**Supplementary Table 5.** **Differentially-expressed genes targeted by DEmiRNAs identified by nanostring analysis in A549 cells**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DEx targets** | | | **miRNA Regulators** | **Log2 Fold Change** |
| **UP** | **BECN1** | Beclin 1 | hsa-miR-130b-3p; hsa-miR-183-5p | 2.08 |
| **CDK6** | Cyclin Dependent Kinase 6 | hsa-miR-1246; hsa-miR-218-5p; hsa-miR-33a-5p; hsa-miR-660-5p; hsa-miR-92b-3p; hsa-miR-99a-5p | 2.04 |
| **CFH** | Complement Factor H | hsa-miR-200c-3p | 1.84 |
| **HMOX1** | Heme Oxygenase 1 | hsa-miR-24-3p | 1.74 |
| **SCML1** | Scm Polycomb Group Protein Like 1 | hsa-miR-24-3p; hsa-miR-33a-5p | 1.66 |
| **CREB5** | CAMP Responsive Element Binding Protein 5 | hsa-miR-130b-3p | 1.60 |
| **CDKN1A** | Cyclin Dependent Kinase Inhibitor 1A | hsa-miR-130b-3p; hsa-miR-146a-5p; hsa-miR-218-5p; hsa-miR-99a-5p | 1.59 |
| **ADM** | Adrenomedullin | hsa-miR-660-5p; hsa-miR-92b-3p | 1.57 |
| **CEP55** | Centrosomal Protein 55 | hsa-miR-130b-3p; hsa-miR-218-5p | 1.57 |
| **RELN** | Reelin | hsa-miR-200c-3p | 1.56 |
| **KIF11** | Kinesin Family Member 11 | hsa-miR-200c-3p | 1.50 |
| **ZMYND8** | Zinc Finger MYND-Type Containing 8 | hsa-miR-24-3p | 1.50 |
| **CDK19** | Cyclin Dependent Kinase 19 | hsa-miR-130b-3p; hsa-miR-183-5p; hsa-miR-33a-5p | 1.48 |
| **CREBRF** | CREB3 Regulatory Factor | hsa-miR-1246; hsa-miR-33a-5p | 1.47 |
| **LAMC1** | Laminin Subunit Gamma 1 | hsa-miR-200c-3p; hsa-miR-218-5p; hsa-miR-24-3p; hsa-miR-33a-5p; hsa-miR-92b-3p | 1.46 |
| **BRCA1** | BRCA1 DNA Repair Associated | hsa-miR-200c-3p; hsa-miR-218-5p; hsa-miR-24-3p | 1.44 |
| **MASTL** | Microtubule Associated Serine/Threonine Kinase Like | hsa-miR-1246; hsa-miR-130b-3p | 1.41 |
| **MBNL1** | Muscleblind Like Splicing Regulator 1 | hsa-miR-1246; hsa-miR-130b-3p; hsa-miR-183-5p; hsa-miR-200c-3p; hsa-miR-218-5p; hsa-miR-24-3p; hsa-miR-92b-3p; hsa-miR-99a-5p | 1.40 |
| **TTF2** | Transcription Termination Factor 2 | hsa-miR-183-5p | 1.39 |
| **JAG1** | Transcription Termination Factor 2 | hsa-miR-183-5p | 1.38 |
| **SMARCD3** | SWI/SNF Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily D, Member 3 | hsa-miR-24-3p | 1.37 |
| **GADD45A** | Growth Arrest And DNA Damage Inducible Alpha | hsa-miR-92b-3p | 1.36 |
| **PLOD2** | Procollagen-Lysine,2-Oxoglutarate 5-Dioxygenase 2 | hsa-miR-130b-3p; hsa-miR-24-3p | 1.35 |
| **HMGCS1** | 3-Hydroxy-3-Methylglutaryl-CoA Synthase 1 | hsa-miR-200c-3p; hsa-miR-24-3p; hsa-miR-660-5p | 1.34 |
| **LBR** | Lamin B Receptor | hsa-miR-200c-3p; hsa-miR-24-3p; hsa-miR-92b-3p | 1.32 |
| **RAB8B** | RAB8B, Member RAS Oncogene Family | hsa-miR-24-3p; hsa-miR-92b-3p | 1.31 |
| **MAEA** | Macrophage Erythroblast Attacher, E3 Ubiquitin Ligase | hsa-miR-24-3p | 1.26 |
| **NEDD1** | NEDD1 Gamma-Tubulin Ring Complex Targeting Factor | hsa-miR-200c-3p | 1.24 |
| **FAM210A** | Family With Sequence Similarity 210 Member A | hsa-miR-33a-5p | 1.23 |
| **GMFB** | Glia Maturation Factor Beta | hsa-miR-130b-3p; hsa-miR-200c-3p; hsa-miR-24-3p | 1.23 |
| **TEX10** | Testis Expressed 10 | hsa-miR-183-5p | 1.19 |
| **SLC30A1** | Solute Carrier Family 30 Member 1 | hsa-miR-218-5p; hsa-miR-33a-5p; hsa-miR-99a-5p | 1.18 |
| **HIST1H3B** | H3 Clustered Histone 2 | hsa-miR-130b-3p; hsa-miR-183-5p | 1.18 |
| **FANCI** | FA Complementation Group I | hsa-miR-92b-3p | 1.17 |
| **CDK1** | Cyclin Dependent Kinase 1 | hsa-miR-24-3p | 1.17 |
| **FAM160B1** | FHF Complex Subunit HOOK Interacting Protein 2A | hsa-miR-183-5p; hsa-miR-660-5p; hsa-miR-92b-3p | 1.16 |
| **ANLN** | Anillin, Actin Binding Protein | hsa-miR-200c-3p; hsa-miR-218-5p | 1.16 |
| **CENPF** | Centromere Protein F | hsa-miR-130b-3p | 1.15 |
| **EZH1** | Enhancer Of Zeste 1 Polycomb Repressive Complex 2 Subunit | hsa-miR-92b-3p | 1.14 |
| **TGOLN2** | Trans-Golgi Network Protein 2 | hsa-miR-130b-3p; hsa-miR-24-3p; hsa-miR-33a-5p | 1.14 |
| **LPIN1** | Lipin 1 | hsa-miR-218-5p | 1.13 |
| **ZHX1** | Zinc Fingers And Homeoboxes 1 | hsa-miR-146a-5p; hsa-miR-218-5p; hsa-miR-33a-5p; hsa-miR-92b-3p | 1.12 |
| **DICER1** | Dicer 1, Ribonuclease III | hsa-miR-130b-3p; hsa-miR-200c-3p; hsa-miR-218-5p; hsa-miR-33a-5p; hsa-miR-92b-3p | 1.12 |
| **DCP1A** | Decapping MRNA 1A | hsa-miR-24-3p | 1.11 |
| **ZDHHC20** | Zinc Finger DHHC-Type Palmitoyltransferase 20 | hsa-miR-200c-3p; hsa-miR-33a-5p | 1.10 |
| **AEBP2** | AE Binding Protein 2 | hsa-miR-24-3p | 1.10 |
| **CTGF** | Cellular Communication Network Factor 2 | hsa-miR-218-5p; hsa-miR-543; hsa-miR-92b-3p | 1.10 |
| **ZMAT3** | Zinc Finger Matrin-Type 3 | hsa-miR-130b-3p; hsa-miR-200c-3p; hsa-miR-218-5p | 1.10 |
| **TMEM189** | Transmembrane Protein 189 | hsa-miR-24-3p | 1.09 |
| **NAV2** | Neuron Navigator 2 | hsa-miR-200c-3p | 1.06 |
| **FLT1** | Fms Related Receptor Tyrosine Kinase 1 | hsa-miR-200c-3p; hsa-miR-24-3p | 1.06 |
| **PCDH9** | Protocadherin 9 | hsa-miR-200c-3p | 1.06 |
| **TGM2** | Transglutaminase 2 | hsa-miR-24-3p | 1.06 |
| **EXOC5** | Exocyst Complex Component 5 | hsa-miR-130b-3p; hsa-miR-92b-3p | 1.06 |
| **ZSWIM6** | Zinc Finger SWIM-Type Containing 6 | hsa-miR-130b-3p; hsa-miR-24-3p; hsa-miR-33a-5p | 1.05 |
| **HIST1H1C** | H1.2 Linker Histone, Cluster Member | hsa-miR-130b-3p; hsa-miR-218-5p | 1.04 |
| **USP25** | Ubiquitin Specific Peptidase 25 | hsa-miR-200c-3p | 1.03 |
| **GOLT1B** | Golgi Transport 1B | hsa-miR-130b-3p; hsa-miR-200c-3p | 1.03 |
| **TBRG1** | Transforming Growth Factor Beta Regulator 1 | hsa-miR-183-5p | 1.03 |
| **TTLL5** | Tubulin Tyrosine Ligase Like 5 | hsa-miR-24-3p | 1.03 |
| **BIRC3** | Baculoviral IAP Repeat Containing 3 | hsa-miR-200c-3p; hsa-miR-24-3p | 1.02 |
| **STAT1** | Signal Transducer And Activator Of Transcription 1 | hsa-miR-146a-5p | 1.01 |
| **MTRFR** | Mitochondrial Translation Release Factor In Rescue | hsa-miR-24-3p | 1.01 |
| **SLC7A5** | Solute Carrier Family 7 Member 5 | hsa-miR-218-5p | 1.01 |
| **SLC39A9** | Solute Carrier Family 39 Member 9 | hsa-miR-218-5p | 1.01 |
| **DOWN** | **CAPRIN1** | Cell Cycle Associated Protein 1 | hsa-miR-1246; hsa-miR-130b-3p; hsa-miR-24-3p | -1.01 |
| **RBM12** | RNA Binding Motif Protein 12 | hsa-miR-1246; hsa-miR-200c-3p; hsa-miR-24-3p; hsa-miR-33a-5p; hsa-miR-92b-3p | -1.02 |
| **MARCKS** | Myristoylated Alanine Rich Protein Kinase C Substrate | hsa-miR-1246; hsa-miR-200c-3p; hsa-miR-218-5p; hsa-miR-660-5p | -1.03 |
| **RAB5B** | RAB5B, Member RAS Oncogene Family | hsa-miR-1246; hsa-miR-130b-3p; hsa-miR-183-5p; hsa-miR-200c-3p; hsa-miR-24-3p | -1.07 |
| **KPNA6** | Karyopherin Subunit Alpha 6 | hsa-miR-1246; hsa-miR-183-5p; hsa-miR-24-3p; hsa-miR-660-5p | -1.07 |
| **PPP1R18** | Protein Phosphatase 1 Regulatory Subunit 18 | hsa-miR-1246; hsa-miR-200c-3p | -1.3 |
| **ACTR10** | Actin Related Protein 10 | hsa-miR-1246 | -1.45 |
| **DCAF7** | DDB1 And CUL4 Associated Factor 7 | hsa-miR-1246; hsa-miR-130b-3p; hsa-miR-24-3p | -1.61 |
| **CREBL2** | CAMP Responsive Element Binding Protein Like 2 | hsa-miR-1246; hsa-miR-24-3p | -1.85 |