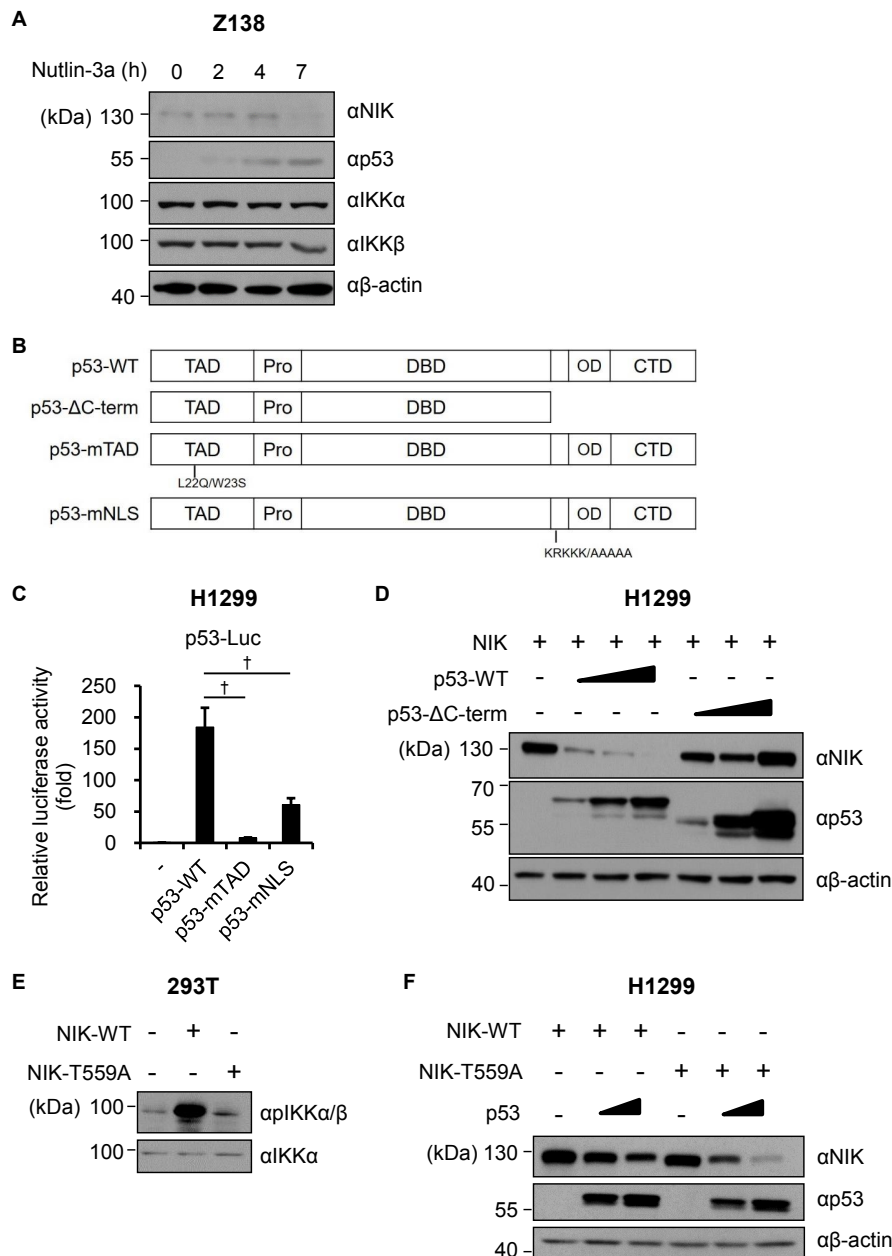
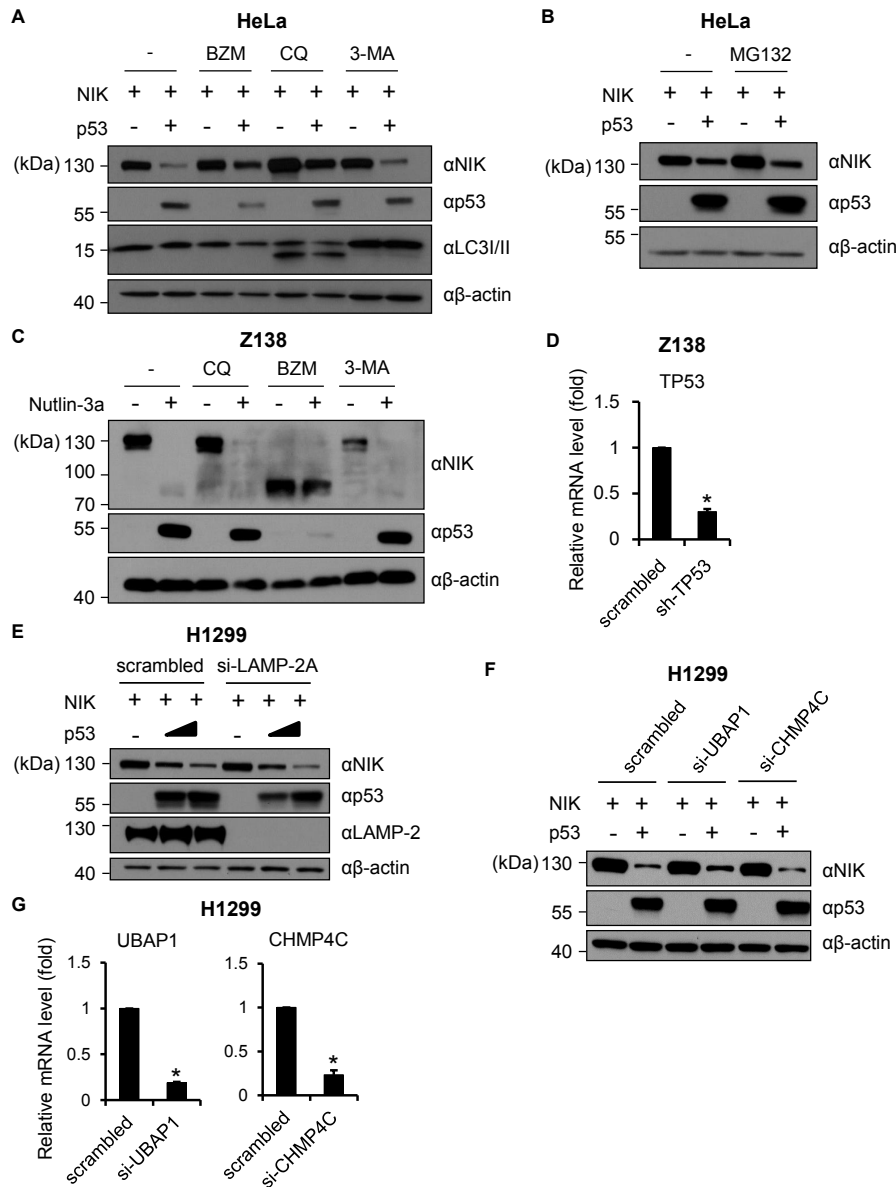


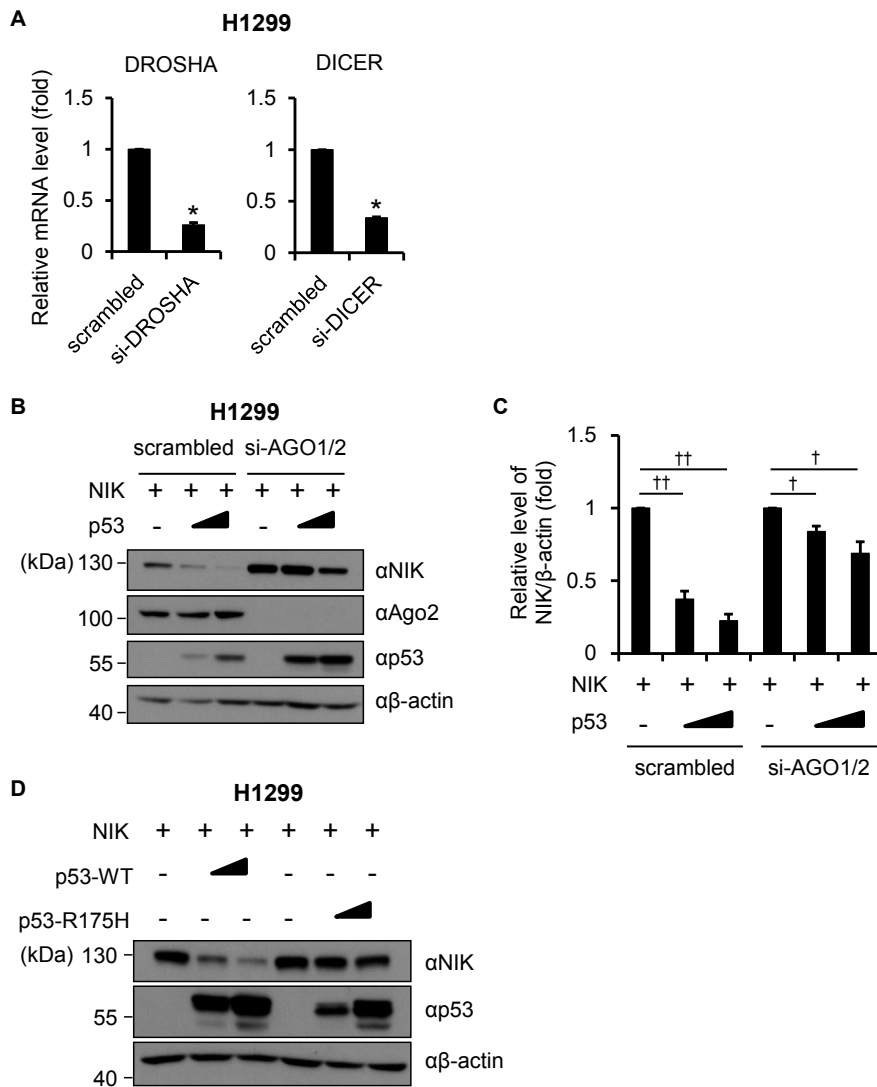
Supplementary Fig. S1. (A-D) Immunoblot analysis related to Figure 1A. HeLa cell lysates were analyzed via immunoblotting with antibodies against NIK or GAPDH as loading control. (E) HeLa cells stably expressing control scrambled shRNA or three different shRNAs specific for p53 (#1, #2 or #3) were lysed and subjected to immunoblot analysis.



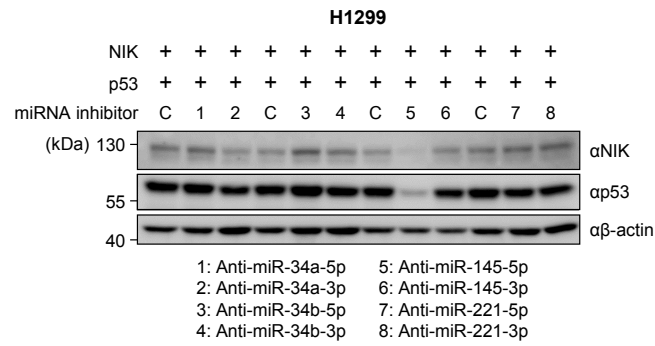
Supplementary Fig. S2. (A) Z138 cells treated with 10 μ M nutlin-3a for indicated time-periods were lysed and subjected to immunoblot analysis. (B) A schematic diagram of human wild-type p53 and various p53 mutants with two transactivation domains (TAD), proline-rich domain (Pro), DNA-binding domain (DBD), oligomerization domain (OD) or C-terminal regulatory domain (CTD). p53 mutants: p53- Δ C-term, a C-terminally truncated form of p53; p53-mTAD, p53-L22Q/W23S; p53-mNLS, p53-KRKKK/AAAAA. (C) H1299 cells were cotransfected with control vector, a p53-luciferase reporter gene plasmid and expression plasmids for p53-WT, p53-mTAD or p53-mNLS as indicated. At 24 h after transfection, H1299 cells were lysed and monitored via the dual-luciferase assay. *Firefly* luciferase activities were normalized to that of *Renilla* luciferase. Values are presented as an average of duplicates for a representative experiment. Data represent mean \pm SEM. $^{\dagger}P < 0.05$ for the indicated comparisons with Student's *t*-test. (D) H1299 cells were transfected with control vector and expression plasmids for NIK, p53-WT or p53- Δ C-term. Various amounts of the p53 constructs were transfected into H1299 cells. After 48 h, H1299 cell lysates were analyzed via immunoblotting with antibodies against p53 for detection of p53-WT or p53- Δ C-term. (E) 293T cells were transfected with control vector and expression plasmids for NIK-WT or NIK-T559A. After 24 h, 293T cells were lysed and subjected to immunoblot analysis. (F) H1299 cells were cotransfected with control vector and expression plasmids for p53, NIK-WT or NIK-T559A for 24 h.



Supplementary Fig. S3. (A) HeLa cells were transfected with control vector and expression plasmids for NIK or p53. After 24 h, cells were incubated in the absence or presence of 2 μ M bortezomib (BZM), 100 μ M chloroquine (CQ) or 5 mM 3-methyladenine (3-MA). After 12 h, HeLa cells were lysed and subjected to immunoblot analysis. (B) HeLa cells were transfected with control vector and expression plasmids for NIK or p53. After 24 h, cells were incubated in the absence or presence of 20 μ M MG132 for 4 h. (C) Z138 cells were pretreated with DMSO (vehicle), 100 μ M CQ, 2 μ M BZM or 5 mM 3-MA. After 4 h, Z138 cells were treated with DMSO or nutlin-3a for 10 h. (D) Related to Figure 3D, total RNA was isolated from Z138 cells stably expressing control scrambled shRNA or shRNA specific for p53 and subjected to RT-qPCR analysis of mRNA for p53. (E) H1299 cells were electroporated with control scrambled siRNA or 50 nM si-LAMP-2A for 24 h, followed by transfection with control vector and expression plasmids for NIK or various amounts of p53 for 24 h. (F) H1299 cells were electroporated with control scrambled siRNA, si-UBAP1 or si-CHMP4C for 24 h, followed by transfection with control vector and expression plasmids for NIK or p53 for 24 h. (G) Related to Supplementary Figure S3F, total RNA was isolated from H1299 cells electroporated with control scrambled siRNA, si-UBAP1 or si-CHMP4C and subjected to RT-qPCR analysis of mRNA for UBAP1 or CHMP4C. Quantitative data in Supplementary Figures S3D and S3G represent mean \pm SEM. * P < 0.05 versus the corresponding control with Student's t -test.



Supplementary Fig. S4. (A) Related to Figure 3E, total RNA was isolated from H1299 cells electroporated with control scrambled siRNA, si-DROSHA or si-DICER and subjected to RT-qPCR analysis of mRNA for DROSHA or DICER. (B) H1299 cells were electroporated with control scrambled siRNA or a combination of siRNAs targeting AGO1 and AGO2 for 36 h, followed by transfection with control vector and expression plasmids for NIK or various amounts of p53 for 24 h. (C) Densitometric analysis of immunoblot shown in Supplementary Figure S4B. Intensity of NIK bands normalized to that of β -actin. Values are presented as an average of independent triplicates. (D) H1299 cells were transfected with control vector and expression plasmids for NIK, p53-WT or p53-R175H. Various amounts of the p53 constructs were transfected into H1299 cells. After 48 h, H1299 cell lysates were analyzed via immunoblotting with antibodies against p53 for detection of p53-WT or p53-R175H. Quantitative data in Supplementary Figures S4A and S4C represent mean \pm SEM. * $P < 0.05$ versus the corresponding control; $^{\dagger}P < 0.05$; $^{\dagger\dagger}P < 0.005$ for the indicated comparisons with Student's t -test.



Supplementary Fig. S5. H1299 cells were cotransfected with expression plasmids for NIK or p53, and 100 nM miRNA inhibitor negative control (C), 100 nM miRNA inhibitors. After 48 h, cell lysates were analyzed via immunoblotting.

Supplementary Table S1. Oligonucleotide sequences for qPCR analysis of gene expression and PCR amplification of genes

qPCR analysis of gene expression	
Genes	Oligonucleotide sequences
<i>TP53</i>	F: 5'-ACAGCTTTGAGGTGCGTGTTC-3' R: 5'-CCCTTTCTTTCGCGAGATTCTCT-3'
<i>MAP3K14</i>	F: 5'-CGGAAAGTGGGAGATCCTGAA-3' R: 5'-GGGCGATGATAGAGATGGCAG-3'
<i>UBAP1</i>	F: 5'-GAGACGGTGGTCAACATGGG-3' R: 5'-CCACTAAAAGAGGGTCTGAAGC-3'
<i>CHMP4C</i>	F: 5'-AGCACGGCAGCAGAAATAA-3' R: 5'-GAGTGAGCTGTTTCTCGAACC-3'
<i>DROSHA</i>	F: 5'-CATGTCACAGAATGTCGTTCCA-3' R: 5'-GGGTGAAGCAGCCTCAGATTT-3'
<i>DICER</i>	F: 5'-TTAACCTTTTGGTGTGGTGGTGT-3' R: 5'-GGACATGATGGACAATTTTCACA-3'
<i>ACTB</i>	F: 5'-CATGTACGTTGCTATCCAGGC-3' R: 5'-CTCCTTAATGTCACGCACGAT-3'
qPCR analysis of miRNA expression	
miRNA genes	Oligonucleotide sequences
<i>MIR34A</i>	F: 5'-TGGCAGTGCTTAGCTGGTGT-3'
<i>MIR34B</i>	F: 5'-TAGGCAGTGTCATTAGCTGATTG-3'
<i>MIR34C</i>	F: 5'-AGGCAGTGTAGTTAGCTGATTGC-3'
<i>MIR100</i>	F: 5'-AACCGTAGATCCGAAGTGTG-3'
<i>MIR143</i>	F: 5'-TGAGATGAAGCACTGTAGCTCAA-3'
<i>MIR145</i>	F: 5'-GTCCAGTTTTCCAGGAATCCCT-3'
<i>MIR221</i>	F: 5'-AGCTACATTGCTGCTGGGTTTC-3'
<i>MIR3618</i>	F: 5'-TGTCTACATTAATGAAAAGAGCAA-3'
<i>MIR3917</i>	F: 5'-GCTCGGACTGAGCAGGTGGG-3'
PCR amplification of genes	
Oligonucleotide name	Oligonucleotide sequences
Luc-NIK-CDS	F: 5'-TATTCTAGAGCGGCCGCGCAGTGATGGAATGGCCTG-3' R: 5'-CTGCTCGAAGCGGCCGCGGGCCTGTTCTCCAGCTG-3'
Luc-NIK-WT	F: 5'-TATTCTAGAGCGGCCGCGAAACTGCACCACCCCAAGG-3' R: 5'-CTGCTCGAAGCGGCCGCTCCAGAGGGTGAGGTTTCCA-3'
Luc-NIK-Mut	F: 5'-CTTCCCCTATAGCAGTTTTTTTCATCCCTTCCCATT-3' R: 5'-AATGGGAAGGGATGAAAAAACTGCTATAGGGGAAG-3'
p53-mTAD	F: 5'-ACATTTTCAGACCAATCGAAACTACTTCC-3' R: 5'-GGAAGTAGTTTCGATTGGTCTGAAAATGT-3'
p53-mNLS-K305A/R306A	F: 5'-CCAGGGAGCACTGCGGCAGCACTGCCAACA-3' R: 5'-TGTTGGGCAGTGCTGCCGAGTGCTCCCTGG-3'
p53-mNLS-K319A/K320A/K321A	F: 5'-TCTCCCAGCCAGCGCGCCAGCCACTGGATGGA-3' R: 5'-TCCATCCAGTGGTGCCGCCGCTGGCTGGGGAGA-3'
p53-R175H	F: 5'-CGGAGGTTGTGAGGCACTGCCCCACCATGA-3' R: 5'-TCATGGTGGGGCAGTGCCTACAACCTCCG-3'
NIK-T559A	F: 5'-GACTACATCCCTGGCGCAGAGACCCACATGG-3' R: 5'-CCATGTGGGTCTCTGCGCCAGGGATGTAGTC-3'

This table lists the oligonucleotide sequences used for qPCR analysis of gene expression and PCR amplification of genes. The reverse primer used for qPCR analysis of miRNA expression is the mRQ 3' Primer supplied with the Mir-X miRNA first-strand synthesis kit.

Supplementary Table S2. Alterations for miRNAs expression in response to nutlin-3a in Z138 cells

Up-regulated genes in Z138 cells treated with nutlin-3a		
microRNA Genes	Fold	p-value
<i>MIR34C</i>	9.78	3.07E-08
<i>MIR3917</i>	2.99	2.80E-05
<i>MIR34A</i>	2.57	8.71E-03
<i>MIR34AHG</i>	2.57	8.73E-03
<i>MIR34B</i>	27.86	1.36E-02
<i>MIR100</i>	2.62	1.57E-02
<i>MIR145</i>	7.73	1.69E-02
<i>MIR221</i>	24.59	2.19E-02
<i>MIR3618</i>	19.16	3.72E-02
<i>MIR143</i>	1.82	4.57E-02

Down-regulated genes in Z138 cells treated with nutlin-3a		
microRNA Genes	Fold	p-value
<i>MIR1255A</i>	-5.61	1.28E-09
<i>MIR223</i>	-4.91	1.34E-08
<i>MIR4781</i>	-5.33	3.37E-08
<i>MIR3614</i>	-4.47	3.87E-08
<i>MIR1292</i>	-3.85	8.13E-08
<i>MIR1303</i>	-4.65	9.71E-08
<i>MIR1247</i>	-20.57	1.62E-07
<i>MIR455</i>	-3.98	1.97E-07
<i>MIR29B1</i>	-5.68	2.35E-07
<i>MIR449A</i>	-3.68	4.1E-07
<i>MIR1271</i>	-4.74	7.36E-07
<i>MIR3136</i>	-5.94	9.08E-07
<i>MIR3681</i>	-4.58	1.06E-06
<i>MIR375</i>	-4.48	2.32E-06
<i>MIR642A</i>	-3.93	2.35E-06
<i>MIR3661</i>	-3.72	3.47E-06
<i>MIR4661</i>	-3.57	4.05E-06
<i>MIR582</i>	-3.6	4.1E-06
<i>MIR580</i>	-3.04	4.44E-06
<i>MIR132</i>	-3.19	4.49E-06
<i>MIR205HG</i>	-3.84	4.49E-06
<i>MIR101-1</i>	-3.96	4.67E-06
<i>MIR1289-1</i>	-8.4	5.31E-06
<i>MIR6775</i>	-3.26	5.7E-06
<i>MIR3909</i>	-3.01	5.94E-06
<i>MIR451A</i>	-3.31	6.1E-06
<i>MIR503</i>	-3.05	6.42E-06
<i>MIR215</i>	-3.7	6.84E-06
<i>MIR4511</i>	-3.22	7.46E-06

<i>MIR598</i>	-3.3	8.53E-06
<i>MIR548F1</i>	-2.98	8.61E-06
<i>MIR627</i>	-3.05	8.96E-06
<i>MIR3928</i>	-3.31	8.96E-06
<i>MIR4786</i>	-4.16	9.02E-06
<i>MIR548N</i>	-3.43	9.48E-06
<i>MIR3157</i>	-3.65	1.03E-05
<i>MIR1227</i>	-6.24	1.07E-05
<i>MIR548AL</i>	-3.27	1.07E-05
<i>MIR3074</i>	-3.36	1.09E-05
<i>MIR3939</i>	-5.78	1.1E-05
<i>MIR5696</i>	-3.34	1.15E-05
<i>MIR4741</i>	-2.91	1.19E-05
<i>MIR6798</i>	-3.45	1.2E-05
<i>MIR199B</i>	-3.44	1.49E-05
<i>MIR1276</i>	-3.3	1.64E-05
<i>MIR194-1</i>	-3.79	1.79E-05
<i>MIR4638</i>	-4.49	1.98E-05
<i>MIR624</i>	-4.03	2.07E-05
<i>MIR5000</i>	-3.07	2.11E-05
<i>MIR6769B</i>	-3.3	2.2E-05
<i>MIR3679</i>	-5.58	2.31E-05
<i>MIR449C</i>	-3.05	2.37E-05
<i>MIR641</i>	-3.69	2.42E-05
<i>MIR1249</i>	-2.96	2.59E-05
<i>MIR4690</i>	-7.46	2.73E-05
<i>MIR615</i>	-5.25	2.88E-05
<i>MIR2355</i>	-2.97	3.31E-05
<i>MIR7114</i>	-7.19	4.33E-05
<i>MIR4767</i>	-3.67	4.67E-05
<i>MIR501</i>	-3.66	4.67E-05
<i>MIR4659B</i>	-4.52	4.7E-05
<i>MIR942</i>	-2.98	4.87E-05
<i>MIR664A</i>	-3.89	4.89E-05
<i>MIR190B</i>	-2.64	5.32E-05
<i>MIR1538</i>	-4.4	5.46E-05
<i>MIR106A</i>	-3.36	5.62E-05
<i>MIR573</i>	-3.12	5.71E-05
<i>MIR877</i>	-3.49	6.25E-05
<i>MIR5690</i>	-3.11	6.66E-05
<i>MIR450A1</i>	-19.55	7.45E-05
<i>MIR3922</i>	-3.74	7.93E-05
<i>MIR3176</i>	-2.86	8.3E-05
<i>MIR940</i>	-2.91	9.26E-05

<i>MIR6505</i>	-4.53	9.93E-05
<i>MIR3691</i>	-2.55	9.95E-05
<i>MIR188</i>	-3.04	9.98E-05
<i>MIR3912</i>	-2.97	1.02E-04
<i>MIR4525</i>	-3.38	1.07E-04
<i>MIR1301</i>	-3.	1.14E-04
<i>MIR497</i>	-3.26	1.19E-04
<i>MIR150</i>	-2.67	1.19E-04
<i>MIR943</i>	-3.7	1.24E-04
<i>MIR6803</i>	-3.05	1.27E-04
<i>MIR939</i>	-2.7	1.28E-04
<i>MIRLET7A2</i>	-3.1	1.34E-04
<i>MIR3194</i>	-3.12	1.36E-04
<i>MIR19B1</i>	-3.82	1.37E-04
<i>MIR600HG</i>	-3.29	1.38E-04
<i>MIR5699</i>	-2.73	1.39E-04
<i>MIR1287</i>	-2.52	1.42E-04
<i>MIR6842</i>	-2.68	1.53E-04
<i>MIR2110</i>	-2.55	1.53E-04
<i>MIR5094</i>	-5.24	1.6E-04
<i>MIR328</i>	-2.59	1.63E-04
<i>MIR2467</i>	-3.11	1.64E-04
<i>MIR24-2</i>	-3.68	1.65E-04
<i>MIR6762</i>	-3.94	1.93E-04
<i>MIR3934</i>	-2.5	1.94E-04
<i>MIR4687</i>	-3.59	1.94E-04
<i>MIR138-2</i>	-5.85	2.02E-04
<i>MIR545</i>	-3.29	2.02E-04
<i>MIR147B</i>	-2.65	2.4E-04
<i>MIR4326</i>	-2.65	2.42E-04
<i>MIR643</i>	-3.62	2.43E-04
<i>MIR128-2</i>	-3.38	2.56E-04
<i>MIR4804</i>	-6.71	2.56E-04
<i>MIR30A</i>	-2.89	2.69E-04
<i>MIR200C</i>	-2.89	2.84E-04
<i>MIR499A</i>	-3.4	2.92E-04
<i>MIR4740</i>	-3.11	2.93E-04
<i>MIR184</i>	-2.83	3.05E-04
<i>MIR2277</i>	-2.57	3.07E-04
<i>MIR3115</i>	-11.23	3.18E-04
<i>MIR6836</i>	-5.82	3.19E-04
<i>MIR548AY</i>	-4.33	3.23E-04
<i>MIR362</i>	-3.7	3.54E-04
<i>MIR628</i>	-2.76	3.59E-04

<i>MIR4745</i>	-3.58	3.71E-04
<i>MIR378A</i>	-3.6	3.99E-04
<i>MIR194-2</i>	-2.7	4.05E-04
<i>MIR450B</i>	-2.98	4.16E-04
<i>MIR4722</i>	-42.61	4.29E-04
<i>MIR4479</i>	-8.42	4.44E-04
<i>MIR4707</i>	-4.54	4.5E-04
<i>MIR6507</i>	-3.55	4.53E-04
<i>MIR181D</i>	-3.12	4.74E-04
<i>MIR190A</i>	-3.04	4.74E-04
<i>MIR574</i>	-2.56	4.88E-04
<i>MIR4746</i>	-3.34	5.01E-04
<i>MIR181B1</i>	-4.2	5.23E-04
<i>MIR155HG</i>	-2.76	5.26E-04
<i>MIR155</i>	-2.76	5.26E-04
<i>MIR1270</i>	-2.38	6.1E-04
<i>MIR1278</i>	-3.81	6.25E-04
<i>MIR590</i>	-3.41	6.33E-04
<i>MIR23A</i>	-2.91	6.8E-04
<i>MIR141</i>	-3.25	7.27E-04
<i>MIR542</i>	-2.87	7.84E-04
<i>MIR152</i>	-2.83	7.96E-04
<i>MIR659</i>	-2.72	8.04E-04
<i>MIR195</i>	-3.2	8.14E-04
<i>MIR211</i>	-3.27	8.23E-04
<i>MIR3159</i>	-3.03	8.3E-04
<i>MIR1468</i>	-2.49	8.33E-04
<i>MIR324</i>	-3.13	8.63E-04
<i>MIR374B</i>	-3.3	8.8E-04
<i>MIR6741</i>	-4.62	8.87E-04
<i>MIR20B</i>	-3.13	9.28E-04
<i>MIR128-1</i>	-3.66	9.49E-04
<i>MIR3611</i>	-4.41	9.57E-04
<i>MIR5706</i>	-7.9	9.57E-04
<i>MIR149</i>	-2.54	9.61E-04
<i>MIR548L</i>	-2.85	9.63E-04
<i>MIR4457</i>	-3.95	9.79E-04
<i>MIR330</i>	-2.97	1.02E-03
<i>MIR600</i>	-3.21	1.03E-03
<i>MIR581</i>	-18.65	1.06E-03
<i>MIR6779</i>	-14.73	1.06E-03
<i>MIR29B2</i>	-2.41	1.07E-03
<i>MIR18B</i>	-2.66	1.09E-03
<i>MIR4766</i>	-3.21	1.11E-03

<i>MIR181A1</i>	-4.59	1.15E-03
<i>MIR193A</i>	-2.86	1.17E-03
<i>MIR1908</i>	-2.73	1.18E-03
<i>MIR4775</i>	-3.83	1.19E-03
<i>MIR101-2</i>	-3.11	1.23E-03
<i>MIR4734</i>	-37.37	1.27E-03
<i>MIR26A2</i>	-3.45	1.27E-03
<i>MIR7-1</i>	-2.8	1.34E-03
<i>MIR497HG</i>	-3.21	1.36E-03
<i>MIR6731</i>	-2.87	1.36E-03
<i>MIR6758</i>	-6.86	1.46E-03
<i>MIR6837</i>	-3.13	1.46E-03
<i>MIR200B</i>	-2.27	1.47E-03
<i>MIR1294</i>	-2.41	1.5E-03
<i>MIR212</i>	-13.6	1.53E-03
<i>MIR636</i>	-2.44	1.53E-03
<i>MIR125B1</i>	-2.43	1.58E-03
<i>MIR548E</i>	-3.04	1.61E-03
<i>MIR144</i>	-2.61	1.63E-03
<i>MIR181A2HG</i>	-5.44	1.69E-03
<i>MIR27A</i>	-3.26	1.72E-03
<i>MIR3942</i>	-2.53	1.85E-03
<i>MIRLET7E</i>	-3.54	1.85E-03
<i>MIR3688-2</i>	-35.8	1.92E-03
<i>MIR153-2</i>	-2.63	1.93E-03
<i>MIR363</i>	-3.1	2.01E-03
<i>MIR5001</i>	-2.62	2.01E-03
<i>MIRLET7F1</i>	-3.18	2.04E-03
<i>MIR7705</i>	-2.38	2.05E-03
<i>MIR7976</i>	-2.74	2.12E-03
<i>MIR548K</i>	-3.12	2.18E-03
<i>MIR4763</i>	-5.77	2.2E-03
<i>MIR6793</i>	-2.89	2.21E-03
<i>MIR577</i>	-3.72	2.21E-03
<i>MIR505</i>	-2.92	2.22E-03
<i>MIR4677</i>	-3.01	2.24E-03
<i>MIR200A</i>	-2.38	2.26E-03
<i>MIR3173</i>	-4.31	2.27E-03
<i>MIR6886</i>	-7.24	2.37E-03
<i>MIR660</i>	-3.2	2.38E-03
<i>MIR944</i>	-2.88	2.39E-03
<i>MIR185</i>	-2.66	2.46E-03
<i>MIR99B</i>	-3.66	2.46E-03
<i>MIR4519</i>	-6.1	2.48E-03

<i>MIR6747</i>	-4.29	2.52E-03
<i>MIR4669</i>	-31.08	2.52E-03
<i>MIR762HG</i>	-7.22	2.62E-03
<i>MIR4803</i>	-3.26	2.68E-03
<i>MIR4791</i>	-2.96	2.8E-03
<i>MIR3124</i>	-3.35	2.81E-03
<i>MIR3165</i>	-12.06	2.81E-03
<i>MIR1306</i>	-2.3	2.85E-03
<i>MIR4639</i>	-6.27	2.86E-03
<i>MIR760</i>	-2.86	2.88E-03
<i>MIR6735</i>	-7.45	2.96E-03
<i>MIR4424</i>	-2.36	2.97E-03
<i>MIR5090</i>	-3.77	3.E-03
<i>MIR301B</i>	-3.29	3.2E-03
<i>MIR548U</i>	-2.58	3.26E-03
<i>MIR1180</i>	-2.79	3.26E-03
<i>MIR4754</i>	-7.3	3.26E-03
<i>MIR1296</i>	-2.35	3.27E-03
<i>MIR6877</i>	-3.95	3.29E-03
<i>MIR7703</i>	-2.89	3.32E-03
<i>MIR597</i>	-3.05	3.6E-03
<i>MIR10B</i>	-2.32	3.62E-03
<i>MIR4532</i>	-2.57	3.77E-03
<i>MIR95</i>	-3.12	4.01E-03
<i>MIR127</i>	-3.21	4.12E-03
<i>MIR4469</i>	-12.02	4.2E-03
<i>MIR23B</i>	-3.05	4.22E-03
<i>MIR548AR</i>	-3.19	4.22E-03
<i>MIR7106</i>	-2.77	4.26E-03
<i>MIR331</i>	-3.32	4.27E-03
<i>MIR125A</i>	-3.32	4.33E-03
<i>MIR16-2</i>	-3.12	4.43E-03
<i>MIR32</i>	-3.12	4.45E-03
<i>MIR6768</i>	-4.9	4.51E-03
<i>MIR4747</i>	-3.83	4.52E-03
<i>MIR424</i>	-2.72	4.58E-03
<i>MIR181C</i>	-3.	4.67E-03
<i>MIR744</i>	-2.77	4.78E-03
<i>MIR125B2</i>	-3.42	4.78E-03
<i>MIR766</i>	-3.15	4.79E-03
<i>MIR10A</i>	-2.61	4.81E-03
<i>MIR652</i>	-2.65	4.87E-03
<i>MIR130B</i>	-3.49	5.05E-03
<i>MIR26A1</i>	-2.65	5.22E-03

<i>MIR5010</i>	-2.77	5.35E-03
<i>MIR629</i>	-2.72	5.77E-03
<i>MIR421</i>	-2.88	5.93E-03
<i>MIR4700</i>	-2.63	6.04E-03
<i>MIR3161</i>	-4.09	6.2E-03
<i>MIR4999</i>	-2.48	6.21E-03
<i>MIR3140</i>	-3.81	6.32E-03
<i>MIR874</i>	-2.91	6.33E-03
<i>MIR4428</i>	-3.25	6.44E-03
<i>MIR6125</i>	-2.53	6.66E-03
<i>MIR5582</i>	-3.05	6.76E-03
<i>MIR197</i>	-2.95	6.85E-03
<i>MIR7706</i>	-3.03	6.92E-03
<i>MIR3175</i>	-29.34	6.99E-03
<i>MIR5698</i>	-25.33	7.05E-03
<i>MIR7111</i>	-25.33	7.05E-03
<i>MIR18A</i>	-3.27	7.19E-03
<i>MIR342</i>	-3.15	7.27E-03
<i>MIR22</i>	-3.25	7.63E-03
<i>MIR183</i>	-3.6	7.63E-03
<i>MIR22HG</i>	-3.25	7.64E-03
<i>MIR1298</i>	-24.48	7.65E-03
<i>MIR1915</i>	-24.48	7.65E-03
<i>MIR4502</i>	-24.48	7.65E-03
<i>MIR6849</i>	-24.48	7.65E-03
<i>MIR6503</i>	-24.48	7.65E-03
<i>MIR103A1</i>	-1.93	7.77E-03
<i>MIR5587</i>	-24.07	7.96E-03
<i>MIR6751</i>	-5.12	8.18E-03
<i>MIR4420</i>	-2.22	8.28E-03
<i>MIR374A</i>	-3.1	8.3E-03
<i>MIR29A</i>	-3.21	8.42E-03
<i>MIR29C</i>	-3.12	8.42E-03
<i>MIR3613</i>	-2.75	8.68E-03
<i>MIR5581</i>	-3.08	8.77E-03
<i>MIR339</i>	-3.42	9.08E-03
<i>MIR532</i>	-2.96	9.16E-03
<i>MIR296</i>	-2.5	9.21E-03
<i>MIR196A2</i>	-2.1	9.47E-03
<i>MIR1976</i>	-3.69	9.54E-03
<i>MIR96</i>	-3.19	9.66E-03
<i>MIR4526</i>	-6.37	9.79E-03
<i>MIR98</i>	-3.35	9.82E-03
<i>MIR3143</i>	-2.75	9.9E-03

<i>MIR4649</i>	-2.19	9.95E-03
<i>MIR99A</i>	-3.04	1.E-02
<i>MIR484</i>	-3.13	1.E-02
<i>MIR33A</i>	-2.9	1.E-02
<i>MIR6882</i>	-4.48	1.03E-02
<i>MIR219A1</i>	-1.93	1.03E-02
<i>MIR30B</i>	-3.19	1.03E-02
<i>MIR3121</i>	-2.9	1.03E-02
<i>MIR3657</i>	-3.43	1.04E-02
<i>MIR6766</i>	-4.34	1.05E-02
<i>MIR1256</i>	-7.05	1.07E-02
<i>MIR7974</i>	-3.14	1.08E-02
<i>MIR361</i>	-2.85	1.09E-02
<i>MIR6838</i>	-4.07	1.1E-02
<i>MIR3652</i>	-3.37	1.11E-02
<i>MIRLET7A3</i>	-2.97	1.11E-02
<i>MIR301A</i>	-3.06	1.13E-02
<i>MIR4449</i>	-2.16	1.15E-02
<i>MIR148A</i>	-3.45	1.19E-02
<i>MIR671</i>	-2.63	1.19E-02
<i>MIR1234</i>	-5.46	1.21E-02
<i>MIR148B</i>	-3.08	1.22E-02
<i>MIR6813</i>	-4.27	1.24E-02
<i>MIR639</i>	-9.16	1.26E-02
<i>MIR589</i>	-2.85	1.27E-02
<i>MIR6805</i>	-3.06	1.3E-02
<i>MIR27B</i>	-3.27	1.32E-02
<i>MIR1285-1</i>	-3.16	1.33E-02
<i>MIR146B</i>	-2.87	1.34E-02
<i>MIR7845</i>	-3.54	1.37E-02
<i>MIR181B2</i>	-3.02	1.37E-02
<i>MIR4504</i>	-4.41	1.39E-02
<i>MIRLET7F2</i>	-2.94	1.43E-02
<i>MIR26B</i>	-3.15	1.44E-02
<i>MIR7854</i>	-2.76	1.44E-02
<i>MIR191</i>	-3.39	1.45E-02
<i>MIR450A2</i>	-9.2	1.48E-02
<i>MIR3198-2</i>	-9.2	1.48E-02
<i>MIR16-1</i>	-3.07	1.49E-02
<i>MIR3615</i>	-2.63	1.52E-02
<i>MIRLET7C</i>	-3.02	1.53E-02
<i>MIR15B</i>	-2.9	1.53E-02
<i>MIR192</i>	-3.2	1.54E-02
<i>MIR194-2HG</i>	-3.2	1.55E-02

<i>MIR769</i>	-2.99	1.55E-02
<i>MIRLET7B</i>	-3.04	1.55E-02
<i>MIR579</i>	-2.27	1.56E-02
<i>MIR21</i>	-3.22	1.59E-02
<i>MIR4802</i>	-4.23	1.6E-02
<i>MIRLET7BHG</i>	-3.03	1.62E-02
<i>MIR15A</i>	-2.95	1.63E-02
<i>MIR611</i>	-3.13	1.65E-02
<i>MIR340</i>	-2.98	1.66E-02
<i>MIR887</i>	-19.46	1.67E-02
<i>MIR500A</i>	-2.63	1.68E-02
<i>MIRLET7A1</i>	-2.07	1.68E-02
<i>MIR17</i>	-3.09	1.7E-02
<i>MIR6840</i>	-2.57	1.71E-02
<i>MIR4653</i>	-19.1	1.73E-02
<i>MIR4757</i>	-19.1	1.73E-02
<i>MIR454</i>	-2.85	1.77E-02
<i>MIR4682</i>	-18.74	1.79E-02
<i>MIR92A2</i>	-2.75	1.81E-02
<i>MIR425</i>	-2.95	1.83E-02
<i>MIR6868</i>	-2.85	1.84E-02
<i>MIR135A1</i>	-18.39	1.86E-02
<i>MIR3160-2</i>	-18.39	1.86E-02
<i>MIR1343</i>	-3.01	1.9E-02
<i>MIR6516</i>	-2.24	1.95E-02
<i>MIR4749</i>	-2.94	1.96E-02
<i>MIR423</i>	-2.78	2.E-02
<i>MIR4651</i>	-2.11	2.E-02
<i>MIR6794</i>	-3.07	2.01E-02
<i>MIR4422</i>	-4.73	2.01E-02
<i>MIR129-1</i>	-6.16	2.05E-02
<i>MIR210</i>	-2.72	2.07E-02
<i>MIR140</i>	-2.84	2.13E-02
<i>MIR429</i>	-2.82	2.14E-02
<i>MIR106B</i>	-2.9	2.14E-02
<i>MIR28</i>	-2.75	2.18E-02
<i>MIR142</i>	-3.07	2.2E-02
<i>MIRLET7G</i>	-2.97	2.22E-02
<i>MIR1307</i>	-2.84	2.22E-02
<i>MIR181A2</i>	-2.77	2.26E-02
<i>MIR502</i>	-2.	2.27E-02
<i>MIR93</i>	-2.94	2.29E-02
<i>MIR182</i>	-3.02	2.29E-02
<i>MIR20A</i>	-2.96	2.36E-02

<i>MIR107</i>	-2.56	2.48E-02
<i>MIRLET7D</i>	-2.72	2.52E-02
<i>MIR7160</i>	-4.02	2.52E-02
<i>MIR3177</i>	-1.99	2.56E-02
<i>MIR6851</i>	-5.11	2.57E-02
<i>MIR576</i>	-1.89	2.58E-02
<i>MIR3940</i>	-1.87	2.59E-02
<i>MIR33B</i>	-2.88	2.69E-02
<i>MIR5089</i>	-3.51	2.7E-02
<i>MIR1909</i>	-3.12	2.71E-02
<i>MIR17HG</i>	-2.9	2.75E-02
<i>MIR3142HG</i>	-2.66	2.79E-02
<i>MIR146A</i>	-2.66	2.79E-02
<i>MIR449B</i>	-3.53	2.79E-02
<i>MIR30D</i>	-2.84	2.83E-02
<i>MIR6802</i>	-2.3	2.84E-02
<i>MIR320A</i>	-2.55	2.86E-02
<i>MIR345</i>	-2.69	2.87E-02
<i>MIR548J</i>	-2.29	2.88E-02
<i>MIR3150B</i>	-2.55	2.88E-02
<i>MIR1226</i>	-1.76	2.91E-02
<i>MIR3188</i>	-2.32	2.92E-02
<i>MIR30E</i>	-2.84	2.99E-02
<i>MIR4660</i>	-4.2	3.09E-02
<i>MIR4742</i>	-2.25	3.09E-02
<i>MIR1277</i>	-7.61	3.19E-02
<i>MIR92A1</i>	-2.76	3.24E-02
<i>MIR570</i>	-2.27	3.24E-02
<i>MIR25</i>	-2.85	3.25E-02
<i>MIR5196</i>	-4.45	3.42E-02
<i>MIRLET7I</i>	-2.74	3.47E-02
<i>MIR92B</i>	-2.81	3.58E-02
<i>MIR5091</i>	-2.65	3.63E-02
<i>MIR4739</i>	-2.58	3.7E-02
<i>MIR3651</i>	-1.66	4.05E-02
<i>MIR4714</i>	-2.7	4.07E-02
<i>MIR6749</i>	-3.91	4.21E-02
<i>MIR186</i>	-2.62	4.22E-02
<i>MIR6785</i>	-5.27	4.26E-02
<i>MIR2278</i>	-3.07	4.32E-02
<i>MIR4779</i>	-4.66	4.35E-02
<i>MIR4258</i>	-13.21	4.58E-02
<i>MIR548W</i>	-13.21	4.58E-02
<i>MIR2681</i>	-13.21	4.58E-02

<i>MIR4500</i>	-13.21	4.58E-02
<i>MIR3196</i>	-13.21	4.58E-02
<i>MIR7151</i>	-13.21	4.58E-02
<i>MIR103A2</i>	-2.1	4.65E-02
<i>MIR202HG</i>	-12.94	4.72E-02
<i>MIR1257</i>	-12.94	4.72E-02
<i>MIR514B</i>	-12.94	4.72E-02
<i>MIR6867</i>	-12.94	4.72E-02
<i>MIR202</i>	-12.94	4.72E-02
<i>MIR151A</i>	-2.43	4.78E-02
<i>MIR126</i>	-2.15	4.8E-02
<i>MIR506</i>	-12.67	4.86E-02
<i>MIR1266</i>	-12.67	4.86E-02
<i>MIR1254-1</i>	-12.67	4.86E-02
<i>MIR1539</i>	-12.67	4.86E-02
<i>MIR4421</i>	-12.67	4.86E-02

This table lists miRNA genes showing fold change ≥ 1.5 and $P < 0.05$ identified via small RNA sequencing.