Supplemental Information

Kcnq1ot1/miR-381-3p/ETS2 Axis Regulates Inflammation in Mouse Models of Acute Respiratory Distress Syndrome

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Supplementary Table 1. The differential analysis results of all genes

| logFC   | AveExpr  | t      | p. Value      | adj.p. Val  | B       |
|---------|----------|--------|---------------|-------------|---------|
| ETS2    | 1.552580906 | 7.679311155 | 14.0513358 | 3.84E-13 | 5.22E-09 | 19.63873215 |
| CDK5RAP2 | 2.251367569 | 9.157797722 | 13.85036019 | 5.25E-13 | 5.22E-09 | 19.35967902 |
| GRB10   | 2.676412417 | 8.210899219 | 13.48869855 | 9.28E-13 | 5.22E-09 | 18.84703325 |
| CD177   | 3.894762431 | 11.29034042 | 13.46425107 | 9.64E-13 | 5.22E-09 | 18.81188505 |
| GY1G1   | 2.08718041  | 10.47582225 | 13.19433405 | 1.49E-12 | 6.45E-09 | 18.41958226 |
| P2RY10  | -1.369432045 | 5.778241085 | -12.85788829 | 2.58E-12 | 9.31E-09 | 17.91949293 |
| IRAK3   | 2.283897424 | 9.287247816 | 12.54237783 | 4.37E-12 | 1.35E-08 | 17.43903951 |
| UPP1    | 1.251842917 | 13.18386306 | 12.14572019 | 8.58E-12 | 2.32E-08 | 16.81877606 |
| ZDHHC20 | 1.893601573 | 6.979373071 | 11.8106408  | 1.54E-11 | 3.48E-08 | 16.2802938  |
| BTBD11  | -1.249885455 | 5.508767245 | -11.78563274 | 1.61E-11 | 3.48E-08 | 16.23956117 |
| MCEMP1  | 1.80846951  | 12.37926579 | 11.67186386 | 1.97E-12 | 3.87E-08 | 16.05329084 |
| MAPK14  | 1.357129639 | 10.6680844 | 10.88942309 | 8.14E-11 | 1.47E-07 | 14.72828621 |
| HLTF    | 2.497239851 | 7.162810981 | 10.72292997 | 1.11E-10 | 1.85E-07 | 14.43617587 |
| MYBPH   | -1.315421286 | 7.039624685 | -10.50538689 | 1.68E-10 | 2.51E-07 | 14.04897141 |
| EXOSC4  | 1.715363243 | 9.982438778 | 10.48699722 | 1.74E-10 | 2.51E-07 | 14.01594998 |
| NLRC4   | 1.022665451 | 7.631234458 | 10.12363167 | 3.51E-10 | 4.47E-07 | 13.35408957 |
| VNN1    | 2.344156465 | 9.098535753 | 9.993039545  | 4.53E-10 | 5.45E-07 | 13.11180998 |
| SLC25A45 | -1.047842806 | 7.673991622 | -9.959747473 | 4.84E-10 | 5.51E-07 | 13.04966837 |
| GADD45A | 1.928097865 | 10.1988178 | 9.913055763  | 5.30E-10 | 5.74E-07 | 12.96225657 |
| MT1FD2  | 1.191611014 | 7.84827399 | 9.824621486  | 6.32E-10 | 6.22E-07 | 12.79586707 |
| NOV     | -1.20153325 | 5.437281729 | -9.754034305 | 7.28E-10 | 6.85E-07 | 12.66228988 |
| AGFG1   | 1.640278139 | 9.350338198 | 9.581717728  | 1.03E-09 | 9.28E-07 | 12.33320718 |
| PECE     | 1.049434944 | 7.447300132 | 9.483475768  | 1.26E-09 | 1.09E-06 | 12.14364805 |
| MAP7    | -1.558343962 | 5.991078214 | -9.370332664 | 1.58E-09 | 1.32E-06 | 11.92379793 |
| STOM    | 1.605393993 | 8.003100851 | 9.14836773  | 2.50E-09 | 2.00E-06 | 11.48703704 |
| TDRD9   | 3.493719906 | 8.058648658 | 9.105257589 | 2.73E-09 | 2.11E-06 | 11.4013892 |
| SMARCD3 | 1.022370653 | 8.845440295 | 9.087939867 | 2.83E-09 | 2.12E-06 | 11.36690839 |
| Gene    | Value1 | Value2 | Value3 | Value4 | Value5 | Value6 | Value7 | Value8 | Value9 | Value10 | Value11 | Value12 | Value13 | Value14 |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|----------|----------|----------|----------|
| PCMT1   | 1.030177986 | 10.06286801 | 9.034275719 | 3.17E-09 | 2.29E-06 | 11.2597848 |
| LHX4    | 1.303179406 | 6.559325637 | 8.997506066 | 3.42E-09 | 2.39E-06 | 11.18614591 |
| IL1R2   | 1.064284646 | 12.19333476 | 8.924208765 | 3.99E-09 | 2.62E-06 | 11.03877 |
| CEBPA   | 1.21352408 | 8.635365238 | 8.912001827 | 4.10E-09 | 2.62E-06 | 11.01415053 |
| GRINA   | 1.207995139 | 11.57778369 | 8.910104508 | 4.11E-09 | 2.62E-06 | 11.010322 |
| PLEKHO1 | -2.007154007 | 10.47307762 | -8.845949944 | 4.71E-09 | 2.70E-06 | 10.88056008 |
| HSH2D   | -1.786235479 | 8.692095826 | -8.830030482 | 4.87E-09 | 2.70E-06 | 10.84826831 |
| CD44    | 1.102242986 | 7.795070049 | 8.779111719 | 5.42E-09 | 2.94E-09 | 10.74473558 |
| TLR5    | 1.939188771 | 10.14244174 | 8.749919147 | 5.77E-09 | 3.05E-06 | 10.68520888 |
| RP1-193H18.2 | 2.040529069 | 6.763274764 | 8.697257751 | 6.46E-09 | 3.08E-06 | 10.57751385 |
| SRPK1   | 1.421093535 | 9.308777663 | 8.690598571 | 6.55E-09 | 3.08E-06 | 10.56386682 |
| CYP1B1  | 2.347968035 | 7.156156208 | 8.616008163 | 7.68E-09 | 3.51E-06 | 10.41056415 |
| IDNK    | 1.753171212 | 8.689818411 | 8.577557084 | 8.34E-09 | 3.69E-06 | 10.33122119 |
| IL18R1  | 2.696613865 | 9.183402655 | 8.522913405 | 9.39E-09 | 4.07E-06 | 10.21809515 |
| AK025288| 1.355238108 | 10.40626991 | 8.456899439 | 1.08E-08 | 4.60E-06 | 10.08085032 |
| SORT1   | 1.106631243 | 8.117531892 | 8.422121584 | 1.17E-08 | 4.86E-06 | 10.00829116 |
| TPST2   | 1.277946927 | 10.82268172 | 8.40910711 | 1.20E-08 | 4.91E-06 | 9.981093017 |
| FKBP5   | 2.124480649 | 8.012705793 | 8.372818973 | 1.30E-08 | 5.03E-06 | 9.905126519 |
| TRPM2   | 1.848831934 | 7.752551764 | 8.361277571 | 1.33E-08 | 5.06E-06 | 9.880925299 |
| MAP2K6  | 1.317446569 | 7.06605542 | 8.304071479 | 1.51E-08 | 5.64E-06 | 9.760683539 |
| ARG1    | 2.770833434 | 6.763545186 | 8.261371035 | 1.66E-08 | 6.02E-06 | 9.670621081 |
| RAB32   | 1.172530363 | 10.35276517 | 8.25899716 | 1.67E-08 | 6.02E-06 | 9.6656064 |
| TIGD3   | -2.301458009 | 9.096014506 | -8.241330935 | 1.73E-08 | 6.11E-06 | 9.628261737 |
| PKM     | 1.702982229 | 9.243544642 | 8.236870844 | 1.75E-08 | 6.11E-06 | 9.618826373 |
| GAS7    | 1.115072351 | 9.065113116 | 8.212743501 | 1.84E-08 | 6.15E-06 | 9.567734648 |
| RPGRIP1 | -2.59097149 | 8.80049203 | -8.194581999 | 1.92E-08 | 6.16E-06 | 9.529220324 |
| HS3ST3B1| 1.066197177 | 5.355882373 | 8.059840282 | 2.59E-08 | 7.78E-06 | 9.24198834 |
| FUNDCl  | -1.318114049 | 6.419590108 | -8.031529523 | 2.75E-08 | 8.06E-06 | 9.181298671 |
| MEF2C   | -1.242135531 | 6.78695513 | -7.981919455 | 3.08E-08 | 8.86E-06 | 9.074676747 |
| Gene   | METTL9  | SNX3    | CSF1R   | MPEG1   | ATP11B  | CCDC146  | LOC102723526 | KCNE1   | HP      | RP11-44F14.8 | CCDC153  | CYSLTR1  | SMA4     | PNMA6A   | LOC283588 | CDKN2C   | ASF1B    | RPS6KA5  | GALNT14  | CASS4    | HVCN1    | NAIP     | MS4A6A   | FOXC1    | GPX3     | SORD     | NHS      | SAMSNI   | SNRNP25  |
|--------|---------|---------|---------|---------|---------|----------|-------------|---------|---------|-------------|-----------|-----------|-----------|----------|-----------|----------|----------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|        | 1.181020646 | 10.81363439 | 7.976982049 | 3.11E-08 | 8.86E-06 | 9.064045817 |
| SNX3   | 1.397332583  | 9.526581667  | 7.923077306  | 3.51E-08 | 9.57E-06 | 8.947752404 |
| CSF1R  | -2.071697238 | 8.447566044  | -7.920979265 | 3.52E-08 | 9.57E-06 | 8.943217642 |
| MPEG1  | -1.691594469 | 10.30212074 | -7.914167106 | 3.58E-08 | 9.57E-06 | 8.92848929  |
| ATP11B | 1.263621955  | 7.972400964  | 7.844461486  | 4.18E-08 | 1.10E-05 | 8.777397024 |
| CCDC146| -1.467166406 | 6.875479571  | -7.837448852 | 4.25E-08 | 1.10E-05 | 8.76215792  |
| LOC102723526 | -1.397073719 | 8.628917144  | -7.818336537 | 4.44E-08 | 1.12E-05 | 8.720589234 |
| KCNE1  | 1.621025337  | 6.818895783  | 7.801303472  | 4.61E-08 | 1.12E-05 | 8.683498677 |
| HP     | 2.204975601  | 9.934647786  | 7.795549698  | 4.67E-08 | 1.12E-05 | 8.670960077 |
| RP11-44F14.8 | -1.634831802 | 7.197646925  | -7.793855466 | 4.69E-08 | 1.12E-05 | 8.667267109 |
| CCDC153| -1.312611438 | 8.903412243  | -7.771759386 | 4.93E-08 | 1.15E-05 | 8.619065962 |
| CYSLTR1| -1.228330837 | 6.619906738  | -7.758041103 | 5.08E-08 | 1.17E-05 | 8.589105254 |
| SMA4   | 1.065295149  | 8.343198095  | 7.730242798  | 5.41E-08 | 1.22E-05 | 8.528311267 |
| PNMA6A | -1.308113226 | 8.58399087   | -7.716627379 | 5.58E-08 | 1.23E-05 | 8.498494503 |
| LOC283588| -1.517599292 | 6.915786552  | -7.706589089 | 5.71E-08 | 1.25E-05 | 8.476494444 |
| CDKN2C | 1.182059278  | 7.756680639  | 7.692043582  | 5.90E-08 | 1.25E-05 | 8.444590792 |
| ASF1B  | -1.497122757 | 7.876277813  | -7.6170967   | 7.00E-08 | 1.40E-05 | 8.279727296 |
| RPS6KA5| -1.300554861 | 7.004017194  | -7.603247779 | 7.22E-08 | 1.42E-05 | 8.24917596 |
| GALNT14| 2.192178712  | 10.14068639  | 7.590803344  | 7.43E-08 | 1.43E-05 | 8.221699797 |
| CASS4  | -1.13683574  | 6.155957839  | -7.589069089 | 7.46E-08 | 1.43E-05 | 8.217868981 |
| HVCN1  | -2.216065608 | 9.722262283  | -7.584674482 | 7.54E-08 | 1.43E-05 | 8.208159774 |
| NAIP   | 1.767800049  | 8.960480708  | 7.517849679  | 8.78E-08 | 1.62E-05 | 8.060184397 |
| MS4A6A | 1.076941493  | 9.273675476  | 7.473075058  | 9.73E-08 | 1.76E-05 | 7.960684417 |
| FOXC1  | 1.505446003  | 7.272335283  | 7.462127681  | 9.98E-08 | 1.79E-05 | 7.936313875 |
| GPX3   | -1.978061222 | 6.239807604  | -7.458575235 | 1.01E-07 | 1.79E-05 | 7.928401973 |
| SORD   | -1.385719743 | 7.447510583  | -7.453879143 | 1.02E-07 | 1.79E-05 | 7.917940264 |
| NHS    | -1.624115111 | 6.361414458  | -7.40769152  | 1.13E-07 | 1.96E-05 | 7.814881468 |
| SAMSNI | 1.368990135  | 6.720713002  | 7.376880713  | 1.21E-07 | 2.09E-05 | 7.745967525 |
| SNRNP25| -1.482259155 | 8.45265499   | -7.363999467 | 1.25E-07 | 2.12E-05 | 7.717117123 |
| Gene  | Log2 Fold Change | p-value | Adjusted p-value |
|-------|-----------------|---------|-----------------|
| ARRB1 | -1.346908212    | 1.28E-07| 2.15E-05        | 7.692509581 |
| CCR3  | -2.060902965    | 1.48E-07| 2.41E-05        | 7.552974739 |
| PLAC8 | 2.399659531     | 1.59E-07| 2.53E-05        | 7.482173201 |
| PAG1  | 1.550239372     | 1.60E-07| 2.53E-05        | 7.477087464 |
| TBC1D8| 2.320674431     | 1.73E-07| 2.68E-05        | 7.401189275 |
| C9orf91| -1.347242469   | 1.89E-07| 2.82E-05        | 7.319263266 |
| ROGDI | 1.317740531     | 2.23E-07| 3.23E-05        | 7.154647531 |
| MAST4 | 1.37377666      | 2.46E-07| 3.50E-05        | 7.062988624 |
| OPLAH | 1.922216316     | 2.53E-07| 3.56E-05        | 7.034212163 |
| CLEC4D| 1.817982434     | 2.75E-07| 3.69E-05        | 6.95418796  |
| OLAH  | 2.669610814     | 2.95E-07| 3.87E-05        | 6.885308966 |
| PPCDC | -1.370550972    | 2.97E-07| 3.87E-05        | 6.876798328 |
| BCAT1 | 1.877652031     | 2.99E-07| 3.87E-05        | 6.872177845 |
| TSPAN13| -1.904569099   | 3.10E-07| 3.99E-05        | 6.837902393 |
| MSMO1 | 1.473571417     | 3.39E-07| 4.27E-05        | 6.748832891 |
| BATF  | 1.72022774      | 3.60E-07| 4.48E-05        | 6.690718488 |
| GPR162| -2.015172653    | 3.69E-07| 4.56E-05        | 6.668223332 |
| IDO1  | -1.983738747    | 3.75E-07| 4.62E-05        | 6.651118146 |
| METTL7B| 3.384873816    | 3.86E-07| 4.66E-05        | 6.624542495 |
| ACBLD6| 1.544005962     | 4.59E-07| 5.45E-05        | 6.455262811 |
| ALPL  | 1.007957865     | 4.61E-07| 5.45E-05        | 6.451400227 |
| SULT1B1| 1.477694997     | 4.68E-07| 5.47E-05        | 6.437188829 |
| RSB1N1| 1.085503674     | 5.20E-07| 5.89E-05        | 6.33059565  |
| PPIH  | -1.144883052    | 5.25E-07| 5.89E-05        | 6.325104507 |
| MAP3K14| -1.008328649   | 5.63E-07| 6.17E-05        | 6.255996967 |
| ST3GAL4-AS1 | 1.507874767 | 5.78E-07| 6.26E-05        | 6.23132339 |
| AKT1  | -1.188995747    | 8.03E-07| 8.20E-05        | 5.911313138 |
| CARD6 | 1.219712507     | 8.38E-07| 8.48E-05        | 5.870185937 |
| Gene     | Fold Change | Log2 Fold Change | p-value | q-value |
|----------|-------------|------------------|---------|---------|
| FGL2     | -1.228134979 | -6.54482334      | 8.67E-07| 8.69E-05|
| GPR84    | 2.831090476  | 6.53712103       | 8.83E-07| 8.81E-05|
| SEL1L3   | 1.313216573  | 6.529361867      | 9.00E-07| 8.91E-05|
| SLC37A3  | 1.486231266  | 6.52882512       | 9.01E-07| 8.91E-05|
| LOC154761| 1.619126573  | 6.517338202      | 9.26E-07| 9.09E-05|
| ANXA3    | 1.230549087  | 6.500596702      | 9.65E-07| 9.63E-05|
| EMLIN2   | 1.070315566  | 6.499181116      | 9.68E-07| 9.23E-05|
| RP11-6I2.3| 1.728935861   | 6.491871672      | 9.85E-07| 9.36E-05|
| MTRR     | 1.016453476  | 6.465808775      | 1.05E-06| 9.83E-05|
| CHI3L1   | -1.311494132 | -6.465397878     | 1.08E-06| 9.83E-05|
| ZAK      | 1.06538609   | 6.387727728      | 1.27E-06| 0.00011546|
| BMX      | 1.351154601  | 6.371596279      | 1.32E-06| 0.000117554|
| FLVCR1   | -1.028950698 | -6.340894952     | 1.42E-06| 0.000123556|
| TP53INP2 | -1.247576045 | -6.32599988      | 1.48E-06| 0.000125887|
| GRAMD1C  | -1.105875646 | -6.309701047     | 1.53E-06| 0.000129242|
| KISS1R   | -1.396315458 | -6.283883839     | 1.63E-06| 0.000134484|
| F5       | 1.284286451  | 6.279413697      | 1.65E-06| 0.000134484|
| C19orf60 | -1.180430465 | -6.279320378     | 1.65E-06| 0.000134484|
| GPR114   | -1.169627434 | -6.254235657     | 1.76E-06| 0.000139474|
| ECHDC3   | 1.843985927  | 6.251405849      | 1.77E-06| 0.000139474|
| TGM3     | -1.82626823  | -6.250808077     | 1.77E-06| 0.000139474|
| PIWIL4   | 1.869455851  | 6.228944888      | 1.87E-06| 0.000145553|
| BR13BP   | -1.01325038  | -6.216112293     | 1.93E-06| 0.000145553|
| ZDHHC19  | 2.093641646  | 6.199527626      | 2.01E-06| 0.000153769|
| LHX4-AS1 | 1.624543601  | 6.184027501      | 2.09E-06| 0.000153769|
| LGALS12  | -2.030165884 | -6.162366604     | 2.20E-06| 0.000163152|
| LOXL1    | 1.230363438  | 6.160118437      | 2.21E-06| 0.000163356|
| AIM2     | 1.983964333  | 6.12927506       | 2.39E-06| 0.000172454|
| Gene       | Fold Change | Log2 Fold Change | FDR   | p-Value  | z-score | Combined Score |
|------------|-------------|------------------|-------|----------|---------|----------------|
| EFEMP2     | 1.110838042 | 8.116915323      | 2.53E-06 | 0.000178439 | 4.794143318 |
| HIST1H2AE  | 1.398575448 | 8.537724575      | 2.79E-06 | 0.000193006 | 4.697231753 |
| PLP2       | 1.41059983  | 9.696493109      | 2.82E-06 | 0.00019383 | 4.688347054 |
| MEF2A      | 1.21882683  | 7.17551005       | 2.86E-06 | 0.000194561 | 4.675611693 |
| LOC93622   | -1.091139823| 7.079885036      | 3.04E-06 | 0.000202295 | 4.616441981 |
| KLHL2      | 1.697774885 | 7.460725554      | 3.06E-06 | 0.000203391 | 4.608186914 |
| BACE2      | -1.825987712| 6.37760682       | 3.09E-06 | 0.000204834 | 4.598320618 |
| TOMM40L    | 1.67117466  | 10.09341032      | 3.17E-06 | 0.000209241 | 4.574610296 |
| PPM1N      | 1.011979358 | 7.49299972       | 3.64E-06 | 0.00022966 | 4.439266607 |
| UBE2F      | 1.093580524 | 9.643630266      | 3.68E-06 | 0.00022966 | 4.427875497 |
| C16orf93   | -1.146427649| 7.571527852      | 3.94E-06 | 0.000240724 | 4.363805672 |
| CSGALNACT2 | 1.123005444 | 5.907496326      | 4.11E-06 | 0.000246066 | 4.320694157 |
| SPNS3      | -1.946297472| 8.393171653      | 4.14E-06 | 0.000247057 | 4.3136355 |
| TOPORS     | -1.199651036| 6.505383878      | 4.15E-06 | 0.000247057 | 4.311370502 |
| GCH1       | 2.075280844 | 8.263894905      | 4.40E-06 | 0.000258443 | 4.254197362 |
| GALNT6     | -1.413983108| 6.760282547      | 4.67E-06 | 0.000268198 | 4.197218802 |
| ITIH4      | 1.100833608 | 7.31284532       | 5.23E-06 | 0.000289578 | 4.086999303 |
| ZNF274     | -1.037132535| 9.378614299      | 5.28E-06 | 0.000290993 | 4.077280581 |
| FAM174A    | -1.139654050| 6.657216621      | 5.34E-06 | 0.000292249 | 4.065678977 |
| PFKFB3     | 1.245679729 | 11.98113828      | 5.56E-06 | 0.000299764 | 4.027971692 |
| LOC441081  | 1.382844059 | 8.025764019      | 5.73E-06 | 0.000304961 | 3.99752408 |
| SPINT1     | -1.167104135| 7.687308512      | 5.85E-06 | 0.00031376 | 3.953210762 |
| SLC26A11   | 2.239407087 | 7.726082599      | 6.00E-06 | 0.00031376 | 3.953210762 |
| DPEP3      | -1.061999344| 11.78444076      | 6.15E-06 | 0.000319056 | 3.929441142 |
| VWA5A      | 1.35482249  | 5.46431388       | 6.40E-06 | 0.000327754 | 3.889766772 |
| RTN1       | -1.138893611| 5.66202417       | 6.74E-06 | 0.000341733 | 3.83992198 |
| EVL        | -1.24434574 | 8.491266582      | 6.92E-06 | 0.000346281 | 3.813453502 |
| SGSH       | 1.109339444 | 7.50507031       | 7.03E-06 | 0.000348115 | 3.799353331 |
| CLU        | 1.553201993 | 7.350488785      | 7.54E-06 | 0.000371795 | 3.730816251 |
| Gene   | Value1 | Value2 | Value3 | Value4 | Value5 | Value6 | Value7 | Value8 | Value9 | Value10 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| FOLR3  | 1.035829319 | 11.47910462 | 5.647919697 | 7.88E-06 | 0.000383703 | 3.686891264 |
| ZNF211 | -1.240630219 | 7.617223203 | -5.63626108 | 8.12E-06 | 0.000393309 | 3.658445522 |
| DDAH2  | 1.252458142 | 9.788914776 | 5.615936169 | 8.54E-06 | 0.000405698 | 3.608829864 |
| RSPH9  | 1.646046819 | 8.047138222 | 5.601735926 | 8.85E-06 | 0.000415848 | 3.574146603 |
| FAIM3  | -1.205723865 | 8.281670366 | -5.592552031 | 9.06E-06 | 0.000423703 | 3.551707397 |
| TP53I3 | 1.824708486 | 9.011167253 | 5.57244898 | 9.53E-06 | 0.000439525 | 3.502567324 |
| IL5RA  | -1.187920837 | 6.457765512 | -5.569144388 | 9.61E-06 | 0.000439525 | 3.494486706 |
| ACER3  | 1.258536979 | 6.602938458 | 5.522909738 | 1.08E-05 | 0.000478485 | 3.381348171 |
| ZBTB42 | -1.139593743 | 6.390568785 | -5.516872472 | 1.10E-05 | 0.000483104 | 3.366563533 |
| LOC100507006 | -1.152671486 | 10.50229777 | -5.492637141 | 1.16E-05 | 0.000505416 | 3.307188476 |
| PNP    | 1.153432368 | 5.669717965 | 5.48937766 | 1.17E-05 | 0.00050783 | 3.299199902 |
| JPX    | -1.093480342 | 5.607526444 | -5.48753158 | 1.18E-05 | 0.00050783 | 3.29467508 |
| PAQR7  | -1.306004465 | 7.298812503 | -5.484502813 | 1.19E-05 | 0.000510256 | 3.287250941 |
| SRGAP2C | -1.018428167 | 9.909904875 | -5.465031868 | 1.25E-05 | 0.000530059 | 3.239509039 |
| ZSCAN18 | -1.075014712 | 6.373737922 | -5.443055052 | 1.32E-05 | 0.000551092 | 3.185593067 |
| FBXO34 | 1.043333677 | 9.042678648 | 5.422081002 | 1.39E-05 | 0.000571509 | 3.134108432 |
| PSTPIP2 | 1.159495222 | 9.542421639 | 5.415923744 | 1.41E-05 | 0.000578373 | 3.11898909 |
| MCC1   | -1.105795861 | 5.432476677 | -5.388179348 | 1.52E-05 | 0.00060881 | 3.050833057 |
| CYB561 | -1.033959601 | 7.539790589 | -5.375907065 | 1.56E-05 | 0.000620959 | 3.020826945 |
| DOK2   | -1.232141274 | 9.19801999 | -5.370950552 | 1.58E-05 | 0.000626583 | 3.008486128 |
| MYO10  | 1.178339785 | 5.565618632 | 5.347889403 | 1.68E-05 | 0.000651083 | 2.951776772 |
| HPGD   | 2.104699361 | 8.560994003 | 5.314433016 | 1.83E-05 | 0.000699779 | 2.869451552 |
| SLC51A | 2.660664413 | 8.051533356 | 5.313118468 | 1.83E-05 | 0.00070087 | 2.866215633 |
| SLC47A1 | -1.235515602 | 5.149676815 | -5.306092312 | 1.86E-05 | 0.000709678 | 2.848918328 |
| LOC101928893 | -1.060655524 | 5.270087543 | -5.27762497 | 2.00E-05 | 0.000749435 | 2.778926757 |
| ZNF329 | -1.922226243 | 7.677020569 | -5.261865356 | 2.09E-05 | 0.000770725 | 2.739979519 |
| PIK3R6 | -1.395859146 | 7.537987837 | -5.237810752 | 2.22E-05 | 0.000802718 | 2.680687813 |
| CAMK1  | -1.051424535 | 6.658799979 | -5.219287846 | 2.32E-05 | 0.000834221 | 2.635012383 |
| NDC80  | -1.077050936 | 7.15880186 | -5.207558859 | 2.39E-05 | 0.000849653 | 2.606081869 |
| Gene       | Log2 Fold Change | P-Value | Adjusted P-Value | Log10 Fold Change |
|------------|-----------------|---------|-----------------|------------------|
| CD81       | -1.511317792    | 2.45E-05| 0.000863018     | 2.584328119      |
| CST7       | 1.338966875     | 2.46E-05| 0.00086399      | 2.580285014      |
| MT1F       | 1.338595378     | 2.54E-05| 0.000887935     | 2.546462388      |
| SLC26A8    | 1.70222651      | 2.70E-05| 0.000922367     | 2.490215457      |
| BC045789   | 1.604687953     | 2.76E-05| 0.000938153     | 2.46892566       |
| ARMC12     | 1.24661459      | 2.76E-05| 0.000938153     | 2.466059996      |
| GPR183     | -1.759223101    | 2.90E-05| 0.000964046     | 2.4196929        |
| MAP1LC3A   | -1.093740917    | 3.29E-05| 0.001057507     | 2.296244226      |
| SGK1       | -1.395673753    | 3.81E-05| 0.001179192     | 2.15358528       |
| SDC2       | -1.207009181    | 3.87E-05| 0.001192508     | 2.138516219      |
| LINC00672  | 1.016115872     | 4.19E-05| 0.001270061     | 2.061456097      |
| NQO2       | -1.093533563    | 4.21E-05| 0.001273054     | 2.056288486      |
| LIPT1      | -1.035819578    | 4.45E-05| 0.001321202     | 2.00364238       |
| TMEM119    | 1.423484542     | 4.68E-05| 0.00137633      | 1.954650165      |
| PMAIP1     | -1.517308885    | 4.80E-05| 0.00140181      | 1.929107557      |
| PDGFC      | 1.232829354     | 4.99E-05| 0.001443495     | 1.892659987      |
| C5orf30    | 1.126603278     | 5.01E-05| 0.001447004     | 1.888468538      |
| CFD        | -1.956554063    | 5.01E-05| 0.001447004     | 1.887709014      |
| HBD        | 3.274106476     | 5.45E-05| 0.001528555     | 1.806652605      |
| AOC3       | -1.263664333    | 5.60E-05| 0.001552444     | 1.780264271      |
| FCGR1A     | 1.176945844     | 5.71E-05| 0.001568168     | 1.761626178      |
| ST6GALNAC3 | 1.04163649      | 6.20E-05| 0.001666372     | 1.680733349      |
| SPTSSA     | 1.266792052     | 6.24E-05| 0.001666982     | 1.675115959      |
| HLA-DRA    | -2.11830424     | 6.25E-05| 0.001670125     | 1.673743921      |
| P2RY2      | -1.615018733    | 6.49E-05| 0.001723544     | 1.636022152      |
| NUP50-AS1  | -1.288552472    | 6.77E-05| 0.001781467     | 1.595652895      |
| LINC00877  | -1.548724274    | 6.91E-05| 0.001810265     | 1.575184357      |
| DSC2       | 1.23042076      | 7.21E-05| 0.00186343      | 1.534478776      |
| RP11-334C17.5 | 1.957320536  | 7.39E-05| 0.001897926     | 1.510910426      |
| Gene         | Value1 | Value2 | Value3 | Value4 | Value5 | Value6 |
|--------------|--------|--------|--------|--------|--------|--------|
| C11orf96    | 1.419 | 6.429 | 4.759 | 7.48E-05 | 0.001 | 1.498 |
| ALOX15      | -1.404 | 6.991 | 4.714 | 8.41E-05 | 0.002 | 1.385 |
| SLC2A1      | 1.002 | 5.879 | 4.711 | 8.46E-05 | 0.002 | 1.379 |
| HLA-DPA1    | -1.351 | 7.263 | 4.697 | 8.78E-05 | 0.002 | 1.343 |
| FAM20A      | 1.484 | 4.963 | 4.694 | 8.84E-05 | 0.002 | 1.336 |
| ARFIP1      | -1.254 | 8.433 | 4.689 | 8.95E-05 | 0.002 | 1.324 |
| PRSS33      | -2.722 | 11.705 | 4.667 | 9.49E-05 | 0.002 | 1.268 |
| CAPG        | 1.056 | 9.481 | 4.663 | 9.57E-05 | 0.002 | 1.260 |
| MCTP1       | 1.121 | 6.896 | 4.658 | 9.68E-05 | 0.002 | 1.249 |
| HLA-DPB1    | -1.285 | 7.266 | 4.633 | 0.000 | 1.185 |
| SLC16A14    | -1.169 | 4.831 | 4.633 | 0.000 | 1.184 |
| ZNF266      | -1.234 | 8.956 | 4.605 | 0.000 | 1.116 |
| RAB13       | 1.562 | 8.014 | 4.582 | 0.000 | 1.064 |
| MIAT        | 1.631 | 8.949 | 4.578 | 0.000 | 1.049 |
| EBLN2       | 1.172 | 7.746 | 4.560 | 0.000 | 1.004 |
| MLK7-AS1    | 1.099 | 5.090 | 4.557 | 0.000 | 0.997 |
| ERCC1       | -1.538 | 8.316 | 4.520 | 0.000 | 0.914 |
| BTN3A1      | -1.006 | 9.617 | 4.521 | 0.000 | 0.909 |
| FLVCR1-AS1  | -1.513 | 8.170 | 4.520 | 0.000 | 0.904 |
| HLA-DMB     | -1.706 | 10.054 | 4.508 | 0.000 | 0.877 |
| HPSE        | 1.278 | 8.472 | 4.498 | 0.000 | 0.850 |
| TRIM22      | 1.175 | 8.114 | 4.495 | 0.000 | 0.814 |
| RPH3A       | 2.248 | 6.088 | 4.476 | 0.000 | 0.795 |
| FBXO6       | 1.256 | 9.135 | 4.442 | 0.000 | 0.713 |
| GAFA1       | 1.215 | 4.518 | 4.441 | 0.000 | 0.709 |
| LOC101060510| 1.067 | 9.594 | 4.436 | 0.000 | 0.697 |
| ITGA7       | 1.412 | 5.902 | 4.431 | 0.000 | 0.683 |
| RP11-499E18.1| 1.377 | 5.215 | 4.430 | 0.000 | 0.683 |
| RP11-426C22.5| -1.039| 8.312 | -4.407| 0.000 | 0.628 |

**Note:** The table represents gene expression values with adjusted p-values and fold changes.
| Gene    | Fold Change | Log2 Fold Change | p-value   | FDR  | Gene | Fold Change | Log2 Fold Change | p-value   | FDR  |
|---------|-------------|------------------|-----------|------|------|-------------|------------------|-----------|------|
| LOC100505564 | -1.384649826 | -4.378063505     | 0.00019844 | 0.003741436 | 0.554080573 |
| CKS2    | -1.422255208 | -4.360807408     | 0.000207377 | 0.003871344 | 0.51150666 |
| MS4A4A  | 1.080010257  | 4.35195933       | 0.000212115 | 0.003916948 | 0.489682927 |
| OR52K3P | -1.048932559 | -4.351854052     | 0.000218224 | 0.00400139  | 0.462250907 |
| CD52    | -1.507658906 | -4.340835012     | 0.000224285 | 0.004184417 | 0.360164719 |
| LCN2    | 1.843292931  | 4.316872537      | 0.000231986 | 0.004196866 | 0.403184417 |
| CYSLTR2 | -1.384067406 | -4.299411346     | 0.000242555 | 0.004348112 | 0.360164719 |
| FBP1    | -1.000170714 | -4.258067272     | 0.000258309 | 0.004710771 | 0.25838098 |
| MAP4K1  | -1.203078396 | -4.25500447      | 0.000269529 | 0.004737897 | 0.25838098 |
| SLC25A38| -1.048932559 | -4.243687903     | 0.000271299 | 0.004839425 | 0.25838098 |
| ALAS2   | 1.147026674  | 4.308012674      | 0.000279593 | 0.00493796  | 0.19902155 |
| CXCL8   | -1.790656979 | -4.196750511     | 0.000286632 | 0.005070425 | 0.166029063 |
| RP11-36B6.1 | 1.729248276 | 4.220137291      | 0.00031143  | 0.005227915 | 0.118998404 |
| RARRES3 | -1.282646309 | -4.196750511     | 0.00031143  | 0.005227915 | 0.118998404 |
| MAOA    | 2.428365368  | 4.184754185      | 0.000324896 | 0.005380399 | 0.078188223 |
| ACSF2   | -1.011182568 | -4.160192883     | 0.000345863 | 0.005631328 | 0.017913125 |
| TPST1   | 1.184101806  | 4.127787915      | 0.000375594 | 0.005967344 | -0.06153054 |
| PTGS2   | -1.184635844 | -4.094392152     | 0.000408887 | 0.006370102 | -0.14331031 |
| MMP8    | 1.200728858  | 4.087695864      | 0.000415906 | 0.006446994 | -0.159695209 |
| POMZP3  | -1.329635738 | -4.080401953     | 0.000423688 | 0.006544201 | -0.17753752 |
| GDPD5   | -1.483309264 | -4.053160069     | 0.000454049 | 0.006871017 | -0.24412794 |
| CLEC1B  | 1.462527267  | 4.05122114       | 0.000456291 | 0.006880908 | -0.2488671 |
| RGL4    | 1.10344716   | 4.040507334      | 0.000468875 | 0.007031548 | -0.275034355 |
| LAMP3   | -1.172022241 | -3.999224176     | 0.000520657 | 0.007592476 | -0.375750432 |
| CD69    | -1.40815683  | -3.996866195     | 0.00052378 | 0.007612383 | -0.381497464 |
| ACRC    | 1.065677302  | 3.994612998      | 0.000526781 | 0.007625297 | -0.38698853 |
| GSAP    | 1.025572813  | 3.975344252      | 0.000553152 | 0.007901384 | -0.433923285 |
| DMTN    | 1.215397656  | 3.968818876      | 0.000562375 | 0.007991963 | -0.449808143 |
| Gene    | Log2FoldChange | Log10FoldChange | PValue  | Log10FoldChangeSE | Log10FoldChangeSESE |
|---------|----------------|----------------|---------|-------------------|---------------------|
| DPY19L3 | 1.165107052    | 7.396269769    | 0.000579084 | 0.008169424    | -0.477930275       |
| IL18RAP | 1.812051354    | 9.076649389    | 0.000583595 | 0.008206324    | -0.485381377       |
| AHSP    | 3.292171868    | 7.098034615    | 0.000604065 | 0.008416923    | -0.518485034       |
| BTN3A2  | -1.30170241    | 8.787640302    | 0.000634182 | 0.008725036    | -0.565187285       |
| ANKRD55 | 1.643664906    | 8.330241602    | 0.000669827 | 0.009071356    | -0.617657587       |
| MXRA7   | 1.010139038    | 6.410520106    | 0.000681639 | 0.009166754    | -0.63427076        |
| TRBC1   | -1.861846559   | 8.450135054    | 0.000707236 | 0.009453826    | -0.669781968       |
| ZNF600  | -1.392663714   | 6.321688268    | 0.000709515 | 0.009472598    | -0.672867223       |
| SELENBP1| 1.594465189    | 7.665715412    | 0.000720189 | 0.009532787    | -0.687184996       |
| NTSR1   | 1.039489998    | 6.291613008    | 0.00074182  | 0.009753561    | -0.71555466        |
| LOC100506922| -1.471170934 | 7.738120356    | 0.00074182  | 0.009753561    | -0.71555466        |
| PPFIBP2 | -1.017365769   | 7.742378803    | 0.000746022 | 0.009790687    | -0.720968272       |
| TRMT6   | 1.047580271    | 6.196495354    | 0.000770988 | 0.01001545    | -0.752517619       |
| AKR1C3  | 1.323293274    | 5.793567137    | 0.000807056 | 0.010924809    | -0.869069984       |
| EPB42   | 2.261607512    | 6.342388918    | 0.00081842  | 0.010932107    | -0.870263747       |
| RASGRP1 | -1.209546208   | 6.93356767    | 0.000105372 | 0.01210191    | -1.006599354       |
| ASGR2   | 1.174006045    | 8.107733198    | 0.001054978 | 0.012559406    | -1.052638285       |
| LOC101929002| -1.206346389 | 5.89899934     | 0.001066951 | 0.012640162    | -1.0634223         |
| SLC4A1  | 1.163874045    | 5.976672342    | 0.001230603 | 0.013974147    | -1.199653244       |
| LOC100506047| -1.068736411 | 7.270379937    | 0.001247432 | 0.01409872    | -1.212657365       |
| ITGB3BP | 1.229293514    | 6.893481764    | 0.001487394 | 0.016080635    | -1.380390645       |
| HBM     | 1.117417969    | 7.19559696     | 0.001513443 | 0.016300413    | -1.396296744       |
| AP3B2   | 1.142434788    | 5.419938116    | 0.001558867 | 0.016637394    | -1.425085025       |
| IFIT3   | -1.310691531   | 11.06038052    | 0.001563381 | 0.016669134    | -1.427837517       |
| OLBM4   | 1.696751552    | 6.771425314    | 0.001765812 | 0.018182914    | -1.543679508       |
| NGFRAP1 | 1.24650325    | 6.994994705    | 0.001819904 | 0.018575096    | -1.572362039       |
| COQ3    | 1.064221806    | 6.449447483    | 0.002098341 | 0.02050522     | -1.707559757       |
| MACAM1  | -1.102301356   | 6.960196706    | 0.002103659 | 0.020547923    | -1.709961865       |
| GJB6    | 1.188508559    | 8.562202394    | 0.002237335 | 0.021485359    | -1.768396199       |
| Gene     | Log2 Fold Change | p-Value  | FDR  | Gene   | Log2 Fold Change | p-Value  | FDR  |
|----------|-----------------|----------|------|--------|-----------------|----------|------|
| CCNA1    | 1.161441372     | 0.002313557 | 0.022022015 | -1.800153645 |
| SEMG1    | -1.397481226     | 0.002426939 | 0.022840224 | -1.84548518  |
| IFIT2    | -1.064038573     | 0.002432487 | 0.022882492 | -1.84764795  |
| LSM7     | -1.480447514     | 0.002531877 | 0.023513276 | -1.885569566 |
| C19orf33 | 1.394014814      | 0.002538687 | 0.023541541 | -1.888112304 |
| DTX4     | -1.015321052     | 0.002563061 | 0.023664774 | -1.89278644  |
| HLA-DMA  | -1.090090604     | 0.002426939 | 0.022840224 | -1.90085381  |
| KLRB1    | -1.504819941     | 0.002531877 | 0.023513276 | -1.96569844  |
| GNLY     | -1.826884135     | 0.003184159 | 0.027794675 | -2.102248633 |
| MAFB     | 1.323873903      | 0.003254648 | 0.025016398 | -2.122910615 |
| CLK      | -1.018965872     | 0.003270024 | 0.025016398 | -2.127357173 |
| CD3D     | -1.372322604     | 0.003512926 | 0.029646301 | -2.194921407 |
| PTPRCAP  | -1.012169837     | 0.003534175 | 0.02979203 | -2.200604709 |
| CLEC5A   | 1.01443976       | 0.003725392 | 0.03098382  | -2.250241499 |
| LTF      | 1.56919017       | 0.003749411 | 0.031107737 | -2.257540674 |
| TNNT1    | -1.06966026      | 0.003754383 | 0.031107737 | -2.257540674 |
| BTN3A3   | -1.332756576     | 0.003761561 | 0.031125951 | -2.25933904  |
| DAAM2    | 1.150456251      | 0.003767658 | 0.031164494 | -2.260863862 |
| BTN1L8   | -1.297375153     | 0.003773074 | 0.031224791 | -2.261947886 |
| FGF13    | 1.739393726      | 0.004381776 | 0.03457994  | -2.402863841 |
| ORM1     | 1.283947896      | 0.004411583 | 0.03474899  | -2.409231427 |
| C3AR1    | 1.078753585      | 0.004502817 | 0.035263116 | -2.428452936 |
| LINC00189| -1.302669684     | 0.00451648  | 0.035282963 | -2.431297328 |
| NR4A2    | -1.026357479     | 0.004692584 | 0.036331035 | -2.467196664 |
| CCL23    | -1.649769684     | 0.005373022 | 0.039837777 | -2.594096803 |
| RP1-93H18.6| -1.021356556    | 0.005400293 | 0.040062493 | -2.598835823 |
| DEFA4    | 1.560575552      | 0.006585831 | 0.046034915 | -2.784271559 |
| IFIT1    | -1.524558601     | 0.006762022 | 0.04691816  | -2.808887966 |
| PPBP     | 1.653019349      | 0.006975297 | 0.047977982 | -2.837825471 |
| Gene    | RNA_1   | RNA_2   | RNA_3   | RNA_4   | RNA_5   | RNA_6   |
|---------|---------|---------|---------|---------|---------|---------|
| FLJ12120 | -1.05853354 | 5.942161004 | -2.938400029 | 0.00713867 | 0.048750521 | -2.859388431 |
| HDC      | -1.378936955  | 7.725439547  | -2.924718939  | 0.007373371 | 0.049726049  | -2.889500679  |
| ETV7     | -1.236050486  | 7.75384427  | -2.923060609  | 0.007402314 | 0.049870076  | -2.89316242  |
| CD2      | -1.24208624  | 6.604701873  | -2.898650411  | 0.007841071 | 0.051644291  | -2.946695775  |
| FGFBP2   | -1.467401503  | 6.340752648  | -2.838227909  | 0.009035946 | 0.056977889  | -3.07832272  |
| DQ592442 | -1.087127031  | 6.451895974  | -2.829631584  | 0.009219369 | 0.057710171  | -3.096939841  |
| CRISP3   | 1.386476819   | 8.219015934  | 2.81141175    | 0.011335449 | 0.066432786  | -3.287868987  |
| RNASE6   | -1.094632476  | 9.546624158  | -2.785794455  | 0.010210897 | 0.06170237   | -3.191442209  |
| TUBB2A   | 1.38247584    | 6.635831438  | 2.740703408   | 0.011335449 | 0.066432786  | -3.287868987  |
| CD24     | 1.036440135   | 8.525270484  | 2.705335655   | 0.012298187 | 0.070337955  | -3.362933448  |
| ALOX12   | 1.050934917   | 5.380955028  | 2.629260131   | 0.014635571 | 0.079461912  | -3.52263768   |
| TGFBI    | -1.027140271  | 8.129899538  | -2.585212879  | 0.016172871 | 0.085420372  | -3.613968784  |
| GZMB     | -1.90247326   | 7.826150783  | -2.533129396  | 0.018184797 | 0.092056326  | -3.720845644  |
| CEACAM6  | 1.153722569   | 6.634867108  | 2.517779421   | 0.018820774 | 0.093973682  | -3.752107661  |
| VSG1G4   | 1.194810444   | 5.672745236  | 2.479085142   | 0.020516746 | 0.09934536   | -3.8304242   |
| SERPING1 | -1.33748584   | 8.712587028  | -2.420436214  | 0.023358771 | 0.108405827  | -3.947762176  |
| MPO      | 1.103564889   | 7.080447497  | 2.381754573   | 0.025427419 | 0.114535497  | -4.024225359  |
| PF4      | 1.257779316   | 9.542825036  | 2.353283844   | 0.027058853 | 0.119337627  | -4.080110614  |
| GZMA     | -1.144321337  | 6.246992356  | -2.32993047   | 0.028463005 | 0.122904562  | -4.125478328  |
| HERC5    | -1.002460615  | 7.794289314  | -2.262705484  | 0.032894233 | 0.135913873  | -4.25472834   |
| FAM3B    | -1.69053221   | 7.801418053  | -2.11070991   | 0.045305966 | 0.168284854  | -4.537789986  |
### Supplementary Table 2. The predicted results from DIANA and TargetScan databases

| miRNA       | PositionintheUTR | seedmatch | context++score | context++scorepercent | weightedcontext+ | conservedbranchle | Pct |
|-------------|------------------|-----------|----------------|-----------------------|------------------|-------------------|-----|
| **Conservedsites** |                   |           |                |                       |                  |                   |     |
| mmu-miR-203-3p.1 | 423-429          | 7mer-m8   | -0.02          | 64                    | -0.02            | 6.114             | 0.31 |
| mmu-miR-203-3p.2 | 423-429          | 7mer-1A   | -0.02          | 50                    | -0.02            | 6.114             | 0.23 |
| mmu-miR-539-3p  | 504-510          | 7mer-1A   | -0.11          | 90                    | -0.11            | 4.238             | N/A |
| mmu-miR-381-3p  | 504-510          | 7mer-1A   | -0.07          | 85                    | -0.07            | 4.238             | N/A |
| mmu-miR-1928    | 1045-1052        | 8mer      | -0.36          | 96                    | -0.07            | 6.686             | 0.68 |
| mmu-miR-222-3p  | 1045-1052        | 8mer      | -0.36          | 96                    | -0.07            | 6.686             | 0.68 |
| mmu-miR-221-3p  | 1045-1052        | 8mer      | -0.36          | 96                    | -0.07            | 6.686             | 0.68 |
| mmu-miR-682     | 1050-1056        | 7mer-1A   | -0.17          | 81                    | -0.03            | 7.973             | 0.54 |
| mmu-miR-455-3p.2| 1062-1068        | 7mer-1A   | -0.11          | 79                    | -0.02            | 6.174             | 0.38 |
| mmu-miR-199a-5p | 1062-1068        | 7mer-1A   | -0.09          | 76                    | -0.02            | 6.174             | 0.38 |
| mmu-miR-199b-5p | 1077-1083        | 7mer-1A   | -0.28          | 93                    | -0.05            | 7.354             | 0.79 |
| mmu-miR-145b    | 1077-1083        | 7mer-1A   | -0.28          | 93                    | -0.05            | 7.354             | 0.79 |
| mmu-miR-145a-5p | 1078-1084        | 7mer-1A   | -0.16          | 89                    | -0.03            | 7.18              | 0.95 |
| mmu-miR-320-3p  | 1108-1114        | 7mer-1A   | -0.06          | 73                    | -0.01            | 4.665             | N/A |
| **Poorlyconservedsites** |                 |           |                |                       |                  |                   |     |
| mmu-miR-6361    | 17-24            | 8mer      | -0.19          | 83                    | -0.19            | 0.716             | <0.1 |
| mmu-miR-6369    | 17-24            | 8mer      | -0.19          | 83                    | -0.19            | 0.716             | <0.1 |
| mmu-miR-6410    | 17-24            | 8mer      | -0.19          | 82                    | -0.19            | 0.716             | <0.1 |
| mmu-miR-6413    | 17-24            | 8mer      | -0.18          | 80                    | -0.18            | 0.716             | <0.1 |
| mmu-miR-24-3p   | 17-24            | 8mer      | -0.18          | 80                    | -0.18            | 0.716             | <0.1 |
| mmu-miR-5124b   | 17-24            | 8mer      | -0.18          | 80                    | -0.18            | 0.716             | <0.1 |
| mmu-miR-3106-5p | 18-24            | 7mer-1A   | -0.06          | 68                    | -0.06            | 0                 | N/A |
| mmu-miR-149-5p  | 19-25            | 7mer-m8   | -0.14          | 82                    | -0.14            | 0.591             | N/A |
| mmu-miR-7087-3p | 20-26            | 7mer-m8   | -0.09          | 55                    | -0.09            | 0                 | N/A |
| miR          | Start | End | Length | Seed | mRNA Seed | Target Seed | Score | Score SD | Score sd | N/A |
|-------------|-------|-----|--------|------|------------|-------------|-------|----------|----------|-----|
| mmu-miR-7679-5p | 21-27 | 7mer-m8 | -0.2 | 83   | -0.2 | 0 | N/A |
| mmu-miR-7648-3p | 22-28 | 7mer-m8 | -0.09 | 53   | -0.09 | 0 | N/A |
| mmu-miR-6940-5p | 22-28 | 7mer-m8 | -0.09 | 52   | -0.09 | 0 | N/A |
| mmu-miR-762 | 22-28 | 7mer-m8 | -0.04 | 48   | -0.04 | 0 | N/A |
| mmu-miR-7048-5p | 23-29 | 7mer-m8 | -0.06 | 35   | -0.06 | 0 | N/A |
| mmu-miR-185-3p | 23-29 | 7mer-m8 | -0.04 | 25   | -0.04 | 0 | N/A |
| mmu-miR-7083-5p | 24-30 | 7mer-m8 | -0.16 | 57   | -0.16 | 0.113 | N/A |
| mmu-miR-673-3p | 25-31 | 7mer-m8 | -0.27 | 81   | -0.27 | 0 | N/A |
| mmu-miR-7648-3p | 27-38 | non-canonical, N/A | N/A | N/A       | 0 | N/A |
| mmu-miR-7648-3p | 27-38 | non-canonical, N/A | N/A | N/A       | 0 | N/A |
| mmu-miR-5621-3p | 30-36 | 7mer-1A | -0.14 | 68   | -0.14 | 0 | N/A |
| mmu-miR-296-5p | 30-36 | 7mer-1A | -0.1 | 57   | -0.1 | 0 | N/A |
| mmu-miR-6379 | 34-40 | 7mer-1A | -0.07 | 56   | -0.07 | 0 | N/A |
| mmu-miR-455-3p.1 | 38-44 | 7mer-1A | -0.09 | 73   | -0.09 | 1.304 | 0.21 |
| mmu-miR-7214-3p | 38-44 | 7mer-m8 | -0.09 | 66   | -0.09 | 0 | N/A |
| mmu-miR-201-5p | 40-46 | 7mer-m8 | -0.04 | 60   | -0.04 | 0.113 | N/A |
| mmu-miR-7687-3p | 41-47 | 7mer-m8 | -0.1 | 77   | -0.1 | 0.41 | N/A |
| mmu-miR-188-3p | 45-51 | 7mer-1A | -0.16 | 76   | -0.16 | 0.468 | N/A |
| mmu-miR-1933-3p | 56-62 | 7mer-1A | -0.03 | 45   | -0.03 | 0 | N/A |
| mmu-miR-6949-5p | 63-69 | 7mer-m8 | -0.09 | 67   | -0.09 | 0 | N/A |
| mmu-miR-7088-5p | 64-70 | 7mer-m8 | -0.02 | 65   | -0.02 | 0 | N/A |
| mmu-miR-3105-5p | 67-73 | 7mer-m8 | -0.13 | 75   | -0.13 | 0 | N/A |
| mmu-miR-3057-5p | 70-77 | 8mer | -0.38 | 97   | -0.38 | 0 | N/A |
| mmu-miR-5130 | 70-76 | 7mer-1A | -0.25 | 93   | -0.25 | 0 | N/A |
| mmu-miR-6938-5p | 70-76 | 7mer-1A | -0.18 | 81   | -0.18 | 0 | N/A |
| mmu-miR-9-5p | 73-79 | 7mer-1A | -0.11 | 78   | -0.11 | 0.375 | <0.1 |
| mmu-miR-193a-5p | 76-83 | 8mer | -0.42 | 97   | -0.42 | 0.338 | <0.1 |
| mmu-miR-3091-5p | 78-84 | 7mer-m8 | -0.29 | 93   | -0.29 | 0 | N/A |
| mmu-miR-3961 | 87-93 | 7mer-1A | -0.17 | 73   | -0.17 | 0 | N/A |
| Mirna          | Start | End   | Target | Score | q Value | p Value | Rank | Type       | Score | q Value | p Value | Rank |
|---------------|-------|-------|--------|-------|---------|---------|------|------------|-------|---------|---------|------|
| mmu-miR-18a-3p| 88-94 | 7mer-m8 | -0.06 | 61    | -0.06   | 0.113   | N/A |
| mmu-miR-7069-3p| 88-94 | 7mer-m8 | -0.05 | 58    | -0.05   | 0.113   | N/A |
| mmu-miR-7016-3p| 90-96 | 7mer-1A | -0.07 | 64    | -0.07   | 0.409   | N/A |
| mmu-miR-7239-5p| 93-99 | 7mer-m8 | -0.02 | 40    | -0.02   | 0       | N/A |
| mmu-miR-3101-5p| 96-102| 7mer-m8 | -0.02 | 32    | -0.02   | 0       | N/A |
| mmu-miR-7087-3p| 108-120| non-canonical| N/A | N/A | N/A | N/A | N/A |
| mmu-miR-7087-3p| 108-120| non-canonical| N/A | N/A | N/A | N/A | N/A |
| mmu-miR-3473c | 109-115| 7mer-1A | -0.1  | 70    | -0.1    | 0       | N/A |
| mmu-miR-7649-3p| 109-115| 7mer-1A | -0.05 | 50    | -0.05   | 0       | N/A |
| mmu-miR-6975-3p| 109-115| 7mer-1A | -0.01 | 29    | -0.01   | 0       | N/A |
| mmu-miR-7063-3p| 111-117| 7mer-m8 | -0.04 | 33    | -0.04   | 0       | N/A |
| mmu-miR-6973b-3p| 111-117| 7mer-m8 | -0.04 | 33    | -0.04   | 0       | N/A |
| mmu-miR-760-3p  | 113-119| 7mer-1A | -0.07 | 48    | -0.07   | 0.113   | N/A |
| mmu-miR-7239-3p| 113-119| 7mer-1A | -0.05 | 39    | -0.05   | 0.113   | N/A |
| mmu-miR-1291  | 113-119| 7mer-m8 | -0.02 | 30    | -0.02   | 0       | N/A |
| mmu-miR-7029-3p| 114-120| 7mer-m8 | -0.14 | 80    | -0.14   | 0.113   | N/A |
| mmu-miR-546  | 116-123| 8mer | -0.43  | 97    | -0.43   | 0       | N/A |
| mmu-miR-6934-5p| 117-123| 7mer-1A | -0.1  | 66    | -0.1    | 0       | N/A |
| mmu-miR-6952-5p| 117-123| 7mer-1A | -0.05 | 46    | -0.05   | 0       | N/A |
| mmu-miR-6400 | 119-130| non-canonical| N/A | N/A | N/A | N/A | N/A |
| mmu-miR-6400 | 119-130| non-canonical| N/A | N/A | N/A | N/A | N/A |
| mmu-miR-7680-3p| 121-127| 7mer-m8 | -0.04 | 55    | -0.04   | 0       | N/A |
| mmu-miR-7663-5p| 121-127| 7mer-m8 | -0.02 | 53    | -0.02   | 0       | N/A |
| mmu-miR-210-5p| 128-134| 7mer-m8 | -0.09 | 61    | -0.09   | 0.468   | N/A |
| mmu-miR-6919-5p| 130-136| 7mer-m8 | -0.25 | 92    | -0.25   | 0.409   | N/A |
| mmu-miR-1668| 132-138| 7mer-m8 | -0.1  | 81    | -0.1    | 0       | N/A |
| mmu-miR-3544-5p| 133-140| 8mer | -0.18  | 89    | -0.18   | 0       | N/A |
| mmu-miR-488-3p| 134-140| 7mer-m8 | -0.04 | 65    | -0.04   | 0.253   | N/A |
| mmu-miR-7681-3p| 134-140| 7mer-1A | -0.04 | 58    | -0.04   | 0       | N/A |
| miRNA           | Start | End   | miRNA Type | miRNA Type | Fold Change | p-Value | N/A     |
|-----------------|-------|-------|------------|------------|-------------|---------|---------|
| mmu-miR-471-3p  | 134   | 140   | 7mer-1A    | -0.01      | 29          | -0.01   | 0.113   |
| mmu-miR-1934-3p | 138   | 144   | 7mer-1A    | -0.11      | 75          | -0.11   | 0       |
| mmu-miR-7b-5p   | 149   | 155   | 7mer-1A    | -0.03      | 60          | -0.03   | 0.269   |
| mmu-miR-7a-5p   | 149   | 155   | 7mer-1A    | -0.03      | 59          | -0.03   | 0.269   |
| mmu-miR-6917-5p | 150   | 157   | 8mer       | -0.31      | 95          | -0.31   | 0       |
| mmu-miR-5121    | 154   | 160   | 7mer-m8    | -0.2       | 80          | -0.2    | 0       |
| mmu-miR-7002-5p | 157   | 163   | 7mer-1A    | -0.06      | 65          | -0.06   | 0       |
| mmu-miR-326-5p  | 164   | 170   | 7mer-1A    | -0.21      | 82          | -0.21   | 0       |
| mmu-miR-486b-3p | 164   | 170   | 7mer-1A    | -0.21      | 71          | -0.21   | 0       |
| mmu-miR-486a-3p | 164   | 170   | 7mer-1A    | -0.21      | 71          | -0.21   | 0       |
| mmu-miR-6954-5p | 164   | 170   | 7mer-1A    | -0.19      | 67          | -0.19   | 0       |
| mmu-miR-31-3p   | 183   | 189   | 7mer-m8    | -0.16      | 81          | -0.16   | 0       |
| mmu-miR-6996-5p | 192   | 203   | non-canon. | N/A        | N/A         | N/A     | 0       |
| mmu-miR-6996-5p | 192   | 203   | non-canon. | N/A        | N/A         | N/A     | 0       |
| mmu-miR-485-3p  | 200   | 206   | 7mer-m8    | -0.02      | 24          | -0.02   | 0       |
| mmu-miR-6909-5p | 209   | 215   | 7mer-m8    | -0.31      | 87          | -0.31   | 0       |
| mmu-miR-6418-5p | 211   | 217   | 7mer-1A    | -0.13      | 70          | -0.13   | 0       |
| mmu-miR-7670-3p | 217   | 223   | 7mer-1A    | -0.01      | 25          | -0.01   | 0.375   |
| mmu-miR-204-5p  | 217   | 223   | 7mer-1A    | -0.01      | 24          | -0.01   | 0.375   |
| mmu-miR-211-5p  | 217   | 223   | 7mer-1A    | -0.01      | 24          | -0.01   | 0.375   |
| mmu-miR-7002-5p | 234   | 240   | 7mer-m8    | -0.05      | 62          | -0.05   | 0       |
| mmu-miR-7091-3p | 235   | 241   | 7mer-m8    | -0.02      | 21          | -0.02   | 0       |
| mmu-miR-6973a-5p| 238   | 244   | 7mer-m8    | -0.18      | 71          | -0.18   | 0       |
| mmu-miR-3085-5p | 244   | 250   | 7mer-m8    | -0.1       | 46          | -0.1    | 0       |
| mmu-miR-423-3p  | 248   | 255   | 8mer       | -0.5       | 94          | -0.5    | 0.299   |
| mmu-miR-7686-3p | 249   | 255   | 7mer-m8    | -0.26      | 72          | -0.26   | 0       |
| mmu-miR-2861    | 254   | 260   | 7mer-m8    | -0.16      | 81          | -0.16   | 0       |
| mmu-miR-3091-3p | 254   | 260   | 7mer-m8    | -0.19      | 74          | -0.19   | 0       |
| mmu-miR-330-3p  | 255   | 266   | non-canon. | N/A        | N/A         | N/A     | 0       |
| miRNA          | Target Location Range | Target ID | Target ID | Target ID | Target ID | Target ID | Target ID |
|----------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| mmu-miR-330-3p.2 | 255-266               | non-canonical | N/A       | N/A       | 0         | N/A       |
| mmu-miR-6996-5p   | 259-266               | 8mer      | -0.21     | 89        | -0.21     | 0         | N/A       |
| mmu-miR-6355     | 264-270               | 7mer-m8   | -0.03     | 70        | -0.03     | 0         | N/A       |
| mmu-miR-6920-5p   | 265-271               | 7mer-m8   | -0.02     | 36        | -0.02     | 0         | N/A       |
| mmu-miR-693-5p    | 268-275               | 8mer      | -0.3      | 96        | -0.3      | 0         | N/A       |
| mmu-miR-3472     | 271-277               | 7mer-m8   | -0.14     | 83        | -0.14     | 0         | N/A       |
| mmu-miR-295-5p    | 275-282               | 8mer      | -0.05     | 84        | -0.05     | 0.113     | N/A       |
| mmu-miR-292b-5p   | 276-282               | 7mer-1A   | -0.05     | 80        | -0.05     | 0.411     | N/A       |
| mmu-miR-294-5p    | 276-282               | 7mer-1A   | -0.04     | 75        | -0.04     | 0.411     | N/A       |
| mmu-miR-290a-5p   | 276-282               | 7mer-1A   | -0.01     | 49        | -0.01     | 1.207     | N/A       |
| mmu-miR-292a-5p   | 276-282               | 7mer-1A   | -0.01     | 48        | -0.01     | 1.207     | N/A       |
| mmu-miR-293-5p    | 276-282               | 7mer-1A   | -0.01     | 47        | -0.01     | 1.207     | N/A       |
| mmu-miR-5133     | 284-290               | 7mer-m8   | -0.18     | 93        | -0.18     | 0         | N/A       |
| mmu-miR-6950-5p   | 285-291               | 7mer-m8   | -0.12     | 72        | -0.12     | 0         | N/A       |
| mmu-miR-6379     | 286-293               | 8mer      | -0.26     | 94        | -0.26     | 0         | N/A       |
| mmu-miR-7671-5p   | 291-297               | 7mer-1A   | -0.17     | 80        | -0.17     | 0         | N/A       |
| mmu-miR-149-5p    | 292-298               | 7mer-m8   | -0.15     | 83        | -0.15     | 0.264     | N/A       |
| mmu-miR-7087-3p   | 293-300               | 8mer      | -0.32     | 93        | -0.32     | 0         | N/A       |
| mmu-miR-3963     | 307-313               | 7mer-1A   | -0.11     | 64        | -0.11     | 0         | N/A       |
| mmu-miR-223-5p    | 309-315               | 7mer-1A   | -0.05     | 53        | -0.05     | 0.113     | N/A       |
| mmu-miR-7089-3p   | 316-323               | 8mer      | -0.37     | 98        | -0.37     | 0         | N/A       |
| mmu-miR-33-3p     | 325-331               | 7mer-m8   | -0.02     | 51        | -0.02     | 0.113     | N/A       |
| mmu-miR-7119-3p   | 331-337               | 7mer-m8   | -0.02     | 39        | -0.02     | 0         | N/A       |
| mmu-miR-1668     | 343-349               | 7mer-m8   | -0.18     | 90        | -0.18     | 0         | N/A       |
| mmu-miR-7062-5p   | 351-357               | 7mer-1A   | -0.09     | 66        | -0.09     | 0         | N/A       |
| mmu-miR-3475-3p   | 352-358               | 7mer-m8   | -0.13     | 80        | -0.13     | 0         | N/A       |
| mmu-miR-6972-5p   | 352-358               | 7mer-m8   | -0.09     | 80        | -0.09     | 0         | N/A       |
| mmu-miR-6950-5p   | 353-360               | 8mer      | -0.25     | 92        | -0.25     | 0         | N/A       |
| mmu-miR-483-3p.1  | 357-363               | 7mer-1A   | -0.01     | 31        | -0.01     | 0.694     | N/A       |
| miRNA     | ID       | Type   | Value | Se | Value | L | Value | N/A |
|-----------|----------|--------|-------|----|-------|---|-------|-----|
| mmu-miR-7055-3p | 360-367 | 8mer  | -0.33 | 96 | -0.33 | 0 | N/A |
| mmu-miR-33-5p   | 367-373 | 7mer-1A | -0.07 | 81 | -0.07 | 2.639 | <0.1 |
| mmu-miR-450b-5p | 369-375 | 7mer-1A | -0.11 | 85 | -0.11 | 0 | N/A |
| mmu-miR-129-5p  | 370-376 | 7mer-m8 | -0.02 | 77 | -0.02 | 1.069 | <0.1 |
| mmu-miR-129b-5p | 371-377 | 7mer-m8 | -0.02 | 75 | -0.02 | 0 | N/A |
| mmu-miR-7091-3p | 375-381 | 7mer-m8 | -0.16 | 80 | -0.16 | 0 | N/A |
| mmu-miR-7037-5p | 377-383 | 7mer-m8 | -0.26 | 90 | -0.26 | 0 | N/A |
| mmu-miR-298-5p  | 381-387 | 7mer-m8 | -0.14 | 87 | -0.14 | 0 | N/A |
| mmu-miR-6969-5p | 382-388 | 7mer-m8 | -0.08 | 72 | -0.08 | 0 | N/A |
| mmu-miR-5621-3p | 393-399 | 7mer-m8 | -0.17 | 74 | -0.17 | 0 | N/A |
| mmu-miR-1946a   | 396-403 | 8mer   | -0.52 | 97 | -0.52 | 0 | N/A |
| mmu-miR-7658-3p | 403-409 | 7mer-1A | -0.07 | 72 | -0.07 | 0 | N/A |
| mmu-miR-1968-3p | 403-409 | 7mer-1A | -0.01 | 31 | -0.01 | 0 | N/A |
| mmu-miR-1952    | 404-411 | 8mer   | -0.31 | 96 | -0.31 | 0 | N/A |
| mmu-miR-6974-3p | 405-411 | 7mer-1A | -0.04 | 51 | -0.04 | 0 | N/A |
| mmu-miR-7649-3p | 406-412 | 7mer-m8 | -0.11 | 71 | -0.11 | 0 | N/A |
| mmu-miR-3473c   | 406-412 | 7mer-m8 | -0.07 | 60 | -0.07 | 0 | N/A |
| mmu-miR-6908-3p | 408-414 | 7mer-m8 | -0.15 | 86 | -0.15 | 0 | N/A |
| mmu-miR-7013-3p | 411-417 | 7mer-1A | -0.1  | 83 | -0.1  | 0 | N/A |
| mmu-miR-6911-3p | 414-420 | 7mer-m8 | -0.19 | 91 | -0.19 | 0 | N/A |
| mmu-miR-7227-3p | 425-431 | 7mer-1A | -0.11 | 92 | -0.11 | 0 | N/A |
| mmu-miR-6984-5p | 425-431 | 7mer-1A | -0.11 | 88 | -0.11 | 0.445 | N/A |
| mmu-miR-875-3p  | 425-431 | 7mer-1A | -0.1  | 88 | -0.1  | 0 | N/A |
| mmu-miR-7079-3p | 429-436 | 8mer   | -0.3  | 94 | -0.3  | 0 | N/A |
| mmu-miR-7235-3p | 431-437 | 7mer-m8 | -0.16 | 88 | -0.16 | 0.113 | N/A |
| mmu-miR-1936    | 433-439 | 7mer-m8 | -0.28 | 97 | -0.28 | 0 | N/A |
| mmu-miR-495-3p  | 437-443 | 7mer-m8 | -0.13 | 95 | -0.13 | 0 | N/A |
| mmu-miR-1192    | 437-443 | 7mer-m8 | -0.13 | 94 | -0.13 | 0 | N/A |
| mmu-miR-8118    | 440-447 | 8mer   | -0.14 | 95 | -0.14 | 0 | N/A |
| miRNA     | mature sequence | seed sequence | mis-match | score 1 | score 2 | score 3 | score 4 | score 5 | score 6 | score 7 | score 8 | score 9 |
|-----------|-----------------|---------------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| mmu-let-7c-1-3p | 443-449         | 7mer-m8       | -0.15     | 89      | -0.15  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-338-5p  | 453-459         | 7mer-1A       | -0.01     | 38      | -0.01  | 0.113   | N/A     |         |         |         |         |         |
| mmu-miR-1197-3p | 469-475         | 7mer-1A       | -0.17     | 87      | -0.17  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-7011-5p | 476-483         | 8mer          | -0.52     | 99      | -0.52  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-6982-5p | 477-484         | 8mer          | -0.51     | 99      | -0.51  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-8100   | 477-483         | 7mer-1A       | -0.27     | 94      | -0.27  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-1843b-5p| 478-484         | 7mer-1A       | -0.19     | 90      | -0.19  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-3473f  | 490-496         | 7mer-1A       | -0.13     | 92      | -0.13  | 0       | N/A     |         |         |         |         |         |
| mmu-let-7c-2-3p | 504-510         | 7mer-m8       | -0.2      | 97      | -0.2   | 0.505   | N/A     |         |         |         |         |         |
| mmu-let-7a-1-3p | 504-510         | 7mer-m8       | -0.2      | 97      | -0.2   | 0.505   | N/A     |         |         |         |         |         |
| mmu-let-7b-3p  | 504-510         | 7mer-m8       | -0.18     | 96      | -0.18  | 0.505   | N/A     |         |         |         |         |         |
| mmu-miR-98-3p  | 504-510         | 7mer-m8       | -0.16     | 94      | -0.16  | 0.505   | N/A     |         |         |         |         |         |
| mmu-let-7f-1-3p | 504-510         | 7mer-m8       | -0.16     | 94      | -0.16  | 0.505   | N/A     |         |         |         |         |         |
| mmu-miR-669b-3p | 505-511         | 7mer-m8       | -0.12     | 85      | -0.12  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-467a-3p | 505-511         | 7mer-m8       | -0.1      | 82      | -0.1   | 0       | N/A     |         |         |         |         |         |
| mmu-miR-669f-3p | 505-511         | 7mer-m8       | -0.1      | 82      | -0.1   | 0       | N/A     |         |         |         |         |         |
| mmu-miR-338-5p  | 508-515         | 8mer          | -0.28     | 98      | -0.26  | 0.505   | N/A     |         |         |         |         |         |
| mmu-miR-3094-3p | 516-522         | 7mer-m8       | -0.08     | 84      | -0.07  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-374b-5p | 525-531         | 7mer-1A       | -0.1      | 90      | -0.09  | 0.299   | N/A     |         |         |         |         |         |
| mmu-miR-6374   | 527-533         | 7mer-m8       | -0.16     | 91      | -0.15  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-717    | 534-541         | 8mer          | -0.44     | 98      | -0.4   | 0       | N/A     |         |         |         |         |         |
| mmu-miR-3097-3p | 535-541         | 7mer-1A       | -0.16     | 82      | -0.15  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-871-5p  | 536-542         | 7mer-m8       | -0.12     | 84      | -0.11  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-743a-5p | 536-542         | 7mer-m8       | -0.11     | 83      | -0.1   | 0       | N/A     |         |         |         |         |         |
| mmu-miR-5625-3p | 538-545         | 8mer          | -0.27     | 95      | -0.24  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-20a-3p  | 547-554         | 8mer          | -0.31     | 96      | -0.28  | 0.113   | N/A     |         |         |         |         |         |
| mmu-miR-1950   | 548-554         | 7mer-1A       | -0.1      | 79      | -0.09  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-6962-3p | 550-556         | 7mer-1A       | -0.09     | 72      | -0.09  | 0       | N/A     |         |         |         |         |         |
| mmu-miR-331-5p  | 554-561         | 8mer          | -0.32     | 96      | -0.3   | 0       | N/A     |         |         |         |         |         |
| miRNA        | miRNA ID | miRNA Type | Score 1 | Score 2 | Score 3 | Score 4 | Score 5 | Score 6 | Score 7 | Score 8 | Score 9 | Score 10 | Score 11 | Score 12 | Score 13 | Score 14 | Score 15 | Score 16 | Score 17 |
|--------------|----------|------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| mmu-miR-6973b-5p | 554-561  | 8mer       | -0.23   | 95      | -0.21   | 0       | N/A     |
| mmu-miR-7211-3p   | 583-589  | 7mer-m8    | -0.31   | 96      | -0.29   | 0       | N/A     |
| mmu-miR-8091      | 583-589  | 7mer-m8    | -0.31   | 96      | -0.29   | 0       | N/A     |
| mmu-miR-7021-5p   | 585-591  | 7mer-m8    | -0.2    | 88      | -0.19   | 0       | N/A     |
| mmu-miR-380-3p    | 589-595  | 7mer-1A    | -0.06   | 62      | -0.06   | 0       | N/A     |
| mmu-miR-202-5p    | 592-599  | 8mer       | -0.31   | 96      | -0.29   | 0.113   | <0.1    |
| mmu-miR-6896-3p   | 638-645  | 8mer       | -0.24   | 96      | -0.22   | 0       | N/A     |
| mmu-miR-7119-3p   | 657-663  | 7mer-m8    | -0.02   | 39      | -0.02   | 0       | N/A     |
| mmu-miR-133a-5p   | 671-677  | 7mer-m8    | -0.17   | 89      | -0.16   | 0       | N/A     |
| mmu-miR-138-5p    | 673-679  | 7mer-1A    | -0.2    | 72      | -0.18   | 0       | <0.1    |
| mmu-miR-370-3p    | 675-682  | 8mer       | -0.29   | 97      | -0.27   | 0.113   | N/A     |
| mmu-miR-3074-5p   | 677-683  | 7mer-m8    | -0.09   | 89      | -0.09   | 0       | N/A     |
| mmu-miR-7674-3p   | 681-687  | 7mer-m8    | -0.1    | 78      | -0.1    | 0       | N/A     |
| mmu-miR-292b-3p   | 685-691  | 7mer-m8    | -0.25   | 92      | -0.23   | 0       | N/A     |
| mmu-miR-7023-3p   | 694-700  | 7mer-1A    | -0.17   | 85      | -0.16   | 0       | N/A     |
| mmu-miR-7018-3p   | 694-700  | 7mer-1A    | -0.14   | 79      | -0.13   | 0       | N/A     |
| mmu-miR-7047-3p   | 694-700  | 7mer-1A    | -0.13   | 78      | -0.12   | 0       | N/A     |
| mmu-miR-7068-3p   | 694-700  | 7mer-1A    | -0.14   | 78      | -0.13   | 0       | N/A     |
| mmu-miR-1193-3p   | 697-703  | 7mer-m8    | -0.18   | 85      | -0.17   | 0       | N/A     |
| mmu-miR-370-5p    | 697-703  | 7mer-m8    | -0.17   | 83      | -0.16   | 0       | N/A     |
| mmu-miR-7119-3p   | 716-722  | 7mer-m8    | -0.02   | 39      | -0.02   | 0       | N/A     |
| mmu-miR-1192      | 720-726  | 7mer-1A    | -0.06   | 87      | -0.05   | 0       | N/A     |
| mmu-miR-7a-1-3p   | 720-726  | 7mer-1A    | -0.03   | 86      | -0.02   | 0       | N/A     |
| mmu-miR-495-3p    | 720-726  | 7mer-1A    | -0.01   | 60      | -0.01   | 0       | N/A     |
| mmu-miR-540-3p    | 737-744  | 8mer       | -0.44   | 98      | -0.41   | 0       | N/A     |
| mmu-miR-6915-5p   | 737-744  | 8mer       | -0.44   | 98      | -0.41   | 0       | N/A     |
| mmu-miR-133b-5p   | 739-745  | 7mer-m8    | -0.19   | 89      | -0.18   | 0       | N/A     |
| mmu-miR-7036b-3p  | 741-747  | 7mer-m8    | -0.18   | 91      | -0.16   | 0       | N/A     |
| mmu-let-7b-3p     | 750-756  | 7mer-m8    | -0.11   | 88      | -0.1    | 0.874   | N/A     |
| miRNA       | Start | Stop  | Length | Score | Fold Change |
|-------------|-------|-------|--------|-------|-------------|
| mmu-let-7c-2-3p | 750-756 | 7mer-m8 | -0.11  | 88    | -0.1        | 0.874 | N/A |
| mmu-let-7a-1-3p | 750-756 | 7mer-m8 | -0.11  | 88    | -0.1        | 0.874 | N/A |
| mmu-miR-98-3p   | 750-756 | 7mer-m8 | -0.09  | 83    | -0.08       | 0.874 | N/A |
| mmu-let-7f-1-3p | 750-756 | 7mer-m8 | -0.09  | 83    | -0.08       | 0.874 | N/A |
| mmu-miR-539-3p  | 750-756 | 7mer-1A | -0.05  | 77    | -0.05       | 1.412 | N/A |
| mmu-miR-381-3p  | 750-756 | 7mer-1A | -0.03  | 70    | -0.03       | 1.412 | N/A |
| mmu-miR-467a-3p | 751-757 | 7mer-m8 | -0.04  | 66    | -0.04       | 0     | N/A |
| mmu-miR-669f-3p | 751-757 | 7mer-m8 | -0.04  | 66    | -0.04       | 0     | N/A |
| mmu-miR-669b-3p | 751-757 | 7mer-m8 | -0.04  | 65    | -0.04       | 0     | N/A |
| mmu-miR-16-2-3p | 754-760 | 7mer-m8 | -0.19  | 92    | -0.17       | 0     | N/A |
| mmu-miR-340-5p  | 767-773 | 7mer-1A | -0.01  | 50    | -0.01       | 2.821 | N/A |
| mmu-miR-6414    | 776-782 | 7mer-1A | -0.03  | 64    | -0.03       | 0     | N/A |
| mmu-miR-6970-5p | 776-782 | 7mer-1A | -0.01  | 44    | -0.01       | 0     | N/A |
| mmu-miR-7210-5p | 781-787 | 7mer-1A | -0.05  | 83    | -0.04       | 0     | N/A |
| mmu-miR-543-3p  | 781-787 | 7mer-1A | -0.01  | 65    | -0.01       | 2.897 | N/A |
| mmu-miR-669p-3p | 782-788 | 7mer-m8 | -0.11  | 90    | -0.1        | 0     | N/A |
| mmu-miR-6905-3p | 784-790 | 7mer-1A | -0.07  | 83    | -0.07       | 0     | N/A |
| mmu-miR-295-5p  | 790-796 | 7mer-m8 | -0.03  | 74    | -0.03       | 0     | N/A |
| mmu-miR-711     | 796-802 | 7mer-1A | -0.23  | 94    | -0.21       | 0     | N/A |
| mmu-miR-15a-3p  | 804-810 | 7mer-m8 | -0.16  | 88    | -0.14       | 0     | N/A |
| mmu-miR-7240-5p | 809-815 | 7mer-m8 | -0.13  | 81    | -0.12       | 0     | N/A |
| mmu-miR-882     | 809-815 | 7mer-1A | -0.08  | 60    | -0.07       | 0.315 | N/A |
| mmu-miR-7216-5p | 809-815 | 7mer-1A | -0.05  | 60    | -0.04       | 0     | N/A |
| mmu-miR-185-5p  | 809-815 | 7mer-1A | -0.07  | 52    | -0.06       | 0.315 | N/A |
| mmu-miR-3473a   | 809-815 | 7mer-1A | -0.05  | 46    | -0.05       | 0.315 | N/A |
| mmu-miR-7012-5p | 816-822 | 7mer-m8 | -0.12  | 78    | -0.11       | 0     | N/A |
| mmu-miR-8113    | 816-822 | 7mer-m8 | -0.12  | 78    | -0.11       | 0     | N/A |
| mmu-miR-8119    | 816-822 | 7mer-m8 | -0.06  | 75    | -0.05       | 0     | N/A |
| mmu-miR-7057-5p | 816-822 | 7mer-m8 | -0.09  | 73    | -0.09       | 0     | N/A |
| miRNA       | Start | End   | miRNA  | Start | End   | Score  | Freq | Score  | Freq |
|-------------|-------|-------|--------|-------|-------|--------|------|--------|------|
| mmu-miR-7050-5p | 817-823 | 7mer-m8 | -0.04 | 56    | -0.04 | 0  | N/A |
| mmu-miR-665-3p   | 818-825 | 8mer    | -0.41 | 98    | -0.38 | 0.24 | N/A |
| mmu-miR-7222-3p  | 819-825 | 7mer-1A | -0.14 | 85    | -0.12 | 0  | N/A |
| mmu-miR-1956     | 820-826 | 7mer-m8 | -0.33 | 93    | -0.3  | 0.113 | N/A |
| mmu-miR-7647-3p  | 821-827 | 7mer-m8 | -0.21 | 89    | -0.19 | 0  | N/A |
| mmu-miR-455-3p.1 | 822-828 | 7mer-m8 | -0.12 | 78    | -0.11 | 0.299 | <0.1 |
| mmu-miR-101b-3p.1 | 825-831 | 7mer-1A | -0.05 | 69    | -0.04 | 0.299 | <0.1 |
| mmu-miR-101b-3p.2 | 825-831 | 7mer-1A | -0.05 | 69    | -0.04 | 0.299 | <0.1 |
| mmu-miR-101a-3p.2 | 825-831 | 7mer-1A | -0.05 | 69    | -0.04 | 0.299 | <0.1 |
| mmu-miR-582-5p   | 825-831 | 7mer-1A | -0.05 | 61    | -0.04 | 0.299 | N/A |
| mmu-miR-208a-5p  | 830-836 | 7mer-m8 | -0.02 | 60    | 0      | 0.445 | N/A |
| mmu-miR-6415     | 830-836 | 7mer-m8 | -0.02 | 60    | 0      | 0.445 | N/A |
| mmu-miR-208b-5p  | 830-836 | 7mer-m8 | -0.02 | 48    | 0      | 0.445 | N/A |
| mmu-miR-693-3p   | 831-837 | 7mer-m8 | -0.04 | 76    | -0.01 | 0  | N/A |
| mmu-miR-674-3p   | 833-839 | 7mer-1A | -0.08 | 75    | -0.02 | 0  | N/A |
| mmu-miR-351-3p   | 852-859 | 8mer    | -0.2  | 92    | -0.04 | 0  | N/A |
| mmu-miR-599      | 855-861 | 7mer-m8 | -0.17 | 83    | -0.03 | 0  | N/A |
| mmu-miR-1970     | 855-861 | 7mer-1A | -0.12 | 74    | -0.02 | 0  | N/A |
| mmu-miR-5129-3p  | 863-869 | 7mer-m8 | -0.19 | 86    | -0.04 | 0.672 | <0.1 |
| mmu-miR-455-5p   | 863-869 | 7mer-m8 | -0.18 | 85    | -0.03 | 0.672 | <0.1 |
| mmu-miR-7651-5p  | 873-879 | 7mer-m8 | -0.15 | 81    | -0.03 | 0.815 | N/A |
| mmu-miR-6976-5p  | 878-884 | 7mer-m8 | -0.11 | 77    | -0.02 | 0  | N/A |
| mmu-miR-7665-5p  | 878-884 | 7mer-m8 | -0.11 | 77    | -0.02 | 0  | N/A |
| mmu-miR-7218-5p  | 881-887 | 7mer-1A | -0.18 | 86    | -0.03 | 0  | N/A |
| mmu-miR-7067-5p  | 881-887 | 7mer-1A | -0.15 | 77    | -0.03 | 0  | N/A |
| mmu-miR-7092-5p  | 888-894 | 7mer-1A | -0.16 | 89    | -0.03 | 0  | N/A |
| mmu-miR-6540-5p  | 888-895 | 8mer    | -0.23 | 77    | -0.04 | 0.982 | <0.1 |
| mmu-miR-124-3p.2 | 888-895 | 8mer    | -0.21 | 74    | -0.04 | 0.982 | <0.1 |
| mmu-miR-124-3p.1 | 888-894 | 7mer-1A | -0.07 | 73    | -0.01 | 0.982 | <0.1 |
| miRNA           | miRNA Accession | window | miRNA | "NC1" | "NC2" |
|----------------|-----------------|--------|-------|-------|-------|
| mmu-miR-5624-3p| 888-895         | 8mer   | -0.18 | 70    | -0.03 | 0.982 | <0.1 |
| mmu-miR-7002-5p| 894-900         | 7mer-1A | -0.02 | 42    | 0     | 0     | N/A  |
| mmu-miR-6375   | 896-902         | 7mer-m8 | -0.17 | 91    | -0.03 | 0     | N/A  |
| mmu-miR-4661-3p| 900-906         | 7mer-1A | -0.01 | 34    | 0     | 0     | N/A  |
| mmu-miR-568    | 902-908         | 7mer-m8 | -0.04 | 50    | -0.01 | 0.507 | N/A  |
| mmu-miR-344h-3p| 902-908         | 7mer-1A | -0.01 | 44    | 0     | 0.113 | N/A  |
| mmu-miR-223-5p | 904-910         | 7mer-1A | -0.09 | 69    | -0.02 | 0.468 | N/A  |
| mmu-miR-669n   | 906-912         | 7mer-m8 | -0.1  | 84    | -0.02 | 0.409 | N/A  |
| mmu-miR-592-5p | 906-912         | 7mer-1A | -0.07 | 72    | -0.01 | 0.652 | N/A  |
| mmu-miR-935    | 908-914         | 7mer-m8 | -0.06 | 81    | -0.01 | 0     | N/A  |
| mmu-miR-216c-3p| 945-951         | 7mer-m8 | -0.05 | 51    | -0.01 | 0     | N/A  |
| mmu-miR-6908-5p| 945-951         | 7mer-1A | -0.01 | 28    | 0     | 0     | N/A  |
| mmu-miR-543-5p | 947-953         | 7mer-m8 | -0.15 | 76    | -0.03 | 0     | N/A  |
| mmu-miR-219a-1-3p| 948-954       | 7mer-m8 | -0.15 | 81    | -0.03 | 0     | N/A  |
| mmu-miR-7072-5p| 952-958         | 7mer-m8 | -0.06 | 65    | -0.01 | 0.499 | N/A  |
| mmu-miR-7030-5p| 956-962         | 7mer-m8 | -0.14 | 61    | -0.03 | 0     | N/A  |
| mmu-miR-7075-5p| 956-962         | 7mer-m8 | -0.11 | 52    | -0.02 | 0     | N/A  |
| mmu-miR-7076-5p| 956-962         | 7mer-m8 | -0.12 | 52    | -0.02 | 0     | N/A  |
| mmu-miR-6971-5p| 957-964         | 8mer   | -0.23 | 72    | -0.04 | 0     | N/A  |
| mmu-miR-7024-5p| 958-964         | 7mer-m8 | -0.14 | 66    | -0.03 | 0     | N/A  |
| mmu-miR-7119-5p| 958-964         | 7mer-m8 | -0.11 | 60    | -0.02 | 0     | N/A  |
| mmu-miR-7023-5p| 958-964         | 7mer-m8 | -0.11 | 57    | -0.02 | 0     | N/A  |
| mmu-miR-7073-5p| 958-964         | 7mer-1A | -0.11 | 48    | -0.02 | 0     | N/A  |
| mmu-miR-6941-5p| 958-964         | 7mer-m8 | -0.07 | 45    | -0.01 | 0     | N/A  |
| mmu-miR-7212-5p| 959-965         | 7mer-m8 | -0.16 | 80    | -0.03 | 0     | N/A  |
| mmu-miR-7117-5p| 959-965         | 7mer-m8 | -0.16 | 79    | -0.03 | 0     | N/A  |
| mmu-miR-3083-5p| 961-968         | 8mer   | -0.16 | 73    | -0.03 | 0.409 | N/A  |
| mmu-miR-7679-5p| 962-968         | 7mer-1A | -0.13 | 73    | -0.02 | 0     | N/A  |
| miR    | miR ID | 5' and 3' sequence | 8mer/7mer score | miR score | p-value | N/A |
|--------|--------|--------------------|----------------|-----------|---------|-----|
| mmu-miR-664-5p | 962-968 | 7mer-m8 | -0.09 | 67 | -0.02 | 0.409 | N/A |
| mmu-miR-3473e | 962-968 | 7mer-1A | -0.04 | 49 | -0.01 | 0.409 | N/A |
| mmu-miR-3473b | 962-968 | 7mer-1A | -0.04 | 49 | -0.01 | 0.409 | N/A |
| mmu-miR-3085-3p | 963-969 | 7mer-m8 | -0.14 | 78 | -0.03 | 0.763 | 0.18 |
| mmu-miR-3064-5p | 963-969 | 7mer-m8 | -0.14 | 78 | -0.03 | 0.763 | 0.18 |
| mmu-miR-871-3p | 965-971 | 7mer-m8 | -0.2 | 83 | -0.04 | 0.113 | N/A |
| mmu-miR-6976-5p | 972-978 | 7mer-m8 | -0.07 | 69 | -0.01 | 0 | N/A |
| mmu-miR-7665-5p | 972-978 | 7mer-m8 | -0.07 | 66 | -0.01 | 0 | N/A |
| mmu-miR-7054-5p | 976-982 | 7mer-m8 | -0.13 | 84 | -0.03 | 0.409 | N/A |
| mmu-miR-6999-5p | 976-982 | 7mer-m8 | -0.08 | 73 | -0.02 | 0.409 | N/A |
| mmu-miR-6244 | 984-990 | 7mer-1A | -0.24 | 85 | -0.04 | 0 | N/A |
| mmu-miR-5120 | 985-991 | 7mer-m8 | -0.21 | 88 | -0.04 | 0 | N/A |
| mmu-miR-5710 | 987-993 | 7mer-1A | -0.09 | 65 | -0.02 | 0 | N/A |
| mmu-miR-7229-3p | 997-1003 | 7mer-m8 | -0.08 | 76 | -0.01 | 0 | N/A |
| mmu-miR-672-3p | 998-1005 | 8mer | -0.23 | 97 | -0.04 | 0.113 | N/A |
| mmu-miR-377-3p | 999-1005 | 7mer-m8 | -0.07 | 51 | -0.01 | 1.069 | N/A |
| mmu-miR-374b-3p | 1007-1013 | 7mer-1A | -0.01 | 18 | 0 | 0 | N/A |
| mmu-miR-544-5p | 1010-1016 | 7mer-1A | -0.05 | 56 | -0.01 | 0 | N/A |
| mmu-miR-6964-3p | 1011-1017 | 7mer-m8 | -0.04 | 69 | -0.01 | 0 | N/A |
| mmu-miR-1903 | 1013-1019 | 7mer-1A | -0.01 | 31 | 0 | 0 | N/A |
| mmu-miR-1191a | 1016-1022 | 7mer-1A | -0.18 | 91 | -0.03 | 0 | N/A |
| mmu-miR-6516-5p | 1062-1069 | 8mer | -0.22 | 93 | -0.04 | 0.609 | N/A |
| mmu-miR-450b-5p | 1063-1070 | 8mer | -0.15 | 90 | -0.03 | 0 | N/A |
| mmu-miR-7078-3p | 1067-1073 | 7mer-1A | -0.01 | 39 | 0 | 0 | N/A |
| mmu-miR-804 | 1073-1079 | 7mer-m8 | -0.2 | 89 | -0.04 | 0 | N/A |
| mmu-miR-7680-5p | 1078-1085 | 8mer | -0.22 | 94 | -0.04 | 0 | N/A |
| mmu-miR-6344 | 1081-1087 | 7mer-1A | -0.03 | 82 | -0.01 | 0 | N/A |
| mmu-miR-7116-3p | 1082-1089 | 8mer | -0.03 | 89 | -0.01 | 0 | N/A |
| mmu-miR-6951-3p | 1082-1089 | 8mer | -0.03 | 88 | -0.01 | 0 | N/A |
| miR           | ID1   | ID2   | ID3   | ID4   | ID5   | ID6   |
|--------------|-------|-------|-------|-------|-------|-------|
| mmu-miR-195a-3p | 1088-1094 | 7mer-m8 | -0.07 | 82 | -0.01 | 0 | N/A |
| mmu-miR-338-5p  | 1089-1096 | 8mer | -0.18 | 96 | -0.03 | 0 | N/A |
| mmu-miR-3095-5p | 1105-1111 | 7mer-m8 | -0.16 | 91 | -0.03 | 0 | N/A |
| mmu-miR-9-3p    | 1108-1114 | 7mer-m8 | -0.12 | 84 | -0.02 | 1.296 | N/A |
| mmu-miR-204-5p  | 1133-1139 | 7mer-m8 | -0.07 | 70 | -0.01 | 0.804 | <0.1 |
| mmu-miR-7670-3p | 1133-1139 | 7mer-m8 | -0.06 | 67 | -0.01 | 0.804 | <0.1 |
| mmu-miR-211-5p  | 1133-1139 | 7mer-m8 | -0.06 | 66 | -0.01 | 0.804 | <0.1 |
| mmu-miR-343     | 1134-1141 | 8mer | -0.24 | 95 | -0.04 | 0 | N/A |
| mmu-miR-6976-3p | 1135-1141 | 7mer-m8 | -0.17 | 83 | -0.03 | 0 | N/A |
| mmu-miR-702-3p  | 1149-1156 | 8mer | -0.21 | 82 | -0.04 | 0 | N/A |
| mmu-miR-6393    | 1150-1156 | 7mer-m8 | -0.1 | 77 | -0.02 | 0 | N/A |
| mmu-miR-6990-3p | 1154-1160 | 7mer-m8 | -0.14 | 77 | -0.03 | 0 | N/A |
| mmu-miR-7035-3p | 1158-1164 | 7mer-m8 | -0.07 | 67 | -0.01 | 0 | N/A |
| mmu-miR-6367    | 1160-1166 | 7mer-m8 | -0.08 | 60 | -0.02 | 0 | N/A |
| mmu-miR-351-5p  | 1160-1166 | 7mer-m8 | -0.07 | 56 | -0.01 | 0 | N/A |
| mmu-miR-6394    | 1160-1166 | 7mer-m8 | -0.07 | 56 | -0.01 | 0 | N/A |
| mmu-miR-125a-5p | 1160-1166 | 7mer-m8 | -0.06 | 53 | -0.01 | 0 | N/A |
| mmu-miR-125b-5p | 1160-1166 | 7mer-m8 | -0.06 | 53 | -0.01 | 0 | N/A |
| mmu-miR-874-3p  | 1162-1169 | 8mer | -0.23 | 91 | -0.04 | 0 | N/A |
| mmu-miR-1231-3p | 1162-1168 | 7mer-1A | -0.17 | 87 | -0.03 | 0 | N/A |
| mmu-miR-6990-3p | 1162-1168 | 7mer-1A | -0.07 | 64 | -0.01 | 0 | N/A |
| mmu-miR-6354    | 1162-1168 | 7mer-1A | -0.08 | 57 | -0.02 | 0 | N/A |
| mmu-miR-7660-5p | 1163-1169 | 7mer-m8 | -0.06 | 44 | -0.01 | 0 | N/A |
| mmu-miR-7067-3p | 1166-1172 | 7mer-1A | -0.03 | 21 | -0.01 | 0 | N/A |
| mmu-miR-7b-5p   | 1180-1186 | 7mer-1A | -0.01 | 35 | 0 | 0.205 | <0.1 |
| mmu-miR-7a-5p   | 1180-1186 | 7mer-1A | -0.01 | 35 | 0 | 0.205 | <0.1 |
| mmu-miR-8099    | 1190-1196 | 7mer-1A | -0.16 | 87 | -0.03 | 0 | N/A |
| mmu-miR-1898    | 1192-1198 | 7mer-m8 | -0.16 | 72 | -0.03 | 0 | N/A |
| mmu-miR-3964    | 1196-1202 | 7mer-1A | -0.11 | 68 | -0.02 | 0 | N/A |
| miRNA          | Start/End | Type    | Score | Tm   | Fold  | p-value | q-value |注释 |
|---------------|------------|---------|-------|------|-------|---------|---------|-----|
| mmu-miR-7013-3p | 1206-1212  | 7mer-m8 | -0.02 | 51   | 0     | 0       | N/A     |     |
| mmu-miR-770-5p  | 1210-1216  | 7mer-m8 | -0.23 | 90   | -0.04 | 0.113   | N/A     |     |
| mmu-miR-29a-3p  | 1211-1217  | 7mer-m8 | -0.11 | 66   | -0.02 | 0.113   | <0.1   |     |
| mmu-miR-29c-3p  | 1211-1217  | 7mer-m8 | -0.11 | 66   | -0.02 | 0.113   | <0.1   |     |
| mmu-miR-29b-3p  | 1211-1217  | 7mer-m8 | -0.1  | 63   | -0.02 | 0.113   | <0.1   |     |
| mmu-miR-6346   | 1231-1238  | 8mer    | -0.25 | 95   | -0.05 | 0       | N/A     |     |
| mmu-miR-6350   | 1231-1238  | 8mer    | -0.21 | 93   | -0.04 | 0       | N/A     |     |
| mmu-miR-3060-3p| 1234-1240  | 7mer-m8 | -0.12 | 66   | -0.02 | 0       | N/A     |     |
| mmu-miR-7042-5p| 1239-1245  | 7mer-m8 | -0.15 | 85   | -0.03 | 0       | N/A     |     |
| mmu-miR-654-5p  | 1244-1250  | 7mer-1A | -0.07 | 63   | -0.01 | 0       | N/A     |     |
| mmu-miR-7049-3p| 1254-1261  | 8mer    | -0.28 | 92   | -0.05 | 0       | N/A     |     |
| mmu-miR-7044-3p| 1255-1261  | 7mer-m8 | -0.1  | 72   | -0.02 | 0       | N/A     |     |
| mmu-miR-6954-3p| 1255-1261  | 7mer-1A | -0.09 | 56   | -0.02 | 0       | N/A     |     |
| mmu-miR-7666-3p| 1256-1262  | 7mer-m8 | -0.02 | 61   | 0     | 0       | N/A     |     |
| mmu-miR-7086-5p| 1264-1270  | 7mer-m8 | -0.08 | 70   | 0     | 0       | N/A     |     |
| mmu-miR-7661-5p| 1268-1274  | 7mer-m8 | -0.02 | 44   | 0     | 0       | N/A     |     |
| mmu-miR-3547-3p| 1282-1288  | 7mer-1A | -0.05 | 51   | -0.01 | 0.113   | N/A     |     |
| mmu-miR-6927-3p| 1284-1290  | 7mer-1A | -0.04 | 54   | -0.01 | 0       | N/A     |     |
| mmu-miR-7035-3p| 1284-1290  | 7mer-1A | -0.01 | 30   | 0     | 0       | N/A     |     |
| mmu-miR-6945-3p| 1284-1290  | 7mer-1A | -0.01 | 21   | 0     | 0       | N/A     |     |
| mmu-miR-301a-5p| 1286-1292  | 7mer-1A | -0.01 | 46   | 0     | 0.113   | N/A     |     |
| mmu-miR-301b-5p| 1286-1292  | 7mer-1A | -0.01 | 46   | 0     | 0.113   | N/A     |     |
| mmu-miR-6952-3p| 1286-1292  | 7mer-1A | -0.01 | 38   | 0     | 0.113   | N/A     |     |
| mmu-miR-1896   | 1286-1292  | 7mer-m8 | -0.02 | 33   | 0     | 0       | N/A     |     |
| mmu-miR-216b-5p| 1288-1294  | 7mer-m8 | -0.02 | 30   | 0     | 0.613   | <0.1    |     |
| mmu-miR-7086-5p| 1297-1303  | 7mer-m8 | -0.18 | 88   | -0.03 | 0       | N/A     |     |
| mmu-miR-3096-5p| 1311-1317  | 7mer-1A | -0.15 | 76   | -0.03 | 0       | N/A     |     |
| mmu-miR-3090-5p| 1323-1330  | 8mer    | -0.15 | 89   | -0.03 | 0       | N/A     |     |
| mmu-miR-7213-5p| 1323-1329  | 7mer-1A | -0.1  | 71   | -0.02 | 0       | N/A     |     |
| Target Name       | Start | End   | Seed   | Meta Score | Expression | miR Score | PVal  |
|-------------------|-------|-------|--------|------------|------------|-----------|-------|
| mmu-miR-7019-5p   | 1324  | 1330  | 7mer-1A| -0.12      | 69         | -0.02     | 0     |
| mmu-miR-6907-5p   | 1324  | 1330  | 7mer-1A| -0.1       | 64         | -0.02     | 0     |
| mmu-miR-7021-3p   | 1326  | 1337  | non-canonical | N/A   | N/A        | 0         | N/A   |
| mmu-miR-7021-3p   | 1326  | 1337  | non-canonical | N/A   | N/A        | 0         | N/A   |
| mmu-miR-107-5p    | 1327  | 1333  | 7mer-1A| -0.02      | 32         | 0         | 0.113 |
| mmu-miR-103-2-5p  | 1327  | 1333  | 7mer-1A| -0.02      | 31         | 0         | 0.113 |
| mmu-miR-103-1-5p  | 1327  | 1333  | 7mer-1A| -0.01      | 30         | 0         | 0.113 |
| mmu-miR-7008-3p   | 1328  | 1335  | 8mer   | -0.2       | 87         | -0.04     | 0     |
| mmu-miR-218-5p    | 1329  | 1335  | 7mer-m8| -0.07      | 65         | -0.01     | 0.113 |
| mmu-miR-7002-3p   | 1329  | 1335  | 7mer-m8| -0.04      | 55         | -0.01     | 0.113 |
| mmu-miR-7026-3p   | 1329  | 1335  | 7mer-1A| -0.02      | 23         | 0         | 0     |
| mmu-miR-6965-3p   | 1330  | 1337  | 8mer   | -0.21      | 90         | -0.04     | 0     |
| mmu-miR-7043-3p   | 1331  | 1337  | 7mer-1A| -0.11      | 73         | -0.02     | 0.445 |
| mmu-miR-7015-5p   | 1331  | 1337  | 7mer-1A| -0.13      | 73         | -0.02     | 0     |
| mmu-miR-6950-3p   | 1335  | 1341  | 7mer-m8| -0.07      | 62         | -0.01     | 0     |
| mmu-miR-7215-3p   | 1338  | 1344  | 7mer-1A| -0.14      | 81         | -0.03     | 0     |
| mmu-miR-7030-3p   | 1339  | 1345  | 7mer-m8| -0.03      | 41         | -0.01     | 0     |
| mmu-miR-206-5p    | 1344  | 1350  | 7mer-m8| -0.02      | 33         | 0         | 0     |
| mmu-miR-338-3p    | 1348  | 1354  | 7mer-m8| -0.02      | 46         | 0         | 0     |
| mmu-miR-1934-5p   | 1368  | 1374  | 7mer-m8| -0.25      | 87         | -0.05     | 0     |
| mmu-miR-6372      | 1371  | 1377  | 7mer-m8| -0.14      | 76         | -0.03     | 0     |
| mmu-miR-1912-3p   | 1374  | 1380  | 7mer-m8| -0.02      | 67         | 0         | 0     |
| mmu-miR-6902-5p   | 1379  | 1385  | 7mer-m8| -0.06      | 72         | -0.01     | 0     |
| mmu-miR-6918-3p   | 1385  | 1391  | 7mer-1A| -0.03      | 30         | -0.01     | 0     |
| mmu-miR-28a-3p    | 1391  | 1397  | 7mer-m8| -0.02      | 28         | 0         | 0     |
| mmu-miR-3068-5p   | 1406  | 1412  | 7mer-m8| -0.05      | 56         | -0.01     | 0     |
| mmu-miR-6934-5p   | 1409  | 1415  | 7mer-m8| -0.15      | 77         | -0.03     | 0     |
| mmu-miR-7672-5p   | 1409  | 1415  | 7mer-1A| -0.07      | 58         | -0.01     | 0     |
| mmu-miR-6910-3p   | 1412  | 1418  | 7mer-1A| -0.02      | 35         | 0         | 0     |
| miRNA       | Start | End   | Seq. | Score | Length | p-value | E-value | Score | p-value | E-value |
|-------------|-------|-------|------|-------|--------|---------|---------|-------|---------|---------|
| mmu-miR-6910-5p | 1420-1426 | 7mer-1A | -0.2 | 76 | -0.04 | 0 | N/A |
| mmu-miR-7006-5p | 1420-1426 | 7mer-1A | -0.12 | 37 | -0.02 | 0 | N/A |
| mmu-miR-5132-5p | 1422-1428 | 7mer-m8 | -0.26 | 84 | -0.05 | 0 | N/A |
| mmu-miR-8110 | 1424-1430 | 7mer-m8 | -0.31 | 87 | -0.06 | 0 | N/A |
| mmu-miR-28a-3p | 1434-1440 | 7mer-m8 | -0.09 | 76 | -0.02 | 0 | 0.569 | N/A |
| mmu-miR-708-3p | 1435-1441 | 7mer-m8 | -0.05 | 52 | 0 | 0 | N/A |
| mmu-miR-350-3p | 1440-1446 | 7mer-1A | -0.01 | 18 | 0 | 0 | N/A |
| mmu-miR-677-3p | 1447-1453 | 7mer-m8 | -0.02 | 53 | 0 | 0 | N/A |
| mmu-miR-133a-5p | 1460-1466 | 7mer-m8 | -0.02 | 21 | 0 | 0 | N/A |
| mmu-miR-138-5p | 1462-1468 | 7mer-1A | -0.11 | 53 | 0 | 0 | N/A |
| mmu-miR-6926-3p | 1468-1474 | 7mer-1A | -0.01 | 35 | 0 | 0 | N/A |
| mmu-miR-1193-3p | 1471-1477 | 7mer-m8 | -0.11 | 76 | 0 | 0 | N/A |
| mmu-miR-370-5p | 1471-1477 | 7mer-m8 | -0.12 | 76 | 0 | 0 | N/A |
| mmu-miR-6904-3p | 1479-1485 | 7mer-m8 | -0.12 | 76 | 0 | 0 | N/A |
| mmu-miR-5619-5p | 1488-1494 | 7mer-1A | -0.19 | 86 | 0 | 0 | N/A |
| mmu-miR-668-3p | 1488-1494 | 7mer-1A | -0.05 | 64 | 0 | 0 | N/A |
| mmu-miR-7215-5p | 1499-1505 | 7mer-m8 | -0.02 | 53 | 0 | 0 | N/A |
| mmu-miR-344h-3p | 1508-1514 | 7mer-m8 | -0.02 | 74 | 0 | 0 | N/A |
| mmu-miR-6910-3p | 1513-1519 | 7mer-1A | -0.11 | 79 | 0 | 0 | N/A |
| mmu-miR-1264-5p | 1535-1541 | 7mer-1A | -0.04 | 38 | 0 | 0 | N/A |
| mmu-miR-1934-5p | 1536-1542 | 7mer-m8 | -0.16 | 75 | 0 | 0 | N/A |
| mmu-miR-763 | 1539-1545 | 7mer-m8 | -0.02 | 51 | 0 | 0 | N/A |
| mmu-miR-1955-5p | 1543-1549 | 7mer-m8 | -0.04 | 33 | 0 | 0 | N/A |
| mmu-miR-6350 | 1548-1554 | 7mer-m8 | -0.02 | 35 | 0 | 0 | N/A |
| mmu-miR-6346 | 1548-1554 | 7mer-m8 | -0.02 | 29 | 0 | 0 | N/A |
| mmu-miR-761 | 1549-1555 | 7mer-m8 | -0.02 | 55 | 0 | 0 | 0.113 | N/A |
| mmu-miR-214-3p | 1549-1555 | 7mer-m8 | -0.02 | 41 | 0 | 0 | 0.113 | N/A |
| mmu-miR-383-3p | 1551-1557 | 7mer-m8 | -0.02 | 24 | 0 | 0 | 0.113 | N/A |
| mmu-miR-9769-5p | 1553-1560 | 8mer | -0.06 | 47 | 0 | 0 | N/A |
| miR ID          | Gene ID   | Mismatches | Score | q value | p value | u value | q value | p value | u value |
|-----------------|-----------|------------|-------|---------|---------|---------|---------|---------|---------|
| mmu-miR-871-3p  | 1557-1563 | 7mer-m8    | -0.08 | 62      | -0.02   | 0       | N/A     |
| mmu-miR-7222-3p | 1561-1567 | 7mer-m8    | -0.19 | 90      | -0.04   | 0       | N/A     |
| mmu-miR-3090-3p | 1563-1569 | 7mer-1A    | -0.03 | 56      | -0.01   | 0       | N/A     |
| mmu-miR-3096-5p | 1573-1579 | 7mer-m8    | -0.07 | 55      | -0.01   | 0       | N/A     |
| mmu-miR-486a-3p | 1584-1590 | 7mer-1A    | -0.11 | 48      | -0.02   | 0       | N/A     |
| mmu-miR-486b-3p | 1584-1590 | 7mer-1A    | -0.11 | 48      | -0.02   | 0       | N/A     |
| mmu-miR-6954-5p | 1584-1590 | 7mer-1A    | -0.09 | 44      | -0.02   | 0       | N/A     |
| mmu-miR-326-5p  | 1584-1590 | 7mer-1A    | -0.05 | 42      | -0.01   | 0       | N/A     |
| mmu-miR-5120    | 1585-1591 | 7mer-m8    | -0.23 | 90      | -0.04   | 0       | N/A     |
| mmu-miR-5710    | 1587-1593 | 7mer-1A    | -0.05 | 47      | -0.01   | 0       | N/A     |
| mmu-miR-692     | 1590-1596 | 7mer-1A    | -0.04 | 68      | -0.01   | 0       | N/A     |
| mmu-miR-6896-3p | 1591-1597 | 7mer-1A    | -0.01 | 39      | 0       | 0       | N/A     |
| mmu-miR-6240    | 1598-1604 | 7mer-m8    | -0.04 | 54      | -0.01   | 0.253   | N/A     |
| mmu-miR-330-3p.1| 1598-1604 | 7mer-m8    | -0.02 | 38      | 0       | 0.253   | N/A     |
| mmu-miR-218-5p  | 1610-1616 | 7mer-m8    | -0.02 | 35      | 0       | 1.818   | <0.1    |
| mmu-miR-7002-3p | 1610-1616 | 7mer-m8    | -0.02 | 34      | 0       | 1.818   | <0.1    |
| mmu-miR-7008-3p | 1610-1616 | 7mer-1A    | -0.01 | 21      | 0       | 0       | N/A     |
| mmu-miR-7026-3p | 1610-1616 | 7mer-1A    | -0.01 | 14      | 0       | 0       | N/A     |
| mmu-miR-6965-3p | 1611-1617 | 7mer-m8    | -0.02 | 37      | 0       | 0.729   | N/A     |
| mmu-miR-339-5p  | 1614-1620 | 7mer-1A    | -0.01 | 27      | 0       | 0.113   | N/A     |
| mmu-miR-7665-3p | 1614-1625 | non-canonical | N/A | N/A     | 0       | N/A     |
| mmu-miR-7665-3p | 1614-1625 | non-canonical | N/A | N/A     | 0       | N/A     |
| mmu-miR-8118    | 1623-1629 | 7mer-m8    | -0.02 | 37      | 0       | 0       | N/A     |
| mmu-miR-1955-5p | 1632-1639 | 8mer       | -0.28 | 92      | -0.05   | 0       | N/A     |
| mmu-miR-219b-5p | 1635-1641 | 7mer-m8    | -0.19 | 82      | -0.04   | 0.468   | N/A     |
| mmu-miR-1942    | 1637-1643 | 7mer-m8    | -0.02 | 50      | 0       | 0       | N/A     |
| mmu-miR-7229-3p | 1640-1646 | 7mer-m8    | -0.02 | 45      | 0       | 0       | N/A     |
| mmu-miR-672-3p  | 1641-1647 | 7mer-m8    | -0.11 | 88      | -0.02   | 0.113   | N/A     |
| mmu-miR-669c-3p | 1642-1649 | 8mer       | -0.08 | 56      | -0.02   | 0       | N/A     |
| miR             | Start  | Length | Seed   | Score  | p-value | E-value |
|-----------------|--------|--------|--------|--------|---------|---------|
| mmu-miR-466i-3p| 1643-1650 | 8mer   | -0.18  | 89     | -0.03   | 0       |
| mmu-miR-362-3p | 1643-1649 | 7mer-1A| -0.04  | 76     | -0.01   | 0.113   |
| mmu-miR-329-3p | 1643-1649 | 7mer-1A| -0.03  | 69     | -0.01   | 0.113   |
| mmu-miR-654-3p | 1657-1663 | 7mer-m8| -0.16  | 86     | -0.03   | 0.707   |
| mmu-miR-6381   | 1674-1680 | 7mer-m8| -0.15  | 82     | -0.03   | 0       |
| mmu-miR-6924-5p| 1675-1681 | 7mer-m8| -0.02  | 16     | 0       | 0       |
| mmu-miR-7011-5p| 1676-1682 | 7mer-m8| -0.05  | 50     | -0.01   | 0       |
| mmu-miR-6942-5p| 1677-1683 | 7mer-m8| -0.06  | 54     | -0.01   | 0       |
| mmu-miR-6916-5p| 1677-1683 | 7mer-m8| -0.05  | 47     | -0.01   | 0       |
| mmu-miR-6952-3p| 1684-1690 | 7mer-m8| -0.04  | 68     | -0.01   | 0       |
| mmu-miR-301b-5p| 1684-1690 | 7mer-m8| -0.02  | 65     | 0       | 0       |
| mmu-miR-301a-5p| 1684-1690 | 7mer-m8| -0.02  | 65     | 0       | 0       |
| mmu-miR-7084-3p| 1685-1691 | 7mer-m8| -0.02  | 37     | 0       | 0       |
| mmu-miR-7074-3p| 1689-1695 | 7mer-1A| -0.03  | 42     | -0.01   | 0       |
| mmu-miR-6924-5p| 1696-1702 | 7mer-1A| -0.08  | 48     | -0.02   | 0       |
| mmu-miR-1967   | 1696-1702 | 7mer-1A| -0.01  | 23     | 0       | 0       |
| mmu-miR-6985-5p| 1698-1704 | 7mer-m8| -0.24  | 93     | -0.04   | 0       |
| mmu-miR-1936   | 1703-1709 | 7mer-m8| -0.15  | 89     | -0.03   | 0       |
| mmu-miR-493-5p | 1711-1717 | 7mer-m8| -0.06  | 76     | -0.01   | 0       |
| mmu-let-7g-3p  | 1712-1718 | 7mer-m8| -0.2   | 82     | -0.04   | 0       |
| mmu-miR-7224-3p| 1716-1722 | 7mer-1A| -0.14  | 83     | -0.03   | 0       |
| mmu-miR-6974-3p| 1717-1723 | 7mer-m8| -0.11  | 76     | -0.02   | 0       |
| mmu-miR-7671-5p| 1720-1726 | 7mer-1A| -0.2   | 85     | -0.04   | 0       |
| mmu-miR-7029-3p| 1721-1728 | 8mer   | -0.33  | 95     | -0.06   | 0.113   |
| mmu-miR-7091-3p| 1722-1728 | 7mer-1A| -0.15  | 78     | -0.03   | 0       |
| mmu-miR-6902-3p| 1725-1731 | 7mer-1A| -0.07  | 62     | -0.01   | 0       |
| mmu-miR-1933-5p| 1727-1733 | 7mer-1A| -0.14  | 69     | -0.03   | 0       |
| mmu-miR-182-5p | 1734-1740 | 7mer-m8| -0.1   | 64     | -0.02   | 1.653   |
| mmu-miR-664-5p | 1759-1765 | 7mer-1A| -0.11  | 72     | -0.02   | 0       |
| mmu-miR-10b-3p  | 1786-1792 | 7mer-1A  | -0.19 | 93  | -0.04 | 0    | N/A |
| mmu-miR-7221-3p | 1793-1799 | 7mer-1A  | -0.09 | 56  | -0.02 | 0    | N/A |
| mmu-miR-468-3p  | 1794-1800 | 7mer-m8  | -0.09 | 75  | -0.02 | 0    | N/A |
| mmu-miR-7048-3p | 1799-1805 | 7mer-m8  | -0.05 | 70  | -0.01 | 0    | N/A |
| mmu-miR-7077-3p | 1799-1805 | 7mer-m8  | -0.05 | 67  | -0.01 | 0    | N/A |
| mmu-miR-1224-5p | 1805-1811 | 7mer-m8  | -0.14 | 89  | -0.03 | 0.113 | N/A |
| mmu-miR-7026-5p | 1808-1814 | 7mer-1A  | -0.05 | 56  | -0.01 | 0    | N/A |
| mmu-miR-7079-3p | 1811-1817 | 7mer-m8  | -0.16 | 81  | -0.03 | 0    | N/A |
| mmu-miR-208b-3p | 1827-1833 | 7mer-1A  | -0.11 | 77  | -0.02 | 0.264 | <0.1 |
| mmu-miR-499-5p  | 1827-1833 | 7mer-1A  | -0.04 | 50  | -0.01 | 0.264 | <0.1 |
| mmu-miR-3066-3p | 1830-1836 | 7mer-1A  | -0.01 | 43  | 0     | 0    | N/A |
| mmu-miR-1a-2-5p | 1832-1839 | 8mer     | -0.27 | 96  | -0.05 | 0    | <0.1 |
| mmu-miR-1a-1-5p | 1832-1839 | 8mer     | -0.27 | 95  | -0.05 | 0    | <0.1 |
| mmu-miR-485-3p  | 1834-1840 | 7mer-1A  | -0.1  | 75  | -0.02 | 0    | N/A |
| mmu-miR-205-5p  | 1836-1842 | 7mer-m8  | -0.19 | 93  | -0.04 | 0.113 | <0.1 |
| mmu-miR-703     | 1839-1845 | 7mer-m8  | -0.1  | 87  | -0.02 | 0    | N/A |
| mmu-miR-7062-5p | 1854-1860 | 7mer-m8  | -0.37 | 96  | -0.07 | 0    | N/A |
| mmu-miR-764-3p  | 1855-1861 | 7mer-m8  | -0.2  | 93  | -0.04 | 0.113 | N/A |
| mmu-miR-5110    | 1856-1862 | 7mer-m8  | -0.16 | 84  | -0.03 | 0    | N/A |
| mmu-miR-7081-5p | 1856-1862 | 7mer-m8  | -0.19 | 81  | -0.03 | 0    | N/A |
| mmu-miR-7086-5p | 1857-1863 | 7mer-m8  | -0.18 | 89  | -0.03 | 0    | N/A |
| mmu-miR-7661-5p | 1861-1867 | 7mer-m8  | -0.02 | 44  | 0     | 0    | N/A |
| mmu-miR-539-5p  | 1863-1869 | 7mer-1A  | -0.01 | 48  | 0     | 0.679 | N/A |
| mmu-miR-706     | 1863-1869 | 7mer-1A  | -0.01 | 45  | 0     | 0    | N/A |
| mmu-miR-126a-5p | 1870-1876 | 7mer-1A  | -0.07 | 84  | -0.01 | 0.789 | N/A |
| mmu-miR-126b-5p | 1872-1878 | 7mer-1A  | -0.01 | 38  | 0     | 0    | N/A |
| mmu-miR-497a-3p | 1884-1890 | 7mer-1A  | -0.09 | 87  | -0.02 | 0    | N/A |
| mmu-miR-489-5p  | 1889-1895 | 7mer-1A  | -0.17 | 83  | 0     | 0    | N/A |
Note: miR, microRNA.