**Supplement 1**

**Differential miRNA Validation**

Reverse transcription (RT) and PCR were performed for quantiﬁcation test. Each RT reaction contained 0.5 μg RNA, 2 μL miScript HiSpec Buffer, 1 μL Nucleics Mix, and 0.5 μL miScript Reverse Transcriptase Mix in a total volume of 10 μL. Reactions were performed in a GeneAmp® PCR System 9700 (Applied Biosystems, USA) for 60 min at 37 ℃, followed by heat inactivation of RT for 5 min at 95 ℃. The 10 μL RT reaction mix was then diluted 10× in nuclease-free water and held at -20 ℃. Real-time PCR was performed by using LightCycler® 480 Ⅱ Real-time PCR Instrument (Roche, Swiss) with 10 μL PCR reaction mixture that included 1 μL of cDNA, 5 μL of 2 × QuantiFast® SYBR® Green PCR Master Mix, 0.2 μL of universal primer, 0.2 μL of microRNA-specific primer and 3.6 μL of nuclease-free water. Reactions were incubated in a 384-well optical plate (Roche, Swiss) at 95 ℃ for 5 min, then 40 cycles of 95 ℃ for 10 s, subsequently 60 ℃ for 30 s. Each sample was run in triplicate for analysis. At the end of the PCR cycles, melting curve analysis was performed to validate the speciﬁc generation of the expected PCR product.

**Detection of SCF, c-kit, Bcl-2, Bax, Bad, PI3K, Akt, caspase-9 protein expression**

SCF, c-kit, Bcl-2, Bax, Bad, PI3K, Akt, caspase-9 protein expressions in ICC were detected by Western blot method. Protein extraction kit was used to extract total protein in each group of cells. The protein concentrations were adjusted according to bicinchonininc acid protein test results. SDS-page loading buffer (5×) was added and boiled at 100 ℃ for 10 min. Separating gel and 5% concentrated gel were prepared, the concentration of separating gel was according to target protein’s molecular weight: 10% (PI3K), 12% (Akt), 13% (SCF, c-kit, Bcl2，Bax, Bad, caspase-9). Loading quantity of protein sample for analysis was 70 μg. Concentrated gel was at a constant pressure of 80 V, for approximately 20 min; the separating gel was at a constant pressure of 120 V, and the stop time for electrophoresis was the time taken for bromophenol blue to settle at the bottom of the gel. Transfer membrane method was wet transfer, 0.22 μm pores were chosen for PVDF membrane, the current was 300 mA, the time was set for 1 h. PVDF membranes were blocked in quick block solution for 20 min, the primary antibodies of targets were incubated overnight for approximately 10 h, 1× TBST was used to wash the membranes every 5 min, three times. Secondary antibodies were incubated for 1 h, 1× TBST was used to wash the membranes every 5 min, three times. ECL agent was added on the surface of PVDF membrane immediately for signal detection (chemiluminescence instrument CLINX 6300 (Shanghai, China).