**Supplementary Table 4. Interactions of ceRNA.**

|  |  |  |
| --- | --- | --- |
| **Name of miRNA** | **Name of interacting** **mRNA or lncRNA** | **Interaction type** |
| hsa-miR-4273hsa-miR-551b-5phsa-miR-758-3phsa-miR-548shsa-miR-34c-5phsa-miR-29b-3phsa-miR-616-3phsa-miR-144-3phsa-miR-2110hsa-miR-944hsa-let-7i-5phsa-miR-590-5phsa-miR-149-3phsa-miR-101-5phsa-miR-148b-3phsa-miR-340-5phsa-miR-29c-3phsa-miR-105-5phsa-miR-576-5phsa-miR-449b-5phsa-miR-641hsa-miR-330-3phsa-miR-127-5phsa-miR-522-3phsa-miR-495-3phsa-miR-501-5phsa-miR-936hsa-miR-761hsa-miR-4301hsa-miR-646hsa-miR-1323hsa-miR-4322hsa-let-7a-5phsa-miR-148a-3phsa-miR-3163hsa-miR-548g-3phsa-miR-583hsa-miR-760hsa-miR-890hsa-miR-4279hsa-miR-3154hsa-miR-188-3phsa-miR-576-3phsa-miR-1179hsa-miR-3166hsa-miR-545-3phsa-miR-4282hsa-miR-509-3-5phsa-miR-1207-3phsa-miR-29a-3phsa-let-7b-5phsa-miR-3144-3phsa-miR-506-3phsa-miR-633hsa-miR-4291hsa-miR-590-3phsa-miR-576-5phsa-miR-98-5phsa-miR-524-5phsa-miR-212-3phsa-miR-3123hsa-miR-145-3phsa-miR-922hsa-miR-4310hsa-miR-197-3phsa-miR-497-5phsa-miR-3120-3phsa-miR-30b-3phsa-miR-30b-3phsa-miR-4296hsa-miR-369-3phsa-miR-9-3phsa-miR-195-5phsa-miR-2054hsa-miR-613hsa-let-7g-5phsa-miR-508-3phsa-miR-222-5phsa-miR-196a-5phsa-miR-181c-5phsa-miR-588hsa-miR-760hsa-miR-4311hsa-miR-221-5phsa-let-7f-5phsa-miR-518d-5phsa-miR-3147hsa-miR-1256hsa-miR-335-3phsa-miR-1284hsa-miR-3171hsa-miR-1-3phsa-miR-335-3phsa-let-7e-5phsa-miR-646hsa-miR-606hsa-miR-138-2-3phsa-miR-181b-5phsa-miR-3130-5phsa-miR-132-3phsa-miR-629-5phsa-miR-96-5phsa-miR-34b-3phsa-miR-4265hsa-miR-505-3phsa-miR-214-3phsa-miR-4259hsa-miR-3148hsa-let-7d-5phsa-miR-4314hsa-miR-22-5phsa-miR-16-5phsa-miR-4323hsa-miR-3149hsa-miR-15b-5phsa-miR-130a-5phsa-miR-548a-3phsa-miR-3187-3phsa-miR-22-5phsa-miR-373-5phsa-miR-181a-5phsa-miR-449ahsa-miR-34a-5phsa-miR-21-5phsa-miR-485-3phsa-miR-3130-5phsa-miR-424-5phsa-miR-15a-5phsa-miR-125a-3phsa-miR-1271-5phsa-miR-4284hsa-miR-509-5phsa-miR-509-3phsa-miR-196b-5phsa-miR-497-3phsa-miR-622hsa-miR-570-3phsa-miR-197-3phsa-miR-206hsa-miR-503-5p | FDX1SLC31A1MAP2K1SLC31A1MAP2K1SLC31A1SLC31A1MAP2K1MAP2K1FDX1SLC31A1FDX1FDX1FDX1MAP2K1FDX1SLC31A1SLC31A1FDX1MAP2K1FDX1MAP2K1FDX1MAP2K1FDX1MAP2K1MAP2K1SLC31A1SLC31A1SLC31A1MAP2K1SLC31A1SLC31A1MAP2K1FDX1SLC31A1SLC31A1MAP2K1MAP2K1SLC31A1SLC31A1MAP2K1SLC31A1FDX1SLC31A1MAP2K1FDX1SLC31A1SLC31A1SLC31A1SLC31A1SLC31A1SLC31A1MAP2K1SLC31A1FDX1SLC31A1SLC31A1SLC31A1SLC31A1FDX1SLC31A1SLC31A1FDX1SLC31A1MAP2K1SLC31A1FDX1SLC31A1SLC31A1FDX1FDX1MAP2K1FDX1SLC31A1SLC31A1SLC31A1FDX1SLC31A1MAP2K1SLC31A1SLC31A1SLC31A1MAP2K1SLC31A1SLC31A1SLC31A1FDX1SLC31A1MAP2K1SLC31A1SLC31A1MAP2K1SLC31A1MAP2K1FDX1SLC31A1MAP2K1SLC31A1SLC31A1SLC31A1MAP2K1FDX1SLC31A1SLC31A1SLC31A1SLC31A1SLC31A1SLC31A1SLC31A1MAP2K1MAP2K1MAP2K1SLC31A1MAP2K1FDX1SLC31A1SLC31A1SLC31A1SLC31A1MAP2K1MAP2K1MAP2K1FDX1MAP2K1FDX1MAP2K1MAP2K1SLC31A1MAP2K1FDX1SLC31A1SLC31A1SLC31A1SLC31A1FDX1FDX1MAP2K1SLC31A1MAP2K1 | miRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNAmiRNA-mRNA |
| hsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-449ahsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148b-3phsa-miR-148a-3phsa-miR-148a-3phsa-miR-148a-3phsa-miR-148a-3phsa-miR-148a-3phsa-miR-148a-3phsa-miR-148a-3phsa-miR-148a-3phsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-206hsa-miR-34c-5phsa-miR-34c-5phsa-miR-34c-5phsa-miR-508-3phsa-miR-508-3phsa-miR-508-3phsa-miR-508-3phsa-miR-508-3phsa-miR-508-3phsa-miR-508-3phsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-761hsa-miR-212-3phsa-miR-212-3phsa-miR-212-3phsa-miR-212-3phsa-miR-212-3phsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-613hsa-miR-590-5phsa-miR-590-5p | ERVH48-1KCNQ1OT1LINC00278EAF1-AS1MUC19CNOT10-AS1JPXUBE2Q1-AS1XISTNAV2-AS5KCNA3SHANK3OIP5-AS1SNHG14LINC00221KCNQ1OT1MIR4313TTTY10C21orf88MCCC1-AS1ITCH-IT1DNM3OSZNRD1-AS1OIP5-AS1SNHG14LINC00221KCNQ1OT1MIR4313HOTAIRM1DNM3OSITCH-IT1CASK-AS1SNORD116-20KCNQ1OT1MALAT1C14orf23SNHG14NEAT1MTUS2-AS2CCDC39-AS1MYLK-AS1ZNRF3-AS1KCNQ1OT1LINC00278MIR4313TTTY12KCNQ1OT1MUC19ARHGEF26-AS1ST7-OT4C21orf128LINC00517KCNQ1OT1ATXN8OSC1orf132TTTY4CTTTY4BTTTY4XISTC21orf90SHANK3ZNRD1-AS1C14orf182LINC00176FAM138EMIR4313FAM138AXISTZNF503-AS1KCNQ1OT1MUC19NEAT1SNORD116-20CASK-AS1KCNQ1OT1TIPARP-AS1C14orf23MIR22HGSNHG14MALAT1NEAT1DIAPH3-AS1FAM66CTTTY15 | lncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNAlncRNA-miRNA |