

## Supplementary data 1. Oligonucleotides used in this work

Oligos for rat G2-LSnord115-G1 amplification (LSnord115 cassette):

G2RBII52F AGAGGACAGTCTTCAAATTCAAGCTAGGTC,

G1RBII52R CTGGGAATAGTGATCCACTGGACCG

5' and 3' primers for amplification of rat LSnord115 cassette from pDrive vector.

M13F CCCAGTCACGACGTTGTAAAACG

M13R AGCGGATAACAATTTACACAGG

Mutagenesis oligos of LSnord115 cassette

3' A/C mutation oligos (for construct 2, 4 in Figure 2):

3' AtoC\_F CTCTGATGCCCTTGTTCTCTTTCCCTCTGTGGG

3' AtoC\_R GAGGGAAAAGAGAACAAGGGCATCAGAGCAGCTCAGATGA

For Construct 5 in Figure 2

RB52-1DMF ACCCTctGGCCCAACCAGGGAGCCAGGGTAACAAGCACTAC  
TTAGTCTCT

RB52-1DMR CCCTGGTTGGGCCagAGGGTAATCCTATTGAGCATGATTT  
TTATGTCATC

For Construct 6 in Figure 2

RB52-2DMF GGGACTCATCTACGCTGCTCTGATGCCCTTGTTCTCTTTT  
CCCTCTGTG

RB52-2DMR CATCAGAGCAGCGTAGATGAGTCCCGCAAGTGGTCCTC  
AAAGAG

For Construct 7 in Figure 2

RB52-3DMF GGGACTCATCTGAGCTGCTCTTGCCCTTGTTCTCTTTTC  
CCTCTGTG

RB52-3DMR CAAGAGAGCAGCTCAGATGAGTCCCGCAAGTGGTCCTCAA  
AGAG

For Construct 8 in Figure 2

RB52-23DMF GGGACTCATCTACGCTGCTCTCTTGCCCTTGTTCTCTTT  
TCCCTCTGTG

RB52-23DMR CAAGAGAGCAGCGTAGATGAGTCCCGCAAGTGGTCCT  
CAAAGAG

Northern blot oligos:

NBRB52L3' 5'GCTCAGATGAGTCCCGCAAGTGGTCC3'

NBRB52S&F 5'GTAATCCTATTGAGCATGATTTTTATGTCAT3'

NBLRB52M 5'TCCCTGGTTGGGCCTCAGCG3'

XBII52R 5'GGCCTCAGCGTAATCCTATTGAGCAT3'

PCR oligos to generate template for *in vitro* transcription of LSnord115 and mutants:

T7RBII52-F CGCGTAATACGACTCACTATAggccaatgatgacaacagaaagtcaag

L-RBII52R GGCATCAGAGCAGCTCAGATGAG

L-RBII52BR GtCATCAGAGCAGCTCAGATGAG

PCR oligos to generate template for *in vitro* transcription of 28S rRNA fragments used in 2'-O-methylation mapping experiments. Rat28SR and R28S4401R oligos were also used in reverse transcription.

T7R28S4714F CTAATACGACTCACTATAGGGGTTTCGTACGTAGCAGAG  
CAG

Rat28SR ACAAACCCTTGTGTCGAGGGCTG

T7R28S4329 CTAATACGACTCACTATAggaaccgcaggttcagacattgg

R28S4401R CCCACAGATGGTAGCTTCGCCC