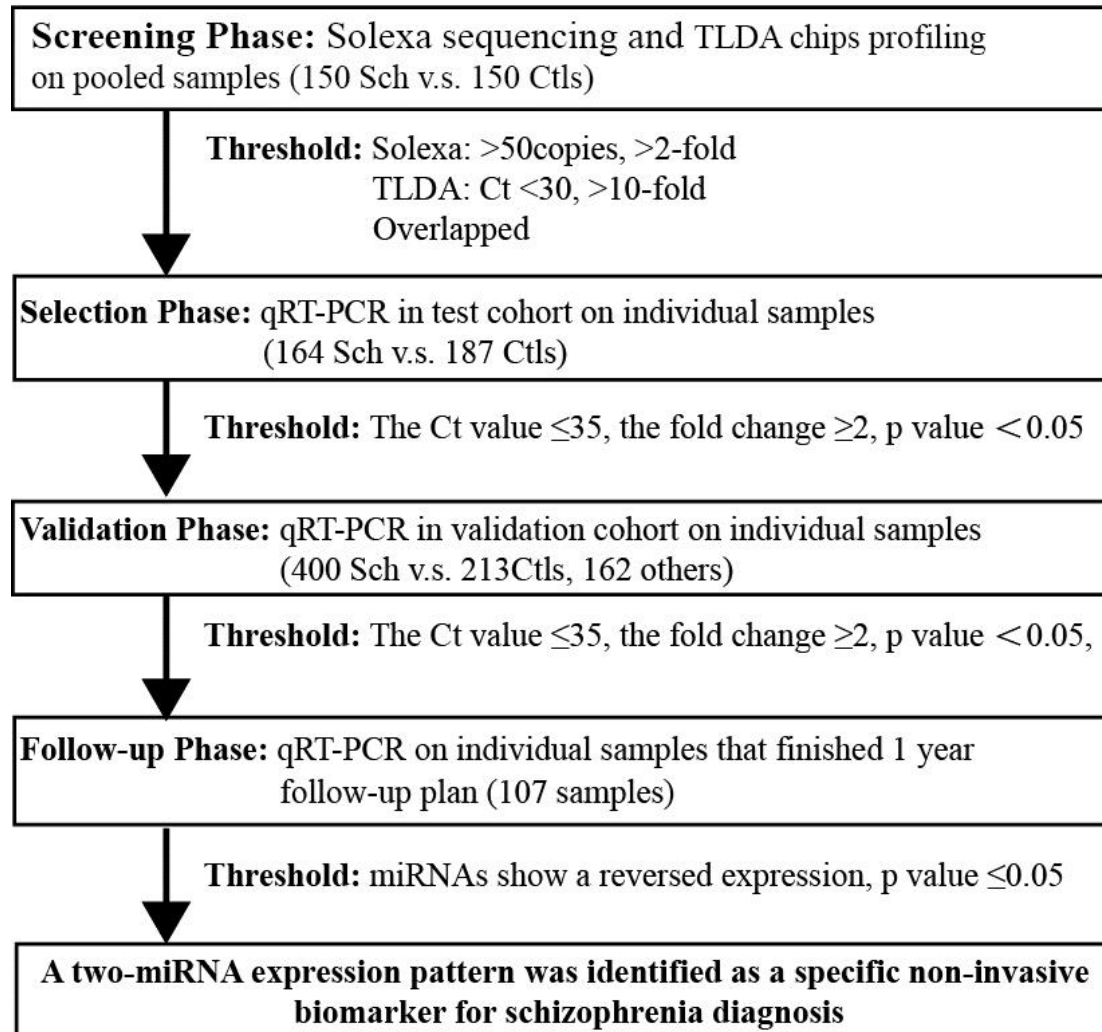


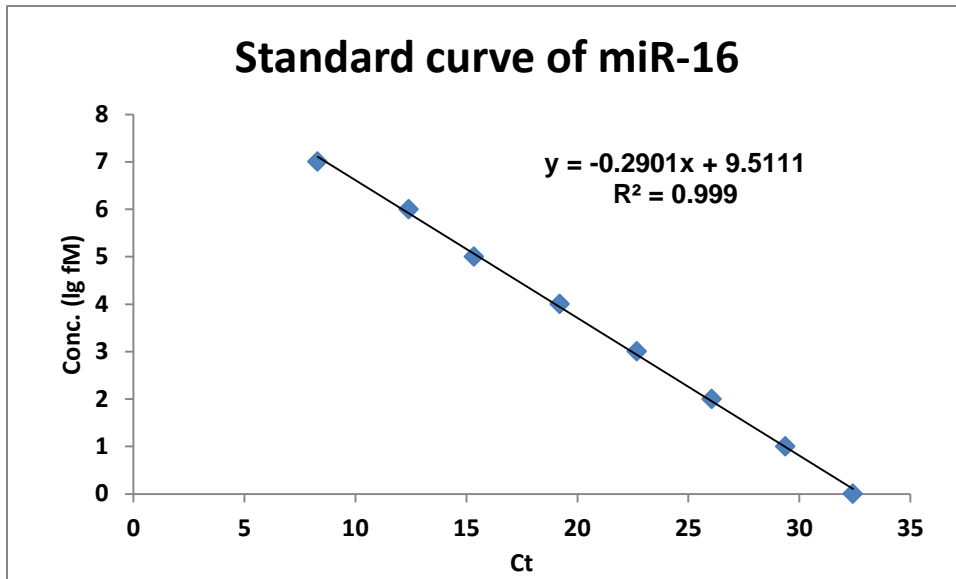
**FIGURE S1:** A flow chart of project strategy.

## Over view of strategy

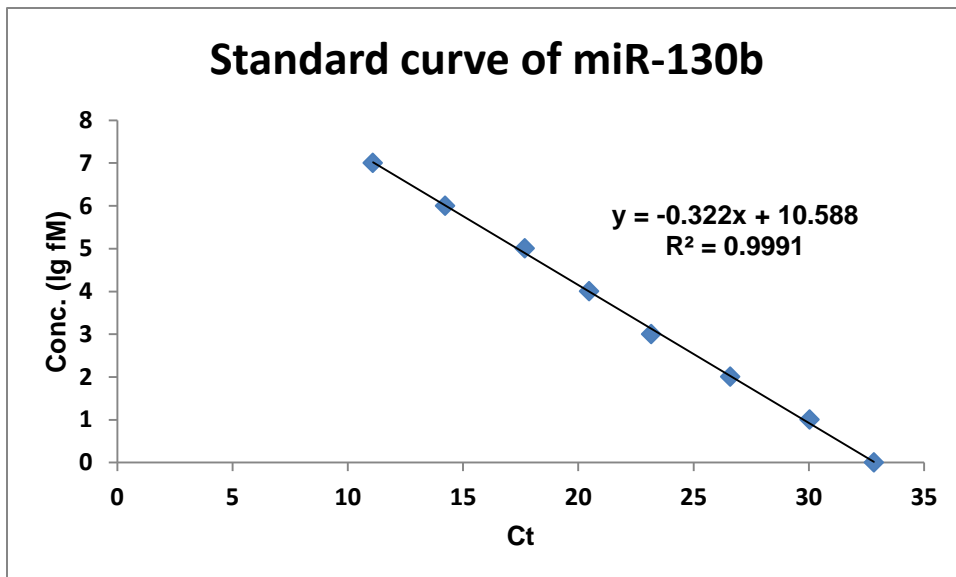


**FIGURE S2 A–C:** The representative standard curve for synthetic single-strand hsa-miR-16, has-miR-130b and has-miR-193a-3p, which were synthesized by Life Technologies, USA). The standard calibration curve was prepared by a 10-fold serial dilution of synthetic miRNAs from 10 fmol/L to 10<sup>7</sup> fmol/L, respectively, and the level of each miRNA was assessed by the qRT-PCR assay. The resulting C<sub>T</sub> values were plotted versus the log<sub>10</sub> of the amount of synthetic hsa-miRNAs. Each point represents the mean of four independent experiments.

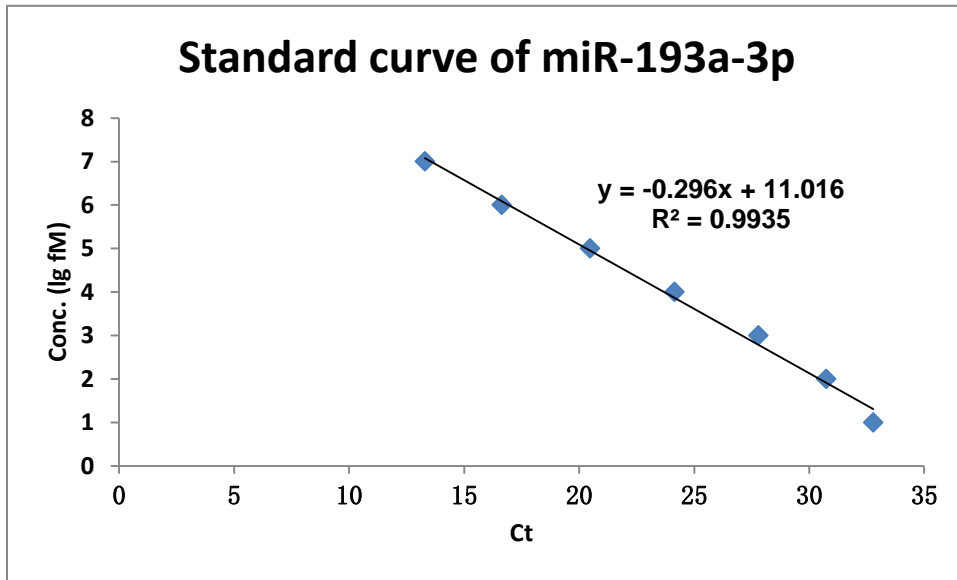
A



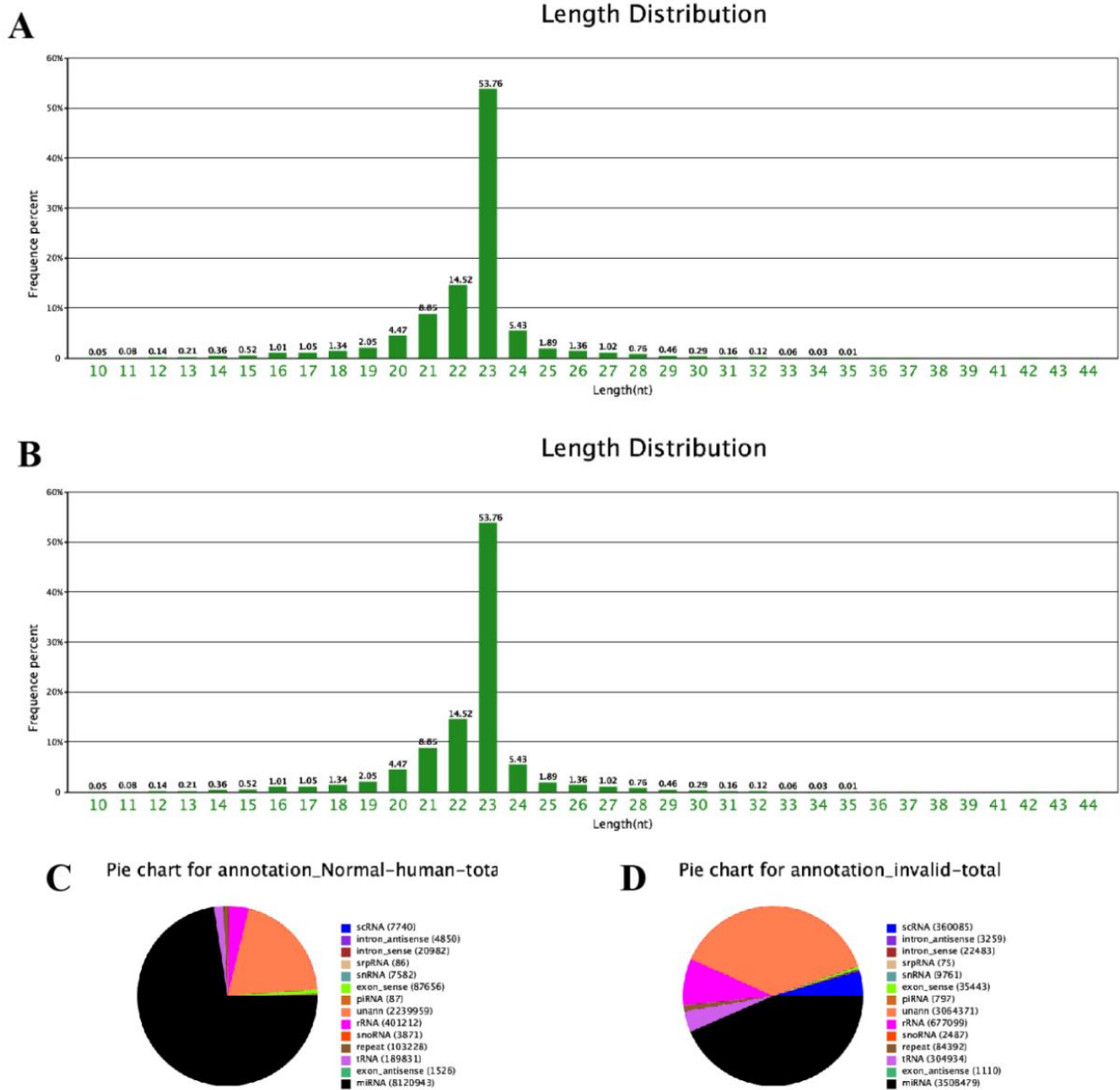
B



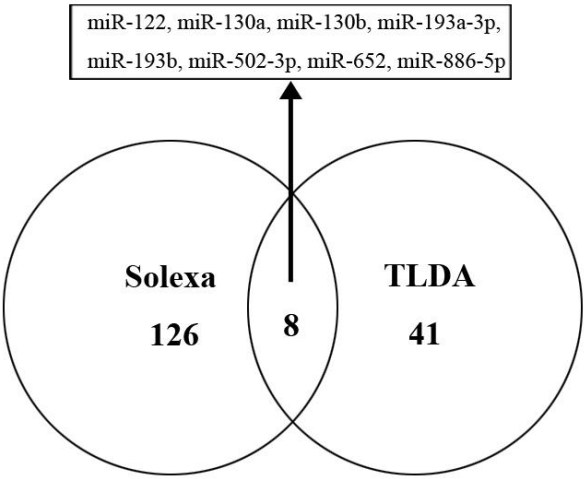
C



**FIGURE S3:** The distribution of length and components of RNAs in pooled RNA samples. Based on their distribution, miRNAs are main components in total plasma RNA. A represents the control samples and B, the case samples. C shows the components of plasma RNAs in pooled control samples, and D, in pooled case samples.



**FIGURE S4:** The number of altered miRNAs in schizophrenia plasma captured by Solexa sequencing and TLDA chips



**TABLE S1.** Detailed information of patients with non-schizophrenia disorders

<b>Disorders</b>	<b>Number of patients</b>
Major depression disorder	84
Anxiety disorder,NOS	23
Mixed anxiety and depressive disorder	12
Mild depressive episode	7
Somatoform disorders	4
Schizophrenic emotional disorders	3
Acute and transient psychiatric disorders, NOS	3
Schizophrenia-like disorders	2
Other non-organic psychotic disorders	2
Other acute and transient psychiatric disorders	2
Depressive episode, NOS	2
Tic disorder	1
Dissociative[Conversive] disorders	1
Generalized anxiety disorder	1
Acute schizophrenic psychiatric disorders	1
Acute stress reaction	1
Acute stress disorder	1
Tension-type stupor state	1
Paranoid personality disorder	1
Other neurosis disorders	1
Alcohol-induced mental and behavioral disorders	1
Bipolar disorders	1
Bipolar disorders, mania at present	1
Sleep Disorder	1
Delusional disorder	1
Undifferentiated somatoform disorder	1
No specific mental disorders	1
Hypochondriac obstacles	1
Depressive episode	1
Total	162

**TABLE S2.** Recruitment criteria for participants

<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
<b>Patients</b>	
Inform consents signed by patients or guardians	Brain organic diseases or other intercurrent clinical body diseases
Chinese Han	Head trauma history, lost consciousness over 30min
Diagnosed of schizophrenia by DSM-IV	Diagnosed of other psychosis by DSM-IV
16≤age≤45	Alcohol or other substance dependence or abuse
First episode, duration less than 3 years	Anti-psychiatric drug contraindications involve in this study
Without systematic anti-psychiatric treatment, continuous regular medication less than 1 month or continuous irregular medication less than 3 months	Participated in other clinical drug trails in 30 days
Education≥3 years	Hypophrenia
	Seizures
	Pregnant or breastfeeding women
<b>Controls</b>	
Healthy blood donors, male or female	Accord with the inclusion or exclusion criteria of patient group
	Family history of mental or neurological disorders
	Suffered severe head trauma or birth trauma
	Suffered febrile convulsion
	Adopted or single-parent in childhood

**TABLE S3.** The recovery rates of miR-130b assay under two external standard curves.

<b>Dilution</b>	<b>Calibration curves</b>	
	<b>miR-16</b>	<b>miR-130b</b>
<b>1</b>	<b>0.38</b>	<b>1.24</b>
<b>2</b>	<b>0.30</b>	<b>0.89</b>
<b>4</b>	<b>0.29</b>	<b>0.80</b>
<b>8</b>	<b>0.28</b>	<b>0.70</b>
<b>16</b>	<b>0.33</b>	<b>0.80</b>
<b>32</b>	<b>0.40</b>	<b>0.91</b>
<b>64</b>	<b>0.51</b>	<b>1.11</b>
<b>128</b>	<b>0.58</b>	<b>1.17</b>

The mean±SD was 0.384±0.110 from the miR-16 calibration curve and that was 0.845±0.103 from the miR-miR-130b calibration curve. Pearson correlation analysis shows  $r=0.384$ ,  $df=6$ ,  $p=0.032$ .

**TABLE S4.** The recovery rates of miR-193a-3p assay under two external standard curves.

<b>Dilution</b>	<b>Calibration curves</b>	
	<b>miR-16</b>	<b>miR-193a-3p</b>
<b>1</b>	<b>0.04</b>	<b>0.96</b>
<b>2</b>	<b>0.04</b>	<b>0.98</b>
<b>4</b>	<b>0.03</b>	<b>0.67</b>
<b>8</b>	<b>0.04</b>	<b>0.81</b>
<b>16</b>	<b>0.03</b>	<b>0.79</b>
<b>32</b>	<b>0.04</b>	<b>0.79</b>
<b>64</b>	<b>0.04</b>	<b>0.87</b>
<b>128</b>	<b>0.04</b>	<b>0.90</b>

The mean±SD was 0.034±0.004 from the miR-16 calibration curve and that was 0.953±0.198 from the miR-193a-3p calibration curve. Pearson correlation analysis shows  $r=0.953$ ,  $df=6$   $p=0.0003$ .