

## **Supplementary Information**

### **Improving classification of mature microRNA by solving class imbalance problem**

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**Supplementary Table 1.** The accuracy rate of miRdup and MatFind with different position deviation

<b>Classifier</b>	<b>0nt</b>	<b>1nt</b>	<b>2nt</b>	<b>3nt</b>	<b>4nt</b>	<b>5nt</b>	<b>sum</b>
miRdup(%)	0.26	0.19	0.14	0.07	0.09	0.06	0.81
MatFind(%)	0.33	0.24	0.14	0.09	0.09	0.03	1

**Supplementary Table 2.** The accuracy rate of MatureByes and MatFind with different position deviation

<b>Classifier</b>	<b>0nt</b>	<b>1nt</b>	<b>2nt</b>	<b>3nt</b>	<b>4nt</b>	<b>5nt</b>	<b>sum</b>
MatureByes (%)	0.09	0.27	0.18	0.16	0.08	0.06	0.84
MatFind(%)	0.33	0.24	0.14	0.09	0.09	0.03	1

**Supplementary Table 3.** The accuracy rate of MiRPara and MatFind with different position deviation

<b>Classifier</b>	<b>0nt</b>	<b>1nt</b>	<b>2nt</b>	<b>3nt</b>	<b>4nt</b>	<b>5nt</b>	<b>sum</b>
MiRPara (%)	0.04	0.03	0.11	0.06	0.11	0.02	0.37
MatFind(%)	0.33	0.24	0.14	0.09	0.09	0.03	1