

<b>GENE EXPRESSION*</b>	<b>CLASSIFICATION LABEL</b>
<b><i>KRT5</i>&lt;<i>SFTPG</i></b>	Adenocarcinoma
<b><i>KRT6A</i>&lt;<i>TTF-1</i></b>	Adenocarcinoma
<b><i>NAPSA</i>&lt;<i>TP73L</i></b>	Adenocarcinoma
<b><i>CD56</i>&lt;<i>CHGA</i></b>	Adenocarcinoma
<b><i>KRT16</i>&lt;<i>SYP</i></b>	Adenocarcinoma
<b><i>SFTPG</i>&lt;<i>TP73L</i></b>	Squamous cell carcinoma
<b><i>NAPSA</i>&lt;<i>KRT5</i></b>	Squamous cell carcinoma
<b><i>TTF-1</i>&lt;<i>KRT6A</i></b>	Squamous cell carcinoma
<b><i>SYP</i>&lt;<i>KRT16</i></b>	Squamous cell carcinoma
<b><i>CD56</i>&lt;<i>CHGA</i></b>	Squamous cell carcinoma
<b><i>CD56</i>&lt;<i>TP73L</i></b>	Neuroendocrine carcinoma
<b><i>CHGA</i>&lt;<i>KRT5</i></b>	Neuroendocrine carcinoma
<b><i>SFTPG</i>&lt;<i>TTF-1</i></b>	Neuroendocrine carcinoma
<b><i>NAPSA</i>&lt;<i>SYP</i></b>	Neuroendocrine carcinoma
<b><i>KRT40</i>&lt;<i>KRT6A</i></b>	Neuroendocrine carcinoma

\*Expression of gene 1 lower (<) than gene 2

### **Supplementary Table 1. Single sample predictor classification rules**