| Primer name | Sequence (5’-3’) |
|-------------|-----------------|
| RBM15B      | F TGAGGAACGGAGTAGGACCAA  |
|             | R CTCGCTGTCTCTTGCTTCCTTC  |
| TRAM2       | F TTCGCGAGGAGGACGAAAG  |
|             | R ACCTCGAACATAAGCCGATG  |
| YY1         | F ACGGCTTCCAGGATCAAGATTC  |
|             | R TGACCAGCGTTTTGTTCAATG  |
| GAPDH       | F GAAGGTGAAGGGTCGGAG  |
|             | R GAAGATGGTGAGGGATTTC  |
| MAP4        | F TCTGAAAGATGTCCGCTCCAA  |
|             | R TCTGAAAGATGTCCGCTCCAA  |
| KDM2A       | F GGAGGTCTGGATGTCTGT  |
|             | R GGAGGTCTGGATGTCTGT  |
| FLNB        | F TCCTCCCACTACTCCATCTCCAT  |
|             | R TGCCGTCCTTGCAGTTCT  |
| CHD2        | F CCGAAGCAGACAAAGACCTAC  |
|             | R CCGCTACTTGCTCTTCTTCTA  |
| MACF1       | F ACAGCAGCAGATCCCATACGA  |
|             | R TAGTTCCCTCCTCTCTTCTCA  |
| CTCF        | F CTCATCCAGCAGCAGGAAGT  |
|             | R CTCATCCAGCAGCAGTAAGT  |
| MAZ         | F GCGTCTGCTTGGAGAAGA  |
|             | R GGAGATTTGTAGCCGTTCTTGA  |
| RBM15B      | F GCGTGGCAAGGTGTGATAA  |
| Primer 1    | R GCGTGGCAAGGTGTGATAA  |
| RBM15B      | F TCGTCCAGGAGGATGGAACA  |
| Primer 2    | R CGTAAGAGCCAGAGATGAAAGG  |
| RBM15B      | F GTCGTCCTGAAGGTGATGA  |
| Primer 3    | R CGTAAGAGCCAGAGATGAAAGG  |
## Supplementary Table S2 Primary antibodies used in this study

| Antigens          | Manufacturer       | Catalog Number | Application       |
|-------------------|--------------------|----------------|-------------------|
| RBM15B            | Proteintech        | 67506-1-Ig     | 1:1000 for WB;    |
|                   |                    | 22249-1-AP     | 1:500 for IHC     |
| TRAM2             | Proteintech        | 13311-1-AP     | 1:1000 for WB     |
| N-cadherin        | Proteintech        | 22018-1-AP     | 1:1000 for WB     |
| E-cadherin        | Proteintech        | 20874-1-AP     | 1:1000 for WB     |
| Vimentin          | Proteintech        | 10366-1-AP     | 1:1000 for WB     |
| YAP               | Cell Signaling     | 14074          | 1:1000 for WB     |
|                   | Technology         |                |                   |
| TAZ               | Cell Signaling     | 72804          | 1:1000 for WB     |
|                   | Technology         |                |                   |
| p-YAP             | Cell Signaling     | 13008          | 1:1000 for WB     |
|                   | Technology         |                |                   |
| p-TAZ             | Cell Signaling     | 59971          | 1:1000 for WB     |
|                   | Technology         |                |                   |
| YY1               | Proteintech        | 2E11C5         | 1:1000 for WB     |
| GAPDH             | Proteintech        | 1E6D9          | 1:1000 for WB     |
| N6-Methylguanosine| Abbkine Scientific | ABP52775       | Me-RIP            |
|                   |                    | 202003         | 1:500 for Dot Blot|
| IgG               | Servicebio         | GB23301        | IP                |
| HRP               | IPKine             | A25222         | 1:1000 for WB; IP |

Me-RIP
**Supplementary Table S3** siRNAs and shRNA used in this study.

| Primer name | Sequence (5’-3’) |
|-------------|------------------|
| sh-NC       | TTCTCCGAACGTGTCACGT |
| sh-RBM15B-1 | GGTGTTGCTAAAGACAAA |
| sh-RBM15B-2 | GGTGTTTGTTTTGTTGTTA |
| sh-RBM15B-3 | AAAGCUAUCUCUUUGACGUG |
| si-NC       | UUCUCGAACGUGUCACGUTT |
| si-TRAM2-1  | GGAGUCUCUCUCCAGCUAAGG |
| si-TRAM2-2  | GCAUCAUCUAGAGGUCUAUU |
| si-TRAM2-3  | AGGUAAAUAAUAGAAAGGC |
| si-CTCF-1   | CAGACUGUAGUGUGUAAAU |
| si-CTCF-2   | GGACAGUGUGAACAACUAACU |
| si-MAZ-1    | GAGAAGAGAGUGAGUCUUAGG |
| si-MAZ-2    | ACAAAAUCGUUAAAACCUAGCG |
| si-YY1-1    | GCCUCCUUUGUUAAUAAUUTT |
| si-YY1-2    | GACGACGACUACAUUUGAAACAATT |