CIRCULAR RNAS FOR DIAGNOSIS OF DEPRESSION AND PREDICTION OF RESPONSE TO ANTIDEPRESSANT TREATMENT

Cross-Reference to Related Applications

This application claims the benefit of the filing date of U.S. Provisional Application No. 63/154,168, filed on February 26, 2021, the disclosure of which is incorporated by reference herein.

Sequence Listing

This application contains a Sequence Listing which has been submitted electronically in ASCII format and is hereby incorporated by reference in its entirety. Said ASCII copy, created on February 23, 2022, is named "CG-Sequence-1" and is 490 Kbytes in size.

Technical Field

The technology relates to the field of medical and therapeutic diagnostics, and in particular systems, methods, and compositions for the detection and treatment of psychiatric disorders using circular RNA biomarkers.

Background

Major Depressive Disorder (MDD; also known as "unipolar depression", "monopolar depression", or just "depression") is a psychiatric disorder that affects close to 10% of the world's population and is the second leading cause of disability and overall global disease burden worldwide. Although treatment with various antidepressants such as Selective Serotonin Reuptake Inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitors (SNRIs), Monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants, and phycological therapy, such as cognitive behavioral therapy, has demonstrated clinical efficacy, the inherent complexity and heterogeneity of the disease and the "trial by error" approach in choosing the particular antidepressant treatment for each patient only allows for a subset of patients to respond to the first choice of treatment. As a result, the average percentage of patients with MDD that achieve response (more than 50% improvement of total score based on symptoms) or remission (elimination of depressive symptoms and a return to premorbid levels of functioning) to the first prescribed antidepressant treatment is around 30-50%. Furthermore, close to 30% of patients with MDD appear to be treatment-resistant in multiple antidepressant drug treatments. Lastly, a small subset of patients with depressive symptoms, initially diagnosed with MDD, end up being diagnosed with Bipolar Disorder (BD), thus making the differentiation between MDD and BD an important priority. It is therefore imperative to predict and monitor therapeutic efficacy and uncover better therapeutic alternatives for MDD. Moreover, the identification of early biomarkers for MDD severity can serve as a valuable tool in evaluating a patient's risk for complications and can help with excluding other differential diagnosis.

Existing RNA biomarker approaches are based on detecting linear RNA expression in adult peripheral samples such as blood. However, linear mRNAs are prone to degradation and most have very low half-lives (a few hours), thus making their expression unstable and transient,

especially in blood/serum samples, which contain high levels of enzymes that break down linear RNA.

Summary

To address the problems outlined above, the disclosure provides for the use of circular RNAs (circRNA) as biomarkers of psychiatric disorders, such as MDD, BD and the like. As described below, circRNA are produced from the backsplicing and covalent joining of exons and/or introns and are by far the most resistant to degradation RNA molecules with half-lives of several days to one week making them more suitable to use as diagnostic biomarkers.

In one embodiment, circRNAs can serve as robust biomarkers in blood and other peripheral samples, or cellular samples such as samples comprising neurons, based on a subset of specific circRNAs, e.g., either before treatment (baseline) or some weeks after treatment, that is significantly altered in the blood of patients with Major Depressive Disorder (MDD) or Bipolar Disorder (BD) and may be associated with response to specific antidepressant treatment. Moreover, a subset of circRNAs can predict MDD severity and can discriminate between MDD and BD. As a result, the disclosure provides for the use of circRNAs as a biomarker for diagnosis of MDD, response or remission to antidepressant treatment, as well as for predicting disease severity and the possibility for relapse. According to one embodiment. the present disclosure provides compositions, kits, assays, systems, and methods for the identification, diagnosis, screening, treatment and/or monitoring of brain disorders including, but not necessarily limited to, psychiatric disorders such as MDD and BD. According to a specific embodiment, the present disclosure provides a plurality of circRNAs biomarkers, the expression of which is indicative of such disorders or with response to various treatments, such as administration of one or more anti-depressants

With half-lives of several days, circRNAs can serve as robust biomarkers in blood and other peripheral samples. As disclosed herein, the expression of one or more circRNAs may be altered in the blood, or other fluid or tissue sample of a patient with a psychiatric disorder such as MDD or BD. The up or down-regulation of the expression of one or more of the circRNAs can be associated with response to an antidepressant treatment. Thus, circRNAs may be employed as a biomarker to identify a psychiatric disorder such as MDD or BD, and for response to antidepressant treatment as well as for predicting disease severity and the possibility for relapse. In particular, a relationship has been identified between circRNAs and diagnosis of MDD or BD and optionally response to antidepressant medication. The relationship found between circRNAs, MDD, BD, and response to treatment may allow for the use of those circRNAs as biomarkers to identify psychiatric disorders such as MDD or BD in patients during early stages of the disease, or before the onset of the disease, to follow therapeutic efficacy of antidepressants and/or design drug targets. Thus, the properties of the circRNAs not only allow for their use as robust peripheral biomarkers of MDD or BD, and/or disease severity, but also as strong predictors of response to treatment.

For example, detecting the presence or amount of one or more specific circRNAs allows for fast and accurate prediction of response to antidepressant mediations for MD, for a more accurate prediction of an individual's risk for developing serious MDD-related complications and/or chances for disease relapse, and/or for early diagnosis of MDD. Thus, according to an embodiment or aspect, the present disclosure provides compositions, kits, assays, systems, and methods for the identification, diagnosis, screening, treatment and/or monitoring of brain disorders including, but not necessarily limited to, MDD or BD. According to a specific embodiment, the present disclosure provides a plurality of circRNAs, the expression of which can be detected and correlated with, for example, responsiveness of a MDD patient to anti-depressant therapy, progression of MDD, and/or relapse of MDD.

In one example, the disclosure provides a composition comprising one or more isolated nucleic acids comprising a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to one or more of SEQ ID Nos. 1-241, or the complement thereof, a composition comprising two or more isolated nucleic acids comprising a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to a combination of two or more of SEQ ID Nos. 1-241, or the complement thereof, or a probe or primer that detects at least one of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or detects at least one of SEQ ID NO's. 1-241, or a plurality of probes that detect any combination of two or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof, e.g., two or more probes that detect two or more of SEQ ID Nos. 1-241. In one embodiment, the probe has a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to the complement of one of SEQ ID Nos. 1-241.

Further provided is a panel of probes comprising probes specific for two or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69,or SEQ ID NOs. 1-241, or a plurality of primers specific for two or more of SEQ ID Nos. 1-241, wherein the probes or primers have a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to, or to the complement of, one of SEQ ID Nos. 1-241.

Also provided is an assay for detecting a mammal having or at risk of having MDD or BD comprising: one or more probes configured to identify the presence of at least one circRNA

selected from circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or SEQ ID NOs. 1-241 or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to one or more of SEQ ID Nos. 1-241, or the complement thereof. In one embodiment, the probes comprise a sequence specific for two or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or SEQ ID NOs. 1-241. In one embodiment, the probe comprises a sequence that spans the splice junction of the circRNA in an asymmetric manner. In one embodiment, the assay includes one or more primers configured to amplify a sequence specific for at least one of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or SEQ ID NOs. 1-241 or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to one or more of SEQ ID Nos. 1-241, or the complement thereof. In one embodiment, the primer includes a sequence that spans the splice junction of the circRNA in an asymmetric manner.

Further provided is a method for diagnosing MDD or BD in a mammal, such as a human, sometimes referred to as a subject or patient. The method includes providing or obtaining a test physiological sample from the mammal; assaying the test sample using probes and/or primers configured to identify the presence of and/or amplify one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or SEQ ID NOs. 1-241; and comparing the presence or amount of one or more of SEQ ID Nos. 1-241 or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to one or more of SEQ ID Nos. 1-241, or the complement thereof, in the test sample to a control sample. In one embodiment, the sample is a physiological fluid sample. In one embodiment, the sample is a blood sample. In one embodiment, the mammal is a human suffering from, or at risk for developing a psychiatric condition, such as MDD or BD.

In one embodiment, a method to predict response or remission to an anti-depressant in a subject is provided. The method including providing or obtaining a test physiological sample from the subject; assaying the test sample using probes and/or primers configured to identify the presence of and/or amplify one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1,

circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or SEQ ID NOs. 1-241; and comparing the presence or amount of one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or SEQ ID NOs. 1-241 or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to one or more of SEQ ID Nos. 1-241, or the complement thereof, in the test sample to a control sample. In one embodiment, the anti-depressant is useful to treat monopolar depression. In one embodiment, the sample is a physiological fluid sample. In one embodiment, the sample is a blood sample. In one embodiment, the subject is a human.

In one embodiment, a method to monitor progression of, or relapse of, MDD or BD in a subject is provided. The method includes providing or obtaining a test physiological sample from the subject; assaying the test sample using probes and/or primers configured to identify the presence of and/or amplify one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, e.g., identify or amplify SEQ ID Nos. 1-241 or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity to one or more of SEQ ID Nos. 1-241, or the complement thereof; and comparing the presence or amount in the test sample to a sample from the mammal obtained at an earlier point in time. In one embodiment, the sample is a physiological fluid sample. In one embodiment, the sample is a blood sample. In one embodiment, the subject is a human.

Brief Description of the Drawings

Figures 1A-1B. Baseline blood PBMC circCDR1as vs circTULP4 ratio predicts remission after SSRI treatment (University of Marseille, France samples). (A) MDD patients that did not achieve remission after 30 weeks of treatment (MDD SSRI NR) display a higher baseline PBMC circCDR1as vs circTULP4 ratio ($p<0.001$, two-tailed one sample t-test, N=7 per group) than patients that achieved remission (MDD SSRI R). Data were acquired with circRNA-specific qRT-PCR in total RNA extracted from blood PBMCs (peripheral blood mononuclear cells) derived from the University of Marseille in France. (B) Differences in the PBMC circCDR1as vs circTULP4 ratio have an excellent predictive value for predicting remission after long-term SSRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.833 (more than 0.80 is considered excellent) and $p=0.0455$ ($p < 0.05$ is considered significant).

Figures 2A-2B. Blood circCDR1as vs circTULP4 ratio before treatment predicts response after 8 weeks of Sertraline treatment (EMBARC study, University of Texas Southwestern, whole blood). (A) Major Depressive Disorder (MDD) patients that did not respond to 8 weeks of Sertraline treatment (MDD Sert NR) display a higher blood circCDR1as vs circTULP4 ratio

($p<0.001$, two-tailed one sample t-test, N=12 per group) than patients that responded to treatment (MDD Sert R) at baseline. Data were acquired with circRNA-specific qRT-PCR in total RNA extracted from whole blood derived from the EMBARC study. (B) Differences in the circCDR1as vs circTULP4 ratio before treatment have a very good predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.7679 and $p=0.0206$ ($p < 0.05$ is considered significant).

Figure 3A-3C. CircRNA profiling reveals that circMIR5695 is a novel biomarker with excellent diagnostic abilities to predict remission to SSRI antidepressant treatment (PBMCs, France samples). (A-B) MDD patients that did not achieve remission after 30 weeks of treatment (SSRI NR) display higher baseline levels of circMIR5695 (A) than patients that achieved remission (SSRI R). These differences between those two groups are erased following 8 weeks as SSRI R circMIR5695 levels increase significantly relative to baseline, thus following the initial improvements in disease severity (B). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****$p<0.0001$, ***$p<0.001$, **$p<0.01$, *$p<0.05$, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (C) Differences in baseline circMIR5695 levels have an outstanding predictive value for predicting remission after long-term SSRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 (100% specificity and sensitivity) and $p=0.0027$ ($p < 0.05$ is considered significant).

Figures 4A-4C. CircRNA profiling reveals that circRERE is a novel biomarker with excellent diagnostic abilities to predict remission to SNRI treatment (France samples). (A-B) MDD patients that achieved remission after 30 weeks of treatment with SNRIs (SNRI R) displayed higher baseline levels of circRERE (A) than patients that did not achieve remission (SNRI NR). These differences between those two groups are erased following 8 weeks as SNRI treatment as circRERE levels increase significantly relative to baseline in SNRI NR (B). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****$p<0.0001$, ***$p<0.001$, **$p<0.01$, *$p<0.05$, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (C) Differences in baseline circRERE levels have an outstanding predictive value for predicting remission after long-term SNRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9722 and $p=0.0065$.

Figures 5A-5D. CircRNA profiling reveals that circCHIC1 is a novel biomarker with excellent diagnostic abilities to predict remission to both SSRI and SNRI treatment (France samples). (A-B) MDD patients that achieved remission after 30 weeks of treatment with SNRIs (SNRI R) or SSRIs (SSRI R) displayed higher baseline levels of circCHIC1 in PBMCs (A) than

patients that did not achieve remission to either category of antidepressant (SNRI NR and SSRI NR). These differences between those two groups are erased following 8 weeks of treatment as circCHIC1 are similar between R and NR groups for both SSRIs and SNRIs (B). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, ***p<0.001, **p<0.01, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (C) Differences in baseline circCHIC1 levels have an outstanding predictive value for predicting remission both after long-term SNRI and SSRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.0000 for both groups and p=0.0027 (SSRI) or p=0.0039 (SNRI).

Figures 6A-6D. CircRNA profiling reveals that circCOMT is a novel biomarker with excellent diagnostic abilities to predict remission to both SSRI and SNRI treatment (France samples). (A-B) MDD patients that achieved remission after 30 weeks of treatment with SNRIs (SNRI R) or SSRIs (SSRI R) displayed higher baseline levels of circCOMT in PBMCs (A) than patients that did not achieve remission to either category of antidepressant (SNRI NR and SSRI NR). These differences between those two groups are erased following 8 weeks of treatment as circCOMT are similar between R and NR groups for both SSRIs and SNRIs (B). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ***p<0.001, **p<0.01, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (C) Differences in baseline circCOMT levels have an outstanding predictive value for predicting remission both after long-term SNRI and SSRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.0000 with p=0.0027 (SSRI) and 0.8611 with p=0.0374 (SNRI).

Figures 7A-7D. Levels of circRALGAPB in blood PBMCs predict remission to SSRIs before treatment and distinguish those treated with SSRIs vs SNRIs 8 weeks after treatment. (A-B) MDD patients that achieved remission after 30 weeks of treatment with SSRIs (SSRI R) displayed higher baseline levels of circCOMT in PBMCs (A) than patients that did not achieve remission after treatment (SSRI NR). These differences between those two groups are erased following 8 weeks of treatment as circCOMT are similar between SSRI R and NR groups (B). Moreover, after 8 weeks of treatment SSRI-treated patient samples exhibit higher circCOMT levels than SNRI-treated samples regardless of remission (B). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, ***p<0.001, **p<0.01, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (C) Differences in baseline circCOMT levels have an outstanding predictive value for predicting remission after long-term SSRI treatment and for predicting whether patients were treated with SNRIs or SSRIs 8 weeks after

treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9048 with p=0.0152 (SSRI R vs NR) and 1.000 with p<0.0001 (SSRI 8 week vs SNRI 8 week).

Figure 8A-8D. CircRNA profiling reveals that circDDX50 is a novel biomarker with excellent diagnostic abilities to predict remission to both SSRI and SNRI treatment (France samples). (A-B) MDD patients that achieved remission after 30 weeks of treatment with SNRIs (SNRI R) or SSRIs (SSRI R) displayed higher baseline levels of circDDX50 in PBMCs (A) than patients that did not achieve remission to either category of antidepressant (SNRI NR and SSRI NR). These differences between those two groups are erased following 8 weeks of treatment as circDDX50 are similar between R and NR groups for both SSRIs and SNRIs (B). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ***p<0.001, **p<0.01, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (C) Differences in baseline circDDX50 levels have an outstanding predictive value for predicting remission after long-term SSRI and SNRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 (100% specificity and sensitivity) and p=0.0027 for SSRI R vs SSRI NR and 0.9722 and p=0.0065 for SNRI R vs SNRI NR.

Figures 9A-9B. CircRNA profiling reveals that circPICALM is a novel biomarker with excellent diagnostic abilities to predict remission to SNRI treatment (France samples). (A-B) MDD patients that achieved remission after 30 weeks of treatment with SNRIs (SNRI R) displayed lower baseline levels of circPICALM levels (A) than patients that did not achieve remission (SNRI NR). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (B) Differences in baseline circPICALM levels have an outstanding predictive value for predicting remission after long-term SNRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9167 and p=0.0163.

Figures 10A-10B. Baseline SSRI remission prediction based on the ratio between circMIR5695 and circCHIC1. (A) Patients with MDD that do not achieve remission 30 weeks after SSRI treatment (SSRI NR) exhibit increased circMIR5695 vs circCHIC1 ratio at baseline (before treatment). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (B) Differences in baseline circMIR5695 vs circCHIC1 ratio have an outstanding predictive value for predicting remission after long-term SSRI treatment based on receiver operating characteristic

curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9910 and p=0.0001.

Fig. 11. SSRI remission prediction 8 weeks after treatment based on the ratio between circMIR5695 and circCHIC1. (A) Patients with MDD that do not achieve remission 30 weeks after SSRI treatment (SSRI NR) still exhibit increased circMIR5695 vs circCHIC1 ratio 8 weeks after treatment. Moreover, patients with MDD that achieve remission after 30 weeks of treatment (SSRI R) increase the baseline circMIR5695 vs circCHIC1 ratio after 8 weeks of treatment. Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. **p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. An explanation of the algorithm based on figures 10 and 11 is shown on the right of the figure.

Figures 12A-12B. Baseline SSRI remission prediction based on the ratio between circRALGAPB and circCHIC1. (A) Patients with MDD that do not achieve remission 30 weeks after SSRI treatment (SSRI NR) exhibit increased circRALGAPB vs circCHIC1 ratio at baseline (before treatment). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (B) Differences in baseline circRALGAPB vs circCHIC1 ratio have an outstanding predictive value for predicting remission after long-term SSRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9861 and p=0.0002.

Figures 13A-13B. Baseline SNRI remission prediction based on the ratio between circCHIC1 and circPICALM. (A) Patients with MDD that achieve remission 30 weeks after SNRI treatment (SNRI R) exhibit increased circCHIC1 vs circPICALM ratio at baseline (before treatment). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, ***p<0.001, **<p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (B) Differences in baseline circCHIC1 vs circPICALM ratio have an outstanding predictive value for predicting remission after long-term SNRI treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9722 and p=0.0004.

Figure 14. SNRI remission prediction 8 weeks after treatment based on the ratio between circCHIC1 and circPICALM. (A) Patients with MDD that do not achieve remission 30 weeks after SNRI treatment (SNRI NR) still exhibit reduced circCHIC1 vs circPICALM ratio 8 weeks after treatment. Moreover, patients with MDD that achieve remission after 30 weeks of treatment (SNRI R) decrease the baseline circCHIC1 vs circPICALM ratio after 8 weeks of treatment. Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, ***p<0.001, **p<0.01,

based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. An explanation of the algorithm based on figures 13 and 12 is shown on the right of the figure.

Figures 15A-15D. Levels of circTULP4 and circSATB2 are significantly elevated in BDD patients 8 weeks after treatment. (A) Patients with depressive symptoms that were originally misdiagnosed with MDD but were later shown to suffer from BD show significantly elevated circTULP4B levels 8 weeks after treatment (regardless of type of treatment). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (B) Differences in baseline circTULP4 levels have an outstanding predictive value for predicting BDD diagnosis based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p=0.0003. (C) Patients with depressive symptoms that were originally misdiagnosed with MDD but were later shown to suffer from BD show significantly elevated circSATB2 levels 8 weeks after treatment (regardless of type of treatment). Data were acquired with circRNA array profiling in total RNA extracted from blood PBMCs derived from the University of Marseille in France. ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=5-7 per group. (B) Differences in baseline circSATB2 levels have an outstanding predictive value for predicting BDD diagnosis based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p=0.0003.

Figures 16A-16C. Sertraline response prediction based on circDDR1. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circDDR1 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circDDR1 levels have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9022 and p=0.0002. (C) Comparison of whole blood circDDR1 expression after 1 week of treatment vs baseline in MDD patients that either achieved reponse (Sert R) or not (SERT NR) to Sertraline and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). **p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for all SERT groups and N= 8 for Control.

Figures 17A-17C. Sertraline response prediction based on circICAM1. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circICAM1 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circICAM1 levels have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p<0.0001. (C) Comparison of whole blood circICAM1 expression after 1 week of treatment vs baseline in MDD patients that either achieved reponse (Sert R) or not (SERT NR) to Sertraline and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, ***p<0.001**p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for all SERT groups and N= 8 for Control.

Figures 18A-18D. Sertraline response prediction based on circMIR5695. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circMIR5695 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circMIR5695 levels have an very good predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.7667 and p=0.0128. (C) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circMIR5695 levels one week after treatment compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (D) Differences in circMIR5695 levels 1 week after treatment have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8978 and p=0.0002.

Figures 19A-19D. Sertraline response prediction based on circRALGAPB. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circRALGAPB levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). **p<0.01, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circRALGAPB levels have a very good predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.7689 and p=0.0121. (C) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circRALGAPB levels one week after treatment compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). **p<0.01, ***p<0.001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (D) Differences in circRALGAPB levels 1 week after treatment have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8889 and p=0.0003.

Figures 20A-20D. Sertraline response prediction based on circDUSP22 or circFKBP8. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circDUSP22 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circDUSP22 levels have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8578 and p=0.0008. (C) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circFKBP8 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ***p<0.001, **p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (D) Differences in baseline

circFKBP8 levels have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8400 and p=0.0015.

Figures 21A-21F. Sertraline response prediction based on circDLG5, circMYO9B, or circADAM22. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circDLG5 levels 1 week after treatment compared to MDD patients that did not achieve response to Sertraline (SERT NR), unaffected Controls (Control), or patients with MDD that were given Placebo and did not respond to treatment (Placb). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ***p<0.001, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control and Placb. (B) Differences in circDLG5 levels 1 week after treatment have a very good predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8267 and p=0.0095. (C) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circMYO9B levels 1 week after treatment compared to MDD patients that did not achieve response to Sertraline (SERT NR), unaffected Controls (Control), or patients with MDD that were given Placebo and did not respond to treatment (Placb). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, ***p<0.001, **p<0.01, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control and Placb. (D) Differences in circMYO9B levels 1 week after treatment have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8267 and p=0.0023. (E) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circADAM22 levels 1 week after treatment compared to MDD patients that did not achieve response to Sertraline (SERT NR), unaffected Controls (Control), or patients with MDD that were given Placebo and did not respond to treatment (Placb). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, ***p<0.001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control and Placb. (F) Differences in circADAM22 levels 1 week after treatment have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that

illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8800 and p=0.0004.

Figures 22A-22D. Sertraline response prediction based on circNFATC3. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circNFATC3 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, **p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circNFATC3, levels have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8800 and p=0.0004. (C) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circNFATC3 levels one week after treatment compared to MDD patients that did not achieve response to Sertraline (SERT NR), unaffected Controls (Control), and patients with MDD that were given Placebo and did not respond to treatment (Placb). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ***p<0.001, *p<0.05, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control and Placb. (D) Differences in circNFATC3 levels 1 week after treatment have a very good predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.7687 and p=0.0075.

Figures 23A-23D. Sertraline response prediction based on circHMGA2 or circMALAT1. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit decreased circHMGA2 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circHMGA2 levels have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p<0.0001. (C) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit increased circMALAT1 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array

profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ***p<0.001, **p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (D) Differences in baseline circMALAT1 levels have an excellent predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.8533 and p=0.0010.

Figures 24A-24F. Sertraline response prediction based on circVDAC2, circTRIM69, or circCYP24A1. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit decreased circVDAC2 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circVDAC2 levels have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 0.9956 and p<0.0001. (C) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit decreased circTRIM69 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, **p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (D) Differences in baseline circTRIM69 levels have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p<0.0001. (E) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit decreased circCYP24A1 levels at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, **p<0.01, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (F) Differences in baseline circCYP24A1 levels have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p<0.0001.

Figures 25A-25B. Sertraline response prediction based on the ratio of circICAM1 vs circHMGA2. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit an increased circICAM1 vs circHMGA2 ratio at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circICAM1 vs circHMGA2 ratio have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p<0.0001.

Figures 26A-26B. Sertraline response prediction based on the ratio of circICAM1 vs circHMGA2. (A) Patients with MDD that achieved response after 8 weeks of Sertraline treatment (Sert R) exhibit an increased circICAM1 vs circVDAC2 ratio at baseline (before treatment) compared to MDD patients that did not achieve response to Sertraline (SERT NR) and unaffected Controls (Control). Data were acquired with circRNA array profiling in total RNA extracted from whool blood derived from the University of Texas Southwestern (EMBARC study). ****p<0.0001, based on ANOVA with Tukey's post-hoc corrections for multiple comparisons, N=15 for SERT R and SERT NR and N= 8 for Control. (B) Differences in baseline circICAM1 vs circVDAC2 ratio have an outstanding predictive value for predicting response after 8 weeks of Sertraline treatment based on receiver operating characteristic curve (ROC curve; a graphical plot that illustrates the diagnostic ability of a binary classifier system). Area under the curve = 1.000 and p<0.0001.

Figure 27. Backspliced junction sequences for selected circRNAs. Graph showing the sequences of the unique circRNA backspliced junction for an exemplary number of species of selected circRNAs (SEQ ID NO's 242-287) PCR primers are designed to span these backspliced circRNA junction sequences.

Figure 28. Exemplary number of species of selected circRNA-specific PCR primers for top circRNA candidates. Graph showing primer pair for PCR-based detection of selected circRNAs (SEQ ID NO's 288-433).

Detailed Description

According to an embodiment the present disclosure provides compositions, kits, assays, systems, and methods for the identification, diagnosis, screening, treatment and/or monitoring of brain disorders including, but not necessarily limited to, psychiatric disorders, such as Major Depressive Disorder (MDD) and Bipolar Disorder (BD). For the purposes of the present disclosure the term "Major Depressive Disorder (s)" or "MDD" is a term that describes a psychiatric disease also known as "unipolar depression", "monopolar depression", or just

"depression" and includes all subtypes and classifications of such illness. The term "Bipolar Disorder" or "BD" is a term for the spectrum of psychiatric disorders formerly called manic-depressive illness or manic depression and includes all subtypes and classifications of such illness, including Bipolar Disorder type I, Bipolar disorder type II, and Cyclothymic Disorder (also called Cyclothymia). The term antidepressant treatment is a broad term that encompasses all drugs used for treatment of MDD, including but not limited to Selective Serotonin Reuptake Inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitors (SNRIs), Monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants, and other atypical antidepressants.

According to a specific embodiment, the present disclosure provides a plurality of circular RNAs (circRNAs) the expression of which is correlated with MDD diagnosis or severity, or response or remission to specific antidepressant treatment. CircRNAs are a category of long non-coding RNAs (ncRNAs) that are derived from the circularization and covalent joining of backspliced exons and/or introns. CircRNAs are particularly enriched in the mammalian brain (at least 100,000 different circRNAs have been identified in the human brain), yet, with few exceptions, lack the capacity of being translated into protein. Some circRNAs are known to sequester microRNAs (miRNAs) by containing partial complementary sequences and others to associate with RNA-binding proteins (RBPs) and transcription factors. Recent work has suggested that circRNAs could be altered in neurological and psychiatric disorders and that they could be responsible for regulating brain development, maturation, plasticity, and aging. Due to their closed loop structure, circRNAs are particularly resistant to degradation thus exhibit very high stability, with half-lives ranging from a few days to a week. This unparallel stability allows circRNAs to accumulate in various tissues and bodily fluids, whereas their tissue- and disease state- specificity allows them to serve as ideal biomarkers.

Tables 1-9 provide the specific circRNAs which showed significantly altered expression based on circRNA array profiling in the blood of individuals diagnosed with MDD that were found to exhibit remission to different antidepressant treatments vs patients with MDD that did not achieve remission after antidepressant treatment or circRNAs that show altered expression 8 weeks after treatment vs baseline (before treatment). For the purposes of the present disclosure, the circRNAs provided in Tables 1-9 are collectively referred to herein as "MDD-treatment predictive circRNAs".

Specifically, Table 1 provides circRNAs which showed significantly altered expression at baseline (before onset of treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD that achieved remission after 30 weeks of SSRI treatment (SSRI-R baseline) vs patients with MDD that did not achieve remission after 30 weeks of SSRI treatment (SSRI-NR baseline).

Table 2 provides circRNAs which showed significantly altered expression 8 weeks after treatment in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with

MDD that achieved remission after 30 weeks of SSRI treatment (SSRI-R 8 week) vs patients with MDD that did not achieve remission after 30 weeks of SSRI treatment (SSRI-NR 8 week).

Table 3 provides circRNAs which showed significantly altered expression at baseline (before onset of treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD that achieved remission after 30 weeks of SNRI treatment (SNRI-R baseline) vs patients with MD D that did not achieve remission after 30 weeks of SSRI treatment (SNRI-NR baseline).

Table 4 provides circRNAs which showed significantly altered expression 8 weeks after treatment in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD that achieved remission after 30 weeks of SNRI treatment (SNRI-R 8 week) vs patients with MDD that did not achieve remission after 30 weeks of SSRI treatment (SNRI-NR 8week).

Table 5 provides circRNAs which showed significantly altered expression 8 weeks after treatment vs baseline (before treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD that achieved remission after 30 weeks of SSRI treatment (SSRI-R 8week vs SSRI-R baseline).

Table 6 provides circRNAs which showed significantly altered expression 8 weeks after treatment vs baseline (before treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD that did not achieve remission after 30 weeks of SSRI treatment (SSRI-NR 8week vs SSRI-NR baseline).

Table 7 provides circRNAs which showed significantly altered expression 8 weeks after treatment vs baseline (before treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD that achieved remission after 30 weeks of SNRI treatment (SNRI-R 8week vs SNRI-R baseline).

Table 8 provides circRNAs which showed significantly altered expression 8 weeks after treatment vs baseline (before treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD that did not achieve remission after 30 weeks of SNRI treatment (SNRI-NR 8week vs SNRI-NR baseline).

Table 9 provides circRNAs which showed significantly altered expression 8 weeks after treatment vs baseline (before treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD who achieved remission after 30 weeks of MAOI treatment (MAOI-R 8week vs MAOI-R baseline). For the purposes of the present disclosure, the term "significantly altered expression" means that the expression of a circRNA in patient samples is significantly lower or higher between two groups of compared samples via two-tailed Student's t-test with $p<0.05$ as a cutoff p-value for statistical significance and a fold change of more 1.5-fold (either reduction or increase).

Tables 10-14 provide the specific circRNAs which showed significantly altered expression based on circRNA array profiling in the blood of individuals diagnosed with either MDD or BD vs unaffected controls or circRNAs that show altered expression 8 weeks after

treatment vs baseline (before treatment) in either patients with MDD or BD, or controls. For the purposes of the present disclosure, the circRNAs provided in Tables 10-14 are collectively referred to herein as "MDD and BD diagnosis-related circRNAs".

Specifically, Table 10 provides circRNAs which showed significantly altered expression at baseline (before onset of treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD (MDD baseline) vs controls (Control Baseline).

Table 11 provides circRNAs which showed significantly altered expression 8 weeks after treatment in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with MDD (MDD 8 week) vs controls (Control 8 week).

Table 12 provides circRNAs which showed significantly altered expression at baseline (before onset of treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with BD (BD baseline) vs controls (Control Baseline).

Table 13 provides circRNAs which showed significantly altered expression 8 weeks after treatment in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with BD (BD 8 week) vs controls (Control 8 week).

Table 14 provides circRNAs which showed significantly altered expression 8 weeks after treatment vs baseline (before treatment) in peripheral blood mononuclear cells (PBMCs) derived from the blood of patients with BD (BD 8week vs BD baseline). For the purposes of the present disclosure, the term "significantly altered expression" means that the expression of a circRNA in patient samples is significantly lower or higher between two groups of compared samples via two-tailed Student's t-test with $p<0.05$ as a cutoff p-value for statistical significance and a fold change of more 1.5-fold (either reduction or increase).

Tables 15-18 provide the specific circRNAs which showed significantly altered expression based on circRNA array profiling in whole blood of individuals diagnosed MDD that were treated with Sertraline for 8 weeks and either responded (Sert R) or did not respond to treatment (Sert NR). For the purposes of the present disclosure, the circRNAs provided in Tables 15-18 are collectively referred to herein as "Sertraline treatment-related circRNAs".

Specifically, Table 15 provides circRNAs which showed significantly altered expression at baseline (before onset of treatment) in whole blood of individuals diagnosed MDD that were treated with Sertraline for 8 weeks and either responded (Sert R) or did not respond to treatment (Sert NR).

Table 16 provides circRNAs which showed significantly altered expression 1 week after treatment in whole blood of individuals diagnosed MDD that were treated with Sertraline for 8 weeks and either responded (Sert R) or did not respond to treatment (Sert NR).

Table 17 provides circRNAs which showed significantly altered expression 1 week after treatment in whole blood of individuals diagnosed MDD that were treated with Sertraline for 8 weeks and responded (Sert R)vs baseline expression in the same patients (Sert R 1 week vs Sert R baseline).

Table 18 provides circRNAs which showed significantly altered expression 1 week after treatment in whole blood of individuals diagnosed MDD that were treated with Sertraline for 8 weeks and did not respond (Sert NR) vs baseline expression in the same patients (Sert NR 1 week vs Sert NR baseline).

Each of the 18 Tables includes the unique transcript start and end chromosomal coordinates (tx Start and tx End), the chromosome (Chr) number and strand, the circRNA type, the circRNA alias based on circBase (http://circbase.mdc-berlin.de) or other circRNA databases the relative to Control fold change and uncorrected p-value, and the host gene symbol for significantly altered circRNAs ($p < .05$, two-tailed Students t-test)." All circRNA array experiments used for Tables 1-16 were performed by employing a commercially available circRNA microarray platform that uses 13,617 circRNA splice junction probes designed based on previous RNA sequencing and circRNA annotation data (Service sold by Arraystar Inc.). Additional methods for identifying these brain disorder-associated circRNA biomarkers are discussed in the Experimental section below.

Given that harsh RNaseR treatment can partially digest some circRNAs together with all linear RNAs, thus making circRNA screening semi-quantitative and given the high cost of such screening methods, the present disclosure also provides novel validated and sequence-verified circRNA-specific qRT-PCR primers aimed at the unique circRNA-specific splice junction, which enable the measurement of a subset of dysregulated circRNAs in non RNaseR-treated samples. The sequences of the backspliced junctions of a few selected circRNAs are shown in Fig. 16. PCR primers are designed so as to span the unique circRNA backspliced junctions, so that they specifically detect the circRNA of interest and not other linear or circular isoforms derived from the same gene.

According to a specific embodiment, the present disclosure provides circCDR1as (also known as CDR1as; circRNA alias via circbase and circinteractome databases: hsa_circ_0001946; see also Figure 16) and circTULP4 (also known as circTCONS_00011401; circRNA alias via circbase and circinteractome databases: hsa_circ_0131196; see also Figure 16) as biomarkers predicting response or remission to SSRI treatment in either whole blood (Fig. 1) or PBMCs or other blood-derived samples from patients with MDD (Fig. 2), as well as other biological fluids including saliva and urine, either before treatment (baseline), or after the start of antidepressant treatment. The backspliced junction sequence used for the detection of human circCDR1as and circTULP4 are shown in Fig. 27, whereas the primers designed for their detection via PCR are shown in Fig. 28. These two circRNAs could be used alone or in conjunction with each other to predict response or remission of MDD patients to SSRI treatment.

According to a specific embodiment, the present disclosure provides that circTIAM1 (hsa_circ_0115791), circCHIC1 (hsa_circ_0091072), circSYNGR2 (hsa_circ_0045871), circSLC41A2 (hsa_circ_0027966), circCOL12A1(hsa_circ_0077032), circCOBL (hsa_circ_0080217), circHERC2 (hsa_circ_0005387), circICT1 (hsa_circ_0045581), circDDX50

(hsa_circ_0007097), circARHGEF10L (hsa_circ_0010210), circCOMT (hsa_circ_0062277), circWSB1 (hsa_circ_0042488), circKIAA1429 (hsa_circ_0084904), circNBAS (hsa_circ_0052712), circPDXDC1 (hsa_circ_0038011), circBPNT1 (hsa_circ_0000185), circMIR5695 (hsa_circ_0130587), circGRIP1 (hsa_circ_0099053), circNUP88 (hsa_circ_0041694), circEPHB4 (hsa_circ_0001730), circSETBP1 (hsa_circ_0006491), circHDHD2 (hsa_circ_0108522), circSIN3A (hsa_circ_0000636), circPPP6R1 (hsa_circ_0000959), circPDE5A (hsa_circ_0002474), circPDE5A (hsa_circ_0070805), circAHSA1 (hsa_circ_0032777), circLTBP1 (hsa_circ_0053907), circDAAM1 (hsa_circ_0000543), circPICALM (hsa_circ_0003695), circLRBA (hsa_circ_0071210), circCHD1L (hsa_circ_0013953), circTTC27 (hsa_circ_0003195), circLIMS1 (hsa_circ_0008348), circPIK3C2B (hsa_circ_0111746), circNRIP1 (hsa_circ_0004771), circLSM14A (hsa_circ_0008030), circPIP4K2A (hsa_circ_0017972), and circMBNL1 (hsa_circ_0001348) (see also Fig. 27-28), or any of the significantly altered circRNAs between SSRI R (those that achieved response or remission to SSRIs) and SSRI NR (those that did not achieve response or remission to SSRIs) shown in Table 1 (baseline) and Table 2 (8 weeks after treatment) and included in sequences 1-241, or circRNAs altered after SSRI treatment vs baseline in SSRI R patients (Table 5; SSRI R 8 week vs SSRI R baseline), or SSRI NR patients (Table 6; SSRI NR 8 week vs SSRI NR baseline) and included in sequences 1-241 (selected Table 5-6 circRNAs are: circMIR5695 (hsa_circ_0130587), circDNMBP (hsa_circ_0092382), circSTX1A (hsa_circ_0009012), circUSHBP1 (hsa_circ_0049965), circTMEM245 (hsa_circ_0087903), circGREB1L (hsa_circ_0003653), circROBO2 (hsa_circ_0066556), circHIVEP2 (hsa_circ_0007021), circIARS (hsa_circ_0087497), circFOXO3 (hsa_circ_0006404), circANXA8 (hsa_circ_0018309), circATIC (hsa_circ_0058058), circENC1 (hsa_circ_0073009), circPTK2 (hsa_circ_0005273), circWSB1 (hsa_circ_0042488), circITGAV hsa_circ_0057319), circATF6 (hsa_circ_0008857), circABL1 (hsa_circ_0089131), circAMBRA1 (hsa_circ_0009155), circRANGAP1 (hsa_circ_0063526), circSELL (hsa_circ_0000157) and circZC3H6 (hsa_circ_0001062), as biomarkers predicting response or remission to SSRI treatment in either whole blood or PBMCs or other blood-derived samples from patients with MDD, as well as other biological fluids including saliva and urine, either before treatment (baseline), or at various intervals after the start of antidepressant treatment. The backspliced junction sequences for some of these circRNAs are shown in Fig. 27, whereas the primers designed for their detection via PCR are shown in Fig. 28. Any of these circRNAs mentioned above in this paragraph and outlined in detail in Tables 1, 2, 5, and 6 could be used alone or in conjunction with each other to predict response or remission of MDD patients to SSRI treatment.

According to a specific embodiment, the present disclosure provides that circRERE (hsa_circ_0009574), circTOX2 (hsa_circ_0001160), circZFHX4 (hsa_circ_0084789), circHEATR5A (hsa_circ_0031570), circITGAV (hsa_circ_0057319), circGRIP1 (hsa_circ_0099053), circPPP2CA (hsa_circ_0073942), circDDX50 (hsa_circ_0007097),

circYTHDF1 (hsa_circ_0004858), circRERE (hsa_circ_0009581), hsa_circ_0001655 (no name; only circRNA alias available), circNBEA (hsa_circ_0029975), circFLNC (hsa_circ_0082218), circRNF167 (hsa_circ_0041623), circICT1 (hsa_circ_0045581), circPTPRM (hsa_circ_0008584), circXBP1 (hsa_circ_0001216), circGSTP1 (hsa_circ_0023115), circANAPC7 (hsa_circ_0028198), circLDHB (hsa_circ_0025597), circZFC3H1 (hsa_circ_0008912), circVRK2 (hsa_circ_0120478), circDENND4A (hsa_circ_0035957), and circPIK3C3 (hsa_circ_0007765), or any of the significantly altered circRNAs between SNRI R (those that achieved response or remission to SNRIs) and SNRI NR (those that did not achieve response or remission to SNRIs) shown in Table 3 (baseline) and Table 4 (8 weeks after treatment) and included in sequences 1-241, or circRNAs altered after SNRI treatment vs baseline in SNRI R patients (Table 7; SNRI R 8 week vs SNRI R baseline), or SSRI NR patients (Table 8; SNRI NR 8 week vs SNRI NR baseline) and included in sequences 1-241 (selected Table 5-6 circRNAs are: circSAP130 (hsa_circ_0056390), circNFAM1 (hsa_circ_0001240), circTMEM245 (hsa_circ_0087903), circHBA2 (hsa_circ_0037139), circGREB1L (hsa_circ_0003653), circGPD1L (hsa_circ_0123503), circDHX33 (hsa_circ_0000740), circITGAV (hsa_circ_0057319), circRERE (hsa_circ_0009574), circRNF167 (hsa_circ_0041623), circIRAK1BP1 (hsa_circ_0077109), circC4orf27 (hsa_circ_0071439), circDDX50 (hsa_circ_0007097), circSTX1A (hsa_circ_0009012), circRFC5 (hsa_circ_0028628), circC20orf24 (hsa_circ_0001151), circANXA8 (hsa_circ_0018309), circBPNT1 (hsa_circ_0000185), circTMEM245 (hsa_circ_0087888), circARHGEF10L (hsa_circ_0010210), circWSB1 (hsa_circ_0042488), and circNR6A1 (hsa_circ_0088511)), as biomarkers predicting response or remission to SSRI treatment in either whole blood or PBMCs or other blood-derived samples from patients with MDD, as well as other biological fluids including saliva and urine, either before treatment (baseline), or at various intervals after the start of antidepressant treatment. The backspliced junction sequences for some of these circRNAs are shown in Fig. 27, whereas the primers designed for their detection via PCR are shown in Fig. 28. Any of these circRNAs mentioned above in this paragraph and outlined in detail in Tables 3, 4, 7, and 8 could be used alone or in conjunction with each other to predict response or remission of MDD patients to SNRI treatment.

According to a specific embodiment, the present disclosure provides that any of the significantly altered circRNAs before and after treatment with MAOIs in MAOI R (those that achieved response or remission to MAOIs) shown in Table 9 (MAOI R 8 week vs MAOI R baseline), such as circFCHO2 (hsa_circ_0072954), circDENND4A (hsa_circ_0035944), circSLC38A1 (hsa_circ_0098630), circEPB41 (hsa_circ_0000041), circPTK2 (hsa_circ_0008305), circNAA40 (hsa_circ_0022623), circREPS1 (hsa_circ_0005210), circCAMKMT (hsa_circ_0006530), circKIAA1586 (hsa_circ_0131987), circMYBL1 (hsa_circ_0084642), circMPHOSPH9 (hsa_circ_0006615), circTBC1D31 (hsa_circ_0001820), circSLC39A10 (hsa_circ_0057551), circRERE (hsa_circ_0009581), circSLC38A2

(hsa_circ_0025984), circSBDSP1 (hsa_circ_0006688), circPTDSS1 (hsa_circ_0001816), circFANCL (hsa_circ_0001009), circCCT3 (hsa_circ_0014724), and circBRE (hsa_circ_0053317), as biomarkers predicting response or remission to MAOI treatment in either whole blood or PBMCs or other blood-derived samples from patients with MDD, as well as other biological fluids including saliva and urine, either before treatment (baseline), or at various intervals after the start of antidepressant treatment. Any of these circRNAs mentioned above in this paragraph and outlined in detail in Table 9 and shown in sequences 1-241 could be used alone or in conjunction with each other to predict response or remission of MDD patients to MAOI treatment.

According to a specific embodiment, the present disclosure provides that any of the significantly altered circRNAs between patients with MDD and Controls shown in Table 10 (baseline MDD vs baseline Controls) and Table 11 (8 weeks after treatment MDD vs Control 8 weeks after first visit), such as circRALGAPB (hsa_circ_0060342), circTBC1D14 (hsa_circ_0003201), circMASTL (hsa_circ_0018031), circEXOC4 (hsa_circ_0082440), circHNRNPA1 (hsa_circ_0026700), circSTRN (hsa_circ_0054033), circWDFY1 (hsa_circ_0001101), circNHP2L1 (hsa_circ_0063598), circITGB7 (hsa_circ_0026568), circSELL (hsa_circ_0000157), circSUSD1 (hsa_circ_0088059), circFBN3 (hsa_circ_0092332), circLARS (hsa_circ_0074407), circTRIP13 (hsa_circ_0071681), circDAGLB (hsa_circ_0006093), circDPH7 (hsa_circ_0006502), circPRELID2 (hsa_circ_0008132), circDAGLB (hsa_circ_0002067), circMIR5695 (hsa_circ_0130587), circUBA2 (hsa_circ_0050547), circS100PBP (hsa_circ_0011451), circITGAV (hsa_circ_0057319), circSAMD8 (hsa_circ_0018905), circNRIP1 (hsa_circ_0061276), circAKAP17A (hsa_circ_0007352), circTBC1D14 (hsa_circ_0003201), circHNRNPA1 (hsa_circ_0026700), circSYNGR2 (hsa_circ_0045871), circRALGAPB (hsa_circ_0060342), circSAMD8 (hsa_circ_0006148), circDNMBP (hsa_circ_0092382), circCWC27 (hsa_circ_0072654), circCORO1C (hsa_circ_0028067), circMTHFD2L (hsa_circ_0069977), circPLEKHG1 (hsa_circ_0078264), circARMC9 (hsa_circ_0058651), circN4BP2L2 (hsa_circ_0029934), and circPNN (hsa_circ_0101802), as biomarkers facilitating the diagnosis of BDD in either whole blood or PBMCs or other blood-derived samples, as well as other biological fluids including saliva and urine, either before treatment (baseline), or at various intervals after the start of antidepressant or other form of psychiatric treatment. The backspliced junction sequences for some of these circRNAs are shown in Fig. 27, whereas the primers designed for their detection via PCR are shown in Fig. 28. Any of these circRNAs mentioned above in this paragraph and outlined in detail in Tables 10 and 11 and shown in sequences 1-241 could be used alone or in conjunction with each other to diagnose MDD in patients with or without depressive symptoms.

According to a specific embodiment, the present disclosure provides that circSRGN (hsa_circ_0018594), circTM2D3 (hsa_circ_0003813), circAGFG1 (hsa_circ_0058514), circDCP2 (hsa_circ_0001520), circAGFG1 (hsa_circ_0058520), circRFWD2

(hsa_circ_0015364), circMED13L (hsa_circ_0000443), circDCP2 (hsa_circ_0073608), circRNF149 (hsa_circ_0001058), circSCMH1 (hsa_circ_0005303), circDICER1 (hsa_circ_0000564), circEYA3 (hsa_circ_0008057), circPAPPA2 (hsa_circ_0015382), circKPNB1 (hsa_circ_0044301), circTLE1 (hsa_circ_0087331), circMTMR3 (hsa_circ_0001219), circMED13L (hsa_circ_0000442), circHLHL2 (hsa_circ_0071375), circKCNH1 (hsa_circ_0016348), circPICALM (hsa_circ_0023928), circSATB2 (hsa_circ_0003915), circHTRA1 (hsa_circ_0020275), circSATB2 (hsa_circ_0007422), circCAPZA1 (hsa_circ_0013526), circKLHL8 (hsa_circ_0127236), circCASC15 (hsa_circ_0075826), circSIDT2 (hsa_circ_0024379), circFBXO24 (hsa_circ_0081481), circTULP4 (hsa_circ_0131196), circHELZ2 (hsa_circ_0001176), circNPRL3 (hsa_circ_0037127), circTUBA8 (hsa_circ_0062191), circKRT8 (hsa_circ_0026467), circMETTL15 (hsa_circ_0000282), circGSE1 (hsa_circ_0040726), circFARS2 (hsa_circ_0075533), circPIGU (hsa_circ_0001142), circCHEK2 (hsa_circ_0004128), circEPB41L5 (hsa_circ_0056264), circALDOA (hsa_circ_0038981), circFBXO24 (hsa_circ_0081481), circSATB2 (hsa_circ_0007422), circHTRA1 (hsa_circ_0020275), circCAPZA1 (hsa_circ_0013526), circSATB2 (hsa_circ_0003915), circMETTL15 (hsa_circ_0000282), circTULP4 (hsa_circ_0131196), circFARS2 (hsa_circ_0075533), circCASC15 (hsa_circ_0075826), circNSD1 (hsa_circ_0075166), circSIDT2 (hsa_circ_0024379), circEPB41L5 (hsa_circ_0056264), circNPRL3 (hsa_circ_0037127), circHELZ2 (hsa_circ_0001176), circGSE1 (hsa_circ_0040726), circTUBA8 (hsa_circ_0062191), circCHEK2 (hsa_circ_0004128), circMYO1F (hsa_circ_0008990), circPIGU (hsa_circ_0001142), and circLPAR1 (hsa_circ_0004928), or any of the significantly altered circRNAs between patients with BDD and Controls or patients with MDD shown in Table 12 (baseline BD vs baseline Contrls) and Table 13 (8 weeks after treatment BD vs Control 8 weeks after first visit) some of which are shown in sequences 1-241, or circRNAs altered after various types of treatment vs baseline in BDD patients regardless or not if these patients responded to such treatments (Table 14; BD 8 week vs BD R baseline), such as some of which are shown in sequences 1-241, as biomarkers facilitating the diagnosis of BDD in either whole blood or PBMCs or other blood-derived samples, as well as other biological fluids including saliva and urine, either before treatment (baseline), or at various intervals after the start of antidepressant or other form of psychiatric treatment. The backspliced junction sequences for some of these circRNAs are shown in Fig. 27, whereas the primers designed for their detection via PCR are shown in Fig. 28. Any of these circRNAs mentioned above in this paragraph and outlined in detail in Tables 12, 13, and 14 and shown in sequences 1-241 could be used alone or in conjunction with each other to diagnose BD in patients with or without depressive symptoms.

According to a specific embodiment, the present disclosure provides that circDDR1 (hsa_circ_0005133), circHERC4 (hsa_circ_0007997), circLAMA3 (hsa_circ_0047232), circCYP24A1 (hsa_circ_0060930), circSESN1 (hsa_circ_0077578), circTRIM69

(hsa_circ_0103668), circSLIT3 (hsa_circ_0074930), circHMGA2 (hsa_circ_0027446), circRPS2 (hsa_circ_0037376), circRASSF8 (hsa_circ_0025638), circHMMR (hsa_circ_0128496), circDUSP22 (hsa_circ_0075410), circICAM1 (hsa_circ_0049241), circRPL13 (hsa_circ_0092337), circCYP26B1 (hsa_circ_0055161), circMAPK6 (hsa_circ_0035301), circCCDC56 (hsa_circ_0043912), circPPP6R1 (hsa_circ_0000959), circXPO5 (hsa_circ_0076560), circULK4 (hsa_circ_0123780), circVDAC2 (hsa_circ_0007335), circNFATC3 (hsa_circ_0005615), circMALAT1 (hsa_circ_0002082), and circFKBP8 (hsa_circ_0050124), circSMARCA2 (hsa_circ_0001834), circARVCF (hsa_circ_0092330), circSKA3 (hsa_circ_0029696), circZNF236 (hsa_circ_0002799), circRTEL1-TNFRSF6B (hsa_circ_0061170), circGPATCH1 (hsa_circ_0050444), circCNOT1 (hsa_circ_0039626), circWDR37 (hsa_circ_0017449), circCMTM7 (hsa_circ_0005414), circDYSF (hsa_circ_0001029), circMIR5695 (hsa_circ_0130587), circDUS2L (hsa_circ_0039908), circRALGAPB (hsa_circ_0060342), circADAM22 (hsa_circ_0080968), circMYO9B (hsa_circ_0000907), circSETD2 (hsa_circ_0065149), circPCSK5 (hsa_circ_0087234), circZFR (hsa_circ_0072088), circUBR5 (hsa_circ_0001819) circSETD2 (hsa_circ_0002569), and circDLG5 (hsa_circ_0006649) (see also Fig. 27-28), or any of the significantly altered circRNAs between Sertraline responders (Sert R) and Sertraline non-responders (Sert NR) shown in Table 15 (baseline) and Table 16 (1 week after treatment) and included in sequences 1-241, as biomarkers predicting response or remission to Sertraline treatment in either whole blood or PBMCs or other blood-derived samples from patients with MDD, as well as other biological fluids including saliva and urine, either before treatment (baseline), or at various intervals after the start of antidepressant treatment. The backspliced junction sequences for some of these circRNAs are shown in Fig. 27, whereas the primers designed for their detection via PCR are shown in Fig. 28. Any of these circRNAs mentioned above in this paragraph and outlined in detail in Tables 15, or 16 and sequences 1-241 could be used alone or in conjunction with each other to predict response or remission of MDD patients to Sertraline treatment.

According to a specific embodiment, the present disclosure provides that circDYSF (hsa_circ_0001029), circDDR1 (hsa_circ_0005133), circSTRN (hsa_circ_0054033), circTIAM2 (hsa_circ_0008289), circRANBP17 (hsa_circ_0004738), circHERC4 (hsa_circ_0007997), circTRIM28 (hsa_circ_0052372), circRPL13 (hsa_circ_0092337), circINCENP (hsa_circ_0000315), circGDI2 (hsa_circ_0005379), circSMAP2 (hsa_circ_0011898), circICAM1 (hsa_circ_0049241), circHABP4 (hsa_circ_0087631), circCALR (hsa_circ_0049637), circZNF646 (hsa_circ_0000691), circPREX1 (hsa_circ_0001167), circAP3S1 (hsa_circ_0002919), circZC3HC1 (hsa_circ_0082319), circBCKDHA (hsa_circ_0000937), circPDPN (hsa_circ_0010027), circDYSF (hsa_circ_0001029), circDDR1 (hsa_circ_0005133), circAMBRA1 (hsa_circ_0009155), circTTTY10 (hsa_circ_0142668), circHERC4 (hsa_circ_0007997), circANKRA2 (hsa_circ_0129585), circLCORL (hsa_circ_0125866), circTRIM28 (hsa_circ_0052372), circRPL13 (hsa_circ_0092337), circEIF4A2

(hsa_circ_0068464), circGDI2 (hsa_circ_0005379), circSMAP2 (hsa_circ_0011898), circICAM1 (hsa_circ_0049241), circTMEM39B (hsa_circ_0006349), circHABP4 (hsa_circ_0087631), circCALR (hsa_circ_0049637), circZNF646 (hsa_circ_0000691), circAP3S1 (hsa_circ_0002919), circZC2HC1 (hsa_circ_0082319), and circBCKDHA (hsa_circ_0000937) (see also Fig. 27-28), or any of the significantly altered circRNAs after 1 week of Sertraline treatment vs baseline (before treatment) in either responders (Sert R) or non-responders (Sert NR) to Sertraline shown in Table 17 (Sert R) and Table 18 (Sert NR) and included in sequences 1-241, as biomarkers predicting response or remission to Sertraline treatment in either whole blood or PBMCs or other blood-derived samples from patients with MDD, as well as other biological fluids including saliva and urine, either before treatment (baseline), or at various intervals after the start of antidepressant treatment. The backspliced junction sequences for some of these circRNAs are shown in Fig. 27, whereas the primers designed for their detection via PCR are shown in Fig. 28. Any of these circRNAs mentioned above in this paragraph and outlined in detail in Tables 17, or 18 and sequences 1-241 could be used alone or in conjunction with each other to predict response or remission of MDD patients to Sertraline treatment.

According to an embodiment, the present disclosure provides a composition, kit or assay, comprising a panel of at least 1 circRNA, wherein the circRNA is a biomarker for either predicting response or remission to antidepressant treatment, or diagnosis of MDD and BD, or evaluation of disease severity in a subject in need thereof. According to a further embodiment, the present disclosure provides a composition comprising a panel of at least 2 circRNAs, where the 2 circRNAs are circRNA biomarkers related to response or remission to antidepressant treatment, or diagnosis of MDD and BD, or evaluation of disease severity in a subject in need thereof. According to a still further embodiment, the present disclosure provides a composition comprising a panel of a plurality of circRNAs, where the plurality circRNAs are circRNA biomarkers related to response or remission to antidepressant treatment, or diagnosis of MDD and BD, or evaluation of disease severity in a subject in need thereof. In one embodiment, this plurality of circRNA biomarkers may include 3 or more, or 2 to 10, 2 to 25, 2 to 50, 2 to 100, 2 to 200, 2 to 500, 2 to 1000, 2 to 2000, or 2 to 4000, or more than 4000 circRNAs, where the circRNAs are brain disorder-associated circRNA biomarkers. According to an embodiment, at least one of the circRNAs in the composition may include one or a plurality of circRNAs shown in Tables 1-18 and/or sequences 1-241. According to an embodiment, at least one of the circRNAs in the composition may be circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69, or a circRNAs shown in Tables 1-18 and/or sequences 1-241.

According to an embodiment, the present disclosure provides an assay for the identification, diagnosis, screening, treatment and/or monitoring of a patient who has been or is

being diagnosed, treated for, or who is suspected of having MDD or BD. For the purposes of the present disclosure, the terms "patient" or "subject" refer to any animal (e.g., mammal), including, but not limited to, humans, non-human primates, equines, canines, felines, rodents, and the like.

In an embodiment, the assay may include obtaining or providing a sample from a patient or an individual with or with an increased risk for MDD or BD (family history of brain disease and/or genetic predisposition, or a person with developmental delay or other clinical symptoms that could be associated with increased risk for developing a brain disorder) and measuring the expression of one or more of the circRNA biomarkers disclosed herein to produce an expression profile. According to an embodiment, at least one of the circRNAs in the expression profile may be circTULP4. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circCDR1as. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circCHIC1. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circPICALM. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circSATB2. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circCOMT. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circRERE. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circMIR5695. According to another specific embodiment, at least one of the circRNAs in the expression profile may be DDX50. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circRALGAPB. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circICAM1. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circDDR1. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circADAM22. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circMALAT1. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circHMGA2. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circCYP24A1. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circDLG5. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circMYO9B. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circNFATC3. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circDUSP22. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circFKBP8. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circVDAC2. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circTRIM69. According to another specific

embodiment, at least one of the circRNAs in the expression profile may be selected from SEQ ID NOs. 1-241, or Tables 1-18. The assay may further include probes, or primers to detect one or more of the circRNAs described above.

The assay may further include the step of comparing the patient's expression profile to a baseline. For identification, diagnostic, screening, or risk assessment purposes, the baseline may be an expression profile derived from one or more unaffected individuals (i.e. "a control profile") or from one or more affected individuals (i.e. a "disease-state profile"). For treatment or monitoring purposes the baseline may be a control profile, disease state profile, or a previously obtained expression profile from the same individual. Because brain disorders such as MDD and BD tend to be highly inherited, there may circumstances wherein it is useful or informative for the baseline to be an expression profile derived from one or more individuals who are blood relatives of the patient.

According to some embodiments the assay may include or provide access to a database of expression profiles including, for example, control profiles, disease-state profiles, and the like. The database may include expression profiles from individuals or consolidated expression profiles from groups of individuals. The database may be curated such that all identifying information from any specific individual is scrubbed. The database may enable review of individual or consolidated expression profiles over time in order to, for example, monitor and/or evaluate disease progression, drug-response, therapy response, etc.

According to an embodiment, the sample may be, or may be produced from, a bodily fluid such as blood (including blood products such as serum, whole blood, plasma, and blood components and cells) cerebral fluid, saliva, urine, or blood from umbilical cords. According to another embodiment, the sample may be, or may be produced from, bodily tissue, such as a skin biopsy, umbilical cord tissue, or deciduous teeth.

According to a specific example, the sample may be neurons taken from the patient (such as those in the gut's enteric system) or derived from the patient from any cells from the aforementioned bodily fluids and tissues. For example, the neurons could be derived from induced pluripotent stem cells (iPSCs), embryonic stem cells, mesenchymal stem cells, or engineered somatic cells, which can in turn be derived from cells of bodily fluids and tissues as described by Kastenberg Z. J., et al, (2008) Alternative sources of pluripotency: science, ethics, and stem cells. Transplant Rev (Orlando) 22,215-222, which is hereby incorporated by reference for all purposes.

According to a specific embodiment, the neurons are derived from iPSCs. iPSCs are similar to embryonic stem cells (ESC) in that iPSCs can be expanded indefinitely at the pluripotent stage and are able to differentiate into all three primary germ layers and, therefore, potentially into all the cell types of the body. iPSCs are derived from somatic cells and the process does not involve the use of embryonic cells, removing ethnical concerns. Moreover,

iPSC cells can be derived from patient samples that are easily and even non-invasively obtained such as skin, saliva, blood, or urine samples.

According to various embodiments, the assay may include any number of sample preparation techniques and compositions including, for example, sample isolation and/or culturing and suitable reagents therefore, the use of suitable buffering solutions, etc.

According to another embodiment, the assay may include amplification of one or more brain disorder-associated circRNA biomarkers in a patient sample. Suitable amplification techniques include, for example, polymerase chain reaction (PCR), including Quantitative Real-Time PCR (qRT-PCR), reverse transcription PCR (RT-PCR), quantitative reverse transcription RT-PCR (QRT-PCR), Multiplex PCR, Nested PCR, Quantitative PCR, Hot-start PCR, Touchdown PCR, Assembly PCR, and droplet PCR.

In general, PCRs and qRT-PCRs employ the use of primers which are specifically designed to hybridize to and amplify a sequence of interest using multiple cycles of denaturation, annealing of primer pairs to opposite strands, and primer extension to exponentially produce copies of target nucleic acid sequence. Such PCRs can also be done following reverse transcription of RNA, including RNase-R-treated RNA. Accordingly, the present disclosure includes PCR and qRT-PCR primers that amplify at least a portion of one or more brain disorder-associated circRNA biomarkers to facilitate detection and/or quantification thereof.

According to an embodiment, at least one of the circRNAs being amplified may be selected from the group consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69.

According to an embodiment, at least one of the circRNAs being amplified may be selected from: a circRNA encoded by the nucleotide sequences according to SEQ ID NO. 1-124.

According to an embodiment, at least one of the circRNAs being amplified may be selected from: a circRNA encoded by the nucleotide sequences according to Tables 1-18.

According to an embodiment, at least one of the circRNAs being amplified may be MDD-a MDD treatment predictive circRNAs selected from: a circRNA encoded by the nucleotide sequences according to Tables 1-9.

According to an embodiment, at least one of the circRNAs being amplified may be a MDD and BD diagnosis-related circRNAs selected from: a circRNA encoded by the nucleotide sequences according to Tables 10-14.

According to an embodiment, at least one of the circRNAs being amplified may be a Sertraline treatment-related circRNAs selected from: a circRNA encoded by the nucleotide sequences according to Tables 15-18.

According to an embodiment, the assay may be or include a hybridization assay wherein a sample from a patient is obtained and interrogated using one or more probes designed to hybridize to one or more of the brain disorder-associated circRNA biomarkers or an amplicon thereof. Those of skill in the art will be familiar with a variety of different hybridization assays for detecting RNA including, but not limited to, microarrays, Northern blotting, PCR arrays, and other related technologies. Accordingly, the present disclosure provides probes that hybridize to one or more of the brain disorder-associated circRNA biomarkers disclosed herein or an amplicon thereof. Those of skill in the art will be familiar with the process for designing appropriate probes. Depending on the particular assay begin designed, it will be understood that the probes may be appropriately labeled. Examples of commonly used labels for hybridization assay probes include, for example, radiolabels, chemiluminescent labels, intercalating dyes, fluorochromes, etc.

According to an embodiment, the assay may be or include DNA or RNA sequencing techniques. Those of skill in the art will be familiar with a variety of sequencing techniques including, but not necessarily limited to, chain terminator (Sanger) sequencing, dye terminator sequencing, pyrosequencing and single-molecule sequencing, or Nanopore or other related long-read. In some cases, RNA sequences may be reverse transcribed into DNA sequencing prior to sequencing.

According to various embodiments, the present disclosure provides a kit comprising various reagents to enable the performance of one or more assays, including optionally instructions for use of the asay, wherein the assay comprises obtaining or providing a sample from a patient and measuring the expression of one or more circRNA biomarkers disclosed herein to produce an expression profile. The kit may include, for example, buffers, primers, and/or probes as needed in order to perform the assay. The kit may include only some or all of the reagents to complete the assay. The kit may further include a database or access to a database to which the expression profile obtained from the assay may be compared.

According to various embodiments, the present disclosure provides methods for the identification, diagnosis, screening, treatment, risk assessment, and/or monitoring of brain disorders such as MDD and BD. In general, the method comprises obtaining, providing, or receiving a patient sample; assaying the sample to determine the expression levels of one or more of the brain disorder-associated circRNA biomarkers disclosed herein; and comparing the expression level to a baseline profile. The baseline profile may be, for example, a control profile, a disease-state profile, or a previously obtained expression profile from the same individual or one or more blood relatives of the patient. Comparison of the expression level of one or more of the brain disorder-associated circRNA biomarkers in the patient sample to the baseline can then be used to identify, diagnose, screen, treat, assess risk, or monitor one or more brain disorders in the patient. For example, a specific expression profile compared to a baseline profile may indicate that a patient is more or less likely to respond to a particular

medication, or a specific dose of a given medication, such as antidepressants, or that a particular medication is or is not providing a benefit or has adverse effects. Such information can be used by the patient, a caretaker, or a medical provider to make both medical and non-medical decisions including, for example, starting, stopping, or changing medication(s), changing dosage(s), etc.

As used herein, a biological marker ("biomarker" or "marker") is a characteristic that is objectively measured and evaluated as an indicator of normal biologic processes, pathogenic processes, or pharmacological responses to therapeutic interventions, consistent with NIH Biomarker Definitions Working Group (1998). Markers can also include patterns or ensembles of characteristics indicative of particular biological processes. The biomarker measurement can increase or decrease to indicate a particular biological event or process. In addition, if the biomarker measurement typically changes in the absence of a particular biological process, a constant measurement can indicate occurrence of that process. The circRNA biomarkers may be used for diagnostic and prognostic purposes, as well as for therapeutic, drug screening and patient stratification purposes (e.g., to group patients into a number of "subsets" for evaluation), as well as other purposes described herein.

As used herein, "circular RNA" is understood as a circular polynucleotide that can encode at least one protein as define herein. The production of circRNAs can be performed using various methods provided in the art. For example, U.S. Pat. No. 6,210,931 teaches a method of synthesizing circRNAs by inserting DNA fragments into a plasmid containing sequences having the capability of spontaneous cleavage and self-circularization. U.S. Pat. No. 5,773,244 teaches producing circRNAs by making a DNA construct encoding an RNA cyclase ribozyme, expressing the DNA construct as an RNA, and then allowing the RNA to self-splice, which produces a circRNA free from intron in vitro. WO1992001813 teaches a process of making single strand circular nucleic acids by synthesizing a linear polynucleotide, combining the linear nucleotide with a complementary linking oligonucleotide under hybridization conditions, and ligating the linear polynucleotide. The person skilled in the art may also use methods provided in WO2015034925 or WO2016011222 to produce circular RNA. Accordingly, methods for producing circular RNA as provided in U.S. Pat. Nos. 6,210,931, 5,773,244, WO1992001813, WO2015034925 and WO2016011222 are incorporated herewith by reference.

The term "sequence identity" or "identity," as used herein in the context of two nucleic acid or polypeptide sequences, refers to the residues in the two sequences that are the same when aligned for maximum correspondence over a specified comparison window.

As used herein, the term "sequence identity" may refer to the value determined by comparing two optimally aligned sequences (e.g., nucleic acid sequences) over a comparison window, wherein the portion of the sequence in the comparison window may comprise additions or deletions (i.e., gaps) as compared to the reference sequence (which does not comprise additions or deletions) for optimal alignment of the two sequences. The percentage is calculated

by determining the number of positions at which the identical nucleotide or amino acid residue occurs in both sequences to yield the number of matched positions, dividing the number of matched positions by the total number of positions in the comparison window, and multiplying the result by 100 to yield the percentage of sequence identity. A sequence that is identical at every position in comparison to a reference sequence is said to be 100% identical to the reference sequence, and vice-versa.

An "expression vector" is a nucleic acid capable of replicating in a selected host cell or organism or *in vitro*. An expression vector can replicate as an autonomous structure, or alternatively can integrate, in whole or in part, into the host cell chromosomes or the nucleic acids of an organelle, or it may be used as a shuttle for delivering foreign DNA to cells, and thus replicate along with the host cell genome. Thus, expression vectors are polynucleotides capable of replicating in a selected in vitro system, host cell, organelle, or organism, e.g., a plasmid, virus, artificial chromosome, nucleic acid fragment, and for which certain genes on the expression vector (including genes of interest) are transcribed and translated into a polypeptide or protein within the cell, organelle or organism; or any suitable construct known in the art, which comprises an "expression cassette". In contrast, as described in the examples herein, a "cassette" is a polynucleotide containing a section of an expression vector. The use of the cassette assists in the assembly of the expression vectors. An expression vector is a replicon, such as plasmid, phage, virus, chimeric virus, or cosmid, and which contains the desired polynucleotide sequence operably linked to the expression control sequence(s).

A polynucleotide sequence is "operably linked to an expression control sequence(s)" (e.g., a promoter and, optionally, an enhancer) when the expression control sequence controls and regulates the transcription and/or translation of that polynucleotide sequence. As used herein, the phrase "gene product" refers to an RNA molecule, such as a circRNA or a protein. Moreover, the term "gene" may sometime refer to the genetic sequence, the transcribed and possibly modified mRNA of that gene, or the translated protein of that mRNA.

Notably, all DNA sequences provided may encompass all RNA and amino acid sequences, as well as primers and probes for detection of the same and vice versa as would be ascertainable by those of ordinary skill in the art, for example through Uracil substitutions as well as redundant codons. Additionally, all sequences include codon-optimized embodiments as would be ascertainable by those of ordinary skill in the art. As such, the term "encoding" or "coding sequence" or "coding" means both encoding a nucleotide and/or amino acid sequence and vice versa.

The terms "approximately" and "about" refer to a quantity, level, value or amount that varies by as much as 30%, or in another embodiment by as much as 20%, and in a third embodiment by as much as 10% to a reference quantity, level, value or amount. As used herein, the singular form "a," "an," and "the" include plural references unless the context clearly dictates otherwise.

The terms and expressions that have been employed are used as terms of description and not of limitation, and there is no intent in the use of such terms and expressions to exclude any equivalent of the features shown and described or portions thereof, but it is recognized that various modifications are possible.

Table 1 (SSRI R baseline vs SSRI NR baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	Gene Symbol
32638325	32649224	chr21	-	exonic	hsa_circ_0115791	1.5018	0.000003	TIAM1
72797242	72804408	chrX	+	exonic	hsa_circ_0091072	1.9375	0.000017	CHIC1
76166897	76167135	chr17	+	exonic	hsa_circ_0045871	1.9043	0.000019	SYNGR2
105238249	105322472	chr12	-	exonic	hsa_circ_0027966	1.6933	0.000021	SLC41A2
75823317	75875495	chr6	-	exonic	hsa_circ_0077032	1.7154	0.000037	COL12A1
51258546	51261286	chr7	-	exonic	hsa_circ_0080217	1.6267	0.000080	COBL
28505922	28506315	chr15	-	exonic	hsa_circ_0005387	1.5518	0.000091	HERC2
73015794	73017356	chr17	+	exonic	hsa_circ_0045581	1.5767	0.000115	ICT1
70696691	70703013	chr10	+	exonic	hsa_circ_0007097	2.0708	0.000121	DDX50
17907047	17953998	chr1	+	exonic	hsa_circ_0010210	2.2325	0.000165	ARHGEF10L
19948721	19951822	chr22	+	exonic	hsa_circ_0062277	1.6795	0.000186	COMT
25628813	25631937	chr17	+	exonic	hsa_circ_0042488	2.0049	0.000221	WSB1
95518727	95524317	chr8	-	exonic	hsa_circ_0084904	2.0901	0.000230	KIAA1429
15415607	15417225	chr2	-	exonic	hsa_circ_0052712	1.5149	0.000247	NBAS
129180070	129188260	chr3	+	exonic	N/A	1.5406	0.000263	IFT122
15120499	15123913	chr16	+	exonic	hsa_circ_0038011	1.5351	0.000294	PDXDC1
220253068	220263134	chr1	-	sense overlapping	hsa_circ_0000185	2.7460	0.000333	BPNT1
126434011	126496057	chr6	+	antisense	hsa_circ_0130587	-2.2679	0.000391	MIR5695
206889066	206889235	chr2	-	intronic	N/A	1.6489	0.000403	INO80D
66923610	66990707	chr12	-	exonic	hsa_circ_0099053	2.1011	0.000424	GRIP1
25151491	25162936	chr16	+	exonic	N/A	1.7777	0.000427	LCMT1
80160631	80173542	chr5	+	sense overlapping	N/A	2.0464	0.000482	MSH3
5292121	5302970	chr17	-	exonic	hsa_circ_0041694	1.5569	0.000490	NUP88
187498055	187506315	chr2	+	exonic	hsa_circ_0057319	2.7310	0.000520	ITGAV
30142548	30149539	chr20	+	exonic	hsa_circ_0059702	1.8693	0.000558	HM13
17370097	17370831	chr19	-	exonic	hsa_circ_0049965	2.0677	0.000561	USHBP1
6481519	6481649	chr16	+	intronic	hsa_circ_0000666	1.6645	0.000571	RBFOX1
48259473	48260829	chr10	+	exonic	hsa_circ_0018309	1.8689	0.000602	ANXA8
111800296	111853435	chr9	-	exonic	hsa_circ_0087903	2.0569	0.000639	TMEM245
133534776	133536765	chr5	-	exonic	hsa_circ_0073942	1.5869	0.000640	PPP2CA
891302	892653	chr1	-	exonic	hsa_circ_0009205	1.5074	0.000655	NOC2L
25478063	25487229	chr13	-	exonic	hsa_circ_0029775	2.0268	0.000663	CENPJ
62283373	62304039	chr11	-	exonic	hsa_circ_0022429	1.5024	0.000687	AHNAK
118456876	118465835	chr12	+	exonic	hsa_circ_0028630	1.5177	0.000689	RFC5
42641806	42641893	chr20	+	intronic	hsa_circ_0001160	1.9879	0.000822	TOX2
151130894	151131115	chrX	-	exonic	hsa_circ_0091710	1.5155	0.000852	GABRE
88655653	88667506	chr9	-	exonic	hsa_circ_0087400	1.5495	0.000856	GOLM1
41884185	41884424	chr19	+	exonic	hsa_circ_0051220	1.5561	0.000864	TMEM91
143238332	143247159	chr6	-	intronic	hsa_circ_0007021	-1.5032	0.000869	HIVEP2

127300370	127302466	chr9	-	exonic	hsa_circ_0068511	1.7699	0.000946	NR6A1
109952549	109964548	chr1	-	exonic	N/A	1.8552	0.000956	PSMA5
29927157	29931571	chr8	-	exonic	hsa_circ_0083834	1.8197	0.000962	SARAF
27024168	27024508	chr10	+	exonic	hsa_circ_0018004	1.7368	0.000970	PDSS1
74091854	74134875	chr5	-	exonic	N/A	1.5740	0.000981	FAM169A
3659367	3659754	chr1	-	exonic	N/A	1.6898	0.000988	TP73-AS1
95027210	95027835	chr9	-	exonic	hsa_circ_0087497	1.9855	0.001081	IARS
140646904	140812121	chr4	-	exonic	hsa_circ_0071000	2.1707	0.001127	MAML3
51459757	51459882	chr3	-	exonic	hsa_circ_0065902	1.6289	0.001152	VPRBP
118456876	118460164	chr12	+	exonic	hsa_circ_0028628	1.6679	0.001160	RFC5
31849672	31852977	chr14	-	exonic	hsa_circ_0031570	1.5811	0.001163	HEATR5A
7414685	7414883	chr5	+	exonic	N/A	1.6612	0.001217	ADCY2
77616277	77620283	chr8	+	exonic	hsa_circ_0084789	1.8931	0.001283	ZFHX4
18945987	18983955	chr18	+	exonic	hsa_circ_0003653	2.1341	0.001296	GREB1L
12632755	12639440	chr1	-	exonic	hsa_circ_0010020	1.5176	0.001351	DHRS3
31789187	31803431	chr13	+	exonic	hsa_circ_0002635	2.0464	0.001354	B3GALTL
80361812	80364358	chr17	-	exonic	hsa_circ_0000815	1.6063	0.001382	OGFOD3
5664833	5667376	chr4	-	exonic	hsa_circ_0004228	1.5499	0.001601	EVC2
79607545	79612827	chr6	+	exonic	hsa_circ_0077109	2.2303	0.001604	IRAK1BP1
170650618	170658898	chr4	-	exonic	hsa_circ_0071439	2.1418	0.001676	C4orf27
41133645	41134997	chr13	-	exonic	hsa_circ_0030042	1.6225	0.001720	FOXO1
4845635	4848517	chr17	+	exonic	hsa_circ_0041623	1.9075	0.001728	RNF167
46804823	46810323	chr11	-	exonic	N/A	1.5385	0.001833	CKAP5
101654702	101656154	chr10	-	exonic	N/A	2.5440	0.001893	DNMBP
128750760	128754065	chr2	-	exonic	hsa_circ_0056390	1.9386	0.002033	SAP130
74533340	74562028	chr9	+	exonic	N/A	1.5589	0.002062	C9orf85
42335263	42407667	chr13	-	exonic	hsa_circ_0030101	1.6283	0.002097	VWA8
158994451	159050851	chr6	+	exonic	hsa_circ_0078488	1.6916	0.002154	TMEM181
67154014	67159945	chr16	+	exonic	hsa_circ_0039787	1.7811	0.002317	C16orf70
51706885	51716483	chr14	+	exonic	hsa_circ_0031896	1.6088	0.002577	TMX1
37061800	37067498	chr3	+	exonic	N/A	1.6328	0.002609	MLH1
20889643	20953727	chr18	-	exonic	hsa_circ_0006015	1.6062	0.002725	TMEM241
152913372	152916781	chrX	+	exonic	hsa_circ_0091751	1.5195	0.002806	DUSP9
95914772	95918564	chr12	-	exonic	hsa_circ_0027779	1.5689	0.002836	USP44
94653105	94669388	chr10	+	exonic	hsa_circ_0019171	1.6410	0.002875	EXOC6
5364258	5365866	chr17	-	exonic	hsa_circ_0000740	1.6562	0.002881	DHX33
74385612	74397235	chr17	-	exonic	hsa_circ_0045801	1.5466	0.003049	UBE2O
161816238	161833102	chr1	+	exonic	hsa_circ_0008857	2.2692	0.003052	ATF6
48466115	48472118	chr20	+	exonic	hsa_circ_0006359	1.5135	0.003172	SLC9A8
216177220	216190861	chr2	+	exonic	hsa_circ_0058058	1.7336	0.003183	ATIC
35236117	35236221	chr20	+	exonic	hsa_circ_0001151	1.8026	0.003229	C20orf24
100035289	100052403	chr2	-	exonic	hsa_circ_0001052	1.7393	0.003323	REV1
50388196	50399175	chr12	-	exonic	hsa_circ_0026195	1.9220	0.003405	RACGAP1
32050486	32053287	chr1	+	exonic	hsa_circ_0011297	1.5304	0.003500	TINAGL1
55621921	55634000	chr15	+	exonic	hsa_circ_0035381	1.7669	0.003501	PIGB
21335426	21336430	chr20	+	exonic	N/A	2.0130	0.003509	XRN2
153555574	153562137	chr7	+	intergenic	N/A	1.5657	0.003534	
28090104	28096621	chr15	-	exonic	hsa_circ_0034189	1.5624	0.003844	OCA2
126434011	126498481	chr6	+	sense overlapping	N/A	1.5453	0.003990	RP11-527F13.1
45921422	45972988	chr22	+	exonic	hsa_circ_0063745	1.5073	0.004043	FBLN1

66252643	66255478	chr11	+	exonic	N/A	1.7355	0.004094	DPP3
29190547	29196560	chr22	-	exonic	hsa_circ_0062722	1.7773	0.004258	XBP1
14685190	14685289	chr12	+	intronic	hsa_circ_0000379	1.6110	0.004274	RP11-502N13.2
8525984	8568734	chr1	-	exonic	hsa_circ_0009574	1.6844	0.004462	RERE
219114086	219114644	chr2	+	exonic	hsa_circ_0058218	1.6016	0.004896	ARPC2
123471177	123512691	chr3	-	exonic	hsa_circ_0002768	1.8179	0.004897	MYLK
70502751	70505255	chr16	+	exonic	N/A	1.5531	0.005102	FUK
90261231	90398157	chr5	+	exonic	N/A	1.5483	0.005546	GPR98
46795476	46795608	chr2	-	sense overlapping	hsa_circ_0000999	1.6931	0.005635	LOC100506142
61833638	61835159	chr20	-	exonic	hsa_circ_0004858	1.5431	0.005655	YTHDF1
141810557	141900868	chr8	-	exonic	hsa_circ_0007521	1.6181	0.005859	PTK2
65228581	65237897	chr2	+	exonic	hsa_circ_0054971	1.6081	0.006009	SLC1A4
109336203	109339348	chr1	+	exonic	hsa_circ_0000100	1.5165	0.006307	STXBP3
42152047	42152455	chr17	+	exonic	hsa_circ_0044013	1.6089	0.006506	G6PC3
27382878	27394372	chr8	+	exonic	hsa_circ_0083766	1.5243	0.006629	EPHX2
128488846	128489036	chr7	+	exonic	hsa_circ_0082218	1.6553	0.006758	FLNC
30941049	30941149	chr22	-	intronic	hsa_circ_0001221	1.5610	0.007060	SEC14L6
101379218	101387397	chr1	+	exonic	hsa_circ_0013353	1.5843	0.007298	SLC30A7
61537238	61545758	chr20	-	exonic	hsa_circ_0061137	1.8752	0.007330	DIDO1
41456925	41457407	chr1	+	intronic	N/A	2.0106	0.007829	CTPS1
40174416	40174658	chr17	+	exonic	hsa_circ_0003530	1.8867	0.007903	NKIRAS2
233353644	233363117	chr1	-	exonic	hsa_circ_0003314	1.6768	0.008006	PCNXL2
45302384	45323900	chr21	+	sense overlapping	N/A	1.8768	0.008551	AGPAT3
105192034	105233194	chr6	-	exonic	hsa_circ_0004397	1.6288	0.008596	HACE1
67270083	67280213	chr17	-	exonic	N/A	1.5128	0.008974	ABCA5
57237616	57250507	chr4	-	exonic	N/A	1.9203	0.009057	AASDH
176339971	176340710	chr5	-	intronic	N/A	1.6466	0.009064	UIMC1
43668295	43669265	chr15	+	exonic	hsa_circ_0034953	1.5320	0.009474	TUBGCP4
15510546	15510663	chr19	+	antisense	hsa_circ_0000902	1.6727	0.010132	AKAP8L
27820936	27830906	chr2	+	exonic	hsa_circ_0053294	1.5134	0.010208	ZNF512
35657761	35658017	chr9	+	antisense	N/A	-1.5758	0.010239	RMRP
40596333	40597123	chr21	-	exonic	hsa_circ_0001193	1.5485	0.010516	BRWD1
72285678	72291210	chr10	+	exonic	hsa_circ_0018659	1.6621	0.011160	PALD1
42069936	42084913	chr22	-	exonic	hsa_circ_0063598	1.6462	0.011210	NHP2L1
37159809	37161502	chr20	+	exonic	hsa_circ_0060342	-1.5477	0.011360	RALGAPB
26208168	26220646	chr12	+	exonic	hsa_circ_0025638	1.5734	0.011861	RASSF8
207705830	207746615	chr2	+	sense overlapping	hsa_circ_0006005	1.6523	0.011883	AC008269.2
93141396	93148280	chr11	+	exonic	N/A	1.6621	0.012493	CCDC67
133738149	133738422	chr9	+	exonic	hsa_circ_0089131	1.5895	0.012501	ABL1
34059659	34101636	chr6	-	exonic	hsa_circ_0076040	1.5210	0.013404	GRM4
141710989	141716304	chr8	-	exonic	hsa_circ_0005273	2.1229	0.013677	PTK2
4317362	4317697	chr4	+	exonic	hsa_circ_0006333	1.5933	0.015026	ZBTB49
3474817	3477249	chr17	-	exonic	N/A	1.6794	0.015062	TRPV1
20573977	20577388	chr6	+	intronic	N/A	1.5175	0.021592	CDKAL1
80869751	80879232	chr9	+	exonic	N/A	1.5449	0.025413	CEP78
62293536	62293836	chr20	+	intronic	hsa_circ_0092333	1.6388	0.025983	RTEL1
107031202	107050797	chr6	-	exonic	hsa_circ_0008514	1.5337	0.026017	RTN4IP1

89123719	89131833	chr14	-	exonic	N/A	1.5607	0.026590	EML5
33866724	33872064	chr20	-	sense overlapping	hsa_circ_0060055	1.5174	0.029576	EIF6
145439832	145440140	chr1	+	intronic	hsa_circ_0000122	-1.5642	0.030419	NBPF10
13532533	13581264	chr20	-	intronic	N/A	1.6154	0.030812	TASP1
33866724	33872295	chr20	-	sense overlapping	hsa_circ_0060056	1.5147	0.033525	EIF6
111795586	111800397	chr9	-	exonic	hsa_circ_0087888	1.6422	0.036036	TMEM245
27447477	27447615	chr10	+	exonic	hsa_circ_0018031	1.5624	0.039389	MASTL
8366	14149	chrM	-	exonic	hsa_circ_0089763	-1.8150	0.040921	JA760600
33058531	33060824	chr1	+	exonic	hsa_circ_0002306	1.5647	0.042295	ZBTB8A
127393233	127393443	chr3	+	exonic	hsa_circ_0067175	-1.6564	0.043061	ABTB1
113057425	113057606	chr2	+	exonic	hsa_circ_0001062	-1.9426	0.043283	ZC3H6
7586	7982	chrM	-	exonic	hsa_circ_0089762	-1.6383	0.048019	JA760602
33149215	33194241	chr15	-	exonic	hsa_circ_0005054	1.6008	0.048353	FMN1

Table 2 (SSRI R 8 week vs SSRI NR 8 week)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
100410368	100410830	chr7	-	exonic	hsa_circ_0001730	1.5019	0.000095	EPHB4
42281139	42281797	chr18	+	exonic	hsa_circ_0006491	-1.7369	0.000384	SETBP1
44656614	44661075	chr18	-	exonic	hsa_circ_0108522	-1.7801	0.000401	HDHD2
75703832	75706652	chr15	-	exonic	hsa_circ_0000636	-1.5598	0.000623	SIN3A
55748067	55748333	chr19	+	antisense	hsa_circ_0000959	1.5630	0.001437	PPP6R1
120517677	120528452	chr4	-	exonic	hsa_circ_0002474	-1.9528	0.001518	PDE5A
120460114	120528452	chr4	-	exonic	hsa_circ_0070805	-1.6493	0.001766	PDE5A
77930940	77934851	chr14	+	exonic	hsa_circ_0032777	-1.5443	0.001839	AHSA1
33442618	33447218	chr2	+	exonic	hsa_circ_0053907	-1.7083	0.001843	LTBP1
59730181	59758024	chr14	+	sense overlapping	hsa_circ_0000543	-1.6033	0.001845	DAAM1
85692171	85695016	chr11	-	exonic	hsa_circ_0003695	-2.9046	0.002190	PICALM
151749331	151753128	chr4	-	exonic	hsa_circ_0071210	-1.8627	0.002431	LRBA
146747016	146757164	chr1	+	exonic	hsa_circ_0013953	-2.2977	0.002539	CHD1L
32858942	32865477	chr2	+	exonic	hsa_circ_0003195	-1.9266	0.002794	TTC27
109288780	109289485	chr2	+	exonic	hsa_circ_0008348	-1.5953	0.002904	LIMS1
204396775	204397348	chr1	-	exonic	hsa_circ_0111746	-1.8689	0.002978	PIK3C2B
16386664	16415895	chr21	-	exonic	hsa_circ_0004771	-2.8924	0.003198	NRIP1
34685382	34706566	chr19	+	exonic	hsa_circ_0008030	-2.9817	0.003319	LSM14A
22880557	22880710	chr10	-	exonic	hsa_circ_0017972	-2.3943	0.003327	PIP4K2A
152017193	152018156	chr3	+	exonic	hsa_circ_0001348	-1.9138	0.003377	MBNL1
141840570	141874498	chr8	-	exonic	hsa_circ_0002908	-2.4499	0.003399	PTK2
141856358	141900868	chr8	-	exonic	hsa_circ_0003221	-2.1285	0.003534	PTK2
85692171	85742653	chr11	-	exonic	hsa_circ_0023903	-3.2167	0.003546	PICALM
34706028	34706566	chr19	+	exonic	hsa_circ_0050463	-1.6032	0.003660	LSM14A
86494712	86508177	chr14	+	intronic	N/A	-1.6016	0.003817	LOC101928767
16386664	16386787	chr21	-	exonic	hsa_circ_0061274	-2.0259	0.003887	NRIP1
151656409	151729550	chr4	-	exonic	hsa_circ_0071174	-2.2857	0.003959	LRBA
68126447	68129252	chr14	-	exonic	N/A	-1.5629	0.004014	VTI1B
152132729	152150709	chr3	+	exonic	hsa_circ_0001349	-2.3777	0.004189	MBNL1
34699833	34706566	chr19	+	exonic	hsa_circ_0050461	-2.4186	0.004197	LSM14A

123658355	123663844	chr10	-	exonic	hsa_circ_0008742	-1.5210	0.004413	ATE1
3550981	3551192	chr19	-	exonic	hsa_circ_0048492	1.5268	0.004421	MFSD12
17928129	17932239	chr20	-	exonic	hsa_circ_0059501	-1.5854	0.004596	SNX5
150496687	150512748	chr5	-	exonic	hsa_circ_0074598	-2.5091	0.004774	ANXA6
14938844	14939516	chr10	+	exonic	hsa_circ_0006780	-1.6865	0.004945	SUV39H2
179043126	179043219	chr5	-	exonic	hsa_circ_0075281	-2.6571	0.005102	HNRNPH1
16415815	16415895	chr21	-	exonic	hsa_circ_0061276	-2.2382	0.005252	NRIP1
24788253	24788679	chr16	+	exonic	hsa_circ_0038673	-1.6957	0.005331	TNRC6A
67562936	67614669	chr18	-	exonic	N/A	-1.9375	0.005340	CD226
67484716	67485741	chr8	-	exonic	N/A	-1.9275	0.005735	MYBL1
93557925	93558139	chr15	+	exonic	hsa_circ_0037007	-2.4697	0.005836	CHD2
64295353	64295792	chrX	+	sense overlapping	hsa_circ_0002532	-1.8253	0.005896	XLOC_008000
125597327	125603476	chr8	-	exonic	N/A	-1.6397	0.006301	MTSS1
155408117	155429689	chr1	-	exonic	hsa_circ_0003247	-1.7020	0.006324	ASH1L
41515056	41518061	chr13	-	exonic	hsa_circ_0030051	-2.0521	0.006435	ELF1
21461899	21470081	chr18	+	exonic	hsa_circ_0047232	1.5636	0.006684	LAMA3
27834913	27838010	chr17	+	exonic	hsa_circ_0004800	-1.8923	0.006697	TAOK1
146209155	146216108	chr6	-	sense overlapping	N/A	-2.8635	0.006844	SHPRH
22896855	22898646	chr10	-	exonic	hsa_circ_0003826	-2.0194	0.006865	PIP4K2A
151727422	151729550	chr4	-	exonic	hsa_circ_0071196	-3.3149	0.007151	LRBA
246078831	246093239	chr1	-	exonic	hsa_circ_0005090	-1.5370	0.007183	SMYD3
33160465	33161645	chr1	-	exonic	hsa_circ_0004895	1.7513	0.007186	SYNC
86627164	86649052	chr5	+	exonic	hsa_circ_0004317	-1.9832	0.007284	RASA1
20781375	20846409	chr6	+	exonic	hsa_circ_0006086	-1.9626	0.007318	CDKAL1
19615443	19653155	chr12	+	exonic	hsa_circ_0006128	-1.7644	0.007336	AEBP2
68861420	68882183	chr5	+	exonic	hsa_circ_0006929	-1.5243	0.007402	GTF2H2C_2
75331178	75336119	chr10	-	exonic	hsa_circ_0007221	1.5567	0.007626	USP54
68717321	68795482	chr2	+	sense overlapping	hsa_circ_0001024	-2.4078	0.007634	APLF
120916382	120924441	chr11	+	exonic	hsa_circ_0000365	-1.5549	0.007654	TBCEL
17661883	17665616	chr6	-	exonic	hsa_circ_0075728	-1.5390	0.007905	NUP153
134002512	134007576	chr5	+	exonic	hsa_circ_0003180	1.7505	0.007913	SEC24A
107236366	107254190	chr12	+	exonic	hsa_circ_0028021	-1.7898	0.007996	RIC8B
211092981	211093411	chr1	-	exonic	hsa_circ_0006123	1.5036	0.008016	KCNH1
146209155	146216113	chr6	-	exonic	hsa_circ_0001649	-2.8604	0.008174	SHPRH
136599002	136603825	chr6	-	exonic	N/A	-1.7506	0.008193	BCLAF1
37347101	37349807	chr2	-	exonic	N/A	-1.5337	0.008236	EIF2AK2
151719232	151729550	chr4	-	exonic	hsa_circ_0004636	-2.8884	0.008339	LRBA
3969740	3976050	chr17	-	exonic	hsa_circ_0004767	-1.6996	0.008353	ZZEF1
79613111	79614128	chr10	-	exonic	hsa_circ_0006649	-1.9346	0.008466	DLG5
103271286	103279053	chr9	+	exonic	N/A	-1.6497	0.008686	TMEFF1
155640110	155644887	chr1	-	exonic	N/A	-1.8231	0.008743	YY1AP1
95814629	95819004	chr2	-	sense overlapping	N/A	-1.6332	0.008914	ZNF514
20507738	20527139	chr2	-	exonic	hsa_circ_0052867	-2.1779	0.008916	PUM2
6630963	6632512	chr12	+	exonic	hsa_circ_0025162	1.5045	0.008953	NCAPD2
29183972	29192818	chr17	+	exonic	N/A	1.8928	0.009008	ATAD5
149833290	149838586	chr6	-	exonic	hsa_circ_0009074	-1.8987	0.009065	PPIL4
24021149	24022915	chr1	+	exonic	hsa_circ_0010884	-1.6693	0.009070	RPL11

190670377	190682906	chr2	+	exonic	N/A	-1.8941	0.009191	PMS1
118422500	118430579	chr11	-	exonic	hsa_circ_0007372	1.5386	0.009212	IFT46
11905658	11907984	chr2	+	exonic	hsa_circ_0002229	-1.5509	0.009337	LPIN1
117944807	117984947	chr1	+	exonic	hsa_circ_0000119	-2.2717	0.009361	MAN1A2
66337415	66352945	chr17	+	sense overlapping	N/A	1.7195	0.009461	ARSG
54265896	54294350	chr4	+	exonic	hsa_circ_0005912	-1.8821	0.009470	FIP1L1
65405871	65409531	chr14	-	sense overlapping	hsa_circ_0032233	1.8031	0.009490	GPX2
151719232	151738409	chr4	-	exonic	hsa_circ_0008618	-2.9526	0.009497	LRBA
37246951	37247979	chr2	-	exonic	N/A	1.5723	0.009554	HEATR5B
230723487	230744844	chr2	-	exonic	hsa_circ_0003273	-2.1034	0.009614	TRIP12
150496687	150502572	chr5	-	exonic	hsa_circ_0074595	-2.2467	0.009688	ANXA6
242283166	242287606	chr2	+	exonic	N/A	-1.6468	0.009728	SEPT2
153583192	153585991	chrX	-	exonic	hsa_circ_0091934	-2.3520	0.009810	FLNA
5964676	5993389	chr1	-	exonic	hsa_circ_0009449	1.7679	0.009864	NPHP4
68155889	68225678	chr16	+	exonic	hsa_circ_0039929	-2.9325	0.009893	NFATC3
34685382	34687668	chr19	+	exonic	hsa_circ_0006446	-1.7643	0.009960	LSM14A
47762155	47787483	chr3	-	exonic	hsa_circ_0065301	-1.6955	0.010013	SMARCC1
151682934	151729550	chr4	-	exonic	hsa_circ_0071185	-2.0060	0.010021	LRBA
148867767	148887990	chr4	+	exonic	hsa_circ_0006473	-1.6269	0.010027	ARHGAP10
31815277	31867987	chr7	-	exonic	N/A	1.5977	0.010047	PDE1C
28290542	28310335	chr22	-	exonic	hsa_circ_0062688	-2.0111	0.010060	PITPNB
28306951	28310335	chr22	-	exonic	hsa_circ_0003056	-2.2706	0.010116	PITPNB
29845053	29845387	chr16	+	exonic	hsa_circ_0000688	1.5085	0.010313	MVP
44060666	44061844	chr15	+	exonic	N/A	-3.6916	0.010333	PDIA3
1902352	1941505	chr4	+	exonic	hsa_circ_0005881	1.5907	0.010336	WHSC1
69502654	69553668	chr15	+	exonic	N/A	-1.5085	0.010432	GLCE
171867882	171884915	chr2	-	exonic	hsa_circ_0057028	-1.6460	0.010471	TLK1
68337215	68343511	chr11	+	exonic	hsa_circ_0023233	-2.2175	0.010486	PPP6R3
51381436	51387763	chr10	+	exonic	hsa_circ_0006820	-1.9660	0.010597	TIMM23B
148778703	148803083	chr4	+	exonic	hsa_circ_0071106	-1.9113	0.010671	ARHGAP10
39607406	39629569	chr18	+	exonic	hsa_circ_0007765	-1.9589	0.010819	PIK3C3
135710404	135715781	chr7	+	sense overlapping	N/A	-1.6608	0.010894	AC024084.1
42415314	42416100	chr22	+	exonic	hsa_circ_0001239	1.6715	0.010908	WBP2NL
27209637	27210251	chr17	+	antisense	hsa_circ_0000747	1.6007	0.010922	FLOT2
227771508	227779067	chr2	+	exonic	hsa_circ_0058497	-1.6975	0.011053	RHBDD1
28654060	28671129	chr8	-	exonic	N/A	1.5208	0.011082	INTS9
134049441	134053797	chr9	+	exonic	hsa_circ_0089172	1.5469	0.011105	NUP214
28013458	28019595	chr8	+	exonic	hsa_circ_0001785	-1.8771	0.011112	ELP3
120345268	120348235	chr11	+	exonic	hsa_circ_0002100	-1.6270	0.011176	ARHGEF12
120347369	120348235	chr11	+	exonic	hsa_circ_0002089	-2.1830	0.011178	ARHGEF12
152497615	152498816	chr7	+	exonic	hsa_circ_0083061	-1.8146	0.011206	ACTR3B
18324587	18379747	chr22	-	exonic	N/A	1.8392	0.011206	MICAL3
191765289	191775047	chr2	+	exonic	hsa_circ_0057521	-2.4383	0.011250	GLS
96233422	96261168	chr9	+	exonic	hsa_circ_0001875	-2.7799	0.011289	FAM120A
5641604	5641957	chr19	+	exonic	hsa_circ_0005104	-1.5501	0.011424	SAFB
65055186	65063461	chr11	+	exonic	hsa_circ_0022812	1.5597	0.011427	POLA2
146767107	146824367	chr4	-	exonic	N/A	-1.6742	0.011449	ZNF827
217329319	217340174	chr2	+	exonic	hsa_circ_0058189	1.7374	0.011471	SMARCAL1

21961646	21995303	chr13	-	exonic	N/A	-1.5279	0.011510	ZDHHC20
2967410	2969120	chr20	+	exonic	hsa_circ_0001127	-1.8006	0.011541	PTPRA
68334461	68343511	chr11	+	exonic	hsa_circ_0002038	-1.8956	0.011545	PPP6R3
141889569	141900868	chr8	-	exonic	hsa_circ_0006646	-1.6797	0.011637	PTK2
85782606	85783383	chr2	-	exonic	hsa_circ_0055426	1.5806	0.011733	GGCX
231226328	231307814	chr2	+	sense overlapping	hsa_circ_0001108	-1.5825	0.011972	SP100
68160350	68160513	chr16	+	exonic	hsa_circ_0039930	-2.0622	0.011974	NFATC3
173433468	173457776	chr2	+	exonic	hsa_circ_0057104	-1.7333	0.012060	PDK1
110084263	110087285	chr9	+	exonic	hsa_circ_0001880	-2.1463	0.012100	RAD23B
72301330	72302378	chr7	+	sense overlapping	hsa_circ_0006688	-1.7673	0.012126	SBDSP1
217329319	217332769	chr2	+	exonic	hsa_circ_0058188	1.6332	0.012128	SMARCAL1
170906490	170912424	chr3	-	exonic	hsa_circ_0002387	-1.8498	0.012192	TNIK
35804797	35822225	chr17	+	exonic	hsa_circ_0043285	-1.9346	0.012251	TADA2A
56989531	57025950	chr6	+	exonic	N/A	-1.9072	0.012281	ZNF451
8383694	8427688	chr2	-	exonic	N/A	-2.6179	0.012289	LINC00299
66044716	66053776	chr15	-	exonic	hsa_circ_0035957	-2.3225	0.012320	DENND4A
47752369	47782822	chr20	-	exonic	hsa_circ_0004648	-1.5174	0.012349	STAU1
77759436	77764156	chr15	+	exonic	hsa_circ_0036429	-1.6080	0.012440	HMG20A
19615443	19626289	chr12	+	exonic	hsa_circ_0006420	-2.6323	0.012486	AEBP2
28956365	28956758	chr8	-	sense overlapping	N/A	1.5923	0.012490	KIF13B
35586872	35614627	chr6	-	intronic	hsa_circ_0001600	-2.0845	0.012558	FKBP5
141874410	141900868	chr8	-	exonic	hsa_circ_0002483	-2.1963	0.012617	PTK2
45059428	45059793	chr15	+	sense overlapping	N/A	1.5339	0.012697	TRIM69
173426947	173429801	chr2	+	exonic	N/A	-1.7795	0.012755	PDK1
167915606	167924353	chr5	+	exonic	hsa_circ_0001551	-1.7748	0.012772	RARS
65830317	65831879	chr1	+	exonic	hsa_circ_0002454	-1.9300	0.012776	DNAJC6
38948670	38964294	chr22	-	exonic	hsa_circ_0004795	1.5732	0.012798	DMC1
77193578	77227582	chr18	+	exonic	hsa_circ_0048025	1.5650	0.012803	NFATC1
47079155	47108608	chr3	-	exonic	hsa_circ_0004692	-1.7064	0.013105	SETD2
86627164	86633908	chr5	+	exonic	hsa_circ_0007507	-1.7674	0.013142	RASA1
132273520	132273720	chr2	+	intronic	hsa_circ_0092325	1.6067	0.013153	RNU6-81P
116590610	116608496	chr10	+	exonic	hsa_circ_0020080	1.8078	0.013164	FAM160B1
176707565	176715926	chr5	+	exonic	hsa_circ_0075172	-1.6490	0.013194	NSD1
123658355	123662135	chr10	-	exonic	hsa_circ_0020250	-1.5187	0.013212	ATE1
27223791	27224216	chr1	-	exonic	hsa_circ_0011032	1.5598	0.013238	GPATCH3
12539258	12539962	chr11	+	intronic	N/A	1.5823	0.013299	PARVA
8674619	8684439	chr1	-	exonic	hsa_circ_0009594	-1.5493	0.013328	RERE
96238537	96259681	chr9	+	exonic	hsa_circ_0087540	-2.5336	0.013370	FAM120A
23356961	23385660	chr1	+	exonic	hsa_circ_0007822	-1.6968	0.013375	KDM1A
145838898	145842016	chr3	-	exonic	N/A	-1.7581	0.013454	PLOD2
65743336	65744440	chr15	-	exonic	hsa_circ_0035892	-1.5551	0.013523	DPP8
27373960	27374248	chr16	+	intronic	hsa_circ_0000684	1.6228	0.013648	IL4R
173433468	173460751	chr2	+	exonic	hsa_circ_0057105	-1.9300	0.013719	PDK1
68155889	68160513	chr16	+	exonic	hsa_circ_0000711	-3.5357	0.013729	NFATC3
39738530	39743147	chr17	-	exonic	hsa_circ_0043614	1.5950	0.013783	KRT14
114886536	114919893	chr9	-	exonic	hsa_circ_0004286	-2.4861	0.013869	SUSD1
73590599	73606865	chr6	+	intronic	hsa_circ_0002930	-1.5336	0.013910	KCNQ5

171879381	171902872	chr2	-	exonic	N/A	-2.4456	0.013912	TLK1
86992149	86993147	chr2	+	exonic	N/A	-1.7890	0.013933	RMND5A
85667519	85695371	chr16	+	exonic	hsa_circ_0040730	-2.1466	0.013976	GSE1
72945231	72960247	chr2	-	exonic	hsa_circ_0009043	-1.6075	0.014100	EXOC6B
109048081	109095099	chr12	-	exonic	hsa_circ_0028072	-2.7821	0.014105	CORO1C
53699213	53701307	chr1	-	exonic	N/A	-2.5862	0.014134	MAGOH
118774654	118787003	chrX	-	exonic	hsa_circ_0008350	-1.5741	0.014212	SEPT6
119222378	119236162	chr3	+	exonic	hsa_circ_0001330	-1.8254	0.014213	TIMMDC1
56144799	56149582	chr2	-	exonic	hsa_circ_0054663	1.8487	0.014249	EFEMP1
154173659	154197163	chr5	+	sense overlapping	hsa_circ_0074712	-1.5952	0.014275	LARP1
148653869	148657467	chr2	+	exonic	hsa_circ_0001073	-1.7845	0.014289	ACVR2A
198273227	198274543	chr2	+	antisense	hsa_circ_0001089	1.7296	0.014474	SF3B1
131071878	131073731	chr7	+	exonic	hsa_circ_0002117	-1.7226	0.014493	MKLN1
41173043	41195087	chr22	-	exonic	hsa_circ_0063459	1.6180	0.014501	SLC25A17
62546241	62566219	chr8	-	exonic	hsa_circ_0009158	-1.6726	0.014595	ASPH
44053621	44055404	chr15	+	exonic	hsa_circ_0003598	-2.0100	0.014627	PDIA3
21327227	21328447	chr16	+	sense overlapping	N/A	-1.5909	0.014681	CRYM-AS1
132551514	132551875	chr12	+	intronic	N/A	1.6609	0.014740	EP400
47531309	47549512	chr16	+	exonic	hsa_circ_0000698	-1.8795	0.014769	PHKB
23356961	23377013	chr1	+	exonic	hsa_circ_0009061	-2.4057	0.014800	KDM1A
96233422	96259881	chr9	+	exonic	hsa_circ_0005218	-3.0499	0.014800	FAM120A
18917290	18923977	chrX	-	exonic	hsa_circ_0089986	1.6443	0.014888	PHKA2
47474879	47481653	chr7	-	exonic	hsa_circ_0008729	1.5692	0.014908	TNS3
70510476	70521018	chrX	+	exonic	hsa_circ_0090999	-1.5930	0.015002	NONO
90192545	90193035	chr15	+	antisense	hsa_circ_0000649	1.5889	0.015009	KIF7
64271341	64295792	chrX	+	sense overlapping	hsa_circ_0001924	-2.5253	0.015020	XLOC_007999
121659715	121659969	chr12	+	exonic	hsa_circ_0028944	1.5168	0.015090	P2RX4
24982756	25002883	chr12	-	exonic	hsa_circ_0007579	1.5660	0.015127	BCAT1
45010607	45011361	chr7	+	antisense	hsa_circ_0001702	1.7773	0.015128	MYO1G
37543379	37544322	chr2	-	exonic	hsa_circ_0000992	-2.2131	0.015144	PRKD3
8555122	8684439	chr1	-	exonic	hsa_circ_0009582	-1.5451	0.015210	RERE
111923074	111924628	chr12	-	exonic	hsa_circ_0002273	-1.7672	0.015224	ATXN2
140622800	140638542	chr9	+	exonic	hsa_circ_0004101	-1.5306	0.015326	EHMT1
52183609	52199707	chr20	-	exonic	hsa_circ_0060915	1.5817	0.015363	ZNF217
243858892	244006584	chr1	-	exonic	hsa_circ_0004649	-3.0393	0.015397	AKT3
27143382	27152609	chr12	-	exonic	hsa_circ_0007478	1.5586	0.015526	TM7SF3
2807472	2810500	chr16	+	exonic	hsa_circ_0037563	-1.9677	0.015562	SRRM2
68155889	68157024	chr16	+	exonic	hsa_circ_0005615	-2.4920	0.015590	NFATC3
92301363	92330608	chr8	+	exonic	N/A	1.6696	0.015700	SLC26A7
61389976	61391675	chr2	+	sense overlapping	hsa_circ_0005338	-1.7672	0.015773	C2orf74
35406809	35425759	chr8	+	exonic	hsa_circ_0083913	1.6167	0.015785	UNC5D
113734352	113773970	chr9	-	exonic	hsa_circ_0087961	1.5581	0.015859	LPAR1
138784244	138842320	chr5	-	exonic	hsa_circ_0074216	1.6574	0.015888	ECSCR
73215386	73228707	chr2	-	exonic	hsa_circ_0004699	1.5767	0.015889	SFXN5
99990262	100016690	chr6	-	exonic	hsa_circ_0077434	1.7862	0.015914	CCNC
71867510	71884913	chr14	+	exonic	hsa_circ_0002722	1.5120	0.015932	SIPA1L1
43197691	43198739	chr17	-	exonic	hsa_circ_0044158	1.5781	0.015934	PLCD3

41036244	41037457	chr15	-	exonic	hsa_circ_0004942	-2.5751	0.015959	RMDN3
60206913	60217693	chr18	+	exonic	hsa_circ_0000854	-1.6160	0.016059	ZCCHC2
96233422	96278551	chr9	+	exonic	hsa_circ_0087531	-2.3310	0.016073	FAM120A
141828375	141900868	chr8	-	exonic	hsa_circ_0005982	-2.0899	0.016074	PTK2
100953713	100962162	chr13	+	exonic	hsa_circ_0002664	-1.6026	0.016156	PCCA
52192351	52194233	chr15	+	exonic	hsa_circ_0004773	-1.5826	0.016223	TMOD3
94767247	94828743	chr8	+	sense overlapping	N/A	1.6906	0.016225	TMEM67
47297355	47308133	chr13	+	exonic	hsa_circ_0002215	-1.8431	0.016230	LRCH1
15374347	15468949	chr6	+	exonic	N/A	-1.7831	0.016275	JARID2
26518046	26519239	chr17	+	exonic	N/A	1.5605	0.016402	NLK
104702610	104722244	chr7	+	exonic	N/A	-1.9766	0.016410	KMT2E
117944807	118009049	chr1	+	exonic	hsa_circ_0000120	-2.9604	0.016502	MAN1A2
61871449	61871624	chr11	-	intergenic	N/A	1.6128	0.016524	
85810160	85814886	chr16	-	sense overlapping	N/A	1.6086	0.016536	EMC8
110321942	110350696	chr2	-	exonic	hsa_circ_0002076	1.5007	0.016606	SEPT10
24698162	24709434	chr22	+	exonic	hsa_circ_0007312	-1.7150	0.016625	SPECC1L
36230203	36231267	chr4	-	exonic	hsa_circ_0069399	-3.0122	0.016627	ARAP2
32050751	32053287	chr1	+	exonic	hsa_circ_0011299	1.5630	0.016646	TINAGL1
61013821	61041513	chr13	+	exonic	hsa_circ_0003441	-2.3062	0.016713	TDRD3
79941429	79943483	chr17	+	exonic	hsa_circ_0046292	1.6277	0.016735	ASPSCR1
74493579	74497377	chr16	-	exonic	hsa_circ_0003315	-2.8588	0.016748	GLG1
32745359	32750312	chr3	+	exonic	hsa_circ_0064690	-1.6801	0.016805	CNOT10
56277780	56284152	chr4	+	exonic	hsa_circ_0001414	-2.9546	0.016859	TMEM165
43122140	43162033	chr5	+	exonic	hsa_circ_0001479	-1.6326	0.016898	ZNF131
76799640	76799724	chr18	+	intergenic	hsa_circ_0000858	1.6884	0.016900	
45891031	45923523	chr20	-	exonic	hsa_circ_0001164	-1.6751	0.016977	ZMYND8
138824814	138847261	chr9	-	exonic	hsa_circ_0089506	1.5005	0.016978	UBAC1
65924470	65928135	chr17	+	exonic	hsa_circ_0045462	-1.9865	0.016988	BPTF
76642965	76662315	chr14	+	exonic	hsa_circ_0032746	-1.8914	0.017017	GPATCH2L
3197902	3215945	chr3	-	exonic	hsa_circ_0003400	-1.7297	0.017025	CRBN
155340294	155340774	chr1	-	exonic	hsa_circ_0007608	-1.5229	0.017070	ASH1L
7187666	7189555	chr6	+	exonic	hsa_circ_0075561	-1.5516	0.017151	RREB1
64096074	64100213	chr5	+	exonic	N/A	-1.8185	0.017151	CWC27
23791389	23792692	chr14	+	exonic	hsa_circ_0031286	-2.1584	0.017159	PABPN1
29210921	29238052	chr18	-	exonic	hsa_circ_0047347	-2.1525	0.017204	B4GALT6
64410315	64411053	chr15	+	exonic	hsa_circ_0000614	-2.0305	0.017210	SNX1
117654716	117658311	chr1	-	sense overlapping	N/A	1.6537	0.017271	TRIM45
235272657	235283214	chr1	-	exonic	hsa_circ_0017037	-1.5030	0.017297	TOMM20
84662298	84663507	chr1	+	exonic	N/A	-1.8863	0.017343	PRKACB
231307651	231314970	chr2	+	exonic	hsa_circ_0003922	-2.0681	0.017371	SP100
155611306	155629068	chr3	+	exonic	N/A	-1.6888	0.017436	GMPS
14705328	14706127	chr19	+	exonic	hsa_circ_0049784	1.6248	0.017574	CLEC17A
87920168	87928449	chr6	+	intronic	hsa_circ_0004383	-1.6185	0.017575	ZNF292
26974589	26975761	chr13	+	exonic	hsa_circ_0003489	-1.7511	0.017589	CDK8
16198836	16199930	chr19	+	exonic	hsa_circ_0005855	-2.0124	0.017604	TPM4
35586872	35604935	chr6	-	exonic	hsa_circ_0076155	-2.2275	0.017657	FKBP5
15341020	15343599	chr17	-	sense overlapping	N/A	1.6022	0.017731	TVP23C-CDRT4

44046021	44048964	chr15	+	exonic	hsa_circ_0002151	-2.1568	0.017827	PDIA3
9204473	9221997	chr18	+	exonic	hsa_circ_0003865	-2.3497	0.017827	ANKRD12
13435076	13443385	chr11	-	exonic	hsa_circ_0008967	-1.8049	0.017847	BTBD10
179146668	179146782	chr5	+	exonic	hsa_circ_0075303	-1.5082	0.017957	CANX
30332294	30336893	chr8	+	exonic	hsa_circ_0007409	1.7014	0.018002	RBPMS
75167801	75173934	chr11	-	exonic	hsa_circ_0023624	1.7157	0.018081	GDPD5
144966169	144969146	chr2	-	exonic	hsa_circ_0001072	-2.6617	0.018131	GTDC1
78915434	78919312	chr5	+	exonic	hsa_circ_0001504	-1.6563	0.018147	PAPD4
13632601	13659064	chr6	-	exonic	hsa_circ_0075650	-2.6297	0.018343	RANBP9
54292038	54294350	chr4	+	exonic	hsa_circ_0069748	-2.1296	0.018343	FIP1L1
21288066	21288532	chr22	+	exonic	hsa_circ_0001206	-1.7298	0.018364	CRKL
42748962	42781337	chr12	+	exonic	N/A	-1.7713	0.018431	PPHLN1
213290658	213303232	chr1	+	exonic	hsa_circ_0005522	-1.5908	0.018455	RPS6KC1
4186092	4200109	chr17	-	exonic	hsa_circ_0003239	-1.9799	0.018456	UBE2G1
79083481	79090455	chr15	-	exonic	N/A	1.5440	0.018478	ADAMTS7
70493472	70500177	chr5	-	exonic	hsa_circ_0072876	-2.0329	0.018530	GUSBP9
242265407	242275513	chr2	+	exonic	hsa_circ_0005154	-1.5271	0.018580	SEPT2
16192722	16192856	chr19	+	exonic	hsa_circ_0002259	-2.2417	0.018618	TPM4
80721840	80758872	chr17	+	exonic	hsa_circ_0046464	-1.6046	0.018640	TBCD
64410315	64415745	chr15	+	exonic	hsa_circ_0035818	-1.9892	0.018714	SNX1
28758369	28763949	chr7	+	exonic	hsa_circ_0079675	1.8062	0.018791	CREB5
149613259	149639014	chr3	+	exonic	hsa_circ_0006801	-2.8526	0.018807	RNF13
156848913	156849949	chr1	+	exonic	hsa_circ_0014798	1.5613	0.018822	NTRK1
79937059	79943483	chr17	+	exonic	hsa_circ_0046290	1.6111	0.018849	ASPSCR1
8553307	8565297	chrX	-	exonic	N/A	1.5627	0.018866	KAL1
196876613	196888609	chr3	-	exonic	hsa_circ_0068702	-1.7805	0.018895	DLG1
230705537	230725247	chr2	-	exonic	hsa_circ_0004079	-2.0372	0.018930	TRIP12
14705443	14706127	chr19	+	exonic	hsa_circ_0049785	1.5780	0.018963	CLEC17A
149563797	149619949	chr3	+	exonic	hsa_circ_0004565	-1.6630	0.018966	RNF13
43292575	43297268	chr5	-	exonic	hsa_circ_0008621	-1.6093	0.018993	HMGCS1
118750908	118754014	chrX	-	exonic	hsa_circ_0091412	1.7156	0.018999	SEPT6
58898635	58906171	chr19	+	exonic	hsa_circ_0052341	1.7055	0.019008	RPS5
56915571	56920595	chr6	+	sense overlapping	N/A	-1.6140	0.019008	KIAA1586
194947437	194947585	chr3	-	exonic	hsa_circ_0068563	1.6914	0.019062	XXYLT1
44048846	44055404	chr15	+	exonic	hsa_circ_0002891	-2.0950	0.019089	PDIA3
83667030	83754378	chr6	-	exonic	hsa_circ_0008236	1.6479	0.019149	UBE3D
38801306	38803739	chr8	+	exonic	hsa_circ_0084021	-2.9589	0.019169	PLEKHA2
45911303	45914319	chr13	-	exonic	hsa_circ_0030162	-2.3649	0.019198	TPT1
54398613	54426184	chr18	+	exonic	hsa_circ_0047744	-1.9733	0.019202	WDR7
41664100	41677086	chr22	-	exonic	hsa_circ_0063534	1.5414	0.019238	RANGAP1
47777523	47787483	chr3	-	exonic	hsa_circ_0065307	-1.5609	0.019254	SMARCC1
15374347	15410596	chr6	+	exonic	hsa_circ_0075671	-2.0447	0.019330	JARID2
59179173	59179739	chr15	-	exonic	hsa_circ_0000604	-2.2731	0.019387	SLTM
54249939	54256040	chr4	+	exonic	hsa_circ_0001411	-2.1023	0.019474	FIP1L1
191765289	191789319	chr2	+	exonic	hsa_circ_0001085	-2.6404	0.019491	GLS
68215377	68217269	chr16	+	exonic	hsa_circ_0039934	-1.8921	0.019523	NFATC3
87925620	87928449	chr6	+	exonic	hsa_circ_0004058	-2.0346	0.019534	ZNF292
10931920	10933328	chr2	-	exonic	hsa_circ_0007250	-1.6338	0.019549	PDIA6
68881420	68888157	chr5	+	sense overlapping	hsa_circ_0005880	-1.5666	0.019612	GTF2H2C_2

109046047	109096774	chr12	-	exonic	hsa_circ_0028067	-2.5460	0.019634	CORO1C
107429298	107435696	chr3	+	exonic	hsa_circ_0001324	-2.3028	0.019652	BBX
117273764	117274087	chr12	+	exonic	hsa_circ_0028602	1.6425	0.019669	RNF T2
1003727	1006847	chr12	+	exonic	hsa_circ_0003251	-1.6163	0.019755	WNK1
1004361	1004666	chr16	-	intronic	N/A	1.6627	0.019798	LMF1
56262089	56278006	chr4	+	sense overlapping	hsa_circ_0069774	-1.5915	0.019798	TMEM165
94008811	94009042	chr14	+	exonic	hsa_circ_0033049	1.6240	0.019846	UNC79
67484716	67505429	chr8	-	exonic	hsa_circ_0084642	-2.0976	0.020034	MYBL1
108697604	108724650	chr1	-	exonic	N/A	1.5365	0.020038	SLC25A24
84225134	84235472	chr9	-	exonic	hsa_circ_0087319	1.5464	0.020076	TLE1
80721840	80861354	chr17	+	exonic	hsa_circ_0046468	-1.6306	0.020093	TBCD
33260901	33265112	chr22	-	exonic	hsa_circ_0062996	1.8503	0.020129	SYN3
70095955	70101437	chr10	+	exonic	hsa_circ_0018499	-1.5359	0.020187	HNRNPH3
237374147	237374353	chr2	-	exonic	N/A	1.6015	0.020236	IQCA1
35604790	35614627	chr6	-	intronic	N/A	-2.4942	0.020285	FKBP5
39623696	39629569	chr18	+	exonic	hsa_circ_0006527	-1.8777	0.020346	PIK3C3
35707043	35712888	chr7	-	exonic	hsa_circ_0001696	-1.9640	0.020360	HERPUD2
179007947	179020646	chr5	+	exonic	N/A	-2.3169	0.020381	RUFY1
133907680	133914026	chr3	-	exonic	hsa_circ_0005768	-1.8981	0.020431	RYK
24002051	24026054	chr22	-	exonic	hsa_circ_0062545	-2.0110	0.020461	GUSBP11
74738317	74742410	chr15	-	exonic	hsa_circ_0036272	1.5185	0.020505	UBL7
123661905	123683844	chr10	-	exonic	hsa_circ_0002850	-1.5986	0.020556	ATE1
5711031	5717503	chr11	-	intronic	hsa_circ_0000276	1.7139	0.020583	TRIM5
186504915	186505671	chr3	+	exonic	hsa_circ_0068465	-2.0876	0.020584	EIF4A2
113734352	113798481	chr9	-	intronic	hsa_circ_0004135	1.7647	0.020591	LPAR1
109046047	109048186	chr12	-	exonic	hsa_circ_0000437	-3.3890	0.020628	CORO1C
61838273	61842207	chr17	-	exonic	hsa_circ_0045219	-1.9761	0.020683	CCDC47
46116798	46117958	chr19	-	exonic	hsa_circ_0008263	1.6978	0.020721	EML2
219366471	219414650	chr1	+	sense overlapping	hsa_circ_0006963	-1.5615	0.020740	LYPLAL1
91855033	91855996	chr7	-	exonic	N/A	-1.5691	0.020794	KRIT1
70299035	70299440	chr16	-	intronic	N/A	1.6886	0.020804	AARS
9020437	9021799	chr12	+	exonic	hsa_circ_0025388	1.5934	0.020815	A2ML1
139316347	139416814	chr7	-	exonic	hsa_circ_0082680	-1.5891	0.020903	HIPK2
33714053	33719586	chr20	-	exonic	N/A	1.5224	0.020934	EDEM2
19473732	19474599	chr11	+	intronic	N/A	1.5578	0.020957	NAV2
39595439	39609405	chr18	+	exonic	hsa_circ_0002560	-2.3673	0.020986	PIK3C3
80772106	80783018	chr2	+	exonic	hsa_circ_0055377	1.5650	0.020996	CTNNA2
77611362	77632364	chr9	-	exonic	hsa_circ_0087220	-2.6959	0.021027	C9orf41
130871231	130962340	chr3	+	exonic	hsa_circ_0067345	1.5496	0.021114	NEK11
103261046	103323802	chr9	+	exonic	N/A	-1.5898	0.021130	TMEFF1
169018296	169038600	chr2	-	exonic	hsa_circ_0001079	-2.1784	0.021157	STK39
47098310	47103636	chr3	-	exonic	hsa_circ_0065149	-2.0391	0.021185	SETD2
53288349	53308214	chr16	+	exonic	hsa_circ_0000702	-1.6392	0.021200	CHD9
201721404	201722812	chr2	-	exonic	hsa_circ_0057725	-1.7193	0.021365	CLK1
45011271	45016256	chr7	-	exonic	hsa_circ_0080099	-2.1125	0.021453	MYO1G
35586872	35610620	chr6	-	exonic	hsa_circ_0001599	-2.5320	0.021492	FKBP5
45766370	45769539	chr19	+	exonic	hsa_circ_0051449	-1.7197	0.021617	MARK4
18393289	18396093	chr20	-	exonic	N/A	1.6402	0.021664	DZANK1

132990021	133002144	chr7	+	sense overlapping	hsa_circ_0001749	1.8397	0.021680	EXOC4
220179447	220180680	chr1	-	exonic	hsa_circ_0007739	-1.5811	0.021685	EPRS
73897062	73898235	chr17	-	exonic	hsa_circ_0045737	1.5741	0.021700	MRPL38
230424926	230425086	chr1	+	intergenic	hsa_circ_0000193	1.5880	0.021707	
149563797	149589941	chr3	+	exonic	hsa_circ_0067716	-1.6173	0.021737	RNF13
13632601	13644961	chr6	-	exonic	hsa_circ_0001577	-2.8016	0.021772	RANBP9
190656515	190682906	chr2	+	exonic	hsa_circ_0001083	-1.5113	0.021896	PMS1
2402279	2402762	chr7	+	exonic	hsa_circ_0079163	-1.6198	0.021906	EIF3B
66426136	66430767	chr17	-	exonic	hsa_circ_0045502	1.5510	0.021920	WIPI1
111819470	111826847	chr9	-	exonic	hsa_circ_0004109	-1.8692	0.021948	TMEM245
47098310	47108608	chr3	-	exonic	hsa_circ_0002569	-2.0734	0.022019	SETD2
45079431	45115960	chr21	+	exonic	hsa_circ_0061880	1.9202	0.022065	RRP1B
197592293	197598333	chr3	+	exonic	hsa_circ_0008106	-1.8032	0.022086	LRCH3
95620775	95621425	chr11	-	exonic	hsa_circ_0024081	1.6566	0.022132	MTMR2
73100965	73101425	chr7	+	exonic	hsa_circ_0005588	-1.9590	0.022136	WBSCR22
149563797	149613347	chr3	+	exonic	hsa_circ_0067717	-1.7931	0.022146	RNF13
19626181	19653155	chr12	+	exonic	hsa_circ_0005257	-1.7572	0.022165	AEBP2
18768781	18769265	chr17	+	exonic	hsa_circ_0002278	-1.8685	0.022169	PRPSAP2
63269389	63286680	chr1	+	exonic	hsa_circ_0012823	-1.6541	0.022204	ATG4C
13579682	13584457	chr6	+	exonic	hsa_circ_0007218	-1.8234	0.022207	SIRT5
47538590	47538885	chr21	+	intronic	N/A	1.7103	0.022431	COL6A2
43010539	43011368	chr6	-	exonic	N/A	1.5086	0.022443	CUL7
75830427	75832610	chr10	+	exonic	hsa_circ_0007797	-1.5958	0.022469	VCL
4200011	4210418	chr17	-	exonic	N/A	-1.7344	0.022476	UBE2G1
70497071	70497677	chr16	+	exonic	hsa_circ_0002599	1.5360	0.022477	FUK
89999875	90002505	chr16	+	exonic	hsa_circ_0041125	1.5798	0.022483	TUBB3
179135239	179136060	chr5	+	exonic	hsa_circ_0005778	-2.0669	0.022502	CANX
43690238	43694048	chr15	+	exonic	N/A	-1.5099	0.022544	TUBGCP4
69120278	69121169	chr12	+	exonic	hsa_circ_0027485	-1.7650	0.022559	NUP107
15860731	15863309	chr1	+	exonic	hsa_circ_0000018	-1.8121	0.022575	DNAJC16
49528047	49531564	chr15	+	exonic	hsa_circ_0008488	-1.7500	0.022599	GALK2
46751970	46754992	chr12	-	exonic	hsa_circ_0025984	1.5738	0.022670	SLC38A2
92224169	92224307	chr1	-	exonic	hsa_circ_0013141	1.5845	0.022855	TGFBR3
61509864	61512143	chr14	+	exonic	N/A	1.5610	0.022905	SLC38A6
31266516	31269158	chr15	-	exonic	N/A	-1.5986	0.022949	MTMR10
89979183	89979271	chr16	+	intronic	hsa_circ_0000728	1.5557	0.023005	MC1R
135025037	135042232	chrX	-	sense overlapping	N/A	1.8066	0.023016	RP11-97N5.2
35890583	35893796	chr21	-	intronic	N/A	1.6380	0.023079	RCAN1
77006164	77033932	chr7	-	exonic	hsa_circ_0080831	-1.7490	0.023108	GSAP
31488162	31489281	chr16	+	exonic	hsa_circ_0039172	1.8084	0.023176	TGFB1I1
36865777	36868169	chr17	+	sense overlapping	hsa_circ_0000760	-1.7599	0.023213	MLLT6
113832487	113833403	chr13	-	exonic	N/A	1.5427	0.023230	PCID2
75892977	75893559	chr15	-	sense overlapping	N/A	1.6221	0.023249	SNUPN
80758739	80861354	chr17	+	exonic	hsa_circ_0046507	1.5740	0.023286	TBCD
53289511	53302038	chr16	+	exonic	hsa_circ_0039365	-2.1939	0.023291	CHD9
152004981	152006276	chr1	-	exonic	hsa_circ_0014205	1.5844	0.023307	S100A11
205585605	205593019	chr1	-	exonic	hsa_circ_0000175	-2.9369	0.023342	ELK4

2659529	2661781	chr4	+	exonic	hsa_circ_0068925	-1.6363	0.023351	FAM193A
34450934	34459751	chr20	+	exonic	hsa_circ_0060158	-1.9987	0.023437	PHF20
20212215	20212724	chr3	-	exonic	N/A	1.6458	0.023513	SGOL1
47441689	47446190	chrX	+	exonic	hsa_circ_0090446	1.8191	0.023586	TIMP1
75933300	75933614	chr7	+	exonic	hsa_circ_0080788	1.5202	0.023593	HSPB1
42579888	42589654	chr15	+	exonic	hsa_circ_0034804	1.5287	0.023647	GANC
155742856	155753880	chr1	-	exonic	hsa_circ_0014628	-1.6456	0.023729	GON4L
107260799	107263621	chr11	-	exonic	N/A	-2.2833	0.023736	CWF19L2
28458561	28544344	chr12	+	exonic	hsa_circ_0006250	-2.1409	0.023750	CCDC91
20315704	20333558	chr13	-	exonic	N/A	-1.5723	0.023826	PSPC1
106739425	106774574	chr2	-	exonic	hsa_circ_0055943	-2.2463	0.023879	UXS1
105121498	105135700	chr7	-	exonic	hsa_circ_0081854	-1.5696	0.023899	PUS7
149563797	149639014	chr3	+	exonic	hsa_circ_0001346	-1.6757	0.023938	RNF13
960930	1004666	chr16	-	exonic	hsa_circ_0000664	1.5532	0.024045	LMF1
72302181	72302378	chr7	+	exonic	hsa_circ_0008708	-1.8333	0.024095	SBDSP1
41994031	42017061	chr22	-	exonic	hsa_circ_0063583	1.6411	0.024141	DESI1
46224309	46235694	chr10	+	exonic	hsa_circ_0006465	-1.8303	0.024191	FAM21C
20910208	20914622	chr17	-	exonic	hsa_circ_0042458	1.6034	0.024218	USP22
2985909	3000467	chr11	-	exonic	N/A	-1.6246	0.024220	NAP1L4
1735857	1770677	chr1	-	exonic	hsa_circ_0005907	-2.0217	0.024262	GNB1
33073307	33078670	chr21	-	exonic	hsa_circ_0007207	1.6706	0.024288	SCAF4
43528083	43544806	chr13	-	exonic	hsa_circ_0000479	-2.2154	0.024303	EPSTI1
16327848	16345099	chr3	+	exonic	hsa_circ_0001273	-1.8969	0.024338	OXNAD1
117957334	117963271	chr1	+	exonic	hsa_circ_0013737	-3.8776	0.024350	MAN1A2
31841015	31844174	chr14	-	exonic	hsa_circ_0031569	1.6170	0.024364	HEATR5A
242396161	242415402	chr2	+	exonic	N/A	1.5727	0.024371	FARP2
10286215	10288043	chr19	-	exonic	hsa_circ_0049224	-2.2327	0.024384	DNMT1
246754813	246755243	chr1	+	exonic	hsa_circ_0017310	-1.8094	0.024403	CNST
115249247	115337531	chr9	+	exonic	hsa_circ_0086102	1.6098	0.024411	KIAA1958
36415395	36424928	chr11	+	intronic	hsa_circ_0005044	-2.7269	0.024446	PRR5L
151960100	152012423	chr7	-	exonic	hsa_circ_0006784	-2.0893	0.024499	KMT2C
24680620	24681035	chr14	-	exonic	hsa_circ_0031359	-2.1906	0.024543	CHMP4A
69039612	69104760	chr8	+	exonic	N/A	1.7587	0.024647	PREX2
168920009	168986268	chr2	-	exonic	hsa_circ_0005882	-1.9069	0.024668	STK39
77065301	77065626	chr4	-	exonic	hsa_circ_0070040	-2.5347	0.024668	NUP54
53672262	53681075	chrX	-	exonic	hsa_circ_0001922	-1.6132	0.024675	HUWE1
36121010	36128402	chr14	-	exonic	hsa_circ_0004823	-1.8069	0.024691	RALGAPA1
71369656	71370884	chr11	+	intergenic	N/A	1.5643	0.024757	
151181822	151188100	chr7	-	exonic	hsa_circ_0082951	-1.9583	0.024759	RHEB
95494501	95507595	chr4	+	exonic	hsa_circ_0070467	-2.1615	0.024777	PDLIM5
30412464	30435989	chr8	-	sense overlapping	N/A	1.5260	0.024803	GTF2E2
189455528	189456563	chr3	+	exonic	hsa_circ_0068514	1.6186	0.024868	TP63
14821320	14821476	chrY	+	exonic	hsa_circ_0092232	1.6892	0.024871	USP9Y
8352261	8352391	chr20	-	antisense	hsa_circ_0001132	1.5716	0.024925	PLCB1
40988349	40990765	chrX	-	antisense	hsa_circ_0001915	1.7825	0.024988	USP9X
123230137	123253755	chr9	-	exonic	hsa_circ_0088284	-1.6206	0.025013	CDK5RAP2
102521074	102527646	chr13	-	exonic	hsa_circ_0030793	1.6545	0.025061	FGF14
103550652	103550795	chr10	-	intronic	hsa_circ_0000256	-1.6628	0.025079	MGEA5
6086622	6089676	chr7	-	exonic	hsa_circ_0079329	-1.5969	0.025113	EIF2AK1
165859440	165872516	chr1	+	exonic	hsa_circ_0015081	1.6154	0.025135	UCK2

58118534	58149057	chr3	+	exonic	hsa_circ_0066361	-1.6337	0.025196	FLNB
32502510	32504220	chr1	+	exonic	hsa_circ_0007231	-1.6665	0.025204	KHDRBS1
44436348	44445676	chr2	+	exonic	hsa_circ_0009062	-1.7116	0.025228	PPM1B
131060182	131130662	chr7	+	exonic	hsa_circ_0003047	-2.0466	0.025229	MKLN1
133894452	133901915	chr3	-	exonic	hsa_circ_0067434	-1.8479	0.025241	RYK
130505247	130505768	chr6	-	exonic	hsa_circ_0008833	-1.6151	0.025262	SAMD3
120346048	120348235	chr11	+	exonic	hsa_circ_0002955	-1.9383	0.025364	ARHGEF12
98985661	98987635	chr7	+	exonic	hsa_circ_0004299	-1.6060	0.025370	ARPC1B
134062675	134064518	chr9	+	exonic	hsa_circ_0089175	1.5950	0.025409	NUP214
97686267	97718297	chr9	+	exonic	N/A	1.6458	0.025414	C9orf3
8076452	8088649	chr18	+	exonic	hsa_circ_0006114	1.5779	0.025420	PTPRM
34093272	34093534	chr11	+	exonic	hsa_circ_0008227	-2.1256	0.025421	CAPRIN1
101450683	101451498	chr3	+	exonic	hsa_circ_0066701	1.6279	0.025429	CEP97
71229099	71256271	chr15	+	exonic	hsa_circ_0036113	1.6485	0.025489	LRRC49
77791974	77818086	chr13	-	exonic	hsa_circ_0004217	-1.5951	0.025517	MYCBP2
26490568	26499644	chr17	+	exonic	hsa_circ_0003638	-1.5232	0.025552	NLK
10283765	10288043	chr19	-	exonic	hsa_circ_0000889	-2.1779	0.025668	DNMT1
80721840	80730383	chr17	+	exonic	hsa_circ_0005281	-1.6350	0.025787	TBCD
34952950	35006275	chr11	+	exonic	hsa_circ_0021708	-1.7319	0.025818	PDHX
50131343	50141145	chr14	-	exonic	hsa_circ_0031787	-1.8661	0.025861	POLE2
39001258	39019284	chr22	-	exonic	N/A	1.6023	0.025866	FAM227A
62546241	62596747	chr8	-	exonic	hsa_circ_0008337	-1.7586	0.025894	ASPH
39328182	39329376	chr4	-	exonic	hsa_circ_0001403	-1.6639	0.025903	RFC1
72182896	72184130	chr5	+	exonic	hsa_circ_0072932	-1.6152	0.025932	TNPO1
77299605	77299759	chr5	-	intronic	hsa_circ_0001500	1.8713	0.026041	AP3B1
234296802	234299129	chr2	+	exonic	hsa_circ_0001112	-2.2256	0.026056	DGKD
94532555	94533477	chr11	+	exonic	hsa_circ_0004214	1.7120	0.026079	AMOTL1
145594038	145595220	chr1	-	exonic	hsa_circ_0003693	-1.6818	0.026171	POLR3C
34302106	34313077	chr20	-	exonic	hsa_circ_0004870	-2.1216	0.026176	RBM39
19068923	19069099	chrX	+	antisense	N/A	1.5578	0.026211	GPR64
54119944	54120936	chr2	-	exonic	hsa_circ_0054547	-1.6134	0.026211	PSME4
153581139	153581292	chrX	-	exonic	hsa_circ_0091894	-1.8918	0.026277	FLNA
116627861	116631668	chr11	-	exonic	N/A	1.6017	0.026315	BUD13
128973475	128975403	chr10	-	exonic	N/A	1.6086	0.026420	FAM196A
101189031	101190071	chr7	+	intronic	hsa_circ_0092287	1.6050	0.026427	COL26A1
39191239	39200116	chr19	+	exonic	hsa_circ_0050900	-2.2542	0.026446	ACTN4
37331786	37333735	chr5	-	exonic	hsa_circ_0072263	1.8231	0.026455	NUP155
124090477	124090706	chr12	+	exonic	hsa_circ_0029235	1.7561	0.026457	DDX55
54292036	54310270	chr4	+	exonic	hsa_circ_0001413	-2.0783	0.026524	FIP1L1
171974248	171974367	chr2	-	exonic	hsa_circ_0057037	-1.7213	0.026593	TLK1
144464665	144465125	chr4	+	sense overlapping	N/A	-2.7497	0.026625	SMARCA5
80390757	80415142	chr15	+	exonic	hsa_circ_0000642	-2.1236	0.026663	ZFAND6
29784412	29819177	chr22	-	sense overlapping	hsa_circ_0001218	-1.6660	0.026759	AP1B1
21987790	21999817	chr13	-	exonic	hsa_circ_0006732	-2.3143	0.026760	ZDHHC20
129684543	129690951	chr3	-	sense overlapping	N/A	1.8094	0.026787	RP11-93K22.6
29218606	29246335	chr18	-	exonic	N/A	-2.0657	0.026789	B4GALT6
52725371	52726564	chr15	-	sense overlapping	hsa_circ_0000602	1.5833	0.026883	MYO5A

49528047	49584734	chr15	+	exonic	hsa_circ_0035189	-1.5021	0.026887	GALK2
29313942	29323831	chr1	+	exonic	hsa_circ_0011168	-1.7586	0.026943	EPB41
66133406	66137003	chr11	-	exonic	hsa_circ_0022983	1.5661	0.026945	SLC29A2
16192722	16197350	chr19	+	exonic	hsa_circ_0008432	-2.1024	0.026992	TPM4
157839891	157841780	chr3	+	exonic	hsa_circ_0001355	-2.0725	0.026994	RSRC1
135263546	135265104	chr6	-	exonic	N/A	1.5398	0.027026	ALDH8A1
45203311	45204674	chr11	+	exonic	N/A	1.5328	0.027060	PRDM11
61118817	61128218	chr2	+	exonic	hsa_circ_0001011	-2.0734	0.027069	REL
153594675	153599729	chrX	-	exonic	hsa_circ_0092022	-1.8951	0.027072	FLNA
17137883	17143936	chr8	+	exonic	hsa_circ_0083423	-1.8896	0.027089	VPS37A
152480271	152496816	chr7	+	exonic	hsa_circ_0006890	-1.6938	0.027096	ACTR3B
243736227	244006584	chr1	-	exonic	hsa_circ_0017248	-2.5105	0.027142	AKT3
15939756	15946230	chr19	+	exonic	hsa_circ_0049851	1.7882	0.027175	XLOC_012981
24021007	24046439	chr2	-	exonic	hsa_circ_0052941	-1.7802	0.027185	ATAD2B
86293355	86301070	chr9	-	exonic	hsa_circ_0087357	-2.9342	0.027186	UBQLN1
33060883	33063720	chr7	-	exonic	hsa_circ_0079800	-1.7690	0.027209	NT5C3A
75302560	75302889	chr10	-	exonic	hsa_circ_0018824	1.8801	0.027235	USP54
1747194	1770677	chr1	-	exonic	hsa_circ_0008702	-1.8961	0.027256	GNB1
52311410	52358462	chr15	+	exonic	hsa_circ_0035301	1.5164	0.027258	MAPK6
99860426	99864304	chr6	-	exonic	hsa_circ_0001630	-1.7406	0.027277	PNISR
20632714	20641530	chr13	+	exonic	hsa_circ_0029636	-1.7632	0.027313	ZMYM2
40293372	40301685	chr13	+	exonic	hsa_circ_0006900	1.6920	0.027394	COG6
95091099	95099324	chr5	+	exonic	hsa_circ_0007444	-2.3130	0.027495	RHOBTB3
41515056	41515506	chr13	-	exonic	hsa_circ_0030050	-2.0300	0.027523	ELF1
186988982	187003844	chr3	-	intronic	hsa_circ_0009169	1.6226	0.027597	MASP1
121220457	121221555	chr12	-	exonic	hsa_circ_0028935	1.6793	0.027603	SPPL3
38069338	38089486	chr22	+	sense overlapping	hsa_circ_0001229	1.8923	0.027667	NOL12
227729319	227729842	chr2	+	exonic	hsa_circ_0001104	-2.7117	0.027688	RHBDD1
243776972	244006584	chr1	-	exonic	hsa_circ_0017252	-2.5425	0.027699	AKT3
13639794	13644961	chr6	-	exonic	hsa_circ_0001578	-3.1932	0.027743	RANBP9
51797729	51800460	chr18	+	exonic	hsa_circ_0007180	-1.5779	0.027759	POLI
61013821	61068709	chr13	+	exonic	N/A	-1.5920	0.027761	TDRD3
216227368	216238260	chr2	+	antisense	N/A	1.6042	0.027762	FN1
44442444	44443967	chr1	+	exonic	hsa_circ_0012125	1.5822	0.027798	ATP6V0B
34300940	34313077	chr20	-	exonic	hsa_circ_0008143	-1.6855	0.027831	RBM39
46622935	46624417	chr12	-	sense overlapping	hsa_circ_0000395	2.0991	0.027907	SLC38A1
52840434	52845910	chr12	-	exonic	hsa_circ_0026399	1.6687	0.027967	KRT6B
69206201	69216694	chr5	+	exonic	hsa_circ_0004837	-2.0201	0.027987	SMA4
89961445	89977071	chr16	+	exonic	hsa_circ_0041100	1.7827	0.027992	TCF25
27269150	27269556	chr1	+	exonic	hsa_circ_0005087	-2.1276	0.027998	NUDC
159001971	159010814	chr6	+	exonic	hsa_circ_0001661	-1.7863	0.028014	TMEM181
102036066	102045130	chr7	+	exonic	hsa_circ_0001735	-1.6782	0.028015	PRKRIP1
68794472	68805135	chr2	+	exonic	N/A	-1.6309	0.028016	APLF
158994451	159010814	chr6	+	exonic	hsa_circ_0004587	-1.9445	0.028149	TMEM181
29313942	29314417	chr1	+	exonic	hsa_circ_0011167	-1.7850	0.028162	EPB41
88883054	88904247	chr14	+	exonic	N/A	-1.8062	0.028202	SPATA7
1724683	1749314	chr1	-	exonic	hsa_circ_0009349	-1.7124	0.028239	GNB1
21076215	21100103	chr1	-	exonic	hsa_circ_0000023	-1.7343	0.028243	HP1BP3
239090705	239093928	chr2	-	exonic	hsa_circ_0001116	-2.1052	0.028301	ILKAP

87017739	87018273	chr3	-	exonic	hsa_circ_0003806	1.5998	0.028306	VGLL3
73122918	73123452	chr7	-	exonic	hsa_circ_0008121	1.6375	0.028438	STX1A
34922765	34936026	chr19	+	exonic	hsa_circ_0050516	-1.5934	0.028448	UBA2
119219541	119232566	chr3	+	exonic	hsa_circ_0006684	-2.1831	0.028487	TIMMDC1
28800065	28802603	chr1	+	exonic	hsa_circ_0000038	-1.8252	0.028500	PHACTR4
44966659	45000952	chr3	-	exonic	hsa_circ_0065052	1.5848	0.028567	ZDHHC3
97178494	97222866	chr12	+	exonic	N/A	1.7844	0.028595	C12orf55
102027080	102038934	chr2	-	exonic	hsa_circ_0004121	1.7519	0.028668	RFX8
66021409	66048810	chr15	-	exonic	hsa_circ_0035946	-1.9521	0.028790	DENND4A
24679553	24681035	chr14	-	exonic	hsa_circ_0031357	-2.2453	0.028794	CHMP4A
130475969	130497153	chr6	-	exonic	N/A	-1.7336	0.028794	SAMD3
32602655	32620661	chr2	+	exonic	hsa_circ_0053441	-1.7140	0.028859	BIRC6
101372434	101373305	chr14	+	exonic	hsa_circ_0033198	1.7579	0.028879	MEG8
62531536	62566219	chr8	-	exonic	hsa_circ_0084606	-2.0066	0.028946	ASPH
72958135	72960247	chr2	-	exonic	hsa_circ_0001030	-2.1241	0.028953	EXOC6B
47410171	47424963	chr21	+	exonic	hsa_circ_0062035	1.6641	0.029025	COL6A1
112116954	112121111	chr12	-	exonic	hsa_circ_0006396	-1.6010	0.029074	BRAP
85692787	85693046	chr11	-	exonic	hsa_circ_0023904	-2.7278	0.029146	PICALM
138203933	138255748	chr7	+	exonic	hsa_circ_0082582	1.9316	0.029206	TRIM24
71640490	71704162	chr15	+	sense overlapping	N/A	1.5420	0.029212	THSD4
155823066	155823597	chr1	-	exonic	hsa_circ_0000139	-2.1594	0.029283	GON4L
126384726	126395456	chr10	-	exonic	hsa_circ_0008456	-1.5278	0.029287	FAM53B
41736871	41737203	chr19	+	exonic	hsa_circ_0002945	1.6207	0.029318	AXL
3778830	3781615	chrX	-	exonic	hsa_circ_0089837	-1.7945	0.029410	AK000470
30734587	30746317	chr20	+	exonic	hsa_circ_0059760	1.5123	0.029525	TM9SF4
117910084	117957453	chr1	+	exonic	hsa_circ_0013729	-3.9496	0.029562	MAN1A2
197986055	197987516	chr2	-	exonic	N/A	-1.5851	0.029565	ANKRD44
170162524	170168267	chr6	+	exonic	hsa_circ_0004237	1.8020	0.029576	ERMARD
29319841	29344954	chr1	+	exonic	hsa_circ_0000041	-1.6209	0.029633	EPB41
68882182	69736583	chr5	+	sense overlapping	hsa_circ_0005896	1.5870	0.029697	SMN1
144464661	144465125	chr4	+	exonic	hsa_circ_0001445	-2.8667	0.029700	SMARCA5
17059499	17059748	chr3	-	antisense	hsa_circ_0001275	1.7322	0.029788	PLCL2
983990	1004666	chr16	-	exonic	N/A	1.5539	0.029822	LMF1
158204420	158223486	chr5	-	exonic	hsa_circ_0074817	1.5452	0.029880	EBF1
46290104	46295253	chr1	+	exonic	hsa_circ_0012277	1.6524	0.029886	MAST2
21415630	21415706	chr1	-	exonic	hsa_circ_0010497	-1.5829	0.029942	EIF4G3
4891946	4892613	chr6	+	exonic	hsa_circ_0008285	-3.4513	0.029979	CDYL
104847269	104847527	chr14	-	intergenic	hsa_circ_0000573	1.8921	0.030033	
138340248	138341258	chr3	+	exonic	hsa_circ_0007080	1.5550	0.030036	FAIM
106508143	106508231	chr7	-	antisense	hsa_circ_0001737	1.5415	0.030041	PIK3CG
15444028	15477863	chrX	-	exonic	hsa_circ_0089921	1.6243	0.030042	PIR
219366423	219414650	chr1	+	sense overlapping	hsa_circ_0004417	-1.7854	0.030073	LYPLAL1
138824814	138853226	chr9	-	exonic	hsa_circ_0089507	1.6738	0.030088	UBAC1
67513932	67514758	chr8	-	exonic	hsa_circ_0004863	-2.3654	0.030150	MYBL1
136085784	136141886	chr3	-	exonic	N/A	-1.6605	0.030154	STAG1
31205314	31214563	chr1	-	exonic	hsa_circ_0011205	1.5787	0.030179	LAPTM5
102121473	102122174	chr4	-	intronic	N/A	1.6214	0.030185	PPP3CA
14832521	14834120	chrY	+	exonic	hsa_circ_0092235	1.5995	0.030273	USP9Y

38792600	38794168	chr21	+	exonic	hsa_circ_0001190	-1.6949	0.030273	DYRK1A
197592293	197602646	chr3	+	exonic	hsa_circ_0008351	-2.6339	0.030374	LRCH3
216177220	216200847	chr2	+	exonic	hsa_circ_0058060	1.5125	0.030377	ATIC
42730765	42744343	chr1	-	exonic	hsa_circ_0006848	-1.7486	0.030656	FOXJ3
24679553	24679974	chr14	-	exonic	hsa_circ_0007326	-2.0799	0.030687	CHMP4A
2951660	2952972	chr4	-	exonic	hsa_circ_0006737	-1.9048	0.030689	NOP14
1735857	1749314	chr1	-	exonic	hsa_circ_0009353	-2.0580	0.030721	GNB1
46190711	46195443	chr19	-	exonic	hsa_circ_0051546	1.6348	0.030749	SNRPD2
16794537	16824083	chr10	-	exonic	hsa_circ_0006577	-1.5398	0.030794	RSU1
42509874	42510962	chr19	-	exonic	hsa_circ_0051260	1.5868	0.030859	GRIK5
592468	619543	chr6	-	exonic	hsa_circ_0075437	-1.5541	0.030867	EXOC2
46934593	46950619	chr16	+	exonic	hsa_circ_0039219	1.6690	0.030924	GPT2
1117078	1118233	chr10	+	sense overlapping	hsa_circ_0000204	1.6259	0.030931	WDR37
140648622	140652463	chr9	+	exonic	hsa_circ_0089727	-1.7699	0.030933	EHMT1
12800185	12800444	chr19	-	exonic	hsa_circ_0049547	1.6403	0.030939	FBXW9
53685473	53687313	chr12	+	sense overlapping	N/A	1.5362	0.030965	ESPL1
128350085	128360471	chr11	-	exonic	hsa_circ_0002083	-2.6553	0.030983	ETS1
33478807	33480195	chr1	-	exonic	hsa_circ_0011462	1.5476	0.030998	AK2
36668400	36669878	chr2	+	exonic	hsa_circ_0007386	-1.7833	0.031017	CRIM1
80537076	80546772	chr9	-	sense overlapping	N/A	-2.4223	0.031024	GNAQ
40502897	40503739	chr3	+	sense overlapping	hsa_circ_0002102	-1.7671	0.031036	RPL14
95498782	95535315	chr12	-	exonic	N/A	1.7181	0.031044	FGD6
128922303	128928858	chr2	+	exonic	hsa_circ_0008298	-1.7614	0.031052	UGGT1
112898406	112900819	chr9	+	exonic	hsa_circ_0008706	1.5218	0.031075	PALM2-AKAP2
155063089	155099179	chr6	+	exonic	hsa_circ_0078357	1.6130	0.031138	SCAF8
71193260	71229161	chr15	+	exonic	N/A	1.6293	0.031152	LRRC49
34953607	34958487	chr21	-	exonic	hsa_circ_0004339	1.5081	0.031160	DONSON
124911167	124934413	chr12	-	exonic	hsa_circ_0000461	-1.7070	0.031171	NCOR2
65466985	65482828	chr2	+	exonic	N/A	-4.6916	0.031235	ACTR2
33996220	33998862	chr9	-	exonic	hsa_circ_0086736	-2.0264	0.031243	UBAP2
34376033	34409158	chr18	-	sense overlapping	hsa_circ_0047467	1.7789	0.031262	TPGS2
4192524	4200109	chr17	-	exonic	hsa_circ_0041555	-1.5295	0.031271	UBE2G1
110068659	110081160	chr9	+	exonic	hsa_circ_0087662	-2.3854	0.031290	RAD23B
3076997	3078169	chr6	+	exonic	hsa_circ_0001571	-2.1668	0.031318	RIPK1
183361267	183390272	chr3	+	exonic	hsa_circ_0001368	-1.7301	0.031327	KLHL24
117944807	117948267	chr1	+	exonic	hsa_circ_0000116	-2.9192	0.031380	MAN1A2
212216334	212220759	chr1	+	exonic	hsa_circ_0006862	1.8309	0.031431	DTL
124121556	124132428	chr8	+	exonic	hsa_circ_0001820	-1.7246	0.031435	TBC1D31
52959282	52975384	chr1	-	exonic	hsa_circ_0003632	-1.7735	0.031459	ZCCHC11
100721965	100754399	chr2	-	sense overlapping	hsa_circ_0001056	1.5000	0.031506	AFF3
5808203	5815904	chr10	-	exonic	N/A	-1.7649	0.031629	GDI2
3424822	3426193	chr11	+	exonic	hsa_circ_0020845	1.9665	0.031640	TSSC2
100976372	101023156	chr3	-	exonic	N/A	1.5595	0.031652	IMPG2
34951655	34957074	chr21	-	exonic	hsa_circ_0061548	1.6449	0.031653	DONSON
34978930	35006275	chr11	+	exonic	hsa_circ_0003768	-1.7293	0.031659	PDHX

24357988	24362320	chr2	+	exonic	hsa_circ_0007270	-2.5693	0.031720	FAM228B
76584771	76588078	chr15	-	exonic	hsa_circ_0003620	-1.6909	0.031739	ETFA
155095122	155131342	chr6	+	exonic	hsa_circ_0078367	-1.5809	0.031791	SCAF8
61013821	61034674	chr13	+	exonic	hsa_circ_0004245	-1.5859	0.031834	TDRD3
42730785	42776781	chr1	-	exonic	hsa_circ_0004416	-1.5763	0.031895	FOXJ3
31315699	31315949	chr20	-	exonic	hsa_circ_0059797	1.6031	0.031907	COMMD7
128628009	128642880	chr11	+	exonic	hsa_circ_0000369	-1.6963	0.031917	FLI1
78098799	78107340	chr1	-	sense overlapping	hsa_circ_0006395	-1.7093	0.032010	ZZZ3
60613530	60642498	chr17	+	exonic	hsa_circ_0045128	-1.5463	0.032022	TLK2
155547476	155551830	chr3	-	exonic	hsa_circ_0001350	-1.8465	0.032040	SLC33A1
29481207	29481422	chr1	-	exonic	hsa_circ_0006602	-2.1371	0.032101	SRSF4
76082583	76083174	chr17	+	exonic	hsa_circ_0045862	1.7040	0.032115	TNRC6C
5129748	5131057	chr16	+	exonic	hsa_circ_0037777	1.9851	0.032162	ALG1
86293355	86297981	chr9	-	exonic	hsa_circ_0001866	-2.3596	0.032166	UBQLN1
65272490	65272586	chr11	+	intronic	hsa_circ_0000326	-3.2295	0.032227	XLOC_l2_002352
24762046	24788679	chr16	+	exonic	hsa_circ_0006008	-1.6618	0.032260	TNRC6A
33467081	33467233	chr3	-	exonic	hsa_circ_0064742	-1.9719	0.032280	UBP1
105563560	105564743	chr6	-	exonic	hsa_circ_0077526	1.6386	0.032415	BVES
42231923	42232779	chr17	+	exonic	hsa_circ_0007378	1.6663	0.032545	C17orf53
53848509	53865591	chr12	+	exonic	hsa_circ_0026640	1.5875	0.032630	PCBP2
1735857	1737977	chr1	-	exonic	hsa_circ_0000007	-2.2080	0.032649	GNB1
139042473	139043291	chr5	-	antisense	hsa_circ_0001539	1.6777	0.032664	CXXC5
31899500	31907527	chr1	+	exonic	hsa_circ_0011286	1.9938	0.032684	SERINC2
8076452	8114825	chr18	+	exonic	hsa_circ_0003063	1.5778	0.032761	PTPRM
65651210	65652469	chr11	-	exonic	hsa_circ_0022920	1.5536	0.032818	FIBP
34574331	34614575	chr6	-	exonic	hsa_circ_0009095	-1.7418	0.032865	C6orf106
106761645	106782539	chr2	-	exonic	hsa_circ_0004029	-1.7569	0.032923	UXS1
43467278	43467478	chr6	+	intronic	hsa_circ_0092310	1.6371	0.032972	TJAP1
195415403	195416309	chr3	+	exonic	hsa_circ_0008267	-1.9652	0.032984	LINC00969
77227158	77230123	chr7	+	exonic	hsa_circ_0080845	-2.3822	0.032988	PTPN12
155628480	155643155	chr3	+	exonic	hsa_circ_0006184	-1.6439	0.032993	GMPS
77779390	77818086	chr13	-	exonic	hsa_circ_0030509	-1.7106	0.032995	MYCBP2
31175028	31204064	chr14	+	exonic	N/A	-1.5955	0.033033	SCFD1
99001020	99002576	chr7	-	exonic	N/A	-2.0462	0.033038	PDAP1
94066434	94068129	chr6	-	exonic	hsa_circ_0077398	1.6380	0.033101	EPHA7
33606862	33613800	chr18	-	exonic	hsa_circ_0000842	-1.8219	0.033121	RPRD1A
102076623	102094483	chr11	+	exonic	hsa_circ_0005990	1.5737	0.033167	YAP1
43133561	43135467	chr20	-	intronic	N/A	1.5761	0.033170	SERINC3
61063896	61141784	chr13	+	exonic	N/A	-1.6720	0.033189	TDRD3
110064315	110068928	chr9	+	exonic	hsa_circ_0006174	-2.3397	0.033202	RAD23B
33222416	33233138	chr20	-	exonic	hsa_circ_0059988	1.6703	0.033205	PIGU
30330343	30389603	chr20	+	exonic	hsa_circ_0059711	1.6998	0.033232	TPX2
75040222	75091111	chr4	+	exonic	hsa_circ_0069982	-1.5486	0.033237	MTHFD2L
197597030	197602646	chr3	+	exonic	hsa_circ_0005873	-2.5311	0.033254	LRCH3
53701835	53714476	chr12	-	exonic	hsa_circ_0026616	1.8226	0.033311	AAAS
106746129	106782539	chr2	-	exonic	hsa_circ_0055947	-1.6099	0.033345	UXS1
74493579	74503971	chr16	-	exonic	hsa_circ_0040466	-2.2733	0.033370	GLG1
6301901	6312055	chr18	-	exonic	N/A	-1.5700	0.033386	L3MBTL4
133135707	133138703	chr6	+	exonic	hsa_circ_0077877	1.7892	0.033387	RPS12
96305503	96312973	chr9	+	exonic	hsa_circ_0087557	-1.5178	0.033405	FAM120A

1747194	1749314	chr1	-	exonic	hsa_circ_0009360	-2.1297	0.033469	GNB1
51860052	51913807	chr1	-	exonic	hsa_circ_0012425	-1.5828	0.033536	EPS15
99890680	99896878	chr13	+	exonic	hsa_circ_0030720	-2.0517	0.033569	UBAC2
131829427	131840230	chr2	-	exonic	hsa_circ_0003524	1.5612	0.033570	FAM168B
142264862	142311690	chr5	+	exonic	hsa_circ_0074362	-1.8974	0.033603	ARHGAP26
4015902	4027345	chr17	-	exonic	hsa_circ_0041517	1.5931	0.033618	ZZEF1
1737913	1749314	chr1	-	exonic	hsa_circ_0009357	-2.6555	0.033632	GNB1
6947713	6948261	chr1	+	exonic	hsa_circ_0009544	1.5574	0.033640	CAMTA1
86294689	86297981	chr9	-	exonic	hsa_circ_0001867	-2.3437	0.033661	UBQLN1
180663927	180670906	chr5	-	exonic	hsa_circ_0075379	1.7730	0.033670	GNB2L1
53024621	53027487	chr17	+	exonic	hsa_circ_0044695	1.5506	0.033730	TOM1L1
12627938	12632881	chr1	-	exonic	hsa_circ_0010015	1.8961	0.033733	DHRS3
128354717	128360471	chr11	-	exonic	hsa_circ_0004296	-2.0880	0.033744	ETS1
34929549	34936026	chr19	+	exonic	hsa_circ_0050532	-1.5984	0.033829	UBA2
35812582	35812776	chr20	+	exonic	hsa_circ_0005759	1.5006	0.033885	RPN2
153924191	153926334	chrX	-	exonic	hsa_circ_0092135	-1.5605	0.033887	GAB3
38991050	39021238	chr5	-	exonic	hsa_circ_0006308	-1.8962	0.033977	RICTOR
205138290	205156934	chr1	-	exonic	hsa_circ_0016199	1.6794	0.033989	DSTYK
128419929	128434922	chr9	-	exonic	hsa_circ_0001890	-1.7683	0.034034	MAPKAP1
18022177	18022367	chr20	-	exonic	N/A	1.6742	0.034036	OVOL2
49298318	49303095	chr19	-	exonic	hsa_circ_0051778	1.5422	0.034038	BCAT2
46488643	46488876	chr1	+	intronic	N/A	1.7408	0.034169	MAST2
44383247	44386611	chrX	-	sense overlapping	hsa_circ_0007290	-1.9927	0.034186	FUNDC1
98673299	98703416	chr8	+	exonic	hsa_circ_0002114	-1.5260	0.034198	MTDH
38205014	38205733	chr8	-	exonic	hsa_circ_0083996	-1.8629	0.034199	WHSC1L1
109489906	109492898	chr2	+	intronic	N/A	1.6070	0.034241	CCDC138
96965240	96966735	chr2	-	intronic	N/A	1.6087	0.034245	SNRNP200
42231920	42232779	chr17	+	exonic	hsa_circ_0004239	1.5565	0.034249	C17orf53
30565588	30569605	chr8	-	exonic	hsa_circ_0083866	-1.6801	0.034286	GSR
35805450	35805551	chr10	+	exonic	hsa_circ_0018203	-2.4473	0.034370	CCNY
30495147	30495584	chr16	+	exonic	hsa_circ_0000690	-2.5353	0.034400	ITGAL
178626309	178639698	chr3	-	intergenic	N/A	1.7901	0.034409	
20902997	20903293	chr16	-	intronic	N/A	1.5721	0.034412	DCUN1D3
126370175	126384781	chr10	-	exonic	hsa_circ_0003570	-1.6392	0.034471	FAM53B
86292641	86297981	chr9	-	exonic	hsa_circ_0006466	-2.4980	0.034572	UBQLN1
137015277	137018525	chr6	-	exonic	hsa_circ_0006554	-2.1769	0.034576	MAP3K5
83819966	83832827	chr15	-	exonic	hsa_circ_0000646	-1.5587	0.034629	HDGFRP3
45241705	45244412	chr1	+	exonic	hsa_circ_0012173	1.7061	0.034632	RPS8
40879652	40882936	chr17	-	exonic	hsa_circ_0043898	1.5466	0.034668	EZH1
85459039	85460676	chr12	+	exonic	N/A	1.7047	0.034676	LRRIQ1
78180292	78204241	chr11	-	exonic	hsa_circ_0023812	1.5943	0.034686	NARS2
96076462	96077487	chr12	-	exonic	hsa_circ_0006419	1.5752	0.034710	NTN4
111434013	111435155	chr1	+	exonic	hsa_circ_0000105	-1.8094	0.034728	CD53
25477659	25477979	chr20	-	intronic	hsa_circ_0092338	1.9190	0.034736	NINL
128320084	128323309	chr7	+	exonic	N/A	1.5491	0.034763	FAM71F2
239082174	239093928	chr2	-	exonic	hsa_circ_0006014	-2.0679	0.034766	ILKAP
47725960	47728788	chr1	-	exonic	N/A	1.5086	0.034812	STIL
33467081	33481417	chr3	-	exonic	hsa_circ_0064743	-1.9692	0.034846	UBP1
43142254	43142429	chr1	+	exonic	hsa_circ_0011977	1.7786	0.034879	PPIH
9002122	9025596	chr11	-	exonic	hsa_circ_0021120	1.7715	0.034885	NRIP3

75567212	75590926	chr14	-	exonic	hsa_circ_0032682	-1.5965	0.034934	NEK9
57014000	57016139	chr20	+	exonic	hsa_circ_0001173	-2.6516	0.034939	VAPB
205156545	205156934	chr1	-	exonic	hsa_circ_0016201	1.5305	0.034947	DSTYK
34921480	34925873	chr19	+	exonic	hsa_circ_0005325	-1.7063	0.034953	UBA2
8759016	8759620	chr11	-	intronic	N/A	1.5987	0.034979	ST5
111883774	111890244	chr10	+	exonic	hsa_circ_0003357	-2.3119	0.034997	ADD3
104678572	104681470	chr7	+	exonic	hsa_circ_0007395	-1.6271	0.035026	KMT2E
45073658	45290704	chr6	-	exonic	N/A	1.6980	0.035036	SUPT3H
144547886	144557755	chr8	-	exonic	hsa_circ_0008635	1.5176	0.035057	ZC3H3
32198899	32199141	chr20	+	exonic	hsa_circ_0059859	1.7439	0.035071	CBFA2T2
125328677	125329118	chr6	+	intronic	N/A	1.5617	0.035083	RNF217
157155854	157160177	chr7	+	exonic	hsa_circ_0008726	-1.6256	0.035257	DNAJB6
30370051	30385318	chr20	+	exonic	hsa_circ_0003209	1.5065	0.035274	TPX2
3424822	3427945	chr11	+	exonic	hsa_circ_0020846	1.9211	0.035344	TSSC2
35578644	35601650	chr17	-	exonic	hsa_circ_0043247	1.5156	0.035362	ACACA
61468694	61484485	chr2	-	exonic	N/A	-1.5620	0.035391	USP34
108286344	108286691	chr9	+	intronic	N/A	-1.6769	0.035440	FSD1L
49609654	49613024	chr10	+	exonic	hsa_circ_0018315	-2.2318	0.035483	MAPK8
16353301	16372347	chr8	-	sense overlapping	N/A	1.6771	0.035524	MSR1
197592293	197593090	chr3	+	exonic	hsa_circ_0008439	-2.1773	0.035544	LRCH3
89236034	89237562	chr1	+	exonic	hsa_circ_0002008	-2.0787	0.035564	PKN2
52293467	52299842	chr1	-	exonic	hsa_circ_0009076	-1.7093	0.035577	NRD1
39766030	39766488	chr17	-	exonic	hsa_circ_0043626	1.7563	0.035608	KRT16
24357988	24369956	chr2	+	exonic	hsa_circ_0000982	-2.7893	0.035653	FAM228B
122369651	122372262	chr12	+	exonic	N/A	1.5781	0.035674	WDR66
110062421	110068928	chr9	+	exonic	hsa_circ_0087655	-1.9135	0.035686	RAD23B
88044886	88047860	chr5	-	exonic	hsa_circ_0073271	1.5194	0.035698	MEF2C
11958205	12016681	chr17	+	sense overlapping	N/A	-2.1004	0.035715	MAP2K4
32659871	32665051	chr20	+	exonic	hsa_circ_0001139	-1.8322	0.035720	RALY
66293626	66313803	chr3	+	exonic	hsa_circ_0004113	-1.7836	0.035736	SLC25A26
221186821	221189955	chr2	+	sense overlapping	N/A	1.6613	0.035772	AC114765.1
68434283	68439038	chr15	+	exonic	hsa_circ_0008378	-1.5239	0.035772	PIAS1
153576899	153583440	chrX	-	exonic	hsa_circ_0091840	1.5022	0.035779	FLNA
100364118	100367214	chr14	+	exonic	hsa_circ_0033163	1.5347	0.035828	EML1
52446826	52448603	chr3	+	exonic	hsa_circ_0004912	-1.7945	0.035860	PHF7
77700452	77703365	chr13	-	exonic	hsa_circ_0000495	-1.7771	0.035912	MYCBP2
119624601	119635021	chr3	-	exonic	hsa_circ_0004225	-1.7525	0.035940	GSK3B
26789747	26802589	chr10	+	exonic	N/A	-2.1180	0.035961	APBB1IP
136990420	137019820	chr6	-	exonic	hsa_circ_0009034	-1.6863	0.035984	MAP3K5
34100754	34101636	chr6	-	exonic	hsa_circ_0076041	1.6045	0.035995	GRM4
91947919	91952074	chr14	-	exonic	hsa_circ_0003045	-1.7035	0.036019	SMEK1
114911523	114919893	chr9	-	exonic	hsa_circ_0088062	-1.7219	0.036028	SUSD1
93480747	93482948	chr15	+	exonic	hsa_circ_0000654	-1.7968	0.036081	CHD2
159004985	159010814	chr6	+	exonic	hsa_circ_0001663	-1.7608	0.036082	TMEM181
38991050	38996984	chr5	-	exonic	hsa_circ_0072338	-1.7303	0.036107	RICTOR
179132679	179137066	chr5	+	exonic	hsa_circ_0001564	-1.6131	0.036128	CANX
119222378	119222868	chr3	+	exonic	hsa_circ_0006394	-2.1416	0.036155	TIMMDC1
34204740	34209207	chr1	-	exonic	N/A	1.6932	0.036165	CSMD2

243708811	243859018	chr1	-	exonic	N/A	-1.6088	0.036173	AKT3
88211723	88221044	chr10	-	exonic	hsa_circ_0019005	-1.6649	0.036178	WAPAL
155691307	155695810	chr1	+	exonic	hsa_circ_0014613	-2.2550	0.036251	DAP3
97207245	97213809	chr9	+	exonic	hsa_circ_0087581	1.5678	0.036268	HIATL1
50438785	50442435	chrX	-	sense overlapping	N/A	1.5477	0.036295	SHROOM4
98698895	98703416	chr8	+	exonic	hsa_circ_0002961	-1.6777	0.036337	MTDH
126735527	126735757	chr3	+	intronic	N/A	1.8570	0.036359	PLXNA1
76970891	76982160	chr10	+	exonic	hsa_circ_0018909	1.8135	0.036394	VDAC2
183454505	183480067	chr3	+	exonic	hsa_circ_0009131	1.6077	0.036419	YEATS2
13604092	13610799	chr20	-	exonic	hsa_circ_0059476	1.5356	0.036425	TASP1
126355758	126370948	chr10	-	exonic	hsa_circ_0020321	-1.5274	0.036464	FAM53B
43702432	43704859	chr18	+	exonic	hsa_circ_0002481	-1.5260	0.036492	HAUS1
201786215	201796102	chr1	+	exonic	hsa_circ_0015911	1.6331	0.036492	NAV1
57250018	57255327	chr16	+	exonic	hsa_circ_0039557	1.7718	0.036497	RSPRY1
67431907	67490392	chr14	+	exonic	hsa_circ_0032253	1.5236	0.036500	GPHN
72462067	72468534	chr10	+	exonic	hsa_circ_0004606	1.5412	0.036507	ADAMTS14
33388679	33427756	chr7	+	exonic	hsa_circ_0079812	-1.6586	0.036557	BBS9
110922882	110925748	chr12	+	exonic	hsa_circ_0004516	-1.8110	0.036562	FAM216A
48308935	48320523	chr8	+	exonic	hsa_circ_0001798	-2.3926	0.036572	SPIDR
86297865	86301070	chr9	-	exonic	hsa_circ_0005142	-2.3086	0.036606	UBQLN1
27656861	27657427	chr2	+	sense overlapping	hsa_circ_0000984	-1.6486	0.036612	NRBP1
55844499	55844644	chr20	-	antisense	hsa_circ_0001171	1.6291	0.036668	BC037891
8043537	8099878	chr7	+	exonic	hsa_circ_0001678	-1.6693	0.036695	GLCCI1
119219541	119236162	chr3	+	exonic	hsa_circ_0066874	-1.9705	0.036744	TIMMDC1
45767941	45769539	chr19	+	exonic	hsa_circ_0051454	-1.5268	0.036796	MARK4
46022924	46026674	chr17	+	exonic	hsa_circ_0044334	1.9457	0.036848	PNPO
110062421	110084399	chr9	+	exonic	hsa_circ_0087856	-2.8205	0.036922	RAD23B
86292641	86292876	chr9	-	exonic	hsa_circ_0087354	-2.0520	0.036949	UBQLN1
47603639	47604020	chr11	+	exonic	hsa_circ_0022015	1.5485	0.037011	NDUFS3
74561481	74563895	chr18	+	exonic	hsa_circ_0004979	-1.7678	0.037037	ZNF236
155695172	155695810	chr1	+	exonic	hsa_circ_0014614	-2.2175	0.037085	DAP3
12039670	12056183	chr10	-	exonic	hsa_circ_0000213	-1.7515	0.037109	UPF2
47341422	47342835	chr19	-	exonic	hsa_circ_0051641	1.5010	0.037117	AP2S1
1756835	1770677	chr1	-	exonic	hsa_circ_0009362	-2.3829	0.037120	GNB1
56526672	56527148	chr5	+	exonic	hsa_circ_0001486	-1.6179	0.037126	GPBP1
185153374	185200840	chr1	+	exonic	hsa_circ_0015677	-2.3340	0.037146	SWT1
42363987	42375484	chr19	+	exonic	hsa_circ_0051241	1.8720	0.037152	RPS19
179136873	179147561	chr5	+	exonic	hsa_circ_0002051	-1.6872	0.037159	CANX
138244331	138256189	chr3	-	exonic	N/A	-1.7827	0.037177	CEP70
40152499	40155575	chr17	-	exonic	N/A	1.7778	0.037201	DNAJC7
58690339	58690574	chr14	+	exonic	hsa_circ_0032064	-1.5136	0.037241	ACTR10
15644268	15679480	chr2	-	exonic	hsa_circ_0004665	-1.6259	0.037256	NBAS
32874967	32875262	chr22	+	exonic	hsa_circ_0008832	-1.7096	0.037353	FBXO7
76198579	76198832	chr17	+	exonic	hsa_circ_0045681	1.8934	0.037362	AFMID
75936161	75936743	chr13	-	exonic	hsa_circ_0030431	1.5686	0.037379	TBC1D4
41536266	41541123	chr1	-	exonic	hsa_circ_0000061	1.5218	0.037412	SCMH1
242541310	242542494	chr2	-	exonic	hsa_circ_0004946	1.5468	0.037430	THAP4
144817634	144819722	chr5	-	sense overlapping	N/A	1.5679	0.037488	XLOC_005041

50133322	50140649	chr20	-	exonic	hsa_circ_0060849	-1.5205	0.037510	NFATC2
34111725	34113603	chr11	+	exonic	hsa_circ_0004851	-2.0442	0.037541	CAPRIN1
10554828	10555880	chr17	-	exonic	N/A	1.5975	0.037566	MYH3
129811943	129813356	chr3	+	exonic	hsa_circ_0067327	1.8900	0.037627	ALG1L2
32703702	32704685	chr2	+	exonic	hsa_circ_0002408	-1.8151	0.037635	BIRC6
53430497	53430625	chrX	-	exonic	hsa_circ_0001921	-1.9417	0.037643	SMC1A
34147027	34149837	chr17	+	exonic	hsa_circ_0043138	-2.7351	0.037650	TAF15
77631183	77632364	chr9	-	exonic	hsa_circ_0004189	-1.9176	0.037734	C9orf41
90069143	90074398	chr10	-	exonic	N/A	1.5189	0.037811	RNLS
27432375	27436268	chr1	-	exonic	hsa_circ_0007283	1.5166	0.037825	SLC9A1
103558598	103567658	chr10	-	exonic	hsa_circ_0019612	-1.9518	0.037840	MGEA5
103432671	103433430	chr10	-	exonic	hsa_circ_0019591	-2.1415	0.037846	FBXW4
22999874	23030758	chr7	-	exonic	hsa_circ_0008951	-2.3526	0.037850	FAM126A
47779518	47787483	chr3	-	exonic	hsa_circ_0065308	-1.8437	0.037902	SMARCC1
6172119	6219748	chr12	-	exonic	hsa_circ_0025114	1.6198	0.037928	VWF
95666858	95735544	chr13	-	exonic	hsa_circ_0030569	1.6380	0.037944	ABCC4
245018859	245019265	chr1	-	sense overlapping	hsa_circ_0000200	-1.6846	0.037947	HNRNPU
149563797	149570383	chr3	+	exonic	hsa_circ_0006697	-2.9627	0.037958	RNF13
140961878	140963182	chr5	-	exonic	hsa_circ_0008982	-1.6935	0.037964	DIAPH1
163876310	163899928	chr6	+	exonic	hsa_circ_0005328	-1.7800	0.037975	QKI
34860052	34860272	chr17	-	intronic	hsa_circ_0092344	1.7127	0.038049	MYO19
91924202	91981956	chr7	+	exonic	hsa_circ_0002744	-1.9828	0.038108	ANKIB1
128525762	128526578	chr2	-	exonic	hsa_circ_0056362	-1.6790	0.038138	WDR33
953289	1003975	chr17	-	exonic	hsa_circ_0007919	-1.8089	0.038196	ABR
1747194	1756938	chr1	-	exonic	hsa_circ_0000008	-2.4314	0.038201	GNB1
21377356	21437876	chr1	-	exonic	hsa_circ_0000026	-1.5595	0.038224	EIF4G3
36623756	36744685	chr2	+	exonic	hsa_circ_0053958	-1.5476	0.038319	CRIM1
11984672	12016677	chr17	+	exonic	hsa_circ_0007456	-2.0275	0.038332	MAP2K4
22404921	22413359	chr1	+	exonic	hsa_circ_0005576	-1.9845	0.038398	CDC42
149563797	149629870	chr3	+	exonic	hsa_circ_0003502	-2.5366	0.038398	RNF13
128525214	128526514	chr3	+	exonic	hsa_circ_0008923	-1.5736	0.038493	RAB7A
21971315	21972024	chr14	-	exonic	hsa_circ_0000523	-1.8506	0.038518	METTL3
34312491	34313077	chr20	-	exonic	hsa_circ_0007632	-2.2193	0.038521	RBM39
52729602	52729875	chr4	+	exonic	hsa_circ_0069715	-2.1222	0.038527	DCUN1D4
33996220	34017187	chr9	-	exonic	hsa_circ_0003410	-1.9770	0.038570	UBAP2
131909665	131911225	chr9	+	exonic	hsa_circ_0089039	1.5149	0.038573	PPP2R4
118920468	118923974	chrX	-	exonic	hsa_circ_0091419	1.5865	0.038580	RPL39
52729602	52744020	chr4	+	exonic	hsa_circ_0001410	-1.9206	0.038581	DCUN1D4
67356836	67371058	chr1	-	exonic	hsa_circ_0006677	-1.6918	0.038593	WDR78
53459000	53459207	chr10	+	intronic	hsa_circ_0000238	1.5451	0.038598	PRKG1
28748406	28771483	chr13	+	exonic	hsa_circ_0008760	-2.0041	0.038603	PAN3
32381495	32385259	chr1	-	exonic	hsa_circ_0007364	-2.0968	0.038611	PTP4A2
1268152	1273035	chr17	-	exonic	hsa_circ_0041195	-1.8248	0.038626	YWHAE
45391429	45423180	chr18	-	exonic	hsa_circ_0000847	-2.1253	0.038701	SMAD2
176938577	176940848	chr5	-	exonic	hsa_circ_0075215	1.8653	0.038760	DDX41
53017589	53018231	chr18	-	exonic	hsa_circ_0047733	1.9297	0.038774	TCF4
159004985	159006457	chr6	+	exonic	hsa_circ_0003345	-1.8382	0.038778	TMEM181
141595217	141595410	chr8	-	exonic	hsa_circ_0008113	-1.5569	0.038822	AGO2
1735857	1756938	chr1	-	exonic	hsa_circ_0006869	-2.5873	0.038871	GNB1
11958205	12016677	chr17	+	exonic	hsa_circ_0005603	-2.2360	0.038922	MAP2K4

87693930	87696605	chr4	+	exonic	hsa_circ_0007324	1.7571	0.038999	PTPN13
86292641	86293514	chr9	-	exonic	hsa_circ_0001865	-2.1615	0.039006	UBQLN1
23550956	23559842	chr14	-	exonic	N/A	-1.9059	0.039027	ACIN1
119720892	119721086	chr3	-	exonic	hsa_circ_0006497	-1.5652	0.039043	GSK3B
15969938	16026822	chrX	+	intergenic	N/A	1.6676	0.039046	
179195850	179196244	chr5	+	exonic	N/A	1.6052	0.039080	MAML1
31535331	31542179	chr14	+	exonic	hsa_circ_0031449	1.5636	0.039311	AP4S1
37727937	37735069	chr8	-	exonic	hsa_circ_0005630	-1.6116	0.039326	RAB11FIP1
108186549	108206688	chr11	+	exonic	hsa_circ_0024231	-2.2357	0.039331	ATM
74056531	74087278	chr2	+	exonic	hsa_circ_0055251	1.9372	0.039359	STAMBP
34101174	34111003	chr11	+	exonic	hsa_circ_0000286	-1.5636	0.039374	CAPRIN1
41598736	41599594	chr17	+	exonic	hsa_circ_0003899	1.8620	0.039404	DHX8
6477621	6482099	chr9	+	exonic	hsa_circ_0007816	-1.5449	0.039438	UHRF2
151167656	151195266	chr7	-	exonic	N/A	-1.6866	0.039496	RHEB
149563797	149613357	chr3	+	exonic	hsa_circ_0003956	-2.7978	0.039508	RNF13
231314886	231328865	chr2	+	exonic	hsa_circ_0058619	-2.3148	0.039571	SP100
14316016	14317401	chr11	-	exonic	hsa_circ_0004429	-1.5162	0.039649	RRAS2
89807211	89815175	chr16	-	exonic	hsa_circ_0040994	1.6182	0.039839	FANCA
151174418	151188100	chr7	-	exonic	hsa_circ_0082950	-2.2001	0.039845	RHEB
7491497	7491864	chr17	-	exonic	hsa_circ_0041939	1.7626	0.039974	SOX15
31947382	31971378	chr22	+	sense overlapping	hsa_circ_0008323	1.6983	0.039989	SFI1
34304661	34313077	chr20	-	exonic	hsa_circ_0001147	-2.2590	0.039993	RBM39
57535669	57535748	chr15	+	exonic	hsa_circ_0035426	1.5489	0.040023	TCF12
125032151	125042288	chr3	-	exonic	hsa_circ_0007557	-2.3166	0.040080	ZNF148
20126716	20131279	chr22	+	exonic	hsa_circ_0004100	1.5019	0.040088	ZDHHC8
65473318	65492309	chr2	+	sense overlapping	hsa_circ_0001022	-4.5983	0.040094	ACTR2
80412669	80415142	chr15	+	exonic	hsa_circ_0000643	-2.2696	0.040099	ZFAND6
50592985	50593565	chr15	-	exonic	hsa_circ_0002551	-1.8156	0.040219	GABPB1
155547476	155560408	chr3	-	exonic	hsa_circ_0067772	-1.7048	0.040220	SLC33A1
140476711	140508795	chr7	-	exonic	hsa_circ_0007178	-2.5369	0.040227	BRAF
45860527	45860957	chr19	-	exonic	hsa_circ_0051470	1.6824	0.040245	ERCC2
44713610	44717214	chr1	-	intronic	hsa_circ_0000065	1.6918	0.040320	ERI3
47531309	47537001	chr16	+	exonic	hsa_circ_0039261	-2.0351	0.040448	PHKB
39411599	39414050	chr22	+	exonic	hsa_circ_0063369	-1.5609	0.040469	APOBEC3C
86328535	86329135	chr6	-	exonic	hsa_circ_0006131	-1.7184	0.040521	SYNCRIP
101132116	101132358	chr13	+	intronic	N/A	1.5164	0.040536	PCCA
50821544	50824353	chr12	+	exonic	hsa_circ_0003664	-1.8211	0.040579	LARP4
40278772	40282608	chr17	-	exonic	N/A	-2.0512	0.040655	RAB5C
74926361	74937998	chr16	-	exonic	hsa_circ_0040507	1.6723	0.040693	WDR59
72370566	72373320	chr5	+	exonic	hsa_circ_0002490	-1.7797	0.040728	FCHO2
127295459	127298715	chr3	-	exonic	hsa_circ_0067161	1.6008	0.040747	TPRA1
71799391	71803602	chr16	-	exonic	hsa_circ_0007770	1.6975	0.040787	AP1G1
6995910	7002978	chr4	+	exonic	hsa_circ_0006681	-2.1694	0.040833	TBC1D14
46751425	46754867	chr10	-	exonic	hsa_circ_0007010	-2.2418	0.040880	BMS1P5
128995614	128996148	chr4	+	exonic	hsa_circ_0070933	-1.7200	0.040901	LARP1B
119219541	119222868	chr3	+	exonic	hsa_circ_0001329	-2.1065	0.040961	TIMMDC1
48216600	48246391	chr19	+	exonic	hsa_circ_0051695	1.6341	0.041021	EHD2
43906156	43909145	chr7	-	exonic	hsa_circ_0079973	1.7342	0.041100	MRPS24
153590346	153590516	chrX	-	exonic	hsa_circ_0091994	-1.5300	0.041283	FLNA

137853422	137854380	chr5	-	intronic	N/A	2.0936	0.041305	ETF1
32715986	32717410	chrX	-	exonic	hsa_circ_0090181	1.5039	0.041312	DMD
131006155	131014868	chr5	-	exonic	hsa_circ_0073859	-1.9373	0.041332	FNIP1
113734352	113800365	chr9	-	exonic	hsa_circ_0087962	1.6255	0.041349	LPAR1
47702783	47719801	chr3	-	exonic	hsa_circ_0003602	-1.5540	0.041359	SMARCC1
42513408	42515462	chr2	+	exonic	hsa_circ_0054241	-1.8456	0.041364	EML4
50810448	50832564	chr22	+	exonic	hsa_circ_0001258	-1.6729	0.041379	PPP6R2
31139461	31144271	chr14	+	exonic	hsa_circ_0009140	-1.8515	0.041506	SCFD1
27445667	27449008	chr16	+	exonic	hsa_circ_0036728	1.5354	0.041544	IL21R
145044816	145083858	chr5	-	intronic	N/A	1.5149	0.041553	PRELID2
155406117	155406859	chr1	-	exonic	hsa_circ_0000137	-1.7977	0.041566	ASH1L
34922765	34924317	chr19	+	exonic	hsa_circ_0050514	-1.5181	0.041604	UBA2
26204839	26205043	chr6	+	sense overlapping	hsa_circ_0001588	-3.1348	0.041613	HIST1H4E
159437506	159492550	chr5	+	exonic	hsa_circ_0074834	1.5117	0.041618	TTC1
233334684	233344435	chr1	-	exonic	hsa_circ_0005223	-1.6270	0.041623	PCNXL2
156444899	156446994	chr1	-	exonic	hsa_circ_0014737	1.5294	0.041712	MEF2D
3252272	3256234	chr18	+	exonic	hsa_circ_0046753	1.6464	0.041731	MYL12A
103173821	103229087	chr11	+	exonic	hsa_circ_0024144	1.7050	0.041752	DYNC2H1
56792449	56839544	chr16	+	exonic	N/A	1.5392	0.041761	NUP93
12999419	13042333	chr18	+	exonic	hsa_circ_0046999	-1.6319	0.041786	CEP192
47497792	47581459	chr16	+	exonic	hsa_circ_0039254	-1.6224	0.041799	PHKB
52028142	52029002	chr3	-	intronic	hsa_circ_0092277	1.6808	0.041876	RPL29
49091920	49094856	chr12	-	exonic	hsa_circ_0026046	-1.6945	0.041899	CCNT1
65941524	65972074	chr17	+	exonic	hsa_circ_0000799	-1.8771	0.041929	BPTF
145066859	145067583	chr8	+	exonic	hsa_circ_0085939	1.8399	0.041952	GRINA
20939730	20939965	chr2	-	exonic	hsa_circ_0052877	1.9583	0.041991	C2orf43
12123470	12133683	chr10	+	exonic	hsa_circ_0003074	-1.7023	0.042019	DHTKD1
95110953	95111328	chr10	-	exonic	N/A	1.6513	0.042025	MYOF
66625443	66625662	chr11	-	intronic	hsa_circ_0000331	1.7981	0.042047	PC
73429657	73429763	chr11	-	exonic	hsa_circ_0023509	-2.3708	0.042109	RAB6A
53421565	53421972	chr12	+	exonic	hsa_circ_0007689	-1.7644	0.042113	EIF4B
2972488	3000467	chr11	-	exonic	hsa_circ_0020816	-1.9587	0.042116	NAP1L4
67718636	67721428	chr3	+	sense overlapping	N/A	1.6983	0.042164	SUCLG2-AS1
208841374	208842310	chr2	-	exonic	hsa_circ_0001095	-1.8302	0.042173	PLEKHM3
145151936	145152037	chr8	+	exonic	hsa_circ_0085959	1.6135	0.042238	CYC1
101553648	101572901	chr10	+	exonic	hsa_circ_0019442	1.6366	0.042311	ABCC2
80540616	80545148	chr17	+	exonic	hsa_circ_0046435	1.5219	0.042329	FOXK2
47585118	47585318	chr19	-	intronic	hsa_circ_0092316	1.7182	0.042329	ZC3H4
196544755	196548630	chr2	+	exonic	hsa_circ_0057551	-2.2933	0.042371	SLC39A10
32659871	32666359	chr20	+	exonic	hsa_circ_0001140	-2.0263	0.042445	RALY
231081134	231097049	chr1	-	exonic	hsa_circ_0000194	-1.8438	0.042457	TTC13
34107610	34113603	chr11	+	exonic	hsa_circ_0000287	-1.9187	0.042466	CAPRIN1
34922765	34955036	chr19	+	exonic	hsa_circ_0050518	-1.5345	0.042588	UBA2
64485055	64509673	chr12	+	exonic	N/A	1.5918	0.042591	SRGAP1
68015271	68018210	chr8	+	exonic	hsa_circ_0084666	-1.5807	0.042597	CSPP1
60629662	60631116	chr17	+	exonic	hsa_circ_0008438	-2.3637	0.042657	TLK2
10058810	10084547	chrX	+	exonic	N/A	1.5813	0.042666	WWC3
10459084	10480201	chr1	+	exonic	hsa_circ_0009723	1.6153	0.042682	PGD
50045984	50074484	chr5	+	exonic	hsa_circ_0072430	-1.8379	0.042732	PARP8

169854206	169863309	chr3	-	exonic	hsa_circ_0001965	-2.5869	0.042733	PHC3
70146376	70148852	chrX	-	exonic	hsa_circ_0090969	1.5732	0.042743	SLC7A3
30890069	30898940	chr7	+	exonic	hsa_circ_0079743	1.5879	0.042754	FAM188B
18303496	18308257	chr11	-	exonic	N/A	1.6815	0.042765	HPS5
77038816	77065626	chr4	-	exonic	hsa_circ_0070032	-1.5167	0.042772	NUP54
44620882	44673174	chr15	+	exonic	hsa_circ_0035052	-1.5269	0.042806	CASC4
169831147	169840532	chr3	-	exonic	hsa_circ_0006893	-1.9704	0.042836	PHC3
99718694	99719539	chr8	-	exonic	hsa_circ_0004592	-1.6378	0.042925	STK3
109263579	109263891	chrX	+	intronic	N/A	-2.0365	0.042938	TMEM164
53413693	53416411	chr12	+	exonic	hsa_circ_0026512	-2.1165	0.043195	EIF4B
96826060	96834012	chr15	-	exonic	hsa_circ_0004200	1.5813	0.043229	NR2F2-AS1
97818240	97820478	chr2	+	exonic	hsa_circ_0055734	1.5510	0.043260	ANKRD36
23023562	23030758	chr7	-	exonic	hsa_circ_0001682	-2.3430	0.043277	FAM126A
42992722	42993879	chr6	+	exonic	N/A	-1.5343	0.043310	RRP36
41361767	41362745	chr15	-	exonic	hsa_circ_0007489	-1.6081	0.043333	INO80
3182193	3186394	chr3	+	exonic	N/A	-1.9231	0.043371	TRNT1
35832287	35838568	chr20	+	exonic	hsa_circ_0060262	1.5231	0.043410	RPN2
45391429	45396935	chr18	-	exonic	hsa_circ_0003694	-2.4684	0.043591	SMAD2
65323338	65339206	chr1	-	exonic	hsa_circ_0012872	-1.6471	0.043651	JAK1
201790558	201796171	chr2	-	exonic	N/A	1.7855	0.043722	ORC2
76953182	76974038	chr18	+	exonic	hsa_circ_0003275	-1.5592	0.043778	ATP9B
102683731	102685776	chr10	+	exonic	hsa_circ_0006654	-1.6627	0.043801	FAM178A
39623414	39627606	chr14	-	exonic	hsa_circ_0005836	-1.5252	0.043804	TRAPPC6B
52785363	52786666	chr19	+	exonic	hsa_circ_0052095	-1.5739	0.043835	ZNF766
77330650	77340944	chr11	-	exonic	hsa_circ_0008342	-1.6271	0.043858	CLNS1A
118832460	118887479	chr6	-	exonic	hsa_circ_0077736	-2.1781	0.043903	CEP85L
44346195	44346638	chr13	-	intronic	N/A	1.6699	0.043909	ENOX1
109466421	109468140	chr6	+	exonic	hsa_circ_0004131	-1.8661	0.043954	CEP57L1
108098321	108106561	chr11	+	exonic	hsa_circ_0003641	-2.1823	0.044003	ATM
100598717	100599535	chr12	+	exonic	N/A	-1.5151	0.044015	ACTR6
149563797	149677923	chr3	+	exonic	hsa_circ_0067718	1.6896	0.044020	RNF13
111208707	111211559	chr6	+	exonic	hsa_circ_0005954	-1.5419	0.044027	AMD1
20113099	20113439	chr22	+	intronic	hsa_circ_0092314	1.6315	0.044125	RANBP1
23691404	23701688	chr16	+	exonic	hsa_circ_0038632	1.5718	0.044148	PLK1
131071878	131084192	chr7	+	exonic	hsa_circ_0001747	-1.7192	0.044294	MKLN1
97026985	97029230	chr14	+	exonic	hsa_circ_0033126	-1.8160	0.044301	PAPOLA
155411422	155448734	chr6	+	exonic	hsa_circ_0078383	1.5104	0.044302	TIAM2
106739425	106782539	chr2	-	exonic	hsa_circ_0055945	-1.6484	0.044335	UXS1
114709055	114713283	chr2	+	exonic	hsa_circ_0002397	-1.7202	0.044376	ACTR3
34144719	34149837	chr17	+	exonic	N/A	-2.7064	0.044384	TAF15
65284462	65290692	chr5	+	exonic	hsa_circ_0001492	-2.5141	0.044470	ERBB2IP
131060182	131084192	chr7	+	exonic	hsa_circ_0001746	-2.2957	0.044475	MKLN1
159026298	159029782	chr6	+	exonic	hsa_circ_0078510	-1.8955	0.044501	TMEM181
103427642	103433430	chr10	-	exonic	hsa_circ_0019589	-2.2273	0.044617	FBXW4
183650117	183652292	chr4	+	exonic	hsa_circ_0071488	1.5714	0.044649	TENM3
37971709	37976881	chr8	+	exonic	hsa_circ_0001790	-2.1206	0.044654	ASH2L
31452908	31468067	chr1	-	exonic	hsa_circ_0002452	-1.6214	0.044756	PUM1
62462039	62470021	chr11	-	exonic	hsa_circ_0022505	1.6210	0.044776	BSCL2
40176084	40176486	chr17	-	antisense	hsa_circ_0000764	1.6330	0.044826	NKIRAS2
13435076	13466728	chr11	-	exonic	hsa_circ_0003234	-1.8874	0.044850	BTBD10

11521928	11527733	chr19	-	exonic	N/A	1.5137	0.044876	RGL3
388708	391408	chr20	+	exonic	hsa_circ_0059148	1.5633	0.044991	RBCK1
53410256	53421972	chr12	+	exonic	hsa_circ_0026498	-1.5654	0.045022	EIF4B
32483331	32493965	chr3	+	exonic	hsa_circ_0064679	1.5029	0.045048	CMTM7
41774127	41787180	chr19	+	exonic	hsa_circ_0003079	-2.1627	0.045056	HNRNPUL1
88066714	88071617	chr16	+	exonic	hsa_circ_0040827	-2.0108	0.045069	BANP
27106071	27106460	chr6	-	exonic	hsa_circ_0075900	1.6204	0.045071	HIST1H2BK
110068659	110074018	chr9	+	exonic	hsa_circ_0087861	-1.9349	0.045106	RAD23B
23224668	23224917	chr7	+	exonic	hsa_circ_0005096	-1.8399	0.045114	NUPL2
36492117	36507984	chr6	-	exonic	hsa_circ_0003131	-2.2429	0.045153	STK38
23375403	23378604	chr14	-	exonic	hsa_circ_0004137	-2.2794	0.045196	RBM23
141595217	141616013	chr8	-	intronic	hsa_circ_0007313	-1.5158	0.045278	AGO2
33760537	33766320	chr1	+	exonic	hsa_circ_0011474	1.5403	0.045318	ZNF362
125032151	125050082	chr3	-	exonic	hsa_circ_0001333	-2.4674	0.045380	ZNF148
36492117	36507981	chr6	-	exonic	N/A	-2.2956	0.045401	STK38
99896085	99896878	chr13	+	exonic	hsa_circ_0030722	-1.9184	0.045414	UBAC2
36623756	36669878	chr2	+	exonic	hsa_circ_0002346	-1.5245	0.045438	CRIM1
103338299	103341453	chr7	-	exonic	hsa_circ_0081778	1.5293	0.045505	RELN
48371865	48396670	chr4	+	sense overlapping	N/A	-1.9103	0.045526	SLAIN2
83940591	83945972	chr16	+	exonic	N/A	-1.7148	0.045641	MLYCD
63988322	64008672	chr15	-	exonic	hsa_circ_0035796	-3.2916	0.045661	HERC1
149962163	149984551	chrX	-	exonic	hsa_circ_0001948	-1.5084	0.045711	CD99L2
9195548	9221997	chr18	+	exonic	hsa_circ_0046843	-2.8282	0.045725	ANKRD12
167915606	167919852	chr5	+	exonic	hsa_circ_0009145	-2.2735	0.045736	RARS
122363276	122363756	chr2	-	exonic	hsa_circ_0007052	-2.0318	0.045739	CLASP1
65139030	65141244	chr1	+	exonic	hsa_circ_0012850	1.5004	0.045830	CACHD1
77693968	77695598	chr18	-	intronic	hsa_circ_0006002	1.5076	0.045948	PQLC1
49703556	49705398	chr19	+	exonic	hsa_circ_0051859	1.5173	0.045963	TRPM4
155054511	155116273	chr6	+	exonic	hsa_circ_0078353	-1.7722	0.046027	SCAF8
179136873	179143295	chr5	+	exonic	hsa_circ_0001565	-1.5844	0.046058	CANX
12039670	12046726	chr10	-	exonic	hsa_circ_0007448	-1.5379	0.046071	UPF2
65860865	65864782	chr7	-	exonic	N/A	1.5360	0.046133	LINC00174
86267693	86284096	chr6	-	exonic	hsa_circ_0001617	-1.5183	0.046258	SNX14
114674460	114699936	chr2	+	exonic	N/A	-1.7215	0.046367	ACTR3
141811902	141820683	chr3	-	exonic	hsa_circ_0008304	-1.8382	0.046378	TFDP2
48371865	48385801	chr4	+	exonic	N/A	-2.6373	0.046509	SLAIN2
107260799	107289013	chr11	-	exonic	hsa_circ_0006668	-1.9292	0.046511	CWF19L2
97141441	97170534	chr10	-	exonic	N/A	1.5277	0.046545	SORBS1
32377296	32385259	chr1	-	exonic	hsa_circ_0004893	-1.7376	0.046583	PTP4A2
122159084	122363756	chr2	-	exonic	hsa_circ_0056297	-1.7929	0.046599	CLASP1
80409376	80430686	chr9	-	exonic	hsa_circ_0087264	-2.4072	0.046605	GNAQ
190656515	190670480	chr2	+	exonic	hsa_circ_0004776	-1.5615	0.046615	PMS1
28362054	28374937	chr1	-	exonic	hsa_circ_0008057	-1.8104	0.046643	EYA3
107459490	107460490	chr2	-	exonic	hsa_circ_0055957	1.8067	0.046694	ST6GAL2
34574331	34574681	chr6	-	exonic	hsa_circ_0006757	-1.7001	0.046725	C6orf106
67864287	67868100	chr1	-	intergenic	N/A	1.5204	0.046726	
48196616	48206619	chr8	+	exonic	hsa_circ_0002157	-1.8452	0.046732	SPIDR
11348416	11350535	chr3	+	exonic	hsa_circ_0064288	1.6995	0.046734	ATG7
25193245	25198922	chr4	-	antisense	N/A	1.9436	0.046771	SEPSECS-AS1
138837130	138837392	chr5	-	exonic	hsa_circ_0074217	1.5320	0.046805	ECSCR

85711279	85712272	chr16	-	exonic	hsa_circ_0040740	1.5195	0.046815	GINS2
65941524	65944422	chr17	+	exonic	hsa_circ_0000798	-1.8751	0.046839	BPTF
20083852	20089944	chr11	+	exonic	hsa_circ_0021493	1.5935	0.046840	NAV2
70650274	70674110	chr8	-	exonic	hsa_circ_0084727	1.6762	0.046859	SLCO5A1
64377407	64378670	chr7	+	exonic	N/A	1.6343	0.046936	ZNF273
233651859	233660931	chr2	+	exonic	hsa_circ_0058733	-1.7097	0.046936	GIGYF2
95099211	95119667	chr5	+	exonic	hsa_circ_0006725	-1.9609	0.047076	RHOBTB3
157129746	157160177	chr7	+	exonic	hsa_circ_0083171	-1.8148	0.047079	DNAJB6
48573339	48573890	chr2	+	exonic	hsa_circ_0001002	-1.6941	0.047115	FOXN2
50073902	50093067	chr5	+	exonic	hsa_circ_0072437	-2.2580	0.047205	PARP8
22024201	22029404	chr22	+	exonic	hsa_circ_0062426	-1.8026	0.047409	PPIL2
18256591	18258636	chr6	-	exonic	hsa_circ_0008846	-2.0104	0.047507	DEK
120343758	120348235	chr11	+	exonic	hsa_circ_0009021	-1.5432	0.047570	ARHGEF12
55516082	55527154	chr15	-	sense overlapping	N/A	-2.2209	0.047597	RAB27A
137015277	137019820	chr6	-	exonic	hsa_circ_0006856	-2.0130	0.047697	MAP3K5
102195835	102196253	chr11	-	antisense	hsa_circ_0000352	1.7335	0.047705	BIRC3
120916382	120930794	chr11	+	exonic	hsa_circ_0003302	-2.3718	0.047713	TBCEL
37170553	37190529	chr3	-	exonic	hsa_circ_0003264	-1.9574	0.047730	LRRFIP2
153579366	153585514	chr1	-	exonic	hsa_circ_0014239	1.5154	0.047753	S100A16
1158623	1159348	chr1	-	exonic	hsa_circ_0000002	-1.9644	0.047770	SDF4
63824845	63855207	chr15	+	exonic	hsa_circ_0002138	-1.6135	0.047773	USP3
32602655	32641231	chr2	+	exonic	hsa_circ_0053442	-1.5845	0.047774	BIRC6
24046127	24046439	chr2	-	exonic	hsa_circ_0003828	-1.6246	0.047829	ATAD2B
53068519	53069224	chr12	-	exonic	hsa_circ_0026462	1.6157	0.047945	KRT1
17847367	17851128	chr8	+	exonic	hsa_circ_0002887	-1.5094	0.047984	PCM1
37580879	37584043	chr17	-	exonic	hsa_circ_0007539	-1.5822	0.047985	MED1
23698789	23701688	chr16	+	exonic	hsa_circ_0038635	1.6967	0.048080	PLK1
76580186	76588078	chr15	-	exonic	hsa_circ_0036408	-1.5660	0.048085	ETFA
30618770	30619243	chr6	+	exonic	hsa_circ_0006109	1.5596	0.048124	C6orf136
77632385	77633517	chr11	-	exonic	hsa_circ_0023736	1.7458	0.048150	INTS4
2066700	2087531	chr1	+	exonic	hsa_circ_0009366	1.6087	0.048195	PRKCZ
76152218	76175765	chr15	+	exonic	hsa_circ_0036374	-1.5280	0.048197	UBE2Q2
58616696	58617086	chr16	-	exonic	hsa_circ_0039697	-1.6532	0.048218	CNOT1
41377566	41379880	chr15	-	exonic	hsa_circ_0004279	-1.5379	0.048276	INO80
7839009	7844817	chr10	+	exonic	hsa_circ_0007292	-3.3660	0.048276	ATP5C1
19345732	19383975	chr18	+	exonic	hsa_circ_0007504	-1.6502	0.048324	MIB1
35565024	35614627	chr6	-	sense overlapping	N/A	-1.7705	0.048390	FKBP5
86292641	86301070	chr9	-	exonic	hsa_circ_0003715	-1.8322	0.048401	UBQLN1
109773499	109774408	chr1	+	exonic	hsa_circ_0007868	-1.5277	0.048447	SARS
171851260	171969331	chr3	+	exonic	hsa_circ_0007148	-2.6583	0.048508	FNDC3B
114377531	114397671	chr1	-	exonic	N/A	-1.8161	0.048542	PTPN22
197541778	197547301	chr3	+	exonic	hsa_circ_0002266	-1.5511	0.048553	LRCH3
92264128	92268765	chr14	-	exonic	hsa_circ_0032969	-2.2551	0.048606	TC2N
73418464	73431944	chr11	-	exonic	hsa_circ_0003908	-1.9334	0.048626	RAB6A
9208654	9239554	chr18	+	intronic	hsa_circ_0005715	-1.7581	0.048764	RP11-21J18.1
78197050	78201759	chr17	+	exonic	N/A	1.5480	0.048785	SLC26A11
7806826	7807115	chr17	+	intronic	N/A	1.6387	0.049059	CHD3
40477365	40477843	chr15	+	exonic	hsa_circ_0008946	1.5282	0.049080	BUB1B
82984689	82989872	chr11	-	exonic	N/A	-1.6631	0.049104	CCDC90B

11778020	11830089	chr16	-	exonic	hsa_circ_0037866	1.6774	0.049113	TXNDC11
187604954	187618776	chr2	+	exonic	hsa_circ_0057328	1.5921	0.049150	FAM171B
62171487	62175109	chr1	-	sense overlapping	hsa_circ_0000077	1.6430	0.049202	TM2D1
77336007	77336863	chr11	-	exonic	hsa_circ_0000343	-2.0494	0.049285	CLNS1A
89123719	89131833	chr14	-	exonic	N/A	1.6016	0.049325	EML5
102542007	102559661	chr12	+	exonic	hsa_circ_0000432	1.5082	0.049413	PARPBP
94645539	94649052	chr9	-	exonic	N/A	1.6324	0.049423	ROR2
118619175	118619412	chr12	-	exonic	hsa_circ_0000446	-1.6764	0.049493	TAOK3
32381491	32385259	chr1	-	intronic	hsa_circ_0005067	-1.9216	0.049522	RP11-84A19.4
7181356	7189555	chr6	+	exonic	hsa_circ_0007429	-2.3511	0.049537	RREB1
7844232	7844817	chr10	+	exonic	hsa_circ_0017675	-2.7279	0.049551	ATP5C1
108175911	108179689	chr13	-	intronic	hsa_circ_0003145	1.6377	0.049574	FAM155A
9991948	9995685	chr1	-	exonic	hsa_circ_0007803	-1.7543	0.049601	LZIC
83793096	83796975	chr4	-	exonic	hsa_circ_0003549	-1.5754	0.049611	SEC31A
59999085	60002460	chr17	-	exonic	hsa_circ_0007759	-1.5722	0.049755	INTS2
33953282	33963789	chr9	-	exonic	hsa_circ_0001847	-1.6689	0.049773	UBAP2
141622461	141640905	chr3	+	exonic	N/A	1.5285	0.049776	ATP1B3
63970043	64005864	chr15	-	exonic	hsa_circ_0035775	-1.6925	0.049777	HERC1
23015828	23030758	chr7	-	exonic	hsa_circ_0005251	-1.7279	0.049821	FAM126A
77296190	77296528	chr5	+	antisense	hsa_circ_0001499	1.5316	0.049887	AP3B1
80042674	80042829	chr17	-	exonic	N/A	1.6185	0.049901	FASN
164514761	164515093	chr4	+	antisense	hsa_circ_0001455	1.8745	0.049905	MARCH1

Table 3 (SNRI R baseline vs SNRI NR baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
8525984	8568734	chr1	-	exonic	hsa_circ_0009574	1.5314	0.000185	RERE
42641806	42641893	chr20	+	intronic	hsa_circ_0001160	1.5821	0.000414	TOX2
77616277	77620283	chr8	+	exonic	hsa_circ_0084789	2.1368	0.002435	ZFHX4
31849672	31852977	chr14	-	exonic	hsa_circ_0031570	1.8765	0.002458	HEATR5A
187498055	187506315	chr2	+	exonic	hsa_circ_0057319	1.8323	0.002492	ITGAV
66923610	66990707	chr12	-	exonic	hsa_circ_0099053	2.2638	0.002535	GRIP1
129180070	129188260	chr3	+	exonic	N/A	1.7123	0.002576	IFT122
133534776	133536765	chr5	-	exonic	hsa_circ_0073942	1.5742	0.003330	PPP2CA
70696691	70703013	chr10	+	exonic	hsa_circ_0007097	1.6326	0.003519	DDX50
61833638	61835159	chr20	-	exonic	hsa_circ_0004858	1.8825	0.003672	YTHDF1
8555122	8601377	chr1	-	exonic	hsa_circ_0009581	2.0163	0.003687	RERE
156468903	156489628	chr6	-	intergenic	hsa_circ_0001655	1.6003	0.004080	
35615069	35633000	chr13	+	exonic	hsa_circ_0029975	1.9065	0.005023	NBEA
149246283	149250107	chr7	-	exonic	N/A	1.9263	0.005404	ZNF767P
128488846	128489036	chr7	+	exonic	hsa_circ_0082218	1.8877	0.005522	FLNC
4845635	4848517	chr17	+	exonic	hsa_circ_0041623	1.7525	0.005843	RNF167
153940503	153944604	chrX	-	exonic	N/A	1.5497	0.005910	GAB3
73015794	73017356	chr17	+	exonic	hsa_circ_0045581	1.5384	0.006169	ICT1
7754370	7755918	chr18	+	intronic	hsa_circ_0008584	1.7102	0.006179	PTPRM
29191568	29192081	chr22	-	sense overlapping	hsa_circ_0001216	2.0594	0.006345	XBP1
31631798	31638674	chr14	-	sense overlapping	N/A	1.5782	0.006617	HECTD1
67351934	67352712	chr11	+	exonic	hsa_circ_0023115	1.8745	0.006976	GSTP1

74533340	74562028	chr9	+	exonic	N/A	1.9416	0.006976	C9orf85
110832905	110834257	chr12	-	exonic	hsa_circ_0028198	2.4445	0.007172	ANAPC7
21768274	21810728	chr12	-	exonic	hsa_circ_0025597	1.8613	0.007603	LDHB
69853296	69856305	chr12	+	sense overlapping	N/A	1.5833	0.007736	RP11-956E11.1
28090104	28096621	chr15	-	exonic	hsa_circ_0034189	1.7468	0.007904	OCA2
151771875	151789457	chr4	-	exonic	hsa_circ_0071224	2.0052	0.008006	LRBA
74433139	74434317	chr7	+	exonic	hsa_circ_0080638	1.8834	0.008141	GATSL1
23395341	23396869	chr14	-	exonic	hsa_circ_0002928	1.5771	0.008423	PRMT5
21335426	21338430	chr20	+	exonic	N/A	1.5627	0.008796	XRN2
103352525	103363738	chr14	+	exonic	hsa_circ_0000570	1.7182	0.008839	TRAF3
22108546	22117269	chrX	+	exonic	hsa_circ_0090069	2.2282	0.008936	PHEX
20573977	20577388	chr6	+	intronic	N/A	2.4541	0.009301	CDKAL1
242028602	242033847	chr2	-	exonic	N/A	1.7173	0.009384	MTERFD2
154548756	154553990	chr4	+	exonic	hsa_circ_0071312	1.6730	0.009507	KIAA0922
36245469	36247930	chr19	-	exonic	hsa_circ_0050649	1.9776	0.009699	HSPB6
75823317	75875495	chr6	-	exonic	hsa_circ_0077032	1.6710	0.009780	COL12A1
96485180	96489456	chr13	-	exonic	hsa_circ_0008274	2.0711	0.009826	UGGT2
158870027	158873300	chr6	+	exonic	hsa_circ_0002073	1.5939	0.009869	TULP4
1599765	1608285	chr1	-	exonic	hsa_circ_0009306	1.5131	0.010222	SLC35E2B
3185580	3209234	chr10	-	exonic	hsa_circ_0017502	1.6121	0.010247	PITRM1
37061800	37067498	chr3	+	exonic	N/A	2.0940	0.010414	MLH1
220253068	220263134	chr1	-	sense overlapping	hsa_circ_0000185	2.0243	0.010426	BPNT1
12359258	12364785	chr1	+	exonic	hsa_circ_0007677	1.5749	0.010833	VPS13D
19746674	19775434	chr16	+	exonic	hsa_circ_0000680	1.7571	0.010943	IQCK
27326903	27328069	chr21	-	exonic	hsa_circ_0003323	1.6652	0.011005	APP
17907047	17953998	chr1	+	exonic	hsa_circ_0010210	1.8775	0.011183	ARHGEF10L
95518727	95524317	chr8	-	exonic	hsa_circ_0084904	1.8499	0.011192	KIAA1429
79607545	79612827	chr6	+	exonic	hsa_circ_0077109	2.0813	0.011296	IRAK1BP1
35615069	35644989	chr13	+	exonic	hsa_circ_0029976	1.8871	0.011323	NBEA
45921422	45972988	chr22	+	exonic	hsa_circ_0063745	1.7949	0.011450	FBLN1
48466115	48472118	chr20	+	exonic	hsa_circ_0006359	1.6020	0.011682	SLC9A8
3474817	3477249	chr17	-	exonic	N/A	1.5577	0.011682	TRPV1
228401141	228402799	chr1	+	exonic	hsa_circ_0016771	1.9198	0.011838	OBSCN
189851784	189858808	chr2	+	exonic	hsa_circ_0057362	2.1329	0.011926	COL3A1
3777940	3778768	chr11	-	intronic	N/A	1.8378	0.011989	NUP98
62283373	62304039	chr11	-	exonic	hsa_circ_0022429	1.5531	0.012131	AHNAK
151130894	151131115	chrX	-	exonic	hsa_circ_0091710	2.0672	0.012280	GABRE
116734383	116744352	chr11	-	exonic	hsa_circ_0000357	1.7365	0.012386	SIK3
110819556	110834257	chr12	-	exonic	hsa_circ_0005785	1.9825	0.012534	ANAPC7
12632755	12639440	chr1	-	exonic	hsa_circ_0010020	1.5986	0.012632	DHRS3
25628813	25631937	chr17	+	exonic	hsa_circ_0042488	1.7015	0.012753	WSB1
55282872	55287683	chr18	-	exonic	hsa_circ_0047771	1.7678	0.012783	NARS
37623043	37632999	chr8	+	exonic	hsa_circ_0083932	1.9672	0.012829	PROSC
94653105	94669388	chr10	+	exonic	hsa_circ_0019171	2.4829	0.012858	EXOC6
76173360	76187046	chr14	+	exonic	hsa_circ_0032704	1.5694	0.012973	TTLL5
98643320	98645505	chr7	-	exonic	N/A	2.4345	0.013059	SMURF1
186375214	186388209	chr1	+	sense overlapping	hsa_circ_0000166	1.6053	0.013324	C1orf27
103236273	103237246	chr8	-	exonic	hsa_circ_0003794	1.6891	0.013353	RRM2B

25478063	25487229	chr13	-	exonic	hsa_circ_0029775	1.7763	0.013529	CENPJ
55621921	55634000	chr15	+	exonic	hsa_circ_0035381	1.5991	0.013706	PIGB
110826316	110834257	chr12	-	exonic	hsa_circ_0028196	1.8218	0.014350	ANAPC7
57237616	57250507	chr4	-	exonic	N/A	2.0531	0.014492	AASDH
153555574	153562137	chr7	+	intergenic	N/A	1.5521	0.014562	
42604156	42604482	chr12	-	exonic	hsa_circ_0000392	1.9209	0.014686	YAF2
204154487	204157049	chr2	+	exonic	hsa_circ_0005307	1.6525	0.014758	CYP20A1
75104453	76279715	chr7	-	sense overlapping	hsa_circ_0006766	1.6305	0.014949	CCL24
126434011	126452004	chr6	+	antisense	hsa_circ_0130586	1.8855	0.015075	MIR5695
170650618	170658898	chr4	-	exonic	hsa_circ_0071439	1.6607	0.015248	C4orf27
64863339	64868113	chr5	+	exonic	hsa_circ_0072697	2.0356	0.015286	PPWD1
48817428	48842572	chr8	-	exonic	hsa_circ_0084429	1.8985	0.015512	PRKDC
111800296	111853435	chr9	-	exonic	hsa_circ_0087903	1.5360	0.015534	TMEM245
39543618	39545297	chr14	-	exonic	hsa_circ_0031724	1.6685	0.015591	SEC23A
100443764	100494030	chr8	+	exonic	hsa_circ_0005984	1.5901	0.015591	VPS13B
136035782	136048826	chr3	+	exonic	N/A	1.5702	0.015697	PCCB
46783379	46798673	chr18	-	exonic	hsa_circ_0047641	1.5034	0.016221	DYM
36245469	36246795	chr19	-	exonic	hsa_circ_0050648	1.8499	0.016536	HSPB6
116335174	116444414	chr10	-	exonic	hsa_circ_0020076	1.7048	0.016584	ABLIM1
35236117	35236221	chr20	+	exonic	hsa_circ_0001151	1.5493	0.017307	C20orf24
95511601	95550574	chr8	-	exonic	hsa_circ_0084903	2.0644	0.017344	KIAA1429
3201105	3202522	chr10	-	exonic	hsa_circ_0017510	1.5267	0.017962	PITRM1
95504879	95550574	chr8	-	exonic	hsa_circ_0084900	2.0336	0.018345	KIAA1429
113321942	113322076	chr2	+	exonic	hsa_circ_0056146	1.7166	0.018453	POLR1B
26918715	26926848	chr17	-	intronic	N/A	1.5737	0.018719	RP11-192H23.4
95549330	95550574	chr8	-	exonic	hsa_circ_0006896	2.0413	0.019136	KIAA1429
18624903	18633652	chr7	+	exonic	hsa_circ_0001680	1.5140	0.019375	HDAC9
6263945	6312055	chr18	-	exonic	hsa_circ_0000824	1.9046	0.019661	L3MBTL4
90670648	90670832	chr6	+	antisense	hsa_circ_0001623	1.5725	0.020241	BACH2
74385612	74397235	chr17	-	exonic	hsa_circ_0045801	1.6042	0.020467	UBE2O
212977661	212977993	chr1	+	exonic	hsa_circ_0016404	1.9769	0.020961	TATDN3
31947298	31949280	chr15	-	exonic	hsa_circ_0034325	1.7913	0.021334	OTUD7A
85685750	85687725	chr11	-	exonic	hsa_circ_0023881	-1.7042	0.021393	PICALM
75214169	75239275	chr10	-	exonic	hsa_circ_0018814	1.6793	0.021407	PPP3CB
26343183	26349097	chr13	+	exonic	N/A	1.6138	0.022653	ATP8A2
175211289	175211585	chr4	+	intronic	N/A	1.5249	0.022969	CEP44
46515157	46534363	chr11	-	exonic	hsa_circ_0007061	1.7079	0.023377	AMBRA1
42980912	42981094	chr6	-	sense overlapping	hsa_circ_0001606	1.7203	0.023850	MEA1
52946553	52950230	chr3	-	exonic	hsa_circ_0001310	1.9662	0.023964	SFMBT1
145379620	145383716	chr5	+	exonic	N/A	1.7502	0.024021	SH3RF2
17629628	17633596	chr4	+	sense overlapping	N/A	1.6784	0.024134	MED28
39923846	39924209	chr19	-	exonic	hsa_circ_0050998	1.5806	0.024144	RPS16
46529740	46534363	chr11	-	exonic	hsa_circ_0003110	1.5719	0.024580	AMBRA1
49394608	49395791	chr3	-	exonic	hsa_circ_0065638	1.5023	0.024621	GPX1
29063135	29096287	chr1	+	exonic	hsa_circ_0011164	2.5323	0.024752	YTHDF2
110820647	110834257	chr12	-	exonic	hsa_circ_0028190	1.9137	0.025125	ANAPC7
35148956	35149174	chr9	-	sense overlapping	N/A	2.5985	0.025289	RP11-182N22.7

29190547	29196560	chr22	-	exonic	hsa_circ_0062722	1.5762	0.025567	XBP1
20240809	20240905	chr2	-	intronic	hsa_circ_0000981	1.7401	0.025600	LAPTM4A
41133645	41134997	chr13	-	exonic	hsa_circ_0030042	2.0631	0.025761	FOXO1
66589113	66590145	chr11	+	exonic	hsa_circ_0023033	1.5498	0.025994	C11orf80
49094294	49095323	chr3	-	exonic	hsa_circ_0002561	1.6964	0.026158	QRICH1
100035289	100052403	chr2	-	exonic	hsa_circ_0001052	1.8484	0.026198	REV1
114541671	114541925	chr9	+	antisense	N/A	1.5307	0.026393	C9orf84
37583953	37584043	chr17	-	exonic	hsa_circ_0043438	1.5818	0.026429	MED1
115837905	115840678	chr5	-	exonic	hsa_circ_0073647	1.5977	0.026534	SEMA6A
72205086	72222904	chr4	+	exonic	hsa_circ_0008676	1.8693	0.026813	SLC4A4
85685750	85695016	chr11	-	exonic	hsa_circ_0006629	-1.5051	0.026869	PICALM
62782684	62793527	chr17	-	exonic	hsa_circ_0002056	1.5234	0.027556	PLEKHM1P
49054148	49063055	chr12	-	exonic	hsa_circ_0026036	1.7517	0.027752	KANSL2
122031337	122031452	chr12	+	sense overlapping	N/A	1.5583	0.027814	RP13-941N14.1
37115061	37122590	chr5	-	exonic	N/A	1.5184	0.027957	C5orf42
126434011	126498481	chr6	+	sense overlapping	N/A	1.6732	0.028093	RP11-527F13.1
36375930	36390613	chr9	-	exonic	hsa_circ_0001856	1.6307	0.028141	RNF38
334399	336173	chr19	-	exonic	N/A	1.6513	0.028347	MIER2
108603170	108615162	chr4	-	exonic	hsa_circ_0005965	1.9128	0.028381	PAPSS1
9482139	9506356	chr3	+	exonic	hsa_circ_0064136	1.5789	0.028685	SETD5
158204420	158223483	chr5	-	exonic	hsa_circ_0074816	1.6913	0.029101	EBF1
138979956	139003046	chr5	+	exonic	hsa_circ_0004503	2.0622	0.029174	UBE2D2
25151491	25162936	chr16	+	exonic	N/A	1.7188	0.029291	LCMT1
131271154	131271376	chr9	+	exonic	hsa_circ_0066807	1.7405	0.029368	GLE1
183831943	183848110	chr2	-	exonic	N/A	1.7430	0.029497	NCKAP1
129926347	129937061	chr9	+	exonic	N/A	1.6161	0.029959	RALGPS1
72020039	72022817	chr12	-	exonic	hsa_circ_0008912	1.7477	0.029971	ZFC3H1
48839753	48842572	chr8	-	exonic	hsa_circ_0084443	1.7066	0.030016	PRKDC
73414865	73428368	chr15	+	exonic	N/A	1.7246	0.030460	NEO1
45545508	45545708	chr21	+	intronic	hsa_circ_0092315	2.0012	0.030584	PWP2
59955247	59958532	chr17	-	exonic	hsa_circ_0045038	1.6032	0.030693	INTS2
36668400	36749456	chr2	+	exonic	hsa_circ_0053967	1.6736	0.030940	CRIM1
80160631	80173542	chr5	+	sense overlapping	N/A	1.9774	0.031045	MSH3
44441761	44443967	chr1	+	exonic	hsa_circ_0012123	1.6493	0.031078	ATP6V0B
112171726	112171872	chr12	+	exonic	hsa_circ_0028299	1.9826	0.031174	ACAD10
3252272	3256234	chr18	+	exonic	hsa_circ_0046753	1.7946	0.031255	MYL12A
31764759	31766195	chr1	-	exonic	hsa_circ_0011267	1.7769	0.031424	SNRNP40
3802927	3808661	chr17	-	exonic	hsa_circ_0000735	1.5943	0.031627	P2RX1
137716445	137717750	chr9	+	exonic	hsa_circ_0003596	1.5664	0.031822	COL5A1
30142548	30149539	chr20	+	exonic	hsa_circ_0059702	1.6462	0.032055	HM13
36749234	36749456	chr2	+	exonic	hsa_circ_0054021	1.6854	0.032274	CRIM1
32677771	32678011	chr20	-	intronic	hsa_circ_0092291	1.5634	0.032295	EIF2S2
14685190	14685289	chr12	+	intronic	hsa_circ_0000379	1.8548	0.032353	RP11-502N13.2
134032815	134044578	chr5	+	exonic	hsa_circ_0003528	1.5357	0.032783	SEC24A
44530905	44531243	chr20	-	exonic	hsa_circ_0060558	1.7934	0.033468	PLTP
128317617	128323309	chr7	+	exonic	hsa_circ_0082182	1.5906	0.033557	FAM71F2
27820936	27830906	chr2	+	exonic	hsa_circ_0053294	1.6581	0.033827	ZNF512

19638320	19638629	chr1	-	sense overlapping	N/A	1.6681	0.034556	AKR7A2
4029116	4033441	chr16	-	exonic	hsa_circ_0007586	1.5635	0.034738	ADCY9
136770511	136771563	chr5	-	intronic	N/A	1.7884	0.034912	SPOCK1
118897646	118898434	chr11	-	exonic	hsa_circ_0024516	1.5564	0.035319	SLC37A4
50388196	50399175	chr12	-	exonic	hsa_circ_0026195	2.6272	0.036108	RACGAP1
50850356	50850568	chr12	+	intronic	N/A	1.5686	0.036172	LARP4
99589361	99607298	chr9	-	exonic	N/A	1.7981	0.036247	ZNF782
27473614	27474913	chr16	-	exonic	hsa_circ_0038737	1.7644	0.037044	GTF3C1
10798306	10799354	chr19	+	sense overlapping	hsa_circ_0000890	1.5262	0.037457	ILF3
13532533	13581264	chr20	-	intronic	N/A	1.6246	0.037814	TASP1
111150126	111152952	chr12	-	intergenic	N/A	1.7076	0.037820	
173662	173882	chr5	+	intronic	hsa_circ_0092371	1.8132	0.038094	PLEKHG4B
97535283	97563284	chr9	+	exonic	hsa_circ_0002191	1.6034	0.038528	C9orf3
206889066	206889235	chr2	-	intronic	N/A	1.6723	0.039391	INO80D
193181194	193205486	chr1	+	exonic	hsa_circ_0000167	1.7749	0.039507	CDC73
32198899	32199141	chr20	+	exonic	hsa_circ_0059859	1.6925	0.039524	CBFA2T2
38656908	38666209	chr15	+	intergenic	N/A	1.5933	0.039614	
109952549	109964548	chr1	-	exonic	N/A	1.8090	0.040483	PSMA5
71433787	72057538	chr15	+	exonic	hsa_circ_0036127	1.5906	0.040640	THSD4
72797242	72804408	chrX	+	exonic	hsa_circ_0091072	1.9060	0.040678	CHIC1
31789187	31803431	chr13	+	exonic	hsa_circ_0002635	2.0545	0.040997	B3GALTL
158204420	158223486	chr5	-	exonic	hsa_circ_0074817	1.7059	0.041058	EBF1
27440281	27440777	chr1	-	intronic	N/A	1.5158	0.041332	SLC9A1
114860749	114875148	chr9	-	exonic	hsa_circ_0088046	1.5252	0.041413	SUSD1
100899717	100904280	chr8	-	exonic	N/A	1.6879	0.041836	COX6C
74948073	74948409	chr15	-	exonic	hsa_circ_0004401	1.5143	0.042836	EDC3
41826760	41837620	chr13	-	exonic	hsa_circ_0030062	1.5739	0.043026	MTRF1
109336203	109339348	chr1	+	exonic	hsa_circ_0000100	1.7133	0.043133	STXBP3
49713126	49720934	chr3	+	exonic	hsa_circ_0065673	1.5791	0.043865	APEH
75116657	75116733	chr11	+	intronic	hsa_circ_0023617	1.5118	0.044063	RPS3
27151596	27151827	chr8	-	exonic	hsa_circ_0083756	2.0602	0.044743	TRIM35
118464661	118466796	chr10	-	exonic	hsa_circ_0020117	1.8173	0.045203	HSPA12A
44788577	44789336	chr15	+	exonic	hsa_circ_0007705	1.6295	0.045462	CTDSPL2
93141396	93148280	chr11	+	exonic	N/A	1.5306	0.045499	CCDC67
7143737	7144998	chr17	-	exonic	hsa_circ_0041782	1.5484	0.046458	GABARAP
71369656	71370884	chr11	+	intergenic	N/A	1.6307	0.046581	
19070216	19076702	chr9	-	exonic	hsa_circ_0086444	1.5799	0.046660	HAUS6
57048187	57069951	chr18	-	sense overlapping	N/A	1.6312	0.046930	XLOC_012858
42509874	42510962	chr19	-	exonic	hsa_circ_0051260	1.5434	0.046978	GRIK5
57430575	57430887	chr17	+	exonic	hsa_circ_0005600	1.6191	0.047605	YPEL2
11940357	11940700	chr16	-	exonic	hsa_circ_0000673	1.7406	0.047949	RSL1D1
29917108	29917448	chr16	+	exonic	N/A	1.5199	0.048181	ASPHD1
2521314	2521523	chr1	-	antisense	hsa_circ_0000010	1.7186	0.048586	FAM213B
114840817	114842445	chr9	-	exonic	hsa_circ_0088036	1.5323	0.048757	SUSD1
107419754	107420500	chr6	-	exonic	N/A	1.9173	0.049657	BEND3
113856936	113891590	chr2	+	exonic	hsa_circ_0056159	1.6672	0.049768	IL1RN

Table 4 (SNRI R 8 week vs SNRI NR 8 week)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
136770511	136771563	chr5	-	intronic	N/A	1.5022	0.030441	SPOCK1
78022381	78032779	chr17	+	exonic	N/A	1.5760	0.012158	CCDC40
72020039	72022817	chr12	-	exonic	hsa_circ_0008912	1.5016	0.037839	ZFC3H1
58275961	58316858	chr2	+	exonic	hsa_circ_0120478	-1.5220	0.035991	VRK2
66044716	66053776	chr15	-	exonic	hsa_circ_0035957	-1.5114	0.014728	DENND4A
39607406	39629569	chr18	+	exonic	hsa_circ_0007765	-1.5176	0.046923	PIK3C3

Table 5 (SSRI R 8 week vs SSRI R baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
126434011	126496057	chr6	+	antisense	hsa_circ_0130587	2.0698	0.001644	MIR5695
101654702	101656154	chr10	-	exonic	hsa_circ_0092382	-2.4354	0.003171	DNMBP
73114707	73115261	chr7	-	sense overlapping	hsa_circ_0009012	-1.7034	0.003668	STX1A
17370097	17370831	chr19	-	exonic	hsa_circ_0049965	-1.7113	0.003762	USHBP1
111800296	111853435	chr9	-	exonic	hsa_circ_0087903	-1.7012	0.005777	TMEM245
18945987	18983955	chr18	+	exonic	hsa_circ_0003653	-1.7079	0.006069	GREB1L
77147164	77147491	chr3	+	exonic	hsa_circ_0066556	1.6139	0.006441	ROBO2
143238332	143247159	chr6	-	intronic	hsa_circ_0007021	1.6169	0.006487	HIVEP2
95027210	95027835	chr9	-	exonic	hsa_circ_0087497	-1.7464	0.007557	IARS
108984657	108986092	chr6	+	exonic	hsa_circ_0006404	-1.5114	0.007815	FOXO3
48259473	48260829	chr10	+	exonic	hsa_circ_0018309	-1.5550	0.009507	ANXA8
216177220	216190861	chr2	+	exonic	hsa_circ_0058058	-1.5332	0.010567	ATIC
73923233	73925817	chr5	-	exonic	hsa_circ_0073009	1.5106	0.010595	ENC1
141710989	141716304	chr8	-	exonic	hsa_circ_0005273	-1.9119	0.010713	PTK2
25628813	25631937	chr17	+	exonic	hsa_circ_0042488	-1.6471	0.010842	WSB1
187498055	187506315	chr2	+	exonic	hsa_circ_0057319	-2.0271	0.011654	ITGAV
161816238	161833102	chr1	+	exonic	hsa_circ_0008857	-2.2328	0.011729	ATF6
133738149	133738422	chr9	+	exonic	hsa_circ_0089131	-1.6934	0.011899	ABL1
46515157	46515754	chr11	-	exonic	hsa_circ_0009155	1.5077	0.013820	AMBRA1
7402357	7402812	chr17	+	sense overlapping	N/A	-2.1894	0.015177	POLR2A
41650311	41677086	chr22	-	exonic	hsa_circ_0063526	1.5272	0.015651	RANGAP1
32878137	32881962	chr20	-	exonic	hsa_circ_0059914	-1.8400	0.015747	AHCY
37159809	37161502	chr20	+	exonic	hsa_circ_0060342	1.5862	0.015776	RALGAPB
79607545	79612827	chr6	+	exonic	hsa_circ_0077109	-1.8261	0.016897	IRAK1BP1
7402357	7402810	chr17	+	exonic	hsa_circ_0000741	-2.4657	0.017273	POLR2A
23015828	23023664	chr7	-	exonic	hsa_circ_0001971	-1.7537	0.017619	FAM126A
72797242	72804408	chrX	+	exonic	hsa_circ_0091072	-1.5166	0.018608	CHIC1
30397715	30399760	chr10	+	antisense	N/A	1.5584	0.018737	KIAA1462
107031202	107050797	chr6	-	exonic	hsa_circ_0008514	-1.7536	0.021261	RTN4IP1
31789187	31803431	chr13	+	exonic	hsa_circ_0002635	-1.8232	0.022004	B3GALTL
15510546	15510663	chr19	+	antisense	hsa_circ_0000902	-1.5746	0.023199	AKAP8L
155408117	155408859	chr1	-	exonic	hsa_circ_0000137	-1.8078	0.024724	ASH1L
33866724	33872064	chr20	-	sense overlapping	hsa_circ_0060055	-1.6060	0.025175	EIF6
141810557	141900868	chr8	-	exonic	hsa_circ_0007521	-1.6288	0.026295	PTK2
23015828	23030758	chr7	-	exonic	hsa_circ_0005251	-1.6500	0.026343	FAM126A

95516727	95524317	chr8	-	exonic	hsa_circ_0084904	-1.6394	0.026904	KIAA1429
220253068	220263134	chr1	-	sense overlapping	hsa_circ_0000185	-1.9964	0.027643	BPNT1
14643337	14643566	chr10	-	intronic	hsa_circ_0000217	-1.5446	0.028796	FAM107B
29927157	29931571	chr8	-	exonic	hsa_circ_0083834	-1.5892	0.029061	SARAF
122525703	122545912	chr3	+	exonic	N/A	-1.5383	0.029757	DIRC2
35236117	35236221	chr20	+	exonic	hsa_circ_0001151	-1.5287	0.030291	C20orf24
170650618	170658898	chr4	-	exonic	hsa_circ_0071439	-1.5939	0.032358	C4orf27
17910716	17974508	chr4	-	exonic	hsa_circ_0125866	1.5122	0.032521	LCORL
70696691	70703013	chr10	+	exonic	hsa_circ_0007097	-1.5731	0.034176	DDX50
65228581	65237897	chr2	+	exonic	hsa_circ_0054971	-1.6453	0.034532	SLC1A4
886917	887077	chr5	-	intronic	hsa_circ_0001463	1.6030	0.038869	BRD9
42231920	42232779	chr17	+	exonic	hsa_circ_0004239	1.5663	0.039543	C17orf53
123718838	123721032	chr10	-	exonic	hsa_circ_0020256	-1.7346	0.040144	NSMCE4A
10186276	10188722	chr2	+	exonic	N/A	1.5020	0.040831	KLF11
61537238	61545758	chr20	-	exonic	hsa_circ_0061137	-1.6501	0.041718	DIDO1
123471177	123512691	chr3	-	exonic	hsa_circ_0002768	-1.5493	0.046050	MYLK
140646904	140812121	chr4	-	exonic	hsa_circ_0071000	-1.8095	0.048950	MAML3

Table 6 (SSRI NR 8 week vs SSRI NR baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
169663839	169664181	chr1	-	intronic	hsa_circ_0000157	-1.6056	0.022536	SELL
113057425	113057606	chr2	+	exonic	hsa_circ_0001062	1.6457	0.043037	ZC3H6

Table 7 (SNRI R 8 week vs SNRI R baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
128750760	128754065	chr2	-	exonic	hsa_circ_0056390	-1.5102	0.024087	SAP130
42807412	42807742	chr22	-	exonic	hsa_circ_0001240	1.5777	0.028423	NFAM1

Table 8 (SNRI NR 8 week vs SNRI NR baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
111800296	111853435	chr9	-	exonic	hsa_circ_0087903	1.8699	0.011877	TMEM245
223470	223709	chr16	+	exonic	hsa_circ_0037139	1.9512	0.017074	HBA2
18945987	18983955	chr18	+	exonic	hsa_circ_0003653	1.9494	0.018293	GREB1L
32180078	32181858	chr3	+	exonic	hsa_circ_0123503	1.5352	0.019108	GPD1L
5364258	5365866	chr17	-	exonic	hsa_circ_0000740	1.6681	0.019482	DHX33
187498055	187506315	chr2	+	exonic	hsa_circ_0057319	1.7323	0.019912	ITGAV
8525984	8568734	chr1	-	exonic	hsa_circ_0009574	1.5383	0.020435	RERE
74091854	74134875	chr5	-	exonic	N/A	1.6290	0.023687	FAM169A
66252643	66255478	chr11	+	exonic	N/A	1.5628	0.024076	DPP3
4845635	4848517	chr17	+	exonic	hsa_circ_0041623	1.7210	0.028566	RNF167
156012056	156012564	chr1	-	intronic	N/A	1.6342	0.029507	UBQLN4
79607545	79612827	chr6	+	exonic	hsa_circ_0077109	1.7799	0.031208	IRAK1BP1
170650618	170658898	chr4	-	exonic	hsa_circ_0071439	1.6126	0.031283	C4orf27
70696691	70703013	chr10	+	exonic	hsa_circ_0007097	1.5803	0.031364	DDX50
66923610	66990707	chr12	-	exonic	N/A	1.6700	0.031606	GRIP1
73114707	73115261	chr7	-	sense overlapping	hsa_circ_0009012	1.9041	0.031930	STX1A
118456876	118460164	chr12	+	exonic	hsa_circ_0028628	1.5254	0.032096	RFC5
35236117	35236221	chr20	+	exonic	hsa_circ_0001151	1.7025	0.034569	C20orf24

48259473	48260829	chr10	+	exonic	hsa_circ_0018309	1.7394	0.034896	ANXA8
220253068	220263134	chr1	-	sense overlapping	hsa_circ_0000185	2.0231	0.035044	BPNT1
111795586	111800397	chr9	-	exonic	hsa_circ_0087888	1.6524	0.035384	TMEM245
17907047	17953998	chr1	+	exonic	hsa_circ_0010210	1.8408	0.037018	ARHGEF10L
25628813	25631937	chr17	+	exonic	hsa_circ_0042488	1.6438	0.042449	WSB1
127300370	127302466	chr9	-	exonic	hsa_circ_0086511	1.5667	0.042681	NR6A1
73015794	73017356	chr17	+	exonic	hsa_circ_0045581	1.5305	0.042724	ICT1
17370097	17370831	chr19	-	exonic	hsa_circ_0049965	1.9508	0.044091	USHBP1
36530224	36531038	chr19	-	exonic	N/A	1.6117	0.047183	THAP8

Table 9 (MAOI R 8 week vs MAOI R baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
72285253	72286691	chr5	+	exonic	hsa_circ_0072954	1.8349	0.000170	FCHO2
66021409	66031213	chr15	-	exonic	hsa_circ_0035944	1.7516	0.000858	DENND4A
46622935	46623422	chr12	-	exonic	hsa_circ_0098630	1.6345	0.000893	SLC38A1
29319841	29344954	chr1	+	exonic	hsa_circ_0000041	1.6910	0.001005	EPB41
141799572	141840625	chr8	-	exonic	hsa_circ_0008305	1.5412	0.001095	PTK2
63719709	63720311	chr11	+	exonic	hsa_circ_0022623	-2.0221	0.001172	NAA40
139262471	139269050	chr6	-	exonic	hsa_circ_0005210	1.5118	0.001210	REPS1
44931421	44942492	chr2	+	exonic	hsa_circ_0006530	1.6360	0.001351	CAMKMT
24549443	24553954	chr14	-	sense overlapping	N/A	-2.9480	0.001538	NRL
56915571	56920595	chr6	+	sense overlapping	hsa_circ_0131987	1.7010	0.001635	KIAA1586
67484716	67505429	chr8	-	exonic	hsa_circ_0084642	1.8149	0.001841	MYBL1
123678932	123682881	chr12	-	exonic	hsa_circ_0006615	1.9081	0.001877	MPHOSPH9
124121556	124132428	chr8	+	exonic	hsa_circ_0001820	1.5577	0.001976	TBC1D31
32987845	32995095	chr11	+	exonic	N/A	-2.6040	0.002488	QSER1
196544755	196548630	chr2	+	exonic	hsa_circ_0057551	2.4728	0.002494	SLC39A10
8555122	8601377	chr1	-	exonic	hsa_circ_0009581	-1.8472	0.002802	RERE
46751970	46754992	chr12	-	exonic	hsa_circ_0025984	-1.8197	0.002917	SLC38A2
72301330	72302378	chr7	+	sense overlapping	hsa_circ_0006688	2.0968	0.003139	SBDSP1
97304862	97305111	chr8	-	antisense	hsa_circ_0001816	-2.1733	0.003351	PTDSS1
100899717	100904280	chr8	-	exonic	N/A	-2.1635	0.003405	COX6C
58449076	58459247	chr2	-	exonic	hsa_circ_0001009	1.5667	0.003409	FANCL
156303337	156305679	chr1	-	exonic	hsa_circ_0014724	1.5058	0.003476	CCT3
28460068	28464260	chr2	+	exonic	hsa_circ_0053317	-1.6037	0.003942	BRE
49094294	49095323	chr3	-	exonic	hsa_circ_0002561	-1.9022	0.004031	QRICH1
22108546	22117269	chrX	+	exonic	hsa_circ_0090069	-2.6250	0.004048	PHEX
120276826	120351139	chr11	+	exonic	hsa_circ_0024615	-1.8373	0.004300	ARHGEF12
10524467	10525312	chr16	+	exonic	hsa_circ_0037807	1.8276	0.004409	ATF7IP2
149246283	149250107	chr7	-	exonic	N/A	-1.6823	0.004501	ZNF767P
45954567	45959775	chr10	-	exonic	hsa_circ_0018273	1.6150	0.004555	MARCH8
129684543	129690951	chr3	-	sense overlapping	N/A	-2.3824	0.004623	RP11-93K22.6
46366930	46367223	chr12	-	intronic	N/A	-1.6981	0.004656	SCAF11
66303083	66397591	chr17	+	exonic	N/A	-1.5012	0.004762	ARSG
56049902	56062681	chr7	+	exonic	hsa_circ_0080251	-1.8131	0.004820	GBAS

42641806	42641893	chr20	+	intronic	hsa_circ_0001160	-1.5897	0.004960	TOX2
34921480	34924317	chr19	+	exonic	hsa_circ_0050509	1.5887	0.005097	UBA2
56883813	56890780	chr4	+	exonic	N/A	-2.5691	0.005230	CEP135
15956819	15978390	chr1	+	exonic	hsa_circ_0010052	1.5011	0.005308	DDI2
210880696	210885788	chr2	+	sense overlapping	hsa_circ_0007225	1.5463	0.005318	RPE
118997417	118997916	chr9	+	exonic	hsa_circ_0088227	-1.5939	0.005364	PAPPA
109952549	109964548	chr1	-	exonic	N/A	-2.6087	0.005495	PSMA5
204396775	204397348	chr1	-	exonic	N/A	1.7779	0.005500	PIK3C2B
129180070	129188260	chr3	+	exonic	N/A	-1.7308	0.005567	IFT122
12326937	12395884	chr1	+	exonic	hsa_circ_0009962	-2.2646	0.005627	VPS13D
21573713	21585332	chr1	-	exonic	hsa_circ_0007877	-1.5050	0.005650	ECE1
95914772	95918564	chr12	-	exonic	hsa_circ_0027779	-1.5237	0.005723	USP44
59981820	59996874	chr17	-	exonic	N/A	-2.0125	0.005760	INTS2
30147413	30149539	chr20	+	exonic	hsa_circ_0059703	-1.5822	0.005794	HM13
233651859	233660931	chr2	+	exonic	hsa_circ_0058733	2.1439	0.005838	GIGYF2
126434011	126498481	chr6	+	sense overlapping	N/A	-2.0511	0.006019	RP11-527F13.1
77759436	77764156	chr15	+	exonic	hsa_circ_0036429	1.6712	0.006106	HMG20A
48561918	48565892	chr20	+	exonic	hsa_circ_0008212	-1.9295	0.006197	RNF114
103649168	103699695	chr10	-	exonic	hsa_circ_0019627	-1.5998	0.006265	C10orf76
75210552	75211467	chr7	-	exonic	hsa_circ_0080731	-1.7904	0.006408	HIP1
217783662	217787544	chr1	-	exonic	hsa_circ_0002843	-1.7220	0.006454	GPATCH2
172325397	172325966	chr2	+	sense overlapping	hsa_circ_0007529	-1.6148	0.006468	DCAF17
68160350	68160513	chr16	+	exonic	hsa_circ_0039930	1.9306	0.006598	NFATC3
47143393	47165936	chr16	-	exonic	hsa_circ_0003520	-1.6568	0.006671	NETO2
24663284	24681467	chr7	+	exonic	hsa_circ_0079619	1.9079	0.006677	MPP6
128350085	128350346	chr11	-	exonic	hsa_circ_0024829	2.1692	0.006698	ETS1
49053687	49054402	chr12	-	intronic	hsa_circ_0000399	-1.8103	0.006808	KANSL2
93185037	93221941	chr10	+	exonic	hsa_circ_0007168	1.5989	0.006847	HECTD2
152163070	152165562	chr3	+	exonic	hsa_circ_0007630	-1.6528	0.006942	MBNL1
1859238	1859834	chr16	-	exonic	N/A	1.9390	0.006994	HAGH
29362337	29365938	chr1	+	exonic	hsa_circ_0000042	2.3063	0.007004	EPB41
49075877	49077050	chr13	-	exonic	hsa_circ_0030235	-1.5939	0.007010	RCBTB2
48209335	48219478	chr3	-	exonic	hsa_circ_0005467	-2.1597	0.007014	CDC25A
17137883	17143936	chr8	+	exonic	hsa_circ_0063423	1.8193	0.007079	VPS37A
46267751	46276110	chr20	+	exonic	hsa_circ_0060633	-1.5933	0.007148	NCOA3
30941049	30941149	chr22	-	intronic	hsa_circ_0001221	-2.0133	0.007175	SEC14L6
47644252	47647293	chr11	-	exonic	hsa_circ_0022019	-1.8387	0.007183	MTCH2
100598717	100601564	chr12	+	exonic	N/A	1.5587	0.007214	ACTR6
77611362	77632364	chr9	-	exonic	hsa_circ_0087220	2.7704	0.007237	C9orf41
98740342	98766983	chr9	+	exonic	hsa_circ_0008720	1.8843	0.007259	ERCC6L2
34934748	34936026	chr19	+	exonic	hsa_circ_0050539	-1.7983	0.007344	UBA2
233334684	233344435	chr1	-	exonic	hsa_circ_0005223	1.9882	0.007650	PCNXL2
77981056	77983024	chr6	-	intergenic	N/A	1.6813	0.007652	
29191568	29192081	chr22	-	sense overlapping	hsa_circ_0001216	-2.0409	0.007935	XBP1
198273227	198274543	chr2	+	antisense	hsa_circ_0001089	-2.0462	0.007937	SF3B1
117825700	117828459	chr7	+	exonic	hsa_circ_0001740	1.6879	0.007995	NAA38

70247563	70256383	chr16	-	sense overlapping	N/A	1.7798	0.008029	SMG1P7
54921379	54925426	chr17	+	exonic	hsa_circ_0044709	1.5162	0.008036	DGKE
120343758	120348235	chr11	+	exonic	hsa_circ_0009021	1.7985	0.008045	ARHGEF12
69983264	69987393	chr12	+	exonic	hsa_circ_0002940	1.6237	0.008137	CCT2
99122975	99123175	chr10	-	intronic	hsa_circ_0092335	-2.0320	0.008247	RRP12
80869751	80879232	chr9	+	exonic	N/A	-2.3285	0.008260	CEP78
141595217	141595410	chr8	-	exonic	hsa_circ_0008113	2.1803	0.008433	AGO2
33960823	33973235	chr9	-	exonic	hsa_circ_0001850	1.9596	0.008538	UBAP2
5314022	5320002	chr17	-	exonic	hsa_circ_0000739	1.5121	0.008567	NUP88
72863871	72865324	chr7	-	exonic	N/A	1.5409	0.008633	BAZ1B
71640490	71704162	chr15	+	sense overlapping	N/A	-2.0350	0.008835	THSD4
37623043	37632999	chr8	+	exonic	hsa_circ_0083932	-1.8028	0.008836	PROSC
34059659	34101636	chr6	-	exonic	hsa_circ_0076040	-2.1951	0.008908	GRM4
21788274	21810728	chr12	-	exonic	hsa_circ_0025597	-1.9156	0.008936	LDHB
50290691	50292747	chr20	-	exonic	hsa_circ_0004207	-1.6989	0.008968	ATP9A
59730181	59758024	chr14	+	sense overlapping	hsa_circ_0000543	1.5052	0.008994	DAAM1
84662298	84663507	chr1	+	exonic	N/A	1.6286	0.009094	PRKACB
128354717	128360471	chr11	-	exonic	hsa_circ_0004296	2.0483	0.009172	ETS1
96826060	96834012	chr15	-	exonic	hsa_circ_0004200	-1.7937	0.009186	NR2F2-AS1
43906156	43908975	chr7	-	exonic	hsa_circ_0079972	-1.8953	0.009209	MRPS24
77394754	77404656	chr11	-	exonic	hsa_circ_0000344	1.5260	0.009313	RSF1
29313942	29323831	chr1	+	exonic	hsa_circ_0011168	2.2326	0.009482	EPB41
95504879	95550574	chr8	-	exonic	hsa_circ_0084900	-1.5765	0.009558	KIAA1429
128350085	128360471	chr11	-	exonic	hsa_circ_0002083	2.5938	0.009667	ETS1
89123719	89131833	chr14	-	exonic	N/A	-2.0667	0.009694	EML5
67513932	67514758	chr8	-	exonic	hsa_circ_0004863	2.2691	0.009709	MYBL1
117273764	117274087	chr12	+	exonic	hsa_circ_0028602	-1.6671	0.009772	RNFT2
31592304	31592917	chr6	+	intronic	N/A	-1.9248	0.009798	PRRC2A
152221370	152224234	chr1	+	exonic	N/A	-1.8915	0.009823	FLG-AS1
71433787	72057538	chr15	+	exonic	hsa_circ_0036127	-2.1346	0.009941	THSD4
15605050	15606052	chr3	-	sense overlapping	N/A	-1.6495	0.009977	HACL1
28090104	28096621	chr15	-	exonic	hsa_circ_0034189	-2.2426	0.010015	OCA2
59739905	59763183	chr18	-	exonic	hsa_circ_0007528	-1.7448	0.010042	PIGN
126370175	126395456	chr10	-	exonic	hsa_circ_0002282	-1.5016	0.010061	FAM53B
152480271	152513673	chr7	+	exonic	hsa_circ_0083059	-1.5143	0.010102	ACTR3B
50358643	50367353	chr7	+	exonic	hsa_circ_0001708	2.2201	0.010117	IKZF1
53288349	53308214	chr16	+	exonic	hsa_circ_0000702	1.7629	0.010268	CHD9
80160631	80173542	chr5	+	sense overlapping	N/A	-1.7492	0.010368	MSH3
2326785	2343345	chrX	-	exonic	hsa_circ_0002818	-1.6491	0.010421	DHRSX
19236821	19239304	chr18	-	exonic	hsa_circ_0047086	-1.5298	0.010469	ABHD3
141889569	141900868	chr8	-	exonic	hsa_circ_0006646	1.6288	0.010497	PTK2
159004985	159006457	chr6	+	exonic	hsa_circ_0003345	2.2874	0.010519	TMEM181
155093275	155094127	chr7	+	exonic	N/A	-1.5835	0.010544	INSIG1
33388679	33427756	chr7	+	exonic	hsa_circ_0079812	1.8452	0.010619	BBS9
120345268	120348235	chr11	+	exonic	hsa_circ_0002100	1.8652	0.010645	ARHGEF12

48248829	48248993	chr19	+	sense overlapping	hsa_circ_0000945	1.5123	0.010679	GLTSCR2
24788253	24788679	chr16	+	exonic	hsa_circ_0038673	1.8570	0.010728	TNRC6A
26343183	26349097	chr13	+	exonic	N/A	-1.8529	0.010729	ATP8A2
27447477	27447615	chr10	+	exonic	hsa_circ_0018031	-2.3860	0.010785	MASTL
8604615	8604944	chr19	+	antisense	hsa_circ_0008990	-1.5469	0.010862	MYO1F
71808337	71808960	chr11	-	exonic	hsa_circ_0023420	-2.3234	0.010939	LAMTOR1
110832905	110834257	chr12	-	exonic	hsa_circ_0028198	-2.1798	0.010991	ANAPC7
66044716	66053776	chr15	-	exonic	hsa_circ_0035957	2.3357	0.010997	DENND4A
27269150	27269556	chr1	+	exonic	hsa_circ_0005087	2.1926	0.011034	NUDC
3201105	3202522	chr10	-	exonic	hsa_circ_0017510	-1.7504	0.011060	PITRM1
7143737	7144998	chr17	-	exonic	hsa_circ_0041782	-1.6603	0.011075	GABARAP
77402203	77404656	chr11	-	exonic	hsa_circ_0004831	1.5219	0.011125	RSF1
151130894	151131115	chrX	-	exonic	hsa_circ_0091710	-1.8953	0.011149	GABRE
109550361	109550978	chr4	+	intronic	N/A	-1.6452	0.011162	RPL34
71090478	71102924	chr3	-	exonic	hsa_circ_0008234	1.6829	0.011168	FOXP1
4749457	4749657	chr16	-	intronic	hsa_circ_0092312	-1.5303	0.011168	ANKS3
15506703	15536599	chr2	-	exonic	N/A	1.6934	0.011271	NBAS
100982814	100992513	chr13	+	exonic	hsa_circ_0008420	1.6021	0.011377	PCCA
116734383	116744352	chr11	-	exonic	hsa_circ_0000357	-1.6045	0.011403	SIK3
33960823	33963789	chr9	-	exonic	hsa_circ_0001849	1.8439	0.011476	UBAP2
24679553	24679974	chr14	-	exonic	hsa_circ_0007326	2.5026	0.011649	CHMP4A
9482139	9506356	chr3	+	exonic	hsa_circ_0064136	-1.8938	0.011694	SETD5
119176864	119182471	chr3	-	sense overlapping	hsa_circ_0066869	-1.5131	0.011715	TMEM39A
120927214	120936665	chr10	-	exonic	hsa_circ_0020169	-1.5129	0.011758	PRDX3
24840803	24841057	chr1	+	exonic	hsa_circ_0003553	1.8500	0.011768	RCAN3
10798306	10799354	chr19	+	sense overlapping	hsa_circ_0000890	-1.6576	0.011804	ILF3
133534776	133536765	chr5	-	exonic	hsa_circ_0073942	-1.6318	0.011817	PPP2CA
156619298	156626486	chr7	-	exonic	hsa_circ_0083127	-1.5193	0.011870	LMBR1
138994170	139003046	chr5	+	exonic	hsa_circ_0074229	2.0394	0.011882	UBE2D2
56518672	56536368	chr16	-	sense overlapping	N/A	-2.0384	0.011891	BBS2
131085277	131096351	chr9	+	exonic	hsa_circ_0088780	-1.9666	0.012002	COQ4
110332157	110350696	chr2	-	exonic	hsa_circ_0007654	-1.6768	0.012034	SEPT10
55844499	55844644	chr20	-	antisense	hsa_circ_0001171	-2.0823	0.012045	BC037691
14832521	14834120	chrY	+	exonic	hsa_circ_0092235	-1.7025	0.012152	USP9Y
68215377	68217269	chr16	+	exonic	hsa_circ_0039934	1.9886	0.012153	NFATC3
140622800	140638542	chr9	+	exonic	hsa_circ_0004101	1.6720	0.012154	EHMT1
101132116	101132358	chr13	+	intronic	N/A	-1.5708	0.012229	PCCA
18769114	18785996	chr17	+	exonic	N/A	1.7089	0.012234	PRPSAP2
41228572	41244373	chr22	-	exonic	hsa_circ_0005671	1.7365	0.012299	ST13
141595217	141616013	chr8	-	intronic	hsa_circ_0007313	2.1011	0.012380	AGO2
25260812	25262116	chr4	+	intronic	N/A	-1.7092	0.012425	PI4K2B
80992910	81006661	chr17	-	exonic	N/A	-1.7857	0.012583	B3GNTL1
12826218	12826553	chr19	-	exonic	hsa_circ_0049587	-1.6130	0.012634	TNPO2
120916382	120924441	chr11	+	exonic	hsa_circ_0000365	2.0421	0.012710	TBCEL
24181170	24199945	chr2	+	exonic	hsa_circ_0005970	1.5222	0.012744	UBXN2A
20974569	20990158	chr2	-	exonic	hsa_circ_0002271	-1.7133	0.012747	C2orf43
73646250	73659419	chr2	+	exonic	hsa_circ_0055229	-1.6751	0.012759	ALMS1

131113791	131113904	chr7	+	exonic	hsa_circ_0082413	1.5084	0.012791	MKLN1
41705097	41795980	chr3	-	exonic	N/A	-1.7770	0.012797	ULK4
57031958	57036364	chr12	-	exonic	hsa_circ_0027070	-1.5770	0.012808	ATP5B
40293372	40301685	chr13	+	exonic	hsa_circ_0006900	-1.9188	0.012865	COG6
114293154	114296633	chr9	+	exonic	N/A	-1.7869	0.012869	ZNF483
30740286	30740893	chr16	+	exonic	hsa_circ_0006127	-1.6214	0.012940	SRCAP
52773707	52790516	chr20	-	exonic	hsa_circ_0060930	-1.8534	0.013017	CYP24A1
89961445	89967202	chr16	+	exonic	hsa_circ_0002631	-1.9644	0.013154	TCF25
24613084	24708279	chr7	+	exonic	hsa_circ_0079614	2.4232	0.013209	MPP6
126434011	126452004	chr6	+	antisense	N/A	-1.8482	0.013252	MIR5695
41456925	41457407	chr1	+	intronic	N/A	-1.8992	0.013252	CTPS1
46096161	46136418	chr22	+	exonic	hsa_circ_0001246	1.7983	0.013273	ATXN10
104432491	104433310	chr8	+	exonic	N/A	-1.5501	0.013280	DCAF13
105121498	105135700	chr7	-	exonic	hsa_circ_0081854	1.5258	0.013353	PUS7
63042932	63052295	chr1	-	exonic	hsa_circ_0002032	-1.9483	0.013401	DOCK7
2972488	3000467	chr11	-	exonic	hsa_circ_0020816	2.4962	0.013417	NAP1L4
39328182	39329376	chr4	-	exonic	hsa_circ_0001403	1.7462	0.013437	RFC1
76342171	76344812	chr5	+	exonic	N/A	1.7212	0.013445	AGGF1
113856936	113891590	chr2	+	exonic	hsa_circ_0056159	-1.7142	0.013511	IL1RN
11905658	11907984	chr2	+	exonic	hsa_circ_0002229	1.8805	0.013545	LPIN1
39739039	39757359	chr4	+	exonic	hsa_circ_0009154	1.9825	0.013560	UBE2K
42711141	42717906	chr12	-	exonic	N/A	1.5424	0.013655	ZCRB1
167927595	167929110	chr5	+	exonic	hsa_circ_0007958	1.8524	0.013695	RARS
21306826	21329301	chr1	-	exonic	hsa_circ_0010486	-1.5805	0.013703	EIF4G3
84765030	84772711	chr6	+	exonic	N/A	-1.8440	0.013707	MRAP2
21335426	21338430	chr20	+	exonic	N/A	-1.8149	0.013785	XRN2
73713630	73751785	chr6	+	exonic	hsa_circ_0004136	-1.8696	0.013839	KCNQ5
73414865	73428368	chr15	+	exonic	N/A	-1.9192	0.013913	NEO1
64295353	64295792	chrX	+	sense overlapping	hsa_circ_0002532	1.7189	0.013968	XLOC_008000
100598717	100599535	chr12	+	exonic	N/A	1.7027	0.014042	ACTR6
158204420	158223483	chr5	-	exonic	hsa_circ_0074816	-1.8988	0.014078	EBF1
45891031	45923523	chr20	-	exonic	hsa_circ_0001164	1.8828	0.014080	ZMYND8
98827555	98831466	chr8	+	exonic	hsa_circ_0065013	-1.8293	0.014088	LAPTM4B
12335881	12338095	chr1	+	exonic	hsa_circ_0009964	1.6750	0.014171	VPS13D
226054811	226065294	chr1	-	exonic	hsa_circ_0016681	1.6469	0.014204	TMEM63A
17624791	17649531	chr6	-	exonic	hsa_circ_0075705	-1.5925	0.014554	NUP153
6477621	6482099	chr9	+	exonic	hsa_circ_0007816	1.7042	0.014585	UHRF2
27440281	27440777	chr1	-	intronic	N/A	-1.7369	0.014644	SLC9A1
22024201	22029404	chr22	+	exonic	hsa_circ_0062426	2.0400	0.014677	PPIL2
15095126	15095229	chr12	-	sense overlapping	hsa_circ_0000380	-1.8740	0.014770	ARHGDIB
91808723	91810001	chr14	-	exonic	hsa_circ_0092959	1.5494	0.014821	CCDC88C
24828014	24861794	chrX	+	exonic	hsa_circ_0090162	1.6568	0.014832	POLA1
66655964	66670484	chr16	-	exonic	hsa_circ_0009167	-1.5511	0.014851	CMTM4
42069936	42084913	chr22	-	exonic	hsa_circ_0063598	-1.8890	0.014923	NHP2L1
103213257	103239214	chr10	+	exonic	N/A	1.5213	0.014936	BTRC
72945231	72960247	chr2	-	exonic	hsa_circ_0009043	1.6908	0.014949	EXOC6B
159001971	159010814	chr6	+	exonic	hsa_circ_0001661	1.5871	0.015038	TMEM181
33058531	33060824	chr1	+	exonic	hsa_circ_0002306	-2.0008	0.015039	ZBTB8A
142221459	142231148	chr6	-	exonic	N/A	-2.4912	0.015061	AK097143

131629427	131840230	chr2	-	exonic	hsa_circ_0003524	-1.6668	0.015123	FAM168B
72517312	72522216	chr17	-	exonic	hsa_circ_0045556	-1.8537	0.015135	CD300LB
47287161	47308084	chr22	+	exonic	hsa_circ_0063853	-1.5145	0.015176	TBC1D22A
128099296	128099870	chr9	+	exonic	hsa_circ_0003270	-1.7378	0.015201	GAPVD1
107216250	107230146	chr4	-	exonic	hsa_circ_0003673	-1.6307	0.015344	TBCK
28337816	28338222	chr1	-	intronic	N/A	-1.9332	0.015432	EYA3
66021409	66048810	chr15	-	exonic	hsa_circ_0035946	2.5523	0.015495	DENND4A
86088303	86090608	chr2	-	exonic	hsa_circ_0055451	1.5257	0.015568	ST3GAL5
108186549	108206688	chr11	+	exonic	hsa_circ_0024231	2.8063	0.015589	ATM
185375790	185376090	chr3	-	intronic	hsa_circ_0092369	-2.0260	0.015642	IGF2BP2
72205086	72222904	chr4	+	exonic	hsa_circ_0008676	-2.1579	0.015665	SLC4A4
24663284	24708279	chr7	+	exonic	hsa_circ_0001686	2.4333	0.015732	MPP6
39090564	39090793	chr19	-	exonic	hsa_circ_0050867	-1.7665	0.015732	MAP4K1
70723046	70731808	chr10	+	exonic	hsa_circ_0018572	-1.7088	0.015760	DDX21
156303337	156304709	chr1	-	exonic	hsa_circ_0004680	2.2938	0.015816	CCT3
43122140	43162033	chr5	+	exonic	hsa_circ_0001479	1.7654	0.015937	ZNF131
189851784	189858808	chr2	+	exonic	hsa_circ_0057362	-2.2306	0.016003	COL3A1
53430497	53430825	chrX	-	exonic	hsa_circ_0001921	2.1421	0.016088	SMC1A
47585118	47585318	chr19	-	intronic	hsa_circ_0092316	-2.1094	0.016150	ZC3H4
75590748	75590926	chr14	-	exonic	hsa_circ_0032683	1.8203	0.016203	NEK9
86494712	86508177	chr14	+	intronic	N/A	1.6480	0.016204	LOC101928767
44346195	44346638	chr13	-	intronic	N/A	-1.9981	0.016222	ENOX1
138244331	138256189	chr3	-	exonic	N/A	2.1616	0.016226	CEP70
7217398	7217478	chr17	-	exonic	hsa_circ_0041811	-2.0343	0.016267	GPS2
110764194	110780253	chr12	+	exonic	hsa_circ_0028173	-1.5481	0.016320	ATP2A2
148730307	148733544	chr2	-	exonic	hsa_circ_0001074	1.5430	0.016328	ORC4
19423859	19424839	chr9	+	exonic	hsa_circ_0086482	-1.7700	0.016348	ACER2
151153488	151161628	chr4	+	exonic	hsa_circ_0071129	-1.7672	0.016459	DCLK2
141622461	141640905	chr3	+	exonic	N/A	-1.8168	0.016486	ATP1B3
123183918	123185582	chr4	+	exonic	N/A	-1.7609	0.016563	KIAA1109
117365827	117402659	chr12	+	exonic	hsa_circ_0003677	1.5865	0.016567	FBXW8
97207245	97213809	chr9	+	exonic	hsa_circ_0087581	-1.6733	0.016640	HIATL1
51317536	51393924	chr3	+	exonic	hsa_circ_0065887	-1.5355	0.016688	DOCK3
110978278	110980107	chrX	+	exonic	N/A	-1.8957	0.016692	ALG13
108057208	108061227	chr11	-	exonic	N/A	2.1916	0.016722	NPAT
74533340	74562028	chr9	+	exonic	N/A	-1.6497	0.016726	C9orf85
47497809	47581459	chr16	+	exonic	hsa_circ_0005385	1.9053	0.016738	PHKB
48466115	48472118	chr20	+	exonic	hsa_circ_0006359	-1.6358	0.016747	SLC9A8
90261231	90398157	chr5	+	exonic	N/A	-1.6932	0.016749	GPR98
100169609	100170072	chrX	-	sense overlapping	N/A	-1.6533	0.016755	XKRX
56419830	56448256	chr16	-	exonic	hsa_circ_0004120	-1.6313	0.016880	AMFR
56078736	56086030	chr14	+	exonic	hsa_circ_0032029	1.8256	0.016936	KTN1
81271271	81274523	chr15	-	exonic	hsa_circ_0000645	-1.6010	0.016946	MESDC2
33310020	33313150	chr17	+	exonic	hsa_circ_0043082	-1.5058	0.017037	LIG3
99589361	99607298	chr9	-	exonic	N/A	-1.8364	0.017083	ZNF782
24680620	24681035	chr14	-	exonic	hsa_circ_0031359	2.3469	0.017119	CHMP4A
75936161	75936743	chr13	-	exonic	hsa_circ_0030431	-1.8523	0.017168	TBC1D4
118774654	118787003	chrX	-	exonic	hsa_circ_0008350	1.9104	0.017172	SEPT6
70347082	70347209	chr15	+	antisense	hsa_circ_0000622	-1.6393	0.017197	TLE3
34918468	34923339	chr5	+	exonic	hsa_circ_0006970	-1.5592	0.017198	BRIX1

179316734	179319566	chr1	+	exonic	hsa_circ_0015454	-1.7691	0.017208	SOAT1
33114035	33118729	chr3	-	exonic	N/A	-1.9651	0.017224	GLB1
33760537	33766320	chr1	+	exonic	hsa_circ_0011474	-1.8835	0.017268	ZNF362
207025605	207025856	chr2	+	intronic	N/A	-1.5059	0.017304	EEF1B2
39739039	39776553	chr4	+	exonic	hsa_circ_0002590	2.1657	0.017317	UBE2K
215259710	215298093	chr1	+	exonic	hsa_circ_0016459	-1.6209	0.017408	KCNK2
54119944	54120936	chr2	-	exonic	hsa_circ_0054547	1.6060	0.017486	PSME4
141828375	141900868	chr8	-	exonic	hsa_circ_0005982	2.2861	0.017550	PTK2
125930467	125936121	chr9	-	sense overlapping	hsa_circ_0001887	1.6379	0.017558	STRBP
12800185	12800444	chr19	-	exonic	hsa_circ_0049547	-1.7851	0.017604	FBXW9
213302869	213349835	chr1	+	exonic	hsa_circ_0007772	-1.6859	0.017677	RPS6KC1
93467550	93472321	chr15	+	exonic	hsa_circ_0007262	1.6359	0.017748	CHD2
37105033	37105170	chr2	-	exonic	hsa_circ_0054033	-1.6545	0.017832	STRN
128166326	128256170	chrX	-	sense overlapping	N/A	-1.6391	0.017884	RP11-41L14.1
48597719	48597913	chr4	-	intronic	N/A	-1.5402	0.017889	FRYL
13387339	13438383	chr18	+	exonic	hsa_circ_0047040	-1.7159	0.017908	LDLRAD4
21723054	21723377	chr18	+	exonic	hsa_circ_0008705	-1.5531	0.017915	CABYR
16875716	16881223	chrX	-	exonic	hsa_circ_0005840	-1.5906	0.017938	RBBP7
37246951	37247979	chr2	-	exonic	N/A	-1.6824	0.017946	HEATR5B
11399891	11421526	chr3	+	exonic	hsa_circ_0008927	-1.5419	0.017949	ATG7
33134028	33134537	chr19	-	exonic	hsa_circ_0000924	1.6382	0.017998	ANKRD27
139865339	139866824	chrX	+	antisense	hsa_circ_0001946	-1.8783	0.018135	CDR1
101402108	101415933	chr14	+	sense overlapping	N/A	-1.5804	0.018150	SNORD113-4
33971648	33973235	chr9	-	exonic	hsa_circ_0001851	1.9396	0.018201	UBAP2
41945763	41951402	chr4	+	exonic	hsa_circ_0069586	-1.8550	0.018238	TMEM33
155628480	155643155	chr3	+	exonic	hsa_circ_0008184	1.7557	0.018260	GMPS
153555574	153562137	chr7	+	intergenic	N/A	-1.6611	0.018275	
23393072	23399247	chr10	+	exonic	N/A	-1.8689	0.018306	MSRB2
65830317	65831879	chr1	+	exonic	hsa_circ_0002454	2.5415	0.018445	DNAJC6
120517677	120528452	chr4	-	exonic	hsa_circ_0002474	1.6812	0.018452	PDE5A
80721840	80730383	chr17	+	exonic	hsa_circ_0005281	1.6420	0.018457	TBCD
32502510	32504220	chr1	+	exonic	hsa_circ_0007231	1.6224	0.018498	KHDRBS1
135025037	135042232	chrX	-	sense overlapping	N/A	-2.2584	0.018503	RP11-97N5.2
29959413	29962002	chr8	+	exonic	hsa_circ_0007353	2.0865	0.018544	LEPROTL1
67356836	67371058	chr1	-	exonic	hsa_circ_0006677	1.8557	0.018621	WDR78
68527036	68529155	chr11	-	exonic	hsa_circ_0023249	-1.8629	0.018631	CPT1A
27432375	27436268	chr1	-	exonic	hsa_circ_0007283	-1.6058	0.018637	SLC9A1
396147	397106	chr16	-	exonic	hsa_circ_0005838	1.9850	0.018653	AXIN1
66426136	66430767	chr17	-	exonic	hsa_circ_0045502	-1.7107	0.018661	WIPI1
74385612	74397235	chr17	-	exonic	hsa_circ_0045801	-1.9272	0.018756	UBE2O
87808910	87812746	chr4	-	exonic	hsa_circ_0004262	-1.8784	0.018770	C4orf36
48497460	48500603	chr20	+	exonic	N/A	-1.5530	0.018852	SLC9A8
63269389	63286880	chr1	+	exonic	hsa_circ_0012823	1.7714	0.018873	ATG4C
148863249	148864022	chr7	+	exonic	N/A	-1.5242	0.018915	ZNF398
77333544	77340944	chr11	-	exonic	hsa_circ_0023696	1.9776	0.018916	CLNS1A
22896855	22898646	chr10	-	exonic	hsa_circ_0003826	2.1955	0.018930	PIP4K2A
102195835	102196253	chr11	-	antisense	hsa_circ_0000352	-1.8890	0.019064	BIRC3

65729590	65731263	chr3	-	intronic	N/A	-1.6004	0.019131	MAGI1
47702783	47719801	chr3	-	exonic	hsa_circ_0003602	1.7055	0.019273	SMARCC1
34686976	34757703	chr5	+	exonic	hsa_circ_0072132	-1.5833	0.019397	RAI14
145379620	145383716	chr5	+	exonic	N/A	-1.8352	0.019415	SH3RF2
31008859	31009242	chr22	+	sense overlapping	N/A	-1.6545	0.019432	TCN2
196876613	196888609	chr3	-	exonic	hsa_circ_0068702	1.8545	0.019505	DLG1
11354777	11356967	chr3	+	exonic	hsa_circ_0003862	-1.5406	0.019553	ATG7
74140611	74143892	chr2	+	exonic	hsa_circ_0055264	-2.0017	0.019594	ACTG2
9379934	9437964	chr5	-	exonic	hsa_circ_0006397	-1.7695	0.019782	SEMA5A
70740402	70766591	chr1	-	exonic	hsa_circ_0000084	1.5192	0.019804	ANKRD13C
128768965	128908618	chr10	+	exonic	hsa_circ_0020396	-1.7057	0.019808	DOCK1
242343242	242357524	chr2	+	exonic	hsa_circ_0004924	-1.7817	0.019855	FARP2
99537069	99538527	chr9	-	exonic	hsa_circ_0007789	-1.7825	0.019914	ZNF510
52157280	52161651	chr5	+	exonic	hsa_circ_0004840	-1.5013	0.019947	ITGA1
44021595	44028848	chr2	+	exonic	hsa_circ_0054326	-1.6211	0.020107	DYNC2LI1
122825299	122826244	chr12	-	exonic	hsa_circ_0029069	1.7407	0.020219	CLIP1
92264128	92268765	chr14	-	exonic	hsa_circ_0032969	3.1619	0.020228	TC2N
29577406	29580649	chr16	-	exonic	hsa_circ_0038917	1.6481	0.020321	LOC440354
10266215	10288043	chr19	-	exonic	hsa_circ_0049224	2.6963	0.020451	DNMT1
46515157	46534363	chr11	-	exonic	hsa_circ_0007061	-1.7178	0.020461	AMBRA1
76205664	76216231	chr1	+	exonic	hsa_circ_0008129	1.5559	0.020502	ACADM
35890583	35893796	chr21	-	intronic	N/A	-1.7677	0.020565	RCAN1
101372434	101373305	chr14	+	exonic	hsa_circ_0033198	-1.9486	0.020612	MEG8
12999419	13042333	chr18	+	exonic	hsa_circ_0046999	1.6241	0.020668	CEP192
17669205	17669777	chr6	-	exonic	hsa_circ_0002049	1.8702	0.020673	NUP153
78098799	78107340	chr1	-	sense overlapping	hsa_circ_0006395	1.9525	0.020680	ZZZ3
67988716	68007967	chr8	+	exonic	N/A	1.5354	0.020699	CSPP1
66589113	66590145	chr11	+	exonic	hsa_circ_0023033	-1.6796	0.020715	C11orf80
151771875	151789457	chr4	-	exonic	hsa_circ_0071224	-1.5202	0.020747	LRBA
14270933	14280545	chr5	+	exonic	hsa_circ_0003037	-1.6523	0.020782	TRIO
6880240	6885270	chr1	+	exonic	hsa_circ_0009541	1.5905	0.020786	CAMTA1
20972052	20972473	chr1	+	sense overlapping	N/A	-1.6375	0.020803	PINK1
59955247	59958532	chr17	-	exonic	hsa_circ_0045038	-1.7155	0.020807	INTS2
110826316	110834257	chr12	-	exonic	hsa_circ_0028196	-1.5250	0.020851	ANAPC7
37326002	37328522	chr5	-	exonic	hsa_circ_0072255	-1.8815	0.020867	NUP155
167677562	167677724	chr1	-	intergenic	hsa_circ_0000152	-1.5882	0.020887	
93543741	93558139	chr15	+	exonic	hsa_circ_0037002	1.6686	0.020893	CHD2
40477365	40477843	chr15	+	exonic	hsa_circ_0008946	-1.7444	0.020909	BUB1B
80040477	80049438	chr9	-	exonic	N/A	-1.6242	0.020930	GNA14
34789429	34789732	chr6	+	exonic	hsa_circ_0076054	-1.7299	0.020944	UHRF1BP1
94066434	94068129	chr6	-	exonic	hsa_circ_0077398	-1.6910	0.020972	EPHA7
111923074	111924628	chr12	-	exonic	hsa_circ_0002273	2.0655	0.021019	ATXN2
46319924	46322642	chr12	-	exonic	hsa_circ_0025967	1.7084	0.021054	SCAF11
70510478	70521018	chrX	+	exonic	hsa_circ_0090999	1.6410	0.021059	NONO
68308593	68309152	chr16	+	exonic	hsa_circ_0007669	1.5514	0.021061	SLC7A6
47531309	47581459	chr16	+	exonic	hsa_circ_0004791	2.0167	0.021077	PHKB
26587169	26606215	chr2	+	exonic	hsa_circ_0006111	-1.5691	0.021089	EPT1
62291306	62292503	chr11	-	intronic	hsa_circ_0000319	3.1119	0.021105	AHNAK

135010665	135012215	chr2	+	exonic	hsa_circ_0001068	1.9264	0.021117	MGAT5
35812582	35812776	chr20	+	exonic	hsa_circ_0005759	-1.5747	0.021128	RPN2
20682177	20688770	chr15	-	exonic	hsa_circ_0007563	1.5661	0.021209	HERC2P3
7262372	7327916	chr10	-	exonic	hsa_circ_0017628	1.8192	0.021263	SFMBT2
44436348	44436466	chr2	+	exonic	hsa_circ_0054406	1.6561	0.021291	PPM1B
33714053	33719586	chr20	-	exonic	N/A	-1.6961	0.021416	EDEM2
112096539	112098479	chr12	-	exonic	hsa_circ_0007776	1.5215	0.021465	BRAP
134381500	134382901	chr9	+	exonic	hsa_circ_0089237	1.8112	0.021470	POMT1
20251685	20280587	chr12	+	sense overlapping	N/A	-1.5598	0.021473	LOC100506393
78183551	78191447	chr1	-	exonic	hsa_circ_0000087	1.6251	0.021491	USP33
100467991	100471076	chr7	+	exonic	hsa_circ_0081545	-1.7747	0.021497	TRIP6
55621921	55634000	chr15	+	exonic	hsa_circ_0035381	-1.7867	0.021547	PIGB
158436980	158439255	chr7	-	exonic	hsa_circ_0083182	-1.5063	0.021553	NCAPG2
203382173	203383775	chr2	+	sense overlapping	N/A	-1.6229	0.021555	BMPR2
34953607	34956487	chr21	-	exonic	hsa_circ_0004339	-1.7990	0.021587	DONSON
159444736	159445499	chr2	+	intronic	N/A	-1.6958	0.021589	PKP4
70502751	70505255	chr16	+	exonic	N/A	-1.5929	0.021595	FUK
85331067	85331842	chr1	-	exonic	hsa_circ_0013058	-1.8111	0.021658	LPAR3
18650180	18650530	chr19	-	exonic	hsa_circ_0000915	1.6671	0.021688	FKBP8
116335174	116444414	chr10	-	exonic	hsa_circ_0020076	-2.0166	0.021733	ABLIM1
169947225	170001116	chr1	-	sense overlapping	N/A	1.7650	0.021775	KIFAP3
30734587	30746317	chr20	+	exonic	hsa_circ_0059760	-1.8378	0.021814	TM9SF4
77791974	77818086	chr13	-	exonic	hsa_circ_0004217	1.9163	0.021916	MYCBP2
70588843	70594578	chr8	-	exonic	hsa_circ_0084725	-1.8305	0.021921	SLCO5A1
22635490	22659753	chr12	-	exonic	N/A	1.7007	0.021941	C2CD5
15970016	15976318	chr1	+	exonic	hsa_circ_0010058	1.7843	0.021971	DDI2
6086622	6089676	chr7	-	exonic	hsa_circ_0079329	1.7493	0.021999	EIF2AK1
42363987	42375484	chr19	+	exonic	hsa_circ_0051241	-2.1583	0.022035	RPS19
95257644	95279591	chr13	+	sense overlapping	N/A	-1.7061	0.022064	GPR180
90432490	90459827	chr14	+	exonic	hsa_circ_0032895	-1.5206	0.022074	TDP1
141874410	141900868	chr8	-	exonic	hsa_circ_0002483	2.4623	0.022099	PTK2
47603639	47604020	chr11	+	exonic	hsa_circ_0022015	-1.7333	0.022103	NDUFS3
47512341	47522502	chr6	+	exonic	N/A	1.6007	0.022111	CD2AP
18624903	18633652	chr7	+	exonic	hsa_circ_0001680	-1.5370	0.022151	HDAC9
217536827	217541605	chr2	-	exonic	hsa_circ_0058196	-1.7204	0.022170	IGFBP5
22880557	22880710	chr10	-	exonic	hsa_circ_0017972	2.6878	0.022178	PIP4K2A
74371372	74372792	chr16	-	exonic	hsa_circ_0005647	1.6335	0.022194	LOC283922
67562936	67614669	chr18	-	exonic	N/A	1.6806	0.022204	CD226
78865519	78867665	chr17	+	exonic	hsa_circ_0000813	-1.5431	0.022219	RPTOR
91855033	91855996	chr7	-	exonic	N/A	1.9828	0.022260	KRIT1
97041039	97055351	chr9	+	exonic	hsa_circ_0087564	-1.8705	0.022330	ZNF169
222997225	223008557	chr1	+	exonic	hsa_circ_0000187	1.8007	0.022335	RP11-452F19.3
227771508	227779067	chr2	+	exonic	hsa_circ_0058497	1.8444	0.022352	RHBDD1
11348632	11362551	chr11	-	exonic	N/A	-1.7257	0.022355	GALNT18
118982215	119033695	chr9	+	exonic	hsa_circ_0088222	-1.7062	0.022408	PAPPA
34922765	34924317	chr19	+	exonic	hsa_circ_0050514	1.7905	0.022470	UBA2
29190547	29196560	chr22	-	exonic	hsa_circ_0062722	-1.9340	0.022518	XBP1

151060665	151079698	chr1	+	exonic	N/A	1.5913	0.022529	GABPB2
5214371	5220364	chr19	-	exonic	N/A	-1.5130	0.022530	PTPRS
40578033	40584633	chr21	-	exonic	N/A	2.2882	0.022593	BRWD1
111372281	111585853	chr7	-	exonic	hsa_circ_0081968	-1.8222	0.022688	DOCK4
65924470	65925603	chr17	+	exonic	hsa_circ_0004392	1.5035	0.022711	BPTF
95966670	95970601	chr5	+	intronic	N/A	-1.6277	0.022723	CAST
53189837	53191453	chr16	+	exonic	hsa_circ_0039353	1.9711	0.022779	CHD9
50824277	50829407	chr12	+	exonic	hsa_circ_0026232	1.6637	0.022791	LARP4
20932159	20953727	chr18	-	exonic	hsa_circ_0047145	-1.5853	0.022794	TMEM241
56419830	56423287	chr16	-	exonic	hsa_circ_0000704	-1.5518	0.022833	AMFR
73748522	73850873	chr11	-	exonic	hsa_circ_0023535	-1.6953	0.022840	C2CD3
33442618	33447218	chr2	+	exonic	hsa_circ_0053907	1.6685	0.022843	LTBP1
39721111	39729993	chr20	+	exonic	N/A	1.9700	0.022880	TOP1
15860731	15863309	chr1	+	exonic	hsa_circ_0000018	2.3419	0.022996	DNAJC16
101874252	101886778	chr2	+	exonic	hsa_circ_0055894	-1.5835	0.023011	CNOT11
46135263	46159290	chr10	-	exonic	N/A	1.9068	0.023062	ZFAND4
74982416	74999720	chr16	-	exonic	hsa_circ_0040534	1.6681	0.023066	WDR59
158994451	159010814	chr6	+	exonic	hsa_circ_0004587	1.7580	0.023078	TMEM181
96044222	96064458	chr8	+	exonic	hsa_circ_0007549	-1.5299	0.023132	NDUFAF6
134249418	134249772	chr8	-	exonic	hsa_circ_0085646	-1.7267	0.023145	AX746885
15758592	15761296	chr16	+	exonic	hsa_circ_0038054	-1.7712	0.023171	NDE1
101891136	101904985	chr9	+	exonic	hsa_circ_0087731	-1.6128	0.023171	TGFBR1
54249939	54256040	chr4	+	exonic	hsa_circ_0001411	2.5706	0.023245	FIP1L1
60733932	60735153	chr14	+	exonic	N/A	-1.8768	0.023254	PPM1A
80721840	80758872	chr17	+	exonic	hsa_circ_0046464	1.7978	0.023269	TBCD
113703700	113773970	chr9	-	exonic	hsa_circ_0004928	-1.5211	0.023270	LPAR1
113137647	113139646	chr9	-	exonic	N/A	-1.6907	0.023294	SVEP1
72302181	72302378	chr7	+	exonic	hsa_circ_0008708	2.5659	0.023357	SBDSP1
36211051	36212593	chr1	-	exonic	hsa_circ_0011588	-1.6041	0.023417	CLSPN
42914234	42938323	chr8	+	exonic	hsa_circ_0084172	1.5141	0.023462	FNTA
20635192	20657172	chr13	+	exonic	N/A	-1.6310	0.023469	ZMYM2
123489400	123489932	chr11	+	exonic	hsa_circ_0024731	-1.6432	0.023499	GRAMD1B
72890195	72891553	chr3	-	exonic	hsa_circ_0005299	1.5204	0.023539	SHQ1
32915309	32915477	chr3	+	exonic	N/A	-1.5003	0.023543	TRIM71
69304539	69318051	chr2	+	exonic	hsa_circ_0055033	-1.8315	0.023574	ANTXR1
14938844	14939516	chr10	+	exonic	hsa_circ_0006780	1.7923	0.023576	SUV39H2
65924470	65928135	chr17	+	exonic	hsa_circ_0045462	2.0241	0.023587	BPTF
34100754	34101636	chr6	-	exonic	hsa_circ_0076041	-1.7335	0.023661	GRM4
112096539	112097149	chr12	-	exonic	hsa_circ_0007885	2.0166	0.023753	BRAP
127294245	127294652	chr3	-	exonic	hsa_circ_0067159	-1.5040	0.023771	TPRA1
52977368	53003274	chr3	-	exonic	hsa_circ_0066151	-1.5871	0.023826	SFMBT1
62650379	62653080	chr11	+	exonic	hsa_circ_0022587	-1.6097	0.023873	SLC3A2
43655238	43657441	chr2	-	exonic	hsa_circ_0054309	-1.6222	0.023891	THADA
35487897	35488280	chr14	+	exonic	hsa_circ_0031647	1.5379	0.023906	SRP54
95686858	95735544	chr13	-	exonic	hsa_circ_0030569	-1.6039	0.023980	ABCC4
25151491	25162936	chr16	+	exonic	N/A	-2.2263	0.024046	LCMT1
3197902	3215945	chr3	-	exonic	hsa_circ_0003400	2.0379	0.024101	CRBN
61083896	61141784	chr13	+	exonic	N/A	1.6440	0.024104	TDRD3
5664833	5699374	chr4	-	exonic	hsa_circ_0069059	-1.6392	0.024237	EVC2
15374347	15468949	chr6	+	exonic	N/A	2.1128	0.024239	JARID2

134002512	134007576	chr5	+	exonic	hsa_circ_0003180	-1.8963	0.024244	SEC24A
53558502	53570574	chr14	-	exonic	hsa_circ_0031977	1.5450	0.024245	DDHD1
183361267	183390272	chr3	+	exonic	hsa_circ_0001368	2.2627	0.024253	KLHL24
96517441	96525822	chr2	-	exonic	N/A	1.9482	0.024275	ANKRD36C
72020039	72022817	chr12	-	exonic	hsa_circ_0008912	-1.8550	0.024344	ZFC3H1
29994794	30008684	chr7	-	exonic	N/A	-1.7225	0.024418	SCRN1
15644268	15679480	chr2	-	exonic	hsa_circ_0004665	2.5051	0.024516	NBAS
44530905	44531243	chr20	-	exonic	hsa_circ_0060558	-1.9777	0.024528	PLTP
231222519	231226412	chr2	+	exonic	hsa_circ_0008382	2.2967	0.024544	SP140L
48311248	48337216	chr16	+	exonic	hsa_circ_0008558	1.8712	0.024557	LONP2
77631183	77632364	chr9	-	exonic	hsa_circ_0004189	2.4547	0.024624	C9orf41
1004356	1004666	chr16	-	exonic	hsa_circ_0007701	-1.5280	0.024743	LMF1
74522734	74523039	chr9	-	intronic	N/A	-1.7979	0.024765	ABHD17B
15629017	15651474	chr2	-	exonic	hsa_circ_0000978	1.8066	0.024825	NBAS
105822015	105824354	chr10	-	exonic	hsa_circ_0019960	-1.7361	0.024844	COL17A1
43668295	43669265	chr15	+	exonic	hsa_circ_0034953	-1.7768	0.024913	TUBGCP4
73985878	73991029	chr4	-	exonic	hsa_circ_0002831	1.6311	0.024934	ANKRD17
62579578	62582288	chr17	-	exonic	hsa_circ_0045322	1.8921	0.024961	SMURF2
30209418	30210756	chr22	-	exonic	hsa_circ_0062794	-1.7082	0.024981	ASCC2
70766446	70781249	chr1	-	exonic	hsa_circ_0003566	1.9444	0.024999	ANKRD13C
12678107	12678441	chr18	-	exonic	hsa_circ_0046974	-1.5297	0.025048	CEP76
192880233	192880611	chr1	-	intergenic	N/A	-1.5667	0.025077	
34789429	34791125	chr6	+	exonic	hsa_circ_0076055	-1.6989	0.025091	UHRF1BP1
23180387	23191828	chr7	+	exonic	N/A	-1.5959	0.025113	KLHL7
44395274	44401035	chr18	-	exonic	hsa_circ_0047585	-1.8348	0.025157	PIAS2
80721840	80861354	chr17	+	exonic	hsa_circ_0046468	1.7372	0.025171	TBCD
44436353	44436466	chr2	+	intronic	N/A	1.5437	0.025248	PPM1B
52899281	52900725	chr5	+	exonic	hsa_circ_0005593	-1.5559	0.025254	NDUFS4
220179447	220180680	chr1	-	exonic	hsa_circ_0007739	1.5604	0.025275	EPRS
48818462	48819092	chr17	+	exonic	hsa_circ_0044623	1.6179	0.025315	LUC7L3
9758948	9786125	chr12	+	sense overlapping	N/A	-1.6755	0.025341	LOC374443
12214763	12215812	chr10	-	exonic	N/A	-1.6525	0.025351	NUDT5
131271154	131271376	chr9	+	exonic	hsa_circ_0088807	-1.6833	0.025377	GLE1
76576097	76588078	chr15	-	exonic	hsa_circ_0002226	1.5520	0.025462	ETFA
34974539	34985912	chr21	-	exonic	N/A	-1.5792	0.025495	CRYZL1
34101174	34111003	chr11	+	exonic	hsa_circ_0000286	1.6883	0.025530	CAPRIN1
9208654	9239554	chr18	+	intronic	hsa_circ_0005715	1.5224	0.025559	RP11-21J18.1
46189392	46196548	chr17	+	exonic	hsa_circ_0044353	-1.5012	0.025603	SNX11
49713126	49720934	chr3	+	exonic	hsa_circ_0065673	-1.5946	0.025610	APEH
24663284	24690331	chr7	+	exonic	hsa_circ_0001685	2.0186	0.025641	MPP6
52028142	52029002	chr3	-	intronic	hsa_circ_0092277	-1.8618	0.025653	RPL29
131060182	131130662	chr7	+	exonic	hsa_circ_0003047	2.5271	0.025668	MKLN1
139978870	140060651	chr4	-	exonic	hsa_circ_0070982	-1.5593	0.025694	ELF2
32677771	32678011	chr20	-	intronic	hsa_circ_0092291	-1.6537	0.025734	EIF2S2
75355797	75356052	chr14	+	exonic	hsa_circ_0032627	1.7133	0.025740	DLST
82923943	82924546	chr6	-	exonic	N/A	1.5211	0.025765	IBTK
87451065	87452507	chr16	-	exonic	hsa_circ_0007361	-1.6267	0.025775	ZCCHC14
37115061	37122590	chr5	-	exonic	N/A	-1.5407	0.025778	C5orf42
77711343	77717784	chr5	+	exonic	hsa_circ_0002186	-1.5205	0.025847	SCAMP1
7318853	7327916	chr10	-	exonic	hsa_circ_0000211	1.6336	0.025872	SFMBT2

56334222	56334387	chr12	+	intronic	N/A	-2.0645	0.025878	DGKA
102810157	102810726	chr14	-	sense overlapping	N/A	-1.6728	0.025907	CINP
54734330	54737100	chr12	+	exonic	N/A	-1.6678	0.025937	COPZ1
61468694	61484485	chr2	-	exonic	N/A	1.8271	0.025945	USP34
44106301	44119121	chr21	+	exonic	hsa_circ_0061828	-1.8388	0.025964	PDE9A
45041062	45042405	chr17	+	intronic	hsa_circ_0006682	-1.7228	0.025981	GOSR2
3712576	3716836	chr11	-	exonic	hsa_circ_0006430	-1.7868	0.025988	NUP98
18722796	18724915	chr20	+	sense overlapping	N/A	-1.5311	0.025988	DTD1
195800800	195802231	chr3	-	exonic	hsa_circ_0068629	1.6400	0.026025	TFRC
45516745	45553909	chr1	-	exonic	N/A	-1.7993	0.026101	ZSWIM5
57466030	57467869	chr11	+	sense overlapping	hsa_circ_0004997	-1.5481	0.026128	ZDHHC5
120460114	120528452	chr4	-	exonic	hsa_circ_0070805	1.5899	0.026128	PDE5A
4032518	4032815	chr6	+	sense overlapping	hsa_circ_0001572	-1.7462	0.026199	PRPF4B
183831943	183848110	chr2	-	exonic	N/A	-1.6249	0.026255	NCKAP1
241402763	241407495	chr2	+	exonic	hsa_circ_0058934	-1.8869	0.026274	GPC1
40161688	40179999	chr20	-	exonic	hsa_circ_0001159	2.4417	0.026279	CHD6
53685473	53687313	chr12	+	sense overlapping	N/A	-1.8829	0.026304	ESPL1
50956259	51001129	chr1	-	exonic	hsa_circ_0008981	1.8961	0.026343	FAF1
16386664	16386787	chr21	-	exonic	hsa_circ_0061274	1.6360	0.026430	NRIP1
76069566	76069928	chr7	+	exonic	hsa_circ_0080802	-1.7674	0.026445	ZP3
204354306	204356042	chr2	-	exonic	hsa_circ_0004564	-1.6473	0.026446	RAPH1
138773478	138774924	chr9	-	exonic	hsa_circ_0001900	1.7119	0.026455	CAMSAP1
44371545	44376369	chr6	+	exonic	hsa_circ_0004346	-1.7435	0.026467	CDC5L
65349233	65350779	chr5	+	exonic	hsa_circ_0072732	2.5468	0.026523	ERBB2IP
158994451	159046786	chr6	+	exonic	N/A	2.1383	0.026525	TMEM181
160015134	160016236	chr6	-	sense overlapping	N/A	-1.7459	0.026543	XLOC_005900
34450934	34459751	chr20	+	exonic	hsa_circ_0060158	1.9414	0.026575	PHF20
23395341	23396869	chr14	-	exonic	hsa_circ_0002928	-1.6359	0.026598	PRMT5
155063089	155099179	chr6	+	exonic	hsa_circ_0078357	-1.8908	0.026611	SCAF8
153734045	153737539	chr1	+	exonic	hsa_circ_0014306	-1.7164	0.026631	INTS3
10460449	10480201	chr1	+	exonic	hsa_circ_0009725	-1.8176	0.026635	PGD
159004985	159010814	chr6	+	exonic	hsa_circ_0001663	1.6182	0.026645	TMEM181
161293403	161326630	chr1	+	exonic	hsa_circ_0015004	-1.6165	0.026671	SDHC
7160603	7170346	chr2	+	exonic	hsa_circ_0000970	-1.5185	0.026686	RNF144A
120776652	120799686	chr2	+	exonic	hsa_circ_0056264	-1.5016	0.026687	EPB41L5
143382083	143486320	chr6	+	exonic	N/A	-1.6652	0.026721	AIG1
40590077	40590586	chr21	-	exonic	hsa_circ_0061721	1.8694	0.026735	BRWD1
90670648	90670832	chr6	+	antisense	hsa_circ_0001623	-1.5169	0.026806	BACH2
40434005	40434149	chr1	+	exonic	hsa_circ_0011871	-1.7201	0.026909	MFSD2A
172782046	172809519	chr2	+	exonic	hsa_circ_0008032	1.5979	0.026939	HAT1
34832618	34832848	chr20	+	exonic	hsa_circ_0060176	-1.7834	0.026942	AAR2
48191166	48192435	chr12	-	exonic	N/A	-1.5686	0.026958	HDAC7
145594038	145595220	chr1	-	exonic	hsa_circ_0003693	2.0544	0.027100	POLR3C
47127684	47139571	chr3	-	exonic	N/A	2.1306	0.027106	SETD2
77830227	77835260	chr11	-	exonic	hsa_circ_0023787	-1.7030	0.027110	ALG8

74239461	74251505	chr7	-	exonic	hsa_circ_0080628	1.9957	0.027146	GTF2IRD2
71867510	71884913	chr14	+	exonic	hsa_circ_0002722	-1.6239	0.027188	SIPA1L1
41826780	41837620	chr13	-	exonic	hsa_circ_0030062	-1.6136	0.027234	MTRF1
32973011	32973508	chr7	-	exonic	N/A	-1.5625	0.027249	RP9P
85180577	85184493	chr15	+	sense overlapping	hsa_circ_0006899	-1.5856	0.027249	SCAND2P
24679553	24681035	chr14	-	exonic	hsa_circ_0031357	2.3124	0.027252	CHMP4A
6021853	6029319	chr1	-	exonic	hsa_circ_0009135	-1.5592	0.027254	NPHP4
243776972	244006584	chr1	-	exonic	hsa_circ_0017252	2.8223	0.027311	AKT3
35814866	35815138	chr1	+	intronic	N/A	-1.6490	0.027336	ZMYM4
111860382	111860606	chr10	+	exonic	hsa_circ_0020005	1.6735	0.027336	ADD3
99672757	99673253	chr7	-	exonic	hsa_circ_0081386	-1.6982	0.027361	ZNF3
50592985	50596330	chr15	-	exonic	hsa_circ_0007983	-1.8425	0.027423	GABPB1
65288537	65310553	chr5	+	exonic	hsa_circ_0005649	1.8782	0.027478	ERBB2IP
31175028	31204064	chr14	+	exonic	N/A	1.7482	0.027500	SCFD1
126370175	126384781	chr10	-	exonic	hsa_circ_0003570	1.7721	0.027509	FAM53B
202400743	202446940	chr2	-	exonic	N/A	-1.7351	0.027534	ALS2CR11
50210774	50212096	chr19	+	exonic	hsa_circ_0051959	-1.5509	0.027638	CPT1C
84112887	84132553	chr14	+	intergenic	N/A	-1.8216	0.027678	
32678875	32824967	chr2	+	exonic	hsa_circ_0053651	1.5528	0.027683	BIRC6
48817428	48842572	chr8	-	exonic	hsa_circ_0084429	-1.6279	0.027691	PRKDC
100296305	100297301	chrX	-	exonic	hsa_circ_0001937	1.7201	0.027692	TRMT2B
48552608	48553595	chr4	-	exonic	hsa_circ_0069681	-1.6237	0.027738	FRYL
35436177	35438558	chr6	+	exonic	hsa_circ_0076138	-1.6964	0.027840	RPL10A
117150623	117150975	chr11	+	exonic	hsa_circ_0002743	1.5876	0.027855	RNF214
80721840	80739597	chr17	+	exonic	hsa_circ_0000818	1.5981	0.027887	TBCD
99887644	99913012	chr6	-	exonic	hsa_circ_0077425	-1.6777	0.027908	USP45
40502897	40503739	chr3	+	sense overlapping	hsa_circ_0002102	1.7665	0.027949	RPL14
77154960	77160881	chrX	+	exonic	hsa_circ_0091114	-1.5220	0.027956	COX7B
94645539	94649052	chr9	-	exonic	N/A	-2.0987	0.027980	ROR2
35622699	35644989	chr13	+	exonic	hsa_circ_0029984	-1.6827	0.028024	NBEA
430683	440932	chr19	-	exonic	N/A	-1.8542	0.028068	SHC2
122701034	122709295	chr12	-	exonic	hsa_circ_0029053	-1.6150	0.028100	DIABLO
73100965	73101425	chr7	+	exonic	hsa_circ_0005588	2.0037	0.028101	WBSCR22
96692646	96694138	chr12	-	exonic	hsa_circ_0007881	2.0039	0.028131	CDK17
59739905	59751839	chr18	-	exonic	hsa_circ_0047841	-1.5586	0.028173	PIGN
176524542	176526377	chr1	+	exonic	N/A	-1.6869	0.028174	PAPPA2
99990262	100016690	chr6	-	exonic	hsa_circ_0077434	-1.9508	0.028183	CCNC
145215872	145218751	chr8	+	exonic	hsa_circ_0085976	-1.5323	0.028184	MROH1
33735522	33735618	chr21	-	sense overlapping	hsa_circ_0001182	-1.6470	0.028187	URB1
74948073	74948409	chr15	-	exonic	hsa_circ_0004401	-1.5400	0.028217	EDC3
41994031	42017061	chr22	-	exonic	hsa_circ_0063583	-1.6745	0.028231	DESI1
28956385	28956758	chr8	-	sense overlapping	N/A	-1.7676	0.028239	KIF13B
236706402	236708166	chr2	+	exonic	hsa_circ_0058805	-1.6290	0.028269	AGAP1
183368083	183369064	chr3	+	exonic	hsa_circ_0001369	2.3313	0.028313	KLHL24
891302	892653	chr1	-	exonic	hsa_circ_0009205	-1.7764	0.028313	NOC2L
138741982	138774924	chr9	-	exonic	hsa_circ_0004338	1.6981	0.028357	CAMSAP1
39757276	39776553	chr4	+	exonic	hsa_circ_0003381	1.7922	0.028417	UBE2K

31448653	31451747	chr5	-	exonic	hsa_circ_0004599	-1.5630	0.028427	DROSHA
31535331	31542179	chr14	+	exonic	hsa_circ_0031449	-1.7182	0.028437	AP4S1
50054354	50057699	chr13	+	exonic	hsa_circ_0000483	1.5346	0.028464	SETDB2
6150755	6155154	chr7	+	exonic	hsa_circ_0007823	-1.5396	0.028538	USP42
32198899	32199141	chr20	+	exonic	hsa_circ_0059859	-2.0562	0.028551	CBFA2T2
89807211	89815175	chr16	-	exonic	hsa_circ_0040994	-1.6595	0.028570	FANCA
216177220	216200847	chr2	+	exonic	hsa_circ_0058060	-1.8336	0.028574	ATIC
50850356	50850568	chr12	+	intronic	N/A	-1.5227	0.028640	LARP4
36584932	36590519	chr19	+	exonic	hsa_circ_0050715	-1.6729	0.028661	WDR62
128065409	128066156	chr2	-	intronic	N/A	-1.5987	0.028662	MAP3K2
21076215	21076375	chr1	-	exonic	hsa_circ_0010440	2.0129	0.028668	HP1BP3
36415395	36424928	chr11	+	intronic	hsa_circ_0005044	2.4417	0.028668	PRR5L
231940224	231951895	chr2	+	exonic	hsa_circ_0001110	1.7105	0.028695	PSMD1
64377407	64378670	chr7	+	exonic	N/A	-2.0717	0.028711	ZNF273
78915434	78919312	chr5	+	exonic	hsa_circ_0001504	2.1828	0.028735	PAPD4
156290629	156304709	chr1	-	exonic	hsa_circ_0014717	2.7643	0.028800	CCT3
73897062	73898235	chr17	-	exonic	hsa_circ_0045737	-1.7814	0.028912	MRPL38
50190591	50192487	chr14	+	exonic	hsa_circ_0007809	1.5368	0.028918	KLHDC1
47762155	47787483	chr3	-	exonic	hsa_circ_0065301	1.6989	0.028928	SMARCC1
79752559	79770535	chr6	-	exonic	hsa_circ_0001615	1.6692	0.028949	PHIP
133894452	133901915	chr3	-	exonic	hsa_circ_0067434	1.8486	0.028950	RYK
38493707	38527396	chr5	-	exonic	hsa_circ_0072303	-1.6651	0.028981	LIFR
39679868	39681251	chr17	-	exonic	hsa_circ_0043598	-1.7993	0.029042	KRT19
85961337	85968638	chr11	+	exonic	hsa_circ_0023948	-1.7121	0.029048	EED
155874101	155874595	chr1	-	exonic	hsa_circ_0006575	1.6425	0.029075	RIT1
155615715	155640091	chr3	+	exonic	hsa_circ_0001352	1.5075	0.029148	GMPS
45725077	45751207	chr12	+	exonic	hsa_circ_0003433	-1.7912	0.029149	ANO6
195776154	195803993	chr3	-	exonic	hsa_circ_0068601	1.6887	0.029169	TFRC
41461588	41463198	chr1	+	exonic	N/A	-1.5129	0.029172	CTPS1
113143415	113153625	chr1	-	exonic	hsa_circ_0000108	1.7085	0.029184	ST7L
77394754	77396204	chr11	-	exonic	hsa_circ_0023704	1.9964	0.029194	RSF1
33400458	33406211	chr3	+	exonic	N/A	-1.6001	0.029222	FBXL2
2985909	3000467	chr11	-	exonic	N/A	1.6881	0.029250	NAP1L4
61013821	61041513	chr13	+	exonic	hsa_circ_0003441	2.5134	0.029286	TDRD3
64863339	64868113	chr5	+	exonic	hsa_circ_0072697	-1.5329	0.029293	PPWD1
131013395	131044965	chr5	-	exonic	hsa_circ_0001524	1.5391	0.029306	FNIP1
51860052	51866625	chr1	-	exonic	hsa_circ_0012421	1.9675	0.029324	EPS15
74738317	74742016	chr15	-	exonic	hsa_circ_0036271	-1.5191	0.029341	UBL7
65043362	65049992	chr11	+	exonic	N/A	-1.5640	0.029346	POLA2
42235891	42237586	chr6	-	exonic	hsa_circ_0006232	-1.7568	0.029348	TRERF1
20902997	20903293	chr16	-	intronic	N/A	-1.8885	0.029399	DCUN1D3
138837130	138837392	chr5	-	exonic	hsa_circ_0074217	-1.7014	0.029424	ECSCR
19746674	19775434	chr16	+	exonic	hsa_circ_0000660	-1.6128	0.029462	IQCK
53837174	53858636	chr12	+	exonic	hsa_circ_0026634	-1.5823	0.029479	PCBP2
34922765	34936026	chr19	+	exonic	hsa_circ_0050516	1.6216	0.029493	UBA2
53459000	53459207	chr10	+	intronic	hsa_circ_0000238	-1.5758	0.029540	PRKG1
4015902	4027345	chr17	-	exonic	hsa_circ_0041517	-1.6668	0.029561	ZZEF1
151775682	151779258	chr6	+	intronic	N/A	-1.6705	0.029584	C6orf211
153227786	153228670	chrX	-	intronic	N/A	-1.5603	0.029589	HCFC1
78177431	78178966	chr1	-	exonic	hsa_circ_0012989	1.5366	0.029611	USP33

91211135	91252672	chr14	-	exonic	N/A	-1.5628	0.029628	TTC7B
88211723	88221044	chr10	-	exonic	hsa_circ_0019005	1.6852	0.029667	WAPAL
128938512	128950008	chr4	+	exonic	N/A	1.5680	0.029671	C4orf29
65307876	65310553	chr5	+	exonic	hsa_circ_0001494	2.1701	0.029694	ERBB2IP
98084309	98084588	chr13	-	sense overlapping	N/A	-1.5676	0.029715	AY726569
74239461	74248066	chr7	-	exonic	hsa_circ_0005811	2.1565	0.029719	GTF2IRD2
108137897	108138069	chr11	+	exonic	hsa_circ_0007694	2.1609	0.029722	ATM
54013510	54014377	chrX	-	exonic	hsa_circ_0009069	2.1864	0.029756	PHF8
243858892	244006584	chr1	-	exonic	hsa_circ_0004649	2.7411	0.029778	AKT3
34921480	34929671	chr19	+	exonic	hsa_circ_0006987	1.5395	0.029811	UBA2
155095122	155131342	chr6	+	exonic	hsa_circ_0078367	2.0200	0.029844	SCAF8
149833290	149836586	chr6	-	exonic	hsa_circ_0009074	2.4037	0.029845	PPIL4
129752887	129773423	chr4	+	exonic	hsa_circ_0006563	1.5552	0.029901	JADE1
50821544	50824353	chr12	+	exonic	hsa_circ_0003664	2.4658	0.029911	LARP4
25315871	25326656	chr2	+	exonic	hsa_circ_0053015	-1.5688	0.029975	EFR3B
37734480	37744829	chr21	+	exonic	N/A	1.5913	0.030044	MORC3
50342357	50346517	chr20	-	exonic	hsa_circ_0008253	-1.5162	0.030051	ATP9A
2521314	2521523	chr1	-	antisense	hsa_circ_0000010	-1.8810	0.030073	FAM213B
662145	671451	chr18	+	exonic	hsa_circ_0004163	-1.7358	0.030097	TYMS
109466421	109468140	chr6	+	exonic	hsa_circ_0004131	2.1070	0.030194	CEP57L1
81503338	81545875	chr12	+	exonic	N/A	-1.7575	0.030211	ACSS3
21490762	21498937	chr16	-	exonic	hsa_circ_0038436	1.7331	0.030224	LOC100271836
46783379	46798673	chr18	-	exonic	hsa_circ_0047641	-1.6630	0.030277	DYM
43527914	43541338	chr6	-	exonic	N/A	-1.9635	0.030291	XPO5
58275620	58292135	chr17	-	exonic	hsa_circ_0044927	-1.6815	0.030330	USP32
70178323	70180131	chr16	+	exonic	hsa_circ_0040148	-1.6565	0.030365	PDPR
28811231	28819771	chr17	+	exonic	hsa_circ_0007460	1.9381	0.030397	GOSR1
170077486	170079217	chr3	+	exonic	hsa_circ_0067938	1.7090	0.030407	SKIL
67799536	67802707	chr13	-	exonic	hsa_circ_0000492	-1.8190	0.030431	PCDH9
109247226	109254142	chr8	-	exonic	N/A	1.6191	0.030436	EIF3E
8832793	8860897	chr11	-	exonic	hsa_circ_0021110	-1.5416	0.030442	ST5
117221450	117278834	chr10	+	exonic	hsa_circ_0020097	-1.7943	0.030447	ATRNL1
108175911	108179689	chr13	-	intronic	hsa_circ_0003145	-2.0848	0.030549	FAM155A
43748089	43749416	chr15	-	exonic	hsa_circ_0006327	-1.6344	0.030554	TP53BP1
2184780	2343345	chrX	-	exonic	hsa_circ_0003473	-1.5151	0.030569	DHRSX
99802639	99812219	chr2	+	exonic	hsa_circ_0001051	2.2538	0.030607	MRPL30
143586360	143586631	chr5	+	sense overlapping	N/A	-1.6971	0.030678	KCTD16
82984589	82989872	chr11	-	exonic	N/A	2.2072	0.030708	CCDC90B
1099947	1101761	chr6	-	sense overlapping	N/A	-1.7418	0.030730	LOC285768
125396193	125396954	chr12	-	exonic	hsa_circ_0029352	-1.5581	0.030806	UBC
114153316	114158328	chr4	+	exonic	hsa_circ_0070703	-1.6657	0.030851	ANK2
20211604	20213263	chrX	-	exonic	N/A	1.6387	0.030884	RPS6KA3
53017589	53018231	chr18	-	exonic	hsa_circ_0047733	-2.0633	0.030995	TCF4
185153374	185200840	chr1	+	exonic	hsa_circ_0015677	3.3514	0.030997	SWT1
100169614	100170072	chrX	-	sense overlapping	N/A	-1.7581	0.031022	XKRX
9020437	9021799	chr12	+	exonic	hsa_circ_0025388	-1.9303	0.031066	A2ML1
119222378	119232566	chr3	+	exonic	hsa_circ_0066875	1.7782	0.031087	TIMMDC1

151116656	151119791	chr6	-	antisense	N/A	-1.7960	0.031095	PLEKHG1
118453893	118455359	chr11	+	exonic	hsa_circ_0007383	1.7955	0.031125	ARCN1
47285639	47285806	chr19	-	exonic	hsa_circ_0051637	-1.5317	0.031177	SLC1A5
88898935	88939642	chr12	-	exonic	hsa_circ_0002375	-1.5279	0.031238	KITLG
138897036	138908962	chrX	-	exonic	hsa_circ_0002372	1.7484	0.031245	ATP11C
42796230	42797910	chr6	+	exonic	hsa_circ_0076412	-1.6546	0.031272	GLTSCR1L
179041465	179041560	chr5	-	sense overlapping	hsa_circ_0001562	-1.5269	0.031374	HNRNPH1
51208062	51208222	chr12	+	exonic	hsa_circ_0026286	1.5997	0.031393	ATF1
150258841	150259405	chr1	+	sense overlapping	hsa_circ_0008958	-1.6064	0.031468	CIART
97986529	98009889	chr13	+	exonic	hsa_circ_0030643	-1.5048	0.031479	MBNL2
61712902	61717911	chr2	-	exonic	hsa_circ_0005050	1.5583	0.031503	XPO1
110863745	110866331	chr3	+	exonic	hsa_circ_0007315	-1.7917	0.031596	PVRL3
95110953	95111328	chr10	-	exonic	N/A	-1.7334	0.031631	MYOF
30267304	30274704	chr17	+	exonic	hsa_circ_0042962	2.2393	0.031672	SUZ12
151999510	152037907	chrX	+	exonic	hsa_circ_0091726	-1.5341	0.031712	NSDHL
51454240	51456330	chr3	-	exonic	hsa_circ_0065898	-1.5028	0.031750	VPRBP
3252272	3256234	chr18	+	exonic	hsa_circ_0046753	-1.7912	0.031765	MYL12A
119952789	119954260	chr5	+	exonic	N/A	-1.5893	0.031782	PRR16
69747506	69747884	chr15	+	exonic	hsa_circ_0036090	-1.6044	0.031788	RPLP1
159026298	159029782	chr6	+	exonic	hsa_circ_0078510	2.1073	0.031806	TMEM181
17661883	17665616	chr6	-	exonic	hsa_circ_0075728	1.5687	0.031824	NUP153
103432671	103436193	chr10	-	exonic	hsa_circ_0000255	2.1489	0.031859	FBXW4
108483817	108510471	chr9	+	exonic	N/A	-1.6511	0.031863	TMEM38B
18650180	18654383	chr19	-	exonic	hsa_circ_0050125	1.5831	0.031875	FKBP8
128768965	129202693	chr10	+	exonic	hsa_circ_0020407	-1.6665	0.031877	DOCK1
11778020	11830089	chr16	-	exonic	hsa_circ_0037866	-1.8650	0.031957	TXNDC11
151682934	151729550	chr4	-	exonic	hsa_circ_0071185	2.0226	0.031962	LRBA
24075537	24075871	chrX	+	exonic	N/A	1.5638	0.031978	EIF2S3
68155889	68157024	chr16	+	exonic	hsa_circ_0005615	2.7460	0.031992	NFATC3
17747023	17747548	chr10	+	intronic	N/A	-1.6813	0.032003	STAM
70033516	70035321	chr2	+	sense overlapping	N/A	-1.5730	0.032010	ANXA4
97177439	97200810	chr9	+	exonic	hsa_circ_0003092	-1.6974	0.032039	HIATL1
107429298	107451870	chr3	+	exonic	hsa_circ_0001325	1.6848	0.032055	BBX
115249247	115337531	chr9	+	exonic	hsa_circ_0068102	-2.0346	0.032059	KIAA1958
49372452	49373029	chr3	-	intronic	hsa_circ_0001301	2.0855	0.032062	USP4
13684435	13686502	chrX	+	exonic	hsa_circ_0002871	1.6249	0.032082	TCEANC
1918887	1919441	chr19	+	intronic	N/A	-1.5076	0.032082	SCAMP4
62171487	62175109	chr1	-	sense overlapping	hsa_circ_0000077	-1.9294	0.032086	TM2D1
65471271	65472542	chr15	-	exonic	hsa_circ_0004374	1.9613	0.032216	CLPX
74649111	74659608	chr18	+	exonic	hsa_circ_0047997	-1.6376	0.032301	ZNF236
45447802	45473343	chr17	+	exonic	N/A	1.8839	0.032311	EFCAB13
48216600	48246391	chr19	+	exonic	hsa_circ_0051695	-1.8732	0.032360	EHD2
85617884	85724620	chr4	-	exonic	hsa_circ_0070294	-1.6573	0.032373	WDFY3
138189034	138223548	chr7	+	exonic	hsa_circ_0082574	1.7164	0.032424	TRIM24
77327195	77340944	chr11	-	exonic	hsa_circ_0023690	2.1782	0.032438	CLNS1A
60613530	60642498	chr17	+	exonic	hsa_circ_0045128	2.0868	0.032482	TLK2
47777523	47787483	chr3	-	exonic	hsa_circ_0065307	1.6308	0.032506	SMARCC1

74570202	74632392	chr11	-	exonic	hsa_circ_0023598	-1.6735	0.032554	XRRA1
137320945	137346838	chr5	-	exonic	hsa_circ_0074079	1.7639	0.032555	FAM13B
132203484	132207864	chr6	+	exonic	N/A	-1.6424	0.032598	ENPP1
29313942	29314417	chr1	+	exonic	hsa_circ_0011167	2.7541	0.032628	EPB41
98831367	98864830	chr8	+	exonic	hsa_circ_0085018	-1.8042	0.032645	LAPTM4B
49459454	49464519	chr19	+	exonic	hsa_circ_0051800	-1.6108	0.032692	BAX
33986757	34017187	chr9	-	exonic	hsa_circ_0086735	2.1388	0.032728	UBAP2
170906490	170912424	chr3	-	exonic	hsa_circ_0002387	1.8584	0.032742	TNIK
59152280	59161925	chr17	+	exonic	hsa_circ_0045006	-1.6232	0.032848	BCAS3
76518189	76588078	chr15	-	exonic	hsa_circ_0036391	1.5950	0.032852	ETFA
103918254	103923549	chr14	+	exonic	hsa_circ_0033475	1.6580	0.032856	MARK3
10459084	10480201	chr1	+	exonic	hsa_circ_0009723	-2.1081	0.032888	PGD
57643406	57658165	chr3	-	exonic	N/A	1.5879	0.032893	DENND6A
19462590	19463125	chr22	-	exonic	hsa_circ_0062261	-1.7496	0.032902	UFD1L
30745214	30753229	chr16	+	exonic	hsa_circ_0039109	1.6815	0.032915	SRCAP
48630533	48631277	chr19	-	exonic	hsa_circ_0051718	-1.7468	0.032945	LIG1
37424841	37429051	chr9	+	exonic	hsa_circ_0087060	-1.5121	0.032948	GRHPR
27900161	27900791	chr2	+	exonic	hsa_circ_0006023	1.6348	0.032966	SLC4A1AP
70650274	70674110	chr8	-	exonic	hsa_circ_0084727	-1.6001	0.032974	SLCO5A1
58118534	58149057	chr3	+	exonic	hsa_circ_0066361	1.8437	0.033031	FLNB
18648410	18649243	chr19	-	exonic	hsa_circ_0050119	1.6262	0.033103	FKBP8
104284516	104284815	chr10	+	intronic	N/A	-1.6607	0.033111	SUFU
26974589	26975761	chr13	+	exonic	hsa_circ_0003489	1.9149	0.033120	CDK8
44169153	44169936	chr2	-	intronic	N/A	-1.7710	0.033122	LRPPRC
122369651	122372262	chr12	+	exonic	N/A	-1.7549	0.033122	WDR66
68300495	68300624	chr16	+	exonic	hsa_circ_0039943	1.7538	0.033137	SLC7A6
14693760	14698083	chr16	-	exonic	hsa_circ_0037972	1.8075	0.033162	PARN
131796425	131801156	chr2	+	exonic	hsa_circ_0056473	-1.6074	0.033182	ARHGEF4
21288178	21288275	chr22	-	antisense	hsa_circ_0001207	-1.5178	0.033247	CRKL
182346324	182350719	chr2	+	exonic	N/A	1.6937	0.033277	ITGA4
70758070	70781249	chr1	-	exonic	hsa_circ_0000085	1.9948	0.033336	ANKRD13C
46067916	46098727	chr22	+	exonic	hsa_circ_0063763	2.2988	0.033360	ATXN10
6456257	6456552	chr7	-	exonic	hsa_circ_0002067	-1.6662	0.033393	DAGLB
12531282	12538053	chr3	+	exonic	hsa_circ_0064340	-1.5556	0.033397	TSEN2
32715986	32717410	chrX	-	exonic	hsa_circ_0090181	-1.6197	0.033401	DMD
8386383	8387260	chr19	+	exonic	hsa_circ_0049055	-1.5040	0.033412	RPS28
134353337	134353833	chr9	+	intronic	N/A	-1.5100	0.033503	PRRC2B
459786	461490	chr12	-	exonic	hsa_circ_0006599	1.6914	0.033510	KDM5A
16089867	16097953	chr17	-	exonic	hsa_circ_0005471	-1.5046	0.033571	NCOR1
36865777	36868169	chr17	+	sense overlapping	hsa_circ_0000760	2.2332	0.033580	MLLT6
30330343	30389603	chr20	+	exonic	hsa_circ_0059711	-1.6496	0.033599	TPX2
31315699	31315949	chr20	-	exonic	hsa_circ_0059797	-1.7236	0.033602	COMMD7
45241245	45244412	chr1	+	exonic	hsa_circ_0012172	-1.8809	0.033614	RPS8
53848509	53865591	chr12	+	exonic	hsa_circ_0026640	-1.7135	0.033641	PCBP2
6679862	6680397	chr1	+	exonic	hsa_circ_0009535	-1.5960	0.033677	PHF13
74484998	74489999	chr9	-	exonic	hsa_circ_0001862	-1.5907	0.033682	ABHD17B
22041861	22048257	chr1	-	exonic	hsa_circ_0000028	2.0983	0.033684	USP48
79229219	79258971	chr4	+	exonic	hsa_circ_0070133	-1.5929	0.033712	FRAS1
46622935	46624417	chr12	-	sense overlapping	hsa_circ_0000395	-2.0935	0.033767	SLC38A1

52478187	52553491	chr16	-	exonic	N/A	-1.6976	0.033760	TOX3
114680116	114682502	chr1	-	exonic	hsa_circ_0013626	-1.5343	0.033823	SYT6
67662272	67663436	chr16	+	exonic	hsa_circ_0008272	1.5393	0.033860	CTCF
155547476	155560408	chr3	-	exonic	hsa_circ_0067772	1.9196	0.033877	SLC33A1
5964676	5993389	chr1	-	exonic	hsa_circ_0009449	-1.8135	0.033935	NPHP4
19867164	19983103	chr20	+	exonic	hsa_circ_0059550	-1.5567	0.033936	RIN2
27426100	27427799	chr2	-	exonic	hsa_circ_0053162	-1.5118	0.034006	SLC5A6
18877942	18882804	chr16	-	exonic	hsa_circ_0038288	2.8615	0.034055	SMG1
26848538	26869175	chr12	-	exonic	N/A	1.5283	0.034075	ITPR2
94006145	94032104	chr4	+	exonic	hsa_circ_0070446	-1.5968	0.034087	GRID2
76152218	76175765	chr15	+	exonic	hsa_circ_0036374	1.6743	0.034151	UBE2Q2
197541778	197547301	chr3	+	exonic	hsa_circ_0002266	1.8197	0.034163	LRCH3
19070216	19076702	chr9	-	exonic	hsa_circ_0086444	-1.7911	0.034191	HAUS6
147227077	147230127	chr4	-	sense overlapping	N/A	-1.7625	0.034204	SLC10A7
37428784	37431886	chr2	+	exonic	hsa_circ_0054104	1.5593	0.034206	CEBPZOS
42509874	42510962	chr19	-	exonic	hsa_circ_0051260	-1.5931	0.034230	GRIK5
20107645	20109225	chr17	+	exonic	hsa_circ_0000745	3.6566	0.034261	SPECC1
2489353	2493801	chr16	+	exonic	hsa_circ_0004603	-1.5815	0.034262	CCNF
131071878	131073731	chr7	+	exonic	hsa_circ_0002117	2.1014	0.034286	MKLN1
135878388	135881816	chr2	+	exonic	hsa_circ_0056548	-1.6714	0.034384	RAB3GAP1
104678572	104681470	chr7	+	exonic	hsa_circ_0007395	1.5933	0.034426	KMT2E
100623093	100625394	chr2	-	exonic	hsa_circ_0001055	1.6243	0.034427	AFF3
20113099	20113439	chr22	+	intronic	hsa_circ_0092314	-1.7176	0.034429	RANBP1
77618762	77633517	chr11	-	exonic	N/A	-1.5166	0.034441	INTS4
128995614	128996148	chr4	+	exonic	hsa_circ_0070933	2.1137	0.034508	LARP1B
121220457	121222396	chr12	-	exonic	hsa_circ_0003472	-1.5198	0.034513	SPPL3
17669523	17669777	chr6	-	exonic	hsa_circ_0075736	-1.7435	0.034553	NUP153
46515157	46529920	chr11	-	exonic	hsa_circ_0007001	-1.6162	0.034630	AMBRA1
68467096	68470236	chr5	+	exonic	hsa_circ_0072758	-1.6703	0.034653	CCNB1
61391748	61396451	chr17	+	exonic	hsa_circ_0045190	-1.6797	0.034682	TANC2
72361889	72362548	chr2	-	exonic	hsa_circ_0055161	-1.8622	0.034689	CYP26B1
77270158	77275895	chrX	+	exonic	hsa_circ_0001934	2.5546	0.034759	ATP7A
12462922	12465283	chr11	+	intronic	N/A	-1.5839	0.034799	PARVA
101450683	101451498	chr3	+	exonic	hsa_circ_0066701	-1.7020	0.034846	CEP97
21644103	21663045	chr18	+	exonic	hsa_circ_0047270	2.0662	0.034929	TTC39C
103558598	103567658	chr10	-	exonic	hsa_circ_0019612	2.7479	0.034937	MGEA5
134305476	134308181	chr9	+	exonic	hsa_circ_0001895	1.7326	0.034949	PRRC2B
35832287	35838568	chr20	+	exonic	hsa_circ_0060262	-1.5988	0.034955	RPN2
41036244	41037457	chr15	-	exonic	hsa_circ_0004942	2.4559	0.034971	RMDN3
75823317	75875495	chr6	-	exonic	hsa_circ_0077032	-1.6229	0.034986	COL12A1
196793574	196846401	chr3	-	exonic	hsa_circ_0068684	-1.5464	0.035042	DLG1
34974539	34975843	chr21	-	exonic	hsa_circ_0061554	-1.6706	0.035048	CRYZL1
24762046	24788679	chr16	+	exonic	hsa_circ_0006008	2.2155	0.035100	TNRC6A
21987790	21999817	chr13	-	exonic	hsa_circ_0006732	2.6583	0.035191	ZDHHC20
50724534	50731374	chr15	+	exonic	N/A	-1.5628	0.035195	USP8
32745359	32750312	chr3	+	exonic	hsa_circ_0064690	1.5948	0.035227	CNOT10
9263787	9275665	chr18	+	exonic	hsa_circ_0046854	-1.6609	0.035288	ANKRD12
72855734	72864506	chr15	+	exonic	hsa_circ_0036232	1.6414	0.035344	ARIH1
31947298	31949280	chr15	-	exonic	hsa_circ_0034325	-1.5054	0.035346	OTUD7A
99860426	99864304	chr6	-	exonic	hsa_circ_0001630	1.7942	0.035357	PNISR

33002948	33012216	chr2	+	exonic	hsa_circ_0053882	-1.6670	0.035379	TTC27
24181170	24207701	chr2	+	exonic	hsa_circ_0052967	2.1456	0.035383	UBXN2A
243736227	244006584	chr1	-	exonic	hsa_circ_0017248	2.8393	0.035421	AKT3
96485180	96489456	chr13	-	exonic	hsa_circ_0008274	-1.5274	0.035485	UGGT2
14825489	14840755	chr11	+	exonic	N/A	1.6198	0.035514	PDE3B
124904502	124915333	chr12	-	exonic	hsa_circ_0029308	1.8387	0.035553	NCOR2
143486218	143605362	chr6	+	exonic	hsa_circ_0078051	-1.5171	0.035566	AIG1
51123962	51364771	chr10	-	exonic	hsa_circ_0018343	1.8967	0.035582	PARG
133326545	133326845	chr5	-	exonic	hsa_circ_0073930	-1.6936	0.035591	VDAC1
75302560	75302689	chr10	-	exonic	hsa_circ_0018824	-2.0558	0.035622	USP54
50596162	50596330	chr15	-	exonic	hsa_circ_0035208	-1.6561	0.035625	GABPB1
65432717	65435353	chr7	-	exonic	hsa_circ_0080319	1.6867	0.035652	GUSB
29402788	29405659	chr11	+	antisense	N/A	-1.5343	0.035678	RP11-460B17.3
135710404	135715781	chr7	+	sense overlapping	N/A	2.3591	0.035683	AC024084.1
43133561	43135467	chr20	-	intronic	N/A	-1.9316	0.035714	SERINC3
133494145	133509713	chr5	-	exonic	hsa_circ_0003711	1.7889	0.035715	SKP1
44620882	44673174	chr15	+	exonic	hsa_circ_0035052	1.6829	0.035731	CASC4
10554828	10555880	chr17	-	exonic	N/A	-1.7026	0.035732	MYH3
61271351	61278318	chr17	+	exonic	hsa_circ_0004006	-1.7562	0.035779	TANC2
39902045	39904080	chr4	-	exonic	hsa_circ_0069524	1.5486	0.035836	PDS5A
19499357	19501527	chr1	-	exonic	hsa_circ_0010358	-1.7702	0.035866	UBR4
137597736	137600758	chr7	-	exonic	hsa_circ_0001753	-1.7054	0.035879	CREB3L2
32617574	32619410	chr20	+	sense overlapping	N/A	1.7915	0.035910	RALY
37126308	37147442	chr9	+	intronic	N/A	3.1086	0.035939	ZCCHC7
82821160	82824865	chr15	-	exonic	hsa_circ_0036566	-1.6042	0.035948	RPS17L
21921956	21978323	chr22	+	sense overlapping	hsa_circ_0062415	-1.6601	0.035950	UBE2L3
146209155	146216108	chr6	-	sense overlapping	N/A	3.5994	0.035963	SHPRH
102542007	102559661	chr12	+	exonic	hsa_circ_0000432	-1.5085	0.035980	PARPBP
17847367	17851128	chr8	+	exonic	hsa_circ_0002867	1.7053	0.035996	PCM1
78022381	78032779	chr17	+	exonic	N/A	-1.6306	0.036035	CCDC40
96965240	96966735	chr2	-	intronic	N/A	-1.8240	0.036068	SNRNP200
48769716	48805947	chr8	-	exonic	hsa_circ_0084353	-1.5545	0.036101	PRKDC
179334378	179337869	chr2	-	exonic	N/A	-1.5520	0.036175	FKBP7
4286037	4298496	chr9	-	exonic	hsa_circ_0086248	-1.5703	0.036181	GLIS3
101189031	101190071	chr7	+	intronic	hsa_circ_0092287	-1.6015	0.036190	COL26A1
77378740	77387395	chr7	+	sense overlapping	hsa_circ_0001720	-1.5617	0.036202	RSBN1L
151043647	151049345	chr5	-	exonic	hsa_circ_0004104	-1.6959	0.036243	SPARC
165859440	165872516	chr1	+	exonic	hsa_circ_0015081	-1.6976	0.036270	UCK2
205138290	205156934	chr1	-	exonic	hsa_circ_0016199	-1.7470	0.036274	DSTYK
102033995	102038934	chr2	-	exonic	hsa_circ_0004814	-1.5597	0.036282	RFX8
38273472	38275126	chr1	+	exonic	hsa_circ_0011717	-1.7108	0.036282	C1orf122
22047528	22048257	chr1	-	exonic	hsa_circ_0004808	2.4119	0.036287	USP48
16327848	16345099	chr3	+	exonic	hsa_circ_0001273	2.0908	0.036311	OXNAD1
114357089	114364762	chrX	-	exonic	hsa_circ_0003300	-1.8373	0.036324	LRCH2
138707735	138774924	chr9	-	exonic	hsa_circ_0089475	1.6094	0.036432	CAMSAP1

58472758	58476205	chr19	-	sense overlapping	hsa_circ_0000965	-1.6222	0.036444	C19orf18
6620185	6628610	chr7	+	exonic	hsa_circ_0079381	-1.6759	0.036499	ZDHHC4
67431907	67525503	chr14	+	exonic	hsa_circ_0092254	-1.5500	0.036506	GPHN
204110568	204150455	chr2	+	exonic	N/A	-1.5425	0.036527	CYP20A1
42992722	42993879	chr6	+	exonic	N/A	1.7147	0.036542	RRP36
75696982	75697501	chr16	+	intronic	N/A	-1.6958	0.036583	TERF2IP
15969938	16026822	chrX	+	intergenic	N/A	-1.9542	0.036634	
67973788	67974381	chr16	-	sense overlapping	hsa_circ_0000710	-1.6963	0.036647	LCAT
68015271	68018210	chr8	+	exonic	hsa_circ_0084666	1.7449	0.036721	CSPP1
49269563	49270871	chr17	-	exonic	N/A	1.6986	0.036741	MBTD1
31764759	31766195	chr1	-	exonic	hsa_circ_0011267	-1.5444	0.036798	SNRNP40
53017589	53018234	chr18	-	exonic	hsa_circ_0004223	-1.9618	0.036848	TCF4
17446976	17447274	chr8	+	exonic	hsa_circ_0003134	-1.8476	0.036858	PDGFRL
107677627	107684231	chr5	-	sense overlapping	hsa_circ_0001517	1.8821	0.036962	FBXL17
107236366	107254190	chr12	+	exonic	hsa_circ_0028021	1.6230	0.036973	RIC8B
42745686	42792796	chr12	+	exonic	hsa_circ_0004815	1.5541	0.036992	PPHLN1
97373450	97400263	chr2	-	exonic	N/A	-1.6599	0.036998	LMAN2L
39123240	39127595	chr19	+	exonic	hsa_circ_0050894	-1.5294	0.037042	EIF3K
29585016	29587415	chr1	+	exonic	hsa_circ_0003904	-1.6076	0.037045	PTPRU
214625147	214638300	chr1	-	exonic	hsa_circ_0007015	-1.5033	0.037077	PTPN14
133245396	133248908	chr12	-	exonic	hsa_circ_0029531	-1.5193	0.037141	POLE
95099211	95119667	chr5	+	exonic	hsa_circ_0006725	2.0948	0.037142	RHOBTB3
123661905	123683844	chr10	-	exonic	hsa_circ_0002850	1.6929	0.037162	ATE1
155644800	155649303	chr1	-	exonic	hsa_circ_0003608	2.0741	0.037176	YY1AP1
112723882	112724819	chr10	+	exonic	hsa_circ_0000261	2.3440	0.037186	SHOC2
77779390	77818086	chr13	-	exonic	hsa_circ_0030509	1.9935	0.037198	MYCBP2
48189458	48190874	chr18	+	exonic	hsa_circ_0047688	-1.5531	0.037218	MAPK4
17665469	17669777	chr6	-	exonic	hsa_circ_0007268	2.0673	0.037272	NUP153
51381438	51387763	chr10	+	exonic	hsa_circ_0006820	1.9938	0.037287	TIMM23B
43702432	43704859	chr18	+	exonic	hsa_circ_0002481	1.7326	0.037303	HAUS1
20212215	20212724	chr3	-	exonic	N/A	-1.8615	0.037312	SGOL1
10283765	10288043	chr19	-	exonic	hsa_circ_0000889	2.6178	0.037319	DNMT1
15427196	15449371	chr2	-	exonic	hsa_circ_0008491	-1.7692	0.037339	NBAS
39623696	39629569	chr18	+	exonic	hsa_circ_0006527	2.1203	0.037351	PIK3C3
89236034	89237562	chr1	+	exonic	hsa_circ_0002008	2.2282	0.037399	PKN2
227729319	227729842	chr2	+	exonic	hsa_circ_0001104	3.1249	0.037430	RHBDD1
61632920	61633008	chr2	+	antisense	hsa_circ_0001015	-1.8576	0.037443	USP34
34951655	34957074	chr21	-	exonic	hsa_circ_0061548	-1.7627	0.037488	DONSON
45766370	45769539	chr19	+	exonic	hsa_circ_0051449	1.9914	0.037490	MARK4
17124850	17127457	chr17	-	exonic	N/A	-1.5675	0.037504	FLCN
70246900	70266475	chr10	-	exonic	hsa_circ_0007778	-1.5642	0.037570	SLC25A16
93480747	93482948	chr15	+	exonic	hsa_circ_0000654	1.8508	0.037593	CHD2
49394608	49395791	chr3	-	exonic	hsa_circ_0065638	-1.6972	0.037600	GPX1
50438785	50442435	chrX	-	sense overlapping	N/A	-1.7749	0.037608	SHROOM4
43514307	43516197	chr6	-	exonic	hsa_circ_0076560	-1.6717	0.037612	XPO5
31904555	31920473	chr7	-	exonic	hsa_circ_0079751	-1.6667	0.037614	PDE1C
50875285	50878685	chr15	-	exonic	hsa_circ_0035226	1.9093	0.037634	TRPM7

97818240	97820478	chr2	+	exonic	hsa_circ_0055734	-1.7163	0.037640	ANKRD36
4497954	4498912	chr19	+	exonic	N/A	-1.6294	0.037642	HDGFRP2
82324537	82336803	chr9	+	exonic	hsa_circ_0087305	-1.5191	0.037668	TLE4
33397466	33427756	chr7	+	exonic	hsa_circ_0008336	1.8549	0.037688	BBS9
180663927	180670906	chr5	-	exonic	hsa_circ_0075379	-1.7571	0.037700	GNB2L1
126384726	126395456	chr10	-	exonic	hsa_circ_0008456	1.5661	0.037728	FAM53B
186756529	186761098	chr3	+	exonic	hsa_circ_0068481	-1.6457	0.037758	ST6GAL1
170428187	170459062	chr4	-	exonic	N/A	1.5211	0.037795	NEK1
50847159	50850753	chr2	-	exonic	hsa_circ_0054525	-1.6192	0.037796	NRXN1
7414685	7414883	chr5	+	exonic	N/A	-1.8505	0.037797	ADCY2
17746429	17747740	chr10	+	exonic	hsa_circ_0008311	1.8816	0.037811	STAM
99896085	99896878	chr13	+	exonic	hsa_circ_0030722	2.3705	0.037858	UBAC2
34835001	34835393	chr6	+	exonic	hsa_circ_0076070	-1.6471	0.037890	UHRF1BP1
75933300	75933614	chr7	+	exonic	hsa_circ_0080788	-1.6203	0.037908	HSPB1
37579940	37582023	chr19	+	exonic	N/A	-1.6177	0.038014	ZNF420
76711302	76711950	chr4	+	exonic	hsa_circ_0007096	1.6577	0.038040	USO1
118832460	118887479	chr6	-	exonic	hsa_circ_0077736	2.2289	0.038062	CEP85L
86293355	86297981	chr9	-	exonic	hsa_circ_0001866	3.1179	0.038073	UBQLN1
33996220	33998862	chr9	-	exonic	hsa_circ_0086736	2.5637	0.038085	UBAP2
21662876	21710381	chr18	+	exonic	hsa_circ_0047281	1.6389	0.038108	TTC39C
125911111	125929096	chr5	-	exonic	hsa_circ_0073736	-1.7978	0.038121	ALDH7A1
71623270	71645769	chr2	+	exonic	hsa_circ_0055151	1.8748	0.038128	ZNF638
46190711	46195443	chr19	-	exonic	hsa_circ_0051546	-1.9103	0.038139	SNRPD2
114911523	114919893	chr9	-	exonic	hsa_circ_0088062	1.5779	0.038169	SUSD1
47767859	47768203	chr19	+	exonic	hsa_circ_0000944	2.1194	0.038212	CCDC9
2807472	2810500	chr16	+	exonic	hsa_circ_0037563	2.6022	0.038329	SRRM2
32684462	32686439	chr20	-	exonic	hsa_circ_0007938	1.6348	0.038334	EIF2S2
152004981	152006276	chr1	-	exonic	hsa_circ_0014205	-1.8786	0.038343	S100A11
10342614	10359778	chr3	-	exonic	hsa_circ_0064277	-1.5969	0.038357	SEC13
104483222	104574295	chr3	-	sense overlapping	hsa_circ_0004993	-1.7001	0.038369	XLOC_003195
43455389	43460330	chr22	-	exonic	hsa_circ_0063681	-1.8019	0.038375	TTLL1
74949767	74950157	chr16	-	exonic	hsa_circ_0004910	1.9312	0.038407	WDR59
44514580	44515853	chr21	-	exonic	hsa_circ_0001198	1.8643	0.038415	U2AF1
132426884	132428481	chr5	+	exonic	hsa_circ_0001531	1.7262	0.038431	HSPA4
138824814	138853226	chr9	-	exonic	hsa_circ_0089507	-1.7533	0.038445	UBAC1
39881347	39924368	chr4	-	exonic	hsa_circ_0069519	1.5370	0.038448	PDS5A
75692832	75695930	chr7	+	exonic	hsa_circ_0080782	-1.5891	0.038499	MDH2
40027197	40041630	chr7	+	exonic	hsa_circ_0001699	2.5848	0.038546	CDK13
152132729	152150709	chr3	+	exonic	hsa_circ_0001349	1.9078	0.038552	MBNL1
3076997	3081350	chr6	+	exonic	hsa_circ_0003886	1.6973	0.038569	RIPK1
36685939	36694658	chr20	+	sense overlapping	hsa_circ_0007673	1.9395	0.038575	RPRD1B
65792943	65804902	chr15	-	exonic	hsa_circ_0006807	1.6161	0.038623	DPP8
201721404	201722812	chr2	-	exonic	hsa_circ_0057725	1.8665	0.038640	CLK1
64271341	64295792	chrX	+	sense overlapping	hsa_circ_0001924	3.9544	0.038670	XLOC_007999
34574331	34574681	chr6	-	exonic	hsa_circ_0006757	1.7489	0.038728	C6orf106
41704366	41704793	chr19	+	exonic	N/A	-1.5337	0.038754	CYP2S1
122514815	122519100	chr2	+	exonic	hsa_circ_0002847	2.0751	0.038799	TSN
110321942	110350696	chr2	-	exonic	hsa_circ_0002076	-1.6813	0.038807	SEPT10

71590282	71597135	chr2	+	exonic	hsa_circ_0001028	2.4690	0.038825	ZNF638
65139030	65141244	chr1	+	exonic	hsa_circ_0012850	-1.7637	0.038845	CACHD1
28970037	28970421	chr16	+	exonic	hsa_circ_0038883	-1.5397	0.038852	NFATC2IP
95938199	95944335	chr8	-	exonic	hsa_circ_0084956	-1.7442	0.038892	TP53INP1
160148151	160177351	chr6	+	sense overlapping	hsa_circ_0078543	-1.5789	0.038900	WTAP
102233626	102239279	chr11	+	exonic	hsa_circ_0004103	1.7618	0.038938	BIRC2
49372459	49373029	chr3	-	intronic	N/A	2.2655	0.038956	USP4
47531309	47549512	chr16	+	exonic	hsa_circ_0000698	2.2830	0.038982	PHKB
186504915	186505671	chr3	+	exonic	hsa_circ_0068465	2.1506	0.038985	EIF4A2
13604092	13610799	chr20	-	exonic	hsa_circ_0059476	-1.7781	0.039001	TASP1
30370051	30385318	chr20	+	exonic	hsa_circ_0003209	-1.5541	0.039001	TPX2
45587230	45599993	chr14	-	sense overlapping	N/A	2.5333	0.039002	FKBP3
50943657	50943763	chr22	-	exonic	hsa_circ_0064001	-1.7574	0.039006	LMF2
19093168	19096767	chr9	-	exonic	N/A	1.7795	0.039069	HAUS6
110922882	110925748	chr12	+	exonic	hsa_circ_0004516	2.2596	0.039077	FAM216A
61608136	61609229	chr3	+	intronic	hsa_circ_0002134	-1.6867	0.039227	PTPRG
52785363	52786666	chr19	+	exonic	hsa_circ_0052095	1.9468	0.039227	ZNF766
116730126	116734144	chr10	+	exonic	hsa_circ_0020092	1.7123	0.039231	TRUB1
113832487	113833403	chr13	-	exonic	N/A	-1.5814	0.039259	PCID2
33953282	33963789	chr9	-	exonic	hsa_circ_0001847	2.3559	0.039279	UBAP2
99196947	99197507	chr10	-	exonic	hsa_circ_0004896	1.5822	0.039318	EXOSC1
139819703	139828890	chr5	+	exonic	hsa_circ_0001541	2.0669	0.039334	ANKHD1
84376847	84412965	chr1	-	exonic	N/A	-1.6099	0.039339	TTLL7
224077	233215	chr11	-	exonic	hsa_circ_0006467	-1.6037	0.039408	SIRT3
26518046	26519239	chr17	+	exonic	N/A	-1.6682	0.039449	NLK
73072005	73072154	chrX	+	sense overlapping	hsa_circ_0001929	-1.6815	0.039459	XLOC_008015
32206506	32215211	chr22	+	exonic	N/A	-1.5024	0.039466	DEPDC5
33073307	33078670	chr21	-	exonic	hsa_circ_0007207	-1.7576	0.039526	SCAF4
19473732	19474599	chr11	+	intronic	N/A	-1.6759	0.039603	NAV2
66444138	66444562	chr11	-	exonic	hsa_circ_0004144	1.8964	0.039606	RBM4B
54248444	54250043	chr4	+	exonic	hsa_circ_0069738	1.5272	0.039627	FIP1L1
75506613	75509180	chr14	-	exonic	hsa_circ_0032644	-1.6434	0.039639	MLH3
100587885	100589861	chr8	+	exonic	hsa_circ_0085096	1.9689	0.039666	VPS13B
25650607	25654354	chr15	-	exonic	hsa_circ_0034168	2.6199	0.039681	UBE3A
32602655	32620661	chr2	+	exonic	hsa_circ_0053441	1.8227	0.039707	BIRC6
130928324	130928494	chrX	-	exonic	hsa_circ_0091558	-1.5121	0.039718	LOC286467
47444334	47446190	chrX	+	exonic	hsa_circ_0090449	-1.5772	0.039778	TIMP1
89961445	89977071	chr16	+	exonic	hsa_circ_0041100	-1.7861	0.039783	TCF25
65941524	65972074	chr17	+	exonic	hsa_circ_0000799	2.4852	0.039835	BPTF
46559797	46563115	chr13	+	antisense	hsa_circ_0000480	-1.6691	0.039846	ZC3H13
151656409	151729550	chr4	-	exonic	hsa_circ_0071174	2.0893	0.039849	LRBA
57523349	57526305	chr15	+	exonic	hsa_circ_0006380	-1.5629	0.039866	TCF12
37126308	37127260	chr9	+	intronic	N/A	1.7772	0.039876	ZCCHC7
203818727	203820481	chr2	+	exonic	hsa_circ_0003493	1.8620	0.039922	CARF
67864287	67868100	chr1	-	intergenic	N/A	-1.6259	0.039958	
45340349	45341367	chr1	-	exonic	hsa_circ_0012185	-1.5089	0.039971	EIF2B3
43679047	43680248	chr7	-	exonic	hsa_circ_0001700	-1.5321	0.039987	COA1
98923108	98923600	chr13	+	intronic	hsa_circ_0003907	-1.5043	0.040000	FARP1

74130250	74137504	chr5	-	exonic	hsa_circ_0004405	1.5984	0.040016	FAM169A
132273520	132273720	chr2	+	intronic	hsa_circ_0092325	-1.6604	0.040089	RNU6-81P
75625762	75634722	chr7	-	sense overlapping	hsa_circ_0001718	-1.5981	0.040103	STYXL1
22399613	22404422	chr4	-	intronic	N/A	-1.6187	0.040108	GPR125
194947437	194947585	chr3	-	exonic	hsa_circ_0068563	-1.6320	0.040113	XXYLT1
100976372	101023156	chr3	-	exonic	N/A	-1.7513	0.040141	IMPG2
20101609	20104725	chr11	+	exonic	hsa_circ_0004819	-1.5829	0.040220	NAV2
3789810	3789974	chr11	-	exonic	hsa_circ_0020913	-1.5412	0.040230	NUP98
175779785	175816930	chr2	-	exonic	hsa_circ_0007941	-1.6281	0.040320	CHN1
113734352	113735838	chr9	-	exonic	hsa_circ_0087960	-1.8020	0.040329	LPAR1
556530	565135	chr17	-	exonic	hsa_circ_0002879	1.6266	0.040388	VPS53
132227855	132228810	chr5	-	exonic	hsa_circ_0001529	1.7778	0.040389	AFF4
26486247	26500028	chr2	+	exonic	hsa_circ_0008257	1.7056	0.040411	HADHB
42748962	42781337	chr12	+	exonic	N/A	1.6997	0.040417	PPHLN1
35055435	35078948	chr14	-	exonic	hsa_circ_0031608	1.5261	0.040499	SNX6
59999085	60002460	chr17	-	exonic	hsa_circ_0007759	1.7762	0.040556	INTS2
381340	385707	chr8	+	exonic	N/A	2.6519	0.040565	FBXO25
68163533	68172161	chr8	-	exonic	hsa_circ_0001807	1.7792	0.040572	ARFGEF1
180286875	180286984	chr5	-	intronic	N/A	-1.6131	0.040576	ZFP62
72082738	72091059	chr9	-	exonic	hsa_circ_0004129	-1.5318	0.040600	APBA1
40152499	40155575	chr17	-	exonic	N/A	-2.0860	0.040635	DNAJC7
19538077	19538212	chr2	+	antisense	hsa_circ_0000980	-1.6870	0.040652	AC092594.1
121220457	121221555	chr12	-	exonic	hsa_circ_0028935	-1.7212	0.040676	SPPL3
36064839	36104804	chr14	-	exonic	hsa_circ_0031668	-1.5960	0.040680	RALGAPA1
46455023	46534363	chr11	-	exonic	hsa_circ_0021845	-1.5241	0.040686	AMBRA1
126194344	126207514	chr8	+	sense overlapping	N/A	-1.5686	0.040690	NSMCE2
20910208	20914622	chr17	-	exonic	hsa_circ_0042458	-1.6296	0.040709	USP22
47100675	47100849	chrX	+	exonic	hsa_circ_0090429	-1.6245	0.040730	USP11
21660548	21663045	chr18	+	exonic	hsa_circ_0002403	2.3424	0.040852	TTC39C
86294689	86297981	chr9	-	exonic	hsa_circ_0001867	2.9493	0.040852	UBQLN1
49348626	49348873	chr19	-	exonic	hsa_circ_0051781	-1.7537	0.040858	PLEKHA4
32560384	32566163	chr1	+	exonic	hsa_circ_0003601	-1.6039	0.040911	TMEM39B
120828957	120830597	chr10	-	exonic	hsa_circ_0020151	-1.5461	0.040932	EIF3A
86328535	86329135	chr6	-	exonic	hsa_circ_0006131	2.3265	0.040969	SYNCRIP
214564330	214571344	chr1	-	exonic	hsa_circ_0008659	-1.6658	0.040976	PTPN14
27331510	27339333	chr1	-	exonic	hsa_circ_0011047	-1.5398	0.041021	FAM46B
228193393	228195562	chr2	+	exonic	hsa_circ_0003081	1.5012	0.041039	MFF
190315628	190316621	chr2	+	exonic	hsa_circ_0057462	-1.6273	0.041135	WDR75
35644044	36220485	chr13	+	exonic	hsa_circ_0029987	-1.5982	0.041156	NBEA
183896644	183896910	chr3	+	exonic	hsa_circ_0068282	2.1050	0.041171	AP2M1
89628044	89629313	chr14	-	intronic	hsa_circ_0000558	1.5817	0.041175	FOXN3
99394503	99396732	chr3	+	intronic	N/A	-1.6094	0.041202	COL6A1
96717725	96728643	chr12	-	exonic	hsa_circ_0002762	1.7723	0.041213	CDK17
47497792	47581459	chr16	+	exonic	hsa_circ_0039254	2.0393	0.041225	PHKB
72050664	72054207	chr12	-	sense overlapping	hsa_circ_0000420	-1.5030	0.041227	ZFC3H1
44986659	45000952	chr3	-	exonic	hsa_circ_0065052	-1.6617	0.041295	ZDHHC3
15964801	15978390	chr1	+	exonic	hsa_circ_0000020	2.0831	0.041320	DDI2
53322669	53329829	chr1	+	exonic	hsa_circ_0002361	-1.7889	0.041342	ZYG11A

6291961	6293703	chr1	-	exonic	hsa_circ_0007427	-1.8497	0.041360	ICMT
41886323	41888573	chr17	-	exonic	N/A	-1.7591	0.041374	MPP3
3740641	3774638	chr11	-	exonic	N/A	1.7773	0.041378	NUP98
15564436	15567918	chr2	-	exonic	hsa_circ_0052760	-1.5399	0.041405	NBAS
21478701	21479419	chr18	+	exonic	hsa_circ_0047253	-1.5892	0.041474	LAMA3
122237752	122239714	chr12	-	exonic	hsa_circ_0029021	-1.6152	0.041513	LINC01089
6776706	6777567	chr7	+	exonic	hsa_circ_0007607	1.6662	0.041526	PMS2CL
168073714	168074132	chr1	-	exonic	hsa_circ_0015136	-1.5101	0.041557	GPR161
50708583	50714058	chr10	-	exonic	hsa_circ_0018331	1.5889	0.041567	ERCC6
57535669	57535748	chr15	+	exonic	hsa_circ_0035426	-1.6321	0.041597	TCF12
16955966	16977910	chr8	+	sense overlapping	N/A	-1.6219	0.041610	MICU3
9435370	9435456	chr19	+	exonic	hsa_circ_0049138	-1.7622	0.041649	ZNF559
38612700	38613982	chr17	+	exonic	hsa_circ_0043553	-1.6324	0.041660	IGFBP4
12999419	13059311	chr18	+	exonic	hsa_circ_0047003	2.0128	0.041662	CEP192
16871028	16871799	chrX	-	intronic	N/A	-1.6462	0.041673	RBBP7
22324940	22326529	chr16	+	exonic	hsa_circ_0038516	-1.5107	0.041727	POLR3E
20632714	20641530	chr13	+	exonic	hsa_circ_0029636	1.8913	0.041752	ZMYM2
23634493	23635749	chr14	-	exonic	hsa_circ_0031282	-1.5611	0.041759	SLC7A8
176954915	176958522	chr5	-	intronic	N/A	-1.5608	0.041767	FAM193B
56600621	56601081	chr3	+	exonic	hsa_circ_0001312	2.3221	0.041831	CCDC66
172821858	172823470	chr2	+	exonic	hsa_circ_0006532	1.5124	0.041836	HAT1
52729602	52729673	chr4	+	exonic	hsa_circ_0069714	1.6176	0.041861	DCUN1D4
120830753	120836157	chr2	+	exonic	hsa_circ_0001064	1.9950	0.041873	EPB41L5
2052758	2052991	chr16	-	intronic	N/A	-1.5195	0.041918	TCRBV20S1
73450163	73450660	chr2	+	exonic	N/A	-1.5270	0.041929	SMYD5
42132937	42134918	chr3	+	intronic	hsa_circ_0001286	-2.0422	0.041931	TRAK1
99930628	99958106	chr6	-	exonic	N/A	-1.8166	0.041970	USP45
236192849	236201553	chr1	-	exonic	hsa_circ_0017109	-1.7199	0.041997	NID1
76566752	76580286	chr15	-	exonic	hsa_circ_0036399	1.7775	0.042000	ETFA
22055264	22065197	chr22	-	sense overlapping	hsa_circ_0001208	-1.5745	0.042032	YPEL1
170626457	170639638	chr6	+	exonic	hsa_circ_0001666	-1.6441	0.042096	FAM120B
151934651	151936377	chrX	-	exonic	hsa_circ_0091722	-1.6118	0.042109	MAGEA3
29061914	29086557	chr17	+	exonic	N/A	1.9625	0.042147	SUZ12P1
18236682	18258636	chr6	-	exonic	hsa_circ_0075796	2.2046	0.042182	DEK
105903546	105907553	chr12	+	sense overlapping	N/A	-1.6690	0.042194	XLOC_l2_003133
132990021	133002144	chr7	+	sense overlapping	hsa_circ_0001749	-2.0072	0.042228	EXOC4
19112421	19115455	chr19	-	exonic	N/A	-1.7105	0.042272	SUGP2
36121010	36128402	chr14	-	exonic	hsa_circ_0004823	1.7490	0.042287	RALGAPA1
104536316	104574319	chr3	-	sense overlapping	N/A	-1.5129	0.042346	XLOC_003195
76642965	76662315	chr14	+	exonic	hsa_circ_0032746	1.7885	0.042353	GPATCH2L
91924202	91981956	chr7	+	exonic	hsa_circ_0002744	2.3543	0.042391	ANKIB1
13579682	13584457	chr6	+	exonic	hsa_circ_0007218	2.1338	0.042405	SIRT5
53478829	53488778	chr17	-	exonic	N/A	-1.5701	0.042408	MMD
50045984	50093067	chr5	+	exonic	hsa_circ_0072431	1.7018	0.042411	PARP8
10407213	10426634	chr5	+	exonic	hsa_circ_0071862	-1.6342	0.042430	MARCH6
86292641	86297981	chr9	-	exonic	hsa_circ_0006466	3.3124	0.042436	UBQLN1

31424825	31425448	chr14	-	exonic	hsa_circ_0007656	1.6917	0.042486	STRN3
37455242	37457328	chr17	-	exonic	hsa_circ_0000761	1.8988	0.042568	FBXL20
68334481	68343511	chr11	+	exonic	hsa_circ_0002038	2.4377	0.042578	PPP6R3
93637042	93639999	chr9	-	antisense	hsa_circ_0001873	-1.6224	0.042586	SYK
168920009	168986268	chr2	-	exonic	hsa_circ_0005882	1.9423	0.042604	STK39
32874967	32875262	chr22	+	exonic	hsa_circ_0008832	2.0516	0.042607	FBXO7
132551514	132551875	chr12	+	intronic	N/A	-1.6808	0.042639	EP400
48744511	48747484	chr20	-	exonic	hsa_circ_0002168	-1.6524	0.042680	TMEM189
93300335	93303190	chr1	+	exonic	hsa_circ_0013181	1.6017	0.042682	RPL5
118451960	118455359	chr11	+	exonic	hsa_circ_0006374	2.4482	0.042747	ARCN1
100384118	100387214	chr14	+	exonic	hsa_circ_0033163	-1.5761	0.042752	EML1
65941524	65944422	chr17	+	exonic	hsa_circ_0000798	2.7567	0.042766	BPTF
72370568	72373320	chr5	+	exonic	hsa_circ_0002490	1.6695	0.042884	FCHO2
136085784	136141886	chr3	-	exonic	N/A	1.6855	0.042890	STAG1
14821320	14821476	chrY	+	exonic	hsa_circ_0092232	-1.6017	0.042988	USP9Y
20245345	20246103	chr13	+	sense overlapping	N/A	-1.5875	0.043033	MPHOSPH8
186946056	186951097	chr2	-	sense overlapping	hsa_circ_0005843	1.5442	0.043055	LINC01473
50140753	50141436	chr13	-	sense overlapping	hsa_circ_0000484	-1.5356	0.043059	RCBTB1
101906400	101910728	chr15	-	exonic	hsa_circ_0037096	-1.6503	0.043061	PCSK6
45011271	45016256	chr7	-	exonic	hsa_circ_0080099	2.3124	0.043062	MYO1G
8076452	8114825	chr18	+	exonic	hsa_circ_0003063	-1.6220	0.043075	PTPRM
140807631	140811883	chr9	+	exonic	hsa_circ_0089757	-1.6390	0.043127	CACNA1B
89396991	89400658	chr4	+	exonic	hsa_circ_0070421	-1.5990	0.043167	HERC5
39607406	39629569	chr18	+	exonic	hsa_circ_0007765	2.3028	0.043191	PIK3C3
242396161	242415402	chr2	+	exonic	N/A	-1.8424	0.043204	FARP2
135639656	135644462	chr6	-	exonic	N/A	-1.6108	0.043208	AHI1
26000343	26015440	chr22	+	intronic	hsa_circ_0001213	-1.5438	0.043224	ADRBK2
102606930	102609897	chr9	+	exonic	hsa_circ_0002643	-1.5295	0.043225	NR4A3
11526612	11527733	chr19	-	exonic	hsa_circ_0006941	-1.5713	0.043253	RGL3
904262	908576	chr5	+	exonic	N/A	-1.7440	0.043331	TRIP13
7849045	7849304	chr17	+	exonic	hsa_circ_0008310	-1.5220	0.043349	CNTROB
127025579	127026209	chr7	-	sense overlapping	N/A	-1.6458	0.043362	ZNF800
7826418	7841374	chr7	+	sense overlapping	hsa_circ_0001676	1.9449	0.043395	UMAD1
39623414	39628754	chr14	-	exonic	N/A	1.6928	0.043424	TRAPPC6B
99584817	99585905	chr3	+	intronic	N/A	-1.7416	0.043456	CMSS1
76576097	76585041	chr15	-	exonic	hsa_circ_0005036	1.6698	0.043458	ETFA
76907603	76912143	chrX	-	exonic	hsa_circ_0001932	1.5840	0.043486	ATRX
60734614	60737990	chr15	-	sense overlapping	hsa_circ_0000606	1.6870	0.043491	ICE2
1828213	1830915	chr8	+	exonic	N/A	-1.6189	0.043519	ARHGEF10
84301451	84303379	chrX	+	intronic	N/A	-1.7572	0.043581	APOOL
138221900	138223331	chr5	+	exonic	hsa_circ_0074166	1.5027	0.043601	CTNNA1
87017739	87018273	chr3	-	exonic	hsa_circ_0003806	-1.6154	0.043621	VGLL3
34111725	34113603	chr11	+	exonic	hsa_circ_0004851	2.6533	0.043685	CAPRIN1
33160465	33161645	chr1	-	exonic	hsa_circ_0004895	-1.6813	0.043790	SYNC
75197502	75203206	chr7	-	exonic	hsa_circ_0080724	-1.5448	0.043793	HIP1

44785299	44804994	chr1	-	exonic	hsa_circ_0005246	-1.5508	0.043899	ERI3
69983264	69985939	chr12	+	exonic	hsa_circ_0000418	2.9124	0.043906	CCT2
107260799	107289013	chr11	-	exonic	hsa_circ_0006868	2.1442	0.043915	CWF19L2
50025688	50042096	chr13	+	exonic	hsa_circ_0030254	1.6311	0.043929	SETDB2
118750908	118754014	chrX	-	exonic	hsa_circ_0091412	-1.7120	0.043940	SEPT6
27224905	27226329	chr16	+	exonic	hsa_circ_0038704	1.9008	0.043963	KDM8
128525762	128528578	chr2	-	exonic	hsa_circ_0056362	1.7103	0.043980	WDR33
148543588	148544397	chr7	-	exonic	hsa_circ_0005284	1.5348	0.043984	EZH2
120347369	120348235	chr11	+	exonic	hsa_circ_0002089	2.3400	0.043995	ARHGEF12
34107610	34113603	chr11	+	exonic	hsa_circ_0000287	2.6054	0.044021	CAPRIN1
39738530	39743147	chr17	-	exonic	hsa_circ_0043614	-1.6678	0.044033	KRT14
31695861	31719046	chr19	-	antisense	N/A	-1.6085	0.044038	CTC-439O9.3
18256591	18258636	chr6	-	exonic	hsa_circ_0008846	2.5491	0.044120	DEK
186286613	186287960	chr1	-	exonic	N/A	-1.6619	0.044126	TPR
54398613	54426184	chr18	+	exonic	hsa_circ_0047744	2.2944	0.044183	WDR7
5968018	5988545	chr9	-	exonic	N/A	1.6107	0.044225	KIAA2026
53289511	53302038	chr16	+	exonic	hsa_circ_0039365	2.4443	0.044226	CHD9
167915606	167921655	chr5	+	exonic	hsa_circ_0001550	2.4321	0.044296	RARS
180651121	180653019	chr3	+	exonic	hsa_circ_0068129	2.0132	0.044309	FXR1
89206670	89206971	chr1	+	exonic	hsa_circ_0000089	1.6658	0.044326	PKN2
34929549	34936026	chr19	+	exonic	hsa_circ_0050532	1.5883	0.044337	UBA2
37775055	37783902	chr21	+	exonic	hsa_circ_0006898	-1.5107	0.044354	CHAF1B
96986391	96991728	chr14	+	exonic	hsa_circ_0002120	1.8941	0.044376	PAPOLA
138824814	138847261	chr9	-	exonic	hsa_circ_0089506	-1.7458	0.044434	UBAC1
25605039	25606501	chr6	+	exonic	hsa_circ_0075881	-1.6408	0.044466	LRRC16A
179976936	179977117	chr5	+	intronic	N/A	2.0252	0.044513	CNOT6
27373960	27374248	chr16	+	intronic	hsa_circ_0000684	-1.6873	0.044514	IL4R
75703832	75706652	chr15	-	exonic	hsa_circ_0000636	1.5533	0.044539	SIN3A
22477517	22496137	chr16	+	exonic	hsa_circ_0038539	1.8669	0.044548	SMG1P1
29432408	29432626	chr18	-	exonic	hsa_circ_0000841	1.9773	0.044643	TRAPPC8
33606862	33613800	chr18	-	exonic	hsa_circ_0000842	1.9318	0.044662	RPRD1A
94767247	94828743	chr8	+	sense overlapping	N/A	-1.6827	0.044698	TMEM67
983990	1004666	chr16	-	exonic	N/A	-1.5377	0.044724	LMF1
35800605	35800763	chr17	+	exonic	hsa_circ_0006220	1.9190	0.044752	TADA2A
171867882	171884915	chr2	-	exonic	hsa_circ_0057028	1.6931	0.044760	TLK1
62515436	62522318	chr17	+	exonic	hsa_circ_0045308	-1.5348	0.044823	CEP95
171486729	171557644	chr1	+	exonic	hsa_circ_0015204	-1.6949	0.044841	PRRC2C
100676720	100691953	chr12	+	exonic	hsa_circ_0006258	1.9998	0.044885	SCYL2
220752695	220754460	chr1	+	exonic	hsa_circ_0016519	-1.5141	0.044887	MARK1
60629662	60631116	chr17	+	exonic	hsa_circ_0008438	2.8461	0.044889	TLK2
103273041	103273253	chr9	+	intronic	N/A	-1.7171	0.044895	TMEFF1
25477659	25477979	chr20	-	intronic	hsa_circ_0092338	-1.9276	0.044915	NINL
76285013	76315227	chr10	+	intronic	N/A	-1.6474	0.044928	ADK
111406810	111419418	chr2	-	exonic	hsa_circ_0056037	-1.5240	0.044939	BUB1
53701835	53714476	chr12	-	exonic	hsa_circ_0026616	-1.8741	0.044969	AAAS
94008811	94009042	chr14	+	exonic	hsa_circ_0033049	-1.7422	0.044982	UNC79
1902352	1941505	chr4	+	exonic	hsa_circ_0005881	-1.6221	0.044988	WHSC1
121154725	121157906	chr12	-	antisense	hsa_circ_0000449	-1.6480	0.045015	UNC119B
108286344	108286691	chr9	+	intronic	N/A	1.6054	0.045038	FSD1L
45690588	45690998	chr19	+	exonic	N/A	-1.6371	0.045065	AC005779.2

97666267	97718297	chr9	+	exonic	N/A	-1.6257	0.045065	C9orf3
131249167	131249240	chr8	-	exonic	hsa_circ_0085613	2.9167	0.045068	ASAP1
89468952	89487246	chr10	+	exonic	N/A	-1.5128	0.045091	PAPSS2
53448969	53449629	chr12	+	exonic	hsa_circ_0026542	-1.5485	0.045111	TNS2
87920168	87928449	chr6	+	intronic	hsa_circ_0004383	1.6919	0.045126	ZNF292
95839490	95854716	chr8	+	exonic	hsa_circ_0001814	1.7262	0.045136	INTS8
6617220	6628610	chr7	+	exonic	hsa_circ_0079373	-1.6585	0.045180	ZDHHC4
8043537	8110761	chr7	+	exonic	N/A	1.5864	0.045286	GLCCI1
1004361	1004666	chr16	-	intronic	N/A	-1.6208	0.045310	LMF1
136467002	136467801	chr2	+	exonic	hsa_circ_0056586	1.5216	0.045323	R3HDM1
183580540	183585848	chr3	-	exonic	hsa_circ_0068255	1.5692	0.045325	PARL
89799889	89804313	chr16	+	exonic	hsa_circ_0040987	-1.6182	0.045340	ZNF276
76342171	76344097	chr5	+	exonic	hsa_circ_0008620	2.8560	0.045370	AGGF1
34147027	34149837	chr17	+	exonic	hsa_circ_0043138	3.3215	0.045377	TAF15
231090078	231097049	chr1	-	exonic	hsa_circ_0000195	2.1211	0.045381	TTC13
47767862	47768203	chr19	+	sense overlapping	N/A	2.1338	0.045383	CCDC9
114133569	114183238	chr11	+	exonic	hsa_circ_0024326	-1.6263	0.045495	NNMT
184563675	184563944	chr4	-	intronic	N/A	-1.6140	0.045531	RWDD4
34144719	34149837	chr17	+	exonic	N/A	3.6754	0.045532	TAF15
45767941	45769539	chr19	+	exonic	hsa_circ_0051454	1.6306	0.045558	MARK4
214174782	214239843	chr2	+	exonic	hsa_circ_0058040	-1.5003	0.045569	SPAG16
113734352	113798481	chr9	-	intronic	hsa_circ_0004135	-1.7101	0.045577	LPAR1
146747016	146757164	chr1	+	exonic	hsa_circ_0013953	1.8930	0.045591	CHD1L
40949651	40950704	chr17	-	sense overlapping	hsa_circ_0043912	-1.6227	0.045613	COA3
62421173	62422143	chr20	-	exonic	hsa_circ_0061179	-1.5789	0.045622	ZBTB46
54852135	54866870	chr8	+	exonic	N/A	-1.5484	0.045707	RGS20
43628823	43652158	chr15	+	sense overlapping	N/A	-1.7736	0.045711	ADAL
81059688	81060008	chr10	+	intronic	hsa_circ_0092353	-1.5610	0.045721	ZMIZ1
2967410	2969120	chr20	+	exonic	hsa_circ_0001127	1.7857	0.045734	PTPRA
178735010	178743013	chr3	-	exonic	hsa_circ_0068067	-1.5999	0.045761	ZMAT3
71799391	71803602	chr16	-	exonic	hsa_circ_0007770	-1.5515	0.045789	AP1G1
69726439	69752439	chr10	-	exonic	hsa_circ_0003308	2.3044	0.045793	HERC4
26918715	26920084	chr17	-	exonic	hsa_circ_0006686	-1.5918	0.045821	SPAG5
28290542	28310335	chr22	-	exonic	hsa_circ_0062688	2.0304	0.045966	PITPNB
19989289	19990955	chr19	+	exonic	N/A	1.8692	0.045986	ZNF253
102076623	102094483	chr11	+	exonic	hsa_circ_0005990	-1.7967	0.046054	YAP1
101643844	101650220	chr2	-	exonic	hsa_circ_0004471	-1.5648	0.046066	TBC1D8
52771601	52773650	chr3	-	exonic	hsa_circ_0001308	2.2130	0.046074	NEK4
17629628	17633596	chr4	+	sense overlapping	N/A	-1.5564	0.046084	MED28
34922765	34955036	chr19	+	exonic	hsa_circ_0050518	1.7077	0.046104	UBA2
22646156	22659753	chr12	-	exonic	hsa_circ_0025614	1.6743	0.046136	C2CD5
70732539	70796508	chr16	-	exonic	hsa_circ_0040319	-1.5515	0.046170	VAC14
31205314	31214563	chr1	-	exonic	hsa_circ_0011205	-1.5192	0.046185	LAPTM5
126355758	126370948	chr10	-	exonic	hsa_circ_0020321	1.5706	0.046234	FAM53B
130705441	130705609	chr9	+	antisense	hsa_circ_0001892	-1.5823	0.046301	FAM102A
54265896	54294350	chr4	+	exonic	hsa_circ_0005912	1.8115	0.046321	FIP1L1
72183904	72185784	chr5	+	exonic	hsa_circ_0072940	1.5703	0.046323	TNPO1

3088665	3117990	chr4	+	exonic	hsa_circ_0003850	-1.6604	0.046339	HTT
4445266	4445746	chr17	-	intronic	hsa_circ_0092308	-1.5234	0.046353	MYBBP1A
65860865	65864782	chr7	-	exonic	N/A	-1.6232	0.046362	LINC00174
186901894	186934725	chr1	+	exonic	N/A	-1.5029	0.046417	PLA2G4A
12825860	12825983	chr19	-	exonic	hsa_circ_0049586	-1.6306	0.046441	TNPO2
103427642	103436193	chr10	-	exonic	hsa_circ_0008362	1.8358	0.046448	FBXW4
19615443	19653155	chr12	+	exonic	hsa_circ_0006128	1.8772	0.046457	AEBP2
41173043	41195087	chr22	-	exonic	hsa_circ_0063459	-1.6296	0.046457	SLC25A17
23614293	23618574	chr20	-	exonic	hsa_circ_0059617	-1.5012	0.046466	CST3
44773981	44785416	chr1	-	exonic	hsa_circ_0012144	-1.5585	0.046468	ERI3
28630428	28855516	chr13	+	exonic	hsa_circ_0029853	1.7712	0.046540	PAN3
88231964	88233730	chr10	-	exonic	hsa_circ_0005828	-1.5733	0.046548	WAPAL
77330650	77340944	chr11	-	exonic	hsa_circ_0008342	1.8527	0.046578	CLNS1A
95609446	95616975	chr1	+	exonic	hsa_circ_0000095	1.6920	0.046584	TMEM56
27668989	27689252	chr7	-	exonic	hsa_circ_0006773	1.7336	0.046619	HIBADH
107459490	107460490	chr2	-	exonic	hsa_circ_0055957	-1.8063	0.046627	ST6GAL2
141220790	141235273	chr3	+	sense overlapping	N/A	1.8315	0.046641	RASA2
28458581	28544344	chr12	+	exonic	hsa_circ_0008250	2.2086	0.046647	CCDC91
33478807	33480195	chr1	-	exonic	hsa_circ_0011462	-1.7273	0.046654	AK2
56642903	56643409	chr16	+	exonic	hsa_circ_0039460	-1.6565	0.046718	MT2A
126021212	126021585	chr8	+	exonic	N/A	-1.5036	0.046737	SQLE
41129506	41129987	chr19	+	exonic	hsa_circ_0051123	-1.6907	0.046759	LTBP4
136770511	136771563	chr5	-	intronic	N/A	-1.7224	0.046784	SPOCK1
42914234	42927450	chr8	+	exonic	hsa_circ_0084170	1.6570	0.046786	PNTA
388708	391408	chr20	+	exonic	hsa_circ_0059148	-1.7437	0.046790	RBCK1
56989531	57025950	chr6	+	exonic	N/A	1.8560	0.046920	ZNF451
76344422	76388643	chr6	+	exonic	hsa_circ_0001613	3.0132	0.047070	SENP6
128977551	129015614	chr5	+	exonic	N/A	-1.5033	0.047100	ADAMTS19
99113384	99114391	chr9	-	exonic	hsa_circ_0087620	-1.5364	0.047104	SLC35D2
242195015	242195594	chr2	+	antisense	hsa_circ_0004528	-1.6049	0.047197	HDLBP
111434013	111440514	chr1	+	exonic	hsa_circ_0013480	1.5117	0.047252	CD53
42315491	42328684	chr20	+	exonic	hsa_circ_0060456	-1.6718	0.047281	MYBL2
33996220	34017187	chr9	-	exonic	hsa_circ_0003410	2.7203	0.047285	UBAP2
42041214	42050989	chr1	-	exonic	hsa_circ_0011950	-1.6522	0.047319	HIVEP3
10417222	10417519	chr1	+	intronic	N/A	-1.7095	0.047349	KIF1B
65922338	65931191	chr14	+	intronic	N/A	2.1334	0.047389	FUT8
21971315	21972024	chr14	-	exonic	hsa_circ_0000523	1.9294	0.047419	METTL3
107083899	107097934	chrX	+	exonic	hsa_circ_0002153	1.5848	0.047423	MID2
74093876	74097944	chr17	-	exonic	hsa_circ_0045775	1.5088	0.047454	EXOC7
124911167	124934413	chr12	-	exonic	hsa_circ_0000461	2.0777	0.047488	NCOR2
2951660	2952972	chr4	-	exonic	hsa_circ_0006737	2.0266	0.047516	NOP14
142779220	142780417	chr5	-	exonic	hsa_circ_0001543	1.5520	0.047547	NR3C1
24523655	24524213	chr20	+	exonic	N/A	-1.5742	0.047551	SYNDIG1
29356520	29390406	chr2	+	exonic	hsa_circ_0003475	1.6656	0.047568	CLIP4
74561481	74563895	chr18	+	exonic	hsa_circ_0004979	2.2360	0.047600	ZNF236
94532555	94533477	chr11	+	exonic	hsa_circ_0004214	-1.7988	0.047609	AMOTL1
50516660	50530353	chr20	-	antisense	N/A	-1.5634	0.047708	RNU6-347P
20315704	20333558	chr13	-	exonic	N/A	1.7843	0.047715	PSPC1
69120278	69121169	chr12	+	exonic	hsa_circ_0027485	1.7032	0.047718	NUP107

96434640	96438798	chr5	+	sense overlapping	N/A	1.5407	0.047721	CTD-2215E18.1
21137230	21139732	chr1	-	exonic	hsa_circ_0010450	-1.5739	0.047726	EIF4G3
118625413	118627996	chr11	-	exonic	hsa_circ_0024490	4.4050	0.047741	DDX6
30428647	30437426	chr21	-	exonic	hsa_circ_0061372	-1.6809	0.047744	CCT8
43872481	43918886	chr13	-	exonic	N/A	-1.5162	0.047752	ENOX1
74119495	74131270	chr7	+	exonic	hsa_circ_0006944	1.5979	0.047801	GTF2I
129767529	129773423	chr4	+	exonic	hsa_circ_0070953	1.6417	0.047874	JADE1
99890680	99896878	chr13	+	exonic	hsa_circ_0030720	2.2580	0.047931	UBAC2
76410959	76415806	chr17	+	exonic	hsa_circ_0045905	-1.5854	0.047934	PGS1
113734352	113800365	chr9	-	exonic	hsa_circ_0087962	-1.6150	0.047995	LPAR1
52446826	52448603	chr3	+	exonic	hsa_circ_0004912	2.3680	0.048024	PHF7
99718694	99719539	chr8	-	exonic	hsa_circ_0004592	1.6102	0.048107	STK3
243708811	243859018	chr1	-	exonic	N/A	1.7832	0.048122	AKT3
18243356	18250970	chr17	-	exonic	hsa_circ_0042339	-1.5868	0.048122	SHMT1
150923840	150935195	chr1	+	exonic	hsa_circ_0006352	-1.6342	0.048180	SETDB1
5268416	5271763	chr17	+	exonic	hsa_circ_0004621	1.6135	0.048208	RABEP1
113057425	113057606	chr2	+	exonic	hsa_circ_0001062	1.7531	0.048214	ZC3H6
58290118	58291514	chr19	+	intronic	N/A	1.6683	0.048230	ZNF587
222997197	223000943	chr1	+	exonic	N/A	-1.5079	0.048257	RP11-452F19.3
78197050	78201759	chr17	+	exonic	N/A	-1.7706	0.048265	SLC26A11
63711737	63798760	chr2	-	exonic	hsa_circ_0006759	1.6666	0.048276	WDPCP
68155889	68225678	chr16	+	exonic	hsa_circ_0039929	3.8119	0.048314	NFATC3
93608139	93611093	chr10	+	exonic	hsa_circ_0008332	1.9873	0.048341	TNKS2
10031484	10035530	chrX	+	exonic	hsa_circ_0007685	2.2108	0.048375	WWC3
86292641	86301070	chr9	-	exonic	hsa_circ_0003715	2.2321	0.048423	UBQLN1
68717321	68795482	chr2	+	sense overlapping	hsa_circ_0001024	2.8269	0.048436	APLF
225140371	225195246	chr1	+	exonic	hsa_circ_0016601	-1.5969	0.048452	DNAH14
50741596	50763992	chr15	+	exonic	hsa_circ_0000599	2.1917	0.048475	USP8
17059499	17059748	chr3	-	antisense	hsa_circ_0001275	-1.6394	0.048492	PLCL2
42730785	42744343	chr1	-	exonic	hsa_circ_0006848	1.9668	0.048515	FOXJ3
45059426	45059793	chr15	+	sense overlapping	N/A	-1.5666	0.048516	TRIM69
113960799	113977741	chr13	+	exonic	hsa_circ_0030997	-1.9238	0.048549	LAMP1
155640110	155644887	chr1	-	exonic	N/A	1.7437	0.048571	YY1AP1
51829537	51831701	chr1	-	exonic	hsa_circ_0012417	-1.5006	0.048574	EPS15
96314841	96322374	chr5	+	exonic	hsa_circ_0001513	-1.6224	0.048600	LNPEP
26512204	26512291	chr17	+	exonic	hsa_circ_0042521	-1.7144	0.048603	NLK
34699833	34706566	chr19	+	exonic	hsa_circ_0050461	1.7387	0.048603	LSM14A
103002341	103027210	chr9	+	exonic	N/A	-1.5099	0.048610	INVS
88983057	88987031	chr4	+	exonic	hsa_circ_0004577	2.0058	0.048614	PKD2
141811902	141820683	chr3	-	exonic	hsa_circ_0008304	1.9262	0.048630	TFDP2
15601324	15651474	chr2	-	exonic	hsa_circ_0052767	-1.6095	0.048637	NBAS
146209155	146216113	chr6	-	exonic	hsa_circ_0001649	3.6196	0.048689	SHPRH
41365625	41366763	chr15	-	exonic	hsa_circ_0034677	1.5681	0.048692	INO80
72958135	72960247	chr2	-	exonic	hsa_circ_0001030	2.6652	0.048784	EXOC6B
68337215	68343511	chr11	+	exonic	hsa_circ_0023233	2.5336	0.048799	PPP6R3
3330258	3395596	chr9	-	exonic	hsa_circ_0086242	-1.5953	0.048815	RFX3
66828270	66839043	chr15	+	exonic	hsa_circ_0008168	1.6055	0.048828	ZWILCH
216269111	216300791	chr2	-	exonic	hsa_circ_0058123	-1.5843	0.048837	FN1

53024621	53027487	chr17	+	exonic	hsa_circ_0044695	-1.6500	0.048840	TOM1L1
62407030	62422143	chr20	-	exonic	hsa_circ_0002805	-1.5111	0.048849	ZBTB46
118890859	118892596	chr11	+	exonic	N/A	-1.5821	0.048857	TRAPPC4
24523658	24524213	chr20	+	sense overlapping	N/A	-1.5850	0.048909	SYNDIG1
103384501	103436193	chr10	-	exonic	hsa_circ_0005741	1.8303	0.048914	FBXW4
73215386	73228707	chr2	-	exonic	hsa_circ_0004699	-1.6055	0.048942	SFXN5
47098310	47103836	chr3	-	exonic	hsa_circ_0065149	1.9961	0.048942	SETD2
37580879	37584043	chr17	-	exonic	hsa_circ_0007539	1.6363	0.048972	MED1
145838898	145842016	chr3	-	exonic	N/A	1.6749	0.049063	PLOD2
20240809	20240905	chr2	-	intronic	hsa_circ_0000981	-1.5621	0.049092	LAPTM4A
122273422	122280607	chr10	+	exonic	hsa_circ_0008896	-1.7486	0.049145	PPAPDC1A
162669971	162688935	chr1	+	sense overlapping	N/A	-1.5593	0.049149	DDR2
75464743	75464836	chr10	-	exonic	hsa_circ_0018844	1.6211	0.049166	BMS1P4
116627861	116631668	chr11	-	exonic	N/A	-1.6555	0.049174	BUD13
64564228	64608670	chr13	-	exonic	hsa_circ_0030388	-1.5922	0.049227	AK057471
77700452	77703365	chr13	-	exonic	hsa_circ_0000495	2.0293	0.049270	MYCBP2
100889777	100908552	chr1	+	exonic	hsa_circ_0000097	2.5880	0.049302	CDC14A
29916172	29917448	chr16	+	exonic	N/A	-1.5676	0.049326	ASPHD1
129102786	129157976	chr9	+	exonic	hsa_circ_0008240	-1.6017	0.049331	MVB12B
70644941	70645407	chr17	-	exonic	hsa_circ_0045526	-1.6152	0.049477	SLC39A11
30890069	30898940	chr7	+	exonic	hsa_circ_0079743	-1.5094	0.049478	FAM188B
33060883	33063720	chr7	-	exonic	hsa_circ_0079800	2.0259	0.049480	NT5C3A
50131343	50141145	chr14	-	exonic	hsa_circ_0031787	2.0293	0.049484	POLE2
89600213	89650899	chr6	-	exonic	hsa_circ_0003393	1.6569	0.049533	RNGTT
20975317	20976684	chr19	+	exonic	N/A	1.9439	0.049537	ZNF66
46521466	46546422	chr1	-	exonic	hsa_circ_0012300	-1.7168	0.049603	PIK3R3
7491497	7491864	chr17	-	exonic	hsa_circ_0041939	-1.8056	0.049657	SOX15
133135707	133138703	chr6	+	exonic	hsa_circ_0077877	-1.7925	0.049706	RPS12
103432671	103433430	chr10	-	exonic	hsa_circ_0019591	2.9276	0.049713	FBXW4
126323958	126326678	chr10	-	intronic	N/A	-1.7013	0.049727	FAM53B
134076752	134079742	chr5	+	exonic	hsa_circ_0003154	2.5024	0.049804	CAMLG
136389287	136396692	chr2	+	exonic	hsa_circ_0001069	1.8110	0.049820	R3HDM1
31532050	31532424	chr1	-	exonic	hsa_circ_0000045	1.8460	0.049895	PUM1
91947919	91952074	chr14	-	exonic	hsa_circ_0003045	1.8909	0.049933	SMEK1
18852886	18856973	chr16	-	exonic	hsa_circ_0006434	2.8869	0.049933	SMG1
3524281	3524706	chr17	-	sense overlapping	N/A	-1.5436	0.049933	SHPK
25443870	25444056	chr14	-	exonic	hsa_circ_0031408	-1.6068	0.049959	STXBP6
43623730	43629994	chr20	+	exonic	hsa_circ_0060530	2.9913	0.049967	STK4
10077970	10081529	chr3	+	exonic	hsa_circ_0001266	-1.6458	0.049967	FANCD2
42294506	42323435	chr8	-	exonic	hsa_circ_0001795	-1.5879	0.049972	SLC20A2

Table 10 (MDD baseline vs Control baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
37159809	37161502	chr20	+	exonic	hsa_circ_0060342	2.1899	1.4000E-10	RALGAPB
6998051	7006651	chr4	+	exonic	hsa_circ_0003201	1.7526	6.0000E-10	TBC1D14
27447477	27447615	chr10	+	exonic	hsa_circ_0018031	2.0229	1.3800E-09	MASTL
132990630	133002144	chr7	+	exonic	hsa_circ_0082440	1.7027	5.5600E-09	EXOC4

54675169	54680872	chr12	+	exonic	hsa_circ_0026700	1.6491	7.0800E-09	HNRNPA1
37105033	37105170	chr2	-	exonic	hsa_circ_0054033	2.2505	8.7600E-09	STRN
224746658	224760347	chr2	-	exonic	hsa_circ_0001101	2.5327	2.5170E-08	WDFY1
42069936	42084913	chr22	-	exonic	hsa_circ_0063596	1.8846	3.9120E-08	NHP2L1
53585106	53590604	chr12	-	exonic	hsa_circ_0026568	1.7467	1.3749E-07	ITGB7
169663839	169664181	chr1	-	intronic	hsa_circ_0000157	2.1239	3.9378E-07	SELL
114905750	114905903	chr9	-	exonic	hsa_circ_0088059	1.7553	0.000001	SUSD1
21335426	21338430	chr20	+	exonic	N/A	1.8442	0.000001	XRN2
134353337	134353833	chr9	+	intronic	N/A	1.6014	0.000001	PRRC2B
8138461	8139361	chr19	-	intronic	hsa_circ_0092332	1.9221	0.000002	FBN3
145522974	145547826	chr5	-	exonic	hsa_circ_0074407	1.7462	0.000002	LARS
896779	901546	chr5	+	exonic	hsa_circ_0071681	1.5686	0.000003	TRIP13
6452441	6456552	chr7	-	exonic	hsa_circ_0006093	1.5476	0.000003	DAGLB
140458885	140459606	chr9	-	exonic	hsa_circ_0006502	1.5114	0.000003	DPH7
10186276	10188722	chr2	+	exonic	N/A	1.6714	0.000003	KLF11
145144493	145205763	chr5	-	exonic	hsa_circ_0008132	1.6215	0.000004	PRELID2
6456257	6456552	chr7	-	exonic	hsa_circ_0002067	1.5473	0.000004	DAGLB
126434011	126496057	chr6	+	antisense	N/A	1.7018	0.000005	MIR5695
34941169	34957919	chr19	+	exonic	hsa_circ_0050547	1.7190	0.000005	UBA2
17910716	17974508	chr4	-	exonic	N/A	1.7549	0.000005	LCORL
79818266	79842185	chr7	+	exonic	N/A	1.5269	0.000006	GNAI1
135979320	136002789	chr3	+	exonic	N/A	1.9035	0.000006	PCCB
10865809	10868382	chr12	-	exonic	hsa_circ_0025460	1.9557	0.000007	YBX3
25265498	25266456	chr8	+	exonic	hsa_circ_0007618	1.5590	0.000007	DOCK5
171537385	171540560	chr1	+	exonic	hsa_circ_0015232	1.8032	0.000009	PRRC2C
64587155	64595958	chr5	-	exonic	hsa_circ_0002529	1.5201	0.000010	ADAMTS6
43628823	43652158	chr15	+	sense overlapping	N/A	1.6297	0.000011	ADAL
43668295	43669265	chr15	+	exonic	hsa_circ_0034953	1.6629	0.000011	TUBGCP4
142593	150507	chr16	-	exonic	hsa_circ_0037128	1.5644	0.000016	NPRL3
170626457	170632347	chr6	+	exonic	hsa_circ_0078768	1.7188	0.000018	FAM120B
170667931	170669824	chr5	+	exonic	hsa_circ_0004736	1.7801	0.000021	RANBP17
23381682	23391205	chr7	-	exonic	N/A	1.6812	0.000022	IGF2BP3
89853414	89866052	chr12	-	exonic	N/A	2.0398	0.000024	POC1B
52777367	52786352	chr3	-	exonic	hsa_circ_0066113	1.5949	0.000025	NEK4
23495059	23502883	chr14	-	exonic	hsa_circ_0031268	1.5649	0.000027	PSMB5
73775150	73775265	chr17	-	intronic	hsa_circ_0000803	1.5082	0.000029	H3F3B
10015311	10016172	chr3	-	exonic	hsa_circ_0064195	1.5026	0.000035	EMC3
33825619	33840156	chr21	+	exonic	hsa_circ_0061481	1.8141	0.000037	EVA1C
23735156	23745632	chr1	-	exonic	N/A	1.7692	0.000039	TCEA3
4516153	4519466	chr16	-	exonic	hsa_circ_0007788	2.6511	0.000043	NMRAL1
50904191	50904503	chr22	-	exonic	hsa_circ_0063982	1.5809	0.000044	SBF1
100895143	100901720	chr6	-	exonic	hsa_circ_0007217	1.5329	0.000049	SIM1
89289564	89291210	chr16	+	exonic	N/A	1.5708	0.000055	ZNF778
44513849	44515020	chr22	+	sense overlapping	N/A	1.5767	0.000057	PARVB
29237938	29246335	chr18	-	exonic	hsa_circ_0047351	1.7543	0.000058	B4GALT6
207988497	207989128	chr2	-	exonic	N/A	1.5061	0.000061	KLF7
73584563	73584911	chr17	-	antisense	hsa_circ_0000802	1.5116	0.000066	MYO15B
22669237	22683186	chrY	-	sense overlapping	N/A	1.6356	0.000068	TTTY10

84112887	84132553	chr14	+	intergenic	N/A	1.6952	0.000073	
23495059	23495584	chr14	-	exonic	hsa_circ_0031267	1.7319	0.000074	PSMB5
75104453	76279715	chr7	-	sense overlapping	hsa_circ_0006766	1.7258	0.000077	CCL24
4076755	4080626	chr11	+	exonic	hsa_circ_0020934	1.6010	0.000082	STIM1
127937917	127941124	chr3	-	antisense	hsa_circ_0001334	2.1228	0.000083	MCM2
30611319	30630569	chr10	-	exonic	N/A	1.5507	0.000084	MTPAP
181846744	181848820	chr2	+	exonic	hsa_circ_0007011	1.5784	0.000091	UBE2E3
37425918	37426651	chr9	+	exonic	hsa_circ_0087063	-1.6982	0.000099	GRHPR
4797948	4798348	chr17	+	intronic	hsa_circ_0092278	-1.7597	0.000115	MINK1
74433139	74434317	chr7	+	exonic	hsa_circ_0080638	1.6877	0.000118	GATSL1
125472197	125474142	chr11	+	exonic	hsa_circ_0024766	1.8617	0.000122	STT3A
7849045	7849304	chr17	+	exonic	hsa_circ_0008310	1.5689	0.000133	CNTROB
173726114	173744981	chr1	+	exonic	hsa_circ_0015278	2.9012	0.000139	KLHL20
44290402	44303983	chr1	+	exonic	hsa_circ_0012107	1.5908	0.000142	ST3GAL3
18770594	18781183	chr17	+	exonic	hsa_circ_0042359	1.6172	0.000143	PRPSAP2
82302569	82372915	chr1	+	exonic	hsa_circ_0013048	1.6057	0.000148	LPHN2
16133348	16208501	chr11	-	exonic	N/A	1.8915	0.000152	SOX6
105953535	105955124	chr14	+	exonic	hsa_circ_0033628	1.9354	0.000153	CRIP1
40669428	40681774	chr22	+	exonic	hsa_circ_0063411	1.9219	0.000155	TNRC6B
68501974	68503656	chr15	-	exonic	hsa_circ_0036052	1.6291	0.000159	CLN6
52693054	52729678	chr19	+	exonic	hsa_circ_0052067	1.5208	0.000172	PPP2R1A
224918163	224918276	chr1	+	exonic	hsa_circ_0016598	1.6261	0.000182	CNIH3
48866179	48869991	chr8	-	exonic	hsa_circ_0084464	1.6031	0.000187	PRKDC
27834800	27834884	chr6	-	sense overlapping	hsa_circ_0001596	1.9419	0.000190	HIST1H1B
131860291	131860929	chr9	-	exonic	hsa_circ_0003362	1.6191	0.000194	CRAT
59376327	59377984	chr15	+	exonic	hsa_circ_0035482	1.5132	0.000201	RNF111
105563560	105573453	chr6	-	exonic	hsa_circ_0077527	1.5044	0.000225	BVES
13532533	13581264	chr20	-	intronic	N/A	3.4574	0.000232	TASP1
175426288	175426438	chr2	-	sense overlapping	hsa_circ_0001082	1.5918	0.000241	WIPF1
56600621	56601081	chr3	+	exonic	hsa_circ_0001312	-1.5787	0.000250	CCDC66
3988781	4080626	chr11	+	exonic	hsa_circ_0020929	1.5585	0.000255	STIM1
32354656	32358098	chr20	+	exonic	hsa_circ_0059880	1.5646	0.000264	ZNF341
147131761	147131890	chr1	-	exonic	hsa_circ_0013959	1.6670	0.000272	ACP6
155411422	155448734	chr6	+	exonic	hsa_circ_0078383	1.5447	0.000288	TIAM2
168110970	168112932	chr5	-	exonic	hsa_circ_0074903	1.6422	0.000296	SLIT3
77214859	77230123	chr7	+	exonic	hsa_circ_0003764	-1.5464	0.000311	PTPN12
6646085	6647162	chr12	+	exonic	hsa_circ_0025196	1.6680	0.000312	GAPDH
146432295	146451816	chrX	-	intergenic	N/A	1.5010	0.000327	
25402743	25402963	chr12	+	antisense	hsa_circ_0000383	1.5773	0.000330	KRAS
58562378	58594266	chr16	-	exonic	hsa_circ_0039626	1.9614	0.000338	CNOT1
39073734	39073896	chr5	+	antisense	hsa_circ_0001477	1.5883	0.000346	RICTOR
131193709	131196192	chr7	-	exonic	hsa_circ_0001973	1.5834	0.000359	PODXL
36036501	36038429	chr19	+	exonic	hsa_circ_0050607	1.5209	0.000370	TMEM147
57535669	57535748	chr15	+	exonic	hsa_circ_0035426	1.5482	0.000392	TCF12
33315062	33324562	chr20	-	exonic	hsa_circ_0004468	1.5141	0.000396	NCOA6
100035289	100052403	chr2	-	exonic	hsa_circ_0001052	1.8217	0.000446	REV1
36245469	36247930	chr19	-	exonic	hsa_circ_0050649	1.7294	0.000456	HSPB6
3205916	3209234	chr10	-	exonic	hsa_circ_0003022	1.5189	0.000463	PITRM1

48597719	48597913	chr4	-	intronic	N/A	1.5893	0.000467	FRYL
17059499	17059748	chr3	-	antisense	hsa_circ_0001275	1.5249	0.000486	PLCL2
23371395	23380612	chr14	-	exonic	hsa_circ_0031235	-1.8396	0.000488	RBM23
201786215	201796102	chr1	+	exonic	hsa_circ_0015911	1.5037	0.000493	NAV1
52478187	52553491	chr16	-	exonic	N/A	1.5181	0.000495	TOX3
46515157	46515754	chr11	-	exonic	hsa_circ_0009155	1.5496	0.000523	AMBRA1
1352719	1356247	chr20	-	exonic	hsa_circ_0059181	1.6053	0.000563	FKBP1A
51797729	51800460	chr18	+	exonic	hsa_circ_0007180	-1.5088	0.000612	POLI
44257772	44303983	chr1	+	exonic	hsa_circ_0012103	1.5086	0.000746	ST3GAL3
151116991	151122005	chr6	+	exonic	hsa_circ_0078264	2.1360	0.000776	PLEKHG1
23378691	23380612	chr14	-	exonic	hsa_circ_0000524	-1.7970	0.000799	RBM23
42231920	42232779	chr17	+	exonic	hsa_circ_0004239	1.5690	0.000857	C17orf53
33608730	33610023	chr19	+	exonic	hsa_circ_0050444	1.7095	0.000866	GPATCH1
29483000	29497015	chr17	+	exonic	hsa_circ_0007542	1.5898	0.000874	NF1
153004802	153005376	chr1	+	exonic	hsa_circ_0014213	1.7147	0.000876	SPRR1B
34832618	34832848	chr20	+	exonic	hsa_circ_0060176	1.5585	0.000900	AAR2
98831367	98864830	chr8	+	exonic	hsa_circ_0085018	1.5362	0.000909	LAPTM4B
144464661	144465125	chr4	+	exonic	hsa_circ_0001445	-1.7820	0.000913	SMARCA5
196544755	196548630	chr2	+	exonic	hsa_circ_0057551	-1.7222	0.000946	SLC39A10
196118683	196120490	chr3	-	exonic	hsa_circ_0005051	-1.9549	0.000960	UBXN7
10204997	10211619	chr1	+	exonic	N/A	1.7848	0.000994	UBE4B
107260799	107263621	chr11	-	exonic	N/A	-1.5347	0.001068	CWF19L2
156468903	156489628	chr6	-	intergenic	hsa_circ_0001655	1.6709	0.001153	
59204761	59209198	chr15	-	exonic	hsa_circ_0000605	-1.6035	0.001181	SLTM
88726648	88727530	chr15	-	exonic	hsa_circ_0036667	1.5092	0.001197	NTRK3
89165951	89185063	chr11	-	exonic	hsa_circ_0023990	2.1834	0.001281	NOX4
19627435	19663412	chr16	+	exonic	hsa_circ_0005699	1.9055	0.001317	C16orf62
19042277	19042456	chr2	+	intronic	hsa_circ_0000979	1.5164	0.001398	XLOC_001374
3474817	3477249	chr17	-	exonic	N/A	1.5279	0.001431	TRPV1
57237616	57250507	chr4	-	exonic	N/A	1.6077	0.001433	AASDH
69644908	69656342	chr12	+	exonic	hsa_circ_0000417	-1.6831	0.001465	CPSF6
981641	1004666	chr16	-	exonic	hsa_circ_0037274	1.6416	0.001517	LMF1
98643320	98645505	chr7	-	exonic	N/A	2.5275	0.001559	SMURF1
91723962	91727541	chr9	-	sense overlapping	hsa_circ_0007738	1.5919	0.001636	SHC3
196118683	196129888	chr3	-	intronic	N/A	-1.7073	0.001718	UBXN7
171965322	171969331	chr3	+	exonic	hsa_circ_0006156	-1.5436	0.001784	FNDC3B
16386664	16415895	chr21	-	exonic	hsa_circ_0004771	-1.7792	0.001847	NRIP1
59204757	59209198	chr15	-	sense overlapping	N/A	-1.6006	0.001847	SLTM
121004627	121009094	chr12	+	exonic	hsa_circ_0028912	1.6792	0.001853	RNF10
23375403	23380612	chr14	-	exonic	hsa_circ_0031241	-1.6616	0.001914	RBM23
103432671	103433430	chr10	-	exonic	hsa_circ_0019591	-1.5849	0.002007	FBXW4
104714065	104717880	chr7	+	exonic	hsa_circ_0001736	-1.7675	0.002110	KMT2E
112723882	112724819	chr10	+	exonic	hsa_circ_0000261	-1.6331	0.002130	SHOC2
21295966	21307720	chr1	-	exonic	hsa_circ_0000025	1.5051	0.002152	EIF4G3
183361267	183390272	chr3	+	exonic	hsa_circ_0001366	-1.5765	0.002241	KLHL24
74666420	74670475	chr16	-	exonic	hsa_circ_0007548	1.5107	0.002243	RFWD3
76344422	76388643	chr6	+	exonic	hsa_circ_0001613	-1.6425	0.002336	SENP6
13579682	13584457	chr6	+	exonic	hsa_circ_0007218	-1.5507	0.002374	SIRT5
162546566	162567648	chr1	+	exonic	hsa_circ_0004646	1.5406	0.002560	UAP1

61632920	61633008	chr2	+	antisense	hsa_circ_0001015	1.6227	0.002756	USP34
197592293	197602646	chr3	+	exonic	hsa_circ_0008351	-1.5878	0.002848	LRCH3
37971709	37974243	chr8	+	exonic	hsa_circ_0083957	-1.5497	0.002888	ASH2L
205585605	205593019	chr1	-	exonic	hsa_circ_0000175	-1.6656	0.003035	ELK4
51804072	51813781	chr16	+	exonic	hsa_circ_0003428	-1.5491	0.003070	POLI
196118683	196129890	chr3	-	exonic	hsa_circ_0001380	-1.6377	0.003120	UBXN7
30495147	30495584	chr16	+	exonic	hsa_circ_0000690	-1.6252	0.003144	ITGAL
57014000	57016139	chr20	+	exonic	hsa_circ_0001173	-1.6775	0.003163	VAPB
151960100	152012423	chr7	-	exonic	hsa_circ_0006784	-1.6438	0.003167	KMT2C
103427642	103433430	chr10	-	exonic	hsa_circ_0019589	-1.6189	0.003306	FBXW4
31139461	31144271	chr14	+	exonic	hsa_circ_0009140	-1.6134	0.003403	SCFD1
197597030	197602646	chr3	+	exonic	hsa_circ_0005873	-1.5149	0.003424	LRCH3
122495211	122495481	chr12	-	antisense	hsa_circ_0000453	1.6547	0.003478	BCL7A
13632601	13644961	chr6	-	exonic	hsa_circ_0001577	-1.5681	0.003762	RANBP9
28458581	28544344	chr12	+	exonic	hsa_circ_0008250	-1.6479	0.003821	CCDC91
169854206	169863309	chr3	-	exonic	hsa_circ_0001965	-1.5974	0.003901	PHC3
76082583	76083174	chr17	+	exonic	hsa_circ_0045862	1.5371	0.003928	TNRC6C
33741700	33747412	chr1	+	exonic	N/A	1.7535	0.004037	ZNF362
5815804	5828013	chr10	-	exonic	hsa_circ_0000210	-1.5221	0.004089	GDI2
33091993	33101669	chr13	-	exonic	hsa_circ_0000471	-1.7130	0.004106	N4BP2L2
41515056	41518061	chr13	-	exonic	hsa_circ_0030051	-1.5119	0.004131	ELF1
117944807	118009049	chr1	+	exonic	hsa_circ_0000120	-1.5664	0.004236	MAN1A2
150496687	150512748	chr5	-	exonic	hsa_circ_0074598	-1.5490	0.004404	ANXA6
109046047	109048186	chr12	-	exonic	hsa_circ_0000437	-1.7666	0.004534	CORO1C
144464665	144465125	chr4	+	sense overlapping	N/A	-1.6861	0.004635	SMARCA5
151656409	151729550	chr4	-	exonic	hsa_circ_0071174	-1.5250	0.004681	LRBA
50073902	50093067	chr5	+	exonic	hsa_circ_0072437	-1.6152	0.004851	PARP8
17135209	17138460	chr21	+	exonic	hsa_circ_0001178	-1.5592	0.005276	USP25
89628179	89628539	chr16	+	intronic	hsa_circ_0092337	1.5648	0.005368	RPL13
191765289	191789319	chr2	+	exonic	hsa_circ_0001085	-1.6748	0.005486	GLS
30954186	30956926	chr20	+	exonic	hsa_circ_0001136	-1.5449	0.005489	ASXL1
58996272	58996401	chr1	-	exonic	hsa_circ_0012722	-1.8912	0.005495	OMA1
58992932	59002413	chr1	-	exonic	hsa_circ_0000073	-1.9835	0.005698	OMA1
196129822	196134264	chr3	-	exonic	hsa_circ_0068655	-1.6312	0.005789	UBXN7
16415815	16415895	chr21	-	exonic	hsa_circ_0061276	-1.6981	0.005840	NRIP1
151727422	151729550	chr4	-	exonic	hsa_circ_0071196	-1.6542	0.005891	LRBA
57808781	57816308	chr17	+	exonic	hsa_circ_0006508	-1.5673	0.006135	VMP1
86292641	86301070	chr9	-	exonic	hsa_circ_0003715	-1.5228	0.006135	UBQLN1
62299506	62306191	chr15	-	exonic	hsa_circ_0000607	-1.7661	0.006584	VPS13C
77631183	77632364	chr9	-	exonic	hsa_circ_0004189	-1.5416	0.006625	C9orf41
111883774	111890244	chr10	+	exonic	hsa_circ_0003357	-1.6058	0.006760	ADD3
223084658	223097002	chr2	-	exonic	hsa_circ_0007333	1.5029	0.006891	PAX3
16386664	16386787	chr21	-	exonic	hsa_circ_0061274	-1.5185	0.007149	NRIP1
183368083	183369064	chr3	+	exonic	hsa_circ_0001369	-1.6858	0.007305	KLHL24
58971731	59004982	chr1	-	exonic	hsa_circ_0002316	-1.9032	0.007362	OMA1
36245469	36246795	chr19	-	exonic	hsa_circ_0050648	1.5251	0.007523	HSPB6
140086068	140086817	chr9	-	exonic	hsa_circ_0089652	1.5283	0.007763	TPRN
117910084	117957453	chr1	+	exonic	hsa_circ_0013729	-1.6278	0.007949	MAN1A2
25477659	25477979	chr20	-	intronic	hsa_circ_0092338	1.5077	0.007970	NINL
76910271	76928416	chr10	+	exonic	hsa_circ_0018905	3.2318	0.008020	SAMD8

75264433	75264514	chr3	+	sense overlapping	hsa_circ_0006169	1.7377	0.008179	HNRNPA3P6
7826418	7841374	chr7	+	sense overlapping	hsa_circ_0001676	-1.6815	0.008222	UMAD1
123924133	123928458	chr9	+	exonic	hsa_circ_0088333	-1.5415	0.008290	CNTRL
45860527	45860957	chr19	-	exonic	hsa_circ_0051470	1.5151	0.008387	ERCC2
64791491	64792365	chr15	+	sense overlapping	hsa_circ_0000615	-1.7506	0.008448	ZNF609
33095509	33111164	chr13	-	exonic	hsa_circ_0029937	-1.7115	0.008655	N4BP2L2
155457868	155473602	chr7	+	exonic	hsa_circ_0001771	-1.5273	0.008865	RBM33
80412669	80415142	chr15	+	exonic	hsa_circ_0000643	-1.5059	0.008874	ZFAND6
52729602	52729875	chr4	+	exonic	hsa_circ_0069715	-1.5194	0.008876	DCUN1D4
195415403	195416309	chr3	+	exonic	hsa_circ_0008267	-1.7764	0.008968	LINC00969
11958205	11984847	chr17	+	exonic	hsa_circ_0007508	-1.5263	0.009008	MAP2K4
24357988	24369956	chr2	+	exonic	hsa_circ_0000982	-1.6753	0.009052	FAM228B
243858892	244006584	chr1	-	exonic	hsa_circ_0004649	-1.5988	0.009084	AKT3
34147027	34149837	chr17	+	exonic	hsa_circ_0043138	-1.6329	0.009485	TAF15
124071293	124074996	chr12	+	exonic	hsa_circ_0000458	-1.5815	0.009493	TMED2
134381500	134381840	chr9	+	exonic	hsa_circ_0001897	-1.6056	0.009640	POMT1
68155889	68160513	chr16	+	exonic	hsa_circ_0000711	-1.6774	0.009848	NFATC3
76910271	76910864	chr10	+	exonic	hsa_circ_0006148	2.1478	0.009911	SAMD8
24190831	24197887	chrX	+	exonic	hsa_circ_0007108	-1.5053	0.010060	ZFX
52773404	52773806	chr8	-	exonic	hsa_circ_0001801	-1.6011	0.010107	PCMTD1
77055327	77065626	chr4	-	exonic	hsa_circ_0070039	-1.6076	0.010478	NUP54
86292641	86293514	chr9	-	exonic	hsa_circ_0001865	-1.5970	0.010501	UBQLN1
109048081	109095099	chr12	-	exonic	hsa_circ_0028072	-1.5209	0.010592	CORO1C
86293355	86301070	chr9	-	exonic	hsa_circ_0087357	-1.6302	0.010932	UBQLN1
153591507	153591640	chr2	+	exonic	hsa_circ_0056754	1.5085	0.010936	ARL6IP6
21668877	21743273	chr6	+	exonic	N/A	1.5480	0.011030	LINC00340
24357988	24362320	chr2	+	exonic	hsa_circ_0007270	-1.5960	0.011200	FAM228B
37633006	37640126	chr4	-	exonic	hsa_circ_0001400	-1.5496	0.011484	RELL1
191765289	191775047	chr2	+	exonic	hsa_circ_0057521	-1.6111	0.011720	GLS
28408513	28460682	chr12	+	exonic	N/A	-1.6773	0.011777	CCDC91
37126308	37126939	chr9	+	exonic	hsa_circ_0001860	-1.6263	0.011819	ZCCHC7
149613259	149639014	chr3	+	exonic	hsa_circ_0006801	-1.6487	0.011862	RNF13
227729319	227729842	chr2	+	exonic	hsa_circ_0001104	-1.6119	0.012110	RHBDD1
49609654	49613024	chr10	+	exonic	hsa_circ_0018315	-1.5416	0.012113	MAPK8
41191341	41196173	chr15	+	exonic	hsa_circ_0034642	1.5609	0.012126	VPS18
1125950	1132297	chr10	+	exonic	hsa_circ_0017446	-1.5005	0.012219	WDR37
132609079	132609271	chr12	-	antisense	hsa_circ_0000463	1.6392	0.012317	EP400NL
88116475	88116842	chr4	-	exonic	hsa_circ_0002538	-1.5972	0.012434	KLHL8
88200377	88248289	chr9	-	exonic	hsa_circ_0087386	-1.5369	0.012702	AGTPBP1
36681395	36681695	chr22	-	intronic	hsa_circ_0092283	1.7541	0.012745	MYH9
13639794	13644961	chr6	-	exonic	hsa_circ_0001578	-1.7350	0.012978	RANBP9
62303908	62305446	chr20	+	exonic	hsa_circ_0061170	1.5096	0.013009	RTEL1
65473657	65492309	chr2	+	exonic	hsa_circ_0008529	-1.9516	0.013128	ACTR2
117944807	117948267	chr1	+	exonic	hsa_circ_0000116	-1.5077	0.013242	MAN1A2
36230203	36231267	chr4	-	exonic	hsa_circ_0069399	-1.6597	0.013280	ARAP2
9195548	9221997	chr18	+	exonic	hsa_circ_0046843	-1.5540	0.013288	ANKRD12
141710989	141716304	chr8	-	exonic	hsa_circ_0005273	-1.5593	0.013316	PTK2
117957334	117963271	chr1	+	exonic	hsa_circ_0013737	-1.6259	0.013554	MAN1A2

231226328	231307814	chr2	+	sense overlapping	hsa_circ_0001108	-1.5033	0.013775	SP100
58999624	59000003	chr1	-	exonic	N/A	-1.7938	0.014087	OMA1
34151081	34165557	chr17	+	exonic	hsa_circ_0000758	-1.6301	0.014441	TAF15
58971731	59002413	chr1	-	exonic	hsa_circ_0000072	-1.8395	0.014681	OMA1
155465560	155473602	chr7	+	exonic	hsa_circ_0001772	-1.6315	0.014733	RBM33
38792600	38868560	chr21	+	exonic	hsa_circ_0061694	-1.9027	0.014842	DYRK1A
122881110	122893258	chr5	+	exonic	hsa_circ_0001522	-1.6015	0.014993	CSNK1G3
58755107	58755971	chr20	+	intronic	hsa_circ_0001174	-1.6509	0.015149	RP5-1043L13.1
57814813	57816308	chr17	+	exonic	hsa_circ_0044875	-1.6159	0.015479	VMP1
86292641	86297981	chr9	-	exonic	hsa_circ_0006466	-1.5677	0.015619	UBQLN1
41961025	41962156	chr15	+	exonic	hsa_circ_0000591	-1.7867	0.015894	MGA
1712336	1714425	chrX	+	exonic	hsa_circ_0007352	2.3769	0.016035	AKAP17A
137015277	137041727	chr6	-	exonic	hsa_circ_0007798	-1.5039	0.016362	MAP3K5
86297865	86301070	chr9	-	exonic	hsa_circ_0005142	-1.5442	0.017590	UBQLN1
65473318	65492309	chr2	+	sense overlapping	hsa_circ_0001022	-1.8632	0.017655	ACTR2
53068519	53069224	chr12	-	exonic	hsa_circ_0026462	1.5932	0.017705	KRT1
86293355	86297981	chr9	-	exonic	hsa_circ_0001866	-1.5660	0.018454	UBQLN1
117676687	117680079	chrX	+	exonic	N/A	-1.5136	0.019918	DOCK11
86294689	86297981	chr9	-	exonic	hsa_circ_0001867	-1.5461	0.020072	UBQLN1
44046021	44048964	chr15	+	exonic	hsa_circ_0002151	-1.5256	0.020098	PDIA3
34144719	34149837	chr17	+	exonic	N/A	-1.5324	0.020422	TAF15
49742748	49752790	chr13	+	exonic	hsa_circ_0006978	-1.5156	0.020568	FNDC3A
22999874	23030758	chr7	-	exonic	hsa_circ_0008951	-1.6035	0.020586	FAM126A
15863654	15889942	chr10	-	exonic	hsa_circ_0000220	-1.6783	0.020726	FAM188A
85718584	85742653	chr11	-	exonic	hsa_circ_0023936	-1.6351	0.020757	PICALM
58971731	58971861	chr1	-	exonic	hsa_circ_0012717	-1.8194	0.020927	OMA1
85722072	85742653	chr11	-	exonic	hsa_circ_0000347	-1.6175	0.021189	PICALM
219467402	219468493	chr1	+	sense overlapping	N/A	1.9661	0.021292	XLOC_000566
68155889	68225678	chr16	+	exonic	hsa_circ_0039929	-1.5678	0.021514	NFATC3
85733409	85742653	chr11	-	exonic	hsa_circ_0023942	-1.6052	0.022072	PICALM
88920106	88924932	chr9	-	exonic	hsa_circ_0001869	-1.5116	0.022137	ZCCHC6
23650789	23651172	chr7	+	exonic	hsa_circ_0001684	-1.6386	0.022337	CCDC126
88190229	88211364	chr9	-	exonic	hsa_circ_0005202	-1.5283	0.022634	AGTPBP1
151719232	151738409	chr4	-	exonic	hsa_circ_0008618	-1.5606	0.022650	LRBA
56277780	56284152	chr4	+	exonic	hsa_circ_0001414	-1.5491	0.022953	TMEM165
72850146	72857113	chr5	-	exonic	N/A	1.5617	0.023205	ANKRA2
20811404	20811554	chr14	-	sense overlapping	hsa_circ_0000518	-1.5112	0.023626	RPPH1
45715378	45780869	chr2	-	exonic	N/A	-1.7093	0.024533	SRBD1
189850390	189859058	chr2	+	exonic	hsa_circ_0057360	1.5029	0.024692	COL3A1
5691329	5691678	chr19	+	exonic	hsa_circ_0048766	1.5155	0.025229	RPL36
231307651	231314970	chr2	+	exonic	hsa_circ_0003922	-1.6348	0.025257	SP100
49694940	49707217	chr5	-	sense overlapping	hsa_circ_0001481	-1.7633	0.025613	EMB
23023562	23030758	chr7	-	exonic	hsa_circ_0001682	-1.5073	0.025614	FAM126A
65466985	65482828	chr2	+	exonic	N/A	-1.8183	0.025923	ACTR2
65284462	65290692	chr5	+	exonic	hsa_circ_0001492	-1.5178	0.026119	ERBB2IP
16611602	16612362	chr19	+	exonic	N/A	1.7358	0.026765	C19orf44

131060182	131084192	chr7	+	exonic	hsa_circ_0001746	-1.5414	0.026966	MKLN1
15875628	15889942	chr10	-	exonic	hsa_circ_0006665	-1.6238	0.027054	FAM188A
1499235	1499964	chr12	+	intronic	N/A	1.6699	0.027830	ERC1
57197912	57207781	chr16	-	exonic	hsa_circ_0006886	-1.6077	0.028126	FAM192A
85737333	85742653	chr11	-	exonic	hsa_circ_0002433	-1.5509	0.030839	PICALM
118635916	118657227	chr11	-	exonic	hsa_circ_0024501	-1.5079	0.031452	DDX6
7839009	7844817	chr10	+	exonic	hsa_circ_0007292	-1.8482	0.031475	ATP5C1
85742510	85742653	chr11	-	exonic	hsa_circ_0023944	-1.5591	0.031536	PICALM
63988322	64008672	chr15	-	exonic	hsa_circ_0035796	-1.5056	0.031870	HERC1
40655612	40657444	chr2	-	exonic	hsa_circ_0000994	-1.6486	0.032094	SLC8A1
118625413	118627996	chr11	-	exonic	hsa_circ_0024490	-1.5471	0.032206	DDX6
149563797	149570383	chr3	+	exonic	hsa_circ_0006697	-1.6320	0.032286	RNF13
231314886	231328865	chr2	+	exonic	hsa_circ_0058619	-1.7735	0.033120	SP100
5690345	5691678	chr19	+	exonic	hsa_circ_0048764	1.8351	0.033371	RPL36
38949785	38951231	chr19	+	exonic	hsa_circ_0050834	1.6713	0.034502	RYR1
40655612	40657441	chr2	-	exonic	hsa_circ_0005232	-1.6174	0.036285	SLC8A1
119155637	119155825	chr3	-	exonic	hsa_circ_0066859	1.7156	0.036564	TMEM39A
134011326	134022971	chr9	+	exonic	hsa_circ_0089153	1.7119	0.036651	NUP214
153413350	153414506	chr5	-	exonic	hsa_circ_0007691	-1.5622	0.039327	FAM114A2
66597490	66605377	chr12	+	exonic	hsa_circ_0000414	-1.5800	0.039423	IRAK3
158552176	158557544	chr7	-	exonic	hsa_circ_0001776	-1.5163	0.041866	ESYT2
94562928	94580249	chr12	+	exonic	N/A	-1.6377	0.043770	PLXNC1
99924615	99925522	chr14	-	exonic	hsa_circ_0033149	-1.5309	0.044765	SETD3
7844232	7844817	chr10	+	exonic	hsa_circ_0017675	-1.6420	0.045053	ATP5C1
45773870	45780869	chr2	-	exonic	hsa_circ_0005542	-1.6117	0.045599	SRBD1
149563797	149629870	chr3	+	exonic	hsa_circ_0003502	-1.5257	0.046423	RNF13
46633461	46633676	chr12	-	exonic	N/A	-1.5083	0.048956	SLC38A1

Table 11 (MDD 8 week vs Control 8 week)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
33290913	33318767	chr1	+	exonic	hsa_circ_0011451	1.5812	0.000772	S100PBP
187498055	187506315	chr2	+	exonic	hsa_circ_0057319	-1.5317	0.001856	ITGAV
76910271	76928416	chr10	+	exonic	hsa_circ_0018905	8.9513	0.002519	SAMD8
16415815	16415895	chr21	-	exonic	hsa_circ_0061276	-1.5780	0.002951	NRIP1
1712336	1714425	chrX	+	exonic	hsa_circ_0007352	6.0828	0.003293	AKAP17A
6998051	7006651	chr4	+	exonic	hsa_circ_0003201	1.8277	0.003688	TBC1D14
54675169	54680872	chr12	+	exonic	hsa_circ_0026700	1.6060	0.007410	HNRNPA1
76166897	76167135	chr17	+	exonic	hsa_circ_0045871	-1.5935	0.007442	SYNGR2
37159809	37161502	chr20	+	exonic	hsa_circ_0060342	1.6468	0.009009	RALGAPB
16611602	16612362	chr19	+	exonic	N/A	3.3940	0.009844	C19orf44
76910271	76910864	chr10	+	exonic	hsa_circ_0006148	3.7615	0.010885	SAMD8
16655365	16664706	chr7	-	sense overlapping	N/A	1.6882	0.012939	ANKMY2
101654702	101656154	chr10	-	exonic	hsa_circ_0092382	-1.6100	0.014111	DNMBP
64084777	64100213	chr5	+	exonic	hsa_circ_0072654	2.7483	0.015568	CWC27
43628823	43652158	chr15	+	sense overlapping	N/A	1.6259	0.016941	ADAL
109046047	109096774	chr12	-	exonic	hsa_circ_0028067	-1.5847	0.022584	CORO1C
75040222	75041120	chr4	+	exonic	hsa_circ_0069977	2.1851	0.022589	MTHFD2L
151116991	151122005	chr6	+	exonic	hsa_circ_0078264	2.4817	0.024390	PLEKHG1

232099936	232100094	chr2	+	exonic	hsa_circ_0058651	2.0184	0.027295	ARMC9
13519798	13520085	chr19	-	intronic	N/A	1.9908	0.028778	CACNA1A
33012788	33018263	chr13	-	exonic	hsa_circ_0029934	2.0833	0.033220	N4BP2L2
39648294	39648666	chr14	+	exonic	hsa_circ_0101802	-1.5473	0.038273	PNN
38019339	38019640	chr22	+	sense overlapping	N/A	2.0641	0.038958	GGA1

Table 12 (BD baseline vs Control baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
70856839	70864567	chr10	+	exonic	hsa_circ_0018594	-1.5166	5.2141E-06	SRGN
102185289	102187102	chr15	-	exonic	hsa_circ_0003813	1.5074	1.2818E-05	TM2D3
228356262	228389631	chr2	+	exonic	hsa_circ_0058514	-1.8810	2.1302E-05	AGFG1
112321531	112339774	chr5	+	exonic	hsa_circ_0001520	-2.3418	2.4776E-05	DCP2
228384663	228389631	chr2	+	exonic	hsa_circ_0058520	-1.7328	3.2761E-05	AGFG1
142170730	142173528	chr8	+	exonic	N/A	-1.7089	3.6165E-05	DENND3
176050287	176055026	chr1	-	exonic	hsa_circ_0015364	-1.5571	3.9521E-05	RFWD2
116668337	116675510	chr12	-	sense overlapping	hsa_circ_0000443	-2.1744	5.0083E-05	MED13L
112321531	112337371	chr5	+	exonic	hsa_circ_0073608	-2.3577	5.6277E-05	DCP2
101910475	101911643	chr2	-	exonic	hsa_circ_0001058	-2.0181	5.8946E-05	RNF149
41651792	41660071	chr1	-	sense overlapping	hsa_circ_0005303	1.6055	0.000073	SCMH1
95606995	95608085	chr14	-	exonic	hsa_circ_0000564	-1.6752	0.000078	DICER1
28362054	28374937	chr1	-	exonic	hsa_circ_0008057	-1.5248	0.000081	EYA3
176563659	176564731	chr1	+	exonic	hsa_circ_0015382	1.5697	0.000091	PAPPA2
45741524	45742524	chr17	+	exonic	hsa_circ_0044301	-1.5049	0.000094	KPNB1
57842331	57851305	chr17	+	intronic	N/A	-1.9460	0.000104	VMP1
84267098	84300811	chr9	-	exonic	hsa_circ_0087331	1.5409	0.000117	TLE1
30387492	30394846	chr22	+	exonic	hsa_circ_0001219	-1.8440	0.000120	MTMR3
116668237	116675510	chr12	-	sense overlapping	hsa_circ_0000442	-1.9621	0.000138	MED13L
166141085	166184511	chr4	+	exonic	hsa_circ_0071375	-2.0802	0.000140	KLHL2
48597719	48597913	chr4	-	intronic	N/A	1.5382	0.000142	FRYL
211192124	211192598	chr1	-	exonic	hsa_circ_0016348	1.5045	0.000155	KCNH1
85711685	85742653	chr11	-	exonic	hsa_circ_0023928	-1.9863	0.000159	PICALM
28811231	28819771	chr17	+	exonic	hsa_circ_0007460	-1.5163	0.000160	GOSR1
228384663	228401709	chr2	+	exonic	hsa_circ_0058521	-1.5297	0.000166	AGFG1
17135209	17172162	chr21	+	exonic	N/A	-1.5364	0.000193	USP25
65078566	65088674	chr12	+	sense overlapping	hsa_circ_0008087	-1.5009	0.000193	RASSF3
57842331	57889147	chr17	+	exonic	hsa_circ_0044879	-1.6611	0.000196	VMP1
155095122	155116273	chr6	+	exonic	hsa_circ_0001654	-1.5372	0.000201	SCAF8
103635594	103647840	chr4	-	exonic	hsa_circ_0001432	-1.8761	0.000202	MANBA
114372213	114377061	chr1	-	exonic	hsa_circ_0000110	-1.6185	0.000203	PTPN22
37614541	37625720	chr13	-	exonic	hsa_circ_0000475	-1.8117	0.000204	SUPT20H
147743428	147744289	chrX	+	exonic	hsa_circ_0001947	-2.9440	0.000212	AFF2
50045984	50059076	chr5	+	exonic	hsa_circ_0005609	-1.6002	0.000214	PARP8
88116475	88116842	chr4	-	exonic	hsa_circ_0002538	-2.2442	0.000223	KLHL8
8043537	8099878	chr7	+	exonic	hsa_circ_0001678	-1.6141	0.000225	GLCCI1
85707868	85742653	chr11	-	exonic	hsa_circ_0023923	-2.5808	0.000227	PICALM

88307603	88327481	chr9	-	exonic	hsa_circ_0007351	-2.0860	0.000228	AGTPBP1
34793786	34805178	chr21	+	exonic	hsa_circ_0002113	-1.6891	0.000228	IFNGR2
45740454	45745776	chr17	+	exonic	hsa_circ_0002854	-1.5570	0.000236	KPNB1
68590619	68609870	chr5	-	exonic	hsa_circ_0001496	-1.5782	0.000238	CCDC125
68590619	68607031	chr5	-	exonic	hsa_circ_0072780	-1.5090	0.000241	CCDC125
63864074	63938159	chr3	+	exonic	hsa_circ_0002634	-1.5013	0.000242	ATXN7
113196219	113202401	chr1	+	exonic	hsa_circ_0000109	-1.5830	0.000251	CAPZA1
34804483	34805178	chr21	+	exonic	hsa_circ_0001185	-1.9291	0.000255	IFNGR2
85707868	85712201	chr11	-	exonic	hsa_circ_0002513	-2.5733	0.000256	PICALM
22399613	22404422	chr4	-	intronic	hsa_circ_0126020	1.5013	0.000257	GPR125
46321391	46321685	chr12	+	antisense	hsa_circ_0000393	1.5162	0.000259	SCAF11
9583114	9595100	chr18	-	exonic	hsa_circ_0009022	-1.5623	0.000260	PPP4R1
147733519	147744289	chrX	+	exonic	hsa_circ_0091669	-2.3673	0.000261	AFF2
137015277	137018525	chr6	-	exonic	hsa_circ_0006554	-1.7175	0.000272	MAP3K5
45741524	45752148	chr17	+	exonic	hsa_circ_0000780	-1.6101	0.000278	KPNB1
94224583	94248681	chr5	-	exonic	hsa_circ_0001512	-1.8977	0.000278	MCTP1
57808781	57816308	chr17	+	exonic	hsa_circ_0006508	-1.8114	0.000284	VMP1
95099211	95119667	chr5	+	exonic	hsa_circ_0006725	-1.7574	0.000286	RHOBTB3
57842331	57851246	chr17	+	exonic	hsa_circ_0004027	-1.8297	0.000288	VMP1
13579682	13584457	chr6	+	exonic	hsa_circ_0007218	-1.8698	0.000292	SIRT5
68434283	68457142	chr15	+	exonic	hsa_circ_0036044	-1.5709	0.000293	PIAS1
32678875	32824967	chr2	+	exonic	hsa_circ_0053651	-1.5073	0.000298	BIRC6
23650789	23651172	chr7	+	exonic	hsa_circ_0001684	-2.1641	0.000301	CCDC126
5808203	5815904	chr10	-	exonic	N/A	-1.5240	0.000304	GDI2
14825489	14840755	chr11	+	exonic	N/A	-1.5030	0.000306	PDE3B
208589523	208607066	chr2	+	exonic	hsa_circ_0002556	-1.6290	0.000314	CCNYL1
172013152	172028671	chr3	+	exonic	hsa_circ_0067997	-1.7342	0.000318	FNDC3B
30374430	30384551	chr22	+	exonic	N/A	-1.6843	0.000335	MTMR3
201721404	201722812	chr2	-	exonic	hsa_circ_0057725	-1.5054	0.000355	CLK1
85685750	85742653	chr11	-	exonic	hsa_circ_0023891	-2.1165	0.000362	PICALM
85685750	85714494	chr11	-	exonic	hsa_circ_0002998	-2.0172	0.000367	PICALM
30509775	30510291	chr17	+	exonic	N/A	-1.5167	0.000374	RHOT1
88190229	88211364	chr9	-	exonic	hsa_circ_0005202	-2.0221	0.000378	AGTPBP1
85692787	85707972	chr11	-	exonic	hsa_circ_0002264	-2.0083	0.000378	PICALM
50616725	50616948	chr14	-	exonic	hsa_circ_0007695	-1.6773	0.000384	SOS2
112498073	112499192	chr12	-	exonic	N/A	1.5919	0.000386	NAA25
50571209	50618904	chr13	-	exonic	hsa_circ_0006475	-1.5038	0.000393	DLEU2
30267304	30300250	chr17	+	exonic	hsa_circ_0005804	-1.6205	0.000400	SUZ12
6646085	6647162	chr12	+	exonic	hsa_circ_0025196	1.5348	0.000402	GAPDH
94899365	94945248	chr15	+	exonic	hsa_circ_0000660	-1.8842	0.000403	MCTP2
30267304	30267505	chr17	+	exonic	hsa_circ_0042961	-1.6745	0.000413	SUZ12
114676884	114678116	chr9	+	exonic	hsa_circ_0006435	-1.8348	0.000415	UGCG
9583114	9595151	chr18	-	exonic	hsa_circ_0007509	-1.8549	0.000418	PPP4R1
30498061	30503232	chr17	+	exonic	hsa_circ_0008604	-2.2003	0.000438	RHOT1
30693541	30702014	chr21	+	exonic	hsa_circ_0001181	-1.5207	0.000444	BACH1
171969049	172025291	chr3	+	exonic	hsa_circ_0067991	-1.5644	0.000449	FNDC3B
32751430	32754357	chr12	+	exonic	N/A	-1.9995	0.000450	FGD4
85742510	85742653	chr11	-	exonic	hsa_circ_0023944	-2.3232	0.000453	PICALM
30267304	30274704	chr17	+	exonic	hsa_circ_0042962	-1.6014	0.000457	SUZ12
85701292	85742653	chr11	-	exonic	hsa_circ_0023918	-1.7923	0.000460	PICALM

85733409	85742653	chr11	-	exonic	hsa_circ_0023942	-2.3159	0.000468	PICALM
231090078	231097049	chr1	-	exonic	hsa_circ_0000195	-1.5371	0.000471	TTC13
197621364	197627499	chr1	-	exonic	hsa_circ_0015796	-1.5223	0.000472	DENND1B
116675272	116675510	chr12	-	exonic	hsa_circ_0028587	-1.8971	0.000473	MED13L
85707868	85714494	chr11	-	exonic	hsa_circ_0023919	-2.2783	0.000473	PICALM
31644075	31676727	chr10	+	intronic	hsa_circ_0002765	-1.7961	0.000475	ZEB1
30384468	30387659	chr22	+	exonic	hsa_circ_0062813	-1.5856	0.000481	MTMR3
118453893	118455359	chr11	+	exonic	hsa_circ_0007383	-1.6198	0.000489	ARCN1
63824845	63852169	chr15	+	exonic	hsa_circ_0035649	-1.7275	0.000490	USP3
47388673	47390207	chr17	-	exonic	hsa_circ_0000782	-1.5885	0.000490	ZNF652
85692171	85707972	chr11	-	exonic	hsa_circ_0002884	-2.1302	0.000498	PICALM
170667931	170669824	chr5	+	exonic	hsa_circ_0004738	1.5675	0.000504	RANBP17
45734225	45736026	chr17	+	exonic	hsa_circ_0044287	-1.5150	0.000508	KPNB1
105767934	105778666	chr10	+	exonic	hsa_circ_0000259	-1.7892	0.000512	SLK
118451960	118455359	chr11	+	exonic	hsa_circ_0006374	-1.6659	0.000524	ARCN1
30500849	30503232	chr17	+	exonic	hsa_circ_0005397	-1.7542	0.000537	RHOT1
85718584	85742653	chr11	-	exonic	hsa_circ_0023936	-2.3381	0.000543	PICALM
76342171	76344097	chr5	+	exonic	hsa_circ_0008620	-1.7109	0.000553	AGGF1
46780439	46835308	chr22	-	exonic	hsa_circ_0063811	1.5002	0.000564	CELSR1
66597490	66622150	chr12	+	exonic	hsa_circ_0005505	-2.0836	0.000570	IRAK3
112399680	112421007	chr5	-	exonic	hsa_circ_0009054	1.5183	0.000584	MCC
13435076	13466728	chr11	-	exonic	hsa_circ_0003234	-1.7208	0.000586	BTBD10
113196219	113209767	chr1	+	exonic	hsa_circ_0005664	-1.5597	0.000592	CAPZA1
85722072	85742653	chr11	-	exonic	hsa_circ_0000347	-2.2798	0.000594	PICALM
71071739	71075089	chr8	-	exonic	hsa_circ_0001810	-1.5186	0.000595	NCOA2
52941283	52945896	chr6	+	exonic	hsa_circ_0076780	-1.5661	0.000596	FBXO9
176085759	176105683	chr1	-	exonic	hsa_circ_0015373	-1.5168	0.000598	RFWD2
166141085	166160051	chr4	+	exonic	hsa_circ_0071374	-2.0015	0.000622	KLHL2
28011580	28030080	chr17	-	exonic	hsa_circ_0000754	-1.7412	0.000623	SSH2
32760890	32764217	chr12	+	exonic	hsa_circ_0000390	-2.2464	0.000626	FGD4
62193423	62194373	chr14	+	exonic	hsa_circ_0032136	-1.7608	0.000632	HIF1A
94204037	94248681	chr5	-	exonic	hsa_circ_0005540	-1.9679	0.000652	MCTP1
142393644	142437312	chr5	+	exonic	N/A	-1.6854	0.000671	ARHGAP26
85692787	85737409	chr11	-	exonic	hsa_circ_0023908	-2.3170	0.000673	PICALM
119144577	119156276	chr11	+	exonic	hsa_circ_0000363	-1.5457	0.000673	CBL
40872407	40882768	chr1	+	exonic	hsa_circ_0011898	-1.5648	0.000680	SMAP2
66597490	66605377	chr12	+	exonic	hsa_circ_0000414	-2.2440	0.000687	IRAK3
88091230	88116842	chr4	-	exonic	hsa_circ_0070389	-1.6189	0.000690	KLHL8
68434283	68439036	chr15	+	exonic	hsa_circ_0008378	-1.6279	0.000695	PIAS1
73951646	73952028	chr17	-	exonic	hsa_circ_0008557	-1.6932	0.000705	ACOX1
72157634	72168547	chr5	+	exonic	hsa_circ_0072917	-1.5603	0.000705	TNPO1
30495147	30495584	chr16	+	exonic	hsa_circ_0000690	-1.8659	0.000719	ITGAL
27867712	27877119	chr12	+	exonic	hsa_circ_0000384	-1.6608	0.000723	MRPS35
94841429	94858866	chr15	+	exonic	N/A	-1.6964	0.000739	MCTP2
52935854	52941341	chr6	+	exonic	hsa_circ_0003700	-1.9539	0.000752	FBXO9
9083315	9098771	chr2	-	exonic	hsa_circ_0007334	-1.7564	0.000763	MBOAT2
37619814	37620866	chr21	+	exonic	hsa_circ_0001187	-1.8254	0.000777	DOPEY2
59963381	59964938	chr15	-	exonic	hsa_circ_0035537	-1.5489	0.000777	BNIP2
1125950	1126416	chr10	+	exonic	hsa_circ_0004277	-1.5450	0.000778	WDR37
112116954	112121111	chr12	-	exonic	hsa_circ_0006396	-1.5534	0.000781	BRAP

62168226	62188541	chr14	+	exonic	hsa_circ_0007976	-1.5609	0.000785	HIF1A
71590282	71597135	chr2	+	exonic	hsa_circ_0001028	-1.9959	0.000785	ZNF638
6925099	6925838	chr4	+	exonic	hsa_circ_0001394	-1.5006	0.000790	TBC1D14
202010100	202014558	chr2	+	exonic	hsa_circ_0001092	-1.8669	0.000794	CFLAR
32381495	32385259	chr1	-	exonic	hsa_circ_0007364	-1.8232	0.000796	PTP4A2
77214859	77230123	chr7	+	exonic	hsa_circ_0003764	-1.6156	0.000802	PTPN12
54245398	54251644	chr19	+	sense overlapping	N/A	1.5744	0.000806	MIR520H
49742748	49752790	chr13	+	exonic	hsa_circ_0006978	-2.0826	0.000811	FNDC3A
28003837	28030080	chr17	-	exonic	hsa_circ_0000753	-1.6547	0.000816	SSH2
74585341	74601048	chr8	-	exonic	hsa_circ_0001811	-2.1020	0.000817	STAU2
30701807	30702014	chr21	+	exonic	hsa_circ_0061396	-1.8575	0.000818	BACH1
40590077	40590586	chr21	-	exonic	hsa_circ_0061721	-1.5125	0.000827	BRWD1
208841374	208842310	chr2	-	exonic	hsa_circ_0001095	-1.6101	0.000828	PLEKHM3
17267718	17273932	chr19	+	exonic	hsa_circ_0006590	-1.5985	0.000834	MYO9B
94983404	95001475	chr15	+	exonic	hsa_circ_0003333	-1.8420	0.000852	MCTP2
34241449	34246936	chr20	-	intronic	hsa_circ_0001146	-1.5820	0.000859	CPNE1
88920106	88924932	chr9	-	exonic	hsa_circ_0001869	-1.8576	0.000861	ZCCHC6
41247862	41276132	chr17	-	exonic	hsa_circ_0008673	-1.5061	0.000871	BRCA1
85707868	85718626	chr11	-	exonic	hsa_circ_0023920	-2.4059	0.000877	PICALM
31661953	31676727	chr10	+	intronic	N/A	-1.7853	0.000883	ZEB1
89624210	89693008	chr10	+	sense overlapping	hsa_circ_0002232	-1.6826	0.000892	PTEN
197592293	197598333	chr3	+	exonic	hsa_circ_0008106	-1.5346	0.000898	LRCH3
211952259	211966532	chr1	-	exonic	hsa_circ_0002274	-1.9320	0.000900	LPGAT1
57808781	57851246	chr17	+	exonic	hsa_circ_0005077	-1.7794	0.000904	VMP1
86292641	86297981	chr9	-	exonic	hsa_circ_0006466	-2.0101	0.000906	UBQLN1
94562928	94580249	chr12	+	exonic	N/A	-2.5601	0.000915	PLXNC1
70236227	70236759	chr14	+	intronic	hsa_circ_0000549	-2.4365	0.000925	SRSF5
9079949	9098771	chr2	-	intronic	hsa_circ_0000973	-1.7658	0.000935	MBOAT2
175976295	175986268	chr2	-	exonic	hsa_circ_0007967	-1.5056	0.000944	ATF2
101898320	101911643	chr2	-	exonic	hsa_circ_0055904	-1.7339	0.000946	RNF149
197592293	197602646	chr3	+	exonic	hsa_circ_0008351	-2.1268	0.000949	LRCH3
140037802	140046483	chr4	-	exonic	N/A	-1.5794	0.000956	ELF2
15456270	15456465	chr21	+	exonic	hsa_circ_0061265	2.3224	0.000961	BC048201
213046019	213062599	chr1	+	exonic	hsa_circ_0016414	-1.7672	0.000971	FLVCR1
6995910	7002978	chr4	+	exonic	hsa_circ_0006681	-1.8083	0.000972	TBC1D14
154520801	154535410	chr6	-	exonic	hsa_circ_0078336	-1.5712	0.000976	IPCEF1
86294689	86297981	chr9	-	exonic	hsa_circ_0001867	-1.9841	0.000976	UBQLN1
45391429	45423180	chr18	-	exonic	hsa_circ_0000847	-1.8056	0.000977	SMAD2
113483526	113506881	chr4	-	exonic	hsa_circ_0070680	-1.5328	0.001023	ZGRF1
32381491	32385259	chr1	-	intronic	hsa_circ_0005067	-1.7406	0.001030	RP11-84A19.4
43341245	43345284	chr3	+	exonic	hsa_circ_0004089	-2.3359	0.001034	SNRK
58971731	59004982	chr1	-	exonic	hsa_circ_0002316	-2.4158	0.001034	OMA1
85723323	85742653	chr11	-	exonic	hsa_circ_0023940	-2.3540	0.001043	PICALM
118890859	118892596	chr11	+	exonic	N/A	1.5243	0.001050	TRAPPC4
196118683	196129690	chr3	-	exonic	hsa_circ_0001380	-1.8287	0.001050	UBXN7
137015277	137041727	chr6	-	exonic	hsa_circ_0007798	-1.8706	0.001055	MAP3K5
85737333	85742653	chr11	-	exonic	hsa_circ_0002433	-2.1667	0.001059	PICALM
129304794	129305562	chr3	-	exonic	N/A	1.5212	0.001067	PLXND1
33825619	33840156	chr21	+	exonic	hsa_circ_0061481	1.5914	0.001067	EVA1C

191523883	191537878	chr2	+	exonic	hsa_circ_0002024	-1.7193	0.001072	NAB1
142264087	142264728	chr8	-	exonic	hsa_circ_0001829	-1.8479	0.001086	SLC45A4
31266516	31269158	chr15	-	exonic	N/A	-1.5599	0.001101	MTMR10
113196219	113212227	chr1	+	exonic	hsa_circ_0013533	-1.5422	0.001114	CAPZA1
77227158	77230123	chr7	+	exonic	hsa_circ_0080845	-1.8012	0.001118	PTPN12
65273201	65275931	chr15	-	exonic	hsa_circ_0035875	-1.6494	0.001121	SPG21
17135209	17138460	chr21	+	exonic	hsa_circ_0001178	-2.0880	0.001128	USP25
80042674	80042829	chr17	-	exonic	N/A	1.6060	0.001142	FASN
74500670	74528759	chr11	+	exonic	hsa_circ_0006705	-1.5566	0.001145	RNF169
70178323	70180131	chr16	+	exonic	hsa_circ_0040148	1.5327	0.001170	PDPR
12999419	13001581	chr18	+	exonic	hsa_circ_0046995	-1.6287	0.001190	CEP192
47098310	47103836	chr3	-	exonic	hsa_circ_0065149	-1.7417	0.001198	SETD2
197597030	197602646	chr3	+	exonic	hsa_circ_0005873	-1.9681	0.001211	LRCH3
81837331	81837529	chr14	-	exonic	hsa_circ_0032832	1.5782	0.001211	STON2
172336669	172341841	chr5	+	exonic	hsa_circ_0075048	-1.5630	0.001221	ERGIC1
56542126	56546968	chr5	+	exonic	hsa_circ_0072547	-1.7708	0.001221	GPBP1
57814813	57851246	chr17	+	exonic	hsa_circ_0003127	-1.8541	0.001234	VMP1
117718697	117724265	chrX	+	exonic	hsa_circ_0091382	-1.6924	0.001251	DOCK11
32372021	32385259	chr1	-	exonic	hsa_circ_0011333	-1.7255	0.001251	PTP4A2
58971731	59002413	chr1	-	exonic	hsa_circ_0000072	-2.2575	0.001264	OMA1
45740454	45752148	chr17	+	exonic	hsa_circ_0003650	-1.5146	0.001310	KPNB1
58275961	58316858	chr2	+	exonic	N/A	-1.5466	0.001319	VRK2
13639794	13644961	chr6	-	exonic	hsa_circ_0001578	-2.3746	0.001328	RANBP9
32749557	32764217	chr12	+	sense overlapping	hsa_circ_0000389	-2.0127	0.001330	FGD4
50073902	50093067	chr5	+	exonic	hsa_circ_0072437	-1.8988	0.001331	PARP8
196118683	196129888	chr3	-	intronic	N/A	-1.8155	0.001347	UBXN7
35693826	35696589	chr20	-	exonic	N/A	-1.5663	0.001357	RBL1
185580493	185599548	chr4	+	exonic	hsa_circ_0003788	-1.6012	0.001366	PRIMPOL
153579366	153585514	chr1	-	exonic	hsa_circ_0014239	1.6366	0.001403	S100A16
114397092	114397671	chr1	-	exonic	hsa_circ_0013609	-1.8361	0.001405	PTPN22
36297027	36301594	chr1	+	exonic	N/A	-1.5115	0.001417	AGO4
133734285	133769540	chr8	-	exonic	hsa_circ_0008205	-1.8092	0.001425	TMEM71
34304661	34313077	chr20	-	exonic	hsa_circ_0001147	-1.8759	0.001429	RBM39
30366964	30375041	chr22	+	exonic	hsa_circ_0006303	-1.5478	0.001429	MTMR3
12039670	12056183	chr10	-	exonic	hsa_circ_0000213	-1.5606	0.001431	UPF2
86293355	86297981	chr9	-	exonic	hsa_circ_0001866	-1.9930	0.001433	UBQLN1
6420911	6434173	chr9	+	exonic	hsa_circ_0002359	-1.5385	0.001455	UHRF2
70847874	70856944	chr10	+	sense overlapping	hsa_circ_0000241	-1.6596	0.001459	SRGN
156549086	156619438	chr7	-	exonic	hsa_circ_0003511	-1.7268	0.001464	LMBR1
21742126	21742536	chr13	-	exonic	hsa_circ_0000467	-1.8305	0.001467	SKA3
40578033	40584633	chr21	-	exonic	N/A	-1.5915	0.001474	BRWD1
19144163	19148055	chr18	-	exonic	hsa_circ_0009110	-1.6436	0.001487	ESCO1
86297865	86301070	chr9	-	exonic	hsa_circ_0005142	-1.8003	0.001494	UBQLN1
58340777	58347472	chr12	+	exonic	hsa_circ_0000412	-1.7336	0.001495	XRCC6BP1
31661946	31709676	chr10	+	intronic	hsa_circ_0000229	-1.7101	0.001499	ZEB1
197592293	197593090	chr3	+	exonic	hsa_circ_0008439	-1.8546	0.001514	LRCH3
56863017	56882352	chr8	+	exonic	hsa_circ_0007920	-1.7204	0.001525	LYN
131193709	131196192	chr7	-	exonic	hsa_circ_0001973	1.6050	0.001543	PODXL
213037066	213058738	chr1	+	exonic	hsa_circ_0000182	-1.9603	0.001546	FLVCR1

129399477	129411699	chr12	+	exonic	hsa_circ_0029405	-1.5282	0.001557	GLT1D1
29218606	29246335	chr18	-	exonic	N/A	-1.7563	0.001570	B4GALT6
50045984	50074484	chr5	+	exonic	hsa_circ_0072430	-1.6896	0.001576	PARP8
65307876	65310553	chr5	+	exonic	hsa_circ_0001494	-1.6186	0.001605	ERBB2IP
3819408	3830758	chr3	-	exonic	hsa_circ_0003910	-1.5937	0.001616	SUMF1
9566086	9588851	chr18	-	exonic	hsa_circ_0046881	-1.7126	0.001626	PPP4R1
33307958	33309057	chr11	+	exonic	hsa_circ_0000284	-1.5053	0.001631	HIPK3
74561481	74583781	chr18	+	exonic	hsa_circ_0001993	-1.7004	0.001649	ZNF236
85692787	85693046	chr11	-	exonic	hsa_circ_0023904	-2.0210	0.001650	PICALM
21629185	21629395	chr16	+	exonic	hsa_circ_0038439	-1.5922	0.001656	METTL9
131006155	131014868	chr5	-	exonic	hsa_circ_0073859	-1.7571	0.001681	FNIP1
35604790	35614627	chr6	-	intronic	N/A	-1.6290	0.001714	FKBP5
153640928	153642354	chr1	-	exonic	hsa_circ_0014280	2.0265	0.001718	ILF2
149613259	149639014	chr3	+	exonic	hsa_circ_0006801	-2.2877	0.001728	RNF13
37838091	37838774	chr19	+	exonic	N/A	3.5752	0.001730	HKR1
191520702	191537878	chr2	+	exonic	hsa_circ_0008961	-1.5001	0.001734	NAB1
153413350	153414506	chr5	-	exonic	hsa_circ_0007691	-2.0389	0.001739	FAM114A2
38792600	38868560	chr21	+	exonic	hsa_circ_0061694	-2.1472	0.001740	DYRK1A
37633006	37640126	chr4	-	exonic	hsa_circ_0001400	-2.2989	0.001755	RELL1
131060182	131084192	chr7	+	exonic	hsa_circ_0001746	-1.7670	0.001778	MKLN1
86627164	86649052	chr5	+	exonic	hsa_circ_0004317	-1.5556	0.001799	RASA1
58999624	59000003	chr1	-	exonic	N/A	-2.1190	0.001849	OMA1
28163979	28167848	chr16	-	exonic	hsa_circ_0007807	-1.6108	0.001866	XPO6
5815804	5828013	chr10	-	exonic	hsa_circ_0000210	-1.7661	0.001871	GDI2
15860731	15863309	chr1	+	exonic	hsa_circ_0000018	-1.6466	0.001876	DNAJC16
50330964	50339661	chr15	-	exonic	hsa_circ_0035197	-1.6667	0.001892	ATP8B4
42513408	42515462	chr2	+	exonic	hsa_circ_0054241	-1.6242	0.001902	EML4
45715378	45780869	chr2	-	exonic	N/A	-2.0772	0.001912	SRBD1
85230855	85234875	chr15	-	exonic	hsa_circ_0036599	-1.6724	0.001916	SEC11A
179135239	179136060	chr5	+	exonic	hsa_circ_0005778	-1.6796	0.001920	CANX
56863017	56866543	chr8	+	exonic	hsa_circ_0006022	-1.8591	0.001928	LYN
39408363	39409453	chr19	-	exonic	hsa_circ_0050954	1.5258	0.001957	SARS2
45741524	45755779	chr17	+	exonic	hsa_circ_0004796	-1.5171	0.001991	KPNB1
21987790	21999817	chr13	-	exonic	hsa_circ_0006732	-1.5829	0.002009	ZDHHC20
149563797	149613357	chr3	+	exonic	hsa_circ_0003956	-2.1466	0.002010	RNF13
211952259	211961069	chr1	-	exonic	N/A	-1.7527	0.002021	LPGAT1
45773870	45780869	chr2	-	exonic	hsa_circ_0005542	-1.9682	0.002022	SRBD1
61749745	61761036	chr2	-	exonic	hsa_circ_0001017	-1.8162	0.002025	XPO1
169673708	169673894	chr1	-	exonic	hsa_circ_0000158	-1.5151	0.002025	SELL
73614502	73614802	chr14	+	exonic	hsa_circ_0008521	-1.6536	0.002026	PSEN1
57814813	57816308	chr17	+	exonic	hsa_circ_0044875	-1.9743	0.002028	VMP1
72157634	72161556	chr5	+	exonic	hsa_circ_0002692	-1.5239	0.002040	TNPO1
131860291	131860929	chr9	-	exonic	hsa_circ_0003362	1.5193	0.002043	CRAT
122881110	122893258	chr5	+	exonic	hsa_circ_0001522	-2.1154	0.002043	CSNK1G3
183361267	183369064	chr3	+	exonic	hsa_circ_0001367	-1.5150	0.002052	KLHL24
48444479	48458730	chr18	+	exonic	hsa_circ_0047700	-1.6692	0.002053	ME2
12999419	13042333	chr18	+	exonic	hsa_circ_0046999	-1.5093	0.002056	CEP192
58996272	58996401	chr1	-	exonic	hsa_circ_0012722	-2.0461	0.002081	OMA1
58971731	58971881	chr1	-	exonic	hsa_circ_0012717	-2.1657	0.002092	OMA1
5836847	5842668	chr10	-	exonic	hsa_circ_0002665	-1.5489	0.002107	GDI2

17270204	17273932	chr19	+	exonic	hsa_circ_0007396	-1.6174	0.002128	MYO9B
38791690	38792852	chr4	-	sense overlapping	N/A	-1.8704	0.002129	TLR1
21097422	21100103	chr1	-	exonic	hsa_circ_0005782	-1.8660	0.002167	HP1BP3
61556601	61560085	chr11	-	exonic	hsa_circ_0022358	1.6110	0.002170	TMEM258
23495059	23495584	chr14	-	exonic	hsa_circ_0031267	1.5979	0.002180	PSMB5
17205666	17214859	chr21	+	exonic	hsa_circ_0005238	-1.6193	0.002182	USP25
183368083	183369064	chr3	+	exonic	hsa_circ_0001369	-2.0321	0.002192	KLHL24
54956488	54959380	chr20	-	exonic	hsa_circ_0004887	-1.5974	0.002209	AURKA
96717725	96728643	chr12	-	exonic	hsa_circ_0002762	-1.5130	0.002223	CDK17
89165951	89185063	chr11	-	exonic	hsa_circ_0023990	2.1133	0.002280	NOX4
174819600	174820960	chr2	-	exonic	hsa_circ_0002642	-1.5692	0.002340	SP3
149563797	149629870	chr3	+	exonic	hsa_circ_0003502	-2.0160	0.002352	RNF13
47139444	47147610	chr3	-	exonic	hsa_circ_0001290	-1.8435	0.002373	SETD2
139619703	139628890	chr5	+	exonic	hsa_circ_0001541	-1.5373	0.002389	ANKHD1
129913321	129960251	chr4	-	exonic	hsa_circ_0001440	-1.9605	0.002400	SCLT1
61707544	61714152	chr8	+	exonic	N/A	-1.8159	0.002405	CHD7
108243000	108250718	chr6	-	exonic	hsa_circ_0001635	-1.8852	0.002410	SEC63
86627164	86633908	chr5	+	exonic	hsa_circ_0007507	-1.6122	0.002420	RASA1
13435076	13443385	chr11	-	exonic	hsa_circ_0008967	-1.5624	0.002422	BTBD10
14057494	14068652	chr1	+	exonic	hsa_circ_0005986	-1.9573	0.002458	PRDM2
58992932	59002413	chr1	-	exonic	hsa_circ_0000073	-2.2642	0.002465	OMA1
144966169	144969146	chr2	-	exonic	hsa_circ_0001072	-1.8435	0.002468	GTDC1
50592985	50593565	chr15	-	exonic	hsa_circ_0002551	-1.6280	0.002480	GABPB1
128103455	128109220	chr9	+	exonic	hsa_circ_0005249	-1.5272	0.002483	GAPVD1
120916382	120930794	chr11	+	exonic	hsa_circ_0003302	-1.8424	0.002487	TBCEL
131060182	131130662	chr7	+	exonic	hsa_circ_0003047	-1.7542	0.002491	MKLN1
122363276	122363756	chr2	-	exonic	hsa_circ_0007052	-1.5864	0.002496	CLASP1
150076352	150078193	chr5	-	exonic	N/A	2.0881	0.002516	RBM22
167921037	167944253	chr1	+	exonic	hsa_circ_0000154	-1.5891	0.002534	DCAF6
88200377	88248289	chr9	-	exonic	hsa_circ_0087386	-1.7839	0.002540	AGTPBP1
62299506	62306191	chr15	-	exonic	hsa_circ_0000607	-2.1888	0.002541	VPS13C
119109304	119139926	chr9	+	exonic	hsa_circ_0088252	1.5568	0.002541	PAPPA
86292641	86301070	chr9	-	exonic	hsa_circ_0003715	-1.7613	0.002542	UBQLN1
15863654	15885271	chr10	-	exonic	hsa_circ_0008178	-1.5729	0.002575	FAM188A
129396968	129411699	chr12	+	exonic	hsa_circ_0029403	-1.6695	0.002583	GLT1D1
65638006	65638129	chr11	-	exonic	hsa_circ_0022917	1.5197	0.002613	EFEMP2
68434283	68446033	chr15	+	exonic	hsa_circ_0003916	-1.7700	0.002614	PIAS1
90376995	90419967	chr7	+	exonic	hsa_circ_0001722	-1.6517	0.002622	CDK14
93579026	93602148	chr10	+	exonic	N/A	-1.5463	0.002627	TNKS2
245530135	245530669	chr1	+	exonic	hsa_circ_0009150	1.5334	0.002634	KIF26B
86292641	86293514	chr9	-	exonic	hsa_circ_0001865	-1.7902	0.002662	UBQLN1
24124293	24135302	chr16	+	exonic	hsa_circ_0038655	-1.6206	0.002668	PRKCB
29130918	29131126	chr17	-	exonic	N/A	-1.5294	0.002684	CRLF3
189850390	189859058	chr2	+	exonic	hsa_circ_0057360	1.7875	0.002708	COL3A1
9048750	9098771	chr2	-	exonic	hsa_circ_0000972	-1.7538	0.002710	MBOAT2
17273159	17273932	chr19	+	exonic	hsa_circ_0000909	-1.6244	0.002722	MYO9B
23023562	23030756	chr7	-	exonic	hsa_circ_0001682	-1.8631	0.002748	FAM126A
140482820	140487384	chr7	-	exonic	N/A	-1.5617	0.002751	BRAF
56694758	56707753	chr3	-	exonic	hsa_circ_0001315	-1.5761	0.002766	FAM208A
149563797	149570383	chr3	+	exonic	hsa_circ_0006697	-2.4451	0.002767	RNF13

31661946	31791437	chr10	+	exonic	hsa_circ_0004126	-1.5871	0.002769	ZEB1
169854206	169863309	chr3	-	exonic	hsa_circ_0001965	-1.9038	0.002770	PHC3
33632307	33637797	chr20	-	exonic	N/A	-1.5513	0.002795	TRPC4AP
755878	760253	chr11	+	exonic	hsa_circ_0003307	-1.5155	0.002801	TALDO1
100587885	100589861	chr8	+	exonic	hsa_circ_0085096	-1.5582	0.002809	VPS13B
36737414	36745300	chr22	-	exonic	hsa_circ_0004470	-1.8983	0.002861	MYH9
58342772	58348842	chr17	-	exonic	hsa_circ_0000793	-1.5391	0.002866	USP32
160103505	160109274	chr6	-	exonic	hsa_circ_0004662	-2.2634	0.002867	SOD2
72420914	72422544	chr11	-	exonic	hsa_circ_0003557	-1.6802	0.002890	ARAP1
202010100	202013775	chr2	+	exonic	hsa_circ_0057748	-1.7420	0.002938	CFLAR
129585852	129599405	chr3	-	intronic	N/A	-1.5919	0.002943	TMCC1
32142994	32157204	chr2	-	exonic	hsa_circ_0007385	-1.7036	0.002946	MEMO1
77210743	77212967	chr7	+	exonic	hsa_circ_0008139	-1.6687	0.002976	PTPN12
137015277	137019820	chr6	-	exonic	hsa_circ_0006856	-1.5998	0.002982	MAP3K5
49459454	49464519	chr19	+	exonic	hsa_circ_0051600	1.5740	0.003002	BAX
62559687	62562375	chr20	+	exonic	hsa_circ_0007609	-1.6462	0.003002	DNAJC5
108222573	108246136	chr6	-	exonic	hsa_circ_0008925	-1.5238	0.003003	SEC63
69726439	69752439	chr10	-	exonic	hsa_circ_0003308	-1.6172	0.003034	HERC4
18851019	18853776	chr16	-	exonic	hsa_circ_0008216	-1.7651	0.003047	SMG1
155628480	155643155	chr3	+	exonic	hsa_circ_0008184	-1.5035	0.003079	GMPS
10031484	10066619	chrX	+	exonic	hsa_circ_0001910	-1.9211	0.003080	WWC3
196118683	196120490	chr3	-	exonic	hsa_circ_0005051	-2.0969	0.003080	UBXN7
171969049	172028671	chr3	+	exonic	hsa_circ_0003692	-1.8143	0.003112	FNDC3B
1404670	1409402	chrX	+	exonic	N/A	-1.7508	0.003144	CSF2RA
129429870	129442188	chr12	+	exonic	hsa_circ_0029410	-1.6317	0.003146	GLT1D1
34011624	34017187	chr9	-	exonic	hsa_circ_0086740	1.8232	0.003146	UBAP2
63821212	63866602	chr15	+	exonic	N/A	-1.5954	0.003156	USP3
96233422	96278551	chr9	+	exonic	hsa_circ_0087531	-1.8286	0.003157	FAM120A
153413350	153414527	chr5	-	exonic	hsa_circ_0001546	-1.8733	0.003159	FAM114A2
33091993	33101669	chr13	-	exonic	hsa_circ_0000471	-1.9183	0.003172	N4BP2L2
73614502	73614814	chr14	+	exonic	hsa_circ_0003848	-1.5940	0.003174	PSEN1
196129822	196134264	chr3	-	exonic	hsa_circ_0068655	-1.9948	0.003196	UBXN7
52238276	52248315	chr1	+	exonic	N/A	1.5121	0.003204	OSBPL9
26056122	26056299	chr6	-	sense overlapping	hsa_circ_0001583	-2.1320	0.003232	HIST1H1C
37633006	37636745	chr4	-	exonic	hsa_circ_0002194	-1.8689	0.003241	RELL1
46934593	46950619	chr16	+	exonic	hsa_circ_0039219	1.5030	0.003243	GPT2
77270158	77275895	chrX	+	exonic	hsa_circ_0001934	-1.5711	0.003261	ATP7A
38801306	38803739	chr8	+	exonic	hsa_circ_0084021	-2.0820	0.003270	PLEKHA2
122514815	122519100	chr2	+	exonic	hsa_circ_0002847	-1.6336	0.003282	TSN
150774187	150774323	chr7	-	exonic	hsa_circ_0082917	1.5580	0.003298	FASTK
52935854	52947416	chr6	+	exonic	hsa_circ_0076777	-1.7818	0.003324	FBXO9
230705537	230725247	chr2	-	exonic	hsa_circ_0004079	-1.6896	0.003327	TRIP12
28748408	28771483	chr13	+	exonic	hsa_circ_0008760	-1.5804	0.003339	PAN3
129913321	129925031	chr4	-	exonic	hsa_circ_0001439	-2.0367	0.003370	SCLT1
45574118	45574781	chr22	+	exonic	hsa_circ_0002077	-1.5502	0.003399	NUP50
96233422	96261168	chr9	+	exonic	hsa_circ_0001875	-1.7207	0.003410	FAM120A
49694940	49707217	chr5	-	sense overlapping	hsa_circ_0001481	-2.5600	0.003481	EMB
235993525	235996967	chr1	-	exonic	hsa_circ_0005899	-2.0098	0.003486	LYST
180665652	180667131	chr3	+	exonic	hsa_circ_0002004	-1.5175	0.003506	FXR1

4076755	4080626	chr11	+	exonic	hsa_circ_0020934	1.5648	0.003523	STIM1
76301164	76415337	chr13	+	exonic	hsa_circ_0030448	3.3117	0.003555	LMO7
4186092	4200109	chr17	-	exonic	hsa_circ_0003239	-1.5795	0.003605	UBE2G1
96238537	96259881	chr9	+	exonic	hsa_circ_0087540	-1.5870	0.003635	FAM120A
12999419	13059311	chr18	+	exonic	hsa_circ_0047003	-1.5648	0.003646	CEP192
239090705	239093928	chr2	-	exonic	hsa_circ_0001116	-1.5536	0.003693	ILKAP
63845913	63855207	chr15	+	exonic	hsa_circ_0008153	-1.8731	0.003736	USP3
27977671	28030080	chr17	-	exonic	hsa_circ_0042806	-1.7328	0.003770	SSH2
11984672	12016677	chr17	+	exonic	hsa_circ_0007456	-1.7084	0.003821	MAP2K4
1499235	1499964	chr12	+	intronic	N/A	1.8500	0.003854	ERC1
26918715	26926848	chr17	-	intronic	N/A	1.5712	0.003871	RP11-192H23.4
10077970	10081529	chr3	+	exonic	hsa_circ_0001266	1.5799	0.003873	FANCD2
177632652	177650900	chr4	-	exonic	hsa_circ_0004496	1.6121	0.003873	VEGFC
65284462	65290692	chr5	+	exonic	hsa_circ_0001492	-1.9009	0.003874	ERBB2IP
31617887	31621588	chr3	+	exonic	hsa_circ_0001278	-1.6531	0.003893	STT3B
56160560	56161804	chr5	+	exonic	hsa_circ_0001485	-1.9218	0.003907	MAP3K1
74650518	74652103	chr8	-	exonic	N/A	-1.8273	0.003908	STAU2
35800605	35802753	chr17	+	exonic	hsa_circ_0005101	-1.5214	0.003916	TADA2A
34906884	34907626	chr21	-	exonic	hsa_circ_0008795	1.7132	0.003926	GART
13632601	13659064	chr6	-	exonic	hsa_circ_0075650	-1.9407	0.003939	RANBP9
234296902	234299129	chr2	+	exonic	hsa_circ_0001112	-1.6492	0.003959	DGKD
118451960	118454073	chr11	+	exonic	N/A	-1.6150	0.003971	ARCN1
8910799	8917022	chr2	-	exonic	hsa_circ_0005315	-1.5236	0.003975	KIDINS220
76910271	76910864	chr10	+	exonic	hsa_circ_0006148	2.9872	0.004025	SAMD8
80537076	80546772	chr9	-	sense overlapping	N/A	-1.8201	0.004073	GNAQ
169018296	169038600	chr2	-	exonic	hsa_circ_0001079	-1.5973	0.004080	STK39
109048081	109095099	chr12	-	exonic	hsa_circ_0028072	-1.7431	0.004098	CORO1C
94244955	94259726	chr5	-	exonic	hsa_circ_0008417	-1.7562	0.004141	MCTP1
26620695	26624553	chr1	-	exonic	N/A	1.5472	0.004153	UBXN11
96233422	96259881	chr9	+	exonic	hsa_circ_0005218	-1.8134	0.004157	FAM120A
149905066	149905920	chrX	+	exonic	hsa_circ_0006764	-1.5113	0.004172	MTMR1
15863654	15889942	chr10	-	exonic	hsa_circ_0000220	-2.0034	0.004186	FAM188A
45010607	45011361	chr7	+	antisense	hsa_circ_0001702	1.5202	0.004233	MYO1G
89236034	89237562	chr1	+	exonic	hsa_circ_0002008	-1.5404	0.004245	PKN2
58342772	58366043	chr17	-	exonic	N/A	-1.5119	0.004272	USP32
61749745	61753656	chr2	-	exonic	hsa_circ_0001016	-1.6502	0.004278	XPO1
71623270	71645769	chr2	+	exonic	hsa_circ_0055151	-1.6116	0.004302	ZNF638
47098310	47108608	chr3	-	exonic	hsa_circ_0002569	-1.7472	0.004307	SETD2
147227077	147230127	chr4	-	sense overlapping	N/A	1.5019	0.004310	SLC10A7
114377531	114397671	chr1	-	exonic	N/A	-1.5936	0.004331	PTPN22
22236974	22237296	chr16	+	exonic	hsa_circ_0038487	1.5160	0.004346	EEF2K
149563797	149619949	chr3	+	exonic	hsa_circ_0004565	-1.6456	0.004383	RNF13
11958205	12016681	chr17	+	sense overlapping	N/A	-1.7016	0.004399	MAP2K4
17908029	17915413	chr7	-	exonic	hsa_circ_0005519	-1.5384	0.004407	SNX13
104714065	104717880	chr7	+	exonic	hsa_circ_0001736	-2.2501	0.004438	KMT2E
30361928	30362658	chr17	+	exonic	hsa_circ_0042994	-1.5002	0.004455	LRRC37B
30698379	30702014	chr21	+	exonic	hsa_circ_0061395	-1.6296	0.004462	BACH1
80409378	80412564	chr9	-	exonic	hsa_circ_0006459	-1.7017	0.004490	GNAQ

128655032	128658211	chr7	-	exonic	hsa_circ_0001741	-1.7408	0.004570	TNPO3
45391429	45396935	chr18	-	exonic	hsa_circ_0003694	-1.7658	0.004612	SMAD2
155054511	155116273	chr6	+	exonic	hsa_circ_0078353	-1.5376	0.004612	SCAF8
6727768	6741097	chr1	-	exonic	hsa_circ_0008389	4.9621	0.004648	DNAJC11
53289511	53302038	chr16	+	exonic	hsa_circ_0039365	-1.6940	0.004650	CHD9
34093272	34093534	chr11	+	exonic	hsa_circ_0008227	-1.5773	0.004666	CAPRIN1
5289579	5290906	chr11	-	exonic	hsa_circ_0020967	1.5384	0.004669	HBE1
178274461	178281831	chr4	+	exonic	hsa_circ_0001460	-1.6476	0.004705	NEIL3
133740043	133769540	chr8	-	exonic	hsa_circ_0006050	-1.6094	0.004708	TMEM71
73944358	73958017	chr4	-	exonic	hsa_circ_0006693	-1.6408	0.004709	ANKRD17
22999874	23030758	chr7	-	exonic	hsa_circ_0008951	-1.9364	0.004759	FAM126A
51804072	51813781	chr18	+	exonic	hsa_circ_0003428	-1.6288	0.004798	POLI
28003837	28004759	chr17	-	exonic	hsa_circ_0042817	-1.6171	0.004802	SSH2
105563560	105573453	chr6	-	exonic	hsa_circ_0077527	1.5442	0.004822	BVES
133894452	133901915	chr3	-	exonic	hsa_circ_0067434	-1.5244	0.004824	RYK
100676720	100691953	chr12	+	exonic	hsa_circ_0006258	-1.5637	0.004851	SCYL2
103557736	103567658	chr10	-	exonic	hsa_circ_0019608	-1.5431	0.004897	MGEA5
84644859	84680000	chr1	+	exonic	hsa_circ_0004083	-1.5247	0.004911	PRKACB
151181822	151188100	chr7	-	exonic	hsa_circ_0082951	-1.5144	0.005018	RHEB
183361267	183390272	chr3	+	exonic	hsa_circ_0001368	-1.6525	0.005063	KLHL24
85223943	85234875	chr15	-	exonic	hsa_circ_0000647	-1.5309	0.005085	SEC11A
51501542	51509135	chr13	+	exonic	hsa_circ_0030286	-1.7849	0.005104	RNASEH2B
195101737	195112876	chr3	-	exonic	hsa_circ_0007331	-1.5350	0.005111	ACAP2
41961025	41962156	chr15	+	exonic	hsa_circ_0000591	-1.9186	0.005116	MGA
191765289	191789319	chr2	+	exonic	hsa_circ_0001085	-1.5814	0.005143	GLS
171879381	171902872	chr2	-	exonic	N/A	-1.7755	0.005146	TLK1
119219541	119232566	chr3	+	exonic	hsa_circ_0006884	-1.6569	0.005184	TIMMDC1
14042035	14075982	chr1	+	exonic	N/A	-1.6423	0.005206	PRDM2
1737913	1749314	chr1	-	exonic	hsa_circ_0009357	-1.7315	0.005223	GNB1
58755107	58755971	chr20	+	intronic	hsa_circ_0001174	-1.9470	0.005260	RP5-1043L13.1
167915606	167919852	chr5	+	exonic	hsa_circ_0009145	-1.7612	0.005268	RARS
26789747	26802589	chr10	+	exonic	N/A	-1.7970	0.005290	APBB1IP
46290104	46295253	chr1	+	exonic	hsa_circ_0012277	1.5048	0.005307	MAST2
42231920	42232779	chr17	+	exonic	hsa_circ_0004239	1.5662	0.005328	C17orf53
47164293	47166311	chr10	-	exonic	hsa_circ_0018293	1.5530	0.005329	ANXA8
101550654	101551042	chr15	+	exonic	hsa_circ_0037078	1.7203	0.005341	LRRK1
13632601	13644961	chr6	-	exonic	hsa_circ_0001577	-2.0136	0.005358	RANBP9
119219541	119236162	chr3	+	exonic	hsa_circ_0066874	-1.6752	0.005376	TIMMDC1
10031484	10078060	chrX	+	exonic	hsa_circ_0089866	-1.6789	0.005379	WWC3
128065409	128066156	chr2	-	intronic	N/A	1.6596	0.005411	MAP3K2
71880564	71948928	chr14	+	intronic	hsa_circ_0000552	-1.6801	0.005451	SIPA1L1
76412360	76421132	chr6	+	exonic	hsa_circ_0077096	-1.5156	0.005456	SENP6
15875628	15889942	chr10	-	exonic	hsa_circ_0006665	-1.9476	0.005498	FAM188A
56626997	56628056	chr3	+	exonic	hsa_circ_0001313	-2.0735	0.005503	CCDC66
77210743	77221573	chr7	+	exonic	hsa_circ_0002458	-1.6228	0.005514	PTPN12
171965322	171969331	chr3	+	exonic	hsa_circ_0006156	-1.8761	0.005525	FNDC3B
37971709	37974243	chr8	+	exonic	hsa_circ_0083957	-1.8365	0.005556	ASH2L
12123470	12133683	chr10	+	exonic	hsa_circ_0003074	-1.5521	0.005558	DHTKD1
119219541	119222868	chr3	+	exonic	hsa_circ_0001329	-1.6406	0.005566	TIMMDC1
128419929	128434922	chr9	-	exonic	hsa_circ_0001890	-1.5159	0.005636	MAPKAP1

28830428	28835595	chr13	+	exonic	hsa_circ_0008902	-1.5877	0.005646	PAN3
1756835	1770677	chr1	-	exonic	hsa_circ_0009362	-1.7776	0.005668	GNB1
63845913	63852169	chr15	+	exonic	hsa_circ_0000613	-1.7337	0.005697	USP3
180953812	180962561	chr1	-	exonic	hsa_circ_0007905	-1.5959	0.005725	STX6
179007947	179020646	chr5	+	exonic	N/A	-1.7293	0.005758	RUFY1
77200394	77221573	chr7	+	exonic	hsa_circ_0008901	-1.6260	0.005774	PTPN12
76069566	76069928	chr7	+	exonic	hsa_circ_0080802	1.5031	0.005775	ZP3
111883774	111890244	chr10	+	exonic	hsa_circ_0003357	-1.8048	0.005790	ADD3
31661946	31750166	chr10	+	exonic	hsa_circ_0000230	-1.6464	0.005802	ZEB1
39595439	39609405	chr18	+	exonic	hsa_circ_0002560	-1.7145	0.005818	PIK3C3
11958205	12016677	chr17	+	exonic	hsa_circ_0005603	-1.7415	0.005828	MAP2K4
65466985	65482828	chr2	+	exonic	N/A	-2.5011	0.005837	ACTR2
80352271	80415142	chr15	+	exonic	hsa_circ_0036506	-1.5198	0.005889	ZFAND6
155823066	155823597	chr1	-	exonic	hsa_circ_0000139	-1.6269	0.005904	GON4L
47920060	47920607	chr19	-	exonic	hsa_circ_0051685	1.5121	0.005914	MEIS3
19615443	19626289	chr12	+	exonic	hsa_circ_0006420	-1.8393	0.006019	AEBP2
47691321	47707559	chr20	+	exonic	hsa_circ_0001168	-1.6206	0.006060	CSE1L
224918163	224918276	chr1	+	exonic	hsa_circ_0016598	1.6249	0.006064	CNIH3
38792600	38845182	chr21	+	exonic	hsa_circ_0005955	-1.6112	0.006087	DYRK1A
71942238	71942518	chr11	+	intronic	N/A	1.6419	0.006103	INPPL1
37318089	37324209	chr5	-	exonic	hsa_circ_0072251	1.5644	0.006145	NUP155
83799882	83803093	chr4	-	exonic	hsa_circ_0006618	-1.6512	0.006188	SEC31A
151727422	151729550	chr4	-	exonic	hsa_circ_0071196	-1.9821	0.006190	LRBA
167935866	167944253	chr1	+	exonic	hsa_circ_0009109	-1.5118	0.006246	DCAF6
89653781	89653866	chr10	+	exonic	hsa_circ_0019058	-1.6239	0.006260	PTEN
49609654	49618211	chr10	+	exonic	hsa_circ_0002968	-1.5279	0.006288	MAPK8
202277555	202278059	chr2	-	intronic	hsa_circ_0005655	-1.5011	0.006311	TRAK2
87925620	87928449	chr6	+	exonic	hsa_circ_0004058	-1.5165	0.006330	ZNF292
109479800	109479932	chr1	-	intronic	hsa_circ_0000102	4.9293	0.006352	AKNAD1
3988781	4080626	chr11	+	exonic	hsa_circ_0020929	1.5335	0.006376	STIM1
149563797	149613347	chr3	+	exonic	hsa_circ_0067717	-1.6662	0.006391	RNF13
125032151	125050082	chr3	-	exonic	hsa_circ_0001333	-1.7911	0.006411	ZNF148
43623730	43629994	chr20	+	exonic	hsa_circ_0060530	-1.7064	0.006420	STK4
99621041	99621555	chr7	+	exonic	hsa_circ_0081379	-1.5624	0.006438	ZKSCAN1
86292641	86292876	chr9	-	exonic	hsa_circ_0087354	-1.5540	0.006485	UBQLN1
118656760	118657227	chr11	-	exonic	hsa_circ_0004293	-1.7132	0.006496	DDX6
62593526	62596747	chr8	-	exonic	hsa_circ_0084615	-1.6381	0.006501	ASPH
44380003	44383675	chr17	+	exonic	hsa_circ_0044195	-1.6586	0.006508	LRRC37A
33397466	33427756	chr7	+	exonic	hsa_circ_0008336	-1.5524	0.006509	BBS9
18419661	18462483	chr3	-	exonic	hsa_circ_0064555	-1.5717	0.006522	SATB1
39191239	39200116	chr19	+	exonic	hsa_circ_0050900	-1.6702	0.006552	ACTN4
73637504	73640415	chr14	+	exonic	hsa_circ_0032506	-1.5043	0.006555	PSEN1
72617462	72618644	chr7	+	exonic	hsa_circ_0002284	-1.6271	0.006590	GTF2IP1
73956383	73958017	chr4	-	exonic	hsa_circ_0007883	-1.5161	0.006590	ANKRD17
108559662	108577564	chr11	+	exonic	hsa_circ_0024246	1.6113	0.006624	DDX10
49458943	49464519	chr19	+	exonic	hsa_circ_0051799	1.5695	0.006655	BAX
88918000	88919862	chr9	-	exonic	hsa_circ_0007037	-1.5632	0.006683	ZCCHC6
71743025	71748859	chr3	-	exonic	N/A	-2.2342	0.006689	EIF4E3
114697535	114709422	chr2	+	exonic	hsa_circ_0056199	-1.6128	0.006701	ACTR3
36723505	36737571	chr22	-	exonic	hsa_circ_0063147	-1.8322	0.006723	MYH9

95091099	95099324	chr5	+	exonic	hsa_circ_0007444	-1.5949	0.006767	RHOBTB3
30954186	30956926	chr20	+	exonic	hsa_circ_0001136	-1.5280	0.006864	ASXL1
38205014	38205733	chr8	-	exonic	hsa_circ_0083996	-1.6642	0.006921	WHSC1L1
18852886	18856973	chr16	-	exonic	hsa_circ_0006434	-1.6796	0.006989	SMG1
33467081	33481417	chr3	-	exonic	hsa_circ_0064743	-1.5194	0.006991	UBP1
34685382	34706566	chr19	+	exonic	hsa_circ_0008030	-1.7145	0.007026	LSM14A
45773870	45789895	chr2	-	exonic	hsa_circ_0000997	-1.7312	0.007035	SRBD1
1735857	1737977	chr1	-	exonic	hsa_circ_0000007	-1.5956	0.007083	GNB1
155465560	155473602	chr7	+	exonic	hsa_circ_0001772	-2.0965	0.007090	RBM33
59204757	59209196	chr15	-	sense overlapping	N/A	-1.6880	0.007093	SLTM
171851260	171969331	chr3	+	exonic	hsa_circ_0007148	-1.8899	0.007099	FNDC3B
76412360	76412788	chr6	+	exonic	hsa_circ_0001614	-1.5604	0.007119	SENP6
48371865	48396670	chr4	+	sense overlapping	N/A	-1.5146	0.007187	SLAIN2
62864579	62865284	chr17	-	exonic	hsa_circ_0045337	-1.5407	0.007238	LRRC37A3
19353584	19359646	chr18	+	exonic	hsa_circ_0008741	-1.7249	0.007276	MIB1
62531536	62566219	chr8	-	exonic	hsa_circ_0084606	-1.7013	0.007292	ASPH
36492117	36507984	chr6	-	exonic	hsa_circ_0003131	-1.8817	0.007328	STK38
213134507	213147412	chr1	+	exonic	hsa_circ_0016418	1.6001	0.007395	VASH2
33095509	33111164	chr13	-	exonic	hsa_circ_0029937	-1.6736	0.007463	N4BP2L2
49372452	49373029	chr3	-	intronic	hsa_circ_0001301	-1.5477	0.007481	USP4
28128638	28133083	chr16	-	exonic	hsa_circ_0038799	-1.5248	0.007531	XPO6
59805629	59812070	chr1	+	exonic	hsa_circ_0000076	-1.5837	0.007543	FGGY
134076752	134079742	chr5	+	exonic	hsa_circ_0003154	-1.6208	0.007544	CAMLG
59811918	59844509	chr1	+	exonic	N/A	-1.6063	0.007557	FGGY
119222378	119222868	chr3	+	exonic	hsa_circ_0008394	-1.5912	0.007619	TIMMDC1
99924615	99932150	chr14	-	exonic	hsa_circ_0000567	-1.9398	0.007622	SETD3
83799882	83803090	chr4	-	exonic	hsa_circ_0001421	-1.6173	0.007639	SEC31A
99924615	99925522	chr14	-	exonic	hsa_circ_0033149	-1.8907	0.007647	SETD3
27867712	27878600	chr12	+	exonic	N/A	1.5075	0.007726	MRPS35
107260799	107263621	chr11	-	exonic	N/A	-1.6701	0.007741	CWF19L2
151174418	151188100	chr7	-	exonic	hsa_circ_0082950	-1.5727	0.007795	RHEB
11958205	11984847	chr17	+	exonic	hsa_circ_0007508	-1.7556	0.007831	MAP2K4
26789747	26792203	chr10	+	exonic	hsa_circ_0006063	-1.7916	0.007844	APBB1IP
62546241	62596747	chr8	-	exonic	hsa_circ_0008337	-1.5495	0.007911	ASPH
120445494	120489922	chr10	-	exonic	N/A	-1.5266	0.007939	CACUL1
59805629	59844509	chr1	+	exonic	hsa_circ_0006633	-1.6173	0.007951	FGGY
35566872	35614627	chr6	-	intronic	hsa_circ_0001600	-1.5339	0.007964	FKBP5
25650607	25654354	chr15	-	exonic	hsa_circ_0034168	-1.6724	0.008062	UBE3A
55516082	55527154	chr15	-	sense overlapping	N/A	-1.7831	0.008100	RAB27A
29691716	29691882	chr18	+	exonic	hsa_circ_0047376	-1.5719	0.008104	RNF138
80409376	80430686	chr9	-	exonic	hsa_circ_0087264	-1.6754	0.008156	GNAQ
61013821	61041513	chr13	+	exonic	hsa_circ_0003441	-1.6553	0.008190	TDRD3
7402357	7402810	chr17	+	exonic	hsa_circ_0000741	-1.7121	0.008223	POLR2A
63824845	63855207	chr15	+	exonic	hsa_circ_0002138	-1.5453	0.008286	USP3
149563797	149639014	chr3	+	exonic	hsa_circ_0001346	-1.5958	0.008326	RNF13
77779390	77818086	chr13	-	exonic	hsa_circ_0030509	-1.5501	0.008336	MYCBP2
77631183	77632364	chr9	-	exonic	hsa_circ_0004189	-1.6579	0.008446	C9orf41
52729602	52729875	chr4	+	exonic	hsa_circ_0069715	-1.6856	0.008451	DCUN1D4

30354787	30358477	chr17	+	exonic	hsa_circ_0042992	-1.6098	0.008494	LRRC37B
88061088	88071617	chr16	+	exonic	hsa_circ_0040823	-1.8006	0.008576	BANP
1125950	1132297	chr10	+	exonic	hsa_circ_0017446	-1.7683	0.008612	WDR37
34111725	34113603	chr11	+	exonic	hsa_circ_0004851	-1.5571	0.008719	CAPRIN1
63821212	63829355	chr15	+	exonic	hsa_circ_0008104	-1.5543	0.008793	USP3
127965678	127983624	chr3	+	exonic	hsa_circ_0067209	2.2925	0.008855	EEFSEC
38890634	38897285	chr22	-	exonic	hsa_circ_0002211	-1.7830	0.008898	DDX17
80390757	80415142	chr15	+	exonic	hsa_circ_0000642	-1.5520	0.009010	ZFAND6
116668337	116678267	chr12	-	sense overlapping	hsa_circ_0000444	-2.0630	0.009033	MED13L
32142994	32168452	chr2	-	exonic	hsa_circ_0053394	-1.5973	0.009055	MEMO1
131164981	131181313	chr8	-	exonic	hsa_circ_0001824	-1.7945	0.009070	ASAP1
80063751	80088663	chr5	+	exonic	hsa_circ_0073177	-1.6014	0.009140	MSH3
60629662	60631116	chr17	+	exonic	hsa_circ_0008438	-1.6484	0.009187	TLK2
86293355	86301070	chr9	-	exonic	hsa_circ_0087357	-1.8947	0.009200	UBQLN1
63988322	64008672	chr15	-	exonic	hsa_circ_0035796	-1.9977	0.009393	HERC1
59204761	59205895	chr15	-	exonic	hsa_circ_0003713	-1.7129	0.009413	SLTM
223084858	223097002	chr2	-	exonic	hsa_circ_0007333	1.6610	0.009463	PAX3
25650607	25657118	chr15	-	exonic	hsa_circ_0000586	-1.5249	0.009518	UBE3A
98698895	98703416	chr8	+	exonic	hsa_circ_0002961	-1.5258	0.009525	MTDH
45079431	45115960	chr21	+	exonic	hsa_circ_0061880	1.6333	0.009525	RRP1B
23375403	23378804	chr14	-	exonic	hsa_circ_0004137	-1.6756	0.009528	RBM23
22347957	22357656	chr7	-	exonic	N/A	1.5070	0.009561	RAPGEF5
71502781	71518729	chr14	+	exonic	hsa_circ_0032446	-1.5141	0.009617	PCNX
131164981	131193126	chr8	-	exonic	hsa_circ_0008934	-1.7986	0.009658	ASAP1
5942291	5949747	chr7	+	exonic	hsa_circ_0004169	-1.5192	0.009688	CCZ1
155742856	155753880	chr1	-	exonic	hsa_circ_0014628	-1.5672	0.009708	GON4L
57197912	57207781	chr16	-	exonic	hsa_circ_0006886	-2.0392	0.009732	FAM192A
23375403	23380612	chr14	-	exonic	hsa_circ_0031241	-1.8507	0.009756	RBM23
123718838	123721032	chr10	-	exonic	hsa_circ_0020256	-1.6376	0.009765	NSMCE4A
35586872	35610620	chr6	-	exonic	hsa_circ_0001599	-1.6491	0.009781	FKBP5
48308935	48320523	chr8	+	exonic	hsa_circ_0001798	-1.7112	0.009807	SPIDR
39821342	39829143	chr7	+	exonic	hsa_circ_0079926	-1.7923	0.009813	LINC00265
44382874	44383675	chr17	+	exonic	hsa_circ_0044197	-1.6131	0.009823	LRRC37A
38949785	38951231	chr19	+	exonic	hsa_circ_0050834	1.9337	0.009840	RYR1
186517507	186517774	chr3	-	intronic	N/A	1.7052	0.009847	RFC4
61838273	61842207	chr17	-	exonic	hsa_circ_0045219	-1.6465	0.009850	CCDC47
19965129	19965469	chr22	-	intronic	hsa_circ_0092330	1.5451	0.009871	ARVCF
21117754	21120167	chr19	+	intronic	N/A	-1.5453	0.009933	ZNF85
1735857	1756938	chr1	-	exonic	hsa_circ_0006869	-1.7401	0.009948	GNB1
59787207	59812070	chr1	+	exonic	hsa_circ_0000075	-1.8079	0.009979	FGGY
7839009	7844817	chr10	+	exonic	hsa_circ_0007292	-2.5586	0.010299	ATP5C1
667396	678730	chr1	-	exonic	hsa_circ_0009181	-1.7851	0.010328	LOC100133331
34312491	34313077	chr20	-	exonic	hsa_circ_0007632	-1.6460	0.010337	RBM39
35586872	35604935	chr6	-	exonic	hsa_circ_0076155	-1.5550	0.010413	FKBP5
216916171	216923699	chr2	-	exonic	N/A	1.5390	0.010527	PECR
149563797	149589941	chr3	+	exonic	hsa_circ_0067716	-1.5811	0.010668	RNF13
41515056	41518061	chr13	-	exonic	hsa_circ_0030051	-1.7142	0.010672	ELF1
61133516	61135470	chr11	+	exonic	hsa_circ_0002058	-1.6171	0.010675	TMEM138
124071293	124074996	chr12	+	exonic	hsa_circ_0000458	-1.9594	0.010724	TMED2
75103969	75104454	chr7	-	exonic	hsa_circ_0006098	-1.6733	0.010743	POM121C

24357988	24362320	chr2	+	exonic	hsa_circ_0007270	-1.9270	0.010611	FAM228B
34107610	34113603	chr11	+	exonic	hsa_circ_0000287	-1.5687	0.010862	CAPRIN1
40655612	40657444	chr2	-	exonic	hsa_circ_0000994	-1.9818	0.010970	SLC8A1
112723862	112724819	chr10	+	exonic	hsa_circ_0000261	-1.6869	0.010973	SHOC2
38341277	38351497	chr1	-	exonic	N/A	1.5779	0.010974	INPP5B
173726114	173744981	chr1	+	exonic	hsa_circ_0015278	1.7723	0.010975	KLHL20
21662876	21710381	chr18	+	exonic	hsa_circ_0047281	-1.5016	0.010989	TTC39C
42730785	42744343	chr1	-	exonic	hsa_circ_0006848	-1.5434	0.011106	FOXJ3
76910271	76928416	chr10	+	exonic	hsa_circ_0018905	4.1759	0.011151	SAMD8
38128842	38137473	chr21	-	exonic	N/A	1.5584	0.011196	HLCS
151116991	151122005	chr6	+	exonic	hsa_circ_0078264	1.7703	0.011292	PLEKHG1
168920009	168986268	chr2	-	exonic	hsa_circ_0005882	-1.5109	0.011294	STK39
21216261	21216990	chr19	+	exonic	hsa_circ_0008838	-1.5472	0.011322	ZNF430
65887959	65890281	chr17	+	exonic	hsa_circ_0005347	-1.6275	0.011356	BPTF
37732032	37735069	chr8	-	exonic	hsa_circ_0083946	-1.6362	0.011538	RAB11FIP1
102195835	102196253	chr11	-	antisense	hsa_circ_0000352	1.5615	0.011547	BIRC3
167915606	167921655	chr5	+	exonic	hsa_circ_0001550	-1.5525	0.011564	RARS
59204761	59209198	chr15	-	exonic	hsa_circ_0000605	-1.6587	0.011574	SLTM
140476711	140508795	chr7	-	exonic	hsa_circ_0007178	-1.8102	0.011648	BRAF
60733932	60735153	chr14	+	exonic	N/A	1.5920	0.011694	PPM1A
77336007	77336863	chr11	-	exonic	hsa_circ_0000343	-1.6009	0.011713	CLNS1A
155457868	155473602	chr7	+	exonic	hsa_circ_0001771	-1.6459	0.011726	RBM33
44395274	44401035	chr18	-	exonic	hsa_circ_0047585	1.5102	0.011783	PIAS2
191765289	191775047	chr2	+	exonic	hsa_circ_0057521	-1.5264	0.011810	GLS
73429657	73429763	chr11	-	exonic	hsa_circ_0023509	-1.6522	0.011878	RAB6A
233651859	233660931	chr2	+	exonic	hsa_circ_0058733	-1.5648	0.011883	GIGYF2
32761408	32807433	chr10	+	exonic	N/A	-1.7664	0.011982	CCDC7
119529812	119549381	chr4	+	exonic	hsa_circ_0005433	-1.6073	0.012148	LOC729218
57014000	57016139	chr20	+	exonic	hsa_circ_0001173	-2.0519	0.012442	VAPB
21660548	21663045	chr18	+	exonic	hsa_circ_0002403	-1.7668	0.012470	TTC39C
36415395	36424928	chr11	+	intronic	hsa_circ_0005044	-1.6964	0.012482	PRR5L
24613084	24708279	chr7	+	exonic	hsa_circ_0079614	-1.5883	0.012594	MPP6
20811404	20811554	chr14	-	sense overlapping	hsa_circ_0000518	-1.6670	0.012597	RPPH1
169831147	169840532	chr3	-	exonic	hsa_circ_0006893	-1.6698	0.012619	PHC3
103372298	103373854	chr8	-	exonic	hsa_circ_0001819	-1.5842	0.012666	UBR5
28408513	28460682	chr12	+	exonic	N/A	-1.8799	0.012772	CCDC91
40655612	40657441	chr2	-	exonic	hsa_circ_0005232	-1.9271	0.012905	SLC8A1
6840578	6841154	chr7	-	exonic	hsa_circ_0007135	-1.5336	0.012906	CCZ1B
41736871	41737203	chr19	+	exonic	hsa_circ_0002945	1.5114	0.012955	AXL
36685933	36694658	chr20	+	exonic	hsa_circ_0007365	-1.5484	0.012997	RPRD1B
19358063	19359646	chr18	+	exonic	hsa_circ_0008190	-1.6792	0.013010	MIB1
18010143	18029623	chr11	-	exonic	hsa_circ_0021412	-1.5431	0.013076	SERGEF
56661064	56662642	chr3	-	exonic	hsa_circ_0001314	-1.7291	0.013088	FAM208A
27106071	27106460	chr6	-	exonic	hsa_circ_0075900	1.5327	0.013099	HIST1H2BK
36492117	36507981	chr6	-	exonic	N/A	-1.8114	0.013190	STK38
119624601	119635021	chr3	-	exonic	hsa_circ_0004225	-1.5085	0.013275	GSK3B
124997967	125032500	chr3	-	exonic	hsa_circ_0067100	-1.6250	0.013327	ZNF148
61632920	61633008	chr2	+	antisense	hsa_circ_0001015	1.7187	0.013418	USP34
77611362	77632364	chr9	-	exonic	hsa_circ_0087220	-1.7002	0.013446	C9orf41
118625413	118627996	chr11	-	exonic	hsa_circ_0024490	-1.9146	0.013472	DDX6

34302106	34313077	chr20	-	exonic	hsa_circ_0004870	-1.5536	0.013679	RBM39
27975161	27977818	chr17	-	exonic	hsa_circ_0042799	-1.5822	0.013680	SSH2
7837219	7841492	chr1	+	exonic	hsa_circ_0009548	-1.5193	0.013685	VAMP3
65941524	65972074	chr17	+	exonic	hsa_circ_0000799	-1.5870	0.013710	BPTF
104702610	104722244	chr7	+	exonic	N/A	-1.5147	0.013718	KMT2E
227729319	227729842	chr2	+	exonic	hsa_circ_0001104	-1.7282	0.013778	RHBDD1
9195548	9221997	chr18	+	exonic	hsa_circ_0046843	-2.0639	0.013950	ANKRD12
243736227	244006584	chr1	-	exonic	hsa_circ_0017248	-1.6245	0.014106	AKT3
57535669	57535748	chr15	+	exonic	hsa_circ_0035426	1.5011	0.014117	TCF12
109046047	109048186	chr12	-	exonic	hsa_circ_0000437	-1.7804	0.014117	CORO1C
20811404	20811492	chr14	-	sense overlapping	hsa_circ_0000517	-1.6570	0.014296	RPPH1
68717321	68795482	chr2	+	sense overlapping	hsa_circ_0001024	-1.8899	0.014417	APLF
134381500	134381840	chr9	+	exonic	hsa_circ_0001897	-1.7225	0.014454	POMT1
78293666	78320990	chr13	+	exonic	N/A	-1.6276	0.014538	SLAIN1
103558598	103567658	chr10	-	exonic	hsa_circ_0019612	-1.5080	0.014641	MGEA5
7402357	7402812	chr17	+	sense overlapping	N/A	-1.7102	0.014697	POLR2A
73950965	73958017	chr4	-	exonic	hsa_circ_0001417	-1.5636	0.014725	ANKRD17
65473657	65492309	chr2	+	exonic	hsa_circ_0008529	-2.2413	0.014788	ACTR2
25650607	25660989	chr15	-	sense overlapping	hsa_circ_0005147	-1.5137	0.015103	UBE3A
9524591	9525849	chr18	+	exonic	hsa_circ_0005158	-1.5807	0.015219	RALBP1
77055327	77065626	chr4	-	exonic	hsa_circ_0070039	-1.7244	0.015268	NUP54
44054401	44054671	chr1	+	exonic	hsa_circ_0012077	-1.5930	0.015416	PTPRF
14685190	14685289	chr12	+	intronic	hsa_circ_0000379	1.5973	0.015447	RP11-502N13.2
43436412	43447330	chr7	+	exonic	hsa_circ_0008258	1.5631	0.015454	HECW1
1747194	1756938	chr1	-	exonic	hsa_circ_0000008	-1.6113	0.015600	GNB1
76344422	76388643	chr6	+	exonic	hsa_circ_0001613	-1.6714	0.015696	SENP6
21644103	21663045	chr18	+	exonic	hsa_circ_0047270	-1.5006	0.015710	TTC39C
11342991	11343191	chr19	-	intronic	hsa_circ_0092357	1.5597	0.015787	DOCK6
80412669	80415142	chr15	+	exonic	hsa_circ_0000643	-1.6787	0.015842	ZFAND6
59787207	59844509	chr1	+	exonic	hsa_circ_0005354	-1.7697	0.015848	FGGY
46751425	46754867	chr10	-	exonic	hsa_circ_0007010	-1.6264	0.016039	BMS1P5
17059499	17059748	chr3	-	antisense	hsa_circ_0001275	1.5014	0.016101	PLCL2
35805450	35805551	chr10	+	exonic	hsa_circ_0018203	-1.6444	0.016134	CCNY
7844232	7844817	chr10	+	exonic	hsa_circ_0017675	-2.0196	0.016249	ATP5C1
83940591	83945972	chr16	+	exonic	N/A	-1.5385	0.016316	MLYCD
127337917	127341124	chr3	-	antisense	hsa_circ_0001334	1.5392	0.016363	MCM2
24357988	24369956	chr2	+	exonic	hsa_circ_0000982	-1.8698	0.016457	FAM228B
34574331	34614575	chr6	-	exonic	hsa_circ_0009095	-1.5170	0.016461	C6orf106
47905209	47907363	chr4	-	exonic	hsa_circ_0008828	1.7237	0.016473	NFXL1
144464661	144465125	chr4	+	exonic	hsa_circ_0001445	-1.8686	0.016497	SMARCA5
34699833	34706566	chr19	+	exonic	hsa_circ_0050461	-1.5501	0.016526	LSM14A
53701835	53714476	chr12	-	exonic	hsa_circ_0026616	1.5466	0.016574	AAAS
56277780	56284152	chr4	+	exonic	hsa_circ_0001414	-1.8167	0.016620	TMEM165
49372459	49373029	chr3	-	intronic	N/A	-1.5060	0.016742	USP4
135625089	135626611	chr2	-	exonic	hsa_circ_0117334	4.7247	0.016785	CCNT2-AS1
44046021	44048964	chr15	+	exonic	hsa_circ_0002151	-1.6484	0.016999	PDIA3
80071512	80088663	chr5	+	exonic	hsa_circ_0001508	-1.7125	0.017014	MSH3

35824525	35827390	chr1	+	exonic	hsa_circ_0011536	-1.6249	0.017053	ZMYM4
24663284	24708279	chr7	+	exonic	hsa_circ_0001686	-1.5610	0.017099	MPP6
26204839	26205043	chr6	+	sense overlapping	hsa_circ_0001588	-1.7516	0.017251	HIST1H4E
34144719	34149837	chr17	+	exonic	N/A	-1.9436	0.017375	TAF15
19345732	19359646	chr18	+	exonic	hsa_circ_0000835	-1.6757	0.017393	MIB1
56600621	56601081	chr3	+	exonic	hsa_circ_0001312	-1.6582	0.017531	CCDC66
158552176	158557544	chr7	-	exonic	hsa_circ_0001776	-1.7820	0.017675	ESYT2
45860527	45860957	chr19	-	exonic	hsa_circ_0051470	1.5378	0.017786	ERCC2
91030185	91035943	chr15	+	exonic	hsa_circ_0007201	-1.9038	0.017796	IQGAP1
123924133	123928458	chr9	+	exonic	hsa_circ_0088333	-1.6313	0.017798	CNTRL
61607643	61609229	chr3	+	intronic	hsa_circ_0006226	1.9549	0.017811	PTPRG
48541721	48542148	chr7	+	intronic	hsa_circ_0001707	-1.9428	0.018083	ABCA13
9204473	9211782	chr18	+	exonic	hsa_circ_0000827	-1.9014	0.018537	ANKRD12
196544755	196548630	chr2	+	exonic	hsa_circ_0057551	-1.7413	0.018592	SLC39A10
29210921	29238052	chr18	-	exonic	hsa_circ_0047347	-1.5250	0.018612	B4GALT6
49609654	49613024	chr10	+	exonic	hsa_circ_0018315	-1.5317	0.018754	MAPK8
59179173	59179739	chr15	-	exonic	hsa_circ_0000604	-1.5721	0.018831	SLTM
89853414	89866052	chr12	-	exonic	N/A	1.5316	0.018963	POC1B
128282270	128289036	chr7	+	exonic	hsa_circ_0082179	-1.6808	0.018972	LINC01000
118635916	118657227	chr11	-	exonic	hsa_circ_0024501	-1.7823	0.019044	DDX6
78293666	78327493	chr13	+	exonic	hsa_circ_0000497	-1.5476	0.019063	SLAIN1
28306951	28310335	chr22	-	exonic	hsa_circ_0003056	-1.5700	0.019141	PITPNB
9388037	9388418	chr18	+	exonic	N/A	1.5537	0.019358	TWSG1
103427642	103433430	chr10	-	exonic	hsa_circ_0019589	-1.6117	0.019452	FBXW4
169947225	170001116	chr1	-	sense overlapping	N/A	-1.5298	0.019460	KIFAP3
57250018	57255327	chr16	+	exonic	hsa_circ_0039557	1.5475	0.019672	RSPRY1
97178494	97222866	chr12	+	exonic	N/A	1.5679	0.019732	C12orf55
16386664	16415895	chr21	-	exonic	hsa_circ_0004771	-1.5842	0.019817	NRIP1
128281294	128289036	chr7	+	exonic	hsa_circ_0082178	-1.6717	0.020135	LINC01000
21076215	21100103	chr1	-	exonic	hsa_circ_0000023	-1.5059	0.020269	HP1BP3
810107	814799	chr7	+	exonic	hsa_circ_0001667	1.7430	0.020659	DNAAF5
155691307	155695810	chr1	+	exonic	hsa_circ_0014613	-1.5779	0.020970	DAP3
72361165	72361649	chr7	+	exonic	hsa_circ_0003261	-1.6145	0.021016	POM121
125032151	125042288	chr3	-	exonic	hsa_circ_0007557	-1.6146	0.021048	ZNF148
37971709	37976881	chr8	+	exonic	hsa_circ_0001790	-1.6219	0.021252	ASH2L
68337215	68343511	chr11	+	exonic	hsa_circ_0023233	-1.5100	0.021260	PPP6R3
54249939	54256040	chr4	+	exonic	hsa_circ_0001411	-1.5055	0.021359	FIP1L1
92264128	92268765	chr14	-	exonic	hsa_circ_0032969	-1.7495	0.021606	TC2N
107429298	107435696	chr3	+	exonic	hsa_circ_0001324	-1.5725	0.021639	BBX
125587224	125591814	chr12	+	exonic	hsa_circ_0006078	1.5185	0.021679	AACS
105953535	105955124	chr14	+	exonic	hsa_circ_0033628	1.5500	0.021831	CRIP1
41515056	41515506	chr13	-	exonic	hsa_circ_0030050	-1.6983	0.021896	ELF1
198703490	198704278	chr1	+	sense overlapping	hsa_circ_0000170	-1.6096	0.021906	PTPRC
21698477	21702388	chr14	-	exonic	hsa_circ_0003643	-1.5005	0.022360	HNRNPC
48573339	48573890	chr2	+	exonic	hsa_circ_0001002	-1.5149	0.022436	FOXN2
201966446	201969143	chr1	+	exonic	hsa_circ_0015962	1.6482	0.023513	RNPEP
144464665	144465125	chr4	+	sense overlapping	N/A	-1.8539	0.023728	SMARCA5

121354581	121356103	chr3	-	exonic	N/A	-1.5275	0.023941	HCLS1
37126308	37126939	chr9	+	exonic	hsa_circ_0001860	-1.6839	0.024025	ZCCHC7
38724057	38734535	chr10	+	exonic	hsa_circ_0018224	-1.6149	0.024077	LINC00999
38894089	38897285	chr22	-	exonic	hsa_circ_0063331	-1.5499	0.024121	DDX17
65473318	65492309	chr2	+	sense overlapping	hsa_circ_0001022	-2.0456	0.024212	ACTR2
110064315	110068928	chr9	+	exonic	hsa_circ_0006174	-1.5004	0.024960	RAD23B
110893390	110895439	chr12	-	exonic	hsa_circ_0028202	1.7138	0.025093	GPN3
35526224	35526947	chr20	-	exonic	N/A	-1.5711	0.025123	SAMHD1
106739425	106774574	chr2	-	exonic	hsa_circ_0055943	-1.6515	0.025143	UXS1
48175347	48177671	chr11	+	exonic	N/A	-1.6333	0.025199	PTPRJ
243858892	244006584	chr1	-	exonic	hsa_circ_0004649	-1.7019	0.025249	AKT3
77193578	77211816	chr18	+	exonic	N/A	-1.6041	0.025653	NFATC1
23791389	23792692	chr14	+	exonic	hsa_circ_0031286	-1.5394	0.025745	PABPN1
107419754	107420500	chr6	-	exonic	N/A	1.5963	0.025796	BEND3
9182379	9221997	chr18	+	exonic	hsa_circ_0000826	-1.9773	0.025889	ANKRD12
23378691	23380612	chr14	-	exonic	hsa_circ_0000524	-1.8286	0.025912	RBM23
247319707	247323115	chr1	-	sense overlapping	N/A	-1.5779	0.026010	ZNF124
243222779	243242354	chr1	-	exonic	hsa_circ_0017202	-1.6347	0.026356	LINC01347
18770594	18781183	chr17	+	exonic	hsa_circ_0042359	-1.5844	0.026643	PRPSAP2
1747194	1749314	chr1	-	exonic	hsa_circ_0009360	-1.5012	0.026696	GNB1
126140467	126168493	chr5	+	exonic	hsa_circ_0073748	-1.7460	0.026751	LMNB1
99786012	99787892	chr2	-	exonic	hsa_circ_0001050	-1.5178	0.027387	MITD1
110062421	110084399	chr9	+	exonic	hsa_circ_0087856	-1.6714	0.027926	RAD23B
50289531	50290616	chr3	+	exonic	hsa_circ_0007083	-1.5244	0.028370	GNAI2
136610762	136610850	chr6	-	intronic	hsa_circ_0001644	1.6472	0.028565	BCLAF1
2066700	2087531	chr1	+	exonic	hsa_circ_0009366	1.5128	0.028672	PRKCZ
128281256	128289036	chr7	+	sense overlapping	hsa_circ_0005921	-1.6193	0.028981	LINC01000
155471301	155473602	chr7	+	exonic	hsa_circ_0083092	-1.7559	0.029369	RBM33
66625443	66625662	chr11	-	intronic	hsa_circ_0000331	1.5323	0.029514	PC
37170553	37190529	chr3	-	exonic	hsa_circ_0003264	-1.5547	0.029739	LRRFIP2
9204473	9221997	chr18	+	exonic	hsa_circ_0003865	-1.6300	0.030236	ANKRD12
114886536	114919893	chr9	-	exonic	hsa_circ_0004286	-1.5682	0.030370	SUSD1
222652709	224149975	chr1	-	sense overlapping	hsa_circ_0003163	-1.5298	0.030486	TLR5
16611602	16612362	chr19	+	exonic	N/A	1.8669	0.030617	C19orf44
95494501	95507595	chr4	+	exonic	hsa_circ_0070467	-1.5135	0.030692	PDLIM5
149778518	149778894	chr5	+	sense overlapping	hsa_circ_0001545	1.5064	0.031065	TCOF1
122273422	122280607	chr10	+	exonic	hsa_circ_0008896	1.5580	0.031627	PPAPDC1A
65349233	65350779	chr5	+	exonic	hsa_circ_0072732	-1.5053	0.031952	ERBB2IP
23371395	23380612	chr14	-	exonic	hsa_circ_0031235	-1.7542	0.032042	RBM23
151719232	151729550	chr4	-	exonic	hsa_circ_0004636	-1.5688	0.032154	LRBA
158552176	158580784	chr7	-	exonic	hsa_circ_0083211	-1.5585	0.032794	ESYT2
141874410	141900868	chr8	-	exonic	hsa_circ_0002483	-1.5843	0.033104	PTK2
133587	139152	chr11	-	exonic	hsa_circ_0020596	-1.5659	0.033123	LOC100133161
54978779	54981849	chr17	-	exonic	hsa_circ_0000787	-1.6027	0.033238	TRIM25
48371865	48385801	chr4	+	exonic	N/A	-1.6538	0.033590	SLAIN2
88061088	88069000	chr16	+	exonic	hsa_circ_0040822	-1.5032	0.033807	BANP

224142178	224149975	chr1	-	intronic	hsa_circ_0001978	-1.5307	0.034241	XLOC_l2_001331
107126327	107126712	chr7	-	intronic	N/A	1.5368	0.034351	COG5
68155889	68160513	chr16	+	exonic	hsa_circ_0000711	-1.8554	0.034698	NFATC3
77632385	77633517	chr11	-	exonic	hsa_circ_0023736	1.5243	0.034880	INTS4
44048846	44055404	chr15	+	exonic	hsa_circ_0002891	-1.5906	0.035470	PDIA3
7830092	7844817	chr10	+	exonic	hsa_circ_0017667	-1.8984	0.035695	ATP5C1
674213	678730	chr1	-	sense overlapping	hsa_circ_0007211	-1.5909	0.035740	AK310751
7181356	7189555	chr6	+	exonic	hsa_circ_0007429	-1.5431	0.035905	RREB1
3076997	3078169	chr6	+	exonic	hsa_circ_0001571	-1.5706	0.035990	RIPK1
24663284	24690331	chr7	+	exonic	hsa_circ_0001685	-1.5052	0.036339	MPP6
141828375	141900868	chr8	-	exonic	hsa_circ_0005982	-1.5397	0.036388	PTK2
247318867	247323115	chr1	-	sense overlapping	hsa_circ_0002922	-1.5034	0.036711	ZNF124
32197099	32199491	chr10	-	exonic	hsa_circ_0000231	-1.5007	0.037246	ARHGAP12
118832460	118887479	chr6	-	exonic	hsa_circ_0077736	-1.5111	0.037441	CEP85L
103432671	103433430	chr10	-	exonic	hsa_circ_0019591	-1.5164	0.037549	FBXW4
108186549	108206688	chr11	+	exonic	hsa_circ_0024231	-1.5552	0.037765	ATM
77065301	77065626	chr4	-	exonic	hsa_circ_0070040	-1.6115	0.037807	NUP54
89289564	89291210	chr16	+	exonic	N/A	-1.5398	0.038861	ZNF778
38726471	38734535	chr10	+	exonic	hsa_circ_0018225	-1.5510	0.039591	LINC00999
146209155	146216113	chr6	-	exonic	hsa_circ_0001649	-1.6766	0.040662	SHPRH
20939730	20939965	chr2	-	exonic	hsa_circ_0052877	1.5268	0.041558	C2orf43
117676687	117680079	chrX	+	exonic	N/A	-1.5042	0.041889	DOCK11
38089338	38089486	chr22	+	sense overlapping	hsa_circ_0001229	1.5396	0.042553	NOL12
128350085	128360471	chr11	-	exonic	hsa_circ_0002083	-1.8127	0.042745	ETS1
52773404	52773806	chr8	-	exonic	hsa_circ_0001801	-1.7835	0.043337	PCMTD1
34147027	34149837	chr17	+	exonic	hsa_circ_0043138	-1.7762	0.044311	TAF15
117957334	117963271	chr1	+	exonic	hsa_circ_0013737	-2.0007	0.045042	MAN1A2
42103080	42105299	chr15	+	exonic	hsa_circ_0034762	1.5789	0.045753	MAPKBP1
46633461	46633676	chr12	-	exonic	N/A	-1.6204	0.046201	SLC38A1
140086068	140086817	chr9	-	exonic	hsa_circ_0089652	1.5222	0.046218	TPRN
68915840	68916286	chr5	+	exonic	hsa_circ_0072797	-1.5327	0.046468	SMA
7826418	7841374	chr7	+	sense overlapping	hsa_circ_0001676	-1.5647	0.046972	UMAD1
117944807	117948267	chr1	+	exonic	hsa_circ_0000116	-1.8227	0.047262	MAN1A2
99090662	99092254	chr7	-	intronic	hsa_circ_0001726	-1.5273	0.047494	ZNF394
69206201	69206389	chr5	+	exonic	hsa_circ_0072805	-1.5570	0.047619	SMA4
117910084	117957453	chr1	+	exonic	hsa_circ_0013729	-1.8889	0.047710	MAN1A2
23356961	23377013	chr1	+	exonic	hsa_circ_0009061	-1.5138	0.048295	KDM1A
96375495	96377506	chr13	+	exonic	hsa_circ_0002473	-1.5112	0.048416	DNAJC3
110084263	110087285	chr9	+	exonic	hsa_circ_0001880	-1.5319	0.048666	RAD23B
212977661	212981190	chr1	+	exonic	hsa_circ_0000181	1.5229	0.049313	TATDN3

Table 13 (BD 8 week vs Control 8 week)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
200233327	200298237	chr2	-	exonic	hsa_circ_0003915	48.2714	0.0000E+00	SATB2
124273706	124274424	chr10	+	exonic	hsa_circ_0020275	25.2733	0.0000E+00	HTRA1

26250417	26252532	chr11	+	intronic	N/A	5.7391	0.0000E+00	METTL15
200173482	200298237	chr2	-	exonic	hsa_circ_0007422	36.6374	1.0000E-11	SATB2
113162074	113202401	chr1	+	exonic	hsa_circ_0013526	46.0121	1.0000E-11	CAPZA1
88084709	88116842	chr4	-	sense overlapping	hsa_circ_0127236	30.5882	1.0000E-11	KLHL8
21979173	22020771	chr6	+	exonic	hsa_circ_0075826	10.6276	6.0000E-11	CASC15
117054494	117054855	chr11	+	exonic	hsa_circ_0024379	12.2603	7.0000E-11	SIDT2
100189289	100189525	chr7	+	exonic	hsa_circ_0081481	20.0530	7.0000E-11	FBXO24
158703294	158735300	chr6	+	sense overlapping	hsa_circ_0131196	14.6652	7.0000E-11	TULP4
62197441	62197777	chr20	-	sense overlapping	hsa_circ_0001176	8.4707	8.0000E-11	HELZ2
44128265	44131942	chr19	-	exonic	N/A	3.0654	9.0000E-11	CADM4
123298105	123325218	chr10	-	exonic	N/A	6.9946	1.1000E-10	FGFR2
142593	143323	chr16	-	exonic	hsa_circ_0037127	5.3055	1.2000E-10	NPRL3
18609120	18609801	chr22	+	exonic	hsa_circ_0062191	6.6578	1.2000E-10	TUBA8
36572334	36577714	chr19	+	exonic	N/A	5.3062	1.2000E-10	WDR62
130634122	130662267	chr6	-	sense overlapping	N/A	7.8248	1.7000E-10	SAMD3
53290970	53292303	chr12	-	exonic	hsa_circ_0026467	5.6016	1.8000E-10	KRT8
28250417	28255132	chr11	+	intronic	hsa_circ_0000282	3.8756	2.1000E-10	METTL15
71761715	71762097	chr15	+	intronic	N/A	21.3345	2.1000E-10	THSD4
85667519	85682357	chr16	+	exonic	hsa_circ_0040726	8.9850	2.6000E-10	GSE1
5404774	5431405	chr6	+	exonic	hsa_circ_0075533	8.9233	2.7000E-10	FARS2
37700501	37723145	chr17	+	sense overlapping	N/A	1.7828	3.5000E-10	CDK12
33148403	33245340	chr20	-	sense overlapping	hsa_circ_0001142	2.6590	3.9000E-10	PIGU
29105993	29130715	chr22	-	exonic	hsa_circ_0004128	10.1839	4.5000E-10	CHEK2
120776652	120799686	chr2	+	exonic	hsa_circ_0056264	7.4505	5.5000E-10	EPB41L5
30078554	30081741	chr16	+	exonic	hsa_circ_0038981	7.9328	5.6000E-10	ALDOA
75848953	75854219	chr10	+	exonic	hsa_circ_0018886	8.3411	8.2000E-10	VCL
113703700	113773970	chr9	-	exonic	hsa_circ_0004928	8.1170	9.3000E-10	LPAR1
55996226	56002769	chr18	+	exonic	N/A	6.6257	1.0500E-09	NEDD4L
79179293	79193564	chr9	+	sense overlapping	N/A	2.3967	1.3800E-09	AL161626.1
86335196	86335470	chr15	-	intronic	hsa_circ_0000648	1.7180	2.0400E-09	KLHL25
134655200	134679497	chrX	+	sense overlapping	hsa_circ_0001945	5.1169	3.4900E-09	DDX26B
64537930	64569274	chr5	-	exonic	N/A	4.9297	4.3500E-09	ADAMTS6
56981238	56999504	chr15	-	exonic	hsa_circ_0035410	3.9707	4.4400E-09	ZNF280D
36782074	36788753	chr18	-	sense overlapping	N/A	3.8272	6.4900E-09	LINC00669
25630392	25638642	chr17	+	exonic	hsa_circ_0005336	5.6159	7.1100E-09	WSB1
18195958	18198099	chr17	-	exonic	hsa_circ_0042330	1.9858	8.1400E-09	TOP3A
74927307	74929309	chr15	-	sense overlapping	hsa_circ_0000632	2.0455	9.3400E-09	EDC3
62594626	62595103	chr11	-	exonic	hsa_circ_0022537	1.9566	1.0760E-08	STX5
170737226	170737501	chr4	+	intergenic	hsa_circ_0001457	2.6585	1.3290E-08	
21703797	21705514	chr18	+	exonic	hsa_circ_0047285	4.7231	1.5270E-08	TTC39C
55420603	55420882	chr19	+	exonic	hsa_circ_0052165	3.9312	1.5510E-08	NCR1

26385242	26388522	chr6	+	exonic	hsa_circ_0001590	1.7317	1.7080E-08	BTN2A2
5711031	5717503	chr11	-	intronic	hsa_circ_0000276	3.7632	1.7100E-08	TRIM5
37600088	37600198	chr20	-	antisense	hsa_circ_0001157	1.7558	1.8390E-08	DHX35
8604615	8604944	chr19	+	antisense	hsa_circ_0008990	6.0568	1.8810E-08	MYO1F
176686989	176687169	chr5	+	exonic	hsa_circ_0075166	2.0986	2.6310E-08	NSD1
133341934	133343019	chr3	-	exonic	hsa_circ_0008069	1.9182	2.6960E-08	TOPBP1
65326097	65359043	chr10	+	exonic	N/A	1.5213	3.3230E-08	REEP3
50080770	50087302	chr13	+	exonic	N/A	3.6263	3.4180E-08	PHF11
41313097	41319934	chr15	-	exonic	hsa_circ_0034657	3.2218	3.7920E-08	INO80
85459039	85460676	chr12	+	exonic	N/A	2.7132	4.4850E-08	LRRIQ1
178287348	178287568	chr5	+	intronic	hsa_circ_0092298	7.0036	4.5220E-08	ZNF354B
50321822	50322261	chr16	+	exonic	hsa_circ_0000699	2.6002	4.5790E-08	ADCY7
183894738	183901879	chr3	+	exonic	hsa_circ_0068281	2.2651	4.9080E-08	AP2M1
50596162	50596330	chr15	-	exonic	hsa_circ_0035208	2.9131	5.0610E-08	GABPB1
109865553	109867711	chr1	-	exonic	hsa_circ_0013433	2.2099	5.4260E-08	SORT1
22312863	22330179	chr22	-	exonic	N/A	2.4095	6.5550E-08	TOP3B
46455023	46534363	chr11	-	exonic	hsa_circ_0021845	2.4707	6.7570E-08	AMBRA1
69170598	69177292	chr16	+	exonic	hsa_circ_0008700	1.8418	9.4280E-08	CIRH1A
90446447	90454051	chr15	-	exonic	hsa_circ_0036750	1.8284	9.6440E-08	ARPIN
61574338	61575044	chr20	+	exonic	hsa_circ_0003574	1.8844	1.1874E-07	GID8
42269709	42269921	chr18	+	intronic	hsa_circ_0000844	2.0706	1.3470E-07	SETBP1
56552657	56552839	chr12	-	antisense	hsa_circ_0000406	2.5784	1.4109E-07	MYL6
79203973	79205702	chr4	+	exonic	N/A	2.0795	1.5915E-07	FRAS1
145223197	145255444	chr8	+	exonic	hsa_circ_0001832	2.6808	1.6234E-07	MROH1
45802132	45802362	chr7	-	intronic	hsa_circ_0001703	2.2635	1.8649E-07	SEPT7P2
52675969	52677359	chr3	-	exonic	hsa_circ_0066083	2.0925	2.0853E-07	PBRM1
118897646	118898434	chr11	-	exonic	hsa_circ_0024516	3.7102	2.1486E-07	SLC37A4
60015345	60017170	chr18	+	sense overlapping	N/A	2.4062	2.2003E-07	TNFRSF11A
80914570	80923622	chr17	-	exonic	hsa_circ_0046598	2.9229	2.2777E-07	B3GNTL1
33283175	33324476	chr1	+	sense overlapping	hsa_circ_0011449	2.6369	2.6680E-07	S100PBP
74526955	74551664	chr12	-	exonic	hsa_circ_0027588	3.1513	2.9667E-07	LOC100507377
53331118	53331571	chr14	-	exonic	hsa_circ_0031968	1.9412	3.0588E-07	FERMT2
10980998	10981370	chr8	-	intronic	hsa_circ_0001779	2.8035	3.1159E-07	XKR6
242033691	242036842	chr2	-	exonic	N/A	2.0737	3.2418E-07	MTERF4
232879544	232894790	chr2	+	exonic	hsa_circ_0007321	2.3824	3.5618E-07	DIS3L2
187540330	187540654	chr2	+	exonic	N/A	1.7564	3.8238E-07	ITGAV
7916911	7923977	chr7	+	intronic	N/A	1.5278	4.2386E-07	RPA3-AS1
34100754	34101636	chr6	-	exonic	hsa_circ_0076041	2.5460	4.3329E-07	GRM4
983990	1004666	chr16	-	exonic	N/A	2.1744	0.000001	LMF1
39104849	39106177	chr22	+	intronic	N/A	1.5146	0.000001	GTPBP1
100506410	100506635	chr2	-	intronic	hsa_circ_0001054	3.3630	0.000001	AFF3
27135705	27143560	chr12	-	exonic	N/A	1.6746	0.000001	TM7SF3
24730377	24734445	chr22	+	exonic	hsa_circ_0003720	2.7491	0.000001	SPECC1L
640897	666007	chr8	-	intronic	N/A	1.7905	0.000001	ERICH1
138203933	138235925	chr7	+	exonic	hsa_circ_0082580	1.6101	0.000001	TRIM24
48552608	48553595	chr4	-	exonic	hsa_circ_0069681	2.0688	0.000001	FRYL
23424768	23430148	chr16	-	exonic	N/A	1.5241	0.000001	COG7
62396665	62398655	chr11	-	exonic	hsa_circ_0022482	1.6914	0.000001	GANAB
73315177	73316443	chr2	-	exonic	hsa_circ_0007273	2.6323	0.000001	RAB11FIP5

60713226	60716000	chr20	-	exonic	hsa_circ_0061036	1.8599	0.000001	PSMA7
100109595	100112837	chr9	+	exonic	hsa_circ_0087659	-1.5849	0.000001	CCDC180
29151053	29151137	chr17	-	intronic	hsa_circ_0000755	2.4098	0.000001	CRLF3
113869721	113869956	chr13	+	intronic	hsa_circ_0000507	2.1233	0.000001	CUL4A
192880233	192880611	chr1	-	intergenic	N/A	2.0627	0.000001	
15162025	15166718	chr16	-	exonic	hsa_circ_0038020	1.5296	0.000001	RRN3
52132662	52134024	chr6	-	exonic	hsa_circ_0076742	1.8525	0.000001	MCM3
143956599	144023646	chr3	+	intergenic	N/A	1.7754	0.000002	
13054580	13054850	chr19	+	sense overlapping	hsa_circ_0000897	1.8029	0.000002	CALR
17124850	17127457	chr17	-	exonic	N/A	3.5115	0.000002	FLCN
184104555	184114861	chr4	+	sense overlapping	hsa_circ_0003631	1.5575	0.000002	WWC2
77051808	77057565	chr4	-	exonic	hsa_circ_0008128	2.0925	0.000002	NUP54
46529740	46534363	chr11	-	exonic	hsa_circ_0003110	2.3690	0.000002	AMBRA1
109762831	109763131	chr6	+	intronic	N/A	1.6867	0.000002	SMPD2
100169609	100170072	chrX	-	sense overlapping	N/A	2.1139	0.000002	XKRX
8674619	8716500	chr1	-	exonic	hsa_circ_0005039	4.0039	0.000002	RERE
51076920	51080465	chr12	+	exonic	N/A	1.6407	0.000002	DIP2B
175749275	175772569	chr5	+	exonic	hsa_circ_0001557	1.5255	0.000002	SIMC1
123489400	123489932	chr11	+	exonic	hsa_circ_0024731	2.5140	0.000002	GRAMD1B
50059614	50062337	chr12	-	exonic	hsa_circ_0006802	1.5656	0.000002	FMNL3
125843206	125856803	chr3	-	exonic	hsa_circ_0067127	1.9884	0.000002	ALDH1L1
58764121	58804477	chr5	-	intronic	N/A	1.6938	0.000003	PDE4D
2929251	2930958	chr12	+	exonic	hsa_circ_0000374	3.8615	0.000003	ITFG2
198351307	198351922	chr2	-	exonic	hsa_circ_0057659	2.0485	0.000003	HSPD1
40313099	40318290	chr15	+	exonic	hsa_circ_0034559	1.6176	0.000004	EIF2AK4
124640186	124650369	chr10	+	sense overlapping	N/A	2.0843	0.000004	LOC399815
62479014	62483619	chr1	+	intronic	N/A	1.8289	0.000004	INADL
127064214	127076264	chr9	+	exonic	hsa_circ_0088485	2.5035	0.000004	NEK6
26861063	26884883	chr9	-	exonic	hsa_circ_0002781	1.9274	0.000004	CAAP1
44970017	44970136	chr11	-	intronic	hsa_circ_0000293	2.1772	0.000004	TP53I11
70644547	70666787	chr11	-	exonic	N/A	1.8607	0.000004	SHANK2
151223776	151247050	chr4	-	exonic	hsa_circ_0001450	1.7503	0.000005	LRBA
44643022	44645125	chr20	+	sense overlapping	hsa_circ_0001162	1.5045	0.000005	MMP9
75790426	75790887	chr3	-	exonic	hsa_circ_0002609	1.5700	0.000005	ZNF717
61044064	61045948	chr11	-	exonic	hsa_circ_0022249	2.0047	0.000005	VWCE
18105081	18111057	chr11	-	exonic	hsa_circ_0002778	1.8442	0.000005	SAAL1
34024320	34101636	chr6	-	exonic	hsa_circ_0076039	2.4669	0.000005	GRM4
85625142	85626406	chr2	-	exonic	hsa_circ_0055412	2.1439	0.000006	CAPG
3725324	3740986	chr16	-	exonic	N/A	1.6268	0.000006	TRAP1
42819829	42821476	chr6	+	exonic	hsa_circ_0076413	3.9054	0.000007	GLTSCR1L
46515157	46515754	chr11	-	exonic	hsa_circ_0009155	-2.2226	0.000007	AMBRA1
46515157	46534363	chr11	-	exonic	hsa_circ_0007061	2.5951	0.000007	AMBRA1
56552657	56552820	chr12	-	antisense	hsa_circ_0000405	1.8657	0.000008	MYL6
175996707	175996824	chr1	-	exonic	hsa_circ_0015358	1.6514	0.000008	RFWD2
7556130	7586290	chr12	-	exonic	hsa_circ_0025349	1.9724	0.000009	CD163L1
40728446	40730445	chr5	-	exonic	hsa_circ_0006141	2.9474	0.000009	TTC33

85619092	85652361	chr15	+	exonic	N/A	2.0838	0.000009	PDE8A
129870387	129871702	chr10	+	sense overlapping	hsa_circ_0000269	1.5314	0.000010	PTPRE
184114751	184130178	chr4	+	exonic	hsa_circ_0003437	1.8009	0.000012	WWC2
28800065	28800663	chr1	+	exonic	hsa_circ_0002909	1.5468	0.000012	PHACTR4
27173370	27183073	chr3	-	exonic	hsa_circ_0003052	1.5454	0.000012	NEK10
5269501	5270820	chr11	-	exonic	hsa_circ_0020960	1.8348	0.000012	HBG1
17366614	17395067	chr9	+	exonic	N/A	1.7728	0.000014	CNTLN
150634289	150636239	chr1	-	exonic	N/A	-1.7096	0.000014	GOLPH3L
29847024	29848279	chr16	+	exonic	hsa_circ_0007258	1.8440	0.000015	MVP
424004	427848	chr16	-	exonic	hsa_circ_0000663	2.0462	0.000015	TMEM8A
111311746	111313913	chr3	-	exonic	hsa_circ_0066781	1.7835	0.000016	ZBED2
33163212	33163532	chr11	-	exonic	N/A	2.0609	0.000016	CSTF3
13233298	13234568	chr10	+	exonic	hsa_circ_0004477	1.5190	0.000018	MCM10
196386979	196388380	chr3	-	antisense	hsa_circ_0001381	1.6315	0.000019	NRROS
213302869	213349835	chr1	+	exonic	hsa_circ_0007772	2.1722	0.000021	RPS6KC1
43552465	43555513	chr17	-	exonic	hsa_circ_0003434	2.2356	0.000022	PLEKHM1
101790176	101799759	chr12	-	exonic	hsa_circ_0027902	1.6002	0.000024	ARL1
145806229	145806661	chr8	-	exonic	hsa_circ_0086154	1.7315	0.000025	ARHGAP39
23408712	23410184	chr1	+	exonic	hsa_circ_0010844	1.7194	0.000026	KDM1A
150432224	150438785	chr2	-	exonic	N/A	1.5756	0.000026	MMADHC
52693054	52729678	chr19	+	exonic	hsa_circ_0052067	2.8896	0.000030	PPP2R1A
33376629	33402809	chr22	-	exonic	hsa_circ_0062997	1.7445	0.000031	SYN3
133534776	133536765	chr5	-	exonic	hsa_circ_0073942	1.7985	0.000031	PPP2CA
201475259	201475620	chr1	-	intronic	hsa_circ_0000172	1.5623	0.000032	CSRP1
62817884	62820990	chr17	-	exonic	hsa_circ_0004702	1.9100	0.000034	PLEKHM1P
47274548	47290742	chr22	+	exonic	hsa_circ_0003343	1.5111	0.000035	TBC1D22A
75101156	75118768	chr10	-	sense overlapping	N/A	1.7213	0.000035	CFAP70
88116475	88116842	chr4	-	exonic	hsa_circ_0002538	-3.4145	0.000036	KLHL8
30715384	30715636	chr16	+	exonic	hsa_circ_0039076	1.6712	0.000037	SRCAP
45089764	45093836	chr21	+	exonic	N/A	1.8045	0.000038	RRP1B
179316734	179319566	chr1	+	exonic	hsa_circ_0015454	2.2491	0.000038	SOAT1
122797769	122798857	chr2	+	intergenic	N/A	1.8961	0.000039	
114153316	114158328	chr4	+	exonic	hsa_circ_0070703	1.8218	0.000039	ANK2
112256581	112269109	chr3	-	exonic	hsa_circ_0066801	-1.5181	0.000040	ATG3
7225183	7225329	chr17	-	exonic	hsa_circ_0041821	1.9815	0.000041	NEURL4
77798585	77807398	chr13	-	exonic	hsa_circ_0030514	1.6269	0.000044	MYCBP2
41988272	41989221	chr15	+	exonic	hsa_circ_0034734	1.5628	0.000044	MGA
25877593	25885213	chr17	+	exonic	N/A	1.5407	0.000046	KSR1
34059659	34101636	chr6	-	exonic	hsa_circ_0076040	2.1517	0.000047	GRM4
97686267	97718297	chr9	+	exonic	N/A	1.8991	0.000049	C9orf3
31535338	31535540	chr14	+	sense overlapping	N/A	1.8134	0.000053	AP4S1
52277731	52325551	chr13	+	exonic	N/A	1.5760	0.000054	WDFY2
12645634	12647798	chr3	-	exonic	hsa_circ_0064365	2.1633	0.000055	RAF1
217005908	217026771	chr2	+	exonic	hsa_circ_0058175	1.5154	0.000060	XRCC5
150088308	150095224	chr5	-	exonic	hsa_circ_0074559	2.6653	0.000062	DCTN4
47285639	47287816	chr19	-	exonic	hsa_circ_0002311	1.9014	0.000065	SLC1A5
3205916	3209234	chr10	-	exonic	hsa_circ_0003022	-1.9356	0.000066	PITRM1
55340765	55341720	chr1	-	exonic	hsa_circ_0012673	1.6255	0.000069	DHCR24

106797630	106802256	chr7	+	exonic	hsa_circ_0081881	1.6944	0.000069	PRKAR2B
127294245	127294652	chr3	-	exonic	hsa_circ_0067159	1.6930	0.000070	TPRA1
58142964	58143287	chr12	-	exonic	hsa_circ_0006606	1.6456	0.000073	CDK4
98276327	98276412	chr2	-	intronic	hsa_circ_0001049	1.5934	0.000073	ACTR1B
151122382	151122520	chr5	-	exonic	hsa_circ_0074657	1.6493	0.000079	ATOX1
14821320	14837158	chrY	+	exonic	hsa_circ_0001954	1.6392	0.000082	USP9Y
43523572	43535091	chr6	-	exonic	hsa_circ_0002037	1.5724	0.000083	XPO5
44346195	44346638	chr13	-	intronic	N/A	2.0021	0.000086	ENOX1
47285639	47285806	chr19	-	exonic	hsa_circ_0051637	1.7894	0.000087	SLC1A5
99538969	99560389	chr8	-	exonic	hsa_circ_0003593	2.0562	0.000098	STK3
156638555	156645132	chr1	-	exonic	hsa_circ_0014771	2.2921	0.000108	NES
75264607	75265184	chr10	-	exonic	hsa_circ_0018818	1.6352	0.000117	USP54
73215386	73228707	chr2	-	exonic	hsa_circ_0004699	1.9725	0.000121	SFXN5
76393373	76393472	chr17	+	intronic	N/A	1.6195	0.000122	PGS1
72361889	72362548	chr2	-	exonic	hsa_circ_0055161	1.8143	0.000140	CYP26B1
96058342	96066564	chr5	+	exonic	hsa_circ_0007003	1.5707	0.000150	CAST
5274420	5275744	chr11	-	exonic	hsa_circ_0020964	1.7381	0.000157	HBG2
237023132	237026854	chr1	+	exonic	hsa_circ_0003929	-1.6428	0.000159	MTR
50592985	50596330	chr15	-	exonic	hsa_circ_0007983	1.5887	0.000164	GABPB1
49054148	49063055	chr12	-	exonic	hsa_circ_0026036	1.6849	0.000172	KANSL2
89123719	89131833	chr14	-	exonic	N/A	1.8537	0.000179	EML5
36252919	36253257	chr19	+	exonic	hsa_circ_0000928	1.6617	0.000180	PROSER3
20113099	20113439	chr22	+	intronic	hsa_circ_0092314	2.2413	0.000182	RANBP1
10015311	10016172	chr3	-	exonic	hsa_circ_0064195	-1.6809	0.000189	EMC3
203818727	203820481	chr2	+	exonic	hsa_circ_0003493	-2.0811	0.000195	CARF
16846216	16847893	chrX	+	exonic	hsa_circ_0006931	1.7211	0.000197	TXLNG
159664587	159664757	chr5	-	antisense	hsa_circ_0001549	1.9195	0.000214	FABP6
129799616	129813722	chrX	-	exonic	N/A	1.6017	0.000225	ENOX2
24663284	24690331	chr7	+	exonic	hsa_circ_0001685	-2.2762	0.000236	MPP6
122363276	122363756	chr2	-	exonic	hsa_circ_0007052	-2.3376	0.000268	CLASP1
88091230	88116842	chr4	-	exonic	hsa_circ_0070389	-1.9075	0.000280	KLHL8
1191424	1203372	chr1	-	exonic	hsa_circ_0009246	1.7378	0.000285	UBE2J2
91409421	91444868	chr14	-	exonic	N/A	-1.7459	0.000288	RPS6KA5
9770162	9770654	chr1	+	exonic	hsa_circ_0009654	1.5010	0.000290	PIK3CD
50054354	50057699	chr13	+	exonic	hsa_circ_0000483	-1.5364	0.000298	SETDB2
90397884	90398971	chr14	-	exonic	hsa_circ_0032891	1.7943	0.000299	EFCAB11
45203311	45204674	chr11	+	exonic	N/A	2.1541	0.000299	PRDM11
105767934	105778666	chr10	+	exonic	hsa_circ_0000259	-2.9598	0.000312	SLK
131271154	131271376	chr9	+	exonic	hsa_circ_0088807	1.5184	0.000324	GLE1
32973011	32973508	chr7	-	exonic	N/A	2.4660	0.000327	RP9P
2828699	2856298	chrX	-	sense overlapping	N/A	1.8048	0.000334	ARSE
65131739	65141666	chr1	+	exonic	hsa_circ_0007009	1.5865	0.000340	CACHD1
126131327	126132928	chr6	+	intronic	N/A	1.5628	0.000375	NCOA7
90261231	90398157	chr5	+	exonic	N/A	2.0738	0.000379	GPR98
64846522	64847170	chr11	+	antisense	hsa_circ_0000323	1.6864	0.000391	CDCA5
35163017	35163328	chr11	+	intronic	hsa_circ_0000291	1.5289	0.000420	CD44
69565029	69565697	chr2	-	exonic	hsa_circ_0001025	1.8218	0.000461	GFPT1
172325397	172325966	chr2	+	sense overlapping	hsa_circ_0007529	1.5724	0.000469	DCAF17

23836176	23836434	chr1	-	sense overlapping	hsa_circ_0000030	1.5377	0.000480	E2F2
50289531	50290616	chr3	+	exonic	hsa_circ_0007083	-2.4983	0.000483	GNAI2
39882005	39882224	chr15	+	exonic	hsa_circ_0034510	1.7291	0.000498	THBS1
28199932	28200152	chr1	+	intronic	hsa_circ_0000036	2.1099	0.000503	THEMIS2
9588086	9595100	chr18	-	exonic	hsa_circ_0046882	1.5595	0.000592	PPP4R1
120600873	120622046	chr12	-	exonic	hsa_circ_0028826	1.6403	0.000594	GCN1L1
58971731	58971881	chr1	-	exonic	hsa_circ_0012717	-2.5849	0.000596	OMA1
65924470	65925603	chr17	+	exonic	hsa_circ_0004392	-1.5911	0.000598	BPTF
24002051	24026054	chr22	-	exonic	hsa_circ_0062545	-2.0571	0.000603	GUSBP11
70245970	70246161	chr14	+	antisense	hsa_circ_0000550	1.6046	0.000618	SLC10A1
17907047	17945940	chr1	+	exonic	hsa_circ_0010206	1.5408	0.000628	ARHGEF10L
45740454	45742524	chr17	+	exonic	hsa_circ_0008586	-1.5245	0.000676	KPNB1
61634149	61634467	chr11	+	sense overlapping	hsa_circ_0000313	1.5880	0.000734	FADS2
47388673	47390207	chr17	-	exonic	hsa_circ_0000782	-1.7060	0.000745	ZNF652
51797729	51813781	chr18	+	exonic	hsa_circ_0047721	-1.5288	0.000771	POLI
104119940	104120152	chr10	+	exonic	hsa_circ_0003839	1.5678	0.000772	GBF1
66286967	66313803	chr3	+	exonic	hsa_circ_0003101	1.7176	0.000793	SLC25A26
71623270	71645769	chr2	+	exonic	hsa_circ_0055151	-2.0020	0.000802	ZNF638
12788710	12788908	chr12	+	exonic	hsa_circ_0002873	1.5867	0.000811	CREBL2
69792863	69792948	chr5	-	exonic	hsa_circ_0072837	-1.8568	0.000821	SMA5
12326937	12395884	chr1	+	exonic	hsa_circ_0009962	1.7134	0.000921	VPS13D
20240809	20240905	chr2	-	intronic	hsa_circ_0000981	1.7032	0.000929	LAPTM4A
47882366	47884745	chr3	+	exonic	hsa_circ_0001298	1.5440	0.000942	DHX30
52128611	52146973	chr6	-	exonic	hsa_circ_0076734	1.6937	0.000944	MCM3
21461899	21470081	chr18	+	exonic	hsa_circ_0047232	1.5439	0.000952	LAMA3
82222843	82249070	chr10	+	exonic	N/A	1.6538	0.000960	TSPAN14
26056122	26056299	chr6	-	sense overlapping	hsa_circ_0001583	-3.4106	0.000995	HIST1H1C
170728745	170735084	chr2	+	exonic	hsa_circ_0002603	-1.7006	0.001060	UBR3
74385612	74395072	chr17	-	exonic	hsa_circ_0045799	1.9954	0.001078	UBE2O
144086397	144086935	chr6	+	exonic	hsa_circ_0007769	1.9578	0.001091	PHACTR2
17907047	17914974	chr1	+	exonic	hsa_circ_0005562	1.5189	0.001099	ARHGEF10L
109048081	109095099	chr12	-	exonic	hsa_circ_0028072	-2.6429	0.001153	CORO1C
76886266	77067234	chr18	+	exonic	hsa_circ_0048009	-1.6919	0.001157	ATP9B
69206201	69216694	chr5	+	exonic	hsa_circ_0004837	-2.1322	0.001169	SMA4
46700538	46700969	chr11	+	antisense	hsa_circ_0000297	1.6021	0.001171	ARHGAP1
102056748	102076805	chr11	+	exonic	hsa_circ_0002320	1.5858	0.001201	YAP1
40596333	40601362	chr21	-	exonic	hsa_circ_0001194	-1.6191	0.001206	BRWD1
17135209	17138460	chr21	+	exonic	hsa_circ_0001178	-3.4252	0.001209	USP25
37331786	37333735	chr5	-	exonic	hsa_circ_0072263	1.6394	0.001222	NUP155
19948721	19951822	chr22	+	exonic	hsa_circ_0062277	-1.5651	0.001291	COMT
15858833	15889942	chr10	-	exonic	hsa_circ_0000219	-1.7391	0.001325	FAM188A
58996272	58996401	chr1	-	exonic	hsa_circ_0012722	-2.4146	0.001353	OMA1
69908548	69908983	chr14	+	exonic	N/A	1.5282	0.001361	SLC39A9
54811039	54817857	chr4	-	antisense	N/A	1.5212	0.001365	PDGFRA
114357089	114364762	chrX	-	exonic	hsa_circ_0003300	1.7139	0.001369	LRCH2
19063007	19068019	chr16	+	exonic	hsa_circ_0036314	2.0177	0.001375	TMC7
70493472	70500177	chr5	-	exonic	hsa_circ_0072876	-2.1126	0.001409	GUSBP9
169673708	169673894	chr1	-	exonic	hsa_circ_0000158	1.6999	0.001418	SELL

21087948	21099138	chr18	+	exonic	hsa_circ_0002757	1.5503	0.001501	C18orf8
91409421	91526993	chr14	-	exonic	hsa_circ_0032942	-1.5677	0.001565	RPS6KA5
58999624	59000003	chr1	-	exonic	N/A	-2.6623	0.001580	OMA1
171969049	172025291	chr3	+	exonic	hsa_circ_0067991	-1.5112	0.001586	FNDC3B
44383247	44386611	chrX	-	sense overlapping	hsa_circ_0007290	-1.9157	0.001612	FUNDC1
1004356	1004666	chr16	-	exonic	hsa_circ_0007701	1.5056	0.001627	LMF1
29691716	29691882	chr18	+	exonic	hsa_circ_0047376	-2.0810	0.001686	RNF138
58971731	59004982	chr1	-	exonic	hsa_circ_0002316	-2.4968	0.001762	OMA1
186375214	186388209	chr1	+	sense overlapping	hsa_circ_0000166	1.5945	0.001790	C1orf27
45073658	45290704	chr6	-	exonic	N/A	1.7472	0.001827	SUPT3H
232099936	232100094	chr2	+	exonic	hsa_circ_0058651	1.6285	0.001865	ARMC9
179135239	179136060	chr5	+	exonic	hsa_circ_0005778	-2.0200	0.001898	CANX
77592249	77592394	chr18	-	antisense	hsa_circ_0000861	1.6405	0.001957	XLOC_012735
114840817	114842445	chr9	-	exonic	hsa_circ_0088036	1.6294	0.002039	SUSD1
47316514	47316617	chr20	-	intronic	hsa_circ_0001167	2.1038	0.002067	PREX1
58992932	59002413	chr1	-	exonic	hsa_circ_0000073	-2.7379	0.002106	OMA1
109462051	109468159	chr8	+	exonic	N/A	-1.9300	0.002116	EMC2
116668337	116676267	chr12	-	sense overlapping	hsa_circ_0000444	-2.9230	0.002116	MED13L
136432901	136437894	chr2	+	exonic	hsa_circ_0001070	-1.6020	0.002125	R3HDM1
103557736	103567658	chr10	-	exonic	hsa_circ_0019608	-1.8901	0.002127	MGEA5
122159084	122363756	chr2	-	exonic	hsa_circ_0056297	-1.8057	0.002245	CLASP1
74963795	74967483	chr15	-	exonic	hsa_circ_0000633	-3.1930	0.002248	EDC3
40578033	40584633	chr21	-	exonic	N/A	-1.7392	0.002262	BRWD1
14042035	14075982	chr1	+	exonic	N/A	-2.1346	0.002299	PRDM2
89236034	89237562	chr1	+	exonic	hsa_circ_0002008	-1.7877	0.002304	PKN2
101132116	101132358	chr13	+	intronic	N/A	1.5324	0.002337	PCCA
7402357	7402810	chr17	+	exonic	hsa_circ_0000741	-3.2715	0.002340	POLR2A
84644859	84680000	chr1	+	exonic	hsa_circ_0004083	-1.8648	0.002366	PRKACB
156395748	156395874	chr3	-	antisense	hsa_circ_0001354	1.5291	0.002415	TIPARP
31661946	31709678	chr10	+	intronic	hsa_circ_0000229	-2.1375	0.002469	ZEB1
104702610	104722244	chr7	+	exonic	N/A	-1.9917	0.002482	KMT2E
38287206	38287466	chr8	-	intronic	N/A	1.5093	0.002504	FGFR1
96986391	96991728	chr14	+	exonic	hsa_circ_0002120	-1.5545	0.002506	PAPOLA
29691716	29706763	chr18	+	exonic	hsa_circ_0005122	-1.5719	0.002525	RNF138
132990630	133002144	chr7	+	exonic	hsa_circ_0082440	1.9212	0.002665	EXOC4
27207184	27207404	chr17	+	antisense	hsa_circ_0000746	1.8419	0.002700	FLOT2
110064315	110068928	chr9	+	exonic	hsa_circ_0006174	-2.2789	0.002731	RAD23B
109046047	109096774	chr12	-	exonic	hsa_circ_0028067	-2.4298	0.002731	CORO1C
112321531	112339774	chr5	+	exonic	hsa_circ_0001520	-2.0057	0.002738	DCP2
21644103	21663045	chr18	+	exonic	hsa_circ_0047270	-1.9396	0.002765	TTC39C
183368083	183369064	chr3	+	exonic	hsa_circ_0001369	-2.1759	0.002834	KLHL24
40590077	40590586	chr21	-	exonic	hsa_circ_0061721	-1.5634	0.002856	BRWD1
191765289	191789319	chr2	+	exonic	hsa_circ_0001085	-1.9781	0.002864	GLS
186988982	187003844	chr3	-	intronic	hsa_circ_0009169	1.5054	0.002894	MASP1
194877177	194947585	chr3	-	exonic	hsa_circ_0008219	1.5034	0.002898	XXYLT1
21097422	21100103	chr1	-	exonic	hsa_circ_0005782	-2.4380	0.002953	HP1BP3
5113044	5126779	chr17	+	exonic	hsa_circ_0000738	1.6898	0.002983	LOC100130950
89289564	89291210	chr16	+	exonic	N/A	-1.8756	0.002994	ZNF778

107260799	107263621	chr11	-	exonic	N/A	-2.2878	0.002998	CWF19L2
136162128	136221621	chr3	-	exonic	N/A	-1.5300	0.003011	STAG1
10524467	10525312	chr16	+	exonic	hsa_circ_0037807	-1.9327	0.003047	ATF7IP2
58971731	59002413	chr1	-	exonic	hsa_circ_0000072	-2.0887	0.003047	OMA1
29119457	29120690	chr17	-	exonic	hsa_circ_0042860	-1.5977	0.003063	CRLF3
151111900	151112566	chr1	-	exonic	N/A	1.5123	0.003064	SEMA6C
35604790	35614627	chr6	-	intronic	N/A	-1.8418	0.003119	FKBP5
132426884	132428481	chr5	+	exonic	hsa_circ_0001531	-1.6102	0.003132	HSPA4
23375403	23378804	chr14	-	exonic	hsa_circ_0004137	-2.4570	0.003138	RBM23
47285639	47291842	chr19	-	exonic	hsa_circ_0051638	1.5968	0.003151	SLC1A5
16435552	16437522	chr9	-	exonic	hsa_circ_0086414	1.5215	0.003171	BNC2
34450934	34459751	chr20	+	exonic	hsa_circ_0060158	-1.7472	0.003200	PHF20
154736558	154754293	chrX	-	exonic	hsa_circ_0007183	-1.6075	0.003212	TMLHE
149905066	149905920	chrX	+	exonic	hsa_circ_0006764	-1.7183	0.003239	MTMR1
17135209	17172162	chr21	+	exonic	N/A	-1.6347	0.003304	USP25
24357988	24362320	chr2	+	exonic	hsa_circ_0007270	-2.6884	0.003321	FAM228B
34614377	34622556	chr6	-	exonic	N/A	-1.5005	0.003340	C6orf106
69785302	69804320	chr10	-	exonic	hsa_circ_0007113	-1.6877	0.003397	HERC4
9524591	9525849	chr18	+	exonic	hsa_circ_0005158	-2.0718	0.003423	RALBP1
55844499	55844644	chr20	-	antisense	hsa_circ_0001171	1.5533	0.003551	BC037891
6172119	6219748	chr12	-	exonic	hsa_circ_0025114	1.8011	0.003554	VWF
31617887	31641951	chr3	+	exonic	hsa_circ_0003338	-1.5924	0.003644	STT3B
151174418	151188100	chr7	-	exonic	hsa_circ_0082950	-2.0352	0.003671	RHEB
41361767	41362745	chr15	-	exonic	hsa_circ_0007489	-1.6312	0.003697	INO80
26234499	26234709	chr6	-	sense overlapping	hsa_circ_0001589	-2.2556	0.003795	HIST1H1D
115005725	115006178	chr1	-	exonic	hsa_circ_0013637	-1.5236	0.003800	TRIM33
35586672	35614627	chr6	-	intronic	hsa_circ_0001600	-1.9440	0.003840	FKBP5
51797729	51800460	chr18	+	exonic	hsa_circ_0007180	-1.7137	0.003881	POLI
54921379	54925426	chr17	+	exonic	hsa_circ_0044709	-1.5371	0.003885	DGKE
70847874	70856944	chr10	+	sense overlapping	hsa_circ_0000241	-1.9723	0.003935	SRGN
122514815	122520660	chr2	+	exonic	hsa_circ_0003789	-1.6196	0.003946	TSN
24840803	24841057	chr1	+	exonic	hsa_circ_0003553	-1.6339	0.003980	RCAN3
46622935	46623422	chr12	-	exonic	N/A	-1.6426	0.003994	SLC38A1
2492063	2502465	chr4	+	exonic	hsa_circ_0004803	-1.5544	0.004061	RNF4
33095509	33111164	chr13	-	exonic	hsa_circ_0029937	-2.6665	0.004099	N4BP2L2
23631224	23636741	chr3	+	intronic	hsa_circ_0004555	1.7566	0.004216	MIR548AC
14880588	14882912	chr11	+	exonic	hsa_circ_0000278	-1.5123	0.004230	PDE3B
124071293	124074996	chr12	+	exonic	hsa_circ_0000458	-2.9320	0.004309	TMED2
13579682	13584457	chr6	+	exonic	hsa_circ_0007218	-1.9030	0.004360	SIRT5
28003837	28004759	chr17	-	exonic	hsa_circ_0042817	-1.8472	0.004373	SSH2
38894089	38897285	chr22	-	exonic	hsa_circ_0063331	-2.2401	0.004440	DDX17
166141085	166160051	chr4	+	exonic	hsa_circ_0071374	-2.6012	0.004458	KLHL2
122514815	122519100	chr2	+	exonic	hsa_circ_0002847	-1.8322	0.004467	TSN
18770594	18781183	chr17	+	exonic	hsa_circ_0042359	-2.0386	0.004487	PRPSAP2
6840578	6841154	chr7	-	exonic	hsa_circ_0007135	-2.4122	0.004517	CCZ1B
381340	385707	chr8	+	exonic	N/A	-1.9091	0.004544	FBXO25
6859878	6860842	chr12	-	exonic	hsa_circ_0025249	1.5720	0.004550	MLF2
179972308	179975702	chr1	+	exonic	hsa_circ_0003942	-1.6477	0.004563	CEP350
28003837	28030080	chr17	-	exonic	hsa_circ_0000753	-1.7793	0.004590	SSH2

59204761	59205895	chr15	-	exonic	hsa_circ_0003713	-2.3451	0.004661	SLTM
246754813	246755243	chr1	+	exonic	hsa_circ_0017310	-1.6817	0.004666	CNST
19345732	19359646	chr18	+	exonic	hsa_circ_0000835	-2.3964	0.004671	MIB1
28290542	28310335	chr22	-	exonic	hsa_circ_0062688	-1.5739	0.004701	PITPNB
96692646	96694138	chr12	-	exonic	hsa_circ_0007881	-1.6004	0.004705	CDK17
34312491	34313077	chr20	-	exonic	hsa_circ_0007632	-2.1150	0.004725	RBM39
139865173	139866645	chr5	+	exonic	hsa_circ_0074264	1.6685	0.004753	ANKHD1
45773870	45780869	chr2	-	exonic	hsa_circ_0005542	-2.5462	0.004757	SRBD1
70251370	70253697	chr11	+	exonic	hsa_circ_0003376	1.5264	0.004763	CTTN
233651859	233660931	chr2	+	exonic	hsa_circ_0058733	-1.6144	0.004858	GIGYF2
72861593	72864813	chr7	-	exonic	hsa_circ_0001714	1.5034	0.004859	BAZ1B
23375403	23380612	chr14	-	exonic	hsa_circ_0031241	-2.5710	0.004866	RBM23
134381500	134382901	chr9	+	exonic	hsa_circ_0089237	-1.7012	0.004906	POMT1
73429657	73429763	chr11	-	exonic	hsa_circ_0023509	-2.4600	0.004936	RAB6A
24357988	24369956	chr2	+	exonic	hsa_circ_0000982	-3.0550	0.004973	FAM228B
76342171	76344097	chr5	+	exonic	hsa_circ_0008620	-2.1019	0.004976	AGGF1
108137897	108138069	chr11	+	exonic	hsa_circ_0007694	-1.7689	0.005019	ATM
69585460	69590802	chr2	-	exonic	hsa_circ_0002863	-1.5307	0.005020	GFPT1
134381500	134381840	chr9	+	exonic	hsa_circ_0001897	-2.2650	0.005040	POMT1
73614502	73614802	chr14	+	exonic	hsa_circ_0008521	-2.0607	0.005094	PSEN1
10186276	10188722	chr2	+	exonic	N/A	-1.5581	0.005116	KLF11
191765289	191775047	chr2	+	exonic	hsa_circ_0057521	-2.0160	0.005139	GLS
202010100	202014558	chr2	+	exonic	hsa_circ_0001092	-2.3209	0.005160	CFLAR
57197912	57207781	chr16	-	exonic	hsa_circ_0006886	-3.1064	0.005169	FAM192A
28011580	28030080	chr17	-	exonic	hsa_circ_0000754	-1.8810	0.005236	SSH2
20511996	20527147	chr2	-	exonic	hsa_circ_0052870	-1.5357	0.005245	PUM2
179054762	179057224	chr1	+	exonic	N/A	1.5059	0.005260	TOR3A
196129822	196134264	chr3	-	exonic	hsa_circ_0068655	-2.6811	0.005294	UBXN7
66293626	66313803	chr3	+	exonic	hsa_circ_0004113	-1.8325	0.005354	SLC25A26
196533449	196539722	chr3	+	exonic	hsa_circ_0004950	-1.5050	0.005355	PAK2
56600621	56601081	chr3	+	exonic	hsa_circ_0001312	-2.3247	0.005377	CCDC66
65922338	65931191	chr14	+	intronic	N/A	-1.6352	0.005486	FUT8
42730785	42776781	chr1	-	exonic	hsa_circ_0004416	-1.5196	0.005500	FOXJ3
21645975	21663045	chr18	+	exonic	hsa_circ_0047274	-1.7407	0.005503	TTC39C
14793482	14810788	chr11	+	exonic	hsa_circ_0000277	-1.9900	0.005547	PDE3B
76342171	76344812	chr5	+	exonic	N/A	-1.5758	0.005626	AGGF1
104714065	104717880	chr7	+	exonic	hsa_circ_0001736	-3.3329	0.005668	KMT2E
65924470	65928135	chr17	+	exonic	hsa_circ_0045462	-1.7786	0.005684	BPTF
45773870	45789895	chr2	-	exonic	hsa_circ_0000997	-2.1759	0.005718	SRBD1
33091993	33101669	chr13	-	exonic	hsa_circ_0000471	-2.4879	0.005727	N4BP2L2
155471301	155473602	chr7	+	exonic	hsa_circ_0083092	-3.0509	0.005759	RBM33
61205096	61205585	chr11	+	exonic	hsa_circ_0000311	-1.6448	0.005766	SDHAF2
62325639	62336454	chr15	-	exonic	hsa_circ_0005761	-1.6990	0.005767	VPS13C
88918000	88919862	chr9	-	exonic	hsa_circ_0007037	-2.0666	0.005787	ZCCHC6
76166897	76167135	chr17	+	exonic	hsa_circ_0045871	-1.5009	0.005807	SYNGR2
34317233	34320057	chr20	-	exonic	hsa_circ_0008817	-1.9735	0.005816	RBM39
158552176	158557544	chr7	-	exonic	hsa_circ_0001776	-2.2278	0.005836	ESYT2
71590282	71597135	chr2	+	exonic	hsa_circ_0001028	-2.0589	0.005862	ZNF638
1080738	1080845	chr1	-	intergenic	hsa_circ_0000001	1.5832	0.005937	
50045984	50059076	chr5	+	exonic	hsa_circ_0005809	-1.6806	0.005957	PARP8

71492833	71502874	chr14	+	exonic	hsa_circ_0007996	-1.6086	0.005962	PCNX
85737333	85742653	chr11	-	exonic	hsa_circ_0002433	-3.0350	0.005982	PICALM
45740454	45745776	chr17	+	exonic	hsa_circ_0002854	-1.5859	0.005988	KPNB1
76152218	76175765	chr15	+	exonic	hsa_circ_0036374	-1.6764	0.006037	UBE2Q2
107260799	107289013	chr11	-	exonic	hsa_circ_0006868	-1.7977	0.006088	CWF19L2
208589523	208607066	chr2	+	exonic	hsa_circ_0002556	-1.5997	0.006097	CCNYL1
48573339	48573890	chr2	+	exonic	hsa_circ_0001002	-1.6612	0.006131	FOXN2
80071512	80088663	chr5	+	exonic	hsa_circ_0001508	-2.2277	0.006147	MSH3
11958205	11984847	chr17	+	exonic	hsa_circ_0007508	-2.4574	0.006230	MAP2K4
88190229	88211364	chr9	-	exonic	hsa_circ_0005202	-2.3305	0.006256	AGTPBP1
151167656	151195266	chr7	-	exonic	N/A	-1.5092	0.006260	RHEB
122881110	122893258	chr5	+	exonic	hsa_circ_0001522	-2.8156	0.006340	CSNK1G3
5268416	5271763	chr17	+	exonic	hsa_circ_0004621	-1.5650	0.006355	RABEP1
63821212	63829355	chr15	+	exonic	hsa_circ_0008104	-1.6956	0.006407	USP3
77336007	77336863	chr11	-	exonic	hsa_circ_0000343	-2.1429	0.006417	CLNS1A
99220665	99220823	chr9	+	sense overlapping	N/A	-1.6888	0.006423	HABP4
49694940	49707217	chr5	-	sense overlapping	hsa_circ_0001481	-3.7182	0.006462	EMB
88307603	88327481	chr9	-	exonic	hsa_circ_0007351	-2.2323	0.006488	AGTPBP1
17270204	17273932	chr19	+	exonic	hsa_circ_0007396	-1.7978	0.006490	MYO9B
23371395	23380612	chr14	-	exonic	hsa_circ_0031235	-2.8227	0.006584	RBM23
28811231	28819771	chr17	+	exonic	hsa_circ_0007460	-1.6414	0.006599	GOSR1
128655032	128658211	chr7	-	exonic	hsa_circ_0001741	-2.1708	0.006599	TNPO3
20811404	20811554	chr14	-	sense overlapping	hsa_circ_0000518	-2.6755	0.006607	RPPH1
153640928	153642354	chr1	-	exonic	hsa_circ_0014280	2.0174	0.006624	ILF2
128995614	128996148	chr4	+	exonic	hsa_circ_0070933	-1.8661	0.006629	LARP1B
50045984	50074484	chr5	+	exonic	hsa_circ_0072430	-1.9192	0.006649	PARP8
31617887	31621588	chr3	+	exonic	hsa_circ_0001278	-1.7538	0.006665	STT3B
26204639	26205043	chr6	+	sense overlapping	hsa_circ_0001588	-2.9154	0.006674	HIST1H4E
20975317	20976684	chr19	+	exonic	N/A	-1.7388	0.006685	ZNF66
133734285	133769540	chr8	-	exonic	hsa_circ_0008205	-2.0374	0.006712	TMEM71
45715378	45780869	chr2	-	exonic	N/A	-2.3798	0.006738	SRBD1
109466421	109468140	chr6	+	exonic	hsa_circ_0004131	-1.5393	0.006764	CEP57L1
243056789	243064606	chr2	+	exonic	N/A	-1.6695	0.006835	LOC728323
28408513	28460682	chr12	+	exonic	N/A	-2.3402	0.006835	CCDC91
119219541	119222868	chr3	+	exonic	hsa_circ_0001329	-2.1144	0.006844	TIMMDC1
4763319	4763528	chr20	+	antisense	hsa_circ_0001128	1.5482	0.006912	RASSF2
17273159	17273932	chr19	+	exonic	hsa_circ_0000909	-1.7914	0.007045	MYO9B
18877942	18882804	chr16	-	exonic	hsa_circ_0038288	-1.8285	0.007052	SMG1
1125950	1126416	chr10	+	exonic	hsa_circ_0004277	-1.7349	0.007059	WDR37
77631183	77632364	chr9	-	exonic	hsa_circ_0004189	-1.8794	0.007075	C9orf41
14057494	14068652	chr1	+	exonic	hsa_circ_0005986	-2.4678	0.007107	PRDM2
247318867	247323115	chr1	-	sense overlapping	hsa_circ_0002922	-2.0274	0.007141	ZNF124
77327195	77340944	chr11	-	exonic	hsa_circ_0023690	-1.7884	0.007228	CLNS1A
65078566	65082233	chr12	+	exonic	N/A	-1.5132	0.007228	RASSF3
95606995	95608085	chr14	-	exonic	hsa_circ_0000564	-1.5011	0.007334	DICER1
86494712	86508177	chr14	+	intronic	N/A	-1.6068	0.007359	LOC101928767

31661946	31791437	chr10	+	exonic	hsa_circ_0004126	-1.6409	0.007385	ZEB1
133740043	133769540	chr8	-	exonic	hsa_circ_0006050	-1.6723	0.007454	TMEM71
68590619	68609870	chr5	-	exonic	hsa_circ_0001496	-1.6370	0.007458	CCDC125
179007947	179020646	chr5	+	exonic	N/A	-1.9547	0.007470	RUFY1
25650607	25654354	chr15	-	exonic	hsa_circ_0034168	-2.0261	0.007504	UBE3A
21117754	21120167	chr19	+	intronic	N/A	-1.9363	0.007555	ZNF65
10031484	10035530	chrX	+	exonic	hsa_circ_0007685	-1.6564	0.007557	WWC3
141231004	141259451	chr3	+	exonic	hsa_circ_0067582	-1.7061	0.007581	RASA2
119222378	119222868	chr3	+	exonic	hsa_circ_0008394	-2.0002	0.007620	TIMMDC1
34978930	35006275	chr11	+	exonic	hsa_circ_0003768	-1.7015	0.007643	PDHX
49609654	49613024	chr10	+	exonic	hsa_circ_0018315	-2.0064	0.007686	MAPK8
19615443	19626289	chr12	+	exonic	hsa_circ_0006420	-2.0422	0.007691	AEBP2
99001020	99002576	chr7	-	exonic	N/A	-2.4407	0.007696	PDAP1
53196123	53201713	chr13	+	exonic	hsa_circ_0008868	2.1859	0.007697	HNRNPA1L2
153413350	153414506	chr5	-	exonic	hsa_circ_0007691	-2.0897	0.007722	FAM114A2
140961878	140963182	chr5	-	exonic	hsa_circ_0008982	-1.6615	0.007782	DIAPH1
103558598	103567658	chr10	-	exonic	hsa_circ_0019612	-1.9293	0.007831	MGEA5
111883774	111890244	chr10	+	exonic	hsa_circ_0003357	-2.2553	0.007832	ADD3
34093272	34093534	chr11	+	exonic	hsa_circ_0008227	-1.8078	0.007868	CAPRIN1
201966446	201969143	chr1	+	exonic	hsa_circ_0015962	1.6027	0.007875	RNPEP
118451960	118455359	chr11	+	exonic	hsa_circ_0006374	-1.8200	0.007888	ARCN1
59204761	59209198	chr15	-	exonic	hsa_circ_0000605	-2.2554	0.007888	SLTM
98673299	98703416	chr8	+	exonic	hsa_circ_0002114	-1.5453	0.007946	MTDH
23378691	23380612	chr14	-	exonic	hsa_circ_0000524	-3.1070	0.007957	RBM23
72604105	72607065	chr7	+	exonic	hsa_circ_0007927	-1.5892	0.007982	GTF2IP1
46083263	46083463	chr1	+	intronic	hsa_circ_0092293	-1.6031	0.007986	NASP
29959413	29962002	chr8	+	exonic	hsa_circ_0007353	-1.5282	0.008007	LEPROTL1
91723962	91727541	chr9	-	sense overlapping	hsa_circ_0007738	1.9773	0.008020	SHC3
117788564	117788924	chrX	+	exonic	hsa_circ_0007733	-1.5435	0.008079	DOCK11
127965678	127983624	chr3	+	exonic	hsa_circ_0067209	2.2965	0.008118	EEFSEC
35586672	35610620	chr6	-	exonic	hsa_circ_0001599	-2.0096	0.008128	FKBP5
151181822	151188100	chr7	-	exonic	hsa_circ_0082951	-1.7411	0.008144	RHEB
80063751	80088663	chr5	+	exonic	hsa_circ_0073177	-1.8326	0.008166	MSH3
208841374	208842310	chr2	-	exonic	hsa_circ_0001095	-1.6344	0.008187	PLEKHM3
11984672	12016677	chr17	+	exonic	hsa_circ_0007456	-2.0190	0.008196	MAP2K4
59204757	59209198	chr15	-	sense overlapping	N/A	-2.1632	0.008197	SLTM
8520288	8528570	chr19	+	exonic	hsa_circ_0006382	-2.2906	0.008207	HNRNPM
9991948	9995685	chr1	-	exonic	hsa_circ_0007803	-1.7768	0.008210	LZIC
18419661	18462483	chr3	-	exonic	hsa_circ_0064555	-1.7718	0.008226	SATB1
129913321	129925031	chr4	-	exonic	hsa_circ_0001439	-2.3810	0.008236	SCLT1
46633461	46633676	chr12	-	exonic	N/A	-2.3214	0.008240	SLC38A1
31661953	31676727	chr10	+	intronic	N/A	-1.8109	0.008262	ZEB1
19701940	19713859	chrX	-	exonic	hsa_circ_0001913	-1.6515	0.008273	SH3KBP1
75167601	75173934	chr11	-	exonic	hsa_circ_0023624	1.5200	0.008284	GDPD5
76344422	76388643	chr6	+	exonic	hsa_circ_0001613	-2.1021	0.008380	SENP6
202010100	202013775	chr2	+	exonic	hsa_circ_0057748	-2.0932	0.008414	CFLAR
196118683	196129890	chr3	-	exonic	hsa_circ_0001380	-2.0627	0.008445	UBXN7
176085759	176105683	chr1	-	exonic	hsa_circ_0015373	-1.5752	0.008504	RFWD2
62864579	62865284	chr17	-	exonic	hsa_circ_0045337	-1.8780	0.008505	LRRC37A3

70193988	70195501	chr12	+	exonic	hsa_circ_0000419	-1.8658	0.008571	RAB3IP
44054401	44054671	chr1	+	exonic	hsa_circ_0012077	-2.4578	0.008591	PTPRF
29313942	29323831	chr1	+	exonic	hsa_circ_0011168	-1.5546	0.008657	EPB41
68434283	68439036	chr15	+	exonic	hsa_circ_0008378	-1.5223	0.008661	PIAS1
197592293	197602646	chr3	+	exonic	hsa_circ_0008351	-2.4894	0.008715	LRCH3
19358063	19359646	chr18	+	exonic	hsa_circ_0008190	-2.0985	0.008785	MIB1
34952950	35006275	chr11	+	exonic	hsa_circ_0021708	-1.6482	0.008814	PDHX
111738706	111739797	chr1	-	intronic	N/A	1.5679	0.008815	DENND2D
20811436	20811534	chr14	-	sense overlapping	hsa_circ_0000519	-1.6194	0.008828	RPPH1
103432671	103436193	chr10	-	exonic	hsa_circ_0000255	-1.6538	0.008867	FBXW4
20507738	20527139	chr2	-	exonic	hsa_circ_0052867	-1.8152	0.008891	PUM2
85722072	85742653	chr11	-	exonic	hsa_circ_0000347	-2.8443	0.008942	PICALM
129913321	129960251	chr4	-	exonic	hsa_circ_0001440	-2.0934	0.008944	SCLT1
108098321	108106561	chr11	+	exonic	hsa_circ_0003641	-1.8783	0.009033	ATM
14685190	14685289	chr12	+	intronic	hsa_circ_0000379	1.7658	0.009045	RP11-502N13.2
72157634	72161556	chr5	+	exonic	hsa_circ_0002692	-1.6214	0.009063	TNPO1
116668237	116675510	chr12	-	sense overlapping	hsa_circ_0000442	-2.1162	0.009161	MED13L
155465560	155473602	chr7	+	exonic	hsa_circ_0001772	-3.1163	0.009173	RBM33
38890634	38897285	chr22	-	exonic	hsa_circ_0002211	-2.4374	0.009181	DDX17
34241449	34246936	chr20	-	intronic	hsa_circ_0001146	-1.7677	0.009222	CPNE1
71942238	71942518	chr11	+	intronic	N/A	1.7808	0.009302	INPPL1
24075537	24075871	chrX	+	exonic	N/A	-1.5382	0.009311	EIF2S3
27747415	27747744	chr1	+	antisense	hsa_circ_0000035	1.5112	0.009314	WASF2
90376995	90419967	chr7	+	exonic	hsa_circ_0001722	-1.8587	0.009315	CDK14
54127017	54128696	chr2	-	exonic	N/A	-1.5350	0.009333	PSME4
103610730	103651893	chr4	-	sense overlapping	hsa_circ_0001431	-1.5237	0.009340	MANBA
9991948	9994918	chr1	-	exonic	hsa_circ_0000014	-1.5007	0.009384	LZIC
37126308	37126939	chr9	+	exonic	hsa_circ_0001860	-2.4074	0.009415	ZCCHC7
20026088	20027464	chr19	+	exonic	hsa_circ_0050273	-1.5048	0.009435	ZNF93
53430497	53430825	chrX	-	exonic	hsa_circ_0001921	-2.2393	0.009462	SMC1A
14643337	14643566	chr10	-	intronic	hsa_circ_0000217	-1.7090	0.009498	FAM107B
68590619	68607031	chr5	-	exonic	hsa_circ_0072780	-1.5715	0.009501	CCDC125
155691307	155695810	chr1	+	exonic	hsa_circ_0014613	-2.1516	0.009527	DAP3
31661946	31750166	chr10	+	exonic	hsa_circ_0000230	-1.8255	0.009558	ZEB1
108057208	108061227	chr11	-	exonic	N/A	-1.6349	0.009577	NPAT
142264087	142264728	chr8	-	exonic	hsa_circ_0001829	-2.1320	0.009579	SLC45A4
50741596	50763992	chr15	+	exonic	hsa_circ_0000599	-1.6489	0.009601	USP8
149563797	149570383	chr3	+	exonic	hsa_circ_0006697	-2.7405	0.009610	RNF13
30495147	30495584	chr16	+	exonic	hsa_circ_0000690	-2.2768	0.009611	ITGAL
23015828	23030758	chr7	-	exonic	hsa_circ_0005251	-1.5492	0.009621	FAM126A
239082174	239093928	chr2	-	exonic	hsa_circ_0006014	-1.6672	0.009680	ILKAP
124997967	125032500	chr3	-	exonic	hsa_circ_0067100	-1.9916	0.009687	ZNF148
134508189	134509862	chr5	+	sense overlapping	hsa_circ_0006652	1.6270	0.009698	C5orf66
158580694	158591763	chr7	-	exonic	hsa_circ_0001777	-1.7064	0.009699	ESYT2
27822449	27824309	chr2	+	exonic	hsa_circ_0000985	-1.7978	0.009736	ZNF512
52192351	52194233	chr15	+	exonic	hsa_circ_0004773	-1.6027	0.009753	TMOD3
37126308	37127260	chr9	+	intronic	N/A	-1.5804	0.009758	ZCCHC7

51860052	51913807	chr1	-	exonic	hsa_circ_0012425	-1.6182	0.009834	EPS15
85718584	85742653	chr11	-	exonic	hsa_circ_0023936	-2.8745	0.009849	PICALM
24663284	24708279	chr7	+	exonic	hsa_circ_0001686	-1.9218	0.009871	MPP6
38253957	38259261	chr7	+	exonic	N/A	1.5131	0.009876	STARD3NL
1125950	1132297	chr10	+	exonic	hsa_circ_0017446	-2.2364	0.009881	WDR37
810107	814799	chr7	+	exonic	hsa_circ_0001667	1.9202	0.009909	DNAAF5
5604593	5604947	chr19	-	exonic	hsa_circ_0000880	-1.5396	0.009927	SAFB2
85685750	85742653	chr11	-	exonic	hsa_circ_0023891	-2.3538	0.009929	PICALM
71071739	71075089	chr8	-	exonic	hsa_circ_0001810	-1.6562	0.009958	NCOA2
85707868	85718626	chr11	-	exonic	hsa_circ_0023920	-2.9939	0.009967	PICALM
101910475	101911643	chr2	-	exonic	hsa_circ_0001058	-2.0897	0.010023	RNF149
98921663	98931350	chr12	+	exonic	hsa_circ_0003517	-1.6783	0.010043	TMPO
32749557	32764217	chr12	+	sense overlapping	hsa_circ_0000389	-2.2066	0.010076	FGD4
118451960	118454073	chr11	+	exonic	N/A	-1.7046	0.010108	ARCN1
100078957	100081447	chr2	-	exonic	hsa_circ_0001053	-1.7091	0.010186	REV1
91855033	91855996	chr7	-	exonic	N/A	-1.5695	0.010192	KRIT1
80537076	80546772	chr9	-	sense overlapping	N/A	-2.0744	0.010212	GNAQ
47887514	47888016	chr4	-	exonic	hsa_circ_0069655	1.6221	0.010225	NFXL1
56277780	56284152	chr4	+	exonic	hsa_circ_0001414	-2.3889	0.010237	TMEM165
123924133	123928458	chr9	+	exonic	hsa_circ_0088333	-1.9621	0.010263	CNTRL
36492117	36507981	chr6	-	exonic	N/A	-2.4083	0.010293	STK38
47768925	47769734	chr21	+	exonic	hsa_circ_0002803	-1.8680	0.010319	PCNT
37727937	37735069	chr8	-	exonic	hsa_circ_0005630	-1.5455	0.010430	RAB11FIP1
37126308	37147442	chr9	+	intronic	N/A	-2.1584	0.010467	ZCCHC7
107528605	107535189	chr9	+	exonic	hsa_circ_0087800	1.6807	0.010517	NIPSNAP3B
110062421	110066928	chr9	+	exonic	hsa_circ_0087855	-1.8259	0.010549	RAD23B
129960195	130003528	chr4	-	exonic	N/A	-1.5397	0.010600	SCLT1
47779518	47787483	chr3	-	exonic	hsa_circ_0065308	-1.7087	0.010653	SMARCC1
31139461	31144271	chr14	+	exonic	hsa_circ_0009140	-1.7899	0.010653	SCFD1
9204473	9211782	chr18	+	exonic	hsa_circ_0000827	-2.8353	0.010697	ANKRD12
85723323	85742653	chr11	-	exonic	hsa_circ_0023940	-3.1896	0.010699	PICALM
68300495	68300624	chr16	+	exonic	hsa_circ_0039943	-1.5452	0.010744	SLC7A6
112321531	112337371	chr5	+	exonic	hsa_circ_0073608	-1.8237	0.010760	DCP2
57814613	57816308	chr17	+	exonic	hsa_circ_0044875	-2.4573	0.010780	VMP1
140037802	140046483	chr4	-	exonic	N/A	-1.6217	0.010812	ELF2
96717725	96728643	chr12	-	exonic	hsa_circ_0002762	-1.5139	0.010844	CDK17
22255610	22256366	chr19	+	exonic	hsa_circ_0050301	-1.6612	0.010847	ZNF257
38991050	38996984	chr5	-	exonic	hsa_circ_0072338	-1.5511	0.010895	RICTOR
154315413	154318485	chr4	+	exonic	hsa_circ_0006225	-1.5246	0.010911	MND1
42812236	42814457	chr8	+	exonic	hsa_circ_0084162	-1.5754	0.010976	HOOK3
119219541	119236162	chr3	+	exonic	hsa_circ_0066874	-1.9037	0.010976	TIMMDC1
211952259	211961069	chr1	-	exonic	N/A	-1.8691	0.010987	LPGAT1
51804072	51813781	chr18	+	exonic	hsa_circ_0003428	-1.6029	0.011027	POLI
33606862	33613800	chr18	-	exonic	hsa_circ_0000842	-1.6512	0.011036	RPRD1A
20811404	20811492	chr14	-	sense overlapping	hsa_circ_0000517	-2.6208	0.011063	RPPH1
113196219	113202401	chr1	+	exonic	hsa_circ_0000109	-1.7243	0.011144	CAPZA1
64004084	64004810	chr7	-	exonic	hsa_circ_0002566	-1.8010	0.011156	ZNF680
79613111	79614128	chr10	-	exonic	hsa_circ_0006649	-1.5524	0.011161	DLG5

9195548	9221997	chr18	+	exonic	hsa_circ_0046843	-2.9322	0.011166	ANKRD12
47127684	47139571	chr3	-	exonic	N/A	-1.7241	0.011177	SETD2
125032151	125032500	chr3	-	exonic	hsa_circ_0067103	-1.5989	0.011195	ZNF148
74148264	74149874	chr7	+	exonic	N/A	-1.6710	0.011351	GTF2I
56626997	56628056	chr3	+	exonic	hsa_circ_0001313	-2.4319	0.011389	CCDC66
21644103	21649235	chr18	+	exonic	hsa_circ_0000839	-1.8403	0.011396	TTC39C
29313942	29314417	chr1	+	exonic	hsa_circ_0011167	-1.5782	0.011430	EPB41
58275961	58316858	chr2	+	exonic	N/A	-1.6817	0.011521	VRK2
77611362	77632364	chr9	-	exonic	hsa_circ_0087220	-2.0058	0.011544	C9orf41
37633006	37640126	chr4	-	exonic	hsa_circ_0001400	-3.1521	0.011552	RELL1
7837219	7841492	chr1	+	exonic	hsa_circ_0009548	-2.1464	0.011584	VAMP3
169840378	169843795	chr3	-	sense overlapping	hsa_circ_0007854	-2.1181	0.011605	PHC3
159004985	159006457	chr6	+	exonic	hsa_circ_0003345	-1.7005	0.011648	TMEM181
72205086	72222904	chr4	+	exonic	hsa_circ_0008676	1.5493	0.011662	SLC4A4
46067916	46098727	chr22	+	exonic	hsa_circ_0063763	-1.5658	0.011681	ATXN10
69726439	69752439	chr10	-	exonic	hsa_circ_0003308	-1.7505	0.011734	HERC4
196118683	196129888	chr3	-	intronic	N/A	-1.9017	0.011749	UBXN7
65471271	65472542	chr15	-	exonic	hsa_circ_0004374	-1.5800	0.011774	CLPX
120916382	120930794	chr11	+	exonic	hsa_circ_0003302	-2.0326	0.011783	TBCEL
61707544	61714152	chr8	+	exonic	N/A	-2.0768	0.011797	CHD7
247322307	247323115	chr1	-	exonic	hsa_circ_0017348	-1.8988	0.011808	ZNF124
86328535	86329135	chr6	-	exonic	hsa_circ_0006131	-1.7285	0.011821	SYNCRIP
85692787	85737409	chr11	-	exonic	hsa_circ_0023908	-2.7090	0.011840	PICALM
155457868	155473602	chr7	+	exonic	hsa_circ_0001771	-2.1724	0.011848	RBM33
133907680	133914026	chr3	-	exonic	hsa_circ_0005768	-1.7210	0.011854	RYK
113196219	113212227	chr1	+	exonic	hsa_circ_0013533	-1.6005	0.011878	CAPZA1
59805629	59844509	chr1	+	exonic	hsa_circ_0006633	-2.0004	0.011898	FGGY
18846213	18856973	chr16	-	exonic	hsa_circ_0038258	-1.7649	0.011913	SMG1
59963381	59964938	chr15	-	exonic	hsa_circ_0035537	-1.5504	0.011932	BNIP2
64096074	64100213	chr5	+	exonic	N/A	-1.7618	0.011948	CWC27
67356636	67371058	chr1	-	exonic	hsa_circ_0006677	-1.5401	0.011957	WDR78
21319681	21324846	chr20	+	exonic	hsa_circ_0001134	-1.5347	0.011975	XRN2
25650607	25657118	chr15	-	exonic	hsa_circ_0000586	-1.9131	0.011991	UBE3A
59805629	59812070	chr1	+	exonic	hsa_circ_0000076	-2.0937	0.012056	FGGY
76412360	76412788	chr6	+	exonic	hsa_circ_0001614	-1.7026	0.012059	SENP6
167915606	167919852	chr5	+	exonic	hsa_circ_0009145	-2.0850	0.012081	RARS
104925455	104937980	chr7	-	intronic	hsa_circ_0003656	-1.5260	0.012092	SRPK2
211952259	211966532	chr1	-	exonic	hsa_circ_0002274	-1.8539	0.012111	LPGAT1
52773420	52773806	chr8	-	exonic	hsa_circ_0001802	-2.9826	0.012130	PCMTD1
17205666	17214859	chr21	+	exonic	hsa_circ_0005238	-1.8629	0.012155	USP25
6776706	6777567	chr7	+	exonic	hsa_circ_0007607	-1.5176	0.012187	PMS2CL
101550654	101551042	chr15	+	exonic	hsa_circ_0037078	1.6928	0.012301	LRRK1
21698477	21702388	chr14	-	exonic	hsa_circ_0003643	-1.9042	0.012372	HNRNPC
86292641	86293514	chr9	-	exonic	hsa_circ_0001865	-2.0831	0.012387	UBQLN1
28163979	28167848	chr16	-	exonic	hsa_circ_0007807	-1.6604	0.012428	XPO6
33099245	33099673	chr1	-	exonic	hsa_circ_0011426	-1.6838	0.012440	ZBTB8OS
31644075	31676727	chr10	+	intronic	hsa_circ_0002765	-1.7387	0.012451	ZEB1
35846859	35854683	chr1	+	exonic	hsa_circ_0000051	-1.5066	0.012506	ZMYM4
114397092	114397671	chr1	-	exonic	hsa_circ_0013609	-2.0538	0.012517	PTPN22
57842331	57851305	chr17	+	intronic	N/A	-2.0538	0.012520	VMP1

62188226	62188541	chr14	+	exonic	hsa_circ_0007976	-1.5828	0.012542	HIF1A
118656760	118657227	chr11	-	exonic	hsa_circ_0004293	-2.1044	0.012545	DDX6
27975161	27977818	chr17	-	exonic	hsa_circ_0042799	-1.9939	0.012561	SSH2
79940776	79940857	chr13	+	antisense	hsa_circ_0000499	1.7038	0.012593	RBM26
10031484	10066619	chrX	+	exonic	hsa_circ_0001910	-2.0023	0.012616	WWC3
197592293	197596333	chr3	+	exonic	hsa_circ_0008106	-1.6172	0.012657	LRCH3
21698477	21699231	chr14	-	exonic	hsa_circ_0031147	-1.6831	0.012673	HNRNPC
45695715	45696530	chr17	+	exonic	hsa_circ_0004622	-1.5350	0.012781	NPEPPS
85742510	85742653	chr11	-	exonic	hsa_circ_0023944	-2.7786	0.012806	PICALM
77330650	77340944	chr11	-	exonic	hsa_circ_0008342	-1.6340	0.012817	CLNS1A
23023562	23030758	chr7	-	exonic	hsa_circ_0001682	-2.1744	0.012842	FAM126A
29432408	29432626	chr18	-	exonic	hsa_circ_0000841	-1.5347	0.012847	TRAPPC8
85701292	85742653	chr11	-	exonic	hsa_circ_0023918	-2.0028	0.012876	PICALM
139818912	139820329	chr7	-	exonic	N/A	-1.5068	0.012918	KDM7A
58755107	58755971	chr20	+	intronic	hsa_circ_0001174	-1.8430	0.012946	RP5-1043L13.1
108243000	108250718	chr6	-	exonic	hsa_circ_0001635	-2.3553	0.012947	SEC63
47762155	47787483	chr3	-	exonic	hsa_circ_0065301	-1.5063	0.012957	SMARCC1
38792600	38868560	chr21	+	exonic	hsa_circ_0061694	-2.7439	0.012965	DYRK1A
74561481	74563895	chr18	+	exonic	hsa_circ_0004979	-1.7239	0.013021	ZNF236
114202540	114239805	chr2	+	exonic	N/A	-1.5470	0.013078	CBWD2
23650789	23651172	chr7	+	exonic	hsa_circ_0001684	-2.4407	0.013183	CCDC126
459786	463400	chr12	-	exonic	hsa_circ_0002881	-1.5455	0.013209	KDM5A
68215377	68217269	chr16	+	exonic	hsa_circ_0039934	-1.6267	0.013263	NFATC3
43436412	43447330	chr7	+	exonic	hsa_circ_0008258	1.6042	0.013283	HECW1
72157634	72168547	chr5	+	exonic	hsa_circ_0072917	-1.6300	0.013322	TNPO1
44894175	44913200	chrX	+	exonic	hsa_circ_0090328	1.5327	0.013356	KDM6A
47139444	47147610	chr3	-	exonic	hsa_circ_0001290	-2.0699	0.013363	SETD2
85223943	85234875	chr15	-	exonic	hsa_circ_0000647	-1.8339	0.013389	SEC11A
7826418	7841374	chr7	+	sense overlapping	hsa_circ_0001676	-1.9206	0.013394	UMAD1
73614502	73614814	chr14	+	exonic	hsa_circ_0003848	-1.7928	0.013440	PSEN1
125032151	125050082	chr3	-	exonic	hsa_circ_0001333	-1.9135	0.013479	ZNF148
64791491	64792365	chr15	+	sense overlapping	hsa_circ_0000615	-2.8710	0.013544	ZNF609
29481207	29481422	chr1	-	exonic	hsa_circ_0006602	-1.8813	0.013562	SRSF4
77779390	77818086	chr13	-	exonic	hsa_circ_0030509	-1.7764	0.013596	MYCBP2
67546221	67548719	chr3	-	exonic	hsa_circ_0003060	-1.7902	0.013626	SUCLG2
9079949	9098771	chr2	-	intronic	hsa_circ_0000973	-1.9172	0.013631	MBOAT2
34144719	34149837	chr17	+	exonic	N/A	-2.6181	0.013666	TAF15
11958205	12016677	chr17	+	exonic	hsa_circ_0005603	-2.0678	0.013702	MAP2K4
74524751	74528329	chr7	+	exonic	hsa_circ_0080649	-1.6149	0.013738	GTF2IRD2
94983404	95001475	chr15	+	exonic	hsa_circ_0003333	-2.0541	0.013804	MCTP2
74500670	74528759	chr11	+	exonic	hsa_circ_0006705	-1.5518	0.013806	RNF169
68915840	68916286	chr5	+	exonic	hsa_circ_0072797	-1.8316	0.013819	SMA
21629185	21629395	chr16	+	exonic	hsa_circ_0038439	-1.6288	0.013909	METTL9
61484604	61497374	chr8	+	exonic	N/A	-1.5135	0.013965	RAB2A
52935654	52941341	chr6	+	exonic	hsa_circ_0003700	-2.0209	0.013987	FBXO9
122369651	122372262	chr12	+	exonic	N/A	1.5494	0.013989	WDR66
21076215	21100103	chr1	-	exonic	hsa_circ_0000023	-1.6395	0.013999	HP1BP3
39595439	39609405	chr18	+	exonic	hsa_circ_0002560	-1.9162	0.014045	PIK3C3
61749745	61753656	chr2	-	exonic	hsa_circ_0001016	-2.0508	0.014144	XPO1

74972047	74976724	chr16	-	exonic	hsa_circ_0006691	1.5338	0.014160	WDR59
144464661	144465125	chr4	+	exonic	hsa_circ_0001445	-2.7373	0.014174	SMARCA5
41892941	41910892	chr13	+	exonic	hsa_circ_0030069	-1.5284	0.014193	NAA16
28013458	28019595	chr8	+	exonic	hsa_circ_0001785	-1.5913	0.014224	ELP3
110062421	110074018	chr9	+	exonic	hsa_circ_0008812	-1.7394	0.014229	RAD23B
169831147	169840532	chr3	-	exonic	hsa_circ_0006893	-2.1356	0.014261	PHC3
85733409	85742653	chr11	-	exonic	hsa_circ_0023942	-2.7155	0.014277	PICALM
73418464	73429935	chr11	-	exonic	hsa_circ_0004596	-1.9231	0.014312	RAB6A
70096955	70101437	chr10	+	exonic	hsa_circ_0018499	1.5512	0.014347	HNRNPH3
52935854	52947416	chr6	+	exonic	hsa_circ_0076777	-1.9652	0.014371	FBXO9
124090477	124090706	chr12	+	exonic	hsa_circ_0029235	1.6527	0.014391	DDX55
103427642	103436193	chr10	-	exonic	hsa_circ_0008362	-1.6684	0.014392	FBXW4
185580493	185599548	chr4	+	exonic	hsa_circ_0003788	-1.5767	0.014407	PRIMPOL
35565024	35614627	chr6	-	sense overlapping	N/A	-1.5117	0.014420	FKBP5
37633006	37636745	chr4	-	exonic	hsa_circ_0002194	-2.1753	0.014442	RELL1
72958135	72960247	chr2	-	exonic	hsa_circ_0001030	-1.8655	0.014510	EXOC6B
153413350	153414527	chr5	-	exonic	hsa_circ_0001546	-1.8308	0.014522	FAM114A2
36492117	36507984	chr6	-	exonic	hsa_circ_0003131	-2.3004	0.014525	STK38
13632601	13644961	chr6	-	exonic	hsa_circ_0001577	-2.5155	0.014550	RANBP9
74239461	74248066	chr7	-	exonic	hsa_circ_0005811	-1.6666	0.014588	GTF2IRD2
57059987	57064148	chr12	-	exonic	hsa_circ_0027089	-1.7072	0.014618	PTGES3
197592293	197593090	chr3	+	exonic	hsa_circ_0008439	-2.0222	0.014627	LRCH3
197597030	197602646	chr3	+	exonic	hsa_circ_0005873	-2.1941	0.014664	LRCH3
43600718	43625947	chr20	+	exonic	N/A	-1.7321	0.014754	STK4
73614502	73640415	chr14	+	exonic	hsa_circ_0002564	-1.5594	0.014754	PSEN1
38991050	39021238	chr5	-	exonic	hsa_circ_0006308	-1.7308	0.014760	RICTOR
144464665	144465125	chr4	+	sense overlapping	N/A	-2.5838	0.014797	SMARCA5
7402357	7402812	chr17	+	sense overlapping	N/A	-2.1245	0.014907	POLR2A
76412360	76421132	chr6	+	exonic	hsa_circ_0077096	-1.5473	0.014908	SENP6
109046047	109046186	chr12	-	exonic	hsa_circ_0000437	-2.6494	0.014978	CORO1C
70758070	70781249	chr1	-	exonic	hsa_circ_0000085	-1.5663	0.015031	ANKRD13C
61749745	61761038	chr2	-	exonic	hsa_circ_0001017	-2.1437	0.015085	XPO1
114697535	114709422	chr2	+	exonic	hsa_circ_0056199	-1.8994	0.015136	ACTR3
65307876	65310553	chr5	+	exonic	hsa_circ_0001494	-1.6374	0.015161	ERBB2IP
85707868	85742653	chr11	-	exonic	hsa_circ_0023923	-2.6049	0.015221	PICALM
50616725	50616948	chr14	-	exonic	hsa_circ_0007695	-1.7529	0.015310	SOS2
103384501	103436193	chr10	-	exonic	hsa_circ_0005741	-1.6447	0.015357	FBXW4
17267718	17273932	chr19	+	exonic	hsa_circ_0006590	-1.6435	0.015410	MYO9B
157839891	157841780	chr3	+	exonic	hsa_circ_0001355	-1.8787	0.015565	RSRC1
99802639	99812219	chr2	+	exonic	hsa_circ_0001051	-1.5987	0.015622	MRPL30
59787207	59844509	chr1	+	exonic	hsa_circ_0005354	-2.1578	0.015627	FGGY
30310017	30315516	chr17	+	exonic	hsa_circ_0002629	-1.6350	0.015628	SUZ12
116668337	116675510	chr12	-	sense overlapping	hsa_circ_0000443	-2.0498	0.015630	MED13L
65288537	65310553	chr5	+	exonic	hsa_circ_0005649	-1.6394	0.015650	ERBB2IP
11958205	12016681	chr17	+	sense overlapping	N/A	-1.9167	0.015675	MAP2K4
140476711	140508795	chr7	-	exonic	hsa_circ_0007178	-2.2149	0.015684	BRAF

86297865	86301070	chr9	-	exonic	hsa_circ_0005142	-1.8391	0.015705	UBQLN1
63824845	63855207	chr15	+	exonic	hsa_circ_0002138	-1.6423	0.015728	USP3
74585341	74601048	chr8	-	exonic	hsa_circ_0001811	-2.3682	0.015756	STAU2
131060182	131130662	chr7	+	exonic	hsa_circ_0003047	-1.7640	0.015929	MKLN1
15863654	15869942	chr10	-	exonic	hsa_circ_0000220	-2.2877	0.015948	FAM188A
15875628	15869942	chr10	-	exonic	hsa_circ_0006665	-2.3264	0.015948	FAM188A
28003837	28022541	chr17	-	exonic	hsa_circ_0042819	-1.5134	0.015997	SSH2
108046972	108047817	chr11	-	exonic	hsa_circ_0006208	-1.6845	0.015998	NPAT
119144577	119156276	chr11	+	exonic	hsa_circ_0000363	-1.5026	0.016006	CBL
5836847	5842668	chr10	-	exonic	hsa_circ_0002665	-1.6209	0.016047	GDI2
42739466	42742954	chr13	+	exonic	hsa_circ_0030131	1.5407	0.016061	DGKH
47691321	47707559	chr20	+	exonic	hsa_circ_0001168	-1.5864	0.016123	CSE1L
32381495	32385259	chr1	-	exonic	hsa_circ_0007364	-1.6448	0.016168	PTP4A2
170906490	170912424	chr3	-	exonic	hsa_circ_0002387	-1.5140	0.016185	TNIK
149563797	149613357	chr3	+	exonic	hsa_circ_0003956	-2.3450	0.016217	RNF13
67546221	67559327	chr3	-	exonic	hsa_circ_0004276	-1.8069	0.016245	SUCLG2
50073902	50093067	chr5	+	exonic	hsa_circ_0072437	-2.0298	0.016255	PARP8
35349801	35360267	chr10	-	exonic	hsa_circ_0000234	-1.5863	0.016265	CUL2
32760890	32764217	chr12	+	exonic	hsa_circ_0000390	-2.2451	0.016399	FGD4
16126965	16130460	chr16	+	exonic	hsa_circ_0002078	1.5733	0.016432	ABCC1
120830753	120836157	chr2	+	exonic	hsa_circ_0001064	-1.5134	0.016433	EPB41L5
65284462	65290692	chr5	+	exonic	hsa_circ_0001492	-1.9897	0.016527	ERBB2IP
103610730	103612114	chr4	-	exonic	hsa_circ_0001429	-1.6371	0.016540	MANBA
49372459	49373029	chr3	-	intronic	N/A	-1.8279	0.016549	USP4
213037066	213058738	chr1	+	exonic	hsa_circ_0000182	-2.2282	0.016560	FLVCR1
86293355	86301070	chr9	-	exonic	hsa_circ_0087357	-2.2513	0.016698	UBQLN1
52773404	52773806	chr8	-	exonic	hsa_circ_0001801	-2.9043	0.016715	PCMTD1
21216261	21216990	chr19	+	exonic	hsa_circ_0008838	-1.8738	0.016776	ZNF430
87925620	87928449	chr6	+	exonic	hsa_circ_0004058	-1.6158	0.016808	ZNF292
22999874	23030758	chr7	-	exonic	hsa_circ_0008951	-2.1011	0.016861	FAM126A
167915606	167921655	chr5	+	exonic	hsa_circ_0001550	-1.6855	0.016905	RARS
125032151	125042288	chr3	-	exonic	hsa_circ_0007557	-1.8587	0.016965	ZNF148
32874967	32875262	chr22	+	exonic	hsa_circ_0008832	-1.5895	0.017026	FBXO7
26851121	26853222	chr6	-	exonic	hsa_circ_0075896	-1.6020	0.017040	GUSBP2
7830092	7844817	chr10	+	exonic	hsa_circ_0017667	-2.6114	0.017094	ATP5C1
77065301	77065626	chr4	-	exonic	hsa_circ_0070040	-2.1031	0.017097	NUP54
53289511	53302038	chr16	+	exonic	hsa_circ_0039365	-1.6887	0.017209	CHD9
243222779	243242354	chr1	-	exonic	hsa_circ_0017202	-1.9878	0.017249	LINC01347
39739039	39757359	chr4	+	exonic	hsa_circ_0009154	-1.5960	0.017336	UBE2K
171851260	171969331	chr3	+	exonic	hsa_circ_0007148	-2.4547	0.017341	FNDC3B
73956383	73958017	chr4	-	exonic	hsa_circ_0007883	-1.5382	0.017391	ANKRD17
64852814	64853814	chr7	+	exonic	hsa_circ_0004150	-1.7071	0.017480	ZNF92
101898320	101911643	chr2	-	exonic	hsa_circ_0055904	-1.8193	0.017510	RNF149
37732032	37735069	chr8	-	exonic	hsa_circ_0083946	-1.9007	0.017512	RAB11FIP1
3182193	3186394	chr3	+	exonic	N/A	-1.8934	0.017547	TRNT1
195101737	195112876	chr3	-	exonic	hsa_circ_0007331	-1.7031	0.017586	ACAP2
86292641	86297981	chr9	-	exonic	hsa_circ_0006466	-1.9482	0.017606	UBQLN1
158552176	158580784	chr7	-	exonic	hsa_circ_0083211	-1.6963	0.017703	ESYT2
94562928	94580249	chr12	+	exonic	N/A	-3.2821	0.017725	PLXNC1
104702610	104707254	chr7	+	exonic	hsa_circ_0081813	-1.5296	0.017733	KMT2E

33971648	33973235	chr9	-	exonic	hsa_circ_0001851	-1.8818	0.017815	UBAP2
96233422	96261168	chr9	+	exonic	hsa_circ_0001875	-1.7939	0.017909	FAM120A
91924202	91981956	chr7	+	exonic	hsa_circ_0002744	-1.7105	0.017975	ANKIB1
40986531	40991029	chr17	+	exonic	N/A	-1.5630	0.017979	PSME3
36723505	36737571	chr22	-	exonic	hsa_circ_0063147	-2.0989	0.018048	MYH9
116675272	116675510	chr12	-	exonic	hsa_circ_0028587	-1.9287	0.018091	MED13L
128281256	128289036	chr7	+	sense overlapping	hsa_circ_0005921	-1.9292	0.018115	LINC01000
117910084	117957453	chr1	+	exonic	hsa_circ_0013729	-3.3192	0.018157	MAN1A2
8910799	8917022	chr2	-	exonic	hsa_circ_0005315	-1.6197	0.018173	KIDINS220
83799882	83803090	chr4	-	exonic	hsa_circ_0001421	-1.9695	0.018182	SEC31A
61607643	61609229	chr3	+	intronic	hsa_circ_0006226	2.0400	0.018201	PTPRG
7844232	7844817	chr10	+	exonic	hsa_circ_0017675	-2.5043	0.018213	ATP5C1
60733932	60735153	chr14	+	exonic	N/A	1.6053	0.018306	PPM1A
108186549	108206688	chr11	+	exonic	hsa_circ_0024231	-2.0696	0.018328	ATM
1735857	1756938	chr1	-	exonic	hsa_circ_0006869	-2.2427	0.018335	GNB1
30267304	30274704	chr17	+	exonic	hsa_circ_0042962	-1.6442	0.018348	SUZ12
39002636	39021238	chr5	-	exonic	hsa_circ_0001475	-1.6985	0.018425	RICTOR
5815804	5828013	chr10	-	exonic	hsa_circ_0000210	-1.8534	0.018551	GDI2
52959282	52975384	chr1	-	exonic	hsa_circ_0003632	-1.7368	0.018590	ZCCHC11
24124293	24135302	chr16	+	exonic	hsa_circ_0038655	-1.7403	0.018618	PRKCB
26789747	26792203	chr10	+	exonic	hsa_circ_0006063	-2.0430	0.018639	APBB1IP
75587212	75590926	chr14	-	exonic	hsa_circ_0032682	-1.5935	0.018640	NEK9
34300940	34313077	chr20	-	exonic	hsa_circ_0008143	-1.5438	0.018694	RBM39
42541471	42562042	chr6	+	exonic	hsa_circ_0076347	-1.5915	0.018717	UBR2
30954186	30956926	chr20	+	exonic	hsa_circ_0001136	-1.7632	0.018738	ASXL1
30354787	30358477	chr17	+	exonic	hsa_circ_0042992	-1.7853	0.018752	LRRC37B
19144163	19148055	chr18	-	exonic	hsa_circ_0009110	-1.5966	0.018827	ESCO1
27977671	28030080	chr17	-	exonic	hsa_circ_0042806	-2.0120	0.018844	SSH2
145594038	145595220	chr1	-	exonic	hsa_circ_0003693	-1.5275	0.018898	POLR3C
42513408	42515462	chr2	+	exonic	hsa_circ_0054241	-1.5092	0.018935	EML4
224746658	224760347	chr2	-	exonic	hsa_circ_0001101	-1.9456	0.019020	WDFY1
247319707	247323115	chr1	-	sense overlapping	N/A	-1.9622	0.019042	ZNF124
61838273	61842207	chr17	-	exonic	hsa_circ_0045219	-1.8177	0.019085	CCDC47
57014000	57016139	chr20	+	exonic	hsa_circ_0001173	-2.5960	0.019109	VAPB
33632307	33637797	chr20	-	exonic	N/A	-1.5553	0.019144	TRPC4AP
54013510	54014377	chrX	-	exonic	hsa_circ_0009069	-1.6796	0.019188	PHF8
57808781	57816308	chr17	+	exonic	hsa_circ_0006508	-1.8795	0.019208	VMP1
42553155	42560230	chr15	-	exonic	hsa_circ_0034803	-1.6638	0.019308	TMEM87A
24613084	24708279	chr7	+	exonic	hsa_circ_0079614	-1.7907	0.019342	MPP6
57276683	57282379	chr3	+	exonic	hsa_circ_0001317	-1.7370	0.019367	APPL1
128281294	128289036	chr7	+	exonic	hsa_circ_0082178	-1.9825	0.019381	LINC01000
37126308	37327831	chr9	+	exonic	hsa_circ_0087047	-1.9773	0.019431	ZCCHC7
119219541	119232566	chr3	+	exonic	hsa_circ_0006884	-1.9087	0.019476	TIMMDC1
9588086	9588851	chr18	-	exonic	hsa_circ_0046881	-1.8428	0.019512	PPP4R1
1747194	1756938	chr1	-	exonic	hsa_circ_0000008	-2.0789	0.019515	GNB1
38724057	38734535	chr10	+	exonic	hsa_circ_0018224	-2.0086	0.019554	LINC00999
38205014	38205733	chr6	-	exonic	hsa_circ_0083996	-1.7944	0.019588	WHSC1L1
45391429	45396935	chr18	-	exonic	hsa_circ_0003694	-2.0701	0.019630	SMAD2
10031484	10078060	chrX	+	exonic	hsa_circ_0089866	-1.7534	0.019648	WWC3

32761408	32807433	chr10	+	exonic	N/A	-2.1029	0.019656	CCDC7
93480747	93482948	chr15	+	exonic	hsa_circ_0000654	-1.6368	0.019702	CHD2
78293666	78320990	chr13	+	exonic	N/A	-1.8392	0.019706	SLAIN1
43341245	43345284	chr3	+	exonic	hsa_circ_0004089	-2.2076	0.019725	SNRK
128103455	128109220	chr9	+	exonic	hsa_circ_0005249	-1.5158	0.019771	GAPVD1
166141085	166184511	chr4	+	exonic	hsa_circ_0071375	-2.0573	0.019879	KLHL2
171965322	171969331	chr3	+	exonic	hsa_circ_0006156	-2.4151	0.019927	FNDC3B
16415815	16415895	chr21	-	exonic	hsa_circ_0061276	-1.6763	0.019945	NRIP1
40872407	40882768	chr1	+	exonic	hsa_circ_0011898	-1.5745	0.020093	SMAP2
132671168	132720832	chr9	-	exonic	hsa_circ_0089074	-1.6061	0.020195	FNBP1
32142994	32168452	chr2	-	exonic	hsa_circ_0053394	-1.9365	0.020203	MEMO1
44713610	44717214	chr1	-	intronic	hsa_circ_0000065	1.5084	0.020299	ERI3
77055327	77065626	chr4	-	exonic	hsa_circ_0070039	-1.9401	0.020339	NUP54
68434283	68446033	chr15	+	exonic	hsa_circ_0003916	-1.9192	0.020342	PIAS1
77210743	77212967	chr7	+	exonic	hsa_circ_0008139	-2.0818	0.020365	PTPN12
138244331	138256189	chr3	-	exonic	N/A	-1.5129	0.020376	CEP70
167927595	167929110	chr5	+	exonic	hsa_circ_0007958	-1.5376	0.020385	RARS
224142178	224149975	chr1	-	intronic	hsa_circ_0001978	-1.8259	0.020387	XLOC_l2_001331
49372452	49373029	chr3	-	intronic	hsa_circ_0001301	-1.7843	0.020424	USP4
50875285	50878685	chr15	-	exonic	hsa_circ_0035226	-1.6037	0.020478	TRPM7
34147027	34149837	chr17	+	exonic	hsa_circ_0043138	-2.5262	0.020524	TAF15
12903120	12903230	chr19	-	intronic	hsa_circ_0000895	1.5998	0.020544	HOOK2
72863871	72865324	chr7	-	exonic	N/A	-1.5624	0.020596	BAZ1B
167915606	167924353	chr5	+	exonic	hsa_circ_0001551	-1.5390	0.020608	RARS
51123962	51364771	chr10	-	exonic	hsa_circ_0018343	-1.8017	0.020641	PARG
130915557	130916831	chr8	-	exonic	hsa_circ_0085567	-1.5742	0.020711	FAM49B
73418464	73431944	chr11	-	exonic	hsa_circ_0003908	-1.9142	0.020799	RAB6A
222652709	224149975	chr1	-	sense overlapping	hsa_circ_0003163	-1.7719	0.020831	TLR5
196118683	196120490	chr3	-	exonic	hsa_circ_0005051	-2.3000	0.020852	UBXN7
156220621	156220731	chr1	-	intronic	hsa_circ_0000141	1.5533	0.020943	SMG5
243776972	244006584	chr1	-	exonic	hsa_circ_0017252	-2.0541	0.020988	AKT3
26789747	26802589	chr10	+	exonic	N/A	-1.9973	0.020997	APBB1IP
163876310	163899928	chr6	+	exonic	hsa_circ_0005328	-1.6009	0.021016	QKI
41961025	41962156	chr15	+	exonic	hsa_circ_0000591	-1.9296	0.021046	MGA
35800605	35802753	chr17	+	exonic	hsa_circ_0005101	-1.6459	0.021049	TADA2A
21660548	21663045	chr18	+	exonic	hsa_circ_0002403	-1.8649	0.021129	TTC39C
61013821	61041513	chr13	+	exonic	hsa_circ_0003441	-1.7544	0.021171	TDRD3
243858892	244006584	chr1	-	exonic	hsa_circ_0004649	-2.1116	0.021209	AKT3
85554223	85554349	chr2	-	sense overlapping	hsa_circ_0001036	-1.6936	0.021249	TGOLN2
47497895	47501947	chr12	+	sense overlapping	hsa_circ_0004650	-1.5690	0.021254	PCED1B
155695172	155695810	chr1	+	exonic	hsa_circ_0014614	-1.8901	0.021263	DAP3
32703702	32704685	chr2	+	exonic	hsa_circ_0002408	-1.5626	0.021269	BIRC6
69983264	69985939	chr12	+	exonic	hsa_circ_0000418	-1.6328	0.021271	CCT2
72361165	72361649	chr7	+	exonic	hsa_circ_0003261	-2.0489	0.021281	POM121
6995910	7002978	chr4	+	exonic	hsa_circ_0006681	-1.8865	0.021298	TBC1D14
151719232	151738409	chr4	-	exonic	hsa_circ_0006618	-1.8840	0.021341	LRBA
117013217	117047785	chr6	+	exonic	hsa_circ_0006146	-1.9081	0.021429	KPNA5
135611502	135636378	chr7	-	exonic	hsa_circ_0082547	-2.1097	0.021448	MTPN

19353584	19359646	chr18	+	exonic	hsa_circ_0008741	-1.9642	0.021454	MIB1
118453893	118455359	chr11	+	exonic	hsa_circ_0007383	-1.5564	0.021468	ARCN1
117957334	117963271	chr1	+	exonic	hsa_circ_0013737	-3.1943	0.021562	MAN1A2
118635916	118657227	chr11	-	exonic	hsa_circ_0024501	-2.3926	0.021591	DDX6
155547476	155560408	chr3	-	exonic	hsa_circ_0067772	-1.5898	0.021610	SLC33A1
111819470	111826847	chr9	-	exonic	hsa_circ_0004109	-1.5409	0.021675	TMEM245
13639794	13644961	chr6	-	exonic	hsa_circ_0001578	-2.6321	0.021703	RANBP9
51501542	51509135	chr13	+	exonic	hsa_circ_0030286	-1.7867	0.021706	RNASEH2B
155742856	155753880	chr1	-	exonic	hsa_circ_0014628	-1.6938	0.021716	GON4L
13632601	13659064	chr6	-	exonic	hsa_circ_0075650	-2.2974	0.021727	RANBP9
57842331	57851246	chr17	+	exonic	hsa_circ_0004027	-1.8161	0.021857	VMP1
74650518	74652103	chr8	-	exonic	N/A	-2.1106	0.021876	STAU2
9048750	9098771	chr2	-	exonic	hsa_circ_0000972	-2.0001	0.021880	MBOAT2
86294689	86297981	chr9	-	exonic	hsa_circ_0001867	-1.8316	0.022019	UBQLN1
63821212	63866602	chr15	+	exonic	N/A	-1.5392	0.022041	USP3
42798455	42823357	chr8	+	exonic	N/A	-1.5041	0.022146	HOOK3
9182379	9221997	chr18	+	exonic	hsa_circ_0000826	-2.8774	0.022220	ANKRD12
63845913	63852169	chr15	+	exonic	hsa_circ_0000613	-1.9582	0.022342	USP3
235993525	235996967	chr1	-	exonic	hsa_circ_0005899	-2.3197	0.022344	LYST
128434594	128434922	chr9	-	exonic	hsa_circ_0088603	-1.5596	0.022389	MAPKAP1
36737414	36745300	chr22	-	exonic	hsa_circ_0004470	-2.0219	0.022451	MYH9
65473318	65492309	chr2	+	sense overlapping	hsa_circ_0001022	-2.9380	0.022501	ACTR2
94204037	94248681	chr5	-	exonic	hsa_circ_0005540	-1.8972	0.022536	MCTP1
24663284	24681487	chr7	+	exonic	hsa_circ_0079619	-1.5785	0.022559	MPP6
167921037	167944253	chr1	+	exonic	hsa_circ_0000154	-1.5964	0.022568	DCAF6
9083315	9098771	chr2	-	exonic	hsa_circ_0007334	-1.8636	0.022600	MBOAT2
103432671	103433430	chr10	-	exonic	hsa_circ_0019591	-1.8190	0.022613	FBXW4
25650607	25660989	chr15	-	sense overlapping	hsa_circ_0005147	-1.6947	0.022696	UBE3A
19989289	19990955	chr19	+	exonic	N/A	-1.6281	0.022865	ZNF253
40506435	40525830	chr1	+	sense overlapping	hsa_circ_0000058	-1.6161	0.022868	CAP1
107429298	107435696	chr3	+	exonic	hsa_circ_0001324	-1.9186	0.022875	BBX
49609654	49618211	chr10	+	exonic	hsa_circ_0002968	-1.5280	0.022897	MAPK8
171482591	171484477	chr5	-	exonic	hsa_circ_0001555	-1.6407	0.022958	STK10
46125304	46136418	chr22	+	exonic	hsa_circ_0001247	-1.5010	0.022972	ATXN10
30374430	30375041	chr22	+	exonic	hsa_circ_0062808	-1.5869	0.023003	MTMR3
56160560	56161804	chr5	+	exonic	hsa_circ_0001485	-1.9243	0.023048	MAP3K1
15374347	15410596	chr6	+	exonic	hsa_circ_0075671	-1.6021	0.023106	JARID2
144966169	144969146	chr2	-	exonic	hsa_circ_0001072	-1.9022	0.023235	GTDC1
33953282	33963789	chr9	-	exonic	hsa_circ_0001847	-1.6836	0.023236	UBAP2
54398613	54426184	chr18	+	exonic	hsa_circ_0047744	-1.6312	0.023310	WDR7
85230655	85234875	chr15	-	exonic	hsa_circ_0036599	-1.8045	0.023314	SEC11A
22024201	22029404	chr22	+	exonic	hsa_circ_0062426	-1.6260	0.023338	PPIL2
43623730	43629994	chr20	+	exonic	hsa_circ_0060530	-1.8995	0.023345	STK4
103923478	103928798	chr14	+	exonic	hsa_circ_0033480	-1.5018	0.023530	MARK3
32108454	32157204	chr2	-	exonic	hsa_circ_0004215	-1.6002	0.023615	MEMO1
37971709	37974243	chr8	+	exonic	hsa_circ_0083957	-2.3085	0.023629	ASH2L
1159211	1159348	chr1	-	exonic	hsa_circ_0009245	-1.7535	0.023690	SDF4
106739425	106774574	chr2	-	exonic	hsa_circ_0055943	-1.9256	0.023781	UXS1

123983090	123984083	chr12	-	exonic	hsa_circ_0007552	-1.6491	0.023810	RILPL1
42730785	42744343	chr1	-	exonic	hsa_circ_0006848	-1.5636	0.023944	FOXJ3
74561481	74583781	chr18	+	exonic	hsa_circ_0001993	-1.5939	0.023973	ZNF236
89653781	89653866	chr10	+	exonic	hsa_circ_0019058	-1.8845	0.023991	PTEN
68337215	68343511	chr11	+	exonic	hsa_circ_0023233	-1.7589	0.024006	PPP6R3
56661064	56662642	chr3	-	exonic	hsa_circ_0001314	-2.0378	0.024020	FAM208A
103372298	103373854	chr8	-	exonic	hsa_circ_0001819	-1.9052	0.024043	UBR5
86293355	86297981	chr9	-	exonic	hsa_circ_0001866	-1.8876	0.024080	UBQLN1
14693760	14698083	chr16	-	exonic	hsa_circ_0037972	-1.5689	0.024244	PARN
240944626	240961757	chr2	-	exonic	hsa_circ_0058923	-1.5183	0.024310	NDUFA10
128922303	128926858	chr2	+	exonic	hsa_circ_0008298	-1.5627	0.024348	UGGT1
151719232	151729550	chr4	-	exonic	hsa_circ_0004636	-1.8075	0.024374	LRBA
103427642	103433430	chr10	-	exonic	hsa_circ_0019589	-1.8296	0.024540	FBXW4
65349233	65350779	chr5	+	exonic	hsa_circ_0072732	-1.7449	0.024628	ERBB2IP
48541721	48542148	chr7	+	intronic	hsa_circ_0001707	-2.4704	0.024661	ABCA13
39607406	39629569	chr18	+	exonic	hsa_circ_0007765	-1.5939	0.024688	PIK3C3
29210921	29238052	chr18	-	exonic	hsa_circ_0047347	-1.5554	0.024709	B4GALT6
72301330	72302378	chr7	+	sense overlapping	hsa_circ_0006688	-1.6485	0.024714	SBDSP1
7639009	7844817	chr10	+	exonic	hsa_circ_0007292	-2.8290	0.024982	ATP5C1
106739425	106782539	chr2	-	exonic	hsa_circ_0055945	-1.5861	0.025053	UXS1
667396	678730	chr1	-	exonic	hsa_circ_0009181	-2.0123	0.025073	LOC100133331
133493397	133509713	chr5	-	sense overlapping	hsa_circ_0004145	-1.5611	0.025133	SKP1
18010143	18029623	chr11	-	exonic	hsa_circ_0021412	-1.6270	0.025140	SERGEF
118625413	118627996	chr11	-	exonic	hsa_circ_0024490	-2.5008	0.025216	DDX6
18852886	18856973	chr16	-	exonic	hsa_circ_0006434	-1.8367	0.025239	SMG1
50330964	50339661	chr15	-	exonic	hsa_circ_0035197	-1.7672	0.025328	ATP8B4
59787207	59812070	chr1	+	exonic	hsa_circ_0000075	-1.9441	0.025354	FGGY
1749275	1770677	chr1	-	exonic	hsa_circ_0009361	-1.5223	0.025389	GNB1
99786012	99787892	chr2	-	exonic	hsa_circ_0001050	-1.8760	0.025408	MITD1
94899365	94945248	chr15	+	exonic	hsa_circ_0000660	-1.7649	0.025429	MCTP2
64295353	64295792	chrX	+	sense overlapping	hsa_circ_0002532	-1.6096	0.025429	XLOC_008000
88200377	88248289	chr9	-	exonic	hsa_circ_0087386	-1.8812	0.025436	AGTPBP1
117023156	117034608	chr11	+	exonic	hsa_circ_0007827	-1.5492	0.025488	PAFAH1B2
34093272	34098189	chr11	+	exonic	hsa_circ_0005974	-1.5987	0.025490	CAPRIN1
39623696	39629569	chr18	+	exonic	hsa_circ_0006527	-1.5411	0.025583	PIK3C3
85554139	85554349	chr2	-	sense overlapping	hsa_circ_0001035	-1.6563	0.025640	TGOLN2
75103969	75104454	chr7	-	exonic	hsa_circ_0006098	-1.9551	0.025674	POM121C
151611363	151611595	chr1	+	exonic	hsa_circ_0000130	-1.6530	0.025702	SNX27
45079431	45115960	chr21	+	exonic	hsa_circ_0061880	1.6496	0.025811	RRP1B
30267304	30300250	chr17	+	exonic	hsa_circ_0005804	-1.5340	0.025832	SUZ12
112723882	112724819	chr10	+	exonic	hsa_circ_0000261	-1.7701	0.025885	SHOC2
11273608	11276922	chr12	-	intronic	N/A	-1.6495	0.026034	PRB4
44514580	44515853	chr21	-	exonic	hsa_circ_0001198	-1.5291	0.026126	U2AF1
36282482	36292436	chr1	+	exonic	hsa_circ_0003986	-1.5008	0.026130	AGO4
120916382	120924441	chr11	+	exonic	hsa_circ_0000365	-1.5225	0.026144	TBCEL
30387492	30394846	chr22	+	exonic	hsa_circ_0001219	-1.6259	0.026251	MTMR3
54249939	54256040	chr4	+	exonic	hsa_circ_0001411	-1.9565	0.026322	FIP1L1

3900297	3901010	chr16	-	exonic	hsa_circ_0007637	-1.5353	0.026329	CREBBP
73950965	73958017	chr4	-	exonic	hsa_circ_0001417	-1.6786	0.026502	ANKRD17
83799682	83803093	chr4	-	exonic	hsa_circ_0006618	-1.8920	0.026589	SEC31A
113196219	113209767	chr1	+	exonic	hsa_circ_0005664	-1.6079	0.026624	CAPZA1
117825700	117828459	chr7	+	exonic	hsa_circ_0001740	-1.5058	0.026685	NAA38
117944807	117946267	chr1	+	exonic	hsa_circ_0000116	-2.7153	0.026748	MAN1A2
99924615	99932150	chr14	-	exonic	hsa_circ_0000567	-1.9741	0.026772	SETD3
7187666	7189555	chr6	+	exonic	hsa_circ_0075561	-1.5451	0.026776	RREB1
52729602	52729875	chr4	+	exonic	hsa_circ_0069715	-1.7311	0.026866	DCUN1D4
48308935	48320523	chr8	+	exonic	hsa_circ_0001798	-1.9974	0.026874	SPIDR
52785363	52786666	chr19	+	exonic	hsa_circ_0052095	-1.5083	0.026901	ZNF766
37347101	37349807	chr2	-	exonic	N/A	-1.5003	0.026951	EIF2AK2
129585852	129599405	chr3	-	intronic	N/A	-1.6795	0.026952	TMCC1
110922682	110925748	chr12	+	exonic	hsa_circ_0004516	-1.5375	0.026959	FAM216A
7181356	7189555	chr6	+	exonic	hsa_circ_0007429	-1.8533	0.027005	RREB1
149833290	149836586	chr6	-	exonic	hsa_circ_0009074	-1.5918	0.027100	PPIL4
151727422	151729550	chr4	-	exonic	hsa_circ_0071196	-2.0567	0.027136	LRBA
70719561	70720005	chr10	+	exonic	hsa_circ_0008865	-1.6065	0.027201	DDX21
49742748	49752790	chr13	+	exonic	hsa_circ_0006978	-2.0659	0.027207	FNDC3A
63845913	63855207	chr15	+	exonic	hsa_circ_0008153	-2.0244	0.027224	USP3
128419929	128434922	chr9	-	exonic	hsa_circ_0001890	-1.5464	0.027274	MAPKAP1
62299506	62306191	chr15	-	exonic	hsa_circ_0000607	-2.4307	0.027299	VPS13C
149563797	149629870	chr3	+	exonic	hsa_circ_0003502	-1.9691	0.027326	RNF13
63824845	63852169	chr15	+	exonic	hsa_circ_0035649	-1.5765	0.027330	USP3
41515056	41515506	chr13	-	exonic	hsa_circ_0030050	-2.0037	0.027412	ELF1
133587	139152	chr11	-	exonic	hsa_circ_0020596	-1.8148	0.027443	LOC100133161
74229605	74230755	chr6	-	exonic	hsa_circ_0077007	-1.8753	0.027564	EEF1A1
131060182	131084192	chr7	+	exonic	hsa_circ_0001746	-1.7767	0.027619	MKLN1
23999828	24105618	chr16	+	exonic	hsa_circ_0038644	-1.5615	0.027647	PRKCB
71880664	71933964	chr14	+	intronic	hsa_circ_0006783	-1.5085	0.027680	SIPA1L1
58342772	58366043	chr17	-	exonic	N/A	-1.5929	0.027744	USP32
62291306	62292503	chr11	-	intronic	hsa_circ_0000319	-1.8335	0.027847	AHNAK
243736227	244006584	chr1	-	exonic	hsa_circ_0017248	-1.9665	0.027937	AKT3
40161688	40179999	chr20	-	exonic	hsa_circ_0001159	-1.7367	0.028000	CHD6
118619175	118619412	chr12	-	exonic	hsa_circ_0000446	-1.6730	0.028041	TAOK3
73418464	73429763	chr11	-	exonic	hsa_circ_0000339	-2.0171	0.028081	RAB6A
149613259	149639014	chr3	+	exonic	hsa_circ_0006801	-2.1731	0.028333	RNF13
36297027	36301594	chr1	+	exonic	N/A	-1.5151	0.028342	AGO4
1735857	1737977	chr1	-	exonic	hsa_circ_0000007	-1.7403	0.028456	GNB1
40027197	40041630	chr7	+	exonic	hsa_circ_0001699	-1.6549	0.028652	CDK13
12183625	12183966	chr11	+	exonic	N/A	1.5352	0.028727	MICAL2
73114707	73115261	chr7	-	sense overlapping	hsa_circ_0009012	-1.8432	0.028728	STX1A
57808781	57851246	chr17	+	exonic	hsa_circ_0005077	-1.8944	0.028862	VMP1
28306951	28310335	chr22	-	exonic	hsa_circ_0003056	-1.9141	0.028924	PITPNB
35586872	35604935	chr6	-	exonic	hsa_circ_0076155	-1.7084	0.028988	FKBP5
57064058	57066849	chr12	-	exonic	hsa_circ_0027093	-1.7477	0.029032	PTGES3
34906684	34907626	chr21	-	exonic	hsa_circ_0008795	1.6311	0.029055	GART
16386664	16415895	chr21	-	exonic	hsa_circ_0004771	-1.7940	0.029184	NRIP1
1158623	1159348	chr1	-	exonic	hsa_circ_0000002	-1.8878	0.029189	SDF4
233334684	233344435	chr1	-	exonic	hsa_circ_0005223	-1.5133	0.029222	PCNXL2

71743025	71748859	chr3	-	exonic	N/A	-2.8131	0.029301	EIF4E3
86627164	86649052	chr5	+	exonic	hsa_circ_0004317	-1.6012	0.029421	RASA1
88920106	88924932	chr9	-	exonic	hsa_circ_0001869	-1.8524	0.029441	ZCCHC6
45587230	45599993	chr14	-	sense overlapping	N/A	-2.2644	0.029486	FKBP3
70236227	70236759	chr14	+	intronic	hsa_circ_0000549	-2.6235	0.029501	SRSF5
132719638	132720832	chr9	-	exonic	hsa_circ_0007426	-1.5789	0.029684	FNBP1
37105033	37105170	chr2	-	exonic	hsa_circ_0054033	-1.8966	0.029724	STRN
151960100	152012423	chr7	-	exonic	hsa_circ_0006784	-1.5467	0.029745	KMT2C
58340777	58347472	chr12	+	exonic	hsa_circ_0000412	-1.7138	0.029781	XRCC6BP1
103635594	103647840	chr4	-	exonic	hsa_circ_0001432	-1.7530	0.029893	MANBA
65466985	65482828	chr2	+	exonic	N/A	-3.0442	0.029919	ACTR2
30498061	30503232	chr17	+	exonic	hsa_circ_0008604	-2.2057	0.029977	RHOT1
73951646	73952028	chr17	-	exonic	hsa_circ_0008557	-1.7811	0.030032	ACOX1
32142994	32157204	chr2	-	exonic	hsa_circ_0007385	-1.9253	0.030185	MEMO1
180953812	180957481	chr1	-	exonic	hsa_circ_0015524	-1.6563	0.030288	STX6
30267304	30303633	chr17	+	exonic	hsa_circ_0042965	-1.7344	0.030579	SUZ12
180953812	180962561	chr1	-	exonic	hsa_circ_0007905	-1.7765	0.030615	STX6
77700452	77703365	chr13	-	exonic	hsa_circ_0000495	-1.5481	0.030703	MYCBP2
36415395	36424928	chr11	+	intronic	hsa_circ_0005044	-1.7144	0.030936	PRR5L
131164981	131181313	chr8	-	exonic	hsa_circ_0001824	-2.1034	0.030974	ASAP1
65271199	65272066	chr11	+	sense overlapping	hsa_circ_0002082	-3.3403	0.030989	MALAT1
53421565	53421972	chr12	+	exonic	hsa_circ_0007889	-1.6183	0.031165	EIF4B
142170730	142173528	chr8	+	exonic	N/A	-1.5305	0.031382	DENND3
111690263	111703918	chr1	+	exonic	hsa_circ_0000106	-1.8289	0.031411	CEPT1
38726471	38734535	chr10	+	exonic	hsa_circ_0018225	-1.7157	0.031464	LINC00999
128282270	128289036	chr7	+	exonic	hsa_circ_0082179	-1.8448	0.031578	LINC01000
190670377	190682906	chr2	+	exonic	N/A	-1.5577	0.031594	PMS1
24108020	24109780	chr22	-	exonic	hsa_circ_0062557	1.9822	0.031680	CHCHD10
171969049	172028671	chr3	+	exonic	hsa_circ_0003692	-1.8247	0.031708	FNDC3B
243542022	243589860	chr1	+	exonic	N/A	-1.5715	0.031829	SDCCAG8
71880664	71948928	chr14	+	intronic	hsa_circ_0000552	-1.7565	0.031854	SIPA1L1
76301164	76415337	chr13	+	exonic	hsa_circ_0030448	3.1166	0.031859	LMO7
9204473	9221997	chr18	+	exonic	hsa_circ_0003865	-1.9443	0.031893	ANKRD12
111690263	111703922	chr1	+	sense overlapping	N/A	-1.6561	0.031936	CEPT1
30267304	30267505	chr17	+	exonic	hsa_circ_0042961	-1.7324	0.031988	SUZ12
73944358	73958017	chr4	-	exonic	hsa_circ_0006693	-1.7215	0.032020	ANKRD17
73238416	73239651	chr17	-	exonic	hsa_circ_0003684	-1.5682	0.032241	GGA3
149563797	149639014	chr3	+	exonic	hsa_circ_0001346	-1.5435	0.032264	RNF13
201790558	201796171	chr2	-	exonic	N/A	1.5422	0.032278	ORC2
167935866	167944253	chr1	+	exonic	hsa_circ_0009109	-1.6250	0.032313	DCAF6
65473657	65492309	chr2	+	exonic	hsa_circ_0008529	-3.0332	0.032368	ACTR2
59811918	59844509	chr1	+	exonic	N/A	-1.6652	0.032387	FGGY
15863654	15885271	chr10	-	exonic	hsa_circ_0008178	-1.6051	0.032513	FAM188A
99924615	99925522	chr14	-	exonic	hsa_circ_0033149	-1.9460	0.032523	SETD3
168920009	168986268	chr2	-	exonic	hsa_circ_0005882	-1.5550	0.032545	STK39
68717321	68795482	chr2	+	sense overlapping	hsa_circ_0001024	-1.8873	0.032664	APLF
191523883	191537878	chr2	+	exonic	hsa_circ_0002024	-1.6985	0.032680	NAB1

61509864	61512143	chr14	+	exonic	N/A	1.5458	0.032893	SLC38A6
147733519	147744289	chrX	+	exonic	hsa_circ_0091669	-1.8675	0.032901	AFF2
128093445	128100770	chr2	-	exonic	N/A	-1.5553	0.032907	MAP3K2
52758220	52782950	chr8	-	exonic	hsa_circ_0001800	-1.5712	0.033064	PCMTD1
228356262	228389631	chr2	+	exonic	hsa_circ_0058514	-1.6860	0.033064	AGFG1
76069566	76069928	chr7	+	exonic	hsa_circ_0080802	1.5058	0.033094	ZP3
23015828	23023664	chr7	-	exonic	hsa_circ_0001971	-1.5285	0.033140	FAM126A
33996220	33998862	chr9	-	exonic	hsa_circ_0086736	-1.7842	0.033261	UBAP2
674213	678730	chr1	-	sense overlapping	hsa_circ_0007211	-1.8814	0.033323	AK310751
117944807	118009049	chr1	+	exonic	hsa_circ_0000120	-2.8355	0.033327	MAN1A2
89291126	89292039	chr16	+	exonic	hsa_circ_0004203	-1.5383	0.033400	ZNF778
48444479	48458730	chr18	+	exonic	hsa_circ_0047700	-1.5830	0.033445	ME2
28458581	28544344	chr12	+	exonic	hsa_circ_0008250	-1.5825	0.033513	CCDC91
3076997	3081350	chr6	+	exonic	hsa_circ_0003886	-1.5823	0.033544	RIPK1
34304661	34313077	chr20	-	exonic	hsa_circ_0001147	-1.7658	0.033566	RBM39
1268152	1273035	chr17	-	exonic	hsa_circ_0041195	-1.5943	0.033651	YWHAE
39648294	39648666	chr14	+	exonic	N/A	-1.7853	0.033666	PNN
48175347	48177671	chr11	+	exonic	N/A	-1.7556	0.033707	PTPRJ
196544755	196548630	chr2	+	exonic	hsa_circ_0057551	-2.0751	0.033723	SLC39A10
44382874	44383675	chr17	+	exonic	hsa_circ_0044197	-1.7444	0.033768	LRRC37A
28748408	28771483	chr13	+	exonic	hsa_circ_0008760	-1.6152	0.033795	PAN3
62288378	62288522	chr11	-	intronic	hsa_circ_0000317	-2.2177	0.033829	AHNAK
32381491	32385259	chr1	-	intronic	hsa_circ_0005067	-1.5013	0.033836	RP11-84A19.4
231222519	231226412	chr2	+	exonic	hsa_circ_0008382	-1.6309	0.033846	SP140L
160103505	160109274	chr6	-	exonic	hsa_circ_0004662	-2.4044	0.033882	SOD2
34895553	34895895	chr19	+	exonic	hsa_circ_0000927	1.5857	0.033895	PDCD2L
34151081	34165557	chr17	+	exonic	hsa_circ_0000758	-2.2305	0.034018	TAF15
37614541	37625720	chr13	-	exonic	hsa_circ_0000475	-1.6673	0.034072	SUPT20H
18851019	18853776	chr16	-	exonic	hsa_circ_0008216	-1.7076	0.034127	SMG1
38894089	38894578	chr22	-	exonic	hsa_circ_0063329	-1.5909	0.034169	DDX17
92264128	92268765	chr14	-	exonic	hsa_circ_0032969	-1.7952	0.034294	TC2N
142393644	142437312	chr5	+	exonic	N/A	-1.7792	0.034323	ARHGAP26
30590251	30601744	chr7	-	exonic	hsa_circ_0001693	1.6805	0.034359	LOC401320
1747194	1770677	chr1	-	exonic	hsa_circ_0008702	-1.5441	0.034491	GNB1
72302181	72302378	chr7	+	exonic	hsa_circ_0008708	-1.7045	0.034586	SBDSP1
131006155	131014868	chr5	-	exonic	hsa_circ_0073859	-1.5985	0.034720	FNIP1
117676687	117680079	chrX	+	exonic	N/A	-1.7772	0.035120	DOCK11
82832825	82850857	chr5	+	exonic	hsa_circ_0073239	-1.5281	0.035191	VCAN
47905209	47907363	chr4	-	exonic	hsa_circ_0008828	1.6059	0.035334	NFXL1
50388196	50399175	chr12	-	exonic	hsa_circ_0026195	1.5897	0.035349	RACGAP1
183361267	183390272	chr3	+	exonic	hsa_circ_0001368	-1.5787	0.035396	KLHL24
33467081	33467233	chr3	-	exonic	hsa_circ_0064742	-1.5362	0.035456	UBP1
2951660	2952972	chr4	-	exonic	hsa_circ_0006737	-1.6921	0.035522	NOP14
50358643	50367353	chr7	+	exonic	hsa_circ_0001708	-1.5104	0.035539	IKZF1
44380003	44383675	chr17	+	exonic	hsa_circ_0044195	-1.7026	0.035564	LRRC37A
65941524	65944422	chr17	+	exonic	hsa_circ_0000798	-1.8128	0.035596	BPTF
62559687	62562375	chr20	+	exonic	hsa_circ_0007609	-1.6363	0.035785	DNAJC5
56879273	56882352	chr8	+	exonic	hsa_circ_0084552	-1.5385	0.035831	LYN
20315704	20356931	chr13	-	exonic	hsa_circ_0000464	-1.6272	0.035849	PSPC1
39821342	39829143	chr7	+	exonic	hsa_circ_0079926	-1.8396	0.035902	LINC00265

53413693	53416411	chr12	+	exonic	hsa_circ_0026512	-1.6276	0.035939	EIF4B
134076752	134079742	chr5	+	exonic	hsa_circ_0003154	-1.6024	0.036003	CAMLG
195415403	195416309	chr3	+	exonic	hsa_circ_0008267	-1.6790	0.036004	LINC00969
155547476	155551830	chr3	-	exonic	hsa_circ_0001350	-1.5356	0.036056	SLC33A1
30374430	30384551	chr22	+	exonic	N/A	-1.5881	0.036244	MTMR3
169854206	169863309	chr3	-	exonic	hsa_circ_0001965	-2.2262	0.036269	PHC3
77200394	77221573	chr7	+	exonic	hsa_circ_0008901	-1.8216	0.036378	PTPN12
106761645	106782539	chr2	-	exonic	hsa_circ_0004029	-1.6077	0.036425	UXS1
109263579	109263891	chrX	+	intronic	N/A	-1.7410	0.036568	TMEM164
25630392	25636298	chr17	+	exonic	hsa_circ_0007716	-1.5071	0.036587	WSB1
52446826	52448603	chr3	+	exonic	hsa_circ_0004912	-1.5234	0.036636	PHF7
156549086	156619438	chr7	-	exonic	hsa_circ_0003511	-1.5771	0.036651	LMBR1
101654702	101656154	chr10	-	exonic	N/A	-1.7988	0.036702	DNMBP
96233422	96259881	chr9	+	exonic	hsa_circ_0005218	-1.8227	0.036787	FAM120A
20811305	20811534	chr14	-	sense overlapping	hsa_circ_0000515	-1.8859	0.036801	RPPH1
123718838	123721032	chr10	-	exonic	hsa_circ_0020256	-1.5305	0.036898	NSMCE4A
69206201	69206389	chr5	+	exonic	hsa_circ_0072805	-1.6830	0.036978	SMA4
155644800	155649303	chr1	-	exonic	hsa_circ_0003608	-1.6612	0.037294	YY1AP1
35280078	35280549	chr6	+	exonic	hsa_circ_0076125	-1.6777	0.037327	DEF6
130916744	130924663	chr8	-	exonic	hsa_circ_0001822	-1.5987	0.037329	FAM49B
30500849	30503232	chr17	+	exonic	hsa_circ_0005397	-1.5700	0.037377	RHOT1
180962498	180974599	chr1	-	exonic	hsa_circ_0000165	-1.5484	0.037396	STX6
12049221	12052747	chr1	+	exonic	hsa_circ_0009910	1.6664	0.037653	MFN2
62297840	62298224	chr11	-	intronic	hsa_circ_0000320	-2.0236	0.037858	AHNAK
57814813	57851246	chr17	+	exonic	hsa_circ_0003127	-1.9865	0.037878	VMP1
58256381	58256569	chr6	-	exonic	hsa_circ_0076917	-1.6285	0.037969	GUSBP4
97299803	97327072	chr14	+	exonic	hsa_circ_0000566	-1.5641	0.038040	VRK1
100889777	100908552	chr1	+	exonic	hsa_circ_0000097	-1.6598	0.038072	CDC14A
228384663	228389631	chr2	+	exonic	hsa_circ_0058520	-1.6221	0.038176	AGFG1
142264862	142311690	chr5	+	exonic	hsa_circ_0074362	-1.7572	0.038210	ARHGAP26
30384468	30387659	chr22	+	exonic	hsa_circ_0062813	-1.5636	0.038238	MTMR3
3076997	3078169	chr6	+	exonic	hsa_circ_0001571	-1.7981	0.038246	RIPK1
147743428	147744289	chrX	+	exonic	hsa_circ_0001947	-2.7804	0.038272	AFF2
31424825	31425448	chr14	-	exonic	hsa_circ_0007656	-1.5871	0.038345	STRN3
97312431	97327072	chr14	+	exonic	N/A	-1.5969	0.038655	VRK1
9991948	9992956	chr1	-	exonic	hsa_circ_0009677	-1.5620	0.038662	LZIC
30701807	30702014	chr21	+	exonic	hsa_circ_0061396	-1.6640	0.038780	BACH1
38949785	38951231	chr19	+	exonic	hsa_circ_0050834	1.6320	0.038780	RYR1
234296902	234299129	chr2	+	exonic	hsa_circ_0001112	-1.6803	0.038827	DGKD
3178943	3186394	chr3	+	exonic	N/A	-1.7301	0.038864	TRNT1
28840851	28845003	chr13	+	exonic	hsa_circ_0000469	-1.5068	0.038968	PAN3
15644268	15679480	chr2	-	exonic	hsa_circ_0004665	-1.5537	0.039004	NBAS
11426664	11427862	chr2	-	exonic	hsa_circ_0006526	-1.8267	0.039342	ROCK2
9583114	9595151	chr18	-	exonic	hsa_circ_0007509	-1.6162	0.039375	PPP4R1
47767859	47768203	chr19	+	exonic	hsa_circ_0000944	-1.6250	0.039550	CCDC9
62546241	62596747	chr8	-	exonic	hsa_circ_0008337	-1.5591	0.039721	ASPH
755876	760253	chr11	+	exonic	hsa_circ_0003307	-1.6536	0.039722	TALDO1
1737913	1749314	chr1	-	exonic	hsa_circ_0009357	-1.9076	0.039877	GNB1
40655612	40657441	chr2	-	exonic	hsa_circ_0005232	-2.2703	0.039959	SLC8A1

75484866	75486869	chr17	+	sense overlapping	hsa_circ_0000808	-1.5096	0.039973	SEPT9
37971709	37976881	chr8	+	exonic	hsa_circ_0001790	-1.9408	0.040008	ASH2L
239090705	239093928	chr2	-	exonic	hsa_circ_0001116	-1.6130	0.040029	ILKAP
185153374	185200840	chr1	+	exonic	hsa_circ_0015677	-1.8073	0.040062	SWT1
142434003	142437312	chr5	+	exonic	hsa_circ_0074371	-1.6804	0.040303	ARHGAP26
53189837	53191453	chr16	+	exonic	hsa_circ_0039353	-1.5355	0.040382	CHD9
1756835	1770677	chr1	-	exonic	hsa_circ_0009362	-2.0395	0.040846	GNB1
40655612	40657444	chr2	-	exonic	hsa_circ_0000994	-2.3515	0.040862	SLC8A1
108559662	108577564	chr11	+	exonic	hsa_circ_0024246	1.5292	0.040863	DDX10
33467081	33481417	chr3	-	exonic	hsa_circ_0064743	-1.5435	0.040926	UBP1
153581139	153581292	chrX	-	exonic	hsa_circ_0091894	-1.5394	0.040965	FLNA
198703490	198704278	chr1	+	sense overlapping	hsa_circ_0000170	-1.8146	0.041041	PTPRC
114676884	114678116	chr9	+	exonic	hsa_circ_0006435	-1.6003	0.041074	UGCG
146209155	146216108	chr6	-	sense overlapping	N/A	-1.9972	0.041253	SHPRH
101659675	101659823	chr10	-	exonic	hsa_circ_0005796	-1.5723	0.041475	DNMBP
96238537	96259881	chr9	+	exonic	hsa_circ_0087540	-1.5881	0.041609	FAM120A
243242289	243265046	chr1	-	exonic	hsa_circ_0017215	-1.8449	0.041748	LINC01347
38801306	38803739	chr8	+	exonic	hsa_circ_0084021	-2.0922	0.041770	PLEKHA2
61133516	61135470	chr11	+	exonic	hsa_circ_0002058	-1.6271	0.042043	TMEM138
93608139	93611093	chr10	+	exonic	hsa_circ_0006332	-1.5507	0.042283	TNKS2
135010665	135012215	chr2	+	exonic	hsa_circ_0001068	-1.5594	0.042496	MGAT5
39191239	39200116	chr19	+	exonic	hsa_circ_0050900	-1.9281	0.042503	ACTN4
91030185	91035943	chr15	+	exonic	hsa_circ_0007201	-2.0414	0.042535	IQGAP1
85707868	85714494	chr11	-	exonic	hsa_circ_0023919	-1.9294	0.042910	PICALM
33996220	34017187	chr9	-	exonic	hsa_circ_0003410	-1.8104	0.043065	UBAP2
65941524	65972074	chr17	+	exonic	hsa_circ_0000799	-1.6342	0.043213	BPTF
99090662	99092254	chr7	-	intronic	hsa_circ_0001726	-1.7265	0.043256	ZNF394
63988322	64008672	chr15	-	exonic	hsa_circ_0035796	-2.2727	0.043390	HERC1
117944807	117984947	chr1	+	exonic	hsa_circ_0000119	-1.8780	0.043417	MAN1A2
68155889	68225678	chr16	+	exonic	hsa_circ_0039929	-2.1897	0.043436	NFATC3
52771601	52775515	chr3	-	exonic	hsa_circ_0001309	-1.5830	0.043478	NEK4
146209155	146216113	chr6	-	exonic	hsa_circ_0001649	-2.0492	0.043598	SHPRH
35824525	35827390	chr1	+	exonic	hsa_circ_0011536	-1.7773	0.043621	ZMYM4
24680620	24681035	chr14	-	exonic	hsa_circ_0031359	-1.7296	0.043675	CHMP4A
89206670	89206971	chr1	+	exonic	hsa_circ_0000089	-1.5754	0.043930	PKN2
47767862	47768203	chr19	+	sense overlapping	N/A	-1.6927	0.043962	CCDC9
54956488	54959380	chr20	-	exonic	hsa_circ_0004887	-1.5901	0.044021	AURKA
15860731	15863309	chr1	+	exonic	hsa_circ_0000018	-1.5348	0.044063	DNAJC16
95494501	95507595	chr4	+	exonic	hsa_circ_0070467	-1.6430	0.044133	PDLIM5
61605249	61615756	chr11	+	exonic	hsa_circ_0022383	-1.7928	0.044176	FADS2
10283765	10288043	chr19	-	exonic	hsa_circ_0000889	-1.8879	0.044477	DNMT1
10077970	10081529	chr3	+	exonic	hsa_circ_0001266	1.5299	0.044483	FANCD2
107031202	107050797	chr6	-	exonic	hsa_circ_0008514	-1.5042	0.044867	RTN4IP1
29412046	29419420	chr18	-	exonic	hsa_circ_0003805	-1.5754	0.044921	TRAPPC8
59179173	59179739	chr15	-	exonic	hsa_circ_0000604	-1.7058	0.044993	SLTM
117654716	117658311	chr1	-	sense overlapping	N/A	1.5352	0.045037	TRIM45

102661274	102676199	chr14	+	exonic	hsa_circ_0002553	-1.5027	0.045317	WDR20
41515056	41518061	chr13	-	exonic	hsa_circ_0030051	-1.7018	0.045592	ELF1
211192124	211192598	chr1	-	exonic	hsa_circ_0016348	1.6693	0.045720	KCNH1
53155459	53155541	chr16	+	intronic	hsa_circ_0000700	-1.5764	0.045754	CHD9
74239461	74251505	chr7	-	exonic	hsa_circ_0080628	-1.5161	0.045943	GTF2IRD2
96233422	96278551	chr9	+	exonic	hsa_circ_0087531	-1.7318	0.046052	FAM120A
85707868	85712201	chr11	-	exonic	hsa_circ_0002513	-2.1705	0.046308	PICALM
131164981	131193126	chr8	-	exonic	hsa_circ_0008934	-2.0759	0.046654	ASAP1
38792600	38794166	chr21	+	exonic	hsa_circ_0001190	-1.5729	0.047078	DYRK1A
74493579	74497377	chr16	-	exonic	hsa_circ_0003315	-1.7870	0.047316	GLG1
77210743	77221573	chr7	+	exonic	hsa_circ_0002458	-1.7821	0.047369	PTPN12
65887959	65890281	chr17	+	exonic	hsa_circ_0005347	-1.5518	0.047402	BPTF
126140467	126168493	chr5	+	exonic	hsa_circ_0073748	-1.7771	0.047449	LMNB1
77270158	77275895	chrX	+	exonic	hsa_circ_0001934	-1.5165	0.047452	ATP7A
22404921	22413359	chr1	+	exonic	hsa_circ_0005576	-1.7571	0.047797	CDC42
67513932	67514758	chr6	-	exonic	hsa_circ_0004863	-1.5906	0.047917	MYBL1
80412669	80415142	chr15	+	exonic	hsa_circ_0000643	-1.9134	0.047933	ZFAND6
64271341	64295792	chrX	+	sense overlapping	hsa_circ_0001924	-2.4063	0.048117	XLOC_007999
3214459	3216950	chr3	-	exonic	hsa_circ_0064022	-1.5661	0.048541	CRBN
128350085	128360471	chr11	-	exonic	hsa_circ_0002083	-1.9151	0.048594	ETS1
121354581	121356103	chr3	-	exonic	N/A	-1.6723	0.048655	HCLS1
77227158	77230123	chr7	+	exonic	hsa_circ_0080845	-1.7118	0.048713	PTPN12
56078736	56086030	chr14	+	exonic	hsa_circ_0032029	-1.5606	0.048753	KTN1
69644908	69656342	chr12	+	exonic	hsa_circ_0000417	-2.0327	0.048909	CPSF6
215645283	215657169	chr2	-	exonic	hsa_circ_0001099	-1.5065	0.048953	BARD1
85692787	85693046	chr11	-	exonic	hsa_circ_0023904	-1.9646	0.048989	PICALM
110068659	110074018	chr9	+	exonic	hsa_circ_0087861	-1.5912	0.049243	RAD23B
58785259	58796887	chr14	+	exonic	hsa_circ_0000542	-1.5942	0.049443	ARID4A
61118817	61128218	chr2	+	exonic	hsa_circ_0001011	-1.5812	0.049581	REL
37838091	37838774	chr19	+	exonic	N/A	2.7883	0.049684	HKR1
45391429	45423180	chr18	-	exonic	hsa_circ_0000847	-1.6572	0.049782	SMAD2
12645634	12653561	chr3	-	exonic	N/A	-1.5392	0.049891	RAF1

Table 14 (BD 8 weeks vs BD baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
100189289	100189525	chr7	+	exonic	hsa_circ_0081481	21.4103	4.1430E-08	FBXO24
200173482	200298237	chr2	-	exonic	hsa_circ_0007422	39.0293	6.8060E-08	SATB2
124273706	124274424	chr10	+	exonic	hsa_circ_0020275	24.2326	6.9380E-08	HTRA1
88084709	88116842	chr4	-	sense overlapping	N/A	31.1631	7.8650E-08	KLHL8
113162074	113202401	chr1	+	exonic	hsa_circ_0013526	47.4214	1.4069E-07	CAPZA1
200233327	200298237	chr2	-	exonic	hsa_circ_0003915	46.2190	1.4552E-07	SATB2
28250417	28255132	chr11	+	intronic	hsa_circ_0000282	4.4270	1.7687E-07	METTL15
28250417	28252532	chr11	+	intronic	N/A	5.6538	2.0178E-07	METTL15
158703294	158735300	chr6	+	sense overlapping	hsa_circ_0131196	16.2448	3.5714E-07	TULP4
5404774	5431405	chr6	+	exonic	hsa_circ_0075533	10.4675	4.3364E-07	FARS2
21979173	22020771	chr6	+	exonic	hsa_circ_0075826	10.7285	4.4485E-07	CASC15
176686989	176687169	chr5	+	exonic	hsa_circ_0075166	2.2803	0.000001	NSD1

117054494	117054855	chr11	+	exonic	hsa_circ_0024379	10.5601	0.000001	SIDT2
71761715	71762097	chr15	+	intronic	N/A	18.8286	0.000001	THSD4
120776652	120799686	chr2	+	exonic	hsa_circ_0056264	7.8467	0.000001	EPB41L5
142593	143323	chr16	-	exonic	hsa_circ_0037127	5.4308	0.000001	NPRL3
123298105	123325218	chr10	-	exonic	N/A	6.9027	0.000001	FGFR2
62197441	62197777	chr20	-	sense overlapping	hsa_circ_0001176	7.6145	0.000001	HELZ2
36572334	36577714	chr19	+	exonic	N/A	5.3195	0.000001	WDR62
85667519	85682357	chr16	+	exonic	hsa_circ_0040726	8.7796	0.000001	GSE1
18609120	18609801	chr22	+	exonic	hsa_circ_0062191	5.7355	0.000002	TUBA8
29105993	29130715	chr22	-	exonic	hsa_circ_0004128	10.8850	0.000002	CHEK2
130634122	130662267	chr6	-	sense overlapping	N/A	7.1705	0.000002	SAMD3
44128265	44131942	chr19	-	exonic	N/A	2.9469	0.000002	CADM4
8604615	8604944	chr19	+	antisense	hsa_circ_0008990	6.0696	0.000002	MYO1F
33148403	33245340	chr20	-	sense overlapping	hsa_circ_0001142	2.6445	0.000002	PIGU
113703700	113773970	chr9	-	exonic	hsa_circ_0004928	7.5622	0.000002	LPAR1
75848953	75854219	chr10	+	exonic	hsa_circ_0018886	8.1970	0.000002	VCL
62594626	62595103	chr11	-	exonic	hsa_circ_0022537	2.0498	0.000003	STX5
53290970	53292303	chr12	-	exonic	hsa_circ_0026467	5.0893	0.000003	KRT8
56981238	56999504	chr15	-	exonic	hsa_circ_0035410	4.2220	0.000004	ZNF280D
55996226	56002769	chr18	+	exonic	N/A	6.1390	0.000005	NEDD4L
30078554	30081741	chr16	+	exonic	hsa_circ_0038981	6.9491	0.000007	ALDOA
85459039	85460676	chr12	+	exonic	N/A	2.4112	0.000007	LRRIQ1
5396865	5431405	chr6	+	sense overlapping	hsa_circ_0005893	1.5103	0.000007	FARS2
91723962	91727541	chr9	-	sense overlapping	hsa_circ_0007738	2.2945	0.000007	SHC3
134655200	134679497	chrX	+	sense overlapping	hsa_circ_0001945	5.2931	0.000008	DDX26B
50080770	50087302	chr13	+	exonic	N/A	3.8389	0.000009	PHF11
25630392	25638642	chr17	+	exonic	hsa_circ_0005336	5.4123	0.000009	WSB1
64537930	64569274	chr5	-	exonic	N/A	4.4400	0.000010	ADAMTS6
242033691	242036842	chr2	-	exonic	N/A	2.0487	0.000010	MTERF4
42269709	42269921	chr18	+	intronic	hsa_circ_0000844	2.3327	0.000011	SETBP1
21703797	21705514	chr18	+	exonic	hsa_circ_0047285	5.0116	0.000012	TTC39C
42819829	42821476	chr6	+	exonic	hsa_circ_0076413	4.4450	0.000013	GLTSCR1L
55420603	55420882	chr19	+	exonic	hsa_circ_0052165	3.6633	0.000013	NCR1
22312863	22330179	chr22	-	exonic	N/A	2.4460	0.000016	TOP3B
170737226	170737501	chr4	+	intergenic	hsa_circ_0001457	2.5295	0.000017	
36782074	36788753	chr18	-	sense overlapping	N/A	3.5861	0.000018	LINC00669
37600088	37600198	chr20	-	antisense	hsa_circ_0001157	1.6749	0.000020	DHX35
133341934	133343019	chr3	-	exonic	hsa_circ_0008069	2.0825	0.000021	TOPBP1
45802132	45802362	chr7	-	intronic	hsa_circ_0001703	2.3040	0.000033	SEPT7P2
77051808	77057565	chr4	-	exonic	hsa_circ_0008128	2.1631	0.000033	NUP54
39104849	39106177	chr22	+	intronic	N/A	1.5686	0.000034	GTPBP1
44643022	44645125	chr20	+	sense overlapping	hsa_circ_0001162	1.6491	0.000036	MMP9
29151053	29151137	chr17	-	intronic	hsa_circ_0000755	2.9898	0.000037	CRLF3

18195958	18198099	chr17	-	exonic	hsa_circ_0042330	1.8787	0.000045	TOP3A
65326097	65359043	chr10	+	exonic	N/A	1.6050	0.000047	REEP3
183894738	183901879	chr3	+	exonic	hsa_circ_0068281	2.2853	0.000048	AP2M1
90261231	90398157	chr5	+	exonic	N/A	2.3374	0.000053	GPR98
32973011	32973508	chr7	-	exonic	N/A	2.6631	0.000053	RP9P
41988272	41989221	chr15	+	exonic	hsa_circ_0034734	1.7620	0.000053	MGA
50321822	50322261	chr16	+	exonic	hsa_circ_0000699	2.2559	0.000055	ADCY7
50596162	50596330	chr15	-	exonic	hsa_circ_0035208	2.9499	0.000056	GABPB1
26861063	26884883	chr9	-	exonic	hsa_circ_0002781	2.1855	0.000058	CAAP1
138203933	138235925	chr7	+	exonic	hsa_circ_0082580	1.6932	0.000060	TRIM24
74526955	74551664	chr12	-	exonic	hsa_circ_0027588	2.9947	0.000061	LOC100507377
52675969	52677359	chr3	-	exonic	hsa_circ_0066083	2.1928	0.000064	PBRM1
56552657	56552839	chr12	-	antisense	hsa_circ_0000406	2.6026	0.000066	MYL6
47285639	47287816	chr19	-	exonic	hsa_circ_0002311	1.8604	0.000068	SLC1A5
81124205	81124712	chr16	-	exonic	N/A	1.5094	0.000073	GCSH
80750269	80767564	chr15	+	exonic	hsa_circ_0007978	1.5771	0.000076	ARNT2
34100754	34101636	chr6	-	exonic	hsa_circ_0076041	2.4066	0.000076	GRM4
48552608	48553595	chr4	-	exonic	hsa_circ_0069681	2.1340	0.000084	FRYL
15162025	15168718	chr16	-	exonic	hsa_circ_0038020	1.5354	0.000087	RRN3
74927307	74929309	chr15	-	sense overlapping	hsa_circ_0000632	1.9251	0.000092	EDC3
60015345	60017170	chr18	+	sense overlapping	N/A	2.4108	0.000096	TNFRSF11A
178287348	178287568	chr5	+	intronic	hsa_circ_0092298	6.4346	0.000096	ZNF354B
27135705	27143560	chr12	-	exonic	N/A	1.8614	0.000101	TM7SF3
79203973	79205702	chr4	+	exonic	N/A	1.9128	0.000106	FRAS1
46455023	46534363	chr11	-	exonic	hsa_circ_0021845	2.2452	0.000109	AMBRA1
144086397	144086935	chr6	+	exonic	hsa_circ_0007769	2.0171	0.000115	PHACTR2
192444969	192463145	chr3	-	sense overlapping	N/A	2.0683	0.000121	FGF12
46515157	46534363	chr11	-	exonic	hsa_circ_0007061	2.4213	0.000126	AMBRA1
12645634	12647798	chr3	-	exonic	hsa_circ_0064365	2.6215	0.000131	RAF1
232879544	232894790	chr2	+	exonic	hsa_circ_0007321	2.3993	0.000143	DIS3L2
102295068	102308010	chr12	+	exonic	hsa_circ_0004655	1.5132	0.000145	DRAM1
10980998	10981370	chr8	-	intronic	hsa_circ_0001779	2.6320	0.000146	XKR6
24730377	24734445	chr22	+	exonic	hsa_circ_0003720	2.6000	0.000148	SPECC1L
187540330	187540654	chr2	+	exonic	N/A	1.6754	0.000148	ITGAV
8674619	8716500	chr1	-	exonic	hsa_circ_0005039	5.0312	0.000155	RERE
143956599	144023646	chr3	+	intergenic	N/A	1.7954	0.000158	
113869721	113869956	chr13	+	intronic	hsa_circ_0000507	2.0692	0.000162	CUL4A
124640186	124650369	chr10	+	sense overlapping	N/A	2.1493	0.000163	LOC399815
198351307	198351922	chr2	-	exonic	hsa_circ_0057659	2.0885	0.000166	HSPD1
23408712	23410184	chr1	+	exonic	hsa_circ_0010844	1.8234	0.000169	KDM1A
80914570	80923622	chr17	-	exonic	hsa_circ_0046598	2.7992	0.000180	B3GNTL1
37700501	37723145	chr17	+	sense overlapping	N/A	1.6335	0.000184	CDK12
125843206	125856803	chr3	-	exonic	hsa_circ_0067127	2.0801	0.000194	ALDH1L1
145223197	145255444	chr8	+	exonic	hsa_circ_0001832	2.3388	0.000214	MROH1
213302869	213349835	chr1	+	exonic	hsa_circ_0007772	2.5061	0.000215	RPS6KC1
127064214	127076264	chr9	+	exonic	hsa_circ_0088485	2.4077	0.000226	NEK6

90446447	90454051	chr15	-	exonic	hsa_circ_0036750	1.6419	0.000233	ARPIN
14821320	14837158	chrY	+	exonic	hsa_circ_0001954	1.7963	0.000238	USP9Y
151223776	151247050	chr4	-	exonic	hsa_circ_0001450	1.7575	0.000249	LRBA
33283175	33324476	chr1	+	sense overlapping	hsa_circ_0011449	2.5487	0.000258	S100PBP
61574338	61575044	chr20	+	exonic	hsa_circ_0003574	1.8533	0.000259	GID8
61044064	61045948	chr11	-	exonic	hsa_circ_0022249	1.8756	0.000260	VWCE
118897646	118898434	chr11	-	exonic	hsa_circ_0024516	3.4028	0.000283	SLC37A4
17366614	17395067	chr9	+	exonic	N/A	1.8681	0.000310	CNTLN
40728446	40730445	chr5	-	exonic	hsa_circ_0006141	3.3462	0.000335	TTC33
5711031	5717503	chr11	-	intronic	hsa_circ_0000276	3.0147	0.000357	TRIM5
46515157	46515754	chr11	-	exonic	hsa_circ_0009155	-2.1969	0.000391	AMBRA1
85625142	85626408	chr2	-	exonic	hsa_circ_0055412	2.1575	0.000397	CAPG
79179293	79193564	chr9	+	sense overlapping	N/A	2.0447	0.000437	AL161626.1
100169609	100170072	chrX	-	sense overlapping	N/A	2.1041	0.000444	XKRX
2929251	2930958	chr12	+	exonic	hsa_circ_0000374	3.6206	0.000468	ITFG2
111311746	111313913	chr3	-	exonic	hsa_circ_0066781	1.7881	0.000470	ZBED2
62479014	62483619	chr1	+	intronic	N/A	1.7057	0.000480	INADL
47316514	47316617	chr20	-	intronic	hsa_circ_0001167	2.6974	0.000480	PREX1
47285639	47285806	chr19	-	exonic	hsa_circ_0051637	1.8628	0.000488	SLC1A5
175996707	175996824	chr1	-	exonic	hsa_circ_0015358	1.6457	0.000502	RFWD2
41313097	41319934	chr15	-	exonic	hsa_circ_0034657	2.8382	0.000548	INO80
120600873	120622046	chr12	-	exonic	hsa_circ_0028826	1.8535	0.000550	GCN1L1
62396665	62398655	chr11	-	exonic	hsa_circ_0022482	1.6115	0.000553	GANAB
7556130	7586290	chr12	-	exonic	hsa_circ_0025349	2.1239	0.000564	CD163L1
34024320	34101636	chr6	-	exonic	hsa_circ_0076039	2.3967	0.000576	GRM4
86335196	86335470	chr15	-	intronic	hsa_circ_0000648	1.5995	0.000590	KLHL25
44970017	44970136	chr11	-	intronic	hsa_circ_0000293	2.1389	0.000590	TP53I11
77798585	77807398	chr13	-	exonic	hsa_circ_0030514	1.5005	0.000596	MYCBP2
112256581	112269109	chr3	-	exonic	hsa_circ_0066801	-1.5896	0.000606	ATG3
101790176	101799759	chr12	-	exonic	hsa_circ_0027902	1.6155	0.000618	ARL1
33376629	33402809	chr22	-	exonic	hsa_circ_0062997	1.8102	0.000631	SYN3
49054148	49063055	chr12	-	exonic	hsa_circ_0026036	1.8864	0.000635	KANSL2
983990	1004666	chr16	-	exonic	N/A	1.9166	0.000654	LMF1
129799616	129813722	chrX	-	exonic	N/A	1.6888	0.000674	ENOX2
123489400	123489932	chr11	+	exonic	hsa_circ_0024731	2.3795	0.000679	GRAMD1B
16586010	16658132	chr6	-	exonic	hsa_circ_0002353	1.5538	0.000718	ATXN1
85619092	85652361	chr15	+	exonic	N/A	2.0107	0.000784	PDE8A
56552657	56552820	chr12	-	antisense	hsa_circ_0000405	1.8673	0.000805	MYL6
73315177	73316443	chr2	-	exonic	hsa_circ_0007273	2.4945	0.000816	RAB11FIP5
17124850	17127457	chr17	-	exonic	N/A	3.2861	0.000823	FLCN
640897	666007	chr8	-	intronic	N/A	1.7127	0.000837	ERICH1
60713226	60716000	chr20	-	exonic	hsa_circ_0061036	1.7660	0.000957	PSMA7
33163212	33163532	chr11	-	exonic	N/A	2.1576	0.000970	CSTF3
27173370	27183073	chr3	-	exonic	hsa_circ_0003052	1.5269	0.001007	NEK10
75790426	75790887	chr3	-	exonic	hsa_circ_0002609	1.5418	0.001008	ZNF717
70644547	70666787	chr11	-	exonic	N/A	1.7508	0.001124	SHANK2
133534776	133536765	chr5	-	exonic	hsa_circ_0073942	1.9503	0.001163	PPP2CA
52132662	52134024	chr6	-	exonic	hsa_circ_0076742	1.9826	0.001200	MCM3

127294245	127294652	chr3	-	exonic	hsa_circ_0067159	1.5781	0.001201	TPRA1
13054580	13054850	chr19	+	sense overlapping	hsa_circ_0000897	1.5011	0.001202	CALR
78865519	78867665	chr17	+	exonic	hsa_circ_0000813	1.5651	0.001228	RPTOR
12788710	12788908	chr12	+	exonic	hsa_circ_0002873	1.6064	0.001249	CREBL2
46529740	46534363	chr11	-	exonic	hsa_circ_0003110	2.1176	0.001252	AMBRA1
109865553	109867711	chr1	-	exonic	hsa_circ_0013433	1.9222	0.001273	SORT1
150092297	150111194	chr6	+	exonic	hsa_circ_0078244	1.6609	0.001277	PCMT1
100109595	100112837	chr9	+	exonic	hsa_circ_0087659	-1.5005	0.001301	CCDC180
109762831	109763131	chr6	+	intronic	N/A	1.6278	0.001332	SMPD2
34059659	34101636	chr6	-	exonic	hsa_circ_0076040	2.1607	0.001417	GRM4
139982526	139996695	chr9	+	exonic	hsa_circ_0089630	1.5608	0.001581	MAN1B1
31535338	31535540	chr14	+	sense overlapping	N/A	1.7681	0.001638	AP4S1
58764121	58804477	chr5	-	intronic	N/A	1.7533	0.001660	PDE4D
45089764	45093836	chr21	+	exonic	N/A	1.8521	0.001685	RRP1B
10015311	10016172	chr3	-	exonic	hsa_circ_0064195	-1.5647	0.001698	EMC3
55340765	55341720	chr1	-	exonic	hsa_circ_0012673	1.6621	0.001716	DHCR24
192880233	192880611	chr1	-	intergenic	N/A	1.9746	0.001750	
15564438	15567918	chr2	-	exonic	hsa_circ_0052760	1.5070	0.001771	NBAS
169673708	169673894	chr1	-	exonic	hsa_circ_0000158	2.1121	0.001796	SELL
132990630	133002144	chr7	+	exonic	hsa_circ_0082440	2.0936	0.001810	EXOC4
151122382	151122520	chr5	-	exonic	hsa_circ_0074657	1.5653	0.001848	ATOX1
43523572	43535091	chr6	-	exonic	hsa_circ_0002037	1.7626	0.001894	XPO5
58142964	58143287	chr12	-	exonic	hsa_circ_0006606	1.5625	0.001904	CDK4
100506410	100506635	chr2	-	intronic	hsa_circ_0001054	2.8699	0.001943	AFF3
99224632	99234828	chr8	-	exonic	N/A	1.5189	0.001998	NIPAL2
52693054	52729678	chr19	+	exonic	hsa_circ_0052067	2.7458	0.002049	PPP2R1A
145806229	145806661	chr8	-	exonic	hsa_circ_0086154	1.7813	0.002118	ARHGAP39
12326937	12395884	chr1	+	exonic	hsa_circ_0009962	1.9528	0.002307	VPS13D
47274548	47290742	chr22	+	exonic	hsa_circ_0003343	1.5647	0.002376	TBC1D22A
53331118	53331571	chr14	-	exonic	hsa_circ_0031968	1.7185	0.002385	FERMT2
26385242	26388522	chr6	+	exonic	hsa_circ_0001590	1.6112	0.002394	BTN2A2
15855582	15874923	chr1	+	exonic	hsa_circ_0010041	1.5101	0.002429	DNAJC16
30715384	30715636	chr16	+	exonic	hsa_circ_0039076	1.7625	0.002439	SRCAP
131271154	131271376	chr9	+	exonic	hsa_circ_0088807	1.5545	0.002704	GLE1
98276327	98276412	chr2	-	intronic	hsa_circ_0001049	1.7226	0.002902	ACTR1B
184114751	184130178	chr4	+	exonic	hsa_circ_0003437	1.6231	0.002917	WWC2
20240809	20240905	chr2	-	intronic	hsa_circ_0000981	2.0439	0.002981	LAPTM4A
76393373	76393472	chr17	+	intronic	N/A	1.6951	0.002985	PGS1
25877593	25885213	chr17	+	exonic	N/A	1.5367	0.003134	KSR1
20113099	20113439	chr22	+	intronic	hsa_circ_0092314	2.3039	0.003151	RANBP1
45203311	45204674	chr11	+	exonic	N/A	1.8114	0.003155	PRDM11
18105081	18111057	chr11	-	exonic	hsa_circ_0002778	1.6227	0.003158	SAAL1
9588086	9595100	chr18	-	exonic	hsa_circ_0046882	1.8023	0.003249	PPP4R1
69170598	69177292	chr16	+	exonic	hsa_circ_0008700	1.6919	0.003277	CIRH1A
114357089	114364762	chrX	-	exonic	hsa_circ_0003300	2.0612	0.003348	LRCH2
196386979	196388380	chr3	-	antisense	hsa_circ_0001381	1.5963	0.003541	NRROS
74385612	74395072	chr17	-	exonic	hsa_circ_0045799	2.3368	0.003659	UBE2O
3205916	3209234	chr10	-	exonic	hsa_circ_0003022	-1.9568	0.003970	PITRM1
9770162	9770654	chr1	+	exonic	hsa_circ_0009654	1.6018	0.004290	PIK3CD

217005908	217026771	chr2	+	exonic	hsa_circ_0058175	1.5553	0.004291	XRCC5
150634289	150636239	chr1	-	exonic	N/A	-1.7443	0.004667	GOLPH3L
69565029	69565697	chr2	-	exonic	hsa_circ_0001025	1.9435	0.004674	GFPT1
99538969	99560389	chr8	-	exonic	hsa_circ_0003593	2.1103	0.004941	STK3
32395264	32400308	chr5	-	exonic	N/A	1.6288	0.004972	ZFR
62817884	62820990	chr17	-	exonic	hsa_circ_0004702	1.8247	0.005097	PLEKHM1P
150432224	150438785	chr2	-	exonic	N/A	1.5060	0.005410	MMADHC
52277731	52325551	chr13	+	exonic	N/A	1.5268	0.005412	WDFY2
50592985	50596330	chr15	-	exonic	hsa_circ_0007983	1.6366	0.005443	GABPB1
171830241	171944737	chr3	+	exonic	hsa_circ_0006948	1.6027	0.005632	FNDC3B
7976672	7990962	chr20	-	exonic	hsa_circ_0001130	1.6476	0.005853	TMX4
32987845	32995095	chr11	+	exonic	N/A	1.5518	0.005881	QSER1
47285639	47291842	chr19	-	exonic	hsa_circ_0051638	1.6050	0.005964	SLC1A5
73215386	73228707	chr2	-	exonic	hsa_circ_0004699	1.8851	0.006204	SFXN5
29847024	29848279	chr16	+	exonic	hsa_circ_0007258	1.7680	0.006313	MVP
73414865	73428368	chr15	+	exonic	N/A	1.6964	0.006341	NEO1
89123719	89131833	chr14	-	exonic	N/A	1.7828	0.006537	EML5
1191424	1203372	chr1	-	exonic	hsa_circ_0009246	1.7910	0.006545	UBE2J2
114840817	114842445	chr9	-	exonic	hsa_circ_0088036	1.6596	0.006694	SUSD1
72361889	72362548	chr2	-	exonic	hsa_circ_0055161	1.6899	0.006744	CYP26B1
106797630	106802256	chr7	+	exonic	hsa_circ_0061881	1.6347	0.006804	PRKAR2B
65924470	65925603	chr17	+	exonic	hsa_circ_0004392	-1.5099	0.006936	BPTF
126434011	126452004	chr6	+	antisense	N/A	1.5800	0.007050	MIR5695
4763319	4763528	chr20	+	antisense	hsa_circ_0001128	1.6270	0.007151	RASSF2
27207184	27207404	chr17	+	antisense	hsa_circ_0000746	2.3495	0.007154	FLOT2
74533340	74562028	chr9	+	exonic	N/A	1.5359	0.007183	C9orf85
30590251	30601744	chr7	-	exonic	hsa_circ_0001693	1.5444	0.007558	LOC401320
43552465	43555513	chr17	-	exonic	hsa_circ_0003434	2.1571	0.007685	PLEKHM1
16846216	16847893	chrX	+	exonic	hsa_circ_0006931	1.9757	0.007932	TXLNG
17948284	18031686	chr11	-	sense overlapping	N/A	1.5992	0.008081	SERGEF
172325397	172325966	chr2	+	sense overlapping	hsa_circ_0007529	1.5709	0.009171	DCAF17
179316734	179319566	chr1	+	exonic	hsa_circ_0015454	2.1541	0.009211	SOAT1
65131739	65141666	chr1	+	exonic	hsa_circ_0007009	1.5575	0.009682	CACHD1
201475259	201475620	chr1	-	intronic	hsa_circ_0000172	1.5087	0.010211	CSRP1
114153316	114158328	chr4	+	exonic	hsa_circ_0070703	1.6440	0.010707	ANK2
424004	427848	chr16	-	exonic	hsa_circ_0000663	1.7663	0.011638	TMEM8A
79940776	79940857	chr13	+	antisense	hsa_circ_0000499	1.7620	0.011646	RBM26
12903120	12903230	chr19	-	intronic	hsa_circ_0000895	1.7439	0.011826	HOOK2
3088665	3117990	chr4	+	exonic	hsa_circ_0003850	1.5566	0.012046	HTT
7225183	7225329	chr17	-	exonic	hsa_circ_0041821	1.6598	0.012536	NEURL4
21087948	21099138	chr18	+	exonic	hsa_circ_0002757	1.5744	0.013471	C18orf8
26343183	26349097	chr13	+	exonic	N/A	1.5093	0.013757	ATP8A2
97686267	97718297	chr9	+	exonic	N/A	1.9280	0.014540	C9orf3
122797769	122798857	chr2	+	intergenic	N/A	1.6333	0.014872	
104119940	104120152	chr10	+	exonic	hsa_circ_0003839	1.5038	0.014937	GBF1
23631224	23636741	chr3	+	intronic	hsa_circ_0004555	1.7160	0.014967	MIR548AC
10186276	10188722	chr2	+	exonic	N/A	-1.5298	0.015546	KLF11
39882005	39882224	chr15	+	exonic	hsa_circ_0034510	1.7896	0.015681	THBS1
48839753	48842572	chr8	-	exonic	hsa_circ_0084443	1.5042	0.016074	PRKDC

66286967	66313803	chr3	+	exonic	hsa_circ_0003101	1.8940	0.016150	SLC25A26
88116475	88116842	chr4	-	exonic	hsa_circ_0002538	-2.2772	0.016411	KLHL8
69908548	69908983	chr14	+	exonic	N/A	1.6023	0.017343	SLC39A9
71433787	72057536	chr15	+	exonic	hsa_circ_0036127	1.5230	0.017981	THSD4
128166326	128256170	chrX	-	sense overlapping	N/A	1.5627	0.018476	RP11-41L14.1
159664587	159664757	chr5	-	antisense	hsa_circ_0001549	1.9399	0.019087	FABP6
151775682	151779258	chr6	+	intronic	N/A	1.5085	0.019122	C6orf211
90397884	90398971	chr14	-	exonic	hsa_circ_0032891	1.6823	0.019576	EFCAB11
5113044	5126779	chr17	+	exonic	hsa_circ_0000738	1.7028	0.020181	LOC100130950
2828699	2856298	chrX	-	sense overlapping	N/A	1.6760	0.020671	ARSE
44346195	44346638	chr13	-	intronic	N/A	1.8189	0.020730	ENOX1
100035289	100052403	chr2	-	exonic	hsa_circ_0001052	1.5085	0.021860	REV1
171830241	171830380	chr3	+	exonic	hsa_circ_0067971	1.5164	0.022367	FNDC3B
70245970	70246161	chr14	+	antisense	hsa_circ_0000550	1.5395	0.023032	SLC10A1
150088308	150095224	chr5	-	exonic	hsa_circ_0074559	2.1958	0.023337	DCTN4
132426884	132428481	chr5	+	exonic	hsa_circ_0001531	-1.5663	0.025140	HSPA4
24549443	24553954	chr14	-	sense overlapping	N/A	1.5209	0.025703	NRL
90098243	90098338	chr16	+	intronic	hsa_circ_0000729	1.5290	0.026706	GAS8
50289531	50290616	chr3	+	exonic	hsa_circ_0007083	-2.2657	0.027141	GNAI2
183831943	183848110	chr2	-	exonic	N/A	1.5875	0.028484	NCKAP1
105767934	105778666	chr10	+	exonic	hsa_circ_0000259	-2.1436	0.031732	SLK
42604156	42604482	chr12	-	exonic	hsa_circ_0000392	1.6641	0.032567	YAF2
38493707	38527396	chr5	-	exonic	hsa_circ_0072303	1.5036	0.033540	LIFR
122363276	122363756	chr2	-	exonic	hsa_circ_0007052	-1.7833	0.034362	CLASP1
110832905	110834257	chr12	-	exonic	hsa_circ_0028198	1.5590	0.036574	ANAPC7
35615069	35633000	chr13	+	exonic	hsa_circ_0029975	1.6530	0.037626	NBEA
156220621	156220731	chr1	-	intronic	hsa_circ_0000141	1.5240	0.038162	SMG5
55844499	55844644	chr20	-	antisense	hsa_circ_0001171	1.5554	0.039612	BC037891
19948721	19951822	chr22	+	exonic	hsa_circ_0062277	-1.5224	0.039942	COMT
15858833	15869942	chr10	-	exonic	hsa_circ_0000219	-1.6248	0.043286	FAM188A
179972308	179975702	chr1	+	exonic	hsa_circ_0003942	-1.5300	0.046242	CEP350
99481790	99483412	chr9	+	sense overlapping	N/A	1.5131	0.047374	RP11-535M15.1
108137897	108138069	chr11	+	exonic	hsa_circ_0007694	-1.7692	0.047379	ATM
70096955	70101437	chr10	+	exonic	hsa_circ_0018499	1.6232	0.048472	HNRNPH3
20811436	20811534	chr14	-	sense overlapping	hsa_circ_0000519	-1.5645	0.049787	RPPH1

Table 15 (Sert R vs NR baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
30856464	30857207	chr6	+	exonic	hsa_circ_0005133	2.1223	0.0000E+00	DDR1
69699344	69700862	chr10	-	exonic	hsa_circ_0007997	1.8107	0.0000E+00	HERC4
21461899	21470081	chr18	+	exonic	hsa_circ_0047232	-1.5784	0.0000E+00	LAMA3
52773707	52790516	chr20	-	exonic	hsa_circ_0060930	-1.6509	0.0000E+00	CYP24A1
109319715	109323546	chr6	-	exonic	hsa_circ_0077578	-1.5986	0.0000E+00	SESN1
45059428	45059793	chr15	+	sense overlapping	hsa_circ_0103668	-1.5267	0.0000E+00	TRIM69
168233450	168250336	chr5	-	exonic	hsa_circ_0074930	2.0476	1.0000E-11	SLIT3
66221780	66232349	chr12	+	exonic	hsa_circ_0027446	-1.6520	2.0000E-11	HMGA2
2012061	2014827	chr16	-	exonic	hsa_circ_0037376	-1.5300	2.0000E-11	RPS2

26208168	26220646	chr12	+	exonic	hsa_circ_0025638	-1.7398	3.0000E-11	RASSF8
162890861	162891608	chr5	+	exonic	hsa_circ_0128496	-1.6999	5.0000E-11	HMMR
304627	311962	chr6	+	exonic	hsa_circ_0075410	1.5074	8.0000E-11	DUSP22
10395790	10397291	chr19	+	exonic	hsa_circ_0049241	2.7999	1.0000E-10	ICAM1
89628179	89628539	chr16	+	intronic	hsa_circ_0092337	3.9146	1.2000E-10	RPL13
72361889	72362548	chr2	-	exonic	hsa_circ_0055161	-1.6039	2.9000E-10	CYP26B1
52311410	52358462	chr15	+	exonic	hsa_circ_0035301	-1.5552	3.0000E-10	MAPK6
40949651	40950704	chr17	-	sense overlapping	hsa_circ_0043912	-1.6800	3.2000E-10	CCDC56
55748067	55748333	chr19	+	antisense	hsa_circ_0000959	-1.7523	5.0000E-10	PPP6R1
43514307	43516197	chr6	-	exonic	hsa_circ_0076560	-1.7378	5.6000E-10	XPO5
41705097	41795980	chr3	-	exonic	hsa_circ_0123780	-1.5524	5.6000E-10	ULK4
48018065	48023202	chr2	+	exonic	hsa_circ_0054474	-1.5198	5.7000E-10	MSH6
5624475	5624965	chr11	+	exonic	hsa_circ_0002969	1.5094	6.7000E-10	TRIM6-TRIM34
32142994	32145979	chr2	-	exonic	hsa_circ_0006790	-1.5665	6.9000E-10	MEMO1
57056124	57069951	chr18	-	sense overlapping	hsa_circ_0007105	-1.5503	7.2000E-10	TCONS_00026722
94721980	94735290	chr12	-	sense overlapping	hsa_circ_0000429	1.6302	7.4000E-10	CCDC41
64526630	64527428	chr7	+	exonic	hsa_circ_0080302	-1.5708	7.9000E-10	CCT6P3
57561274	57570191	chr3	-	exonic	hsa_circ_0008107	-1.6476	8.1000E-10	ARF4
144994590	145021167	chr1	-	exonic	hsa_circ_0008390	1.8253	9.0000E-10	PDE4DIP
27546443	27574979	chr14	+	exonic	N/A	-1.6378	9.0000E-10	RP11-364J4.2
67799536	67802707	chr13	-	exonic	hsa_circ_0000492	-1.5920	9.1000E-10	PCDH9
71680927	71681075	chr2	-	antisense	hsa_circ_0001029	1.9280	1.0900E-09	DYSF
128810558	128821588	chr10	+	exonic	N/A	1.6369	1.1300E-09	DOCK1
42041214	42050989	chr1	-	exonic	hsa_circ_0011950	-1.5832	1.2500E-09	HIVEP3
5664833	5699374	chr4	-	exonic	hsa_circ_0069059	1.8860	1.7900E-09	EVC2
167424300	167447459	chr6	+	exonic	hsa_circ_0078668	-1.5577	1.7900E-09	FGFR1OP
153759605	153764260	chrX	-	exonic	hsa_circ_0092108	-1.5669	1.8000E-09	G6PD
58275620	58292135	chr17	-	exonic	hsa_circ_0044927	-1.7553	1.8400E-09	USP32
222803446	222803648	chr1	+	intronic	hsa_circ_0000186	1.7094	2.8000E-09	MIA3
128973475	128975403	chr10	-	exonic	hsa_circ_0093074	-1.7367	2.8900E-09	FAM196A
896779	901546	chr5	+	exonic	hsa_circ_0071681	-1.7731	3.0700E-09	TRIP13
27041298	27044443	chr17	-	exonic	hsa_circ_0042691	-1.5173	3.0900E-09	RAB34
5827104	5842668	chr10	-	exonic	hsa_circ_0005379	2.5431	3.4400E-09	GDI2
72945231	72960247	chr2	-	exonic	hsa_circ_0009043	1.5122	3.8500E-09	EXOC6B
203378441	203379702	chr2	+	exonic	hsa_circ_0057805	-1.6049	4.1500E-09	BMPR2
28141776	28155940	chr13	-	exonic	hsa_circ_0000468	2.1506	4.1700E-09	LNX2
90653627	90665417	chr10	+	sense overlapping	hsa_circ_0008629	-1.5496	4.3400E-09	STAMBPL1
39738530	39743147	chr17	-	exonic	hsa_circ_0043614	-1.5392	4.5800E-09	KRT14
4953886	4960950	chr16	-	exonic	N/A	-1.5418	5.8500E-09	PPL
76978820	76979114	chr10	+	exonic	hsa_circ_0007335	-1.7556	6.1400E-09	VDAC2
50821993	50831048	chr15	-	exonic	hsa_circ_0035222	-1.5835	6.3300E-09	USP50
79660683	79661883	chr17	+	exonic	hsa_circ_0004721	1.7732	6.4600E-09	HGS
37352838	37358253	chr5	-	exonic	hsa_circ_0072279	1.6953	7.1500E-09	NUP155
136035782	136048826	chr3	+	exonic	N/A	1.6483	7.7400E-09	PCCB
145197456	145205763	chr5	-	exonic	hsa_circ_0006528	-1.5630	7.7800E-09	PRELID2
128691933	128697886	chr9	+	exonic	hsa_circ_0004804	-1.5514	8.0800E-09	PBX3
10460449	10480201	chr1	+	exonic	hsa_circ_0009725	-1.5405	9.0500E-09	PGD
115202366	115205625	chr5	+	exonic	hsa_circ_0002919	2.6267	9.7900E-09	AP3S1
225600155	225607500	chr1	-	exonic	N/A	1.5037	9.9800E-09	LBR
196544755	196583056	chr2	+	exonic	hsa_circ_0057552	-1.5088	1.1300E-08	SLC39A10
4935748	4937971	chr6	+	exonic	hsa_circ_0075522	-1.5189	1.2470E-08	CDYL
61013821	61034674	chr13	+	exonic	hsa_circ_0004245	-1.5424	1.4600E-08	TDRD3
186988982	187003844	chr3	-	intronic	hsa_circ_0009169	-1.5170	1.4860E-08	MASP1
30693541	30744883	chr21	+	sense overlapping	N/A	1.5291	1.5380E-08	BACH1
65922338	66028484	chr14	+	exonic	hsa_circ_0001998	-1.5521	1.5850E-08	FUT8
20436712	20466338	chr10	+	exonic	hsa_circ_0000224	-1.5332	1.6440E-08	PLXDC2
41361767	41362745	chr15	-	exonic	hsa_circ_0007489	1.5016	1.6930E-08	INO80
13049413	13055304	chr19	+	exonic	hsa_circ_0049637	3.3950	2.0530E-08	CALR
53854798	53858636	chr12	+	exonic	hsa_circ_0026646	1.6492	2.0650E-08	PCBP2
12462922	12465283	chr11	+	intronic	N/A	-1.5578	2.0670E-08	PARVA
28654060	28671129	chr8	-	exonic	N/A	-1.7105	2.2950E-08	INTS9
27668989	27672064	chr7	-	exonic	hsa_circ_0003958	-1.5584	2.3880E-08	HIBADH
9020437	9021799	chr12	+	exonic	hsa_circ_0025388	-1.5387	2.3900E-08	A2ML1
124911167	124934413	chr12	-	exonic	hsa_circ_0000461	1.5741	2.6700E-08	NCOR2
102056748	102076805	chr11	+	exonic	hsa_circ_0002320	-1.5432	2.7120E-08	YAP1

38273472	38275126	chr1	+	exonic	hsa_circ_0011717	-1.5021	2.7160E-08	C1orf122
65220766	65221561	chr7	+	exonic	N/A	-1.6462	2.7830E-08	CCT6P1
51454240	51456330	chr3	-	exonic	hsa_circ_0065898	1.5344	2.9610E-08	VPRBP
122669065	122670847	chr12	+	exonic	N/A	-1.6045	2.9740E-08	LRRC43
61013821	61068709	chr13	+	exonic	N/A	-1.5176	3.3140E-08	TDRD3
5568791	5570232	chr7	-	exonic	hsa_circ_0079276	1.9169	3.7990E-08	ACTB
32557275	32566163	chr1	+	exonic	hsa_circ_0006349	-2.0370	4.0520E-08	TMEM39B
114572086	114588952	chr5	-	exonic	hsa_circ_0073634	-1.6337	4.1830E-08	PGGT1B
69874028	69876023	chr16	+	exonic	hsa_circ_0040097	1.7718	4.3750E-08	WWP2
8555122	8617582	chr1	-	exonic	hsa_circ_0006837	-1.5054	4.4550E-08	RERE
35436177	35436558	chr6	+	exonic	hsa_circ_0076138	-1.5554	4.5600E-08	RPL10A
47725960	47726788	chr1	-	exonic	N/A	-1.5185	4.9570E-08	STIL
91247081	91252672	chr14	-	exonic	hsa_circ_0000560	-1.5008	5.0480E-08	TTC7B
29677910	29678100	chr16	+	intronic	hsa_circ_0000686	1.5764	5.4560E-08	SPN
25644553	25645709	chr1	-	intronic	N/A	-1.7327	5.8410E-08	C1orf63
24495906	24507344	chr1	-	exonic	hsa_circ_0010906	1.8698	6.0250E-08	IL28RA
122031337	122031452	chr12	+	sense overlapping	N/A	1.5955	6.1450E-08	RP13-941N14.1
74561481	74580819	chr18	+	exonic	hsa_circ_0002799	1.5148	6.3420E-08	ZNF236
16046228	16047883	chr1	+	exonic	hsa_circ_0002733	1.5528	6.6020E-08	PLEKHM2
113258782	113260758	chr2	+	exonic	N/A	-1.6002	7.0390E-08	TTL
118969734	119033695	chr9	+	exonic	hsa_circ_0008792	-1.6301	7.8620E-08	PAPPA
172305190	172314987	chr2	+	exonic	hsa_circ_0001081	2.0165	7.9640E-08	DCAF17
140954867	140955044	chr3	-	antisense	hsa_circ_0001343	-1.6247	8.6220E-08	ACPL2
45883610	45893784	chr11	+	exonic	hsa_circ_0000295	1.5059	9.2890E-08	CRY2
46751033	46752171	chr1	-	exonic	hsa_circ_0004070	-1.5546	9.8620E-08	LRRC41
100826890	100828258	chr14	-	exonic	hsa_circ_0033191	-1.5481	1.0036E-07	WARS
55756487	55757046	chr19	-	exonic	hsa_circ_0005746	1.5602	1.0424E-07	PPP6R1
16526335	16528616	chr10	+	exonic	hsa_circ_0017854	-2.0031	1.0493E-07	PTER
211092981	211093411	chr1	-	exonic	hsa_circ_0006123	-1.6106	1.0496E-07	KCNH1
38029408	38055959	chr4	+	exonic	N/A	-1.6108	1.1200E-07	TBC1D1
56409123	56409324	chr17	-	sense overlapping	hsa_circ_0000792	1.6113	1.3977E-07	LOC100506779
45073658	45290704	chr6	-	exonic	N/A	-1.7263	1.8051E-07	SUPT3H
176964873	176966148	chr5	-	exonic	hsa_circ_0075236	1.5403	1.8507E-07	FAM193B
242396161	242415402	chr2	+	exonic	N/A	-1.5055	1.9976E-07	FARP2
173371969	173380275	chr5	+	exonic	hsa_circ_0008042	-1.5279	2.0856E-07	CPEB4
19760861	19761115	chr19	-	intronic	hsa_circ_0000919	1.5815	2.1806E-07	ATP13A1
27445667	27449008	chr16	+	exonic	hsa_circ_0038728	-1.5741	2.3419E-07	IL21R
48271490	48272189	chr17	-	exonic	hsa_circ_0044556	1.6644	2.6291E-07	COL1A1
14369008	14369452	chr5	+	intronic	N/A	2.5157	3.3045E-07	TRIO
159664587	159664757	chr5	-	antisense	hsa_circ_0001549	1.6256	3.4921E-07	FABP6
41916541	41929074	chr19	+	exonic	hsa_circ_0000937	2.1013	3.5069E-07	BCKDHA
136770511	136771563	chr5	-	intronic	N/A	-1.5044	3.5836E-07	SPOCK1
172305190	172314585	chr2	+	exonic	hsa_circ_0005904	1.5743	3.7614E-07	DCAF17
42819829	42821476	chr6	+	exonic	hsa_circ_0076413	-1.5301	4.2787E-07	KIAA0240
36681395	36681695	chr22	-	intronic	hsa_circ_0092283	-1.8003	4.4168E-07	MYH9
85331067	85331821	chr1	-	exonic	hsa_circ_0004390	-1.6453	4.7503E-07	LPAR3
6657590	6657991	chr12	-	exonic	hsa_circ_0000375	1.9318	0.000001	IFFO1
99148008	99148381	chr10	-	exonic	hsa_circ_0019337	-1.5410	0.000001	RRP12
196793574	196846401	chr3	-	exonic	hsa_circ_0068684	-1.5455	0.000001	DLG1
38894089	38894578	chr22	-	exonic	hsa_circ_0063329	2.3324	0.000001	DDX17
5691329	5691678	chr19	+	exonic	hsa_circ_0048766	-1.6880	0.000001	RPL36
131761180	131761386	chr5	+	intronic	hsa_circ_0001525	2.1665	0.000001	C5orf56
121675707	121732604	chr4	-	exonic	hsa_circ_0005654	1.9972	0.000001	PRDM5
80721840	80726442	chr17	+	exonic	hsa_circ_0046462	-1.6260	0.000001	TBCD
66312474	66313803	chr3	+	exonic	hsa_circ_0066465	1.6395	0.000001	SLC25A26
76602357	76603236	chr10	+	exonic	hsa_circ_0005235	-1.6042	0.000001	KAT6B
94023872	94027070	chr7	+	exonic	hsa_circ_0081055	1.5685	0.000001	COL1A2
3252272	3256234	chr18	+	exonic	hsa_circ_0046753	-1.5253	0.000001	MYL12A
13424714	13466728	chr11	-	exonic	N/A	1.5306	0.000001	BTBD10
13710566	13710870	chr19	-	exonic	N/A	1.5348	0.000001	CACNA1A
8946801	8949183	chr16	-	sense overlapping	hsa_circ_0037798	-1.5128	0.000001	CARHSP1
201966446	201969143	chr1	+	exonic	hsa_circ_0015962	-1.9816	0.000001	RNPEP
90670648	90670832	chr6	+	antisense	hsa_circ_0001623	1.6650	0.000001	BACH2
33113327	33116872	chr19	-	exonic	hsa_circ_0050386	1.5300	0.000001	ANKRD27
80772106	80783018	chr2	+	exonic	hsa_circ_0055377	-1.7518	0.000001	CTNNA2
7301567	7303659	chr12	+	exonic	N/A	-1.8136	0.000002	CLSTN3
112399680	112421007	chr5	-	exonic	hsa_circ_0009054	2.0313	0.000002	MCC

6582390	6605349	chr8	+	exonic	hsa_circ_0002682	1.6771	0.000002	AGPAT5
55833019	55919286	chr18	+	exonic	N/A	2.2127	0.000002	NEDD4L
53732144	53737018	chr1	-	exonic	hsa_circ_0012592	-1.5298	0.000002	LRP8
40176084	40176486	chr17	-	antisense	hsa_circ_0000764	-1.5185	0.000002	NKIRAS2
127965678	127983624	chr3	+	exonic	hsa_circ_0067209	1.5506	0.000002	EEFSEC
28872327	28884970	chr10	+	exonic	hsa_circ_0007503	-1.5297	0.000002	WAC
119526736	119542682	chr4	+	exonic	hsa_circ_0070739	1.5471	0.000002	TCONS_00008208
149563797	149629870	chr3	+	exonic	hsa_circ_0003502	-1.5417	0.000002	RNF13
22925975	22926065	chr15	+	exonic	hsa_circ_0034067	-2.4854	0.000002	CYFIP1
79613111	79614128	chr10	-	exonic	hsa_circ_0006649	1.8846	0.000002	DLG5
68018139	68026357	chr8	+	exonic	hsa_circ_0001806	-1.5401	0.000003	CSPP1
96965240	96966735	chr2	-	intronic	N/A	-1.5588	0.000003	SNRNP200
4760668	4766974	chr20	-	exonic	hsa_circ_0059354	1.8301	0.000003	RASSF2
53410256	53416411	chr12	+	exonic	hsa_circ_0026497	-1.5026	0.000003	EIF4B
120916382	120924441	chr11	+	exonic	hsa_circ_0000365	2.1086	0.000003	TBCEL
95500310	95500614	chr9	-	intronic	hsa_circ_0001874	1.5341	0.000003	BICD2
141004774	141009692	chr5	-	exonic	hsa_circ_0074332	1.7448	0.000003	HDAC3
3976434	3976629	chr19	-	intronic	hsa_circ_0000872	1.6625	0.000004	EEF2
49343147	49349087	chr3	-	exonic	hsa_circ_0004581	-1.5683	0.000004	USP4
79186178	79186586	chr4	+	exonic	hsa_circ_0070113	1.5108	0.000004	FRAS1
54292038	54294350	chr4	+	exonic	hsa_circ_0069748	1.7488	0.000004	FIP1L1
98276327	98276412	chr2	-	intronic	hsa_circ_0001049	1.5128	0.000004	ACTR1B
89747293	89750866	chr14	-	exonic	hsa_circ_0000559	-1.5849	0.000004	FOXN3
50596162	50596330	chr15	-	exonic	hsa_circ_0035208	-1.5373	0.000004	GABPB1
175426288	175426438	chr2	-	sense overlapping	hsa_circ_0001082	-1.5241	0.000004	WIPF1
3726429	3733956	chr11	-	exonic	N/A	-1.5359	0.000005	NUP98
113705647	113707650	chr12	+	exonic	hsa_circ_0002857	1.6852	0.000005	TPCN1
103299660	103300494	chr8	-	exonic	hsa_circ_0001818	2.4036	0.000005	UBR5
140444507	140450374	chr4	-	exonic	hsa_circ_0001442	-1.5275	0.000005	SETD7
77065301	77065626	chr4	-	exonic	hsa_circ_0070040	1.9776	0.000006	NUP54
9792628	9793633	chr3	+	exonic	hsa_circ_0008027	1.5105	0.000006	OGG1
57237616	57250507	chr4	-	exonic	N/A	-1.5608	0.000007	AASDH
51680350	51680428	chr16	+	sense overlapping	hsa_circ_0005008	2.1673	0.000008	TCONS_I2_00009739
188202379	188242575	chr3	+	exonic	hsa_circ_0006517	1.5366	0.000009	LPP
43008874	43011764	chr15	+	sense overlapping	N/A	1.9950	0.000009	STARD9
128356641	128363626	chr3	-	exonic	hsa_circ_0067231	1.5535	0.000009	RPN1
22669237	22683186	chrY	-	sense overlapping	N/A	-1.5582	0.000010	TTTY10
3474817	3477249	chr17	-	exonic	N/A	-1.5849	0.000011	TRPV1
61912498	61913166	chr11	+	sense overlapping	hsa_circ_0000315	3.6734	0.000011	INCENP
40120400	40120586	chr17	-	antisense	hsa_circ_0000763	3.2927	0.000012	CNP
154743639	154744117	chr6	-	exonic	hsa_circ_0078346	-1.5876	0.000012	CNKSR3
102603979	102669865	chr7	-	exonic	N/A	-1.5564	0.000013	FBXL13
189022209	189026744	chr4	-	exonic	N/A	1.6871	0.000013	TRIML2
45203311	45204674	chr11	+	exonic	N/A	-1.5148	0.000013	PRDM11
114157810	114175048	chr13	+	exonic	hsa_circ_0007760	-1.5865	0.000014	TMCO3
50592985	50596330	chr15	-	exonic	hsa_circ_0007983	-1.5143	0.000014	GABPB1
47380394	47397280	chr11	-	exonic	hsa_circ_0000303	1.7318	0.000017	SPI1
44060686	44061844	chr15	+	exonic	N/A	1.6563	0.000017	PDIA3
118890859	118892596	chr11	+	exonic	N/A	1.8155	0.000017	TRAPPC4
104702610	104722244	chr7	+	exonic	N/A	1.6253	0.000018	KMT2E
77830227	77835260	chr11	-	exonic	hsa_circ_0023787	-1.6163	0.000022	ALG8
76388556	76411108	chr17	+	exonic	hsa_circ_0045890	1.5043	0.000023	PGS1
26233194	26236101	chr7	-	exonic	hsa_circ_0001691	1.5162	0.000027	HNRNPA2B1
81121205	81124712	chr16	-	exonic	N/A	-2.8034	0.000029	GCSH
57409052	57430887	chr17	+	exonic	hsa_circ_0044837	3.2159	0.000030	YPEL2
14513408	14515374	chr19	+	exonic	hsa_circ_0004853	1.5870	0.000034	CD97
15374347	15410596	chr6	+	exonic	hsa_circ_0075671	1.8480	0.000035	JARID2
34107610	34112225	chr11	+	exonic	hsa_circ_0021647	2.1746	0.000042	CAPRIN1
1735857	1770677	chr1	-	exonic	hsa_circ_0005907	1.5318	0.000043	GNB1
10283765	10288043	chr19	-	exonic	hsa_circ_0000889	1.5118	0.000046	DNMT1
123718836	123721032	chr10	-	exonic	hsa_circ_0020256	-2.1983	0.000050	NSMCE4A
34110941	34112225	chr11	+	exonic	hsa_circ_0021652	2.2841	0.000052	CAPRIN1
32659871	32666359	chr20	+	exonic	hsa_circ_0001140	1.5530	0.000058	RALY
34111725	34112225	chr11	+	exonic	hsa_circ_0000288	2.4433	0.000064	CAPRIN1
17117929	17128675	chr22	+	exonic	hsa_circ_0062142	1.6161	0.000066	psiTPTE22

72850146	72857113	chr5	-	exonic	N/A	-1.9558	0.000066	ANKRA2
140920348	140920479	chr4	-	intronic	hsa_circ_0001443	1.5718	0.000070	MAML3
28199932	28200152	chr1	+	intronic	hsa_circ_0000036	1.5645	0.000072	C1orf38
103916775	103917971	chr10	+	exonic	hsa_circ_0000257	-1.7953	0.000073	NOLC1
68155889	68157024	chr16	+	exonic	hsa_circ_0005615	1.7410	0.000095	NFATC3
33429698	33429839	chr1	+	antisense	hsa_circ_0000049	-1.5792	0.000100	RNF19B
1003727	1006847	chr12	+	exonic	hsa_circ_0003251	1.6634	0.000109	WNK1
38894089	38897285	chr22	-	exonic	hsa_circ_0063331	1.7359	0.000114	DDX17
110064315	110068928	chr9	+	exonic	hsa_circ_0006174	1.7792	0.000117	RAD23B
20507738	20527139	chr2	-	exonic	hsa_circ_0052867	1.7939	0.000125	PUM2
85554139	85554349	chr2	-	sense overlapping	hsa_circ_0001035	1.9799	0.000128	TGOLN2
5690345	5691678	chr19	+	exonic	hsa_circ_0048764	-1.8978	0.000129	RPL36
42284534	42284717	chr2	+	intronic	N/A	1.5309	0.000141	PKDCC
185318552	185327138	chr3	+	exonic	N/A	1.6713	0.000143	SENP2
22940727	22947086	chr15	+	exonic	hsa_circ_0034072	1.5428	0.000168	CYFIP1
124517260	124518071	chr11	-	exonic	hsa_circ_0000367	2.9762	0.000204	SIAE
31093273	31093358	chr16	-	antisense	hsa_circ_0000691	2.8594	0.000217	ZNF646
219467402	219468493	chr1	+	sense overlapping	N/A	-1.8208	0.000228	XLOC_000566
27834800	27834884	chr6	-	sense overlapping	hsa_circ_0001596	2.3704	0.000255	HIST1H1B
110068659	110081160	chr9	+	exonic	hsa_circ_0087862	2.0376	0.000263	RAD23B
19627435	19663412	chr16	+	exonic	hsa_circ_0005699	-1.8947	0.000271	C16orf62
8059547	8059653	chr17	-	intronic	hsa_circ_0000742	1.8092	0.000277	None
243056789	243064606	chr2	+	exonic	N/A	1.5008	0.000279	LOC728323
349113	349256	chr6	+	intronic	hsa_circ_0001568	3.2945	0.000279	DUSP22
85554223	85554349	chr2	-	sense overlapping	hsa_circ_0001036	1.9445	0.000287	TGOLN2
54292038	54310270	chr4	+	exonic	hsa_circ_0001413	1.5144	0.000309	FIP1L1
45391429	45396935	chr18	-	exonic	hsa_circ_0003694	1.5112	0.000323	SMAD2
109479800	109479932	chr1	-	intronic	hsa_circ_0000102	2.4968	0.000333	CLCC1
208589523	208598771	chr2	+	exonic	N/A	2.2119	0.000353	CCNYL1
47098310	47108608	chr3	-	exonic	hsa_circ_0002569	1.7014	0.000356	SETD2
240098108	240158360	chr2	-	exonic	hsa_circ_0003445	1.5169	0.000369	HDAC4
85667519	85695371	chr16	+	exonic	hsa_circ_0040730	2.0527	0.000378	KIAA0182
1032390	1036245	chr19	+	exonic	hsa_circ_0048140	1.5077	0.000394	CNN2
25288601	25300954	chr20	-	exonic	hsa_circ_0059665	-4.5148	0.000414	ABHD12
3988781	3988912	chr11	+	exonic	hsa_circ_0020926	1.5706	0.000419	STIM1
89458787	89459087	chr16	-	intronic	N/A	-3.7837	0.000436	ANKRD11
110084263	110087285	chr9	+	exonic	hsa_circ_0001880	1.6568	0.000442	RAD23B
42103080	42105299	chr15	+	exonic	hsa_circ_0034762	2.9061	0.000446	MAPKBP1
47098310	47103836	chr3	-	exonic	hsa_circ_0065149	1.6431	0.000469	SETD2
56558216	56556309	chr12	+	antisense	hsa_circ_0000407	2.0151	0.000501	SMARCC2
37838091	37838774	chr19	+	exonic	N/A	1.9796	0.000505	HKR1
39191239	39200116	chr19	+	exonic	hsa_circ_0050900	1.9380	0.000508	ACTN4
47441689	47446190	chrX	+	exonic	hsa_circ_0090446	-1.7940	0.000512	TIMP1
41191341	41196173	chr15	+	exonic	hsa_circ_0034642	2.4043	0.000517	VPS18
118774654	118787003	chrX	-	exonic	hsa_circ_0008350	1.5184	0.000557	SEPT6
110068659	110074018	chr9	+	exonic	hsa_circ_0087861	1.6059	0.000558	RAD23B
1737913	1749314	chr1	-	exonic	hsa_circ_0009357	1.8344	0.000559	GNB1
27975161	27977818	chr17	-	exonic	hsa_circ_0042799	1.6566	0.000596	SSH2
171965322	171969331	chr3	+	exonic	hsa_circ_0006156	1.6358	0.000653	FNDC3B
133587	139152	chr11	-	exonic	hsa_circ_0020596	1.7952	0.000692	None
243242289	243265046	chr1	-	exonic	hsa_circ_0017215	2.3701	0.000700	TCONS_l2_00002816
224142178	224149975	chr1	-	intronic	hsa_circ_0001978	1.8065	0.000738	TCONS_l2_00001804
36282482	36292436	chr1	+	exonic	hsa_circ_0003986	1.5016	0.000755	EIF2C4
13701322	13717044	chr10	-	exonic	hsa_circ_0004183	2.0844	0.000770	FRMD4A
99220660	99233376	chr9	+	exonic	hsa_circ_0087631	1.9825	0.000781	HABP4
36245469	36247930	chr19	-	exonic	hsa_circ_0050649	-1.5321	0.000785	HSPB6
222652709	224149975	chr1	-	sense overlapping	hsa_circ_0003163	1.7536	0.000789	TCONS_l2_00001808
128354717	128360471	chr11	-	exonic	hsa_circ_0004296	1.5194	0.000791	ETS1
128350085	128360471	chr11	-	exonic	hsa_circ_0002083	1.7828	0.000810	ETS1
129662158	129679387	chr7	-	exonic	hsa_circ_0082319	1.9825	0.000849	ZC3HC1
43334706	43342194	chr21	-	exonic	hsa_circ_0061817	1.5101	0.000953	C2CD2
36245469	36246795	chr19	-	exonic	hsa_circ_0050648	-1.5132	0.000958	HSPB6
129665997	129679387	chr7	-	exonic	hsa_circ_0082326	2.0344	0.001025	ZC3HC1
171851260	171969331	chr3	+	exonic	hsa_circ_0007148	1.6007	0.001029	FNDC3B
1712336	1714425	chrX	+	exonic	hsa_circ_0007352	1.8194	0.001032	None

10610070	10610756	chr19	-	exonic	hsa_circ_0049271	1.6312	0.001121	KEAP1
66764014	66766408	chr16	-	intronic	hsa_circ_0000706	-1.5542	0.001153	DYNC1LI2
35800605	35800763	chr17	+	exonic	hsa_circ_0006220	2.0383	0.001183	TADA2A
110062421	110084399	chr9	+	exonic	hsa_circ_0087856	2.0977	0.001186	RAD23B
36415395	36440853	chr11	+	sense overlapping	N/A	1.9009	0.001193	PRR5L
128281256	128289036	chr7	+	sense overlapping	hsa_circ_0005921	2.2043	0.001212	FLJ45340
127083737	127089724	chr9	+	exonic	hsa_circ_0088494	-1.6498	0.001268	NEK6
2929251	2930958	chr12	+	exonic	hsa_circ_0000374	1.6079	0.001290	ITFG2
28163979	28167848	chr16	-	exonic	hsa_circ_0007807	1.5584	0.001379	XPO6
20107645	20109225	chr17	+	exonic	hsa_circ_0000745	2.2785	0.001395	SPECC1
35797838	35800763	chr17	+	exonic	hsa_circ_0043278	2.1025	0.001399	TADA2A
65473318	65492309	chr2	+	sense overlapping	hsa_circ_0001022	2.4615	0.001434	ACTR2
6727768	6741097	chr1	-	exonic	hsa_circ_0008389	2.3891	0.001518	DNAJC11
78337590	78338212	chr17	+	intronic	N/A	1.5123	0.001577	RNF213
16198836	16199930	chr19	+	exonic	hsa_circ_0005855	1.5063	0.001591	TPM4
33935836	33941860	chr9	-	exonic	hsa_circ_0008344	1.6934	0.001628	UBAP2
4891946	4892613	chr6	+	exonic	hsa_circ_0008285	2.5292	0.001650	CDYL
59058742	59058878	chr19	+	exonic	hsa_circ_0052372	1.5645	0.001765	TRIM28
76301164	76415337	chr13	+	exonic	hsa_circ_0030448	1.5529	0.001835	LMO7
8366	14149	chrM	-	exonic	hsa_circ_0089763	1.5468	0.001840	None
22896855	22898646	chr10	-	exonic	hsa_circ_0003826	1.6000	0.001893	PIP4K2A
34151081	34165557	chr17	+	exonic	hsa_circ_0000758	1.5351	0.001904	TAF15
34147027	34149837	chr17	+	exonic	hsa_circ_0043138	1.7719	0.001915	TAF15
38726471	38734535	chr10	+	exonic	hsa_circ_0018225	1.6343	0.001928	LOC399744
36737414	36745300	chr22	-	exonic	hsa_circ_0004470	2.1458	0.001995	MYH9
134011326	134022971	chr9	+	exonic	hsa_circ_0089153	-1.6596	0.002050	NUP214
186504915	186505373	chr3	+	exonic	hsa_circ_0068464	-1.8312	0.002084	EIF4A2
65473657	65492309	chr2	+	exonic	hsa_circ_0008529	2.5924	0.002120	ACTR2
38890634	38897265	chr22	-	exonic	hsa_circ_0002211	1.6285	0.002243	DDX17
128282270	128289036	chr7	+	exonic	hsa_circ_0082179	1.9995	0.002328	FLJ45340
107513236	107535189	chr9	+	exonic	hsa_circ_0087798	1.7850	0.002433	NIPSNAP3A
34144719	34149837	chr17	+	exonic	N/A	1.6605	0.002459	TAF15
36680448	36702653	chr22	-	exonic	hsa_circ_0063089	1.6978	0.002494	MYH9
113933932	113935290	chr11	+	exonic	N/A	1.9491	0.002525	ZBTB16
128281294	128289036	chr7	+	exonic	hsa_circ_0082178	2.0034	0.002624	FLJ45340
35800609	35800763	chr17	+	exonic	N/A	1.9586	0.002733	TADA2A
131164981	131181313	chr8	-	exonic	hsa_circ_0001824	1.5086	0.002763	ASAP1
40278772	40282608	chr17	-	exonic	N/A	1.5348	0.002764	RAB5C
38072992	38075809	chr22	+	exonic	hsa_circ_0063227	-1.6189	0.002864	LGALS1
51743841	51747425	chr15	-	exonic	hsa_circ_0035277	1.6721	0.002868	DMXL2
73775150	73775265	chr17	-	intronic	hsa_circ_0000803	-2.1936	0.002941	H3F3B
674213	678730	chr1	-	sense overlapping	hsa_circ_0007211	2.0379	0.003055	None
104638135	104638748	chr10	+	exonic	N/A	1.5456	0.003104	AS3MT
38724057	38734535	chr10	+	exonic	hsa_circ_0018224	2.0307	0.003141	LOC399744
25328542	25339121	chr15	+	exonic	N/A	1.7208	0.003211	SNURF-SNRPN
36865777	36868169	chr17	+	sense overlapping	hsa_circ_0000760	1.6241	0.003252	MLLT6
153583192	153585991	chrX	-	exonic	hsa_circ_0091934	1.9558	0.003331	FLNA
68155889	68160513	chr16	+	exonic	hsa_circ_0000711	2.0923	0.003346	NFATC3
119529812	119549361	chr4	+	exonic	hsa_circ_0005433	1.8111	0.003553	TCONS_I2_00020705
135625089	135626611	chr2	-	exonic	N/A	2.4162	0.003563	CCNT2-AS1
18877942	18882804	chr16	-	exonic	hsa_circ_0038288	1.5506	0.003602	SMG1
47719687	47727660	chr3	-	exonic	hsa_circ_0001296	1.8923	0.003865	SMARCC1
236332005	236343328	chr1	+	exonic	N/A	2.1745	0.004185	GPR137B
3735585	3747433	chrX	-	sense overlapping	N/A	1.6391	0.004186	LOC389906
1747194	1756938	chr1	-	exonic	hsa_circ_0000008	1.5992	0.004716	GNB1
75264433	75264514	chr3	+	sense overlapping	hsa_circ_0006169	2.0641	0.004755	TCONS_I2_00018657
134353337	134353633	chr9	+	intronic	N/A	1.5060	0.004877	PRRC2B
160103505	160109274	chr6	-	exonic	hsa_circ_0004662	1.9621	0.005102	SOD2
667396	678730	chr1	-	exonic	hsa_circ_0009181	1.9594	0.005603	None
125472197	125474142	chr11	+	exonic	hsa_circ_0024766	-2.0628	0.005743	STT3A
12903120	12903230	chr19	-	intronic	hsa_circ_0000895	1.5433	0.005894	JUNB
27977671	28030080	chr17	-	exonic	hsa_circ_0042806	1.5412	0.006010	SSH2
65271199	65272066	chr11	+	sense overlapping	hsa_circ_0002082	2.6013	0.006366	MALAT1

20070853	20070981	chr22	+	intronic	hsa_circ_0001204	1.6972	0.006578	DGCR8
180609836	180610653	chr1	+	intronic	N/A	1.5846	0.006830	XPR1
243222779	243242354	chr1	-	exonic	hsa_circ_0017202	1.8957	0.007036	TCONS_I2_00002816
39821942	39829143	chr7	+	exonic	hsa_circ_0079926	1.8411	0.007262	LINC00265
13933667	13937011	chr1	+	exonic	hsa_circ_0010027	1.6079	0.007276	PDPN
85723323	85742653	chr11	-	exonic	hsa_circ_0023940	1.7406	0.008123	PICALM
66413497	66413944	chr11	+	exonic	hsa_circ_0023016	2.1502	0.008273	RBM4
64791491	64792365	chr15	+	sense overlapping	hsa_circ_0000615	1.6217	0.008462	ZNF609
202010100	202013775	chr2	+	exonic	hsa_circ_0057748	1.5730	0.008816	CFLAR
62288378	62288522	chr11	-	intronic	hsa_circ_0000317	1.6892	0.009292	AHNAK
41850651	41854360	chr19	-	exonic	hsa_circ_0051218	1.5534	0.009747	TGFB1
57059987	57064148	chr12	-	exonic	hsa_circ_0027089	1.5236	0.009767	PTGES3
38801306	38803739	chr8	+	exonic	hsa_circ_0084021	1.7316	0.009834	PLEKHA2
4516153	4519466	chr16	-	exonic	hsa_circ_0007788	-1.6779	0.010135	NMRAL1
150496687	150502572	chr5	-	exonic	hsa_circ_0074595	1.6178	0.010653	ANXA6
1735857	1756936	chr1	-	exonic	hsa_circ_0006869	1.6584	0.010995	GNB1
56854413	56866543	chr8	+	exonic	hsa_circ_0001803	1.5284	0.011144	LYN
18459757	18466821	chr19	+	exonic	hsa_circ_0050102	1.6034	0.011353	PGPEP1
57088080	57089646	chr19	+	intronic	N/A	2.2080	0.011952	ZNF470
45302384	45323900	chr21	+	sense overlapping	N/A	1.5032	0.012285	AGPAT3
27047048	27047688	chr17	+	intronic	hsa_circ_0092360	1.6244	0.012777	RPL23A
29313942	29314417	chr1	+	exonic	hsa_circ_0011167	1.5621	0.013036	EPB41
13532533	13581264	chr20	-	intronic	N/A	-1.7094	0.013269	TASP1
65466985	65482828	chr2	+	exonic	N/A	2.1184	0.013385	ACTR2
22880557	22880710	chr10	-	exonic	hsa_circ_0017972	1.5809	0.013400	PIP4K2A
12645634	12653561	chr3	-	exonic	N/A	1.5344	0.013717	RAF1
62297840	62298224	chr11	-	intronic	hsa_circ_0000320	1.7299	0.014255	AHNAK
26204839	26205043	chr6	+	sense overlapping	hsa_circ_0001588	2.1392	0.014941	HIST1H4E
18650180	18653782	chr19	-	exonic	hsa_circ_0050124	1.5759	0.015275	FKBP8
77977114	77987558	chr4	-	exonic	N/A	1.5398	0.015611	CCNI
131357380	131357465	chr12	+	exonic	hsa_circ_0029426	1.8044	0.016257	RAN
126434011	126496057	chr6	+	antisense	hsa_circ_0130587	1.5550	0.017326	MIR5695
25072253	25077915	chr13	-	exonic	hsa_circ_0005198	1.7871	0.017894	PARP4
18650180	18654383	chr19	-	exonic	hsa_circ_0050125	1.5647	0.017977	FKBP8
141595217	141616013	chr8	-	intronic	hsa_circ_0007313	1.5033	0.018636	EIF2C2
73585593	73594262	chr10	-	exonic	hsa_circ_0018722	1.5447	0.019135	PSAP
1756835	1770677	chr1	-	exonic	hsa_circ_0009362	1.6141	0.019322	GNB1
47379617	47379952	chr11	-	intronic	hsa_circ_0000301	1.5300	0.019336	SPI1
45954567	45959775	chr10	-	exonic	hsa_circ_0018273	1.6968	0.019939	MARCH8
48726970	48728915	chr3	-	exonic	hsa_circ_0003748	1.7712	0.020903	IP6K2
10865809	10868382	chr12	-	exonic	hsa_circ_0025460	-1.7081	0.021864	CSDA
68155889	68225678	chr16	+	exonic	hsa_circ_0039929	1.6247	0.021868	NFATC3
50618381	50618469	chr22	+	sense overlapping	hsa_circ_0001255	1.7460	0.023961	PANX2
169854206	169863309	chr3	-	exonic	hsa_circ_0001965	1.5572	0.025222	PHC3
18650180	18650530	chr19	-	exonic	hsa_circ_0000915	1.5546	0.026969	FKBP8
42903447	42905047	chr6	+	intronic	hsa_circ_0001605	1.8272	0.028064	CNPY3
36723505	36737571	chr22	-	exonic	hsa_circ_0063147	1.5672	0.035510	MYH9
135748304	135778851	chr6	-	exonic	hsa_circ_0077930	1.7329	0.035759	AHI1
5680784	5692141	chr7	-	exonic	hsa_circ_0079284	-1.6052	0.039779	RNF216
151306734	151327356	chr5	+	intergenic	N/A	1.6262	0.044454	
45247282	45249430	chr17	-	exonic	hsa_circ_0044234	1.5007	0.046115	CDC27
29313942	29323831	chr1	+	exonic	hsa_circ_0011168	1.5011	0.046748	EPB41

Table 16 (Sert R vs NR 1 week)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
2017333	2017502	chr9	+	intronic	hsa_circ_0001834	1.5191	9.4800E-09	SMARCA2
19965129	19965469	chr22	-	intronic	hsa_circ_0092330	1.5944	8.4710E-08	ARVCF
21735928	21746820	chr13	-	exonic	hsa_circ_0029696	1.5662	0.000002	SKA3
74561481	74580819	chr18	+	exonic	hsa_circ_0002799	1.5784	0.000003	ZNF236
62303908	62305446	chr20	+	exonic	hsa_circ_0061170	2.1299	0.000006	RTEL1-TNFRSF6B
33608730	33610023	chr19	+	exonic	hsa_circ_0050444	1.5421	0.000007	GPATCH1
58562378	58594266	chr16	-	exonic	hsa_circ_0039626	1.5087	0.000013	CNOT1
1125950	1151181	chr10	+	exonic	hsa_circ_0017449	1.5118	0.000020	WDR37

32479446	32483505	chr3	+	sense overlapping	hsa_circ_0005414	1.5601	0.000025	CMTM7
71680927	71681075	chr2	-	antisense	hsa_circ_0001029	1.5336	0.000030	DYSF
126434011	126496057	chr6	+	antisense	hsa_circ_0130587	1.7600	0.000077	MIR5695
68059317	68072052	chr16	+	exonic	hsa_circ_0039908	1.7525	0.000080	DUS2L
37159809	37161502	chr20	+	exonic	hsa_circ_0060342	1.5079	0.000096	RALGAPB
87765294	87797542	chr7	+	exonic	hsa_circ_0080968	1.8150	0.000113	ADAM22
17212469	17213367	chr19	+	exonic	hsa_circ_0000907	1.5679	0.000484	MYO9B
47098310	47103836	chr3	-	exonic	hsa_circ_0065149	1.6204	0.000571	SETD2
78682870	78722267	chr9	+	exonic	hsa_circ_0087234	1.5477	0.000683	PCSK5
32379220	32388780	chr5	-	exonic	hsa_circ_0072088	1.5435	0.000948	ZFR
103372298	103373854	chr8	-	exonic	hsa_circ_0001819	1.5058	0.001416	UBR5
47098310	47108608	chr3	-	exonic	hsa_circ_0002569	1.6043	0.001591	SETD2
129662158	129679387	chr7	-	exonic	hsa_circ_0082319	1.8259	0.001781	ZC3HC1
197597030	197602646	chr3	+	exonic	hsa_circ_0005873	1.5432	0.002468	LRCH3
197592293	197602646	chr3	+	exonic	hsa_circ_0008351	1.6466	0.002547	LRCH3
22696395	22777499	chr11	+	exonic	hsa_circ_0095626	1.5510	0.002784	GAS2
18650180	18650530	chr19	-	exonic	hsa_circ_0000915	1.6077	0.003266	FKBP8
10865809	10868382	chr12	-	exonic	hsa_circ_0025460	2.0476	0.003306	CSDA
77977114	77987558	chr4	-	exonic	hsa_circ_0127000	1.5210	0.003476	CCNI
7839009	7844817	chr10	+	exonic	hsa_circ_0007292	1.6868	0.003505	ATP5C1
40669428	40681774	chr22	+	exonic	hsa_circ_0063411	1.5696	0.003529	TNRC6B
68155889	68157024	chr16	+	exonic	hsa_circ_0005615	1.5617	0.004577	NFATC3
61133516	61135470	chr11	+	exonic	hsa_circ_0002058	1.5230	0.004816	TMEM138
68155889	68160513	chr16	+	exonic	hsa_circ_0000711	1.8483	0.004964	NFATC3
18650180	18653782	chr19	-	exonic	hsa_circ_0050124	1.5338	0.005899	FKBP8
68155889	68225678	chr16	+	exonic	hsa_circ_0039929	1.6637	0.006010	NFATC3
22880557	22880710	chr10	-	exonic	hsa_circ_0017972	1.5245	0.006480	PIP4K2A
79613111	79614128	chr10	-	exonic	hsa_circ_0006649	1.5045	0.006750	DLG5
128281294	128289036	chr7	+	exonic	hsa_circ_0082178	1.7327	0.007843	FLJ45340
38724057	38734535	chr10	+	exonic	hsa_circ_0018224	1.7322	0.006313	LOC399744
1737913	1749314	chr1	-	exonic	hsa_circ_0009357	1.5780	0.008414	GNB1
18650180	18654383	chr19	-	exonic	hsa_circ_0050125	1.5192	0.008836	FKBP8
128281256	128289036	chr7	+	sense overlapping	hsa_circ_0005921	1.7142	0.009315	FLJ45340
674213	678730	chr1	-	sense overlapping	hsa_circ_0007211	1.7337	0.010236	
38894089	38897285	chr22	-	exonic	hsa_circ_0063331	1.5074	0.010364	DDX17
667396	678730	chr1	-	exonic	hsa_circ_0009181	1.7400	0.010693	
85692787	85693046	chr11	-	exonic	hsa_circ_0023904	1.5305	0.010876	PICALM
243222779	243242354	chr1	-	exonic	hsa_circ_0017202	1.6837	0.011214	TCONS_I2_00002816
20507738	20527139	chr2	-	exonic	hsa_circ_0052867	1.5063	0.011538	PUM2
169854206	169863309	chr3	-	exonic	hsa_circ_0001965	1.5259	0.012958	PHC3
119529812	119549381	chr4	+	exonic	hsa_circ_0005433	1.5200	0.013854	TCONS_I2_00020705
128282270	128289036	chr7	+	exonic	hsa_circ_0082179	1.6565	0.014047	FLJ45340
39821342	39829143	chr7	+	exonic	hsa_circ_0079926	1.6340	0.015078	LINC00265
89628179	89628539	chr16	+	intronic	hsa_circ_0092337	1.5921	0.015429	RPL13
26204839	26205043	chr6	+	sense overlapping	hsa_circ_0001588	1.8646	0.015738	HIST1H4E
64791491	64792365	chr15	+	sense overlapping	hsa_circ_0000615	1.5156	0.019165	ZNF609
13639794	13644961	chr6	-	exonic	hsa_circ_0001578	1.5204	0.019191	RANBP9
227729319	227729842	chr2	+	exonic	hsa_circ_0001104	1.6632	0.019383	RHBDD1
85692171	85707972	chr11	-	exonic	hsa_circ_0002884	1.5499	0.022197	PICALM
85707868	85712201	chr11	-	exonic	hsa_circ_0002513	1.6604	0.024690	PICALM
63988322	64008672	chr15	-	exonic	hsa_circ_0035796	1.7005	0.026407	HERC1
4891946	4892613	chr6	+	exonic	hsa_circ_0008285	1.8595	0.028770	CDYL
85707868	85742653	chr11	-	exonic	hsa_circ_0023923	1.6296	0.033058	PICALM
153583192	153585991	chrX	-	exonic	hsa_circ_0091934	1.5309	0.034179	FLNA
110062421	110084399	chr9	+	exonic	hsa_circ_0087856	1.5079	0.035654	RAD23B
36737414	36745300	chr22	-	exonic	hsa_circ_0004470	1.5815	0.036653	MYH9
17270204	17273932	chr19	+	exonic	hsa_circ_0007396	1.7108	0.040361	MYO9B
74229605	74230755	chr6	-	exonic	hsa_circ_0077007	1.5248	0.047161	EEF1A1

Table 17 (Sert R 1 week vs SERT R baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
71680927	71681075	chr2	-	antisense	hsa_circ_0001029	1.5518	9.5874E-06	DYSF
30856464	30857207	chr6	+	exonic	hsa_circ_0005133	1.5607	5.4492E-05	DDR1
37105033	37105170	chr2	-	exonic	hsa_circ_0054033	-1.5937	0.000068	STRN

155448623	155451551	chr6	+	exonic	hsa_circ_0008289	-1.6278	0.000111	TIAM2
170667931	170669824	chr5	+	exonic	hsa_circ_0004738	-1.6344	0.000115	RANBP17
69699344	69700862	chr10	-	exonic	hsa_circ_0007997	1.7230	0.000264	HERC4
59058742	59058878	chr19	+	exonic	hsa_circ_0052372	1.5588	0.000501	TRIM28
89628179	89628539	chr16	+	intronic	hsa_circ_0092337	2.0496	0.000584	RPL13
61912498	61913166	chr11	+	sense overlapping	hsa_circ_0000315	-2.5489	0.001013	INCENP
5827104	5842668	chr10	-	exonic	hsa_circ_0005379	1.5646	0.001059	GDI2
104702610	104722244	chr7	+	exonic	N/A	1.5109	0.001139	KMT2E
40872407	40882768	chr1	+	exonic	hsa_circ_0011898	1.5128	0.001201	SMAP2
10395790	10397291	chr19	+	exonic	hsa_circ_0049241	1.7069	0.001364	ICAM1
99220660	99233376	chr9	+	exonic	hsa_circ_0087631	1.7952	0.001682	HABP4
13049413	13055304	chr19	+	exonic	hsa_circ_0049637	1.8774	0.001705	CALR
31093273	31093358	chr16	-	antisense	hsa_circ_0000691	2.0362	0.002473	ZNF646
47316514	47316617	chr20	-	intronic	hsa_circ_0001167	-1.5018	0.002486	PREX1
14369008	14369452	chr5	+	intronic	N/A	1.5495	0.002603	TRIO
115202366	115205825	chr5	+	exonic	hsa_circ_0002919	1.6065	0.002604	AP3S1
129662158	129679387	chr7	-	exonic	hsa_circ_0082319	1.7514	0.002788	ZC3HC1
41916541	41929074	chr19	+	exonic	hsa_circ_0000937	1.5266	0.003536	BCKDHA
13933667	13937011	chr1	+	exonic	hsa_circ_0010027	1.5430	0.003779	PDPN
85554139	85554349	chr2	-	sense overlapping	hsa_circ_0001035	1.6238	0.004196	TGOLN2
13701322	13717044	chr10	-	exonic	hsa_circ_0004183	1.7338	0.004215	FRMD4A
236332005	236343328	chr1	+	exonic	N/A	1.9290	0.004873	GPR137B
20070853	20070981	chr22	+	intronic	hsa_circ_0001204	-1.6487	0.005299	DGCR8
124517260	124518071	chr11	-	exonic	hsa_circ_0000367	2.3036	0.005925	SIAE
44060686	44061844	chr15	+	exonic	N/A	1.5928	0.006101	PDIA3
99481790	99483412	chr9	+	sense overlapping	hsa_circ_0139435	-1.5265	0.006109	RP11-535M15.1
208589523	208598771	chr2	+	exonic	N/A	1.7973	0.007051	CCNYL1
1737913	1749314	chr1	-	exonic	hsa_circ_0009357	1.5612	0.007207	GNB1
35797638	35800763	chr17	+	exonic	hsa_circ_0043278	1.7374	0.007535	TADA2A
85554223	85554349	chr2	-	sense overlapping	hsa_circ_0001036	1.5794	0.007657	TGOLN2
40120400	40120586	chr17	-	antisense	hsa_circ_0000763	-1.9105	0.008423	CNP
107513236	107535189	chr9	+	exonic	hsa_circ_0087798	-1.6302	0.008912	NIPSNAP3A
34107610	34112225	chr11	+	exonic	hsa_circ_0021647	1.6600	0.009048	CAPRIN1
135625089	135626611	chr2	-	exonic	N/A	-2.2992	0.009423	CCNT2-AS1
34111725	34112225	chr11	+	exonic	hsa_circ_0000288	1.7832	0.009666	CAPRIN1
25325262	25326442	chr15	+	intronic	hsa_circ_0092367	-1.5545	0.010503	SNORD116-14
34110941	34112225	chr11	+	exonic	hsa_circ_0021652	1.7157	0.010585	CAPRIN1
160103505	160109274	chr6	-	exonic	hsa_circ_0004662	1.7477	0.011042	SOD2
6727768	6741097	chr1	-	exonic	hsa_circ_0008389	-2.0709	0.011334	DNAJC11
109479600	109479932	chr1	-	intronic	hsa_circ_0000102	-1.9089	0.011358	CLCC1
37838091	37838774	chr19	+	exonic	hsa_circ_0109543	-1.6436	0.013260	HKR1
57409052	57430887	chr17	+	exonic	hsa_circ_0044837	-1.9894	0.014362	YPEL2
35800609	35800763	chr17	+	exonic	N/A	1.6269	0.015350	TADA2A
57409052	57430887	chr17	+	exonic	hsa_circ_0044837	1.5281	0.016471	YPEL2
85737333	85742653	chr11	-	exonic	hsa_circ_0002433	1.5807	0.017092	PICALM
61653517	61657356	chr5	+	exonic	hsa_circ_0001490	-1.7235	0.018494	KIF2A
35800605	35800763	chr17	+	exonic	hsa_circ_0006220	1.5815	0.018778	TADA2A
127338260	127339678	chr5	-	intronic	N/A	-1.5810	0.018978	CTC-228N24.3
27834800	27834884	chr6	-	sense overlapping	hsa_circ_0001596	-1.7043	0.018989	HIST1H1B
85742510	85742653	chr11	-	exonic	hsa_circ_0023944	1.5576	0.019117	PICALM
20107645	20109225	chr17	+	exonic	hsa_circ_0000745	1.8404	0.019201	SPECC1
85733409	85742653	chr11	-	exonic	hsa_circ_0023942	1.5380	0.020666	PICALM
85722072	85742653	chr11	-	exonic	hsa_circ_0000347	1.5543	0.020692	PICALM
68155889	68160513	chr16	+	exonic	hsa_circ_0000711	1.6089	0.022377	NFATC3
349113	349256	chr6	+	intronic	hsa_circ_0001568	-1.9028	0.024417	DUSP22
57088080	57089646	chr19	+	intronic	hsa_circ_0109937	-1.8962	0.024697	ZNF470
42103080	42105299	chr15	+	exonic	hsa_circ_0034762	-1.7911	0.025582	MAPKBP1
85718584	85742653	chr11	-	exonic	hsa_circ_0023936	1.5342	0.026461	PICALM
103299660	103300494	chr8	-	exonic	hsa_circ_0001818	1.5398	0.028160	UBR5
76910271	76928416	chr10	+	exonic	hsa_circ_0018905	-1.7044	0.028734	SAMD8
51680350	51680428	chr16	+	sense overlapping	hsa_circ_0005008	1.5721	0.029597	TCONS_I2_00009739
65272490	65272586	chr11	+	intronic	hsa_circ_0000326	1.8138	0.032164	TCONS_I2_00004572
47719687	47727660	chr3	-	exonic	hsa_circ_0001296	-1.5743	0.032858	SMARCC1

128281256	128289036	chr7	+	sense overlapping	hsa_circ_0005921	1.5063	0.033970	FLJ45340
151306734	151327356	chr5	+	intergenic	N/A	-1.5474	0.035109	
26204839	26205043	chr6	+	sense overlapping	hsa_circ_0001588	1.7324	0.035201	HIST1H4E
135748304	135778851	chr6	-	exonic	hsa_circ_0077930	-1.6504	0.035785	AHI1
45247282	45259003	chr17	-	exonic	hsa_circ_0044235	1.6283	0.036041	CDC27
66413497	66413944	chr11	+	exonic	hsa_circ_0023016	-1.7310	0.036135	RBM4
25072253	25077915	chr13	-	exonic	hsa_circ_0005198	-1.6020	0.037039	PARP4
50618361	50618469	chr22	+	sense overlapping	hsa_circ_0001255	-1.6199	0.037149	PANX2
26056122	26056299	chr6	-	sense overlapping	hsa_circ_0001583	1.5430	0.039109	HIST1H1C
243242289	243265046	chr1	-	exonic	hsa_circ_0017215	1.5036	0.041981	TCONS_I2_00002816
85723323	85742653	chr11	-	exonic	hsa_circ_0023940	1.6653	0.043048	PICALM

Table 18 (Sert NR 1 week vs SERT NR baseline)

TxStart	TxEnd	Chrom	Strand	circRNA type	Alias	Fold change	P-value	GeneSymbol
71680927	71681075	chr2	-	antisense	hsa_circ_0001029	1.5518	0.000010	DYSF
30856464	30857207	chr6	+	exonic	hsa_circ_0005133	1.5607	0.000054	DDR1
46515157	46515754	chr11	-	exonic	hsa_circ_0009155	-1.5209	0.000055	AMBRA1
22669237	22683186	chrY	-	sense overlapping	hsa_circ_0142668	-1.5912	0.000079	TTTY10
69699344	69700862	chr10	-	exonic	hsa_circ_0007997	1.7230	0.000264	HERC4
72850146	72857113	chr5	-	exonic	hsa_circ_0129585	-1.5755	0.000450	ANKRA2
17910716	17974508	chr4	-	exonic	hsa_circ_0125866	-1.5534	0.000478	LCORL
59058742	59058878	chr19	+	exonic	hsa_circ_0052372	1.5588	0.000501	TRIM28
89628179	89628539	chr16	+	intronic	hsa_circ_0092337	2.0496	0.000584	RPL13
186504915	186505373	chr3	+	exonic	hsa_circ_0068464	-1.6788	0.000933	EIF4A2
5827104	5842668	chr10	-	exonic	hsa_circ_0005379	1.5646	0.001059	GDI2
104702610	104722244	chr7	+	exonic	N/A	1.5109	0.001139	KMT2E
40872407	40882768	chr1	+	exonic	hsa_circ_0011898	1.5128	0.001201	SMAP2
10395790	10397291	chr19	+	exonic	hsa_circ_0049241	1.7069	0.001364	ICAM1
32557275	32566163	chr1	+	exonic	hsa_circ_0006349	-1.5483	0.001526	TMEM39B
99220660	99233376	chr9	+	exonic	hsa_circ_0087631	1.7952	0.001682	HABP4
13049413	13055304	chr19	+	exonic	hsa_circ_0049637	1.8774	0.001705	CALR
31093273	31093358	chr16	-	antisense	hsa_circ_0000691	2.0382	0.002473	ZNF646
14369008	14369452	chr5	+	intronic	N/A	1.5495	0.002603	TRIO
115202366	115205825	chr5	+	exonic	hsa_circ_0002919	1.6065	0.002604	AP3S1
129662158	129679387	chr7	-	exonic	hsa_circ_0082319	1.7514	0.002788	ZC3HC1
41916541	41929074	chr19	+	exonic	hsa_circ_0000937	1.5266	0.003536	BCKDHA
13933667	13937011	chr1	+	exonic	hsa_circ_0010027	1.5430	0.003779	PDPN
201966446	201969143	chr1	+	exonic	hsa_circ_0015962	-1.5149	0.004025	RNPEP
85554139	85554349	chr2	-	sense overlapping	hsa_circ_0001035	1.6238	0.004196	TGOLN2
13701322	13717044	chr10	-	exonic	hsa_circ_0004183	1.7338	0.004215	FRMD4A
236332005	236343328	chr1	+	exonic	hsa_circ_0112550	1.9290	0.004873	GPR137B
7301567	7303659	chr12	+	exonic	hsa_circ_0099201	-1.5004	0.005010	CLSTN3
124517260	124518071	chr11	-	exonic	hsa_circ_0000367	2.3036	0.005925	SIAE
44060686	44061844	chr15	+	exonic	N/A	1.5928	0.006101	PDIA3
208589523	208598771	chr2	+	exonic	hsa_circ_0118936	1.7973	0.007051	CCNYL1
1737913	1749314	chr1	-	exonic	hsa_circ_0009357	1.5612	0.007207	GNB1
35797838	35800763	chr17	+	exonic	hsa_circ_0043278	1.7374	0.007535	TADA2A
85554223	85554349	chr2	-	sense overlapping	hsa_circ_0001036	1.5794	0.007657	TGOLN2
5680784	5692141	chr7	-	exonic	hsa_circ_0079284	-1.8035	0.008327	RNF216
34107610	34112225	chr11	+	exonic	hsa_circ_0021647	1.6600	0.009048	CAPRIN1
34111725	34112225	chr11	+	exonic	hsa_circ_0000288	1.7832	0.009666	CAPRIN1
22925975	22926065	chr15	+	exonic	hsa_circ_0034067	-1.6612	0.010502	CYFIP1
34110941	34112225	chr11	+	exonic	hsa_circ_0021652	1.7157	0.010585	CAPRIN1
160103505	160109274	chr6	-	exonic	hsa_circ_0004662	1.7477	0.011042	SOD2
73114707	73115261	chr7	-	sense overlapping	hsa_circ_0009012	-1.5020	0.011180	STX1A
35800609	35800763	chr17	+	exonic	hsa_circ_0106717	1.6269	0.015350	TADA2A
57409052	57430887	chr17	+	exonic	hsa_circ_0044837	1.5281	0.016471	YPEL2
85737333	85742653	chr11	-	exonic	hsa_circ_0002433	1.5807	0.017092	PICALM
35800605	35800763	chr17	+	exonic	hsa_circ_0006220	1.5815	0.018778	TADA2A
85742510	85742653	chr11	-	exonic	hsa_circ_0023944	1.5576	0.019117	PICALM
20107645	20109225	chr17	+	exonic	hsa_circ_0000745	1.8404	0.019201	SPECC1

85733409	85742653	chr11	-	exonic	hsa_circ_0023942	1.5380	0.020666	PICALM
85722072	85742653	chr11	-	exonic	hsa_circ_0000347	1.5543	0.020692	PICALM
81121205	81124712	chr16	-	exonic	N/A	-2.0542	0.022021	GCSH
68155889	68160513	chr16	+	exonic	hsa_circ_0000711	1.6089	0.022377	NFATC3
85718584	85742653	chr11	-	exonic	hsa_circ_0023936	1.5342	0.026461	PICALM
103299660	103300494	chr8	-	exonic	hsa_circ_0001818	1.5398	0.028160	UBR5
51680350	51680428	chr16	+	sense overlapping	hsa_circ_0005008	1.5721	0.029597	TCONS_I2_00009739
65272490	65272586	chr11	+	intronic	hsa_circ_0000326	1.6138	0.032164	TCONS_I2_00004572
128281256	128289036	chr7	+	sense overlapping	hsa_circ_0005921	1.5063	0.033970	FLJ45340
26204839	26205043	chr6	+	sense overlapping	hsa_circ_0001586	1.7324	0.035201	HIST1H4E
45247282	45259003	chr17	-	exonic	hsa_circ_0044235	1.6283	0.036041	CDC27
26056122	26056299	chr6	-	sense overlapping	hsa_circ_0001583	1.5430	0.039109	HIST1H1C
243242289	243265046	chr1	-	exonic	hsa_circ_0017215	1.5036	0.041981	TCONS_I2_00002816
85723323	85742653	chr11	-	exonic	hsa_circ_0023940	1.6653	0.043046	PICALM

Exemplary Embodiments

The disclosure provides a composition comprising a panel of from 1 up to 20 or more circRNAs, where the circRNAs are MDD- or BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment. In one embodiment, at least one of the circRNAs in the expression profile may be circTULP4. In one embodiment, at least one of the circRNAs in the expression profile may be circCDR1as. In one embodiment, at least one of the circRNAs in the expression profile may be circCHIC1. In one embodiment, at least one of the circRNAs in the expression profile may be circPICALM. In one embodiment, at least one of the circRNAs in the expression profile may be circSATB2. In one embodiment, at least one of the circRNAs in the expression profile may be circCOMT. In one embodiment, at least one of the circRNAs in the expression profile may be circRERE. In one specific embodiment, at least one of the circRNAs in the expression profile may be circMIR5695. In one embodiment, at least one of the circRNAs in the expression profile may be DDX50. In one embodiment, at least one of the circRNAs in the expression profile may be circRALGAPB. In one embodiment, at least one of the circRNAs in the expression profile may be circICAM1. In one specific embodiment, at least one of the circRNAs in the expression profile may be circDDR1. In one specific embodiment, at least one of the circRNAs in the expression profile may be circADAM22. In one embodiment, at least one of the circRNAs in the expression profile may be circMALAT1. In one embodiment, at least one of the circRNAs in the expression profile may be circHMGA2. In one embodiment, at least one of the circRNAs in the expression profile may be circCYP24A1. In one embodiment, at least one of the circRNAs in the expression profile may be circDLG5. According to another specific embodiment, at least one of the circRNAs in the expression profile may be circMYO9B. In one embodiment, at least one of the circRNAs in the expression profile may be circNFATC3. In one embodiment, at least one of the circRNAs in the expression profile may be circDUSP22. In one embodiment, at least one of the circRNAs in the expression profile may be circFKBP8. In one embodiment, at least one of the circRNAs in the expression profile may be circVDAC2. In one embodiment, at least one of the circRNAs in the expression profile may be circTRIM69. In one embodiment, at least one of the circRNAs is

derived from the differentially altered circRNAs shown in tables 1-18. In one embodiment, at least one of the circRNAs is derived from the differentially altered circRNAs according to SEQ ID NOs. 1-241. In one embodiment, the circRNA or probe comprises a sequence that spans the backspliced junction of the circRNA in an asymmetric manner.

Also provided is an assay for detecting MDD or BD comprising: one or more probes or one or more primers configured to identify the presence of or amplify at least one brain disorder-associated circRNA biomarker. In one embodiment, at least one of the circRNAs is circTULP4. In one embodiment, at least one of the circRNAs is circSATB2. In one embodiment, the circRNA, probe or PCR primer comprises a sequence selected from the group of sequences shown in Fig.27 (SEQ ID NO.'s 242-287) and Fig. 28 (SEQ ID NO.'s 288-433)or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity thereto, or to the complement thereof. In one embodiment, the circRNA or probe comprises a sequence that spans the backspliced junction of the circRNA in an asymmetric manner. In one embodiment, the one or more primers are configured to amplify at least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker. It should be noted that the exemplary primers and sequences provided herein include a representative number of species directed to a representative number of circRNAs and is not intended to be exhaustive of the entire genus of possible primers useful to amplify circRNAs.

Also provided is an assay for detecting MDD or BD comprising: one or more probes or one or more primers configured to identify the presence of or amplify at least one brain disorder-associated circRNA biomarker selected from the circRNA biomarker according to Tables 1-18. In one embodiment, the circRNA, probe or PCR primer comprises a sequence selected from the group of sequences shown in Fig.27 and Fig. 28 or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity thereto, or to the complement thereof. In one embodiment, the circRNA or probe comprises a sequence that spans the backspliced junction of the circRNA in an asymmetric manner. In one embodiment, the one or more primers are configured to amplify at least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker.

Further provided is a method for assessing MDD or BD in a subject comprising: obtaining a sample from the patient; assaying the sample using probes and/or primers configured to identify the presence of and/or amplify one or more brain disorder-associated circRNA biomarkers; producing an expression profile of the one or more brain disorder-associated circRNA biomarkers based on the assay; and comparing the expression profile to a control.

The disclosure also provides for a composition comprising one or more isolated circRNAs selected from circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22,

circFKBP8, circVDAC2, or circTRIM69, or any combination thereof, one or more probes specific for circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof, or one or more primers specific for circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof.

A kit is provided comprising a panel of probes comprising probes specific for one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof, or comprising a plurality of primers specific for one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof.

An assay is provided for detecting a mammal having or at risk of having MDD or BD, or for detecting response or remission to an anti-depressant in a mammal, comprising: one or more probes
configured to identify the presence of at least one circRNA selected from circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof, or one or more primers specific for circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69.

In one embodiment, the probe comprises a sequence specific for circCHIC1, circMIR5695, circRALGAPB, circCOMT, circDDX50, or a combination thereof.

In one embodiment, the probe comprises a sequence specific for circCHIC1, circCOMT, circPICALM, circDDX50, circRERE, or a combination thereof.

In one embodiment, one or more primers configured to amplify a sequence specific for two or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22,

circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof.

In one embodiment, the primer comprises a sequence specific for circCHIC1, circMIR5695, circRALGAPB, circCOMT, circDDX50, or a combination thereof.

In one embodiment, the primer comprises a sequence specific for circCHIC1, circCOMT, circPICALM, circDDX50, circRERE, or a combination thereof.

In one embodiment, the primer includes a sequence that spans the splice junction of the circRNA in an asymmetric manner.

Further provided is a method for diagnosing MDD or BD in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69 in the test sample using probes and/or primers configured to identify the presence of and/or amplify circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69.

A method is provided to predict response or remission to an anti-depressant in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69. in the test sample using probes and/or primers configured to identify the presence of and/or amplify circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69. In one embodiment, the anti-depressant is for MDD.

A method to monitor progression of, or relapse of, MDD or BD in a mammal is provided. The method includes providing a test physiological sample from the mammal; and comparing the presence or amount of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69 in the test sample to a sample from the mammal obtained at an earlier point in time.

In one embodiment, the step of detecting comprises one or more probes or primers that include a sequence that spans the splice junction of circCDR1as, circTULP4, circCHIC1,

circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69 in an asymmetric manner. In one embodiment, the sample is a physiological fluid sample. In one embodiment, the sample is a blood sample. In one embodiment, the sample is a cellular sample. In one embodiment, the mammal is a human.

In addition, a method for assessing MDD or BD in a subject is provided. The method includes providing a sample from the subject; assaying the sample using probes and/or primers configured to identify the presence of and/or amplify one or more brain disorder-associated circRNA biomarkers; and determining whether the sample has altered levels of the one or more brain disorder-associated circRNAs or a different expression profile of the one or more brain disorder-associated circRNAs relative to a control representing levels of the one or more brain disorder-associated circRNAs or an expression profile of the one or more brain disorder-associated circRNAs in non-MDD or non-BD humans.

Exemplary circRNAs

SEQ ID NO. 1 Homo Sapiens - hsa_circ_0068464|NM_001967|EIF4A2
SEQ ID NO. 2 Homo Sapiens - hsa_circ_0054033|NM_003162|STRN
SEQ ID NO. 3 Homo Sapiens - hsa_circ_0111746|ENST00000367187.3|PIK3C2B
SEQ ID NO. 4 Homo Sapiens - hsa_circ_0066556|NM_002942|ROBO2
SEQ ID NO. 5 Homo Sapiens - hsa_circ_0013953|NM_004284|CHD1L
SEQ ID NO. 6 Homo Sapiens - hsa_circ_0009574|NM_012102|RERE
SEQ ID NO. 7 Homo Sapiens - hsa_circ_0049241|NM_000201|ICAM1
SEQ ID NO. 8 Homo Sapiens - hsa_circ_0007352|None|None
SEQ ID NO. 9 Homo Sapiens - hsa_circ_0018594|NM_002727|SRGN
SEQ ID NO. 10 Homo Sapiens - hsa_circ_0017449|NM_014023|WDR37
SEQ ID NO. 11 Homo Sapiens - hsa_circ_0062191|NM_018943|TUBA8
SEQ ID NO. 12 Homo Sapiens - hsa_circ_0010210|NM_018125|ARHGEF10L
SEQ ID NO. 13 Homo Sapiens - hsa_circ_0006148|NM_144660|SAMD8
SEQ ID NO. 14 Homo Sapiens - hsa_circ_0029696|NM_145061|SKA3
SEQ ID NO. 15 Homo Sapiens - hsa_circ_0123503|NM_015141|GPD1L
SEQ ID NO. 16 Homo Sapiens - hsa_circ_0052712|NM_015909|NBAS
SEQ ID NO. 17 Homo Sapiens - hsa_circ_0063526|NM_002883|RANGAP1
SEQ ID NO. 18 Homo Sapiens - hsa_circ_0103668|ENST00000558173.1|TRIM69
SEQ ID NO. 19 Homo Sapiens - hsa_circ_0000442|NM_015335|MED13L
SEQ ID NO. 20 Homo Sapiens - hsa_circ_0008305|NM_001199649|PTK2
SEQ ID NO. 21 Homo Sapiens - hsa_circ_0025638|NM_001164746|RASSF8
SEQ ID NO. 22 Homo Sapiens - hsa_circ_0087903|NM_032012|C9orf5
SEQ ID NO. 23 Homo Sapiens - hsa_circ_0015382|NM_020318|PAPPA2
SEQ ID NO. 24 Homo Sapiens - hsa_circ_0006349|NM_018056|TMEM39B
SEQ ID NO. 25 Homo Sapiens - hsa_circ_0029975|NM_015678|NBEA
SEQ ID NO. 26 Homo Sapiens - hsa_circ_0000157|NM_000655|SELL
SEQ ID NO. 27 Homo Sapiens - hsa_circ_0001176|NM_001037335|PRIC285
SEQ ID NO. 28 Homo Sapiens - hsa_circ_0001101|NM_020830|WDFY1
SEQ ID NO. 29 Homo Sapiens - hsa_circ_0001520|NM_152624|DCP2
SEQ ID NO. 30 Homo Sapiens - hsa_circ_0008857|NM_007348|ATF6
SEQ ID NO. 31 Homo Sapiens - hsa_circ_0058058|NM_004044|ATIC
SEQ ID NO. 32 Homo Sapiens - hsa_circ_0092330|NM_001670|ARVCF
SEQ ID NO. 33 Homo Sapiens - hsa_circ_0098630|NM_030674|SLC38A1

SEQ ID NO. 34 Homo Sapiens - hsa_circ_0009012|NM_004603|STX1A
SEQ ID NO. 35 Homo Sapiens - hsa_circ_0001240|NM_145912|NFAM1
SEQ ID NO. 36 Homo Sapiens - hsa_circ_0000959|NM_014931|PPP6R1
SEQ ID NO. 37 Homo Sapiens - hsa_circ_0057551|NM_001127257|SLC39A10
SEQ ID NO. 38 Homo Sapiens - hsa_circ_0001655|None|None
SEQ ID NO. 39 Homo Sapiens - hsa_circ_0029934|NM_033111|N4BP2L2
SEQ ID NO. 40 Homo Sapiens - hsa_circ_0042488|NM_015626|WSB1
SEQ ID NO. 41 Homo Sapiens - hsa_circ_0115791|ENST00000286827.3|TIAM1
SEQ ID NO. 42 Homo Sapiens - hsa_circ_0003915|NM_001172509|SATB2
SEQ ID NO. 43 Homo Sapiens - hsa_circ_0001009|NM_018062|FANCL
SEQ ID NO. 44 Homo Sapiens - hsa_circ_0001820|NM_145647|WDR67
SEQ ID NO. 45 Homo Sapiens - hsa_circ_0058651|NM_025139|ARMC9
SEQ ID NO. 46 Homo Sapiens - hsa_circ_0080968|NM_021723|ADAM22
SEQ ID NO. 47 Homo Sapiens - hsa_circ_0005387|NM_004667|HERC2
SEQ ID NO. 48 Homo Sapiens - hsa_circ_0008132|NM_138492|PRELID2
SEQ ID NO. 49 Homo Sapiens - hsa_circ_0108522|ENST00000300605.6|HDHD2
SEQ ID NO. 50 Homo Sapiens - hsa_circ_0005303|NM_001172218|SCMH1
SEQ ID NO. 51 Homo Sapiens - hsa_circ_0011451|NM_022753|S100PBP
SEQ ID NO. 52 Homo Sapiens - hsa_circ_0025597|NM_001174097|LDHB
SEQ ID NO. 53 Homo Sapiens - hsa_circ_0071375|NM_007246|KLHL2
SEQ ID NO. 54 Homo Sapiens - hsa_circ_0120478|NR_036441|VRK2
SEQ ID NO. 55 Homo Sapiens - hsa_circ_0060930|NM_000782|CYP24A1
SEQ ID NO. 56 Homo Sapiens - hsa_circ_0015364|NM_022457|RFWD2
SEQ ID NO. 57 Homo Sapiens - hsa_circ_0072654|NM_005869|CWC27
SEQ ID NO. 58 Homo Sapiens - hsa_circ_0043912|NM_001040431|CCDC56
SEQ ID NO. 59 Homo Sapiens - hsa_circ_0008912|NM_144982|ZFC3H1
SEQ ID NO. 60 Homo Sapiens - hsa_circ_0001819|NM_015902|UBR5
SEQ ID NO. 61 Homo Sapiens - hsa_circ_0000564|NM_030621|DICER1
SEQ ID NO. 62 Homo Sapiens - hsa_circ_0027446|NM_003483|HMGA2
SEQ ID NO. 63 Homo Sapiens - hsa_circ_0018031|NM_001172303|MASTL
SEQ ID NO. 64 Homo Sapiens - hsa_circ_0002067|NM_139179|DAGLB
SEQ ID NO. 65 Homo Sapiens - hsa_circ_0084904|NM_015496|KIAA1429
SEQ ID NO. 66 Homo Sapiens - hsa_circ_0131987|ENST00000370733.4|KIAA1586
SEQ ID NO. 67 Homo Sapiens - hsa_circ_0058520|NM_001135187|AGFG1
SEQ ID NO. 68 Homo Sapiens - hsa_circ_0002474|NM_001083|PDE5A
SEQ ID NO. 69 Homo Sapiens - hsa_circ_0037139|NM_000517|HBA2
SEQ ID NO. 70 Homo Sapiens - hsa_circ_0041694|NM_002532|NUP88
SEQ ID NO. 71 Homo Sapiens - hsa_circ_0006093|NM_139179|DAGLB
SEQ ID NO. 72 Homo Sapiens - hsa_circ_0000691|NM_014699|ZNF646
SEQ ID NO. 73 Homo Sapiens - hsa_circ_0003653|NM_001142966|GREB1L
SEQ ID NO. 74 Homo Sapiens - hsa_circ_0062277|NM_000754|COMT
SEQ ID NO. 75 Homo Sapiens - hsa_circ_0130587|None|None
SEQ ID NO. 76 Homo Sapiens - hsa_circ_0001167|NM_020820|PREX1
SEQ ID NO. 77 Homo Sapiens - hsa_circ_0073009|NM_003633|ENC1
SEQ ID NO. 78 Homo Sapiens - hsa_circ_0077578|NM_014454|SESN1
SEQ ID NO. 79 Homo Sapiens - hsa_circ_0035944|NM_001144823|DENND4A
SEQ ID NO. 80 Homo Sapiens - hsa_circ_0044301|NM_002265|KPNB1
SEQ ID NO. 81 Homo Sapiens - hsa_circ_0070805|NM_001083|PDE5A
SEQ ID NO. 82 Homo Sapiens - hsa_circ_0076560|NM_020750|XPO5
SEQ ID NO. 83 Homo Sapiens - hsa_circ_0082319|NM_016478|ZC3HC1
SEQ ID NO. 84 Homo Sapiens - hsa_circ_0018309|NM_001040084|ANXA8
SEQ ID NO. 85 Homo Sapiens - hsa_circ_0005379|NM_001494|GDI2
SEQ ID NO. 86 Homo Sapiens - hsa_circ_0002569|NM_014159|SETD2
SEQ ID NO. 87 Homo Sapiens - hsa_circ_0055161|NM_019885|CYP26B1
SEQ ID NO. 88 Homo Sapiens - hsa_circ_0001142|NM_080476|PIGU
SEQ ID NO. 89 Homo Sapiens - hsa_circ_0049965|NM_031941|USHBP1
SEQ ID NO. 90 Homo Sapiens - hsa_circ_0087631|NM_014282|HABP4

SEQ ID NO. 91 Homo Sapiens - hsa_circ_0008057|NM_001990|EYA3
SEQ ID NO. 92 Homo Sapiens - hsa_circ_0035301|NM_002748|MAPK6
SEQ ID NO. 93 Homo Sapiens - hsa_circ_0060342|NM_020336|RALGAPB
SEQ ID NO. 94 Homo Sapiens - hsa_circ_0000041|NM_001166006|EPB41
SEQ ID NO. 95 Homo Sapiens - hsa_circ_0063598|NM_001003796|NHP2L1
SEQ ID NO. 96 Homo Sapiens - hsa_circ_0000740|NM_020162|DHX33
SEQ ID NO. 97 Homo Sapiens - hsa_circ_0028198|NM_016238|ANAPC7
SEQ ID NO. 98 Homo Sapiens - hsa_circ_0000636|NM_001145358|SIN3A
SEQ ID NO. 99 Homo Sapiens - hsa_circ_0072954|NM_138782|FCHO2
SEQ ID NO. 100 Homo Sapiens - hsa_circ_0089131|NM_007313|ABL1
SEQ ID NO. 101 Homo Sapiens - hsa_circ_0125866|NM_001166139|LCORL
SEQ ID NO. 102 Homo Sapiens - hsa_circ_0127236|ENST00000273963.5|KLHL8
SEQ ID NO. 103 Homo Sapiens - hsa_circ_0061170|NR_037882|RTEL1-TNFRSF6B
SEQ ID NO. 104 Homo Sapiens - hsa_circ_0082440|NM_021807|EXOC4
SEQ ID NO. 105 Homo Sapiens - hsa_circ_0081481|NM_033506|FBXO24
SEQ ID NO. 106 Homo Sapiens - hsa_circ_0037376|NM_002952|RPS2
SEQ ID NO. 107 Homo Sapiens - hsa_circ_0004928|NM_057159|LPAR1
SEQ ID NO. 108 Homo Sapiens - hsa_circ_0024379|NM_001040455|SIDT2
SEQ ID NO. 109 Homo Sapiens - hsa_circ_0001160|NM_001098797|TOX2
SEQ ID NO. 110 Homo Sapiens - hsa_circ_0031570|NM_015473|HEATR5A
SEQ ID NO. 111 Homo Sapiens - hsa_circ_0007021|NM_006734|HIVEP2
SEQ ID NO. 112 Homo Sapiens - hsa_circ_0010027|NM_006474|PDPN
SEQ ID NO. 113 Homo Sapiens - hsa_circ_0052372|NM_005762|TRIM28
SEQ ID NO. 114 Homo Sapiens - hsa_circ_0091072|NM_001039840|CHIC1
SEQ ID NO. 115 Homo Sapiens - hsa_circ_0011898|NM_022733|SMAP2
SEQ ID NO. 116 Homo Sapiens - hsa_circ_0075826|NR_015410|LINC00340
SEQ ID NO. 117 Homo Sapiens - hsa_circ_0000315|NM_020238|INCENP
SEQ ID NO. 118 Homo Sapiens - hsa_circ_0020275|NM_002775|HTRA1
SEQ ID NO. 119 Homo Sapiens - hsa_circ_0082218|NM_001458|FLNC
SEQ ID NO. 120 Homo Sapiens - hsa_circ_0005133|None|None
SEQ ID NO. 121 Homo Sapiens - hsa_circ_0000937|NM_000709|BCKDHA
SEQ ID NO. 122 Homo Sapiens - hsa_circ_0006615|NM_022782|MPHOSPH9
SEQ ID NO. 123 Homo Sapiens - hsa_circ_0000543|NM_014992|DAAM1
SEQ ID NO. 124 Homo Sapiens - hsa_circ_0000282|NM_001113528|METTL15
SEQ ID NO. 125 Homo Sapiens - hsa_circ_0025984|NM_018976|SLC38A2
SEQ ID NO. 126 Homo Sapiens - hsa_circ_0006404|NM_001455|FOXO3
SEQ ID NO. 127 Homo Sapiens - hsa_circ_0008289|NM_012454|TIAM2
SEQ ID NO. 128 Homo Sapiens - hsa_circ_0018905|NM_144660|SAMD8
SEQ ID NO. 129 Homo Sapiens - hsa_circ_0028628|NM_181578|RFC5
SEQ ID NO. 130 Homo Sapiens - hsa_circ_0087888|NM_032012|C9orf5
SEQ ID NO. 131 Homo Sapiens - hsa_circ_0008990|NM_012335|MYO1F
SEQ ID NO. 132 Homo Sapiens - hsa_circ_0005414|NM_138410|CMTM7
SEQ ID NO. 133 Homo Sapiens - hsa_circ_0092382|ENST00000324109.4|DNMBP
SEQ ID NO. 134 Homo Sapiens - hsa_circ_0035957|NM_001144823|DENND4A
SEQ ID NO. 135 Homo Sapiens - hsa_circ_0006688|TCONS_12_00026000|TCONS_12_00026000
SEQ ID NO. 136 Homo Sapiens - hsa_circ_0008348|NM_001193485|LIMS1
SEQ ID NO. 137 Homo Sapiens - hsa_circ_0016348|NM_172362|KCNH1
SEQ ID NO. 138 Homo Sapiens - hsa_circ_0050444|NM_018025|GPATCH1
SEQ ID NO. 139 Homo Sapiens - hsa_circ_0084789|NM_024721|ZFHX4
SEQ ID NO. 140 Homo Sapiens - hsa_circ_0088511|NM_033334|NR6A1
SEQ ID NO. 141 Homo Sapiens - hsa_circ_0026467|NM_002273|KRT8
SEQ ID NO. 142 Homo Sapiens - hsa_circ_0022623|NM_024771|NAA40
SEQ ID NO. 143 Homo Sapiens - hsa_circ_0008584|NM_001105244|PTPRM
SEQ ID NO. 144 Homo Sapiens - hsa_circ_0087497|NM_013417|IARS
SEQ ID NO. 145 Homo Sapiens - hsa_circ_0045871|NM_004710|SYNGR2
SEQ ID NO. 146 Homo Sapiens - hsa_circ_0001730|NM_004444|EPHB4
SEQ ID NO. 147 Homo Sapiens - hsa_circ_0001029|NM_003494|DYSF

SEQ ID NO. 148 Homo Sapiens - hsa_circ_0056390|NM_001145928|SAP130
SEQ ID NO. 149 Homo Sapiens - hsa_circ_0004858|NM_017798|YTHDF1
SEQ ID NO. 150 Homo Sapiens - hsa_circ_0088059|NM_022486|USD1
SEQ ID NO. 151 Homo Sapiens - hsa_circ_0056264|NM_020909|EPB41L5
SEQ ID NO. 152 Homo Sapiens - hsa_circ_0006502|NM_138778|WDR85
SEQ ID NO. 153 Homo Sapiens - hsa_circ_0080217|NM_015198|COBL
SEQ ID NO. 154 Homo Sapiens - hsa_circ_0003813|NM_078474|TM2D3
SEQ ID NO. 155 Homo Sapiens - hsa_circ_0045581|NM_001545|ICT1
SEQ ID NO. 156 Homo Sapiens - hsa_circ_0049637|NM_004343|CALR
SEQ ID NO. 157 Homo Sapiens - hsa_circ_0038011|NM_015027|PDXDC1
SEQ ID NO. 158 Homo Sapiens - hsa_circ_0128496|NM_001142556|HMMR
SEQ ID NO. 159 Homo Sapiens - hsa_circ_0001834|NM_003070|SMARCA2
SEQ ID NO. 160 Homo Sapiens - hsa_circ_0075410|NM_020185|DUSP22
SEQ ID NO. 161 Homo Sapiens - hsa_circ_0001151|NM_018840|C20orf24
SEQ ID NO. 162 Homo Sapiens - hsa_circ_0028067|NM_014325|CORO1C
SEQ ID NO. 163 Homo Sapiens - hsa_circ_0032777|NM_012111|AHSA1
SEQ ID NO. 164 Homo Sapiens - hsa_circ_0007097|NM_024045|DDX50
SEQ ID NO. 165 Homo Sapiens - hsa_circ_0006530|NM_024766|CAMKMT
SEQ ID NO. 166 Homo Sapiens - hsa_circ_0004771|NM_003489|NRIP1
SEQ ID NO. 167 Homo Sapiens - hsa_circ_0073608|NM_152624|DCP2
SEQ ID NO. 168 Homo Sapiens - hsa_circ_0005210|NM_031922|REPS1
SEQ ID NO. 169 Homo Sapiens - hsa_circ_0007765|NM_002647|PIK3C3
SEQ ID NO. 170 Homo Sapiens - hsa_circ_0101802|NM_002687|PNN
SEQ ID NO. 171 Homo Sapiens - hsa_circ_0072088|NM_016107|ZFR
SEQ ID NO. 172 Homo Sapiens - hsa_circ_0047232|NM_198129|LAMA3
SEQ ID NO. 173 Homo Sapiens - hsa_circ_0074407|NM_020117|LARS
SEQ ID NO. 174 Homo Sapiens - hsa_circ_0003695|NM_007166|PICALM
SEQ ID NO. 175 Homo Sapiens - hsa_circ_0087234|NM_001190482|PCSK5
SEQ ID NO. 176 Homo Sapiens - hsa_circ_0009581|NM_012102|RERE
SEQ ID NO. 177 Homo Sapiens - hsa_circ_0129585|NM_023039|ANKRA2
SEQ ID NO. 178 Homo Sapiens - hsa_circ_0001062|NM_198581|ZC3H6
SEQ ID NO. 179 Homo Sapiens - hsa_circ_0071210|NM_001199282|LRBA
SEQ ID NO. 180 Homo Sapiens - hsa_circ_0053907|NM_206943|LTBP1
SEQ ID NO. 181 Homo Sapiens - hsa_circ_0007422|NM_001172509|SATB2
SEQ ID NO. 182 Homo Sapiens - hsa_circ_0027966|NM_032148|SLC41A2
SEQ ID NO. 183 Homo Sapiens - hsa_circ_0008030|NM_001114093|LSM14A
SEQ ID NO. 184 Homo Sapiens - hsa_circ_0001348|NM_207296|MBNL1
SEQ ID NO. 185 Homo Sapiens - hsa_circ_0050547|NM_005499|UBA2
SEQ ID NO. 186 Homo Sapiens - hsa_circ_0001058|NM_173647|RNF149
SEQ ID NO. 187 Homo Sapiens - hsa_circ_0041623|NM_015528|RNF167
SEQ ID NO. 188 Homo Sapiens - hsa_circ_0074930|NM_003062|SLIT3
SEQ ID NO. 189 Homo Sapiens - hsa_circ_0092332|NM_032447|FBN3
SEQ ID NO. 190 Homo Sapiens - hsa_circ_0023928|NM_007166|PICALM
SEQ ID NO. 191 Homo Sapiens - hsa_circ_0007997|NM_022079|HERC4
SEQ ID NO. 192 Homo Sapiens - hsa_circ_0000185|NM_006085|BPNT1
SEQ ID NO. 193 Homo Sapiens - hsa_circ_0001216|NM_001079539|XBP1
SEQ ID NO. 194 Homo Sapiens - hsa_circ_0039908|NM_017803|DUS2L
SEQ ID NO. 195 Homo Sapiens - hsa_circ_0075533|NM_006567|FARS2
SEQ ID NO. 196 Homo Sapiens - hsa_circ_0001219|NM_153051|MTMR3
SEQ ID NO. 197 Homo Sapiens - hsa_circ_0006491|NM_015559|SETBP1
SEQ ID NO. 198 Homo Sapiens - hsa_circ_0003195|NM_017735|TTC27
SEQ ID NO. 199 Homo Sapiens - hsa_circ_0057319|NM_002210|ITGAV
SEQ ID NO. 200 Homo Sapiens - hsa_circ_0026700|NM_031157|HNRNPA1
SEQ ID NO. 201 Homo Sapiens - hsa_circ_0009155|NM_017749|AMBRA1
SEQ ID NO. 202 Homo Sapiens - hsa_circ_0005273|NM_001199649|PTK2
SEQ ID NO. 203 Homo Sapiens - hsa_circ_0078264|NM_001029884|PLEKHG1
SEQ ID NO. 204 Homo Sapiens - hsa_circ_0071439|NM_017867|C4orf27

SEQ ID NO. 205 Homo Sapiens - hsa_circ_0037127|NM_001243249|NPRL3
SEQ ID NO. 206 Homo Sapiens - hsa_circ_0142668|ENST00000455084.1|TTTY10
SEQ ID NO. 207 Homo Sapiens - hsa_circ_0092337|NM_033251|RPL13
SEQ ID NO. 208 Homo Sapiens - hsa_circ_0038981|NM_000034|ALDOA
SEQ ID NO. 209 Homo Sapiens - hsa_circ_0002799|NM_007345|ZNF236
SEQ ID NO. 210 Homo Sapiens - hsa_circ_0069977|NM_001144978|MTHFD2L
SEQ ID NO. 211 Homo Sapiens - hsa_circ_0017972|NM_005028|PIP4K2A
SEQ ID NO. 212 Homo Sapiens - hsa_circ_0003201|NM_020773|TBC1D14
SEQ ID NO. 213 Homo Sapiens - hsa_circ_0065149|NM_014159|SETD2
SEQ ID NO. 214 Homo Sapiens - hsa_circ_0071681|NM_004237|TRIP13
SEQ ID NO. 215 Homo Sapiens - hsa_circ_0084642|NM_001080416|MYBL1
SEQ ID NO. 216 Homo Sapiens - hsa_circ_0053317|NM_199193|BRE
SEQ ID NO. 217 Homo Sapiens - hsa_circ_0000443|NM_015335|MED13L
SEQ ID NO. 218 Homo Sapiens - hsa_circ_0040726|NM_014615|KIAA0182
SEQ ID NO. 219 Homo Sapiens - hsa_circ_0087331|NM_005077|TLE1
SEQ ID NO. 220 Homo Sapiens - hsa_circ_0073942|NM_002715|PPP2CA
SEQ ID NO. 221 Homo Sapiens - hsa_circ_0013526|NM_006135|CAPZA1
SEQ ID NO. 222 Homo Sapiens - hsa_circ_0131196|TCONS_00011401|TCONS_00011401
SEQ ID NO. 223 Homo Sapiens - hsa_circ_0004738|NM_022897|RANBP17
SEQ ID NO. 224 Homo Sapiens - hsa_circ_0026568|NM_000889|ITGB7
SEQ ID NO. 225 Homo Sapiens - hsa_circ_0061276|NM_003489|NRIP1
SEQ ID NO. 226 Homo Sapiens - hsa_circ_0002919|NM_001284|AP3S1
SEQ ID NO. 227 Homo Sapiens - hsa_circ_0000907|NM_004145|MYO9B
SEQ ID NO. 228 Homo Sapiens - hsa_circ_0023115|NM_000852|GSTP1
SEQ ID NO. 229 Homo Sapiens - hsa_circ_0001816|NM_014754|PTDSS1
SEQ ID NO. 230 Homo Sapiens - hsa_circ_0004128|NM_001005735|CHEK2
SEQ ID NO. 231 Homo Sapiens - hsa_circ_0077109|NM_001010844|IRAK1BP1
SEQ ID NO. 232 Homo Sapiens - hsa_circ_0014724|NR_036564|CCT3
SEQ ID NO. 233 Homo Sapiens - hsa_circ_0039626|NM_016284|CNOT1
SEQ ID NO. 234 Homo Sapiens - hsa_circ_0075166|NM_022455|NSD1
SEQ ID NO. 235 Homo Sapiens - hsa_circ_0123780|ENST00000301831.4|ULK4
SEQ ID NO. 236 Homo Sapiens - hsa_circ_0077032|NM_004370|COL12A1
SEQ ID NO. 237 Homo Sapiens - hsa_circ_0099053|ENST00000359742.4|GRIP1
SEQ ID NO. 238 Homo Sapiens - hsa_circ_0002082|NR_002819|MALAT1
SEQ ID NO. 239 Homo Sapiens - hsa_circ_0007335|NM_001184783|VDAC2
SEQ ID NO. 240 Homo Sapiens - hsa_circ_0050124|NM_012181|FKBP8
SEQ ID NO. 241 Homo Sapiens - hsa_circ_0005615|NM_004555|NFATC3

All patents and publications referenced below and/or mentioned herein are indicative of the levels of skill of those skilled in the art to which the invention pertains, and each such referenced patent or publication is hereby incorporated by reference to the same extent as if it had been incorporated by reference in its entirety individually or set forth herein in its entirety. Applicants reserve the right to physically incorporate into this specification any and all materials and information from any such cited patents or publications.

WHAT IS CLAIMED IS:

1. A composition comprising one or more circRNAs, where the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

2. The composition of claim 1 wherein at least one of the circRNAs is circTULP4.

3. The composition of claim 1 or 2 wherein at least one of the circRNAs is circCDR1as.

4. The composition of claim 1, 2 or 3 wherein at least one of the circRNAs is circCHIC1.

5. The composition of any one of claims 1 to 4 wherein at least one of the circRNAs is circCOMT.

6. The composition of any one of claims 1 to 5 wherein at least one of the circRNAs is circPICALM.

7. The composition of any one of claims 1 to 6 wherein at least one of the circRNAs is circMIR5695.

8. The composition of any one of claims 1 to 7 wherein at least one of the circRNAs is circRALGAPB.

9. The composition of any one of claims 1 to 8 wherein at least one of the circRNAs is circRERE.

10. The composition of any one of claims 1 to 9 wherein at least one of the circRNAs is circDDX50.

11. The composition of any one of claims 1 to 10 wherein at least one of the circRNAs is circSATB2.

12. The composition of any one of claims 1 to 11 wherein at least one of the circRNAs is circICAM1.

13. The composition of any one of claims 1 to 12 wherein at least one of the circRNAs is is circDDR1.

14. The composition of any one of claims 1 to 13 wherein at least one of the circRNAs is circICAM1.

15. The composition of any one of claims 1 to 14 wherein at least one of the circRNAs is circADAM22.

16. The composition of any one of claims 1 to 15 wherein at least one of the circRNAs is circMALAT1.

17. The composition of any one of claims 1 to 16 wherein at least one of the circRNAs is circHMGA2.

18. The composition of any one of claims 1 to 17 wherein at least one of the circRNAs is circCYP24A1.

19. The composition of any one of claims 1 to 18 wherein at least one of the circRNAs is circDLG5.

20. The composition of any one of claims 1 to 19 wherein at least one of the circRNAs is circMYO9B.

21. The composition of any one of claims 1 to 20 wherein at least one of the circRNAs is circNFATC3.

22. The composition of any one of claims 1 to 21 wherein at least one of the circRNAs is circDUSP22.

23. The composition of any one of claims 1 to 22 wherein at least one of the circRNAs is circFKBP8.

24. The composition of any one of claims 1 to 23 wherein at least one of the circRNAs is circVDAC2.

25. The composition of any one of claims 1 to 24 wherein at least one of the circRNAs is circTRIM69.

26. The composition of any one of claims 1 to 25 wherein at least one of the circRNAs is derived from the differentially altered circRNAs shown in tables 1-18 and/or a sequence according to SEQ ID NO. 1-241.

27. An assay for detecting MDD or BD in a subject comprising: one or more probes or one or more primers configured to identify the presence of or amplify at least one brain disorder-associated circRNA biomarker.

28. The assay of claim 27 wherein the primer comprises a PCR primer sequence selected from the group of sequences according to SEQ ID NO.'s. 242-433, or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity thereto, or to the complement thereof.

29. The composition of any one of claims 27 to 28, wherein the primer comprises a sequence that spans the backspliced junction of the circRNA in an asymmetric manner.

30. The assay of any one of claims 27 to 29, wherein the one or more primers are configured to amplify at least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker, and/or wherein the one or more probes are configured to identify least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker.

31. A method for assessing MDD or BD in a subject comprising: obtaining a sample from the patient; assaying the sample using probes and/or primers configured to identify the presence of and/or amplify one or more brain disorder-associated circRNA biomarkers; producing an expression profile of the one or more brain disorder-associated circRNA biomarkers based on the assay; and comparing the expression profile to a control, and optionally administering, changing, or discontinuing an antidepressant treatment for said subject based on the differential expression of

said brain disorder-associated circRNA biomarkers compared to said control, or a second sample from the subject after administration of an antidepressant treatment and wherein the antidepressant treatment optionally is selected from: administering a Selective Serotonin Reuptake Inhibitors (SSRIs), administering a serotonin and norepinephrine reuptake inhibitors (SNRIs), administering a Monoamine oxidase inhibitors (MAOIs), and optionally administering a tricyclic antidepressants, or any combination thereof.

32. A composition comprising one or more isolated circRNAs selected from circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof, or one or more primers specific for circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof.

33. A kit comprising a panel of probes comprising probes specific for one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof, or comprising a plurality of primers specific for one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof.

34. An assay for detecting a mammal having or at risk of having MDD or BD, or for detecting response or remission to an anti-depressant in a mammal, comprising: one or more probes configured to identify the presence of at least one circRNA selected from circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof, or one or more primers specific for circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof.

35. A method for diagnosing MDD or BD in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or

circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, in the test sample using probes and/or primers configured to identify the presence of and/or amplify circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or any combination thereof.

36. A method to predict response or remission to an anti-depressant in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, in the test sample using probes and/or primers configured to identify the presence of and/or amplify one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, or circTRIM69, or any combination thereof.

37. A method to monitor progression of, or relapse of, MDD or BD in a mammal, comprising: providing a test physiological sample from the mammal; and comparing the presence or amount of one or more of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, in the test sample to a sample from the mammal obtained at an earlier point in time, or to a control sample.

38. The method of any one of claims above wherein the step of detecting comprises one or more probes or primers that include a sequence that spans the splice junction of any of circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, or circTRIM69, or any combination thereof, in an asymmetric manner.

39. An assay for detecting MDD or BD in a subject comprising: one or more probes or one or more primers configured to identify the presence of or amplify at least one brain disorder-associated circRNA biomarker selected from circRNAs shown in Tables 1-18, or any combination thereof.

40. An assay for detecting MDD or BD in a subject comprising: one or more probes or one or more primers configured to identify the presence of or amplify at least one brain disorder-associated circRNA biomarker selected from a circRNA shown in Tables 1-18, or any combination thereof, or

a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity thereto, or to the complement thereof.

41. The assay of claim 1 to 40 wherein the primer comprises a sequence selected from the group of sequences according to SEQ ID NO.'s. 242-433 or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity thereto, or to the complement thereof.

42. The composition of any one of claims 1 to 40, wherein the circRNA or probe or primer comprises a sequence that spans the backspliced junction of the circRNA in an asymmetric manner.

43. The assay of any one of claims 1 to 40, wherein the one or more primers are configured to amplify at least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker, and/or wherein the one or more probes are configured to detect least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker.

44. A method for assessing MDD or BD in a subject comprising: obtaining a sample from the patient; assaying the sample using probes and/or primers configured to identify the presence of and/or amplify one or more brain disorder-associated circRNA biomarkers; producing an expression profile of the one or more brain disorder-associated circRNA biomarkers based on the assay; and comparing the expression profile to a control, wherein brain disorder-associated circRNA biomarkers comprise one or more circRNAs selected from the circRNAs shown in Tables 1-18.

45. A composition comprising one or more isolated circRNAs selected from the circRNAs shown in Tables 1-18, or any combination thereof, or one or more primers to amplify a one or more of the circRNAs shown in Tables 1-18, or any combination thereof.

46. A kit comprising a panel of probes comprising probes specific for one or more of the circRNAs shown in Tables 1-18, or any combination thereof, or comprising a plurality of primers to amplify one or more of the circRNAs shown in Tables 1-18, or any combination thereof.

47. An assay for detecting a mammal having or at risk of having MDD or BD, or for detecting response or remission to an anti-depressant in a mammal, comprising: one or more probes configured to identify the presence of at least one circRNA selected from the circRNAs shown in Tables 1-18, or any combination thereof.

48. A method for diagnosing MDD or BD in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of the circRNAs shown in Tables 1-18, or any combination thereof.

49. A method to predict response or remission to an anti-depressant in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of the circRNAs shown in Tables 1-18, or any combination thereof.

50. A method to monitor progression of, or relapse of, MDD or BD in a mammal, comprising: providing a test physiological sample from the mammal; and comparing the presence or amount of the circRNAs shown in Tables 1-18, or any combination thereof,in the test sample to a sample from the mammal obtained at an earlier point in time, or against a control.

51. The method of any one of claims above wherein the step of detecting comprises contacting one or more probes or primers with a circRNAs that include a sequence that spans the splice junction of the circRNAs shown in Tables 1-18, or any combination thereof, in an asymmetric manner.

52. An assay for detecting MDD or BD in a subject comprising: one or more probes or one or more primers configured to identify the presence of or amplify at least one brain disorder-associated circRNA biomarker selected SEQ ID NO. 1-241, or any combination thereof.

53. An assay for detecting MDD or BD in a subject comprising: one or more probes or one or more primers configured to identify the presence of or amplify at least one brain disorder-associated circRNA biomarker selected from SEQ ID NO. 1-241, or any combination thereof, or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity thereto, or to the complement thereof.

54. The assay of any of claims 47, or 52 to 53 wherein the circRNA primer comprises a sequence selected from the group of sequences according to SEQ ID NO.'s. 242-433, or a sequence having at least 80%, 85%, 90%, 95%, 96%, 97%, 98% or 99% nucleic acid sequence identity thereto, or to the complement thereof.

55. The composition of any claim above, wherein the circRNA or probe comprises a sequence that spans the backspliced junction of the circRNA in an asymmetric manner.

56. The assay of any claim above, wherein the one or more primers are configured to amplify at least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker, and/or wherein the one or more probes are configured to detect least one MDD/BD- or antidepressant response/treatment-associated circRNA biomarker selected from the group consisting of SEQ ID NO. 1-241.

57. A method for assessing MDD or BD in a subject comprising: obtaining a sample from the patient; assaying the sample using probes and/or primers configured to identify the presence of and/or amplify one or more brain disorder-associated circRNA biomarkers; producing an expression profile of the one or more brain disorder-associated circRNA biomarkers based on the assay; and comparing the expression profile to a control, wherein brain disorder-associated circRNA

biomarkers comprising one or more isolated circRNAs are selected from SEQ ID NO. 1-241, or any combination thereof.

58. A composition comprising one or more isolated circRNAs selected from the circRNAs shown in Tables 1-18, or any combination thereof, or one or more primers specific for the circRNAs selected from the group consisting of SEQ ID NO. 1-241, or any combination thereof.

59. A kit comprising a panel of probes comprising probes specific for one or more of the circRNAs shown in Tables 1-18, or any combination thereof, or comprising a plurality of primers specific for one or more of the circRNAs selected from SEQ ID NO. 1-241, or any combination thereof.

60. An assay for detecting a mammal having or at risk of having MDD or BD, or for detecting response or remission to an anti-depressant in a mammal, comprising: one or more probes configured to identify the presence of at least one circRNA selected from SEQ ID NO. 1-241, or any combination thereof.

61. A method for diagnosing MDD or BD in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of one or more circRNAs selected from SEQ ID NO. 1-241, or any combination thereof.

62. A method to predict response or remission to an anti-depressant in a mammal, comprising: providing a test physiological sample from the mammal; and detecting the presence or amount of one or more circRNAs selected from SEQ ID NO. 1-241, or any combination thereof.

63. A method to monitor progression of, or relapse of, MDD or BD in a mammal, comprising: providing a test physiological sample from the mammal; and comparing the presence or amount of one or more circRNAs selected from SEQ ID NO. 1-241, or any combination thereof, in the test sample to a sample from the mammal obtained at an earlier point in time.

64. The method of any one of claims 61 or 62 wherein the step of detecting comprises one or more probes or primers that include a sequence that spans the splice junction of one or more circRNAs selected from SEQ ID NO. 1-241, or any combination thereof, in an asymmetric manner.

65. The method of any one of claims 31, 35-37, 44, 48-51, 57, or 61 to 64 wherein the sample is a physiological fluid sample.

66. The method of any one of claims 31, 35-37, 44, 48-51, 57, or 61 to 64 wherein the sample is a blood sample.

67. The method of any one of claims 31, 35-37, 44, 48-51, 57, or 61 to 64 wherein the sample is a cellular sample.

68. The method of any one of claims 31, 35-37, 44, 48-51, 57, or 61 to 64 wherein the mammal is a human.

69. A method for assessing MDD or BD in a subject comprising: providing a sample from the subject; assaying the sample using probes and/or primers configured to identify the presence of and/or amplify one or more brain disorder-associated circRNA biomarkers; and determining whether the sample has altered levels of the one or more brain disorder-associated circRNAs or a different expression profile of the one or more brain disorder-associated circRNAs relative to a control representing levels of the one or more brain disorder-associated circRNAs or an expression profile of the one or more brain disorder-associated circRNAs in non-MDD or non-BD humans.

70. A method of treating a MDD or BD condition in a patient who is predicted to benefit or not to benefit from therapeutic administration of an antidepressant treatment comprising:

- detecting in a first sample of a patient the expression levels of one or more MDD/BD- or antidepressant response/treatment-associated circRNA biomarkers to establish an expression profile of said patient;

- administering an antidepressant treatment to treat MDD or BD wherein the antidepressant treatment medication is selected from the group consisting of: Selective Serotonin Reuptake Inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitors (SNRIs), Monoamine oxidase inhibitors (MAOIs), and tricyclic antidepressants;

- detecting in a second sample of said patient the expression levels MDD- or BD-associated circRNA biomarkers or circRNA biomarkers after administration of said antidepressant treatment;

- correlating the levels of expression in said first and second samples to determine if the antidepressant treatment is effective at treating the condition, and continuing to administer the antidepressant treatment to treat MDD or BD based on said correlation, or stopping administering the antidepressant treatment to treat MDD or BD, or administering a different antidepressant treatment to treat MDD or BD.

71. The method of claim 70, wherein said sample comprises a physiological fluid sample.

72. The method of claim 71, wherein said physiological fluid sample comprises blood, cell, or tissue sample.

73. The method of claim 70, wherein said patient is a human.

74. The method of claim 70, wherein the circRNA biomarkers are selected from the group consisting of: a circRNA encoded by a nucleotide sequence according to SEQ ID NO. 1-241.

75. The method of claim 70, wherein the circRNA biomarkers are selected from a circRNA as shown in Tables 1-18.

76. The method of claim 70, wherein the circRNA biomarkers are selected from the group consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69.

77. The method of claim 70, wherein the circRNA biomarkers are selected from the group consisting of: a MDD-treatment predictive circRNA as shown in Tables 1-9.

78. The method of claim 70, wherein the circRNA biomarkers are selected from the group consisting of: a MDD and BD diagnosis-related circRNA as shown in Tables 10-14.

79. The method of claim 70, wherein the circRNA biomarkers are selected from the group consisting of: a Sertraline treatment-related circRNA as shown in Tables 15-18.

80. An assay kit for selecting a patient who is predicted to benefit or not to benefit from therapeutic administration of an antidepressant treatment comprising:
- a means for detecting in a sample of a patient the expression levels of one or more MDD/BD- or antidepressant response/treatment-associated circRNA biomarkers;
- a control selected from the group consisting of:
  - a control sample for detecting sensitivity to an antidepressant treatment;
  - a control sample for detecting resistance to the antidepressant treatment;
  - information containing a predetermined control level of the one or more biomarkers that has been correlated with sensitivity to the antidepressant treatment; and
  - information containing a predetermined control level of the one or more biomarkers that has been correlated with resistance to the antidepressant treatment.

81. The kit of claim 80, wherein said sample comprises a physiological fluid sample.

82. The kit of claim 81, wherein said physiological fluid sample comprises blood, cell, or tissue sample.

83. The kit of claim 80, wherein said patient is a human.

84. The kit of claim 80, wherein the circRNA biomarkers are selected from: a circRNA encoded by a nucleotide sequence according to SEQ ID NO. 1-241.

85. The kit of claim 80, wherein the circRNA biomarkers are selected from a circRNA as shown in Tables 1-18.

86. The kit of claim 80, wherein the circRNA biomarkers are selected from the group consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69.

87. The kit of claim 80, wherein the circRNA biomarkers are selected from a MDD-treatment predictive circRNA as shown in Tables 1-9.

88. The kit of claim 80, wherein the circRNA biomarkers are selected from a MDD and BD diagnosis-related circRNA as shown in Tables 10-14.

89. The kit of claim 80, wherein the circRNA biomarkers are selected from a Sertraline treatment-related circRNA as shown in Tables 15-18.

90. The kit of claim 80, wherein the control sample is a circRNA profile from said patient, a circRNA profile from a blood-relative of said patient, or a database of circRNA profiles.

91. An isolated primer configured to amplify a nucleotide sequence selected from SEQ ID NO. 1-241.

92. An isolated primer configured to amplify a circRNA sequence selected from the group of circRNAs show in Tables 1-18.

93. An isolated primer configured to amplify a circRNA sequence selected from circRNAs consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69.

94. An isolated probe configured to detect a circRNA nucleotide sequence selected from SEQ ID NO. 1-241.

95. An isolated probe configured to detect a circRNA sequence selected from circRNAs shown in Tables 1-18.

96. An isolated probe configured to detect a circRNA sequence selected from circRNAs consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1,

circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69.

97. An isolated circRNA selected from the group consisting of: SEQ ID NO. 1-241.

98. An isolated circRNA selected from the group of circRNAs shown in in Tables 1-18.

99. An isolated circRNA selected from the group of circRNAs consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69.

100. An expression vector encoding a circRNA, operably linked to a promoter, selected from the group consisting of: SEQ ID NO. 1-241.

101. An expression vector encoding a circRNA, operably linked to a promoter, selected from the group of circRNAs shown in Tables 1-18.

102. An expression vector encoding a circRNA, operably linked to a promoter, selected from the group of circRNAs consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69.

103. An assay configured to detect one or more circRNAs, where the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

104. An assay configured to detect one or more circRNA biomarkers selected from the group consisting of SEQ ID NO. 1-241, wherein the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

105. An assay configured to detect one or more circRNAs biomarkers shown in Tables 1-18 wherein the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

106. An assay configured to detect one or more circRNAs biomarkers selected from the group consisting of: circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, and circTRIM69, wherein the circRNAs are (Major Depressive Disorder)

MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

107. An assay configured to detect one or more circRNAs biomarkers comprising at least one primer selected from the group consisting of: a primer according to SEQ ID NO. 242-287, or a combination of the same, wherein the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

108. An assay configured to detect one or more circRNAs biomarkers comprising at least one primer selected from the group consisting of: a primer according to SEQ ID NO. 288-433, or a combination of the same, wherein the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

109. An assay configured to detect one or more circRNAs biomarkers comprising at least one primer selected from the group consisting of: a primer configured to amplify a circRNA sequence shown in Tables 1-18, wherein the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

110. An assay configured to detect one or more circRNAs biomarkers comprising at least one primer selected from the group consisting of: a primer configured to amplify a circRNA according to SEQ ID NO. 1-241, wherein the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

111. An assay configured to detect one or more circRNAs biomarkers comprising at least one primer selected from the group consisting of: a primer configured to amplify circCDR1as, circTULP4, circCHIC1, circMIR5695, circRALGAPB, circCOMT, circPICALM, circDDX50, circRERE, or circSATB2, circICAM1, circDDR1, circADAM22, circMALAT1, circHMGA2, circCYP24A1, circDLG5, circMYO9B, circNFATC3, circDUSP22, circFKBP8, circVDAC2, circTRIM69, or a combination of the same, wherein the circRNAs are (Major Depressive Disorder) MDD- or (Bipolar Disorder) BD-associated circRNA biomarkers or circRNA biomarkers for predicting response or remission after antidepressant treatment.

112. The assay of any of claims 103 to 11, wherein said circRNAs biomarkers are detected in a physiological fluid sample.

113. The assay of claim 112, wherein the sample is a blood or cellular sample.

114. The assay of any of claims 112 to 113, wherein the sample is a human sample.

115. The assay of any of claims 103 to 114, wherein said antidepressant treatment comprises Selective Serotonin Reuptake Inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitors (SNRIs), Monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants, or psychological therapy.