## **Supplemental Table 1**. Features calculated for building the novel miRNA detection model.

## **Feature**

Sequence count in the cluster

Read count

The proportion of reads that are an exact match to the cluster sequence in the cluster

5' Unstable length of the cluster

3' Unstable length of the cluster

Proportion of templated nucleotide at the positions -3, -2, -1 relative to the 5' end and +1, +2, +3, +4, +5, +6 relative to the 3' end of the stable range of the cluster sequences

Proportion of non-templated adenine (A) at the positions -3, -2, -1 relative to the 5' end and +1, +2, +3, +4, +5, +6 relative to the 3' end of the stable range of the cluster sequences

Proportion of non-templated thymine (T) at the positions -3, -2, -1 relative to the 5' end and +1, +2, +3, +4, +5, +6 relative to the 3' end of the stable range of the cluster sequences

Proportion of non-templated cytosine (C) at the positions -3, -2, -1 relative to the 5' end and +1, +2, +3, +4, +5, +6 relative to the 3' end of the stable range of the cluster sequences

Proportion of non-templated guanine (G) at the positions -3, -2, -1 relative to the 5' end and +1, +2, +3, +4, +5, +6 relative to the 3' end of the stable range of the cluster sequences

The arm where the stable range of sequences were located at the precursor hairpin structure

Distance between stable range of sequences and terminal loop

Number of bindings in the stable range of sequences divided by its length

Number of hairpin loops in the precursor

Number of bindings in the precursor

Number of interior loops in the precursor

Number of nucleotides in apical loop of the precursor

Length of stem in the precursor

Minimum free energy (MFE) of the precursor

Number of bindings in the stable range of sequences

Whether UGU or UGUG motif exists in the apical loop of the precursor

Whether there is another stable range of sequences located at the other arm of the precursor