

Table S1. List of candidate genes for ESCC.

| Gene | PubMed | Gene | PubMed | Gene | PubMed |
|-----------------|----------|---------------|----------|-----------------|----------|
| <i>ABCG2</i> | 22236447 | <i>EMPI</i> | 22888304 | <i>MMP13</i> | 32035950 |
| <i>ADAMTS12</i> | 31236983 | <i>ERCC1</i> | 32611208 | <i>MMP2</i> | 32436041 |
| <i>ADAMTS2</i> | 29358879 | <i>FSCN1</i> | 35401239 | <i>MMP3</i> | 30969151 |
| <i>ADH1A</i> | 29248712 | <i>GCOM1</i> | 25823933 | <i>MMP7</i> | 21455340 |
| <i>ADH1B</i> | 27038040 | <i>HLA-G</i> | 29067119 | <i>MMP9</i> | 33572115 |
| <i>ALDH2</i> | 35788888 | <i>HOXA10</i> | 31950785 | <i>MTHFR</i> | 28046029 |
| <i>AURKA</i> | 32572158 | <i>HPGD</i> | 35317779 | <i>NAT2</i> | 25886288 |
| <i>BMII</i> | 32239639 | <i>IBSP</i> | 31709184 | <i>PDGFRA</i> | 29358879 |
| <i>BMP7</i> | 23504348 | <i>IGFBP3</i> | 35782901 | <i>PLAU</i> | 33574243 |
| <i>C2orf40</i> | 27698864 | <i>ITGA3</i> | 35782901 | <i>POSTN</i> | 32613365 |
| <i>CCNA2</i> | 34737951 | <i>ITGB4</i> | 30479571 | <i>PPP1R3C</i> | 29844815 |
| <i>CCND1</i> | 34611831 | <i>LAMA3</i> | 29358879 | <i>SASH1</i> | 30443973 |
| <i>CCNE1</i> | 28800315 | <i>LAMB3</i> | 36415640 | <i>SH3BGRL2</i> | 25823933 |
| <i>COL10A1</i> | 35117161 | <i>LAMC2</i> | 29511340 | <i>SIX1</i> | 28260921 |
| <i>COL11A1</i> | 34790783 | <i>MEIS1</i> | 32819319 | <i>SIX4</i> | 33481352 |
| <i>COL1A1</i> | 35117161 | <i>MFAP2</i> | 29358879 | <i>SOX2</i> | 31991109 |
| <i>COL27A1</i> | 29358879 | <i>MGLL</i> | 25823933 | <i>SPPI</i> | 36467891 |
| <i>COL7A1</i> | 18331784 | <i>MLF1</i> | 29358879 | <i>SULT1A1</i> | 12455060 |
| <i>CYP1A1</i> | 26455829 | <i>MMP1</i> | 27130665 | <i>SULT1A1</i> | 12455060 |
| <i>EGR1</i> | 29047233 | <i>MMP10</i> | 22121946 | <i>TCF3</i> | 29358879 |
| <i>ELN</i> | 25823933 | <i>MMP11</i> | 29358879 | <i>TP53</i> | 34611831 |
| <i>EMPI</i> | 22888304 | <i>MMP12</i> | 35265129 | | |

Note. Nine candidate piRNA target genes for esophageal squamous cell carcinoma are highlighted in yellow.