTTTTTTTTTTTTTTTTTGGCATTACCGCGTGCCTTAAT |
| PROBE_5 | TTTTTTTTTTTTTTTTTACAGTAGCACAATGTGAAAAGAGCTC |
| PROBE_6 | TTTTTTTTTTTTTTTTTCGATGCCCTTTAACATTGCACTGCT |
| PROBE_7 | TTTTTTTTTTTTTTTTTACTTACAGTATATGATGATATCCCAG |
| PROBE_8 | TTTTTTTTTTTTTTTTTGACTAGTACATCATCTATACTGTAGT |
| PROBE_9 | TTTTTTTTTTTTTTTTTGTAATGGTAACGGTTTCCTCGCCATT |
| PROBE_10 | TTTTTTTTTTTTTTTTTGAGCAGCAAGAGAACCGTTACCATT |
| PROBE_11 | TTTTTTTTTTTTTTTTTAACAGCTGCTTTGGGATTCCGTTGC |
| PROBE_12 | TTTTTTTTTTTTTTTTTAGGGAACGAAATCCAAGTGCAGCTGG |
| PROBE_13 | TTTTTTTTTTTTTTTTTCCACAAAGAAGTATATGCATAGGA |
| PROBE_14 | TTTTTTTTTTTTTTTTTCATCTTCCCATGCGCTATACCTCTTT |
| PROBE_15 | TTTTTTTTTTTTTTTTTGACAGACTCCGGTGAATGAAGGACA |
| PROBE_16 | TTTTTTTTTTTTTTTTTCTGAGCTTCACTCCACTGAAATCT |
| PROBE_17 | TTTTTTTTTTTTTTTTTTCGACTTGGTCCGTTTGACCAGC |
| PROBE_18 | TTTTTTTTTTTTTTTTTTGTAGCTGGTTGAAGGGACCAAAC |
| PROBE_19 | TTTTTTTTTTTTTTTTTCTATGAGGATATAAAGAAGCATGT |
| PROBE_20 | TTTTTTTTTTTTTTTTTCCACACACTTCCTTACATCCATA |

| | |
|----------|---|
| PROBE_21 | TTTTTTTTTTTTTTTTTAAACTATGCAACCTACTACCTCT |
| PROBE_22 | TTTTTTTTTTTTTTTTTAGGCAGCAGGTCGTATAGTAACTCC |
| PROBE_23 | TTTTTTTTTTTTTTTTTTCATAAAGCTGCCACTGAAGAACT |
| PROBE_24 | TTTTTTTTTTTTTTTTTCAACAGTTCTTCAACTGGCAGCTTA |
| PROBE_25 | TTTTTTTTTTTTTTTTTGGATCCCTGGGACCATACCTAGAA |
| PROBE_26 | TTTTTTTTTTTTTTTTTGGTTCTAGGATAGGCCAGGGGCCT |
| PROBE_27 | TTTTTTTTTTTTTTTTTCTGCACAGCAAGTGTAGACAGGCAGA |
| PROBE_28 | TTTTTTTTTTTTTTTTTGACTGCCTGCTGTGCCTGCTGTAC |
| PROBE_29 | TTTTTTTTTTTTTTTTTGTCCAACCTCAGCTTGTCAAATACAC |
| PROBE_30 | TTTTTTTTTTTTTTTTTGGGGTATTGACAACTGACACTCT |
| PROBE_31 | TTTTTTTTTTTTTTTTTGCGAATTCACCAAGGGCAACCTCT |
| PROBE_32 | TTTTTTTTTTTTTTTTTAAACAAAAGTTGCCTTGTGTGATTC |
| PROBE_33 | TTTTTTTTTTTTTTTTTACACACAGGACCTGGAGTCAGGAGCC |
| PROBE_34 | TTTTTTTTTTTTTTTTTAGGCCTCTGACTCCAAGTCCAGTGC |
| PROBE_35 | TTTTTTTTTTTTTTTTTAAAGTCTCGCTCTCTGCCCTCAGCC |
| PROBE_36 | TTTTTTTTTTTTTTTTTAAGACTGAGGGGCTCAGACCGAGCT |
| PROBE_37 | TTTTTTTTTTTTTTTTTACAAAACCTTGGTCAAGAGTAGAAA |
| PROBE_38 | TTTTTTTTTTTTTTTTTATCCTCCCTCCCGTCCCAAATTC |
| PROBE_39 | TTTTTTTTTTTTTTTTTCCTCCAGCCCTCCAGGGCTTCCTCC |
| PROBE_40 | TTTTTTTTTTTTTTTTTGAGGTGGAGCCCTGAGAACCGGAGGA |
| PROBE_41 | TTTTTTTTTTTTTTTTTCATCTCAGGCGCAGCAGATACCTCT |

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|----------|---|
| PROBE_42 | TTTTTTTTTTTTTTTTTCGAGGCGTCCAGCGCCCGCGCCCG |
| PROBE_43 | TTTTTTTTTTTTTTTTTGAAGAGGCAGGTGGTAGGGAGAGAG |
| PROBE_44 | TTTTTTTTTTTTTTTTTCCCTCCCTTCACCCTCCTCCTTGCCT |
| PROBE_45 | TTTTTTTTTTTTTTTTTGCAACGGCCCCGCGCTGCCGGCGCTG |
| PROBE_46 | TTTTTTTTTTTTTTTTTACCAACGCCAGAGAGATGGGGCTCTA |
| PROBE_47 | TTTTTTTTTTTTTTTTTAAAGCTACAAGTACGACAAGGGGATC |
| PROBE_48 | TTTTTTTTTTTTTTTTTCGCATCGCCCCGGGAGGCTCCCGCA |
| PROBE_49 | TTTTTTTTTTTTTTTTTCAACCCGGCCAAGAAGAAGAGAAAA |
| PROBE_50 | TTTTTTTTTTTTTTTTTCCTCCTCCTCGCTCCTCGGGGGTA |
| PROBE_51 | TTTTTTTTTTTTTTTTTAAAGACATCACTGTAATGAGTGTGGG |
| PROBE_52 | TTTTTTTTTTTTTTTTTCCTCCTCACCCACCATCAGAGAGTC |
| PROBE_53 | TTTTTTTTTTTTTTTTTCCCCCTCTTCTCCATCCAAAGCA |
| PROBE_54 | TTTTTTTTTTTTTTTTTCCTCACCGGACAGAACGAGTTGAAG |
| PROBE_55 | TTTTTTTTTTTTTTTTTCGGGAAATAAAGCCGCCCCCGCGGA |
| PROBE_56 | TTTTTTTTTTTTTTTTTATCCCGGGGTGACTCCTTCTAGT |
| PROBE_57 | TTTTTTTTTTTTTTTTTTGATCCCCTGTGAACCTTGACCTAT |
| PROBE_58 | TTTTTTTTTTTTTTTTTTAGGTCAAAGTAAACAGATTATA |
| PROBE_59 | TTTTTTTTTTTTTTTTTGAGGAAGCAGATTCGGCCATCGCTGA |
| PROBE_60 | TTTTTTTTTTTTTTTTTAATCAACGGAATGAGCAGAATCTGAA |
| PROBE_61 | TTTTTTTTTTTTTTTTTCCAGGCTCGCCCTCTTCTAGCTTCC |
| PROBE_62 | TTTTTTTTTTTTTTTTTATGAAGGACCAGAGAGGGCGCCCG |

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|----------|--|
| PROBE_63 | TTTTTTTTTTTTTTTTCTCAACTCGTTCACCTCAGGGAATCC |
| PROBE_64 | TTTTTTTTTTTTTTTTTCGGGACCCCGGAGTACGAGCGGCA |
| PROBE_65 | TTTTTTTTTTTTTTTTGTCCAATTATACAGCAAACACTCCCA |
| PROBE_66 | TTTTTTTTTTTTTTTTTCAAGTCATGCCTACTGCACCTCTAA |
| PROBE_67 | TTTTTTTTTTTTTTTTTCATGTCTCAGGAAGAAGAAGAGGAG |
| PROBE_68 | TTTTTTTTTTTTTTTTTCCCACACTTGTCTCTTCCAGGAGC |
| PROBE_69 | TTTTTTTTTTTTTTTTTCCTTCATATTGCAGGGCCCGGGCG |
| PROBE_70 | TTTTTTTTTTTTTTTTTCATGCTCGGATGCCCGTGCCGCAC |
| PROBE_71 | TTTTTTTTTTTTTTTTTAACCTCCCTCCAGAGGAGCAGAACAG |
| PROBE_72 | TTTTTTTTTTTTTTTTTAAATGTTAATCTACCTGAAGAGAGG |
| PROBE_73 | TTTTTTTTTTTTTTTTTCGACCATCAAACGCATCCAGCAGCAG |
| PROBE_74 | TTTTTTTTTTTTTTTTTCCCTACCGGTGGTGGGACTGGTGGT |
| PROBE_75 | TTTTTTTTTTTTTTTTTCCCTGCCGGCAGGTAGCAGAGAAAAG |
| PROBE_76 | TTTTTTTTTTTTTTTTTGCCCTCCTCTCAGCCGCTGGCGG |
| PROBE_77 | TTTTTTTTTTTTTTTTTCTCACAACAACCCTAGGAGGTTGCTC |
| PROBE_78 | TTTTTTTTTTTTTTTTTTCAGCCCTGCCTCAGGCTGCTGCAG |
| PROBE_79 | TTTTTTTTTTTTTTTTTCCAGCAAGAGACAGCGAGGGGAGTG |
| PROBE_80 | TTTTTTTTTTTTTTTTTCCACCTCCAGATCCTCTGCTGCTCCC |
| PROBE_81 | TTTTTTTTTTTTTTTTTACTGTGGGCCCTTCCGCACCAGTCC |
| PROBE_82 | TTTTTTTTTTTTTTTTTAGGGACTGAGCGGTTAGGGCATAACAG |
| PROBE_83 | TTTTTTTTTTTTTTTTTATCCGGGCTCTGGTGGCCTGAGGGGG |

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|-----------|--|
| PROBE_84 | TTTTTTTTTTTTTTTTTGCTCCCCACAGACCCAGAGCCGAATT |
| PROBE_85 | TTTTTTTTTTTTTTTTTTTTGTGTTACAGTGGCAACCGTACCT |
| PROBE_86 | TTTTTTTTTTTTTTTTTTTTGAGGACGGCGCTAACCCATGCT |
| PROBE_87 | TTTTTTTTTTTTTTTTTTTTCCCCGGCTCTCAGGAAGTGGTGGC |
| PROBE_88 | TTTTTTTTTTTTTTTTTTTTCCGCCGCTCGACTCCTCCGTGAC |
| PROBE_89 | TTTTTTTTTTTTTTTTTTTTGGCCTTCTCAACTCTCATGAAAAAGG |
| PROBE_90 | TTTTTTTTTTTTTTTTTTTTACCTTCTCATGAAGAAACAAAAGG |
| PROBE_91 | TTTTTTTTTTTTTTTTTTTTGTCATGCAAAGCAATCACACATTCAT |
| PROBE_92 | TTTTTTTTTTTTTTTTTTTTAGGAGAACATTGATGGCTCTGTTGAC |
| PROBE_93 | TTTTTTTTTTTTTTTTTTTTGCTCCAAGTGGGCAGATCGGCGACA |
| PROBE_94 | TTTTTTTTTTTTTTTTTTCATGTCGTCGATCATCTGCCACCT |
| PROBE_95 | TTTTTTTTTTTTTTTTTCTTACCATCTTCAAAGGGTGTCCCTT |
| PROBE_96 | TTTTTTTTTTTTTTTTTCAAAGGGCACCTTTTAATATGTAGA |
| PROBE_97 | TTTTTTTTTTTTTTTTTCTTGGCAAAGACAACACCTCTCCC |
| PROBE_98 | TTTTTTTTTTTTTTTTTTGGGGCAGCCCTCTGCCTTCTGCCAA |
| PROBE_99 | TTTTTTTTTTTTTTTTTACAGTCCCAGAGGGGTACCGATCGT |
| PROBE_100 | TTTTTTTTTTTTTTTTTTCATGAATCAAACCACCAGCTGAGCT |
| PROBE_101 | TTTTTTTTTTTTTTTTTTGTAGATCTTCACTGGCCAGAAACC |
| PROBE_102 | TTTTTTTTTTTTTTTTTTCAGATGCCTGGCAGTAACAGAGCTTC |
| PROBE_103 | TTTTTTTTTTTTTTTTTCTTGGCCGCTCTGGTCCAAGACTG |
| PROBE_104 | TTTTTTTTTTTTTTTTTCTATCCGGCACTGGCGGCTCCAAG |

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|-----------|--|
| PROBE_105 | TTTTTTTTTTTTTTTTAGACAGTGTGCAAACCTGATCTCCAG |
| PROBE_106 | TTTTTTTTTTTTTTTTGGCGAGAGATCAGGATTCCTCACTGG |
| PROBE_107 | TTTTTTTTTTTTTTTTCGTGGTGGGGACACACACCCGCAAC |
| PROBE_108 | TTTTTTTTTTTTTTTTGGGTGGGTTGTAGTCCGACCACCAC |
| PROBE_109 | TTTTTTTTTTTTTTTTATCTCATTTTGTCTTCTCACACTGG |
| PROBE_110 | TTTTTTTTTTTTTTTTATGCAGAGCGAGAAAACAATACAGTT |
| PROBE_111 | TTTTTTTTTTTTTTTTCCACAGACCAATCAGATGCAGGCAAT |
| PROBE_112 | TTTTTTTTTTTTTTTTCTCTCGCCTCCATCAATTAGCTATCA |
| PROBE_113 | TTTTTTTTTTTTTTTTAGAGTTCAAGCATAGGAGCCTATGGA |
| PROBE_114 | TTTTTTTTTTTTTTTTAACCACAGACTCCCAAACAGTGCC |
| PROBE_115 | TTTTTTTTTTTTTTTTGCCACAAGTCTGCCGACTTCCTCAC |
| PROBE_116 | TTTTTTTTTTTTTTTTAACGAGAACTACCCAAGTCAAAC |
| PROBE_117 | TTTTTTTTTTTTTTTTGTAGGAGCCAGGCTTCAGCCAGAGGC |
| PROBE_118 | TTTTTTTTTTTTTTTTACAGCTGCAGCTGAAATCACTGGCCA |
| PROBE_119 | TTTTTTTTTTTTTTTTCAGTGACAGAGGTGGGCTCCTGGGT |
| PROBE_120 | TTTTTTTTTTTTTTTTAAACCAAAGCTTGCAAGTGACACCT |
| PROBE_121 | TTTTTTTTTTTTTTTTGATACCAGAATAGCAACAGCCACTTC |
| PROBE_122 | TTTTTTTTTTTTTTTTATGAAGGGCTGTGCTTAGTTTCTAC |
| PROBE_123 | TTTTTTTTTTTTTTTTCAGGCCACTGGGCTGCAGGAAATGGG |
| PROBE_124 | TTTTTTTTTTTTTTTTAGCCCGTCTACATAACCCTGTGTAC |
| PROBE_125 | TTTTTTTTTTTTTTTTATTGATTAGCACCATAGCTGAACCAA |

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|-----------|--|
| PROBE_126 | TTTTTTTTTTTTTTTTTAATGGCATTACAGCTATGGAACCTGA |
| PROBE_127 | TTTTTTTTTTTTTTTTTAGGCATATCCAGCAGTCCCCAAACA |
| PROBE_128 | TTTTTTTTTTTTTTTTTGTTCTTTGGGGACTACCCAGGCAAGC |
| PROBE_129 | TTTTTTTTTTTTTTTTTAACTCAGCAAAGTACAGACATGCAGG |
| PROBE_130 | TTTTTTTTTTTTTTTTTTCAGCATGTTCTGACCACTGCTGC |
| PROBE_131 | TTTTTTTTTTTTTTTTTATTCTTTTGAAGAAAACCCCCTCT |
| PROBE_132 | TTTTTTTTTTTTTTTTTATGTGGGGAGGGGTTCCCTCAAAT |
| PROBE_133 | TTTTTTTTTTTTTTTTTCAAACAGCAGTGGGGTCAGGGGCAGG |
| PROBE_134 | TTTTTTTTTTTTTTTTTCACCTGCCCACTCACCCCACTTAGC |
| PROBE_135 | TTTTTTTTTTTTTTTTTAAAGGATTAAGGGAACCGATAAAC |
| PROBE_136 | TTTTTTTTTTTTTTTTTGTGATCTCCAGTCCCCTCACCCAAC |
| PROBE_137 | TTTTTTTTTTTTTTTTTCTTAAATGGGCCAAGTGGCTCAGA |
| PROBE_138 | TTTTTTTTTTTTTTTTTGCATGATGAACTTGGTCCCAATTTT |
| PROBE_139 | TTTTTTTTTTTTTTTTTGGCTGTAGGCGGAGCAGCTCATGGGC |
| PROBE_140 | TTTTTTTTTTTTTTTTTGGCACCAGGAGCTGCTACCGCGCAG |
| PROBE_141 | TTTTTTTTTTTTTTTTTCCAGGATTTTCCAGCCAGACCCTA |
| PROBE_142 | TTTTTTTTTTTTTTTTTATCAAGAGTCTGAACTGGACCTGAAC |
| PROBE_143 | TTTTTTTTTTTTTTTTTGTGATCATTTCCATGAGGCCAGGCGTA |
| PROBE_144 | TTTTTTTTTTTTTTTTTGGACACCTGGCCCTTACAGAAGATC |
| PROBE_145 | TTTTTTTTTTTTTTTTTACAGAGGCCAGGACACCAAGAACT |
| PROBE_146 | TTTTTTTTTTTTTTTTTGTGCTTAGCATGCCTGATAGC |

| | |
|-----------|---|
| PROBE_147 | TTTTTTTTTTTTTTTCAACCATTATTGGCATCAAACACAGT |
| PROBE_148 | TTTTTTTTTTTTTTTACAAAGAGGGTCTGATGCCAACCTCG |
| PROBE_149 | TTTTTTTTTTTTTTTAGATCCACCATCTTTGTATGTGAGC |
| PROBE_150 | TTTTTTTTTTTTTTTGTCTCACACAAAAGAAGTGGGACT |
| PROBE_151 | TTTTTTTTTTTTTTTGCCTACATACACATCACACACAC |
| PROBE_152 | TTTTTTTTTTTTTTTATGTGTATGCACCTGTGTATGTATAA |
| PROBE_153 | TTTTTTTTTTTTTTTAGCAGGTGGCTCCTCCCAAGCATAT |
| PROBE_154 | TTTTTTTTTTTTTTTCTATGCTGGGAACAGGAAGTCCAC |
| PROBE_155 | TTTTTTTTTTTTTTTAGTCAGACTGCAGAGGAGACAAAAGA |
| PROBE_156 | TTTTTTTTTTTTTTTCTTACTCTCTCTCCTTGTCTCATC |
| PROBE_157 | TTTTTTTTTTTTTTTGGTAGTGATGGAGGTGAGCCTTTTTC |
| PROBE_158 | TTTTTTTTTTTTTTTCCGTAAAAGTGCTTCTCCATCCCA |
| PROBE_159 | TTTTTTTTTTTTTTTAAATCCGAAGGAAATGAGCAAACC |
| PROBE_160 | TTTTTTTTTTTTTTTTCGCTCGCCACCTCTCCAATTT |
| PROBE_161 | TTTTTTTTTTTTTTTAGATGAGCCAATCAATCCTCGCACC |
| PROBE_162 | TTTTTTTTTTTTTTTCATCTGCAAGGATCCCATGATGCCA |
| PROBE_163 | TTTTTTTTTTTTTTTCTCTGTATCTTGAAGTTGCCGAGT |
| PROBE_164 | TTTTTTTTTTTTTTTGCACCTCTCCGACTCTCCAAGACACA |
| PROBE_165 | TTTTTTTTTTTTTTTAAACACCAAAAATGTCAGAAGTCTT |
| PROBE_166 | TTTTTTTTTTTTTTTCAAAGACAGTAGGAACATTCTGTGCA |
| PROBE_167 | TTTTTTTTTTTTTTTGGAAAAGGAAGCAGGAAAAACAAAAC |

PROBE_168

TTTTTTTTTTTTTTAGACTTTGCTCTGAGGCCCTGCTCCC

Table S4: List of Stem-loop RT-PCR primers

| | | |
|------------|----------------|--|
| all miRNAs | Reverse primer | GTGCAGGGTCCGAGGT |
| mmu-let-7a | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACACTATA |
| mmu-let-7a | Forward primer | GCCCTGAGGTAGTAGGTTG |
| Nmir_001 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACTTACAG |
| Nmir_001 | Forward primer | GCCCGGATATCATCATATA |
| Nmir_002 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACGCACAG |
| Nmir_002 | Forward primer | GCCCTGCCTGTCTACTTGG |
| Nmir_004 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACAGTCTC |
| Nmir_004 | Forward primer | GCCCTGAGGGGAGAGAGC |
| Nmir_006 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACATCCTC |
| Nmir_006 | Forward primer | GCCCATTTGGGACGGGAGG |
| Nmir_008 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACCGAGGC |
| Nmir_008 | Forward primer | GCCCGCGCGGCGCTGGAC |
| Nmir_009 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACAGAGGC |
| Nmir_009 | Forward primer | GCCCTCTCCCCTACCACCT |
| Nmir_010 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACCTCCCT |
| Nmir_010 | Forward primer | GCCCGCAAGGGAGAGGGTGA |
| Nmir_011 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACAACGGC |
| Nmir_011 | Forward primer | GCCCGCGCCGGCAGCGGGG |
| Nmir_012 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACCATCGC |

| | | |
|----------|----------------|--|
| Nmir_012 | Forward primer | GCCCCGGGAGCCTCCCGG |
| Nmir_013 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACTCTCC |
| Nmir_013 | Forward primer | GCCCCCCCAGGAGGACGA |
| Nmir_014 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACTCTCC |
| Nmir_014 | Forward primer | GCCCCTCTCTGATGGTGGT |
| Nmir_015 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACCCCT |
| Nmir_015 | Forward primer | GCCCCTTGGATGGAGAAAG |
| Nmir_016 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACTCACC |
| Nmir_016 | Forward primer | GCCCTCAACTCGTTCTGTCC |
| Nmir_017 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACGAAAT |
| Nmir_017 | Forward primer | GCCCCGCGGGGCGGCTTT |
| Nmir_018 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACGATCCC |
| Nmir_018 | Forward primer | GCCCAGGTCAAGGTTACAG |
| Nmir_019 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACGGAAGC |
| Nmir_019 | Forward primer | GCCCAGGATGGCCGAATCT |
| Nmir_020 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACTGAAGG |
| Nmir_020 | Forward primer | GCCCGCCGCCCTCTCTGGT |
| Nmir_021 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACGACCC |
| Nmir_021 | Forward primer | GCCCCGCTCGTACTCCCG |
| Nmir_022 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACAAGTCA |
| Nmir_022 | Forward primer | GCCCAGAGGTGCAGTAGGCA |

| | | |
|---------------------------|----------------|---|
| Nmir_023 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACTGTCTC |
| Nmir_023 | Forward primer | GCCCCCTTCTTCTTCTCCT |
| Nmir_024 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACTTCATA |
| Nmir_024 | Forward primer | GCCCCCGCCGGGCCCTGCAA |
| Nmir_025 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACTGCTCG |
| Nmir_025 | Forward primer | GCCCGCGGGCACCGGGCATC |
| Nmir_026 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACCCTCCC |
| Nmir_026 | Forward primer | GCCCGTTCTGCTCCTCTGGA |
| Nmir_027 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACCTACCG |
| Nmir_027 | Forward primer | GCCCCACCAGTCCCACCACG |
| Nmir_028 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACCCTCC |
| Nmir_028 | Forward primer | GCCCGCCAGCGGGCTGAAGA |
| Nmir_029 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACAGCCCT |
| Nmir_029 | Forward primer | GCCCTGCAGCAGCCTGAGGC |
| Nmir_030 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACACCTCC |
| Nmir_030 | Forward primer | GCCCGAGCAGCAGAGGATCT |
| Nmir_003: mmu-miR-422b | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACGGCCTT |
| Nmir_003: mmu-miR-422b | Forward primer | GCCCCTGGACTTGGAGTCAG |
| Nmir_005: mmu-miR-423 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACCTGAGG |
| Nmir_005: mmu-miR-423 | Forward primer | GCCCAGCTCGGTCTGAGGCC |
| Nmir_007: mmu-miR-671 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTGCACTGGATACGACCCTCCA |

| | | |
|-----------------------------|----------------|--|
| Nmir_007: mmu-miR-671 | Forward primer | GCCCAGGAAGCCCTGGAGGGGC |
| Nmir_031: mmu-miR-675-3p | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACTGAG |
| Nmir_031: mmu-miR-675-3p | Forward primer | GCCCCTGTATGCCCTAACCG |
| Nmir_032: mmu-miR-760 | RT primer | GTCGTATCCAGTGCAGGGTCCGAGGTATTCGCACTGGATACGACCTCCCC |
| Nmir_032: mmu-miR-760 | Forward primer | GCCCGAAATTCGGCTCTGGGTCTGT |