

Table S2 Differential gene expression profile with miR34 over-expression

| PROBE_ID | GENE SYMBOL | Fold changes | ACCESSION | PROTEIN_PRODUCT | Comment |
|---|---------------|--------------|----------------|-----------------|--------------------------------------|
| Up-regulation by miR-34a over-expression | | | | | |
| ILMN_1221148 | CNN1 | 5.622138271 | NM_009922.3 | NP_034052.2 | h1-calponin |
| ILMN_2595612 | Idh2 | 4.273697206 | NM_173011.1 | NP_766599.1 | |
| ILMN_1244099 | LOC100041388 | 4.014480491 | XM_001476627.1 | XP_001476677.1 | |
| ILMN_2636803 | Acyp2 | 4.003017615 | NM_029344.3 | NP_083620.1 | |
| ILMN_1249378 | Bhlhb2 | 3.909017089 | NM_011498.4 | NP_035628.1 | |
| ILMN_1239370 | Shfm1 | 3.745368624 | NM_009169.2 | NP_033195.1 | |
| ILMN_2764781 | Pls3 | 3.615617528 | NM_145629.1 | NP_663604.1 | |
| ILMN_2971043 | V1rd6 | 3.5419975 | NM_030738.1 | NP_109663.1 | |
| ILMN_2695964 | Lep | 3.440290865 | NM_008493.3 | NP_032519.1 | |
| ILMN_2641111 | Dpagt1 | 3.275815373 | NM_007875.2 | NP_031901.2 | |
| ILMN_2671366 | 6330577E15Rik | 3.117077402 | NM_026377.1 | | |
| ILMN_2599130 | Aldoa | 3.109562032 | NM_007438.3 | NP_031464.1 | |
| ILMN_2777986 | Pck1 | 3.074604817 | NM_011044 | | |
| ILMN_1225414 | Rab5c | 2.914454097 | NM_024456.2 | NP_077776.2 | |
| ILMN_2462745 | H2-D1 | 2.798198849 | NM_010380.3 | NP_034510.3 | |
| ILMN_2732848 | TAGLN2 | 2.721118525 | NM_178598.2 | NP_848713.1 | SM22alpha |
| ILMN_1245987 | Hnrnpk | 2.667151752 | NM_025279.2 | NP_079555.1 | |
| ILMN_2654296 | Rab10 | 2.617282273 | NM_016676.4 | NP_057885.1 | |
| ILMN_2716838 | Hspa4 | 2.350300909 | NM_008300.3 | NP_032326.3 | |
| ILMN_2691613 | Ugcg | 2.334163401 | NM_031868.2 | NP_114074.1 | |
| ILMN_2511089 | Ppp1ca | 2.300596168 | NM_011673 | | |
| ILMN_2747959 | Dcn | 2.195035137 | NM_007833.4 | NP_031859.1 | |
| ILMN_2607408 | Pcbp4 | 2.178358316 | NM_021567.2 | NP_067542.2 | |
| ILMN_2873319 | Lypla1 | 2.173443856 | NM_008866.2 | NP_032892.1 | |
| ILMN_2710354 | ACTA2 | 2.1729868 | NM_007392.2 | NP_031418.1 | SM α -actin |
| ILMN_2849521 | Pycr1 | 2.169303834 | NM_144795.2 | NP_659044.1 | |
| ILMN_1218842 | LOC381105 | 2.160453784 | XM_355021.1 | | |
| ILMN_2418957 | 5930418K15Rik | 2.146499883 | | | |
| ILMN_1254883 | Fip1l1 | 2.143354544 | NM_024183.4 | NP_077145.2 | |
| ILMN_2873822 | AEBP1 | 2.079588497 | NM_009636.1 | NP_033766.1 | aortic carboxypeptidase-like protein |

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|--------------|---------------|-------------|----------------|----------------|-------------------------------------|
| ILMN_2643159 | SIRT1 | 2.051813061 | NM_019812.1 | NP_062786.1 | sirtuin 1 |
| ILMN_2978040 | Myh8 | 2.028195488 | NM_177369.3 | NP_796343.2 | |
| ILMN_2876071 | Fth1 | 2.020825185 | NM_010239.1 | NP_034369.1 | |
| ILMN_2621581 | SMTN | 1.980577874 | NM_013870.2 | NP_038898.1 | smoothelin |
| ILMN_1231072 | A630082K20Rik | 1.958463745 | XM_145254 | | |
| ILMN_1218247 | Palld | 1.916824434 | XM_974900.1 | XP_979994.1 | |
| ILMN_2988299 | SRF | 1.91038159 | NM_020493.1 | NP_065239.1 | Serum response factor |
| ILMN_1227803 | LOC674707 | 1.860780338 | XR_031381.1 | | |
| ILMN_2836982 | DES | 1.821677099 | NM_010043.1 | NP_034173.1 | desmin |
| ILMN_2435360 | MYOCD | 1.820363166 | NM_145136.4 | NP_660118.3 | myocardium |
| ILMN_2691780 | MyI3 | 1.786516369 | NM_010859.1 | NP_034989.1 | |
| ILMN_2804261 | CALD1 | 1.780141459 | NM_145575.2 | NP_663550.1 | h-caldesmon |
| ILMN_2936221 | Uprt | 1.772344129 | NM_001081189.1 | NP_001074658.1 | |
| ILMN_2758452 | Hn1 | 1.75919755 | NM_008258.1 | NP_032284.1 | |
| ILMN_1218347 | MYLK | 1.744983995 | NM_139300.3 | NP_647461.3 | telokin |
| ILMN_2679063 | Dctn2 | 1.735718025 | NM_027151.1 | NP_081427.1 | |
| ILMN_2622217 | MYH11 | 1.723761875 | NM_013607.1 | NP_038635.1 | smooth muscle myosin heavy chain 11 |
| ILMN_1214950 | MEF2C | 1.719307738 | NM_025282.2 | NP_079558.1 | myocyte enhancer factor 2C |
| ILMN_2533447 | AA407270 | 1.71203639 | NM_001033208.3 | NP_001028380.1 | |
| ILMN_2518457 | Irak1 | 1.708525698 | NM_008363.2 | NP_032389.2 | |
| ILMN_2643326 | 2210020M01Rik | 1.685217224 | NM_183259.2 | NP_899082.1 | |
| ILMN_2699222 | LOC669053 | 1.6652632 | XM_972773.1 | XP_977867.1 | |
| ILMN_1230140 | LOC385923 | 1.659273047 | XM_359000.1 | | |
| ILMN_3133448 | Mfge8 | 1.650499233 | NM_001045489.1 | NP_001038954.1 | |
| ILMN_2694955 | Igfbp4 | 1.611891845 | NM_010517.2 | | |
| ILMN_1221235 | 4933425L21Rik | 1.606305557 | AK019858 | | |
| ILMN_1235646 | 1110069O07Rik | 1.587316809 | | | |
| ILMN_1234729 | C130017I15Rik | 1.582996786 | AK047868 | | |
| ILMN_2513536 | Ythdf3 | 1.576358155 | NM_172677.2 | NP_766265.2 | |
| ILMN_1227357 | Flot2 | 1.573381621 | NM_008028.2 | NP_032054.1 | |
| ILMN_1241039 | 2510042H12Rik | 1.562091712 | AK011092 | | |
| ILMN_1239535 | Plekhm2 | 1.560872256 | XM_924800.3 | XP_929893.3 | |
| ILMN_1212702 | Hba-a1 | 1.547253336 | NM_008218.2 | NP_032244.2 | |

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|--------------|-----------|-------------|-------------|-------------|--------------|
| ILMN_1213431 | LOC626583 | 1.530697304 | XM_988307.1 | XP_993401.1 | |
| ILMN_2419138 | VCL | 1.501898958 | NM_009502.4 | NP_033528.3 | metavinculin |

Down-regulation by miR-34a over-expression

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|--------------|---------------|-------------|----------------|----------------|--|
| ILMN_3005211 | Akap6 | 0.628808485 | NM_198111.2 | NP_932779.2 | |
| ILMN_1240938 | AW212394 | 0.602759169 | NM_133829 | | |
| ILMN_2684370 | Igk-C | 0.589605323 | XM_132633.4 | | |
| ILMN_1213449 | Man2c1 | 0.588938772 | NM_028636.2 | NP_082912.1 | |
| ILMN_2653617 | Cd63 | 0.588478696 | NM_007653.1 | | |
| ILMN_1253322 | Tex261 | 0.588088929 | NM_009357.1 | NP_033383.1 | |
| ILMN_1244081 | Rgs4 | 0.582896009 | NM_009062.3 | NP_033088.2 | |
| ILMN_2744326 | LOC665250 | 0.575666945 | XR_033814.1 | | |
| ILMN_1253970 | Sirt7 | 0.575421788 | NM_153056.1 | NP_694696.1 | |
| ILMN_2791963 | E2f6 | 0.563460644 | NM_033270.1 | NP_150373.1 | |
| ILMN_2867147 | Tyrobp | 0.562853185 | NM_011662.2 | NP_035792.1 | |
| ILMN_2714252 | Kcnj3 | 0.557833702 | NM_008426.1 | NP_032452.1 | |
| ILMN_1256518 | Akr7a5 | 0.551937352 | NM_025337.2 | NP_079613.2 | |
| ILMN_2752817 | Myb | 0.550583451 | NM_010848.3 | NP_034978.3 | |
| ILMN_2607529 | LOC100046044 | 0.546925564 | XM_001475459.1 | XP_001475509.1 | |
| ILMN_1233283 | P2rx5 | 0.543051384 | NM_033321.1 | NP_201578.1 | |
| ILMN_1243319 | Trib2 | 0.54076479 | NM_144551.5 | NP_653134.2 | |
| ILMN_2626773 | Rbak | 0.533060729 | NM_021326.2 | NP_067301.1 | |
| ILMN_1254199 | Gaa | 0.532515968 | NM_008064.2 | NP_032090.2 | |
| ILMN_1235366 | LOC100045628 | 0.53117846 | XR_031850.1 | | |
| ILMN_2510612 | Ywhaz | 0.530641568 | NM_011740.2 | NP_035870.1 | |
| ILMN_2628876 | Jph2 | 0.528423701 | NM_021566.1 | NP_067541.1 | |
| ILMN_1215067 | Ctbp1 | 0.526071557 | NM_013502.2 | NP_038530.1 | |
| ILMN_3090793 | Nfyc | 0.525698077 | NM_008692.3 | NP_032718.2 | |
| ILMN_2752994 | Fbxo32 | 0.52354856 | NM_026346.1 | NP_080622.1 | |
| ILMN_2777474 | H2-T23 | 0.519869076 | NM_010398.1 | NP_034528.1 | |
| ILMN_2457437 | A830080H07Rik | 0.519543217 | | | |
| ILMN_2537836 | LOC385865 | 0.518471833 | XM_358975.1 | | |
| ILMN_2927025 | Sdcbp | 0.517597012 | NM_016807.1 | NP_058087.1 | |

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| ILMN_1235635 | Slco3a1 | 0.513386835 | NM_023908.2 | NP_076397.2 |
| ILMN_2705268 | Atp5l | 0.512445091 | NM_013795.4 | NP_038823.2 |
| ILMN_1232295 | Sort1 | 0.509807516 | NM_019972 | |
| ILMN_1227459 | Gga2 | 0.508942236 | NM_028758.2 | NP_083034.1 |
| ILMN_2425415 | Ube3b | 0.505632053 | NM_054093.2 | NP_473434.2 |
| ILMN_1239729 | Kif1b | 0.504351203 | NM_207682.2 | NP_997565.2 |
| ILMN_2620078 | Dap3 | 0.501323496 | NM_022994.2 | NP_075370.1 |
| ILMN_2589073 | Lrrc10 | 0.500021345 | NM_146242.2 | NP_666354.1 |
| ILMN_1227839 | Brwd1 | 0.499482347 | NM_145125.2 | NP_660107.1 |
| ILMN_2599110 | Usp1 | 0.498577121 | NM_001013378.1 | NP_001013396.1 |
| ILMN_1238117 | LOC386054 | 0.493252261 | XM_359045.1 | |
| ILMN_2986315 | Mir16 | 0.487658501 | NM_019580.3 | NP_062526.1 |
| ILMN_1254987 | Mbnl2 | 0.487128377 | NM_175341.4 | NP_780550.1 |
| ILMN_2750428 | Timm44 | 0.476772184 | NM_011592.1 | NP_035722.1 |
| ILMN_1234324 | Pdzd8 | 0.474702905 | NM_001033222.2 | NP_001028394.1 |
| ILMN_2667447 | Hdlbp | 0.473999228 | NM_133808.4 | NP_598569.1 |
| ILMN_1259528 | LOC382092 | 0.469147057 | XM_356174.1 | |
| ILMN_2739843 | Metrn | 0.467418561 | NM_133719 | |
| ILMN_2993267 | Keap1 | 0.465161445 | NM_016679.2 | NP_057888.1 |
| ILMN_2971559 | Eef1a2 | 0.465024364 | NM_007906.2 | NP_031932.1 |
| ILMN_1257759 | Tnrc6b | 0.464889956 | NM_144812.2 | NP_659061.2 |
| ILMN_2733046 | Cdc25c | 0.455919501 | NM_009860.2 | NP_033990.2 |
| ILMN_1241915 | Notch1 | 0.454971716 | NM_008714.2 | NP_032740.2 |
| ILMN_2609948 | Suds3 | 0.453359029 | NM_178622.3 | NP_848737.2 |
| ILMN_1238313 | Cnot2 | 0.452552762 | NM_001037846.2 | NP_001032935.1 |
| ILMN_1247990 | Purb | 0.451824808 | NM_011221.2 | NP_035351.1 |
| ILMN_1258682 | Map2k2 | 0.451660818 | NM_023138.3 | NP_075627.2 |
| ILMN_1220309 | Cep63 | 0.451484232 | NM_001081122.1 | NP_001074591.1 |
| ILMN_1247312 | Kpna3 | 0.449438204 | NM_008466.3 | NP_032492.1 |
| ILMN_2628875 | Jph2 | 0.447043915 | NM_021566.1 | NP_067541.1 |
| ILMN_1227926 | Flt1 | 0.445619416 | NM_010228.3 | NP_034358.2 |
| ILMN_1220498 | Pygm | 0.44414986 | NM_011224.1 | NP_035354.1 |
| ILMN_2655260 | Ptp4a3 | 0.442203662 | NM_008975.2 | NP_033001.2 |

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| ILMN_2930819 | Acd | 0.437936397 | NM_001012638.1 | NP_001012656.1 |
| ILMN_2675785 | Myo18b | 0.433358207 | XM_912851.3 | XP_917944.3 |
| ILMN_1221702 | Plaa | 0.432391343 | NM_172695.2 | NP_766283.2 |
| ILMN_1246601 | Glg1 | 0.431889168 | NM_009149 | |
| ILMN_2724545 | Sbk | 0.431232234 | NM_145587.1 | |
| ILMN_2813594 | Zfp691 | 0.431018251 | NM_183140.1 | NP_898963.1 |
| ILMN_2632665 | Cav1 | 0.430594443 | NM_007616.3 | NP_031642.1 |
| ILMN_2546596 | 2310076E21Rik | 0.429992929 | AK010195 | |
| ILMN_2656677 | Fkbp8 | 0.429677397 | NM_010223.1 | NP_034353.1 |
| ILMN_2739760 | Prelp | 0.428983401 | NM_054077.3 | NP_473418.2 |
| ILMN_2499264 | 4933428A15Rik | 0.427856664 | NM_027756 | |
| ILMN_2529932 | LOC385905 | 0.427319747 | XR_034995.1 | |
| ILMN_2710784 | Gpsn2 | 0.426685111 | NM_134118.3 | NP_598879.1 |
| ILMN_2618364 | Flnc | 0.426361591 | NM_001081185.1 | NP_001074654.1 |
| ILMN_2715289 | Exosc7 | 0.425933252 | NM_001081188.1 | NP_001074657.1 |
| ILMN_2693976 | Ncl | 0.424817135 | NM_010880.3 | NP_035010.3 |
| ILMN_1236828 | Usp20 | 0.422404031 | NM_028846.3 | NP_083122.1 |
| ILMN_1256369 | Lynx1 | 0.419799355 | NM_011838.4 | NP_035968.1 |
| ILMN_1249514 | Large | 0.415024023 | NM_010687.1 | NP_034817.1 |
| ILMN_1226970 | Wwp2 | 0.40899385 | NM_025830.3 | NP_080106.1 |
| ILMN_2697918 | LOC381302 | 0.408386585 | XM_355244.1 | |
| ILMN_1255927 | Ubtf | 0.404891052 | NM_001044383.1 | NP_001037848.1 |
| ILMN_1221168 | 2310061F22Rik | 0.404598175 | NM_153775.1 | NP_722470.1 |
| ILMN_2681030 | EG629595 | 0.402452137 | XM_894495.2 | XP_899588.1 |
| ILMN_1237183 | Ociad1 | 0.381976204 | NM_023429.3 | NP_075918.1 |
| ILMN_2713060 | Fam131a | 0.369421669 | NM_133778.2 | NP_598539.1 |
| ILMN_2733356 | Endod1 | 0.364638976 | NM_028013.2 | NP_082289.1 |
| ILMN_1252204 | Sepw1 | 0.364105606 | NM_009156.2 | NP_033182.1 |
| ILMN_1250816 | Apeh | 0.363210275 | NM_146226.1 | NP_666338.1 |
| ILMN_1244098 | Dst | 0.359134991 | NM_134448.2 | NP_604443.2 |
| ILMN_2445548 | C330006A16Rik | 0.358698462 | | |
| ILMN_1231542 | Ttn | 0.357513978 | NM_011652.3 | NP_035782.3 |
| ILMN_1377923 | Actb | 0.353220505 | NM_007393.3 | NP_031419.1 |

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|--------------|---------------|-------------|----------------|----------------|
| ILMN_1254358 | Igfbp5 | 0.348021168 | NM_010518.2 | NP_034648.2 |
| ILMN_2527650 | LOC268700 | 0.346186618 | XM_193742.2 | |
| ILMN_3073318 | Tom1l2 | 0.346158034 | NM_153080.2 | NP_694720.2 |
| ILMN_2654074 | Sesn1 | 0.345735691 | NM_001013370.1 | NP_001013388.1 |
| ILMN_2994779 | Gpsn2 | 0.340700999 | NM_134118.1 | NP_598879.1 |
| ILMN_2480021 | 0610007P22Rik | 0.339814991 | NM_026676.2 | NP_080952.1 |
| ILMN_1232298 | BC003940 | 0.335811448 | NM_001033231.2 | NP_001028403.1 |
| ILMN_1377918 | LOC100048105 | 0.335515669 | XM_001479832.1 | XP_001479882.1 |
| ILMN_2611699 | Jmjd1b | 0.335403769 | NM_001081256.1 | NP_001074725.1 |
| ILMN_2661005 | 1110018G07Rik | 0.326283053 | NM_178065.3 | NP_835166.2 |
| ILMN_2723881 | Hcfc1 | 0.326241686 | NM_008224.3 | NP_032250.2 |
| ILMN_2737658 | Pdk2 | 0.326102669 | NM_133667.1 | NP_598428.1 |
| ILMN_1219978 | Appl2 | 0.325859192 | NM_145220.2 | NP_660255.1 |
| ILMN_3128792 | Ttn | 0.316510794 | NM_028004.2 | NP_082280.2 |
| ILMN_2704562 | LOC100047628 | 0.316406947 | XM_001476703.1 | XP_001476753.1 |
| ILMN_1244316 | Hbb-b1 | 0.31627096 | AK010993 | |
| ILMN_2621471 | 1110007L15Rik | 0.31623635 | NM_026269.1 | NP_080545.2 |
| ILMN_1214024 | 2310003M01Rik | 0.315148721 | AK009124 | |
| ILMN_1224045 | Dsp | 0.31458421 | XM_621314.3 | XP_621314.2 |
| ILMN_2699028 | Crybg3 | 0.314261164 | NM_174848.2 | NP_777273.1 |
| ILMN_2740852 | F2r | 0.306318637 | NM_010169.3 | NP_034299.2 |
| ILMN_2670713 | Cyfp2 | 0.305397666 | NM_133769.2 | NP_598530.2 |
| ILMN_2777798 | EG667723 | 0.294813005 | XM_001001948.1 | XP_001001948.1 |
| ILMN_2590961 | Hadh | 0.294489032 | NM_008212.3 | NP_032238.2 |
| ILMN_1213609 | Txnip | 0.294044329 | NM_023719.1 | NP_076208.1 |
| ILMN_1246808 | Serpine2 | 0.285704085 | AK045954 | |
| ILMN_2760295 | BC003965 | 0.284864172 | XM_128528.2 | |
| ILMN_2762056 | Dtnbp1 | 0.264900509 | NM_025772.3 | |
| ILMN_2710139 | Ppargc1a | 0.262055987 | NM_008904.1 | NP_032930.1 |
| ILMN_2625981 | Tcp112 | 0.252211623 | NM_146008.2 | NP_666120.1 |
| ILMN_2591731 | Ptprb | 0.243202853 | NM_029928.1 | NP_084204.1 |
| ILMN_2636335 | Sfrs2 | 0.239533525 | NM_011358.1 | NP_035488.1 |
| ILMN_2565729 | B230386D16Rik | 0.238450669 | AK046451 | |

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|--------------|---------------|-------------|----------------|----------------|
| ILMN_2607880 | Tkt | 0.236974973 | NM_009388.2 | NP_033414.1 |
| ILMN_2771991 | Ndrg2 | 0.236307041 | NM_013864 | |
| ILMN_2538355 | LOC386233 | 0.226558057 | XM_359128.1 | |
| ILMN_2588056 | LOC100042427 | 0.22620383 | XM_001478518.1 | XP_001478568.1 |
| ILMN_2593694 | Lrtm1 | 0.225907269 | NM_176920.3 | NP_795894.1 |
| ILMN_2635082 | LOC620009 | 0.223555458 | XR_030609.1 | |
| ILMN_2747168 | Ddx5 | 0.214385503 | NM_007840.3 | NP_031866.2 |
| ILMN_2762863 | AI606181 | 0.213847123 | XR_035118.1 | |
| ILMN_2788673 | Pgm2 | 0.213514628 | NM_028132.2 | NP_082408.2 |
| ILMN_2806676 | Acads | 0.205321587 | NM_007383.2 | NP_031409.2 |
| ILMN_2918987 | Lias | 0.203012732 | NM_024471.2 | NP_077791.1 |
| ILMN_1249486 | Mgl1 | 0.194652521 | NM_010796.2 | NP_034926.1 |
| ILMN_3144820 | LOC329575 | 0.194506015 | NM_001024849.1 | NP_001020020.1 |
| ILMN_2712957 | Prpf6 | 0.194453201 | NM_133701.2 | NP_598462.1 |
| ILMN_2673024 | Mrps24 | 0.192982414 | NM_026080.2 | NP_080356.1 |
| ILMN_1219840 | 2310033F14Rik | 0.18445462 | | |
| ILMN_1237061 | Dm15 | 0.183702219 | NM_032418 | |
| ILMN_2764727 | Actn2 | 0.174128023 | NM_033268.2 | |
| ILMN_1236904 | Mrpl23 | 0.164063753 | NM_011288.1 | NP_035418.1 |
| ILMN_1215942 | LOC381095 | 0.152240283 | XM_358506.1 | |
| ILMN_1239040 | mtDNA_CytB | 0.112099942 | | |