

**Table S1.** PyMotif identified previously described Nrd1-Nab3 RNA binding motifs.

Shown are overrepresented 4-6 mers (k-mers) and corresponding Z-scores that were isolated from the Nrd1 (11964) and Nab3 (18222) intervals with an FDR value of < 0.01. Previously identified Nrd1 and Nab3 motifs are highlighted in red and blue, respectively.

| <b>Nrd1 PAR-CLIP</b><br><b>11964 significant intervals</b> |         | <b>Nab3 PAR-CLIP</b><br><b>18222 significant intervals</b> |         |
|--|---------|--|---------|
| k-mer  | Z-score | k-mer  | Z-score |
| <b>TGTA</b>  | 65.25   | GTAG   | 31.73   |
| <b>TGTAG</b>   | 55.8    | TGTAG  | 29.3    |
| <b>GTAG</b>  | 52.35   | CTGT   | 25.22   |
| TTGTA  | 42.36   | TCTG   | 23.21   |
| CTGTA  | 37.88   | TGTA   | 23.19   |
| <b>TGTAA</b>   | 37.26   | GGAC   | 22.99   |
| TTGTAG   | 34.7    | CTGTA  | 22.91   |
| TGTAGA   | 34.22   | GTAGA  | 21.78   |
| TTGT   | 33.37   | ACTG   | 20.1    |
| GTAGA  | 32.94   | GACT   | 19.47   |
| CTGT   | 32.67   | GAAC   | 19.1    |
| ATGTA  | 31.72   | TGTAGA   | 19.03   |
| GTAGT  | 30.54   | TCGG   | 18.96   |
| TGTAGT   | 29.8    | CTGTAG   | 18.96   |
| CTGTAG   | 28.63   | CTCT   | 18.95   |
| GTAA   | 27.46   | TTGTAG   | 18.86   |
| ATGTAG   | 27.08   | <b>CTTG</b>  | 18.76   |
| <b>TGTAAA</b>  | 26      | ACTGT  | 18.1    |
| GTGTA  | 25.3    | GGACT  | 17.54   |
| ATTGTA   | 24.54   | GAACT  | 17.45   |
| TTTGTA   | 24.02   | ACTCT  | 17.28   |
| TTGTAA   | 23.46   | TGGAC  | 16.97   |
| TCTGTA   | 22.95   | GACTG  | 16.9    |
| ACTGTA   | 22.56   | <b>TCTTG</b>   | 16.86   |
| ATGT   | 22.56   | CTCTG  | 16.53   |
| TGTAGAA  | 22.36   | <b>CTTGT</b>   | 16.39   |
| CTGTAA   | 21.86   | GTAGAA   | 15.92   |
| CTTGTA   | 21.86   | ACTGTA   | 15.8    |
| TCTGT  | 21.74   | TCTGT  | 15.58   |

**Table S2.** List of transcripts that contained cross-linked Nrd1-Nab3 motifs in 3' UTRs.

|           |              |              |                |               |                |       |           |
|-----------|--------------|--------------|----------------|---------------|----------------|-------|-----------|
| ABF1      | CIS1         | GCV2         | KRE29          | NHP2          | RAD23          | SMF1  | TRM5      |
| ABF2      | CIS3         | GDT1         | KSS1           | NOP1          | RAS2           | SMX3  | TRM9      |
| ACC1      | CKA2         | GGA2         | LAG1           | NOP12         | RBG2           | SNA3  | TRP1      |
| ADE6      | CLB1         | GIM3         | LAP3           | NOP14         | RDI1           | SNF11 | TUL1      |
| ADH6      | CLF1         | GLR1         | LAS1           | NUC1<br>NUP10 | REG1           | SNF12 | UPC2      |
| AIM31     | COA2         | GLY1         | LCB3           | 0             | REX2           | SNX3  | URA1      |
| AIM4      | COG4         | GSH2         | LIA1           | NUP53         | RGA1           | SOD1  | USA1      |
| AIR2      | COS8         | GSY2         | LOT6           | OSH6          | RGT2           | SPB4  | UTP23     |
| ALR1      | COX1<br>6    | HAA1         | LSM6           | OXA1          | RMD6           | SPC1  | VHS1      |
| ALR2      | COX1<br>7    | HAC1         | LSP1           | OYE2          | RNR1           | SPI1  | VPS4      |
| APA2      | COX9         | HAL9         | LTV1           | PAB1          | ROT1           | SPR6  | VPS51     |
| APC11     | CSE1         | HAP5         | LYP1           | PAC11         | RPA14          | SPT7  | VPS63     |
| APE3      | CYC2         | HCH1         | LYS14          | PAC2          | RPC25          | SRP14 | VTC1      |
| APL2      | DAS2         | HEM1         | MAP2           | PAF1          | RPC40<br>RPL12 | SRP40 | WRS1      |
| ARG1      | DBP6         | HIR3         | MBA1           | PAM18         | A<br>RPL41     | SSA1  | WSS1      |
| ARG8      | DED1         | HIS7         | MCX1           | PAN1          | A              | SSA2  | YAP7      |
| ART10     | DIA1         | HMF1         | MDJ1           | PAN2          | RPL8A          | SSQ1  | YBR085C-A |
| ASF2      | DLS1         | HMG2         | MDN1           | PAN6          | RPP2B          | SST2  | YBR126W-B |
| ASI2      | DPB11        | HMS2         | MDS3           | PAT1          | RPS5           | SSU72 | YBR137W   |
| ATP14     | DPH5         | HMT1         | MFA2           | PBI2          | RRG10          | SSY5  | YCL041C   |
| ATP16     | DSE2         | HOR7         | MIR1           | PBP2          | RRG9           | STR2  | YCL046W   |
| ATP17     | ECL1         | HPA3<br>HSP1 | MLH1           | PCA1          | RRN5           | SUR2  | YCP4      |
| ATP3      | EDC2         | 2            | MLH3U          | PCL9          | RRP1           | TAF9  | YCR016W   |
| BBP1      | EFT2         | HTA1         | MNP1           | PEP3          | RRP8           | TAT2  | YCR087C-A |
| BCH2      | EGT2         | HUA1         | MRF1           | PEX21         | RSM25          | TFA1  | YDL086W   |
| BEM3      | ELC1<br>EMP2 | HYP2         | MRP13          | PEX22         | RSM7           | THP1  | YDL094C   |
| BMH1      | 4<br>ERG1    | IAH1         | MRP21<br>MRPL2 | PHD1          | RTC2           | THR1  | YDL177C   |
| BNA1      | 1            | IBD2         | 2              | PHO84         | RTC6           | TIF35 | YDL183C   |
| BRO1      | ESC2         | IES6         | MRPL3<br>MRPL3 | PIR1          | RTR2           | TIM12 | YDR157W   |
| BSC2      | ESS1         | ILV5         | 8              | PIS1          | SAM1           | TIM54 | YDR239C   |
| BUB3      | FAR3         | IMH1         | MRPL4          | PKH1          | SAM2           | TMA19 | YEA6      |
| BUD2<br>6 | FCJ1         | IML3         | MSC3           | PKP1          | SAM3           | TMA22 | YEL045C   |
| CAB2      | FEN1         | IRA1         | MSL5           | POC4          | SAM35          | TOF2  | YEL057C   |
| CAD1      | FMP16        | IRC21        | MSN1           | POL30         | SBE22          | TOM40 | YER064C   |
| CBK1      | FRE4         | IRC7         | MUQ1           | PSA1          | SDS3           | TOS1  | YER088W-B |
| CCA1      | FUI1         | ISU1         | NAB2           | PSD2          | SEC53          | TPK3  | YER140W   |
| CCE1      | FYV12        | ITC1         | NAB3           | PTI1          | SFK1           | TPS2  | YFR020W   |
| CDC8      | GAS1         | JIP4         | NAM8           | PUS9          | SHO1           | TRA1  | YGL088W   |
| CHA4      | GCR2         | JLP2         | NAM9           | QDR3          | SIP5           | TRE1  | YGL108C   |
| CHC1      | GCS1         | KGD2         | NCL1           | RAD10         | SKY1           | TRI1  | YGR021W   |

**Table S2 continued.**

|           |           |
|-----------|-----------|
| YGR025W   | YOR248W   |
| YGR050C   | YOR316C-A |
| YGR069W   | YPL066W   |
| YGR079W   | YPL107W   |
| YGR130C   | YPL191C   |
| YGR240C-A | YPL229W   |
| YHL042W   | YPR097W   |
| YHR049C-A | YPR126C   |
| YIL096C   | YPR160C-A |
| YIL102C-A | YRO2      |
| YJR107W   | YSP1      |
| YJR124C   | YTA12     |
| YKL047W   | YTA7      |
| YKL061W   | ZEO1      |
| YKL068W-A |           |
| YKL100C   |           |
| YLF2      |           |
| YLH47     |           |
| YLR108C   |           |
| YLR143W   |           |
| YLR171W   |           |
| YLR286W-A |           |
| YLR287C   |           |
| YLR419W   |           |
| YME1      |           |
| YMR013W-A |           |
| YMR103C   |           |
| YMR122W-A |           |
| YMR187C   |           |
| YNL010W   |           |
| YNL024C   |           |
| YNL097C-B |           |
| YNL140C   |           |
| YNL162W-A |           |
| YNR021W   |           |
| YNR040W   |           |
| YOL013W-A |           |
| YOL097W-A |           |
| YOR060C   |           |
| YOR097C   |           |

**Table S3.** Oligonucleotides used in this study

**Oligonucleotides used for quantitative RT-PCR:**

| Gene      | Forward primer (5'-3')     | Reverse primer (5'-3')    |
|-----------|----------------------------|---------------------------|
| HHT1_3UTR | CAGGCCTTGTAGGAGGCAAGATTT   | CCACGTATGCGGCTTCAAGTTGTT  |
| HHT1_exon | CAGGTAAGTCTTCTGACAGCAAG    | CACCGATGGCAGAAGATTGA      |
| YTA7_3UTR | TCTGAATAAGCAGGAGTCCATAATGT | ACCCGAAACGTATGCCAGAACAGT  |
| YTA7_exon | GCAAATTCAGACCAGGAAATGG     | AGTGCATAGGGACCTCAGAT      |
| PPM2      | ATCCGCTGAGTGAGACGCTAACAT   | TGGCACCGCCTCCAATGATATGTA  |
| IPP1_exon | CGTAAGCCACCCAGAACTAA       | CGGTCTCACCTTCATCCAATAA    |
| IPP1_3UTR | CGAGGGTATCGCCAGGA          | GGTTTACTGGGTTCTTTAACAGTTG |

**Oligonucleotides used for end-point RT-PCR:**

| Gene            | Forward primer (5'-3')  | Reverse primer (5'-3') |
|-----------------|-------------------------|------------------------|
| IPP1_exon       | CTGGTAAGTCTTCTGACAGCAAG | GGAGATGAAGAACCCTTGTC   |
| IPP1_downstream | CTGGTAAGTCTTCTGACAGCAAG | GATTTGTTTTCTGGCGATACC  |

**Oligonucleotides used for Northern Blotting:**

| Gene            | Sequence (5'-3')   |
|-----------------|--|
| HHT1_exon       | GGCGTGAATGGCAGCCAAGTTGGTATCTTCAAATAAAGAGACTAAGTAGGC<br>TTCGACAGATTCTTGCAAGGCACCG |
| HHT1_downstream | CCACATGGAAAGCCATAAATCTTGCCTCCTACAAGGCCTGGC                                       |
| IPP1_exon       | GGGAAAGCACCATAGTTGTGAATGTAACCATGGTGAGGGAAACAG                                    |
| IPP1_downstream | GCCAGGCCTTGTAGGAGGCAAGATTTATGGCTTTCCATGTGG                                       |
| snR13           | GCCAAACAGCAACTCGAGCCAAATGCACTCATATTCATC  |
| U2_snRNA        | CCCTTTAGCAAACCTCCATTTATATCCTGCGAGAAGAGCTCCTTC                                    |