**Supplementary Data 1**

**siRNA**

| Gene | Sequence（ 5' → 3' ） |
| --- | --- |
| si1-HOTAIR | AAAUCCAGAACCCUCUGACAUUUGC |
| si2-HOTAIR | UUAAGUCUAGGAAUCAGCACGAAGC |
| si-EZH2 | AAGAGGUUCAGACGAGCUGAUTT |

**Primer sequences**

| Gene | Sequence（ 5' → 3' ） |
| --- | --- |
| HOTAIR | F: CAGTGGGGAACTCTGACTCG |
|  | R: GTGCCTGGTGCTCTCTTACC |
| UPP1 | F: ATGGGCATTCCTTCTATCR: GACAATCTGCTCAAACTC |
| UPP1-promoter | F: GGCTTGTCTGCGGGATGR: CGGAGCACTCGAATGAGG |
| GAPDH | F: GAAGGTGAAGGTCGGAGTC |
|  | R: GAAGATGGTGATGGGATTTC |

**shRNA**

**OE-UPP1**



**sh1-UPP1**



**sh2-UPP1**



**sh3-UPP1**

