**Supplementary Methods**

***De novo* gene annotations**

All public RNA-seq data were mapped to the *C. elegans* reference genome (ce6) using Tophat v1.1.4 (Trapnell et al. 2009) with a minimum anchor size of 8nt (parameter: −a 8) for exon-junction hits, with requiring a unique mapping (parameter: −g 1), and without allowing a mismatch in the anchor region (parameter: −m 0). Using the Cufflinks program v0.9.3 (Trapnell et al. 2010), *de novo* gene annotations were constructed for non-strand-specific and strand-specific RNA-seq datasets, respectively (Figure 1A). The gene annotations were unified by taking unique gene models and then, updated through three procedures as follows:

*A. Improving gene annotations.* For the non-strand-specific gene annotations, the direction of each exon was evaluated, requiring that ≥ 95% of the strand-specific RNA-seq reads map to the sense strand and less than five reads map to the opposite strand. If >5% of the RNA-seq reads or more than five reads map to the opposite strand, we considered the possibility of a transcript on the opposite strand. The original exon was scrutinized further focusing on 60-nt windows to examine if parts of the exon have insufficient support from the strand-specific reads (Figure S1A). If ≥95 % of RNA-seq signal came from the opposite strand, the exon was fragmented within the window. Because the weak RNA-seq signal often extended upstream of the confidently identified regions of transcripts, we annotated the 5’ end of the transcript as the position of the 5’ exon that contains the most proximal 80% of the RNA-seq reads.

*B. Updating exon junctions.* Information was incorporated from exon-junction hits that were not considered in the original annotations. If the exon-junction hits were associated with previously annotated transcripts based on RNA-seq signal, they were used to revise the pre-annotated transcripts (Figure S1B). If the exon-junction hits were not associated with previously annotated transcripts, we annotated a new transcript based on the junction and flanking RNA-seq reads that had previously failed to exceed the Cufflinks cutoffs for annotation.

*C. Updating poly(A) sites.* Illumina sequencing reads from Jan et al. (2011) were mapped to the genome using Bowtie (Langmead et al. 2009). Reads that mapped uniquely to the genome and had at least one untemplated terminal adenylate were clustered using the same method described as (Jan et al. 2011). Candidate cleavage sites were defined as the 3’ end of the most frequent tag in clusters that contain at least two reads. If the candidate sites were connected to the 3’ end of an annotation transcript using RNA-seq reads (requiring at least one RNA-seq read within each successive 100 nt window and using exon-junction hits to exclude unpopulated windows), they were classified as poly(A)-sites of the respective transcript, provided that they mapped within 3 kb downstream of the 3’ end of the transcript and before the 5’ end of the next downstream transcript. If the candidate site mapped within an exon or intron, a shorter isoform was annotated. After all steps, any redundant gene models that had the same transcript structure are removed.

**Distinguishing lincRNAs from ancRNAs**

lncRNAs with at least 100 nt of convergent antisense complementarity to pre-mRNAs (or known ncRNAs) were designated as ancRNAs. If a lncRNA locus produced alternative isoforms, some with antisense complementarity and others without, then classification was based on that of the isoforms with the most 3P tags. For each lncRNA with 3P-seq support, those initially classified as ancRNAs were examined to confirm the authenticity of the complementary mRNA; one ancRNA lacked convincing RNA-seq support for the complementary mRNA and was re-annotated as a lincRNA.

**Analysis of start codon enrichment.**

The frequencies of the AUG start codon in the 30 nt downstream of trans-splicing sites of lincRNAs and mRNAs were compared to the background frequency observed within –500 to 100 nt of the trans-splicing sites. The *P* values were estimated by the hypergeometric test and adjusted by the Bonferroni correction.

**Preprocessing of small-RNA sequencing data**

All published and newly sequenced small-RNA sequencing reads were mapped to genome, allowing no mismatches and discarding those mapping to the genome at more than 10 loci (Table S5). If a read mapped to multiple loci, the read number assigned to each locus was divided by the number of loci. After excluding miRNAs, 21U-RNAs, rRNAs, and other structural ncRNAs, the remaining reads were classified as 22G-RNAs, 26G-RNAs, and other siRNAs, based on their length and 5’ terminal nucleotide. Density of endo-siRNAs on each target was calculated as antisense reads per kilobase per million genomic mapping reads (RPKM).

**Expression cluster analysis**

For each lincRNA, RPKM values were transformed to *z* scores, using the distribution of expression levels over 35 different developmental stages/conditions. Clusters were constructed using the clustering program CLICK with a parameter of homogeneity = 0.5 (Sharan et al. 2003), which utilizes Pearson correlations as a metric to find genes with correlated expression.

**Supplementary Figure Legends**

**Figure S1.** Refining the original gene annotations that had been constructed from either non-strand-specific or strand-specific RNA-seq data.

(A) An example of using information from strand-specific RNA-seq data to improve a gene model that had been constructed from non-strand-specific data. For 3P-seq, red lines indicate 3P-seq clusters on the minus strand, and the blue line indicates a 3P-seq cluster on the plus strand. For strand-specific RNA-seq, reads mapping to the plus strand are plotted in black and those mapping to the minus strand are in gray.

(B) An example of incorporating information from exon-junction hits from non-strand-specific data, which was not incorporated in the original annotations from the strand-specific data. Cufflinks predicted transcripts from two loci based on the RNA-seq signal and exon-junction hits (blue) from strand-specific data. Additional exon-junction hits (orange) from non-strand-specific RNA-seq provided evidence for a long transcript that connected the original transcripts by a newly identified intron. Then 3P-seq tags were used to refine the 3’ ends of the alternative isoforms. Otherwise, as in (A).

**Figure S2.** The sensitivity of gene annotation for all protein-coding genes and for subsets with expression levels matching those of the lincRNAs.

Ten cohorts of 170 expression-controlled genes were used to estimate one standard deviation.

**Figure S3.** Thresholds used to filter transcripts with coding potential.

(A) Discrimination between mRNAs and lncRNAs using CPC score. Plotted is the distribution of CPC scores of single- and multi-exonic protein-coding genes and lncRNA candidates. lncRNA candidates included 3,291 lincRNA and ancRNA candidate loci. Of all protein-coding genes, 0.34% had CPC score ≤ –1, the cutoff used for lncRNA annotation.

(B) Discrimination between mRNAs and ncRNAs using polyribosome association. Plotted is the fraction of RNAs with the indicated lower bound of polyribosome association (measured as polyribosome RPKM / RNA-seq RPKM). The RNA-seq RPKM was calculated after pooling the 35 different RNA-seq datasets. Most mRNAs, but few ncRNAs had polyribosome association exceeding 0.1 polyribosome read per RNA-seq RPKM, which was the threshold used for lncRNA annotation (asterisk). The small fraction of ncRNAs with measured polyribosome association presumably reflected the fact that the polyribosome experiment used poly(A) selection to prepare samples to sequence.

(C) Discrimination between mRNAs and ncRNAs using ribosome footpring data (Stadler and Fire 2011). Plotted is the fraction of RNAs with the indicated lower bound of ribosome association (measured as ribosome RPKM / RNA-seq RPKM). For 3’UTRs, we excluded 5’ most 20nt to avoid ribosome shadowing signals. Otherwise, as in (B).

**Figure S4.** Newly identified and previsouly orphan poly(A) sites assigned to lincRNAs. The initial implementation of 3P-seq to identify poly(A) sites focused only on poly(A) sites downstream of previously annotated protein-coding genes. This original pipeline identified some poly(A) sites that were not connected to the upstream gene because of a gap in the RNA-seq signal that was not spanned by an exon-junction hit. After considering our *de novo* gene annotations, some of these orphan poly(A) sites previously identified by the original pipeline were assigned to lincRNAs (red triangles). In addition, some 3P clusters were not considered in the original pipeline because they did not map downstream of previously annotated protein-coding genes. These were identified in our more general pipeline, and some were assigned to lincRNAs (blue triangles).

**Figure S5.** Correlation between ancRNA expression and that of their protein-coding antisense partner. Shown is the average Pearson correlation for all lincRNA–partner pairs, and pairs of the indicated subcategories (with the number of pairs in parenthesis). As a control, mean correlations were also calculated for number-matched cohorts of random pairs of ancRNA and protein-coding genes. For comparison, mean correlations were calculated for number-matched cohorts of convergent and divergent pairs of protein-coding genes. For both the controls and comparisons, the average correlation of 1000 cohorts is reported for each subcategory, with error bars showing one standard deviation. For the *P* value, one-sample t-test was used.

**Figure S6.** Clusters of lincRNAs within 1 kb of each other. Shown is one of the three tandem pairs and a divergent pair. No convergent pairs were identified.

**Figure S7.** Examples of lincRNAs antisense to endo-siRNAs.

(A) An example of an adult 22G-RNA cluster antisense to a lincRNA (linc-22). For 22G-RNAs, blue bars are reads mapped to the minus strand. RNA-seq and 3P-seq data were strand-specific, plotted as in Figure S1.

(B) An example of an embryo 26G-RNA cluster antisense to a lincRNA (linc-11). For 22G-RNAs, red bars are reads mapped to the plus strand. Otherwise, as in (A).

**Figure S8.** Endo-siRNA antisense to lincRNAs.

(A) As in Figure 2A, but showing results for all 170 lincRNAs.

(B) Improved annotations of loci corresponding to the top 200 22G-RNA clusters. Annotations based on ce6 (left) are compared to those of the *de novo* gene annotation (right). Clusters are classified according to the key, considering only clusters for which ≥90% of the reads mapped to the indicated annotation. For the clusters mapping to newly annotated genes (orange bars), the number mapping to lincRNAs is in parenthesis. The percentage in parenthesis indicates the fraction of lincRNAs with an antisense-mapping cluster. This fraction was significantly higher than that observed for mRNAs (*P* value, Fisher’s exact test).

(C) Improved annotations of loci corresponding to the top 100 26G-RNA clusters. Otherwise, as in (B).

**Figure S9.** H3K9me3 signals on lincRNA loci in early embryo and L3 stages.

(A) H3K9me3 signals within windows of 50kb. Blue bars present numbers and locations of lincRNAs not associated with endo-siRNAs. Red bars present numbers and locations of lincRNAs antisense to 22G-RNAs or 26G-RNAs.

(B) Median H3K9me3 signals per kilobase of 25 lincRNAs antisense to adult 22G-RNAs (small-RNA RPKM ≥ 5), 25 antisense to WAGO-1‒associated 22G-RNAs (small-RNA RPKM ≥5), 27 antisense to CSR-1‒associated 22G-RNAs (small-RNA RPKM ≥ 5), and 77 not associated with adult endo-siRNAs (top panel). Median H3K9me3 signals per kilobase of 18 lincRNAs antisense to embryo 26G-RNAs (small-RNA RPKM ≥ 5), 18 antisense to L4 26G-RNAs (small-RNA RPKM ≥ 5), and 77 not associated with endo-siRNAs (bottom panel). *P* values were calculated using the KS-tests.

(C) The cumulative distributions of ratios of H3K9me3 signals in *nrde-2* mutant and wild-type. Using H3K9me3 data prepared in *nrde-2* mutant and wild-type worms (Gu et al. 2012), we examined the extent to which H3K9me3 enrichment at lincRNA loci depended on *nrde-2*. lincRNAs antisense to endo-siRNAs had significantly reduced H3K9me3 signals in the *nrde-2* mutant, compared to lincRNAs not associated with endo-siRNAs (*P* = 0.0017‒0.004, KS-tests).

**Figure S10.** Sequence redundancy among lincRNAs. Among 170 lincRNAs, 22 lincRNAs had sequences with similarity to each other (BLASTN E-value ≤ 10-10), a number significantly higher than that for ten random cohorts of number-matched mRNAs. The *P* value was estimated using the Fisher’s exact test.

**Figure S11.** Examples of short conserved elements within a lincRNA.

**Figure S12.** The L3-specific ancRNA expression clusters. *Z* scores were determined from the distribution of RPKM values from the 10 indicated strand-specific RNA-seq datasets. Otherwise, as Figure 4C.

**Figure S13.** Orientations of neighboring genes in *C. elegans*.

(A) Orientation of lincRNAs and their closest neighboring protein-coding genes. Data were plotted only for gene pairs within –100 and 1000 bp of each other.

(B) Orientation of protein-coding genes and their closest neighboring protein-coding genes. Otherwise, as in (A).**Supplementary Tables**

Table S1A. Sources and depth of RNA-seq data.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Samples | Tophat hits | Junction hits |
| Non-strand-specific RNA-seqs (Gerstein et al. 2010; Lamm et al. 2011) | 25 | 1.071 X 109 | 50,548,048 |
| Strand-specific RNA-seqs (Lamm et al. 2011) | 10 | 82,526,531 | 5,238,579 |

Table S1B. Mapping information for individual RNA-seq datasets.

|  |  |  |  |
| --- | --- | --- | --- |
| Samples | Tophat hits | Strand information | Unique stages\* |
| early\_embryo | 47,931,741 | Non-strand-specific | Early embryo |
| early\_embryo2 | 31,771,199 | Non-strand-specific | Early embryo |
| late\_embryo | 46,948,279 | Non-strand-specific | Late embryo |
| late\_embryo2 | 46,002,201 | Non-strand-specific | Late embryo |
| embryo\_*him-8* | 37,030,764 | Non-strand-specific | - |
| mid-L1\_*lin-35* | 40,408,756 | Non-strand-specific | - |
| L2 | 50,799,318 | Non-strand-specific | L2 |
| L3 | 49,889,938 | Non-strand-specific | L3 |
| L4 | 40,994,045 | Non-strand-specific | L4 |
| mid-L4 | 86,595,093 | Non-strand-specific | L4 |
| L4\_male | 43,418,013 | Non-strand-specific | Male |
| mid-L4\_soma\_only | 73,666,540 | Non-strand-specific | - |
| young\_adult | 54,814,253 | Non-strand-specific | Young adult |
| adult\_*spe-9* | 76,556,114 | Non-strand-specific | - |
| *him-8*\_dsDNALigSeq | 6,167,606 | Non-strand-specific | Male |
| *fem-1*\_dsDNALigSeq | 6,573,605 | Non-strand-specific | Female |
| *fem-3*\_dsDNALigSeq | 14,088,358 | Non-strand-specific | Female |
| dauer\_exit\_*daf-2* | 39,706,249 | Non-strand-specific | - |
| dauer\_entry\_*daf-2* | 39,584,214 | Non-strand-specific | Dauer |
| dauer\_*daf-2* | 35,947,348 | Non-strand-specific | Dauer |
| N2\_controls\_for\_S.macescens\_Db10 | 842,604 | Non-strand-specific | - |
| N2\_exposed\_to\_S.macescens\_Db10 | 117,691,851 | Non-strand-specific | - |
| N2\_controls\_for\_Harposporium | 51,864,722 | Non-strand-specific | - |
| N2\_exposed\_to\_Harposporium | 58,823,017 | Non-strand-specific | - |
| N2\_mixed-stage\_dsDNALigSeq | 23,065,219 | Non-strand-specific | - |
| N2\_L3\_CircLigSeq | 9,378,890 | Strand-specific | L3 |
| N2\_L1\_CircLigSeq | 9,692,857 | Strand-specific | L1 |
| N2\_L2\_CircLigSeq | 11,278,057 | Strand-specific | L2 |
| N2\_L4\_ssRNALigSeq | 4,302,185 | Strand-specific | L4 |
| N2\_L3\_ssRNALigSeq | 5,687,332 | Strand-specific | L3 |
| N2\_L2\_ssRNALigSeq | 7,637,135 | Strand-specific | L2 |
| N2\_L1\_ssRNALigSeq | 6,273,046 | Strand-specific | L1 |
| *rrf-3*\_*him-8*\_ssRNALigSeq | 8,198,753 | Strand-specific | - |
| *him-8*\_ssRNALigSeq | 10,548,875 | Strand-specific | Male |
| N2\_mixed-stage\_ssRNALigSeq | 9,529,401 | Strand-specific | - |

\*These samples were used to examine differential expression in ten distinct stages (Figure 4A and B).

Table S1C. Accuracies of *de novo* gene annotations with respect to RefSeq protein-coding transcripts, estimated by the Cuffcompare (Trapnell et al. 2010).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| (%) | Nucleotide level | |  | Locus level | | | |
| Sensitivity | Specificity |  | Missed exons | Missed introns | Wrong exons | Wrong introns |
| Non-strand-specific RNA-seqs | 81.4 | 32.5 |  | 18.8 | 22.5 | 27.9 | 13.0 |
| Strand-specific RNA-seqs | 73.7 | 62.8 |  | 26.2 | 28.2 | 25.5 | 9.9 |
| Combining annotations | 84.1 | 66.3 |  | 15.1 | 15.8 | 8.7 | 7.0 |

Table S2A. Features of lincRNAs.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Loci (isoforms) | Mean length | Loci with ME/Loci with SE\* |
| Potential lincRNAs | 801 (932) | 465 | 664/137 |
| lincRNAs with 3P-seq supported poly(A) sites | 170(262) | 830 | 117/53 |
| Potential lincRNAs without 3P-seq supported poly(A) sites | 631 (670) | 316 | 547/84 |

\*ME: multiple exons, SE: single exon

Table S2B. The statistics of ancRNAs.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Loci (isoforms) | Mean length | Loci with ME/Loci with SE\* |
| Potential ancRNAs | 344 (400) | 446 | 177/167 |
| ancRNAs with 3P-seq supported poly(A) sites | 58 (95) | 756 | 29/29 |
| Potential ancRNAs without 3P-seq supported poly(A) sites | 286 (305) | 375 | 148/138 |

\*ME: multiple exons, SE: single exon

Table S2C. lincRNAs with 3P-seq supported poly(A) sites. Some lincRNAs (indicated as ‘X’) are not included in current WormBase annotation because the WormBase previously suspected that they could express a short peptide.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Coordinates | CPC score | Ribosome/Exp. | Delayed annotation in WormBase |
| *linc-1* | chrI(+):13652511-13652714 | -1.06 | 0.00 | X |
| *linc-2* | chrIII(+):5024844-5024970 | -1.29 | 0.00 |  |
| *linc-3* | chrV(+):3012694-3013086 | -1.17 | 0.00 | X |
| *linc-4* | chrII(+):6268924-6270140 | -1.14 | 0.00 | X |
| *linc-5* | chrX(+):14018532-14019298 | -1.08 | 0.00 |  |
| *linc-6* | chrX(-):1982705-1982878 | -1.13 | 0.00 |  |
| *linc-7* | chrX(+):16002518-16003647 | -1.15 | 0.00 |  |
| *linc-8* | chrII(-):2501839-2503803 | -1.14 | 0.00 |  |
| *linc-9* | chrI(+):3703544-3704958 | -1.09 | 0.00 |  |
| *linc-10* | chrII(-):3313079-3313503 | -1.28 | 0.00 |  |
| *linc-11* | chrII(-):3373164-3374180 | -1.29 | 0.00 |  |
| *linc-12* | chrII(-):2681408-2681658 | -1.09 | 0.00 |  |
| *linc-13* | chrII(-):1071513-1071845 | -1.21 | 0.00 | X |
| *linc-14* | chrV(-):17539169-17539404 | -1.40 | 0.00 |  |
| *linc-15* | chrX(-):11991407-11991856 | -1.24 | 0.00 |  |
| *linc-16* | chrII(-):1820245-1820949 | -1.14 | 0.00 |  |
| *linc-17* | chrII(+):3596220-3596806 | -1.35 | 0.00 |  |
| *linc-18* | chrI(+):12215528-12216313 | -1.28 | 0.00 |  |
| *linc-19* | chrIII(+):3150212-3151342 | -1.05 | 0.00 |  |
| *linc-20* | chrX(-):16507998-16509211 | -1.12 | 0.00 |  |
| *linc-21* | chrIV(-):4242079-4242459 | -1.34 | 0.00 |  |
| *linc-22* | chrX(+):9069076-9073673 | -1.16 | 0.10 |  |
| *linc-23* | chrI(+):2644966-2645310 | -1.05 | 0.00 | X |
| *linc-24* | chrIII(+):1370485-1371558 | -1.09 | 0.00 |  |
| *linc-25* | chrV(-):18725324-18725861 | -1.09 | 0.00 |  |
| *linc-26* | chrIV(-):4238166-4238401 | -1.02 | 0.00 | X |
| *linc-27* | chrII(-):6369678-6369828 | -1.33 | 0.00 |  |
| *linc-28* | chrV(-):19420665-19420821 | -1.24 | 0.00 |  |
| *linc-29* | chrIV(+):6354210-6357227 | -1.19 | 0.00 | X |
| *linc-30* | chrI(+):2046541-2048915 | -1.20 | 0.00 |  |
| *linc-31* | chrV(-):8152015-8154444 | -1.07 | 0.00 |  |
| *linc-32* | chrV(-):410590-410931 | -1.43 | 0.00 |  |
| *linc-33* | chrX(-):11563550-11563674 | -1.38 | 0.00 |  |
| *linc-34* | chrX(-):13400673-13401348 | -1.16 | 0.00 |  |
| *linc-35* | chrII(-):6927574-6927762 | -1.08 | 0.00 |  |
| *linc-36* | chrIV(-):5380397-5381206 | -1.32 | 0.00 | X |
| *linc-37* | chrIII(+):832976-833339 | -1.35 | 0.00 | X |
| *linc-38* | chrV(-):10276922-10277281 | -1.11 | 0.00 |  |
| *linc-39* | chrI(-):4683183-4683866 | -1.18 | 0.00 |  |
| *linc-40* | chrIII(+):1325881-1327714 | -1.11 | 0.00 |  |
| *linc-41* | chrIV(-):4241217-4241758 | -1.14 | 0.00 |  |
| *linc-42* | chrIII(+):2936099-2936992 | -1.05 | 0.00 |  |
| *linc-43* | chrX(+):13141556-13141952 | -1.17 | 0.00 |  |
| *linc-44* | chrII(-):5781889-5782081 | -1.05 | 0.00 |  |
| *linc-45* | chrIII(+):3151799-3152597 | -1.08 | 0.00 |  |
| *linc-46* | chrII(-):1990693-1991488 | -1.14 | 0.00 |  |
| *linc-47* | chrII(-):11887681-11888096 | -1.39 | 0.00 |  |
| *linc-48* | chrX(+):17421803-17422256 | -1.34 | 0.00 |  |
| *linc-49* | chrII(+):5236007-5236320 | -1.01 | 0.00 |  |
| *linc-50* | chrIV(-):5582028-5582249 | -1.24 | 0.00 |  |
| *linc-51* | chrV(-):19816056-19816480 | -1.04 | 0.00 |  |
| *linc-52* | chrII(+):607413-607779 | -1.11 | 0.00 |  |
| *linc-53* | chrI(-):6860394-6861996 | -1.04 | 0.00 |  |
| *linc-54* | chrX(-):14505621-14505789 | -1.06 | 0.00 |  |
| *linc-55* | chrV(-):5994243-5994523 | -1.36 | 0.00 |  |
| *linc-56* | chrX(+):2822748-2823502 | -1.18 | 0.00 |  |
| *linc-57* | chrIII(-):7543400-7544988 | -1.29 | 0.00 |  |
| *linc-58* | chrI(+):7952879-7953119 | -1.25 | 0.00 |  |
| *linc-59* | chrV(-):16319001-16320392 | -1.31 | 0.00 |  |
| *linc-60* | chrIV(-):14958892-14959310 | -1.05 | 0.00 |  |
| *linc-61* | chrV(-):16043072-16043605 | -1.16 | 0.00 |  |
| *linc-62* | chrV(+):18011545-18012068 | -1.08 | 0.00 |  |
| *linc-63* | chrI(-):3870644-3871269 | -1.21 | 0.00 |  |
| *linc-64* | chrX(+):1765229-1765802 | -1.37 | 0.00 |  |
| *linc-65* | chrV(-):4759356-4760320 | -1.28 | 0.00 |  |
| *linc-66* | chrII(-):2615726-2616220 | -1.30 | 0.00 |  |
| *linc-67* | chrX(-):7398256-7398659 | -1.07 | 0.00 |  |
| *linc-68* | chrII(+):3597510-3597908 | -1.05 | 0.00 | X |
| *linc-69* | chrV(-):8766675-8767721 | -1.30 | 0.00 |  |
| *linc-70* | chrV(+):20137961-20138212 | -1.16 | 0.00 | X |
| *linc-71* | chrII(+):3509943-3510105 | -1.14 | 0.00 |  |
| *linc-72* | chrII(+):8819737-8820079 | -1.39 | 0.00 |  |
| *linc-73* | chrII(+):6993931-6994301 | -1.07 | 0.00 |  |
| *linc-74* | chrII(+):14218711-14220282 | -1.22 | 0.00 |  |
| *linc-75* | chrX(+):1791718-1792569 | -1.10 | 0.00 |  |
| *linc-76* | chrIII(-):11126745-11129237 | -1.12 | 0.00 |  |
| *linc-77* | chrIV(-):4059924-4061716 | -1.25 | 0.00 |  |
| *linc-78* | chrX(+):2243109-2243233 | -1.17 | 0.00 |  |
| *linc-79* | chrIV(-):4975705-4976074 | -1.18 | 0.00 |  |
| *linc-80* | chrI(-):8974857-8975108 | -1.42 | 0.00 |  |
| *linc-81* | chrV(-):19891072-19893183 | -1.06 | 0.00 |  |
| *linc-82* | chrIII(+):3664837-3667020 | -1.06 | 0.00 |  |
| *linc-83* | chrX(-):10474145-10474833 | -1.05 | 0.00 |  |
| *linc-84* | chrI(+):8865937-8866616 | -1.33 | 0.00 |  |
| *linc-85* | chrI(+):4295025-4296742 | -1.01 | 0.00 | X |
| *linc-86* | chrIV(+):17220251-17220565 | -1.20 | 0.00 |  |
| *linc-87* | chrIII(-):12149442-12150998 | -1.19 | 0.00 |  |
| *linc-88* | chrX(+):8753793-8754158 | -1.39 | 0.00 | X |
| *linc-89* | chrIV(-):3430307-3432467 | -1.27 | 0.00 |  |
| *linc-90* | chrIII(+):352221-355401 | -1.26 | 0.00 |  |
| *linc-91* | chrI(+):4699611-4702867 | -1.08 | 0.00 |  |
| *linc-92* | chrV(-):5789929-5790308 | -1.09 | 0.00 | X |
| *linc-93* | chrII(+):7884334-7884732 | -1.25 | 0.00 |  |
| *linc-94* | chrIV(+):735162-735704 | -1.05 | 0.00 |  |
| *linc-95* | chrIII(-):3632985-3635768 | -1.06 | 0.00 |  |
| *linc-96* | chrV(-):5425169-5427015 | -1.36 | 0.00 |  |
| *linc-97* | chrIV(-):8845480-8846025 | -1.20 | 0.00 | X |
| *linc-98* | chrV(-):18172512-18172612 | -1.16 | 0.00 |  |
| *linc-99* | chrIII(-):13740612-13740903 | -1.04 | 0.00 |  |
| *linc-100* | chrX(-):16775137-16775422 | -1.20 | 0.00 |  |
| *linc-101* | chrIV(-):2160277-2160856 | -1.10 | 0.00 | X |
| *linc-102* | chrX(-):14079319-14079959 | -1.03 | 0.00 | X |
| *linc-103* | chrX(+):6256737-6258935 | -1.26 | 0.00 |  |
| *linc-104* | chrI(-):4467347-4467685 | -1.19 | 0.00 |  |
| *linc-105* | chrIII(+):10718223-10719367 | -1.14 | 0.00 |  |
| *linc-106* | chrX(-):16905501-16905927 | -1.14 | 0.00 |  |
| *linc-107* | chrII(-):7287357-7287753 | -1.28 | 0.00 |  |
| *linc-108* | chrV(-):15565144-15566399 | -1.12 | 0.00 |  |
| *linc-109* | chrIII(-):10732155-10736563 | -1.17 | 0.00 |  |
| *linc-110* | chrII(-):7836005-7841058 | -1.12 | 0.00 |  |
| *linc-111* | chrIV(-):16190536-16191097 | -1.00 | 0.00 |  |
| *linc-112* | chrX(+):3952640-3954327 | -1.16 | 0.00 |  |
| *linc-113* | chrI(+):8503987-8505559 | -1.21 | 0.00 |  |
| *linc-114* | chrIV(-):4259730-4260384 | -1.08 | 0.00 | X |
| *linc-115* | chrX(+):15745641-15746126 | -1.24 | 0.00 |  |
| *linc-116* | chrIII(+):7612036-7613356 | -1.02 | 0.00 |  |
| *linc-117* | chrV(-):7085051-7085591 | -1.25 | 0.00 |  |
| *linc-118* | chrX(+):15617337-15617752 | -1.04 | 0.00 |  |
| *linc-119* | chrIV(+):10235510-10236651 | -1.22 | 0.00 |  |
| *linc-120* | chrII(+):8688103-8691847 | -1.35 | 0.00 |  |
| *linc-121* | chrIV(-):14934782-14937089 | -1.13 | 0.00 | X |
| *linc-122* | chrII(-):5765009-5765369 | -1.28 | 0.00 |  |
| *linc-123* | chrV(-):15443801-15444329 | -1.29 | 0.00 |  |
| *linc-124* | chrI(-):14027767-14028113 | -1.05 | 0.00 |  |
| *linc-125* | chrII(+):7238888-7242849 | -1.19 | 0.00 |  |
| *linc-126* | chrIV(-):8628309-8629535 | -1.18 | 0.00 |  |
| *linc-127* | chrII(-):5459238-5459734 | -1.13 | 0.00 |  |
| *linc-128* | chrV(+):1150908-1153209 | -1.12 | 0.00 |  |
| *linc-129* | chrIII(+):10817145-10821127 | -1.21 | 0.00 |  |
| *linc-130* | chrX(-):7947396-7947915 | -1.45 | 0.00 |  |
| *linc-131* | chrI(+):1696200-1697677 | -1.19 | 0.00 |  |
| *linc-132* | chrIV(+):161147-162788 | -1.22 | 0.00 | X |
| *linc-133* | chrII(+):7837756-7841415 | -1.08 | 0.00 |  |
| *linc-134* | chrIV(-):5737171-5738090 | -1.09 | 0.00 | X |
| *linc-135* | chrIV(+):8453278-8457017 | -1.03 | 0.00 |  |
| *linc-136* | chrV(-):3717687-3723721 | -1.09 | 0.00 |  |
| *linc-137* | chrV(-):1863875-1863990 | -1.26 | 0.00 |  |
| *linc-138* | chrII(+):6615595-6617181 | -1.25 | 0.00 |  |
| *linc-139* | chrII(-):4812835-4814216 | -1.29 | 0.00 |  |
| *linc-140* | chrX(+):15832882-15833166 | -1.23 | 0.00 |  |
| *linc-141* | chrI(-):7372293-7372526 | -1.15 | 0.00 |  |
| *linc-142* | chrX(-):12517036-12518956 | -1.31 | 0.00 |  |
| *linc-143* | chrIII(-):3035531-3037533 | -1.36 | 0.00 |  |
| *linc-144* | chrX(-):16822300-16823308 | -1.08 | 0.00 |  |
| *linc-145* | chrIV(-):5155928-5156829 | -1.13 | 0.00 |  |
| *linc-146* | chrV(+):10176203-10179234 | -1.27 | 0.00 |  |
| *linc-147* | chrIII(+):3672027-3674224 | -1.11 | 0.00 |  |
| *linc-148* | chrV(+):11179295-11181696 | -1.24 | 0.00 |  |
| *linc-149* | chrI(+):7333033-7334531 | -1.21 | 0.00 | X |
| *linc-150* | chrX(-):2369175-2370539 | -1.09 | 0.00 |  |
| *linc-151* | chrIV(+):11808700-11809643 | -1.29 | 0.00 |  |
| *linc-152* | chrII(+):15257273-15259701 | -1.04 | 0.00 |  |
| *linc-153* | chrV(-):11641002-11643894 | -1.07 | 0.00 |  |
| *linc-154* | chrX(+):2326738-2329086 | -1.16 | 0.00 |  |
| *linc-155* | chrX(+):17240263-17242328 | -1.02 | 0.00 |  |
| *linc-156* | chrI(+):5073582-5079306 | -1.08 | 0.00 |  |
| *linc-157* | chrIV(+):9060759-9063667 | -1.10 | 0.00 |  |
| *linc-158* | chrIV(-):3450367-3450732 | -1.12 | 0.00 |  |
| *linc-159* | chrIV(-):1033999-1035986 | -1.03 | 0.00 |  |
| *linc-160* | chrV(+):3184082-3185003 | -1.16 | 0.00 |  |
| *linc-161* | chrIII(-):12098632-12099358 | -1.16 | 0.00 |  |
| *linc-162* | chrV(+):13753808-13754365 | -1.08 | 0.00 |  |
| *linc-163* | chrV(+):20213292-20214536 | -1.11 | 0.00 | X |
| *linc-164* | chrII(-):12352874-12355824 | -1.15 | 0.00 |  |
| *linc-165* | chrIII(-):7402159-7405996 | -1.05 | 0.00 |  |
| *linc-166* | chrX(+):737234-742376 | -1.09 | 0.00 |  |
| *linc-167* | chrI(+):3122012-3127662 | -1.03 | 0.00 |  |
| *linc-168* | chrV(-):18649907-18650292 | -1.38 | 0.00 |  |
| *linc-169* | chrII(+):7371722-7372673 | -1.11 | 0.00 |  |
| *linc-170* | chrV(+):20591397-20591610 | -1.23 | 0.00 |  |

Table S2D. ancRNAs with 3P-seq supported poly(A) sites. Some ancRNAs (indicated as ‘X’) are not included in current WormBase annotation because the WormBase previously suspected that they could express a short peptide.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Coordinates | CPC score | Ribosome/Exp. | Delayed annotation in WormBase |
| *anr-1* | chrIII(+):6450990-6451509 | -1.07 | 0.00 |  |
| *anr-2* | chrII(+):12178385-12178679 | -1.22 | 0.00 |  |
| *anr-3* | chrIV(+):15522555-15524725 | -1.18 | 0.00 |  |
| *anr-4* | chrIV(-):4977086-4977278 | -1.27 | 0.00 |  |
| *anr-5* | chrI(-):6136722-6136929 | -1.34 | 0.00 |  |
| *anr-6* | chrV(-):5685214-5685635 | -1.15 | 0.00 |  |
| *anr-7* | chrV(+):11238789-11239037 | -1.49 | 0.00 |  |
| *anr-8* | chrIV(-):8959553-8960936 | -1.23 | 0.00 |  |
| *anr-9* | chrIII(+):3654923-3655212 | -1.20 | 0.00 |  |
| *anr-10* | chrI(+):5046477-5046788 | -1.31 | 0.00 |  |
| *anr-11* | chrIV(+):9700841-9701263 | -1.12 | 0.00 |  |
| *anr-12* | chrII(-):13770752-13771525 | -1.32 | 0.00 |  |
| *anr-13* | chrIV(+):11136261-11136445 | -1.03 | 0.00 |  |
| *anr-14* | chrI(-):12775543-12776521 | -1.21 | 0.00 |  |
| *anr-15* | chrV(+):12011954-12012195 | -1.10 | 0.00 |  |
| *anr-16* | chrX(-):11524911-11526560 | -1.15 | 0.00 |  |
| *anr-17* | chrX(-):17697152-17697259 | -1.21 | 0.00 |  |
| *anr-18* | chrIV(-):3805232-3806556 | -1.28 | 0.00 |  |
| *anr-19* | chrI(-):1916943-1917065 | -1.01 | 0.00 |  |
| *anr-20* | chrI(+):9382449-9383539 | -1.05 | 0.00 |  |
| *anr-21* | chrV(-):7007283-7007599 | -1.31 | 0.00 |  |
| *anr-22* | chrII(-):6099368-6099807 | -1.06 | 0.00 |  |
| *anr-23* | chrV(-):5949183-5949371 | -1.10 | 0.00 |  |
| *anr-24* | chrX(+):1995738-1996667 | -1.15 | 0.00 |  |
| *anr-25* | chrI(+):9375248-9375814 | -1.46 | 0.00 |  |
| *anr-26* | chrIII(-):2439928-2440807 | -1.02 | 0.00 |  |
| *anr-27* | chrII(-):560595-560988 | -1.12 | 0.00 | X |
| *anr-28* | chrIII(-):2439861-2440771 | -1.03 | 0.00 |  |
| *anr-29* | chrV(+):12810446-12810717 | -1.05 | 0.00 |  |
| *anr-30* | chrV(+):12439479-12440791 | -1.20 | 0.00 |  |
| *anr-31* | chrIV(-):13188004-13188986 | -1.28 | 0.00 | X |
| *anr-32* | chrV(-):6003558-6006729 | -1.15 | 0.00 |  |
| *anr-33* | chrV(+):9371706-9371907 | -1.04 | 0.00 |  |
| *anr-34* | chrIII(+):8787322-8789485 | -1.06 | 0.00 |  |
| *anr-35* | chrII(+):11174475-11175576 | -1.17 | 0.00 |  |
| *anr-36* | chrV(-):7854231-7854940 | -1.31 | 0.00 |  |
| *anr-37* | chrV(+):20188118-20188827 | -1.13 | 0.00 |  |
| *anr-38* | chrI(-):5356235-5356731 | -1.25 | 0.00 |  |
| *anr-39* | chrII(-):2421071-2423076 | -1.06 | 0.00 |  |
| *anr-40* | chrI(+):11213839-11214627 | -1.18 | 0.00 | X |
| *anr-41* | chrII(+):4059046-4059517 | -1.17 | 0.00 |  |
| *anr-42* | chrI(+):1822402-1823044 | -1.32 | 0.00 |  |
| *anr-43* | chrV(-):10951208-10951533 | -1.37 | 0.00 |  |
| *anr-44* | chrIV(+):8231712-8234995 | -1.24 | 0.00 |  |
| *anr-45* | chrI(-):3410346-3411466 | -1.09 | 0.00 |  |
| *anr-46* | chrI(-):11013393-11014196 | -1.16 | 0.00 |  |
| *anr-47* | chrIV(-):3201455-3203703 | -1.02 | 0.00 | X |
| *anr-48* | chrII(+):2166432-2170213 | -1.29 | 0.00 |  |
| *anr-49* | chrX(+):1531973-1535979 | -1.17 | 0.00 |  |
| *anr-50* | chrIV(-):1629777-1629985 | -1.03 | 0.00 |  |
| *anr-51* | chrII(-):9237103-9239073 | -1.20 | 0.00 |  |
| *anr-52* | chrII(+):10294013-10295614 | -1.03 | 0.00 |  |
| *anr-53* | chrIII(-):1294920-1298365 | -1.22 | 0.00 |  |
| *anr-54* | chrII(-):5329534-5331194 | -1.30 | 0.00 |  |
| *anr-55* | chrIV(-):16802460-16803591 | -1.12 | 0.00 |  |
| *anr-56* | chrIV(+):12555580-12556023 | -1.17 | 0.00 |  |
| *anr-57* | chrIV(+):10809530-10810510 | -1.07 | 0.00 |  |
| *anr-58* | chrV(+):1197816-1198062 | -1.29 | 0.00 |  |

Table S2E. Potential lincRNAs without 3P-seq supported poly(A) sites. \*Rfam data predicted this potential lincRNA as a signal recognition particle (SRP) RNA.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Coordinates | CPC score | Ribosome/Exp. |
| lincRNA\_WO3P\_L1\* | chrIII(+):5211237-5211337 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L2 | chrX(+):1506289-1506389 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L3 | chrX(+):1680801-1681914 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L4 | chrX(+):16932384-16932516 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L5 | chrI(+):11654975-11655075 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L6 | chrX(+):16930374-16931909 | -1.2 | 0.07 |
| lincRNA\_WO3P\_L7 | chrV(+):15909035-15909403 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L8 | chrV(+):15903166-15903534 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L9 | chrV(-):7710735-7711132 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L10 | chrIII(-):7550178-7550616 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L11 | chrX(-):8863468-8863782 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L12 | chrIV(+):6515810-6516226 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L13 | chrI(+):1258307-1258607 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L14 | chrIV(+):13761740-13761840 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L15 | chrX(+):1812458-1812981 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L16 | chrI(-):1540481-1540681 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L17 | chrI(+):629599-630999 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L18 | chrV(+):950472-950572 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L19 | chrIV(+):9223558-9225205 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L20 | chrIV(-):6192477-6192927 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L21 | chrIII(+):3200781-3200881 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L22 | chrII(-):694445-695446 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L23 | chrV(+):15585129-15585229 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L24 | chrV(-):15585118-15585218 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L25 | chrX(+):5196092-5197746 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L26 | chrIV(-):7346746-7346846 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L27 | chrV(-):17995086-17995286 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L28 | chrV(+):7072566-7072666 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L29 | chrI(+):6771031-6773061 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L30 | chrII(+):14562201-14562301 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L31 | chrV(-):17488859-17488959 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L32 | chrI(-):11907245-11907345 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L33 | chrII(-):13366222-13366322 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L34 | chrII(+):8288756-8291199 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L35 | chrV(-):19958582-19959682 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L36 | chrX(+):9604914-9606927 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L37 | chrIV(-):16749634-16752572 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L38 | chrII(+):1026027-1026836 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L39 | chrIII(-):12697877-12697977 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L40 | chrX(+):1150848-1151525 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L41 | chrX(+):16986438-16986538 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L42 | chrIV(-):4325159-4325485 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L43 | chrX(-):17253893-17254093 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L44 | chrV(-):12381480-12381580 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L45 | chrX(-):82241-82777 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L46 | chrX(-):11377815-11378015 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L47 | chrV(-):16934112-16934476 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L48 | chrIV(-):8087716-8090514 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L49 | chrIV(-):8087646-8090212 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L50 | chrX(-):15787654-15789446 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L51 | chrIII(+):1989693-1990359 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L52 | chrIV(-):14421743-14421893 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L53 | chrIV(-):4401857-4404456 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L54 | chrI(+):797289-799200 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L55 | chrX(-):1689447-1690012 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L56 | chrIV(-):1670827-1671826 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L57 | chrV(-):10049477-10049743 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L58 | chrX(-):3902044-3904287 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L59 | chrII(+):7472362-7472462 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L60 | chrI(-):676810-678739 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L61 | chrI(-):10819342-10819942 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L62 | chrIV(+):921070-921429 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L63 | chrV(+):12510068-12510443 | -1.6 | 0.0 |
| lincRNA\_WO3P\_L64 | chrV(-):19981605-19982818 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L65 | chrX(+):15870881-15873938 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L66 | chrIV(+):3925955-3926065 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L67 | chrII(-):7884237-7886054 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L68 | chrII(-):15108842-15109742 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L69 | chrX(-):1636119-1638679 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L70 | chrIII(-):12869102-12870360 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L71 | chrI(-):3110400-3110693 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L72 | chrIV(+):17137299-17137499 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L73 | chrV(-):13295750-13295850 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L74 | chrIII(-):12868789-12869372 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L75 | chrX(-):17501269-17501605 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L76 | chrX(-):11785752-11787521 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L77 | chrII(+):6505950-6508517 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L78 | chrIV(-):2168441-2168541 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L79 | chrIV(+):65851-66622 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L80 | chrIII(+):9619591-9619691 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L81 | chrX(-):15617458-15618356 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L82 | chrII(+):13946861-13947729 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L83 | chrIII(+):3634976-3635776 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L84 | chrV(+):3185288-3186023 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L85 | chrI(+):10288880-10291180 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L86 | chrX(+):1523967-1524677 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L87 | chrI(-):12661932-12662111 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L88 | chrI(-):11683482-11686250 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L89 | chrIII(+):8189487-8190152 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L90 | chrX(+):16100269-16100535 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L91 | chrI(-):6502218-6502318 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L92 | chrI(+):2058406-2058906 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L93 | chrX(-):17579701-17579901 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L94 | chrV(-):19872712-19873333 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L95 | chrX(-):5055033-5056412 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L96 | chrX(-):1523686-1524674 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L97 | chrIV(+):5620167-5621158 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L98 | chrIII(+):13584483-13585163 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L99 | chrIV(-):2216603-2222227 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L100 | chrIII(+):6660445-6662030 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L101 | chrII(+):7470188-7471661 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L102 | chrIV(+):4733314-4733414 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L103 | chrX(+):17426654-17426754 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L104 | chrII(+):4100773-4101573 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L105 | chrIII(+):445580-446632 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L106 | chrIV(+):6543823-6545133 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L107 | chrX(-):15319537-15319637 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L108 | chrII(-):950200-951106 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L109 | chrX(-):15635778-15636591 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L110 | chrII(+):996230-996475 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L111 | chrII(+):1992540-1992836 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L112 | chrIII(+):3148407-3149268 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L113 | chrIV(+):11197601-11198670 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L114 | chrV(+):19714055-19714334 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L115 | chrII(-):994280-994595 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L116 | chrI(-):611231-611878 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L117 | chrIV(+):14210651-14212039 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L118 | chrV(-):16452022-16452665 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L119 | chrI(-):14143187-14144121 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L120 | chrI(+):5978640-5978740 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L121 | chrIV(-):16217036-16217482 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L122 | chrV(-):3205378-3206036 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L123 | chrII(+):13465010-13465110 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L124 | chrI(-):12785416-12786129 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L125 | chrIII(-):54826-56245 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L126 | chrIV(+):1069143-1069806 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L127 | chrV(+):14766362-14768080 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L128 | chrX(+):12835264-12836787 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L129 | chrV(+):15582353-15582811 | -1.6 | 0.0 |
| lincRNA\_WO3P\_L130 | chrX(+):14446433-14447611 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L131 | chrI(-):1974410-1976802 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L132 | chrII(-):13663163-13664314 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L133 | chrV(+):9427994-9428239 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L134 | chrI(+):13889333-13890007 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L135 | chrV(-):19228508-19228767 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L136 | chrX(+):1832754-1833431 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L137 | chrIII(+):2433184-2433364 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L138 | chrIV(+):3943298-3943761 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L139 | chrIII(-):9638014-9638889 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L140 | chrV(+):12351511-12351800 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L141 | chrII(+):3274807-3274907 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L142 | chrIV(-):58220-58937 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L143 | chrII(+):14046797-14047194 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L144 | chrIV(+):7277928-7280257 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L146 | chrI(-):10621671-10622305 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L147 | chrX(-):2368569-2368669 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L148 | chrIV(+):16216863-16217201 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L149 | chrIV(-):785241-785341 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L150 | chrV(+):978042-980917 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L151 | chrI(+):10361813-10362662 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L152 | chrX(+):15632271-15632976 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L153 | chrX(+):435508-435912 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L154 | chrV(+):14204437-14205601 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L155 | chrV(-):11331688-11332081 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L156 | chrII(-):1456164-1458821 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L157 | chrII(-):2859415-2859780 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L158 | chrI(+):7709582-7712556 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L159 | chrI(+):13454401-13455256 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L160 | chrX(-):1281846-1283250 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L161 | chrIV(-):4170699-4171568 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L162 | chrX(+):15831335-15832010 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L163 | chrII(+):8644391-8645016 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L164 | chrI(-):1966293-1966791 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L166 | chrX(+):13060141-13060762 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L167 | chrIV(-):16590969-16591898 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L168 | chrX(+):11787841-11789636 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L169 | chrI(+):12755378-12756395 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L170 | chrX(+):8841792-8842784 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L171 | chrIV(+):8256600-8258318 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L172 | chrII(-):7839534-7841128 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L173 | chrX(+):5033676-5033956 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L174 | chrI(-):1557640-1560182 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L175 | chrI(-):1430714-1431048 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L176 | chrV(+):5764628-5765273 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L177 | chrX(+):10135-10623 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L178 | chrII(-):5076724-5076931 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L179 | chrV(+):14200550-14200650 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L180 | chrX(-):14724374-14724721 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L181 | chrX(-):2330712-2335414 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L182 | chrV(+):10990921-10991199 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L183 | chrIV(+):13578276-13578924 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L184 | chrX(-):12501583-12501683 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L185 | chrIV(-):17139057-17141063 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L186 | chrI(-):14607751-14609656 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L188 | chrIV(-):648343-649003 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L190 | chrIV(-):2739544-2739932 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L191 | chrX(+):4203776-4204075 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L192 | chrV(+):4551020-4553499 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L193 | chrIV(-):7367110-7367651 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L227 | chrX(-):2765660-2767987 | -1.0 | 0.0 |
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| lincRNA\_WO3P\_L241 | chrX(+):13382306-13382945 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L242 | chrX(-):16837396-16838951 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L244 | chrV(+):19179445-19180315 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L245 | chrV(-):133415-135059 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L246 | chrIV(-):3182444-3184812 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L247 | chrII(+):8640859-8642505 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L248 | chrX(-):14079013-14079158 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L255 | chrIV(+):6713440-6715194 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L256 | chrX(+):13883135-13883598 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L257 | chrII(-):9392556-9392827 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L258 | chrII(+):13841434-13842912 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L259 | chrV(-):20590764-20591101 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L260 | chrX(-):14040823-14043037 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L263 | chrV(-):15169639-15170205 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L264 | chrV(-):6893164-6894534 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L265 | chrV(-):3722451-3723791 | -1.3 | 0.0 |
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| lincRNA\_WO3P\_L270 | chrIV(-):12512417-12512728 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L272 | chrV(+):3045141-3046353 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L275 | chrI(-):10462403-10463215 | -1.0 | 0.0 |
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| lincRNA\_WO3P\_L278 | chrX(-):8841712-8841978 | -1.3 | 0.0 |
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| lincRNA\_WO3P\_L280 | chrIII(-):3820424-3821123 | -1.3 | 0.0 |
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| lincRNA\_WO3P\_L291 | chrX(+):4418541-4419460 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L294 | chrX(+):2463336-2465415 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L295 | chrIV(+):16110228-16113004 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L298 | chrIV(+):16497283-16499115 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L299 | chrV(+):17573202-17574369 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L304 | chrIV(+):10648197-10648544 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L305 | chrI(-):779908-781990 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L306 | chrX(+):8565070-8566692 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L307 | chrI(+):3417014-3417368 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L308 | chrIII(+):4099144-4100052 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L309 | chrII(-):13358019-13358563 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L310 | chrI(+):8787090-8789408 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L311 | chrV(-):4586130-4586597 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L312 | chrII(-):3177459-3177697 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L313 | chrIV(+):1066973-1067777 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L314 | chrIII(-):3030505-3032517 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L315 | chrX(+):15638049-15640943 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L316 | chrX(-):17508027-17512917 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L317 | chrX(-):11699417-11700252 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L318 | chrX(+):6164893-6165228 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L319 | chrV(+):2635791-2636924 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L320 | chrX(-):17288461-17289329 | -1.0 | 0.0 |
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| lincRNA\_WO3P\_L322 | chrX(-):5042624-5043124 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L323 | chrIV(+):2857683-2859243 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L324 | chrV(-):5221259-5224284 | -1.0 | 0.0 |
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| lincRNA\_WO3P\_L326 | chrV(-):1079953-1080848 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L327 | chrX(-):12056863-12059967 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L328 | chrIV(+):3097970-3098231 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L329 | chrIII(-):4484691-4485180 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L330 | chrX(+):5030950-5031860 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L331 | chrIV(-):7380299-7381052 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L332 | chrX(-):3221280-3223240 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L333 | chrII(+):13357258-13357828 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L334 | chrII(-):14414154-14414819 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L335 | chrIV(-):9581060-9582484 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L336 | chrV(+):5887102-5889241 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L337 | chrII(+):11296120-11296220 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L338 | chrII(-):5566679-5567180 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L339 | chrX(-):5883396-5884848 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L340 | chrII(+):12090168-12091093 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L341 | chrIII(+):7745-7845 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L342 | chrIII(-):4050143-4050662 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L343 | chrIII(-):11741980-11742080 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L344 | chrI(-):14291773-14292043 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L345 | chrV(+):12028624-12030961 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L346 | chrV(+):1891500-1892182 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L347 | chrI(-):2012327-2013044 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L348 | chrX(+):2926644-2926904 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L349 | chrX(-):5049155-5050382 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L350 | chrIII(-):12664343-12665468 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L351 | chrII(-):12638985-12639295 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L352 | chrI(+):13046795-13047600 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L353 | chrX(-):17488993-17491182 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L354 | chrIII(+):7402184-7405354 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L355 | chrIII(+):13013924-13016294 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L356 | chrX(+):17489578-17491261 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L357 | chrX(-):12607789-12609850 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L358 | chrX(-):1290470-1292093 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L359 | chrX(+):14825374-14828571 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L360 | chrIII(+):11744646-11745003 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L361 | chrI(-):981394-982299 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L362 | chrV(+):10875231-10877558 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L363 | chrV(-):20872225-20874820 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L364 | chrV(-):20013635-20014082 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L365 | chrV(-):706698-707015 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L366 | chrV(-):12300675-12301689 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L367 | chrV(-):6080644-6083919 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L368 | chrX(+):8746733-8748148 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L369 | chrX(-):7349582-7351372 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L370 | chrII(-):15199362-15199628 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L371 | chrII(-):602547-604605 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L372 | chrIV(+):6939455-6940162 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L373 | chrIV(-):9433687-9434011 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L374 | chrI(+):2127416-2128325 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L375 | chrIII(+):13184575-13186401 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L376 | chrII(+):4567927-4569451 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L377 | chrX(-):17478831-17478931 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L378 | chrI(-):1363255-1365077 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L379 | chrX(+):2329526-2329626 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L380 | chrX(-):11936014-11937166 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L381 | chrX(-):2087790-2088618 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L382 | chrIV(-):3092517-3096283 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L385 | chrX(-):3949824-3952721 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L386 | chrX(-):8431275-8432502 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L387 | chrIV(+):3177185-3178932 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L388 | chrX(+):15997109-15997813 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L389 | chrI(+):12911055-12912047 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L390 | chrV(+):17463178-17464303 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L391 | chrIV(+):3309966-3310307 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L392 | chrX(+):16346182-16347178 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L393 | chrV(+):15659237-15662055 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L394 | chrX(+):2799727-2800637 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L395 | chrIV(-):16580881-16581695 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L396 | chrI(-):3316576-3317088 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L397 | chrII(+):8586079-8586428 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L398 | chrIV(+):1821810-1822399 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L399 | chrIV(-):2532406-2533271 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L400 | chrIII(+):2841069-2841731 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L401 | chrX(-):14443842-14444231 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L402 | chrI(+):5700460-5701059 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L403 | chrII(+):1185720-1186108 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L404 | chrX(+):16533080-16533585 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L405 | chrV(-):506602-507223 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L406 | chrIV(-):15752330-15752953 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L407 | chrIV(+):11762409-11764657 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L408 | chrX(+):11741633-11744173 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L409 | chrV(+):19656160-19658574 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L410 | chrV(+):3565816-3568566 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L411 | chrX(-):2212269-2214730 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L412 | chrIV(+):16373379-16373646 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L413 | chrV(-):19097339-19097611 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L414 | chrX(+):5313240-5315205 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L415 | chrIV(-):642527-644444 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L416 | chrX(-):1664832-1665329 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L417 | chrX(+):14399113-14400288 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L418 | chrIII(-):6625615-6627989 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L419 | chrI(-):3099859-3100779 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L421 | chrIV(+):16404403-16404856 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L422 | chrV(-):20867808-20870122 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L424 | chrII(+):4567997-4570535 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L425 | chrIV(-):2732863-2733153 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L426 | chrX(-):8400972-8401502 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L427 | chrI(+):13974736-13975854 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L428 | chrIV(+):4781974-4783469 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L433 | chrX(+):1707286-1709320 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L434 | chrX(-):14840852-14841470 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L435 | chrX(+):12612009-12612351 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L436 | chrIV(+):8953163-8955202 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L437 | chrIII(-):13175632-13176590 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L438 | chrIII(-):13011808-13012716 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L439 | chrX(-):17496637-17499175 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L441 | chrI(-):1276979-1277336 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L445 | chrV(-):2041895-2042412 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L447 | chrI(+):978408-979061 | -1.3 | 0.0 |
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| lincRNA\_WO3P\_L450 | chrX(+):748737-749254 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L453 | chrV(+):16269678-16270065 | -1.4 | 0.0 |
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| lincRNA\_WO3P\_L455 | chrII(-):13147254-13150999 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L456 | chrX(+):16954091-16956177 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L457 | chrII(-):5763533-5763633 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L458 | chrII(-):13168575-13170235 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L459 | chrIV(-):7966104-7966600 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L460 | chrIV(+):3157523-3158168 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L461 | chrIV(+):2414999-2417922 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L464 | chrX(-):4315516-4315934 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L465 | chrV(-):800016-800613 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L466 | chrI(-):10745255-10749076 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L467 | chrIII(+):1668804-1671234 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L470 | chrIII(+):2372910-2375145 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L471 | chrIV(-):1887440-1890401 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L472 | chrII(+):1592127-1592732 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L473 | chrV(-):6341461-6342028 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L474 | chrIV(+):11234949-11235714 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L475 | chrIV(+):2081395-2082786 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L476 | chrX(-):7171863-7172954 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L477 | chrI(+):3121011-3123113 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L478 | chrX(+):3433464-3436241 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L479 | chrIV(-):8945217-8948774 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L480 | chrV(-):5368363-5369402 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L481 | chrI(+):10493375-10494210 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L482 | chrII(+):13471555-13472004 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L483 | chrX(-):12897615-12898699 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L484 | chrX(+):7172419-7173026 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L485 | chrIV(+):16419296-16421480 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L486 | chrIII(+):12892368-12893322 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L487 | chrX(-):13366805-13368555 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L488 | chrIII(+):2628197-2628315 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L489 | chrIII(+):9277717-9278683 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L490 | chrIV(+):642527-645260 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L491 | chrI(+):13896924-13898578 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L492 | chrIV(-):3983777-3986236 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L493 | chrX(-):15660621-15661826 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L494 | chrII(-):797992-798352 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L495 | chrIV(+):3180632-3182209 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L496 | chrI(+):786759-788551 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L497 | chrX(+):2372582-2372682 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L498 | chrIII(+):10149018-10149386 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L499 | chrII(-):14057890-14059028 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L500 | chrIII(+):138731-138980 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L501 | chrIV(-):9058031-9058747 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L502 | chrIV(+):1790935-1791406 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L503 | chrX(+):13851198-13852287 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L504 | chrII(-):5268923-5269515 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L505 | chrIII(-):12803313-12803987 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L506 | chrIII(+):6402382-6406323 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L507 | chrIV(-):4948439-4951380 | -1.2 | 0.0 |
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| lincRNA\_WO3P\_L509 | chrIV(+):3412825-3413087 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L510 | chrII(+):15254967-15255589 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L511 | chrX(+):10849877-10851093 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L512 | chrI(+):9636398-9638137 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L513 | chrX(-):16820206-16821067 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L514 | chrV(-):14770922-14771388 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L515 | chrI(+):433424-436288 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L516 | chrX(-):8490751-8492189 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L517 | chrX(-):9766058-9768785 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L518 | chrV(-):19805376-19808432 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L519 | chrIV(-):3404033-3404628 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L520 | chrX(-):14372809-14373845 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L521 | chrI(+):576925-581116 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L522 | chrIV(+):1978094-1979155 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L523 | chrIII(-):7675181-7677184 | -1.1 | 0.0 |
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| lincRNA\_WO3P\_L525 | chrII(+):1585414-1585867 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L526 | chrI(-):8673083-8675190 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L527 | chrI(+):1827366-1829268 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L528 | chrIV(+):17235956-17236521 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L529 | chrI(+):14917036-14918309 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L530 | chrX(+):12825277-12827212 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L531 | chrIV(+):3849768-3850485 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L532 | chrI(-):986333-986611 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L533 | chrV(-):7570619-7570869 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L534 | chrI(-):6693365-6695999 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L535 | chrV(+):1513330-1513995 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L536 | chrI(+):7418649-7419658 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L537 | chrIII(-):8570639-8571197 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L538 | chrX(+):2459062-2460862 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L539 | chrV(-):704270-706412 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L540 | chrV(-):1248913-1252269 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L541 | chrX(+):8961242-8963913 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L542 | chrV(-):1568130-1569595 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L543 | chrIV(-):16496250-16497072 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L544 | chrIII(-):210658-211805 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L545 | chrIII(+):3674239-3674339 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L546 | chrX(-):13830798-13831181 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L547 | chrIII(-):4039381-4039481 | -1.3 | 0.0 |
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| lincRNA\_WO3P\_L549 | chrIII(+):99051-99325 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L550 | chrX(-):15327213-15327711 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L551 | chrX(-):10433257-10435221 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L552 | chrII(+):14190486-14190948 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L553 | chrII(+):4151461-4154291 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L554 | chrIV(-):1143495-1144618 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L555 | chrIV(-):16994410-16994754 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L556 | chrI(-):14236234-14237266 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L557 | chrIII(-):3033707-3035357 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L558 | chrIII(-):10716890-10718845 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L559 | chrV(-):524851-525116 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L560 | chrIII(+):10575857-10581408 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L561 | chrV(+):13574946-13577670 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L562 | chrIII(-):10546515-10549409 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L563 | chrI(-):13221036-13221504 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L564 | chrIII(+):10363483-10363583 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L565 | chrX(+):6964086-6965186 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L566 | chrV(-):18583881-18585950 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L567 | chrX(-):7448476-7450596 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L568 | chrIII(+):2817088-2817553 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L569 | chrIII(+):6060688-6063838 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L570 | chrX(-):6418218-6418478 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L571 | chrIV(+):1724411-1725177 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L572 | chrI(+):12243509-12245145 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L573 | chrI(-):3403198-3407152 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L574 | chrIV(-):6931745-6933805 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L575 | chrX(-):16422029-16422964 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L576 | chrX(-):9775526-9777100 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L577 | chrX(-):3365799-3366950 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L578 | chrX(-):16773875-16774069 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L579 | chrX(-):1231739-1231953 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L580 | chrIII(-):13555814-13559000 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L581 | chrIII(-):12097648-12097748 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L582 | chrV(-):14859746-14861509 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L583 | chrIII(-):7819544-7819970 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L584 | chrX(+):8523551-8525167 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L585 | chrII(+):9562105-9562939 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L586 | chrX(-):5125672-5127713 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L587 | chrX(-):8520248-8521095 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L588 | chrX(-):10071547-10071910 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L589 | chrX(+):13261424-13261629 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L590 | chrX(-):4226524-4226649 | -1.5 | 0.0 |
| lincRNA\_WO3P\_L591 | chrIII(-):12441885-12442477 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L592 | chrIV(+):151730-155180 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L593 | chrX(-):12588098-12590728 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L594 | chrIV(+):15694657-15696123 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L595 | chrX(+):16206607-16209438 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L596 | chrIV(+):3821503-3824667 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L597 | chrIII(+):33270-34658 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L598 | chrII(-):8878075-8878324 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L599 | chrII(-):10607805-10609117 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L600 | chrV(-):1563802-1566125 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L601 | chrX(+):16086484-16089479 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L602 | chrIV(-):12801908-12802754 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L603 | chrX(+):12820995-12821248 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L604 | chrIV(-):5155120-5155220 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L605 | chrV(+):4639898-4641016 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L606 | chrIV(-):16800714-16800814 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L607 | chrIV(-):16694438-16694684 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L608 | chrX(-):967000-967709 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L609 | chrX(-):3128975-3130944 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L610 | chrII(-):13266766-13269928 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L611 | chrII(+):5300515-5301904 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L612 | chrIII(+):13023937-13024153 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L613 | chrI(-):14843306-14843720 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L614 | chrV(-):14401803-14402468 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L615 | chrIV(+):3642880-3644677 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L616 | chrI(-):10239566-10242458 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L617 | chrII(+):4553169-4553666 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L618 | chrX(-):3511046-3511976 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L619 | chrV(-):3190650-3191209 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L620 | chrIII(+):504325-504967 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L621 | chrIII(+):3560179-3563397 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L622 | chrX(-):13124239-13125729 | -1.3 | 0.0 |
| lincRNA\_WO3P\_L623 | chrX(+):15219470-15223220 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L624 | chrII(+):13001060-13002794 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L625 | chrIII(-):11211902-11213252 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L626 | chrX(+):12673722-12674127 | -1.4 | 0.0 |
| lincRNA\_WO3P\_L627 | chrII(-):353454-355173 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L628 | chrII(+):6161811-6164145 | -1.0 | 0.0 |
| lincRNA\_WO3P\_L629 | chrII(-):3386256-3386884 | -1.1 | 0.0 |
| lincRNA\_WO3P\_L630 | chrII(+):4213550-4213924 | -1.2 | 0.0 |
| lincRNA\_WO3P\_L631 | chrV(+):14387711-14390436 | -1.2 | 0.0 |

Table S2F. Potential ancRNAs without 3P-seq supported poly(A) sites.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Coordination | CPC score | Ribosome/Exp. |
| ancRNA\_WO3P\_L1 | chrIV(+):11147273-11147473 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L2 | chrV(+):5193367-5193467 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L3 | chrIV(-):17277489-17277589 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L4 | chrIII(-):6981464-6981564 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L5 | chrI(+):13626505-13626605 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L6 | chrIV(-):7393166-7393266 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L7 | chrIII(+):10811942-10812042 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L8 | chrI(-):9969417-9969817 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L9 | chrIII(-):6727650-6727850 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L10 | chrII(-):6997487-6997791 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L11 | chrIII(-):8252794-8252894 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L12 | chrII(-):2619543-2619643 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L13 | chrV(+):20695987-20696087 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L14 | chrI(+):5313502-5313802 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L15 | chrV(+):13784349-13784478 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L16 | chrI(+):5402939-5403339 | -1.1 | 0.09 |
| ancRNA\_WO3P\_L17 | chrIV(-):992307-992607 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L18 | chrII(+):10035146-10035246 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L19 | chrX(+):4333917-4334649 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L20 | chrIII(-):880756-881256 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L21 | chrIV(+):9343564-9343664 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L22 | chrI(+):13548181-13548381 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L23 | chrII(-):9248747-9248847 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L24 | chrII(-):265884-265984 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L25 | chrV(+):7453801-7453901 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L26 | chrV(+):6257622-6257922 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L27 | chrII(-):9559193-9559293 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L28 | chrII(+):5086382-5086482 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L29 | chrII(+):10857581-10857681 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L30 | chrI(-):8741786-8742186 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L31 | chrI(+):2297496-2297696 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L32 | chrII(+):9701454-9701754 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L33 | chrV(+):15393945-15394145 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L34 | chrIII(-):6084453-6084553 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L35 | chrV(-):4499618-4499718 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L36 | chrIV(-):4080240-4081252 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L37 | chrI(-):13270025-13271925 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L38 | chrIV(+):13293496-13293596 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L39 | chrIII(-):10810689-10810989 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L40 | chrIII(+):6299348-6299448 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L41 | chrIV(+):14773616-14773716 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L42 | chrI(-):6385999-6386099 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L43 | chrIV(+):3106849-3108306 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L44 | chrIII(-):7589336-7589436 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L45 | chrV(+):15657371-15657771 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L46 | chrIII(-):5029408-5029508 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L47 | chrII(-):14492612-14492712 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L48 | chrI(+):7723956-7724056 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L49 | chrIII(-):11526200-11526300 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L50 | chrIII(+):13165731-13166231 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L51 | chrIV(-):1850549-1850959 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L52 | chrV(-):8579216-8579316 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L53 | chrIV(-):8625921-8626021 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L54 | chrII(-):13579894-13579994 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L55 | chrIII(-):12160851-12161222 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L56 | chrI(+):13480027-13480327 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L57 | chrII(-):11518739-11518905 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L58 | chrIV(+):9231332-9233097 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L59 | chrIII(-):12527675-12527775 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L60 | chrIII(+):6555064-6555164 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L61 | chrV(+):1393153-1393253 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L62 | chrIV(-):12706374-12706674 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L63 | chrIV(-):2513229-2513770 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L64 | chrIV(+):15647558-15648258 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L65 | chrI(+):10701636-10701736 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L66 | chrII(+):3246404-3248463 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L67 | chrII(+):1136788-1137021 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L68 | chrII(+):1931872-1931972 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L69 | chrII(+):13455982-13456522 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L70 | chrV(-):14286149-14286795 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L71 | chrV(-):3691762-3691962 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L72 | chrIII(+):5353055-5355320 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L73 | chrV(-):18290910-18291410 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L74 | chrX(-):11034440-11035722 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L75 | chrI(-):4298036-4298636 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L76 | chrV(+):9244438-9244538 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L77 | chrV(-):3687092-3688330 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L78 | chrIV(+):2903627-2903927 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L79 | chrIII(-):12729831-12731813 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L80 | chrIV(-):6323241-6323341 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L81 | chrIII(+):5353125-5357036 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L82 | chrII(+):4130189-4131527 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L83 | chrII(+):4130305-4132542 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L84 | chrI(-):7229250-7229350 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L85 | chrI(-):4735070-4735170 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L86 | chrV(+):1449799-1450099 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L87 | chrIV(-):5453166-5453266 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L88 | chrII(-):2126065-2128865 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L89 | chrIV(-):14197817-14198017 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L90 | chrIII(+):12657967-12658319 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L91 | chrV(+):8924309-8924509 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L92 | chrIV(-):16917743-16917843 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L93 | chrI(-):1548085-1548733 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L94 | chrX(+):3376921-3377121 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L95 | chrX(+):3823449-3825768 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L96 | chrV(-):19507223-19507423 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L97 | chrI(+):10107441-10107641 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L98 | chrIV(-):2352952-2353252 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L99 | chrIII(-):9259860-9259960 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L100 | chrI(+):7786056-7786556 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L101 | chrIV(+):7520240-7520440 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L102 | chrIV(-):8399404-8399604 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L103 | chrI(+):4013852-4014512 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L104 | chrII(-):1860662-1861301 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L105 | chrII(+):12954555-12954855 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L106 | chrII(-):14878970-14879616 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L107 | chrIV(+):2797668-2797768 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L108 | chrIII(+):3122106-3122704 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L109 | chrI(+):9074738-9077813 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L110 | chrII(+):10933472-10934272 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L111 | chrI(-):1251218-1253129 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L112 | chrI(+):1820603-1820703 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L113 | chrI(-):14086335-14087792 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L114 | chrIV(-):12674437-12674537 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L115 | chrIV(+):13970715-13971654 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L116 | chrII(-):441975-443175 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L117 | chrI(-):11465115-11465215 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L118 | chrV(+):4533960-4535257 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L119 | chrIV(+):727042-727142 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L120 | chrII(+):1953711-1953811 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L121 | chrX(-):11471310-11471765 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L122 | chrIII(-):1877061-1877461 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L123 | chrX(+):4981234-4981334 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L124 | chrV(-):15061242-15061442 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L125 | chrV(-):2239570-2241270 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L126 | chrX(-):6853607-6856381 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L127 | chrIII(-):12189651-12189851 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L128 | chrII(-):2256393-2256493 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L129 | chrX(-):7768325-7770551 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L130 | chrI(-):1935137-1937712 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L131 | chrX(-):4015949-4016049 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L132 | chrIV(+):15459122-15459558 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L133 | chrIV(-):8064585-8067266 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L134 | chrV(+):11441917-11442017 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L135 | chrII(-):1216241-1217036 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L136 | chrI(+):11832958-11833058 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L137 | chrIII(-):1566871-1568092 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L138 | chrI(+):13265022-13265922 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L139 | chrIII(+):3021332-3022849 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L140 | chrI(-):13987506-13988006 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L141 | chrV(+):14431816-14432016 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L142 | chrV(+):17530239-17531439 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L143 | chrI(+):389111-390121 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L144 | chrV(+):12382199-12383999 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L145 | chrIII(+):6555364-6559464 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L146 | chrIV(-):12210197-12210297 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L147 | chrV(-):6212365-6214430 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L148 | chrV(-):19479813-19480513 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L149 | chrIII(-):12501842-12502229 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L150 | chrIII(+):4663168-4663268 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L151 | chrX(-):2060499-2065213 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L152 | chrI(-):12343679-12345079 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L153 | chrIII(-):1000290-1000390 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L154 | chrX(-):4410072-4410857 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L155 | chrX(-):16220976-16221076 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L156 | chrIII(+):9011920-9012020 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L157 | chrIII(+):10560556-10560656 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L158 | chrV(+):4841965-4842465 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L159 | chrV(+):3256052-3256152 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L160 | chrIV(-):5150177-5150777 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L161 | chrI(-):292647-294736 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L162 | chrIV(+):11617308-11618919 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L163 | chrX(+):282725-283586 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L164 | chrIV(+):10093815-10095215 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L165 | chrIII(-):1118463-1120609 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L166 | chrII(-):12161971-12164438 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L167 | chrII(+):3234657-3234757 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L168 | chrIII(+):7968359-7968759 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L169 | chrI(+):229671-230071 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L170 | chrIII(+):3126744-3126844 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L171 | chrIV(-):4393302-4394692 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L172 | chrV(+):12083398-12083698 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L173 | chrV(+):1825870-1826613 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L174 | chrII(-):14943310-14943938 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L175 | chrIV(-):13653909-13654309 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L176 | chrV(-):1262337-1262437 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L177 | chrIV(+):721482-722113 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L178 | chrII(+):4059815-4061373 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L179 | chrI(+):9355271-9356671 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L180 | chrII(+):7642908-7643408 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L181 | chrII(+):1631621-1631905 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L182 | chrX(-):9369026-9369803 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L183 | chrV(+):19239215-19240315 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L184 | chrI(-):2342136-2342636 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L185 | chrI(+):10868342-10868542 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L186 | chrIII(-):3302008-3302525 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L187 | chrV(+):15556866-15559149 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L188 | chrX(+):13164546-13165710 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L189 | chrX(-):14144626-14147366 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L190 | chrV(+):20427864-20428262 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L191 | chrV(-):18760422-18761478 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L192 | chrI(-):14016620-14019620 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L193 | chrIV(+):7357580-7358467 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L194 | chrX(+):12274056-12276229 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L195 | chrIII(+):3619970-3622500 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L196 | chrI(+):3052115-3054589 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L197 | chrI(+):2656827-2657106 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L198 | chrV(+):4356677-4357212 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L199 | chrIII(-):2424967-2425527 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L200 | chrX(+):4063820-4064514 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L201 | chrII(-):8280332-8280732 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L202 | chrV(-):19247376-19250993 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L203 | chrII(-):15206998-15208075 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L204 | chrI(+):2453355-2453686 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L205 | chrX(+):8326565-8328936 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L206 | chrIV(+):16020161-16021196 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L207 | chrI(-):4421663-4422479 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L208 | chrX(-):7360725-7363125 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L209 | chrV(+):8440846-8442034 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L210 | chrIV(-):15152055-15153412 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L211 | chrI(-):2328320-2328460 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L212 | chrIII(+):96599-98270 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L213 | chrIV(-):14137782-14137882 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L214 | chrV(-):14765000-14768057 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L215 | chrIV(+):11531948-11534592 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L216 | chrIII(-):12809944-12810287 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L217 | chrX(-):2802108-2802727 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L218 | chrI(+):8857664-8860155 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L219 | chrV(-):2677997-2679587 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L220 | chrI(+):10993205-10993511 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L221 | chrIV(+):6980946-6982546 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L222 | chrII(-):12641788-12642891 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L223 | chrV(-):15109717-15110599 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L224 | chrII(-):2269535-2269635 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L225 | chrX(+):3167637-3168394 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L226 | chrV(+):20276148-20276927 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L227 | chrII(+):977030-977842 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L228 | chrI(+):1851905-1853361 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L229 | chrIII(-):6209998-6210930 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L230 | chrIV(+):2445141-2447867 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L231 | chrIII(+):3260562-3262797 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L232 | chrI(-):13347740-13351283 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L233 | chrI(+):14748095-14750456 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L234 | chrII(-):5327505-5328796 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L235 | chrI(-):13007490-13010935 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L236 | chrX(+):14228854-14229506 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L237 | chrI(+):12401378-12403860 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L238 | chrV(+):8691126-8694403 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L239 | chrIV(-):16353354-16353967 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L240 | chrIV(-):116067-116836 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L241 | chrV(+):18734017-18734117 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L242 | chrIV(+):16528556-16529351 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L243 | chrIV(+):13396972-13397371 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L244 | chrI(+):13681205-13681753 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L245 | chrV(-):17541735-17542497 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L246 | chrII(+):3362725-3364062 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L247 | chrV(-):9920409-9922326 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L248 | chrV(-):2829980-2831382 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L249 | chrX(-):16211539-16213902 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L250 | chrIV(+):7527756-7529995 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L251 | chrV(-):20163540-20164439 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L252 | chrI(-):11302507-11303548 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L253 | chrX(+):9225362-9226374 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L254 | chrIV(-):16811199-16811912 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L255 | chrIV(+):4219480-4222568 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L256 | chrI(+):11714664-11715932 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L257 | chrV(+):2150320-2151579 | -1.4 | 0.0 |
| ancRNA\_WO3P\_L258 | chrII(-):9565210-9566750 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L259 | chrIV(-):17236501-17237146 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L260 | chrV(-):20002230-20003032 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L261 | chrIV(-):3978339-3981016 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L262 | chrV(-):1707232-1709655 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L263 | chrIV(+):10060762-10061440 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L264 | chrV(+):2746705-2749843 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L265 | chrIV(+):13598286-13600405 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L266 | chrX(+):3016340-3018426 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L267 | chrIV(-):5521204-5522685 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L268 | chrV(-):14716339-14716770 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L269 | chrIV(-):14915606-14915926 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L270 | chrV(+):19269712-19270864 | -1.5 | 0.0 |
| ancRNA\_WO3P\_L271 | chrV(+):3900777-3902094 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L272 | chrX(+):1194132-1196663 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L273 | chrI(-):6418180-6419535 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L274 | chrV(+):2951887-2952253 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L275 | chrIV(-):14583394-14584886 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L276 | chrIV(+):15959269-15960483 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L277 | chrIV(-):16636595-16637158 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L278 | chrV(-):15613626-15614174 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L279 | chrI(-):11352817-11353063 | -1.0 | 0.0 |
| ancRNA\_WO3P\_L280 | chrX(-):10502448-10505163 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L281 | chrI(-):12122512-12124876 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L282 | chrI(-):11136099-11139495 | -1.2 | 0.0 |
| ancRNA\_WO3P\_L283 | chrI(-):3893368-3894844 | -1.3 | 0.0 |
| ancRNA\_WO3P\_L284 | chrIV(-):14522749-14524387 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L285 | chrII(+):14378629-14379694 | -1.1 | 0.0 |
| ancRNA\_WO3P\_L286 | chrV(+):15949085-15949657 | -1.1 | 0.0 |

Table S3A. Unique trans-splicing junctions and total chimeric reads of protein-coding genes. Of RefSeq genes, 20,587 unique genes were examined.

|  |  |  |
| --- | --- | --- |
| Splice leader | Unique trans-splicing junctions | Total chimeric reads |
| sl4 | 244 | 400 |
| sl5 | 1,647 | 7,592 |
| sl1 | 5,615 | 65,736 |
| sl2 | 956 | 3,555 |
| sl3 | 1,051 | 3,081 |
| slc | 532 | 1,004 |
| sle | 3 | 5 |
| slg | 63 | 82 |
| slb | 1,240 | 5,358 |
| slCo | 244 | 381 |
| SUM | 6,624 | 87,194 |

Table S3B. Unique trans-splicing junctions and chimeric reads of lincRNAs. 170 lincRNAs were examined.

|  |  |  |
| --- | --- | --- |
| Splice leader | Unique trans-splicing junctions | Total chimeric reads |
| sl4 | 0 | 0 |
| sl5 | 0 | 0 |
| sl1 | 11 | 51 |
| sl2 | 1 | 1 |
| sl3 | 0 | 0 |
| slc | 0 | 0 |
| sle | 0 | 0 |
| slg | 0 | 0 |
| slb | 0 | 0 |
| slCo | 0 | 0 |
| SUM | 12 | 52 |

Table S3C. Motif analysis of the downstream of trans-splice sites. For trans-splicing junction sites of mRNAs and lincRNAs, the frequencies of all possible codons in their downstream 30 nt were measured, compared to that of background regions (within −500 to 100 nt of the 5’ end of mRNAs and lincRNAs). The *P* values were estimated using the hypergeometric test, then adjusted using the Bonferroni correction.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Codons | Signal | Background | Adjusted *P* |
|  | CCG | 11 | 59 | 8.9 X 10-4 |
|  | GAC | 10 | 65 | 0.012 |
| lincRNAs | CGA | 11 | 89 | 0.054 |
|  | AUG | 6 | 95 | 0.95 |
|  | AUG | 25 | 253 | 8 X 10-5 |
| mRNAs | UGA | 29 | 313 | 9 X 10-5 |
|  | AUC | 27 | 327 | 9.4 X 10-4 |

Table S4. Tandem clusters of lincRNAs. lincRNA tandem pairs within 1 kb of each other.

|  |  |  |  |
| --- | --- | --- | --- |
| lincRNA A | Coordinates | lincRNA B | Coordinates |
| *linc-17* | chrII(+):3596219-3596805 | *linc-68* | chrII(+):3597509-3597907 |
| *linc-19* | chrIII(+):3150211-3151341 | *linc-45* | chrIII(+):3151798-3152596 |
| *linc-41* | chrIV(-):4241216-4241757 | *linc-21* | chrIV(-):4242078-4242458 |

Table S5. Depth of small-RNA libraries.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cloning method | Library | Mapping reads | Unique reads | References |
| 5’ mono-phosphate dependent | Embryo | 1,296,014 | 135,942 | (Batista et al. 2008) |
| L4 | 1,566,726 | 134,977 | (Batista et al. 2008) |
| 5’ mono-phosphate independent | L4 | 4,507,108 | 1,103,373 | GSE36394 |
| Adult | 2,786,115 | 563,898 | GSE36394 |
| WAGO-1 IP | 3,081,504 | 1,395,906 | (Gu et al. 2009) |
| CSR-1 IP | 1,473,583 | 554,845 | (Gu et al. 2009) |

Table S6. lincRNAs antisense to 22G and 26G-RNAs.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name | Mean RPKM | 22G-RNAs (RPKM) | | | |  | 26G-RNAs (RPKM) | |
| L4 | Adult | Adult WAGO-1 IP | Adult CSR-1 IP |  | Embryo | L4 |
| *linc-1* | 396.04 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-2* | 96.73 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-3* | 57.58 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-5* | 30.99 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-15* | 25.40 | 34.13 | 4.25 | 0.96 | 6.02 |  | 18.26 | 0.00 |
| *linc-7* | 22.94 | 41.43 | 55.43 | 249.99 | 87.68 |  | 0.00 | 1.69 |
| *linc-6* | 22.03 | 355.76 | 301.17 | 958.63 | 230.11 |  | 0.00 | 7.34 |
| *linc-4* | 15.94 | 1.30 | 1.47 | 1.20 | 7.94 |  | 0.00 | 0.00 |
| *linc-18* | 15.66 | 5.33 | 1.73 | 6.24 | 0.00 |  | 0.00 | 39.89 |
| *linc-8* | 14.90 | 771.31 | 220.75 | 106.45 | 277.48 |  | 366.61 | 17.45 |
| *linc-10* | 9.84 | 4.78 | 0.00 | 0.00 | 0.00 |  | 0.00 | 2.75 |
| *linc-11* | 9.43 | 117.34 | 46.99 | 223.48 | 132.23 |  | 929.89 | 16.45 |
| *linc-14* | 9.39 | 42.71 | 17.27 | 6.94 | 25.40 |  | 540.53 | 13.65 |
| *linc-21* | 9.03 | 514.34 | 220.88 | 11.35 | 718.96 |  | 5.40 | 2.23 |
| *linc-17* | 7.65 | 102.57 | 50.50 | 13.86 | 75.02 |  | 546.71 | 28.87 |
| *linc-13* | 7.56 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-25* | 6.32 | 21.28 | 3.69 | 1.11 | 0.00 |  | 58.13 | 52.46 |
| *linc-80* | 6.18 | 1.06 | 0.00 | 3.11 | 0.00 |  | 0.00 | 0.00 |
| *linc-23* | 6.11 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-16* | 6.02 | 36.82 | 22.12 | 22.28 | 385.90 |  | 702.32 | 24.72 |
| *linc-12* | 5.82 | 10.24 | 16.57 | 0.00 | 194.89 |  | 1927.01 | 39.28 |
| *linc-22* | 5.70 | 1452.83 | 290.81 | 69.72 | 233.54 |  | 0.25 | 0.00 |
| *linc-19* | 5.66 | 19.89 | 13.07 | 0.45 | 41.82 |  | 2.16 | 3.58 |
| *linc-37* | 5.55 | 0.00 | 2.38 | 10.75 | 0.00 |  | 0.00 | 0.00 |
| *linc-24* | 5.45 | 135.26 | 51.77 | 4.37 | 15.66 |  | 96.45 | 6.14 |
| *linc-40* | 5.31 | 0.42 | 0.00 | 0.00 | 0.00 |  | 0.00 | 1.81 |
| *linc-36* | 5.06 | 2.29 | 0.00 | 2.23 | 0.00 |  | 0.00 | 103.09 |
| *linc-34* | 5.05 | 1.43 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-35* | 4.98 | 0.00 | 0.00 | 1.72 | 0.00 |  | 0.00 | 0.00 |
| *linc-26* | 4.89 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-72* | 4.84 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-33* | 4.72 | 0.00 | 0.00 | 5.19 | 0.00 |  | 0.00 | 0.00 |
| *linc-32* | 4.20 | 11.86 | 5.48 | 52.02 | 0.00 |  | 0.00 | 0.00 |
| *linc-169* | 4.05 | 1.53 | 0.82 | 2.73 | 3.11 |  | 0.00 | 0.00 |
| *linc-45* | 4.01 | 62.60 | 71.94 | 6.72 | 172.98 |  | 3.36 | 9.73 |
| *linc-27* | 3.86 | 52.57 | 8.53 | 2.06 | 5.38 |  | 6.11 | 0.00 |
| *linc-46* | 3.86 | 1.47 | 2.38 | 0.00 | 4.49 |  | 0.00 | 0.00 |
| *linc-168* | 3.80 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-29* | 3.57 | 624.79 | 563.67 | 472.62 | 226.21 |  | 0.00 | 0.00 |
| *linc-28* | 3.52 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-41* | 3.26 | 96.62 | 51.38 | 3.93 | 26.00 |  | 7.78 | 9.01 |
| *linc-61* | 3.07 | 7.86 | 0.00 | 0.00 | 0.00 |  | 1.95 | 0.00 |
| *linc-50* | 3.06 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-71* | 3.05 | 0.00 | 0.00 | 1.99 | 0.00 |  | 0.00 | 0.00 |
| *linc-48* | 2.77 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-42* | 2.72 | 12.27 | 3.35 | 7.46 | 1.95 |  | 28.82 | 7.34 |
| *linc-51* | 2.72 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-44* | 2.41 | 59.78 | 52.07 | 10.09 | 21.10 |  | 0.00 | 0.00 |
| *linc-170* | 2.40 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 11.13 |
| *linc-56* | 2.27 | 0.00 | 0.00 | 0.43 | 0.00 |  | 0.00 | 0.00 |
| *linc-43* | 2.21 | 0.00 | 0.00 | 1.63 | 0.00 |  | 0.00 | 0.00 |
| *linc-20* | 2.12 | 16.00 | 6.26 | 21.91 | 8.51 |  | 0.00 | 0.00 |
| *linc-39* | 2.07 | 0.00 | 0.00 | 0.90 | 0.00 |  | 0.00 | 0.00 |
| *linc-58* | 1.91 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-49* | 1.89 | 0.71 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-38* | 1.87 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-82* | 1.79 | 0.00 | 0.00 | 0.20 | 0.00 |  | 0.00 | 0.00 |
| *linc-54* | 1.75 | 0.00 | 0.00 | 5.76 | 0.00 |  | 0.00 | 0.00 |
| *linc-64* | 1.71 | 0.00 | 0.00 | 0.95 | 0.00 |  | 0.00 | 0.00 |
| *linc-47* | 1.68 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-65* | 1.58 | 0.00 | 0.00 | 8.45 | 0.00 |  | 0.00 | 0.00 |
| *linc-53* | 1.45 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-70* | 1.36 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-66* | 1.32 | 1.49 | 0.00 | 0.00 | 1.51 |  | 0.00 | 18.52 |
| *linc-52* | 1.28 | 0.00 | 0.00 | 0.44 | 5.55 |  | 0.00 | 0.00 |
| *linc-83* | 1.26 | 0.52 | 0.85 | 1.53 | 0.00 |  | 0.00 | 0.00 |
| *linc-57* | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-55* | 1.18 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-84* | 1.17 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-9* | 1.09 | 8.37 | 6.10 | 11.77 | 17.51 |  | 0.00 | 0.00 |
| *linc-67* | 1.05 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-60* | 1.04 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-69* | 1.00 | 0.00 | 0.00 | 0.91 | 0.00 |  | 0.00 | 0.00 |
| *linc-59* | 0.98 | 795.30 | 89.20 | 3.87 | 5.40 |  | 0.00 | 10.15 |
| *linc-73* | 0.92 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-107* | 0.92 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-81* | 0.91 | 1.40 | 1.54 | 3.59 | 4.06 |  | 0.00 | 0.00 |
| *linc-76* | 0.89 | 0.00 | 0.00 | 0.17 | 0.00 |  | 0.00 | 0.00 |
| *linc-92* | 0.87 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-62* | 0.83 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-123* | 0.80 | 74.72 | 161.62 | 798.81 | 138.78 |  | 0.00 | 0.00 |
| *linc-63* | 0.80 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-96* | 0.79 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-68* | 0.72 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-101* | 0.72 | 10.84 | 3.09 | 2.80 | 37.05 |  | 341.45 | 5.50 |
| *linc-111* | 0.70 | 8.19 | 0.70 | 0.63 | 0.00 |  | 3.00 | 1.24 |
| *linc-78* | 0.68 | 3.55 | 5.74 | 15.58 | 0.00 |  | 0.00 | 0.00 |
| *linc-79* | 0.64 | 0.00 | 0.00 | 0.88 | 0.00 |  | 0.00 | 0.00 |
| *linc-87* | 0.62 | 0.07 | 0.10 | 0.89 | 1.54 |  | 0.00 | 0.00 |
| *linc-98* | 0.62 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-124* | 0.58 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-91* | 0.55 | 0.14 | 0.11 | 0.50 | 0.00 |  | 0.00 | 0.00 |
| *linc-77* | 0.54 | 0.38 | 0.41 | 4.14 | 1.16 |  | 0.00 | 0.00 |
| *linc-85* | 0.53 | 0.00 | 0.00 | 0.72 | 0.00 |  | 0.00 | 0.00 |
| *linc-89* | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-102* | 0.49 | 0.59 | 0.16 | 1.86 | 0.00 |  | 0.00 | 0.00 |
| *linc-88* | 0.47 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-106* | 0.44 | 0.70 | 1.13 | 2.04 | 0.00 |  | 9.71 | 2.01 |
| *linc-31* | 0.42 | 0.02 | 0.51 | 0.46 | 0.00 |  | 0.00 | 0.00 |
| *linc-93* | 0.41 | 49.96 | 6.85 | 0.00 | 7.77 |  | 229.71 | 2.44 |
| *linc-86* | 0.41 | 2.22 | 0.00 | 1.63 | 0.00 |  | 0.00 | 1.60 |
| *linc-140* | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 |  | 6.74 | 0.00 |
| *linc-94* | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-95* | 0.37 | 0.28 | 0.00 | 0.41 | 0.00 |  | 0.00 | 0.00 |
| *linc-74* | 0.37 | 0.00 | 0.00 | 1.25 | 0.00 |  | 0.00 | 0.00 |
| *linc-163* | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-97* | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-138* | 0.35 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-116* | 0.34 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-103* | 0.34 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-100* | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-104* | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-113* | 0.28 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-137* | 0.26 | 1.91 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-75* | 0.26 | 0.32 | 0.00 | 5.25 | 2.93 |  | 3.33 | 0.00 |
| *linc-109* | 0.25 | 0.00 | 0.00 | 0.09 | 0.00 |  | 0.00 | 0.00 |
| *linc-128* | 0.24 | 0.29 | 0.47 | 1.20 | 0.00 |  | 0.00 | 0.00 |
| *linc-99* | 0.24 | 0.00 | 0.00 | 2.22 | 0.00 |  | 0.00 | 0.00 |
| *linc-105* | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-118* | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-112* | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-108* | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-130* | 0.20 | 6.61 | 3.31 | 13.20 | 3.71 |  | 0.00 | 0.00 |
| *linc-30* | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-117* | 0.19 | 0.00 | 0.00 | 0.29 | 0.00 |  | 0.00 | 0.00 |
| *linc-90* | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-135* | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-115* | 0.19 | 0.00 | 0.00 | 0.76 | 0.00 |  | 0.00 | 0.00 |
| *linc-125* | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-119* | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-114* | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-126* | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-127* | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-120* | 0.15 | 0.16 | 0.25 | 0.68 | 0.00 |  | 0.00 | 0.00 |
| *linc-110* | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-132* | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-147* | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-131* | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-134* | 0.13 | 0.00 | 0.00 | 0.91 | 0.00 |  | 0.00 | 0.00 |
| *linc-148* | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-129* | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-139* | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-133* | 0.12 | 0.00 | 0.00 | 0.00 | 0.84 |  | 0.00 | 0.00 |
| *linc-151* | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-149* | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-141* | 0.11 | 0.00 | 0.00 | 0.69 | 0.00 |  | 0.00 | 0.00 |
| *linc-122* | 0.10 | 0.12 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-136* | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-142* | 0.09 | 0.46 | 0.00 | 0.68 | 0.00 |  | 0.00 | 0.00 |
| *linc-144* | 0.08 | 0.00 | 0.00 | 0.32 | 0.00 |  | 0.00 | 0.00 |
| *linc-143* | 0.07 | 0.00 | 0.22 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-156* | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-162* | 0.06 | 0.46 | 0.00 | 0.68 | 0.00 |  | 0.00 | 0.00 |
| *linc-146* | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-152* | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-121* | 0.05 | 0.00 | 0.00 | 0.00 | 0.32 |  | 0.00 | 0.00 |
| *linc-159* | 0.05 | 0.13 | 2.64 | 0.22 | 52.57 |  | 8.42 | 0.43 |
| *linc-150* | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-160* | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-153* | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-154* | 0.03 | 0.00 | 0.00 | 0.06 | 0.00 |  | 0.00 | 0.00 |
| *linc-158* | 0.03 | 10.30 | 6.26 | 4.01 | 1.16 |  | 0.00 | 0.00 |
| *linc-145* | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-155* | 0.02 | 0.00 | 0.00 | 0.18 | 0.00 |  | 0.00 | 0.00 |
| *linc-164* | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-161* | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-166* | 0.02 | 0.00 | 0.00 | 0.01 | 0.00 |  | 0.00 | 0.00 |
| *linc-165* | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-157* | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |
| *linc-167* | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |  | 0.00 | 0.00 |

Table S7A. The RPKM values of lincRNAs across 35 different samples (External tab delimited file).

Table S7B. 20 tissue-specific lincRNAs [maximum RPKM/mean RPKM ≥ 10 and log2 (maximum RPKM) ≥ 3].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Maximum RPKM (log2) | Mean RPKM (log2) | Fold difference | Specific stage or condition |
| *linc-3* | 9.973592 | -5.04337 | 33155.62 | dauer |
| *linc-62* | 3.127786 | -6.49185 | 786.6832 | dauer |
| *linc-23* | 4.77676 | -3.34962 | 279.4376 | male |
| *linc-1* | 10.40873 | 3.028715 | 166.5733 | male |
| *linc-19* | 6.431577 | -0.54548 | 125.9809 | dauer |
| *linc-79* | 3.288196 | -3.5822 | 117.0029 | dauer |
| *linc-28* | 4.794375 | -0.87845 | 51.01401 | dauer |
| *linc-26* | 4.600365 | -0.8716 | 44.38395 | male |
| *linc-36* | 5.171444 | -0.01552 | 36.42762 | male |
| *linc-41* | 4.599326 | -0.22035 | 28.24015 | male |
| *linc-18* | 6.369681 | 1.900782 | 22.14485 | male |
| *linc-72* | 5.633548 | 1.230219 | 21.16091 | L3 |
| *linc-170* | 3.042009 | -1.20001 | 18.92233 | male |
| *linc-64* | 3.036972 | -1.02977 | 16.75755 | male |
| *linc-13* | 5.706052 | 1.838856 | 14.59291 | late\_embryo |
| *linc-10* | 5.701845 | 1.959837 | 13.38002 | dauer |
| *linc-168* | 3.942029 | 0.254121 | 12.88757 | adult |
| *linc-40* | 3.668773 | 0.162008 | 11.36688 | male |
| *linc-52* | 3.187451 | -0.28063 | 11.06614 | late\_embryo |
| *linc-39* | 3.308501 | -0.02395 | 10.07319 | dauer |

Table S7C. Embryo-specific lincRNAs.

|  |  |
| --- | --- |
| Name | Coordinates |
| *linc-6* | chrX(-):1982705-1982878 |
| *linc-4* | chrII(+):6268924-6270140 |
| *linc-11* | chrII(-):3373164-3374180 |
| *linc-13* | chrII(-):1071513-1071845 |
| *linc-16* | chrII(-):1820245-1820949 |
| *linc-12* | chrII(-):2681408-2681658 |
| *linc-22* | chrX(+):9069076-9073673 |
| *linc-47* | chrII(-):11887681-11888096 |
| *linc-52* | chrII(+):607413-607779 |
| *linc-57* | chrIII(-):7543400-7544988 |
| *linc-55* | chrV(-):5994243-5994523 |
| *linc-60* | chrIV(-):14958892-14959310 |
| *linc-76* | chrIII(-):11126745-11129237 |
| *linc-68* | chrII(+):3597510-3597908 |
| *linc-78* | chrX(+):2243109-2243233 |
| *linc-87* | chrIII(-):12149442-12150998 |
| *linc-77* | chrIV(-):4059924-4061716 |
| *linc-85* | chrI(+):4295025-4296742 |
| *linc-86* | chrIV(+):17220251-17220565 |
| *linc-94* | chrIV(+):735162-735704 |
| *linc-74* | chrII(+):14218711-14220282 |
| *linc-108* | chrV(-):15565144-15566399 |
| *linc-90* | chrIII(+):352221-355401 |
| *linc-150* | chrX(-):2369175-2370539 |

Table S7D. Early larval-specific lincRNAs.

|  |  |
| --- | --- |
| Name | Coordinates |
| *linc-5* | chrX(+):14018532-14019298 |
| *linc-15* | chrX(-):11991407-11991856 |
| *linc-25* | chrV(-):18725324-18725861 |
| *linc-35* | chrII(-):6927574-6927762 |
| *linc-72* | chrII(+):8819737-8820079 |
| *linc-56* | chrX(+):2822748-2823502 |
| *linc-58* | chrI(+):7952879-7953119 |
| *linc-53* | chrI(-):6860394-6861996 |
| *linc-83* | chrX(-):10474145-10474833 |
| *linc-84* | chrI(+):8865937-8866616 |
| *linc-107* | chrII(-):7287357-7287753 |
| *linc-81* | chrV(-):19891072-19893183 |
| *linc-92* | chrV(-):5789929-5790308 |
| *linc-96* | chrV(-):5425169-5427015 |
| *linc-111* | chrIV(-):16190536-16191097 |
| *linc-102* | chrX(-):14079319-14079959 |
| *linc-163* | chrV(+):20213292-20214536 |
| *linc-113* | chrI(+):8503987-8505559 |
| *linc-99* | chrIII(-):13740612-13740903 |
| *linc-130* | chrX(-):7947396-7947915 |
| *linc-135* | chrIV(+):8453278-8457017 |
| *linc-115* | chrX(+):15745641-15746126 |
| *linc-125* | chrII(+):7238888-7242849 |
| *linc-119* | chrIV(+):10235510-10236651 |
| *linc-110* | chrII(-):7836005-7841058 |
| *linc-132* | chrIV(+):161147-162788 |
| *linc-131* | chrI(+):1696200-1697677 |
| *linc-148* | chrV(+):11179295-11181696 |
| *linc-151* | chrIV(+):11808700-11809643 |
| *linc-149* | chrI(+):7333033-7334531 |
| *linc-141* | chrI(-):7372293-7372526 |
| *linc-136* | chrV(-):3717687-3723721 |
| *linc-142* | chrX(-):12517036-12518956 |
| *linc-144* | chrX(-):16822300-16823308 |
| *linc-143* | chrIII(-):3035531-3037533 |
| *linc-162* | chrV(+):13753808-13754365 |
| *linc-146* | chrV(+):10176203-10179234 |
| *linc-159* | chrIV(-):1033999-1035986 |
| *linc-145* | chrIV(-):5155928-5156829 |
| *linc-157* | chrIV(+):9060759-9063667 |
| *linc-167* | chrI(+):3122012-3127662 |

Table S7E. Sperm-specific lincRNAs. Colored-text denotes lincRNAs within 10 kb of each other.

|  |  |
| --- | --- |
| Name | Coordinates |
| *linc-1* | chrI(+):13652511-13652714 |
| *linc-18* | chrI(+):12215528-12216313 |
| *linc-8* | chrII(-):2501839-2503803 |
| *linc-10* | chrII(-):3313079-3313503 |
| *linc-14* | chrV(-):17539169-17539404 |
| *linc-21* | chrIV(-):4242079-4242459 |
| *linc-17* | chrII(+):3596220-3596806 |
| *linc-80* | chrI(-):8974857-8975108 |
| *linc-23* | chrI(+):2644966-2645310 |
| *linc-40* | chrIII(+):1325881-1327714 |
| *linc-36* | chrIV(-):5380397-5381206 |
| *linc-26* | chrIV(-):4238166-4238401 |
| *linc-33* | chrX(-):11563550-11563674 |
| *linc-45* | chrIII(+):3151799-3152597 |
| *linc-46* | chrII(-):1990693-1991488 |
| *linc-29* | chrIV(+):6354210-6357227 |
| *linc-41* | chrIV(-):4241217-4241758 |
| *linc-61* | chrV(-):16043072-16043605 |
| *linc-50* | chrIV(-):5582028-5582249 |
| *linc-71* | chrII(+):3509943-3510105 |
| *linc-44* | chrII(-):5781889-5782081 |
| *linc-170* | chrV(+):20591397-20591610 |
| *linc-49* | chrII(+):5236007-5236320 |
| *linc-38* | chrV(-):10276922-10277281 |
| *linc-82* | chrIII(+):3664837-3667020 |
| *linc-64* | chrX(+):1765229-1765802 |
| *linc-65* | chrV(-):4759356-4760320 |
| *linc-66* | chrII(-):2615726-2616220 |
| *linc-67* | chrX(-):7398256-7398659 |
| *linc-69* | chrV(-):8766675-8767721 |
| *linc-59* | chrV(-):16319001-16320392 |
| *linc-123* | chrV(-):15443801-15444329 |
| *linc-98* | chrV(-):18172512-18172612 |
| *linc-89* | chrIV(-):3430307-3432467 |
| *linc-106* | chrX(-):16905501-16905927 |
| *linc-93* | chrII(+):7884334-7884732 |
| *linc-140* | chrX(+):15832882-15833166 |
| *linc-97* | chrIV(-):8845480-8846025 |
| *linc-116* | chrIII(+):7612036-7613356 |
| *linc-104* | chrI(-):4467347-4467685 |
| *linc-137* | chrV(-):1863875-1863990 |
| *linc-128* | chrV(+):1150908-1153209 |
| *linc-112* | chrX(+):3952640-3954327 |
| *linc-127* | chrII(-):5459238-5459734 |
| *linc-147* | chrIII(+):3672027-3674224 |
| *linc-134* | chrIV(-):5737171-5738090 |
| *linc-133* | chrII(+):7837756-7841415 |
| *linc-166* | chrX(+):737234-742376 |
| *linc-165* | chrIII(-):7402159-7405996 |

Table S7F. Dauer-specific lincRNAs.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Name | Coordinates | | *linc-3* | chrV(+):3012694-3013086 | | *linc-19* | chrIII(+):3150212-3151342 | | *linc-24* | chrIII(+):1370485-1371558 | | *linc-28* | chrV(-):19420665-19420821 | | *linc-42* | chrIII(+):2936099-2936992 | | *linc-39* | chrI(-):4683183-4683866 | | *linc-70* | chrV(+):20137961-20138212 | | *linc-9* | chrI(+):3703544-3704958 | | *linc-62* | chrV(+):18011545-18012068 | | *linc-79* | chrIV(-):4975705-4976074 | | *linc-91* | chrI(+):4699611-4702867 | | *linc-88* | chrX(+):8753793-8754158 | | *linc-31* | chrV(-):8152015-8154444 | | *linc-103* | chrX(+):6256737-6258935 | | *linc-100* | chrX(-):16775137-16775422 | | *linc-75* | chrX(+):1791718-1792569 | | *linc-109* | chrIII(-):10732155-10736563 | | *linc-30* | chrI(+):2046541-2048915 | | *linc-117* | chrV(-):7085051-7085591 | | *linc-114* | chrIV(-):4259730-4260384 | | *linc-121* | chrIV(-):14934782-14937089 | |  |

Table S7G. The RPKM values of ancRNAs across 10 different samples (External tab delimited file).

Table S7H. L3-specific ancRNAs.

|  |  |
| --- | --- |
| Name | Coordinates |
| *anr-2* | chrII(+):12178385-12178679 |
| *anr-3* | chrIV(+):15522555-15524725 |
| *anr-6* | chrV(-):5685214-5685635 |
| *anr-9* | chrIII(+):3654923-3655212 |
| *anr-10* | chrI(+):5046477-5046788 |
| *anr-8* | chrIV(-):8959553-8960936 |
| *anr-14* | chrI(-):12775543-12776521 |
| *anr-16* | chrX(-):11524911-11526560 |
| *anr-20* | chrI(+):9382449-9383539 |
| *anr-19* | chrI(-):1916943-1917065 |
| *anr-18* | chrIV(-):3805232-3806556 |
| *anr-37* | chrV(+):20188118-20188827 |
| *anr-23* | chrV(-):5949183-5949371 |
| *anr-21* | chrV(-):7007283-7007599 |
| *anr-29* | chrV(+):12810446-12810717 |
| *anr-17* | chrX(-):17697152-17697259 |
| *anr-30* | chrV(+):12439479-12440791 |
| *anr-33* | chrV(+):9371706-9371907 |
| *anr-36* | chrV(-):7854231-7854940 |
| *anr-56* | chrIV(+):12555580-12556023 |
| *anr-31* | chrIV(-):13188004-13188986 |
| *anr-35* | chrII(+):11174475-11175576 |
| *anr-34* | chrIII(+):8787322-8789485 |
| *anr-42* | chrI(+):1822402-1823044 |
| *anr-32* | chrV(-):6003558-6006729 |
| *anr-40* | chrI(+):11213839-11214627 |
| *anr-38* | chrI(-):5356235-5356731 |
| *anr-48* | chrII(+):2166432-2170213 |
| *anr-44* | chrIV(+):8231712-8234995 |
| *anr-39* | chrII(-):2421071-2423076 |
| *anr-45* | chrI(-):3410346-3411466 |
| *anr-46* | chrI(-):11013393-11014196 |
| *anr-49* | chrX(+):1531973-1535979 |
| *anr-51* | chrII(-):9237103-9239073 |
| *anr-52* | chrII(+):10294013-10295614 |
| *anr-53* | chrIII(-):1294920-1298365 |
| *anr-57* | chrIV(+):10809530-10810510 |
| *anr-55* | chrIV(-):16802460-16803591 |

Table S8. Co-expression of lincRNA genes and neighboring genes (within 100 kb upstream and downstream). The mean value of Pearson correlations (*r*) between expressions of a lincRNA and its neighboring genes were compared to the mean values for 1000 cohorts of the lincRNA and number-matched protein-coding genes. The *P* values were estimated using one-sample t-test and adjusted with the Bonferroni correction.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| lincRNA | Location | Mean *r* | Neighboring gene number | Adjusted  *P* |
| *linc-3* | chrV(+):3012694-3013086 | 59 | 0.24 | 6 X 10-7 |
| *linc-36* | chrIV(-):5380397-5381206 | 49 | 0.24 | 7 X 10-5 |
| *linc-49* | chrII(+):5236007-5236320 | 43 | 0.15 | 6 X 10-5 |
| *linc-83* | chrX(-):10474145-10474833 | 31 | 0.20 | 0.001 |
| *linc-117* | chrV(-):7085051-7085591 | 58 | 0.15 | 0.003 |
| *linc-150* | chrX(-):2369175-2370539 | 28 | 0.28 | 0.0004 |
| *linc-154* | chrX(+):2326738-2329086 | 32 | 0.17 | 2 X 10-5 |

Table S9A. lincRNAs with sense matches to mRNAs (≥100 nt).

|  |  |  |
| --- | --- | --- |
| lincRNA | mRNA | Match size (nt) |
| linc-99 | NM\_060563 | 124 |
| linc-169 | NM\_063141 | 120 |
| linc-75 | NM\_075928 | 111 |
| linc-109 | NM\_060750 | 362 |
| linc-109 | NM\_060479 | 137 |
| linc-40 | NM\_066063 | 223 |

Table S9B. lincRNAs with antisense matches to mRNAs (≥100 nt).

|  |  |  |
| --- | --- | --- |
| lincRNA | mRNA | Match size (nt) |
| linc-121 | NM\_071998 | 191 |

Table S10A. lincRNAs with antisense matches to mRNAs (≥30 nt).

|  |  |  |
| --- | --- | --- |
| lincRNA | Gene name | Match size (nt) |
| linc-22 | NM\_064753 | 124 |
| linc-23 | NM\_058618 | 42 |
| linc-119 | NM\_069475 | 50 |
| linc-18 | NM\_060683 | 75 |
| linc-13 | NM\_061504 | 23 |
| linc-95 | NM\_001047235 | 60 |
| linc-95 | NM\_078172 | 58 |
| linc-95 | NM\_058483 | 50 |
| linc-95 | NM\_001027784 | 51 |
| linc-95 | NM\_062645 | 50 |
| linc-95 | NM\_001027814 | 62 |
| linc-95 | NM\_070991 | 61 |
| linc-93 | NM\_065599 | 33 |
| linc-93 | NM\_182092 | 23 |
| linc-167 | NM\_001029014 | 51 |
| linc-167 | NM\_065178 | 34 |
| linc-167 | NM\_067718 | 36 |
| linc-169 | NM\_060479 | 89 |
| linc-169 | NM\_063144 | 103 |
| linc-169 | NM\_001029454 | 39 |
| linc-160 | NM\_075386 | 87 |
| linc-160 | NM\_062073 | 78 |
| linc-160 | NM\_067158 | 44 |
| linc-160 | NM\_061499 | 100 |
| linc-160 | NM\_071318 | 28 |
| linc-160 | NM\_061368 | 27 |
| linc-160 | NM\_071224 | 28 |
| linc-160 | NM\_068201 | 24 |
| linc-160 | NM\_068607 | 48 |
| linc-143 | NM\_070137 | 97 |
| linc-143 | NM\_067131 | 69 |
| linc-143 | NM\_058365 | 64 |
| linc-143 | NM\_065307 | 56 |
| linc-143 | NM\_001027719 | 60 |
| linc-143 | NM\_073068 | 65 |
| linc-143 | NM\_058510 | 63 |
| linc-143 | NM\_065178 | 53 |
| linc-143 | NM\_058516 | 93 |
| linc-143 | NM\_060750 | 57 |
| linc-143 | NM\_071846 | 46 |
| linc-143 | NM\_001029014 | 52 |
| linc-143 | NM\_067244 | 39 |
| linc-143 | NM\_067190 | 37 |
| linc-143 | NM\_071100 | 54 |
| linc-143 | NM\_066904 | 67 |
| linc-143 | NM\_067038 | 48 |
| linc-143 | NM\_067718 | 38 |
| linc-143 | NM\_071834 | 86 |
| linc-143 | NM\_067172 | 32 |
| linc-143 | NM\_067896 | 34 |
| linc-143 | NM\_071011 | 34 |
| linc-143 | NM\_078267 | 25 |
| linc-77 | NM\_071998 | 191 |
| linc-76 | NM\_062809 | 40 |
| linc-76 | NM\_001038465 | 95 |
| linc-76 | NM\_078408 | 34 |
| linc-76 | NM\_073039 | 34 |
| linc-74 | NM\_070137 | 93 |
| linc-74 | NM\_058365 | 64 |
| linc-74 | NM\_067244 | 43 |
| linc-74 | NM\_073068 | 75 |
| linc-74 | NM\_001027719 | 93 |
| linc-74 | NM\_071834 | 51 |
| linc-74 | NM\_066904 | 70 |
| linc-74 | NM\_071846 | 42 |
| linc-74 | NM\_058516 | 35 |
| linc-74 | NM\_067353 | 37 |
| linc-74 | NM\_071638 | 32 |
| linc-74 | NM\_061607 | 28 |
| linc-74 | NM\_001038465 | 33 |
| linc-120 | NM\_061655 | 89 |
| linc-121 | NM\_075433 | 49 |
| linc-128 | NM\_071672 | 53 |
| linc-128 | NM\_062073 | 123 |
| linc-128 | NM\_061562 | 48 |
| linc-128 | NM\_065307 | 48 |
| linc-128 | NM\_067089 | 47 |
| linc-128 | NM\_067038 | 48 |
| linc-128 | NM\_071177 | 49 |
| linc-128 | NM\_067158 | 44 |
| linc-128 | NM\_071100 | 41 |
| linc-128 | NM\_067190 | 46 |
| linc-128 | NM\_170801 | 42 |
| linc-128 | NM\_170812 | 39 |
| linc-128 | NM\_067172 | 36 |
| linc-128 | NM\_064303 | 38 |
| linc-128 | NM\_067343 | 44 |
| linc-128 | NM\_075284 | 35 |
| linc-128 | NM\_071322 | 31 |
| linc-128 | NM\_067131 | 46 |
| linc-170 | NM\_075573 | 31 |
| linc-157 | NM\_061368 | 28 |
| linc-132 | NM\_061285 | 30 |
| linc-135 | NM\_001038465 | 56 |
| linc-52 | NM\_060515 | 46 |
| linc-55 | NM\_069433 | 48 |
| linc-55 | NM\_068310 | 48 |
| linc-55 | NM\_068370 | 48 |
| linc-55 | NM\_068372 | 48 |
| linc-55 | NM\_068379 | 48 |
| linc-55 | NM\_062742 | 52 |
| linc-55 | NM\_062743 | 52 |
| linc-55 | NM\_062748 | 52 |
| linc-55 | NM\_062764 | 52 |
| linc-55 | NM\_062571 | 45 |
| linc-55 | NM\_062569 | 45 |
| linc-55 | NM\_069339 | 47 |
| linc-55 | NM\_069358 | 47 |
| linc-55 | NM\_062497 | 47 |
| linc-55 | NM\_069380 | 47 |
| linc-55 | NM\_068312 | 47 |
| linc-55 | NM\_068313 | 47 |
| linc-55 | NM\_068377 | 47 |
| linc-55 | NM\_068359 | 47 |
| linc-55 | NM\_069063 | 41 |
| linc-55 | NM\_069359 | 46 |
| linc-55 | NM\_069361 | 46 |
| linc-55 | NM\_069448 | 46 |
| linc-55 | NM\_062457 | 45 |
| linc-55 | NM\_068354 | 46 |
| linc-55 | NM\_068351 | 46 |
| linc-55 | NM\_069341 | 46 |
| linc-55 | NM\_062558 | 46 |
| linc-55 | NM\_062464 | 40 |
| linc-55 | NM\_069321 | 45 |
| linc-55 | NM\_062753 | 50 |
| linc-55 | NM\_062490 | 38 |
| linc-55 | NM\_062559 | 38 |
| linc-55 | NM\_062548 | 50 |
| linc-55 | NM\_062500 | 37 |
| linc-55 | NM\_062505 | 37 |
| linc-55 | NM\_062487 | 37 |
| linc-105 | NM\_065178 | 32 |
| linc-105 | NM\_001029014 | 28 |
| linc-109 | NM\_060479 | 113 |
| linc-109 | NM\_058715 | 39 |
| linc-109 | NM\_065181 | 66 |
| linc-109 | NM\_070867 | 43 |
| linc-109 | NM\_064921 | 28 |
| linc-109 | NM\_074843 | 30 |
| linc-109 | NM\_061685 | 30 |
| linc-109 | NM\_060681 | 37 |
| linc-4 | NM\_059044 | 89 |
| linc-46 | NM\_067038 | 127 |
| linc-46 | NM\_071177 | 112 |
| linc-46 | NM\_067172 | 81 |
| linc-46 | NM\_067089 | 43 |
| linc-46 | NM\_170812 | 83 |
| linc-46 | NM\_067190 | 53 |
| linc-46 | NM\_058414 | 25 |
| linc-46 | NM\_064303 | 25 |
| linc-46 | NM\_058510 | 71 |
| linc-46 | NM\_065307 | 51 |
| linc-46 | NM\_067131 | 110 |
| linc-46 | NM\_058415 | 25 |
| linc-46 | NM\_170824 | 25 |
| linc-46 | NM\_058512 | 25 |
| linc-46 | NM\_058516 | 25 |
| linc-46 | NM\_060515 | 47 |
| linc-46 | NM\_067343 | 35 |
| linc-46 | NM\_061799 | 38 |
| linc-46 | NM\_071100 | 37 |
| linc-46 | NM\_001028857 | 45 |
| linc-49 | NM\_062583 | 92 |
| linc-145 | NM\_070232 | 39 |
| linc-33 | NM\_077531 | 85 |
| linc-39 | NM\_068036 | 32 |
| linc-39 | NM\_060479 | 43 |

Table S10B. Of 140 lincRNAs not associated with repeat elements, 16 matched antisense to mRNAs (≥30 nt). Pearson correlations for expression of a lincRNA and matched mRNAs were calculated. For 22G-RNAs, the value shown is the maximum among RPKMs calculated from developmental stages and IPs.

|  |  |  |  |
| --- | --- | --- | --- |
| lincRNA | Mean *r* | Gene number | 22G-RNAs (RPKM) |
| linc-55 | -0.06 | 36 | 0 |
| linc-46 | 0.04 | 20 | 53 |
| linc-109 | -0.09 | 8 | 0 |
| linc-121 | 0.71 | 1 | 53 |
| linc-4 | -0.20 | 1 | 8 |
| linc-22 | 0.33 | 1 | 1452 |
| linc-23 | 0.39 | 1 | 0 |
| linc-49 | 0.15 | 1 | 1 |
| linc-119 | 0.36 | 1 | 0 |
| linc-170 | 0.06 | 1 | 0 |
| linc-132 | -0.11 | 1 | 1 |
| linc-135 | -0.04 | 1 | 0 |
| linc-33 | -0.08 | 1 | 5 |
| linc-18 | 0.08 | 1 | 6 |
| linc-13 | 0.39 | 1 | 0 |
| linc-52 | -0.15 | 1 | 6 |

Table S11A.Some candidate lincRNAs (clincs) with 3P-seq supported poly(A) sites. Listed are candidates retained when using a less stringent protein-coding filter (CPC < 0).

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Coordinates | CPC score | Ribosome/Exp. |
| *clinc-1* | chrIII(-):13496407-13496518 | -0.89 | 0.05 |
| *clinc-2* | chrII(+):3521800-3523583 | -0.71 | 0.00 |
| *clinc-3* | chrI(-):4660897-4661884 | -0.24 | 0.07 |
| *clinc-4* | chrII(+):10317237-10317592 | -0.93 | 0.00 |
| *clinc-5* | chrV(+):11390632-11390904 | -0.74 | 0.00 |
| *clinc-6* | chrIV(-):8611550-8611835 | -0.85 | 0.00 |
| *clinc-7* | chrIV(-):4880726-4881204 | -0.99 | 0.00 |
| *clinc-8* | chrV(-):14201043-14202020 | -0.84 | 0.00 |
| *clinc-9* | chrV(-):18720485-18723766 | -0.51 | 0.00 |
| *clinc-10* | chrIV(+):7516548-7517052 | -0.85 | 0.00 |
| *clinc-11* | chrIV(-):9103856-9104427 | -0.99 | 0.00 |
| *clinc-12* | chrX(-):12636749-12636944 | -0.08 | 0.00 |
| *clinc-13* | chrV(-):17158637-17159285 | -0.80 | 0.00 |
| *clinc-14* | chrX(-):5998192-5999344 | -0.04 | 0.00 |
| *clinc-15* | chrII(+):14102249-14102909 | -0.97 | 0.00 |
| *clinc-16* | chrIII(-):5220335-5220859 | -0.97 | 0.00 |
| *clinc-17* | chrV(-):17631168-17633362 | -0.96 | 0.00 |
| *clinc-18* | chrV(-):17539100-17539404 | -0.95 | 0.00 |
| *clinc-19* | chrV(+):11479699-11479957 | -0.90 | 0.00 |
| *clinc-20* | chrII(-):1892112-1892520 | -0.93 | 0.00 |
| *clinc-21* | chrII(+):1895579-1896057 | -0.81 | 0.00 |
| *clinc-22* | chrI(-):2640455-2642291 | -0.88 | 0.00 |
| *clinc-23* | chrIII(+):5094754-5095113 | -0.76 | 0.00 |
| *clinc-24* | chrII(-):5598373-5599141 | -0.90 | 0.00 |
| *clinc-25* | chrI(-):2640028-2640441 | -0.81 | 0.00 |
| *clinc-26* | chrV(+):3670789-3672196 | -1.00 | 0.00 |
| *clinc-27* | chrI(+):4427045-4428044 | -0.06 | 0.00 |
| *clinc-28* | chrX(+):3401990-3402714 | -1.00 | 0.00 |
| *clinc-29* | chrIII(-):10196221-10197156 | -0.10 | 0.00 |
| *clinc-30* | chrV(+):17892994-17893352 | -0.92 | 0.00 |
| *clinc-31* | chrV(-):16609409-16610861 | -0.43 | 0.00 |
| *clinc-32* | chrX(+):8108202-8109332 | -0.03 | 0.00 |
| *clinc-33* | chrII(+):10494720-10495617 | -0.74 | 0.00 |
| *clinc-34* | chrII(-):6927493-6927762 | -0.99 | 0.00 |
| *clinc-35* | chrII(+):11175745-11177284 | -0.10 | 0.00 |
| *clinc-36* | chrX(+):2565424-2565997 | -0.78 | 0.00 |
| *clinc-37* | chrIV(+):13867008-13867471 | -0.86 | 0.00 |
| *clinc-38* | chrII(-):3096222-3096610 | -0.95 | 0.00 |
| *clinc-39* | chrII(-):12557731-12560187 | -0.25 | 0.00 |
| *clinc-40* | chrX(-):16396905-16398330 | -0.92 | 0.00 |
| *clinc-41* | chrIII(+):7865693-7865889 | -0.81 | 0.00 |
| *clinc-42* | chrV(-):4108655-4109901 | -0.71 | 0.00 |
| *clinc-43* | chrIV(-):7063314-7064715 | -0.70 | 0.00 |
| *clinc-44* | chrII(-):11718465-11718693 | -0.92 | 0.00 |
| *clinc-45* | chrI(-):2506240-2506670 | -0.94 | 0.00 |
| *clinc-46* | chrX(-):15596100-15600531 | -0.92 | 0.00 |
| *clinc-47* | chrX(-):14431728-14432279 | -0.92 | 0.00 |
| *clinc-48* | chrV(-):17435547-17436524 | -0.18 | 0.00 |
| *clinc-49* | chrV(-):13966186-13966681 | -0.78 | 0.00 |
| *clinc-50* | chrIV(+):2560649-2562127 | -0.35 | 0.00 |
| *clinc-51* | chrV(+):4215216-4216462 | 0.00 | 0.00 |
| *clinc-52* | chrX(+):8375228-8375990 | -0.55 | 0.00 |
| *clinc-53* | chrIII(-):4669827-4670974 | -0.12 | 0.00 |
| *clinc-54* | chrV(-):20587075-20590185 | -0.86 | 0.00 |
| *clinc-55* | chrX(-):7396530-7397622 | -0.95 | 0.00 |
| *clinc-56* | chrIII(+):126552-127982 | -0.96 | 0.00 |
| *clinc-57* | chrX(-):7396411-7397621 | -0.97 | 0.00 |
| *clinc-58* | chrX(+):3306337-3306900 | -0.22 | 0.00 |
| *clinc-59* | chrI(+):9482738-9483582 | -0.76 | 0.00 |
| *clinc-60* | chrIV(+):4394399-4396083 | -0.84 | 0.00 |
| *clinc-61* | chrV(+):10647738-10648160 | -0.97 | 0.00 |
| *clinc-62* | chrI(-):11492939-11494369 | -0.79 | 0.00 |
| *clinc-63* | chrI(-):14340609-14341292 | -0.37 | 0.00 |
| *clinc-64* | chrIII(-):5099633-5101593 | -0.83 | 0.00 |
| *clinc-65* | chrII(-):5072938-5074413 | -0.99 | 0.00 |
| *clinc-66* | chrIV(+):3395879-3396592 | -0.93 | 0.00 |
| *clinc-67* | chrIII(-):6289760-6292658 | -0.89 | 0.00 |
| *clinc-68* | chrIV(-):4728199-4728762 | -0.95 | 0.00 |
| *clinc-69* | chrI(-):13359722-13359823 | -1.00 | 0.00 |
| *clinc-70* | chrII(+):3889152-3889605 | -0.40 | 0.00 |
| *clinc-71* | chrII(+):10942446-10943339 | -0.93 | 0.00 |
| *clinc-72* | chrII(+):3889015-3889520 | -0.24 | 0.00 |
| *clinc-73* | chrIV(+):12899662-12900077 | -0.79 | 0.00 |
| *clinc-74* | chrIV(+):14933358-14933603 | -0.98 | 0.00 |
| *clinc-75* | chrII(-):3509831-3512317 | -0.08 | 0.00 |
| *clinc-76* | chrV(+):12646228-12646660 | -0.21 | 0.00 |
| *clinc-77* | chrV(+):5845869-5846210 | -0.90 | 0.00 |
| *clinc-78* | chrII(+):9483416-9483805 | -0.83 | 0.00 |
| *clinc-79* | chrIV(+):8603222-8607807 | -0.83 | 0.00 |
| *clinc-80* | chrX(+):6178020-6178838 | -0.90 | 0.00 |
| *clinc-81* | chrI(+):1427852-1432094 | -0.02 | 0.00 |
| *clinc-82* | chrV(+):18211112-18212739 | -0.82 | 0.00 |
| *clinc-83* | chrII(+):14998546-14998859 | -0.86 | 0.00 |
| *clinc-84* | chrX(-):16247625-16249335 | -0.16 | 0.00 |
| *clinc-85* | chrII(-):8694362-8695754 | -0.87 | 0.00 |
| *clinc-86* | chrX(-):7614182-7616772 | -0.42 | 0.00 |
| *clinc-87* | chrV(+):12117434-12118693 | -0.22 | 0.00 |
| *clinc-88* | chrIV(+):6152339-6153094 | -0.03 | 0.00 |
| *clinc-89* | chrX(+):12348536-12349119 | -0.16 | 0.00 |
| *clinc-90* | chrX(-):8127967-8129475 | -0.26 | 0.00 |
| *clinc-91* | chrII(-):3387134-3387759 | -0.56 | 0.00 |
| *clinc-92* | chrIII(+):448807-449482 | -0.57 | 0.00 |
| *clinc-93* | chrV(-):14954848-14955722 | -0.85 | 0.00 |
| *clinc-94* | chrI(+):1359658-1361599 | -0.98 | 0.00 |
| *clinc-95* | chrX(+):8956378-8956815 | -0.68 | 0.00 |
| *clinc-96* | chrIV(+):15074696-15074939 | -0.29 | 0.00 |
| *clinc-97* | chrIV(-):10511230-10512381 | -0.93 | 0.00 |
| *clinc-98* | chrII(+):2619810-2622016 | -0.23 | 0.00 |
| *clinc-99* | chrX(-):16237105-16237804 | -0.77 | 0.00 |
| *clinc-100* | chrX(+):17295942-17296246 | -0.25 | 0.00 |
| *clinc-101* | chrX(-):11938051-11938809 | -0.71 | 0.00 |
| *clinc-102* | chrIII(+):3051185-3051989 | -0.89 | 0.00 |
| *clinc-103* | chrX(-):10682929-10683618 | -0.94 | 0.00 |
| *clinc-104* | chrI(-):7371606-7372526 | -0.82 | 0.00 |
| *clinc-105* | chrIV(-):5737007-5738090 | -0.81 | 0.00 |
| *clinc-106* | chrIV(+):7175642-7176755 | -0.35 | 0.00 |
| *clinc-107* | chrII(-):8759011-8761312 | -0.73 | 0.00 |
| *clinc-108* | chrI(-):850314-851958 | -0.42 | 0.00 |
| *clinc-109* | chrX(+):3292011-3293180 | -0.10 | 0.00 |
| *clinc-110* | chrV(-):9255660-9255999 | -0.11 | 0.00 |
| *clinc-111* | chrII(+):14245811-14248609 | -0.40 | 0.00 |
| *clinc-112* | chrX(+):7287215-7291767 | -0.98 | 0.00 |
| *clinc-113* | chrV(+):17252048-17252502 | -0.48 | 0.00 |
| *clinc-114* | chrII(-):9782093-9783042 | -0.96 | 0.00 |
| *clinc-115* | chrV(-):17066924-17067607 | -0.57 | 0.00 |
| *clinc-116* | chrX(+):1543811-1545303 | -0.95 | 0.00 |
| *clinc-117* | chrIV(+):16458376-16460285 | -0.09 | 0.00 |
| *clinc-118* | chrIV(-):2783034-2785368 | -0.10 | 0.00 |
| *clinc-119* | chrIV(+):14690900-14691764 | -0.99 | 0.00 |
| *clinc-120* | chrII(-):7948837-7955558 | -1.00 | 0.00 |
| *clinc-121* | chrV(-):14290241-14290660 | -0.84 | 0.00 |
| *clinc-122* | chrX(-):4997650-4997817 | -0.76 | 0.00 |
| *clinc-123* | chrV(-):1365843-1370658 | -0.75 | 0.00 |
| *clinc-124* | chrIII(-):6533696-6534327 | -0.66 | 0.00 |
| *clinc-125* | chrIV(+):3451823-3452103 | -0.99 | 0.00 |
| *clinc-126* | chrIV(+):11808700-11810451 | -0.79 | 0.00 |
| *clinc-127* | chrIII(-):13104400-13106356 | -0.61 | 0.00 |
| *clinc-128* | chrIII(+):6288913-6291080 | -0.76 | 0.00 |
| *clinc-129* | chrIII(+):9271186-9273605 | -0.86 | 0.00 |
| *clinc-130* | chrX(+):16481213-16484498 | -0.98 | 0.00 |
| *clinc-131* | chrIII(+):10361462-10362488 | -0.86 | 0.00 |
| *clinc-132* | chrII(-):8852423-8854928 | -0.70 | 0.00 |
| *clinc-133* | chrIII(-):1554546-1555085 | -0.94 | 0.00 |

Table S11B.Some candidate ancRNAs (canrs) with 3P-seq supported poly(A) sites. Listed are candidates retained when using a less stringent protein-coding filter (CPC < 0).

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Coordinates | CPC score | Ribosome/Exp. |
| *canr-1* | chrIV(+):11913962-11916137 | -0.8698 | 0 |
| *canr-2* | chrV(-):3633485-3634502 | -0.93753 | 0.039 |
| *canr-3* | chrII(+):395120-395891 | -0.57469 | 0 |
| *canr-4* | chrIII(-):5952454-5953299 | -0.87349 | 0 |
| *canr-5* | chrII(+):11343735-11344152 | -0.91552 | 0 |
| *canr-6* | chrIV(-):8300969-8301216 | -0.98748 | 0 |
| *canr-7* | chrI(+):5761613-5761919 | -0.77929 | 0 |
| *canr-8* | chrIV(-):7237672-7237872 | -0.93732 | 0 |
| *canr-9* | chrIV(+):8190042-8190253 | -0.42003 | 0 |
| *canr-10* | chrIII(-):8768143-8768913 | -0.96095 | 0 |
| *canr-11* | chrI(-):7058177-7061226 | -0.97495 | 0 |
| *canr-12* | chrI(+):6563947-6565195 | -0.75305 | 0 |
| *canr-13* | chrII(-):11304043-11304473 | -0.98385 | 0 |
| *canr-14* | chrI(+):8638575-8638790 | -0.96121 | 0 |
| *canr-15* | chrIII(-):11829337-11830762 | -0.92111 | 0 |
| *canr-16* | chrI(-):6929220-6929430 | -0.9402 | 0 |
| *canr-17* | chrI(-):7772372-7776287 | -0.99654 | 0.040 |
| *canr-18* | chrI(-):4252668-4254005 | -0.86862 | 0 |
| *canr-19* | chrIII(-):3331188-3331320 | -0.89336 | 0 |
| *canr-20* | chrIV(-):10469892-10470536 | -0.83341 | 0 |
| *canr-21* | chrIII(+):8356938-8357160 | -0.5495 | 0 |
| *canr-22* | chrI(-):8666584-8668431 | -0.70496 | 0 |
| *canr-23* | chrX(-):14603747-14604171 | -0.98539 | 0 |
| *canr-24* | chrIV(+):2969932-2970818 | -0.31927 | 0 |
| *canr-25* | chrIII(-):6891889-6893590 | -0.93181 | 0 |
| *canr-26* | chrV(-):14195504-14200719 | -0.47672 | 0 |
| *canr-27* | chrIII(+):8436647-8440613 | -0.67821 | 0 |
| *canr-28* | chrI(-):12939174-12940854 | -0.69402 | 0 |
| *canr-29* | chrIII(+):10245339-10248355 | -0.93444 | 0 |
| *canr-30* | chrII(+):12178448-12179116 | -0.98148 | 0 |
| *canr-31* | chrII(+):13458586-13460993 | -0.69236 | 0 |
| *canr-32* | chrIII(-):10414067-10415598 | -0.8514 | 0 |
| *canr-33* | chrIII(+):6885992-6886338 | -0.74258 | 0 |
| *canr-34* | chrIII(+):8788910-8792289 | -0.88373 | 0 |
| *canr-35* | chrII(-):4853446-4854132 | -0.93591 | 0 |
| *canr-36* | chrV(-):13715254-13717595 | -0.97833 | 0 |
| *canr-37* | chrII(+):11540870-11541444 | -0.63459 | 0 |
| *canr-38* | chrIV(-):16550660-16551533 | -0.98852 | 0 |
| *canr-39* | chrI(-):326703-330629 | -0.86465 | 0 |
| *canr-40* | chrI(+):6614356-6614699 | -0.84656 | 0 |
| *canr-41* | chrIII(-):5111745-5112031 | -0.96346 | 0 |
| *canr-42* | chrX(-):17479490-17480668 | -0.91918 | 0 |
| *canr-43* | chrIV(+):10235210-10235328 | -0.84492 | 0 |
| *canr-44* | chrV(-):6451759-6452792 | -0.98997 | 0 |
| *canr-45* | chrIV(-):13347885-13349016 | -0.99083 | 0 |
| *canr-46* | chrX(+):7557169-7559572 | -0.88726 | 0 |
| *canr-47* | chrIII(-):5266679-5267123 | -0.76862 | 0 |
| *canr-48* | chrX(+):17065029-17065331 | -0.79731 | 0 |
| *canr-49* | chrIII(+):4323435-4324320 | -0.96139 | 0 |
| *canr-50* | chrV(+):6730380-6733134 | -0.64452 | 0 |
| *canr-51* | chrIV(-):2137950-2140427 | -0.79784 | 0 |
| *canr-52* | chrII(+):2733070-2734254 | -0.24621 | 0 |
| *canr-53* | chrII(-):1863614-1864589 | -0.73066 | 0 |
| *canr-54* | chrV(-):18516782-18522343 | -0.72753 | 0 |
| *canr-55* | chrII(-):6098654-6103956 | -0.99884 | 0 |
| *canr-56* | chrI(-):4457948-4458597 | -0.79483 | 0 |
| *canr-57* | chrIV(+):222474-234219 | -0.99693 | 0 |
| *canr-58* | chrV(+):10554088-10555005 | -0.17137 | 0 |
| *canr-59* | chrI(+):14708391-14709034 | -0.87025 | 0 |
| *canr-60* | chrV(-):8035191-8035777 | -0.75582 | 0 |
| *canr-61* | chrV(+):18782620-18784939 | -0.9527 | 0 |
| *canr-62* | chrV(+):10795764-10796786 | -0.90988 | 0 |
| *canr-63* | chrII(+):11460398-11461946 | -0.65752 | 0 |
| *canr-64* | chrII(-):5791126-5792440 | -0.69372 | 0 |
| *canr-65* | chrI(+):6950086-6950343 | -0.65192 | 0 |
| *canr-66* | chrIII(-):8384242-8384375 | -0.98249 | 0 |
| *canr-67* | chrIII(-):11656977-11659449 | -0.84361 | 0 |
| *canr-68* | chrII(+):11460361-11461318 | -0.51996 | 0 |
| *canr-69* | chrIII(+):8787322-8789930 | -0.87285 | 0 |
| *canr-70* | chrIV(-):10278882-10279363 | -0.36642 | 0 |
| *canr-71* | chrX(-):3552424-3554889 | -0.90227 | 0 |
| *canr-72* | chrIV(+):4276218-4282160 | -0.88038 | 0 |
| *canr-73* | chrIV(-):13841888-13843207 | -0.82692 | 0 |
| *canr-74* | chrIV(+):2778257-2778603 | -0.94307 | 0 |
| *canr-75* | chrIV(-):14049899-14051283 | -0.96091 | 0 |
| *canr-76* | chrIII(+):5478271-5479115 | -0.81656 | 0 |
| *canr-77* | chrX(+):10670272-10670481 | -0.99656 | 0 |
| *canr-78* | chrX(+):13409858-13411965 | -0.90865 | 0 |
| *canr-79* | chrI(-):14085608-14085809 | -0.44908 | 0 |
| *canr-80* | chrI(-):7595155-7596520 | -0.87561 | 0 |
| *canr-81* | chrI(-):13452132-13453604 | -0.96317 | 0 |
| *canr-82* | chrIV(+):15455480-15455753 | -0.60538 | 0 |
| *canr-83* | chrV(-):11794605-11795003 | -0.86656 | 0 |
| *canr-84* | chrII(+):3289777-3290839 | -0.90875 | 0 |
| *canr-85* | chrIII(+):2232154-2234016 | -0.84127 | 0 |
| *canr-86* | chrV(+):13752216-13752702 | -0.85885 | 0 |
| *canr-87* | chrV(-):4024241-4026760 | -0.96358 | 0 |
| *canr-88* | chrV(+):4636874-4637862 | -0.96602 | 0 |
| *canr-89* | chrV(-):18310853-18314325 | -0.94742 | 0 |
| *canr-90* | chrV(-):19417138-19420821 | -0.96178 | 0 |
| *canr-91* | chrIV(-):6775343-6777216 | -0.83452 | 0 |
| *canr-92* | chrIV(-):15931734-15932095 | -0.14206 | 0 |
| *canr-93* | chrX(-):16516016-16518954 | -0.88197 | 0 |
| *canr-94* | chrV(+):15295220-15296897 | -0.49525 | 0 |
| *canr-95* | chrII(+):2335226-2335665 | -0.89089 | 0 |
| *canr-96* | chrIV(-):15112807-15113152 | -0.75169 | 0 |
| *canr-97* | chrX(-):16516093-16521653 | -0.90963 | 0 |
| *canr-98* | chrIV(-):13695561-13698221 | -0.96533 | 0 |
| *canr-99* | chrV(-):19645872-19645983 | -0.98706 | 0 |
| *canr-100* | chrI(-):7483161-7484153 | -0.79059 | 0 |
| *canr-101* | chrII(+):3271769-3273107 | -0.11642 | 0 |
| *canr-102* | chrIV(-):14140164-14140596 | -0.93166 | 0 |

Table S12.RefSeq genes without coding potential.

|  |  |  |  |
| --- | --- | --- | --- |
| Transcript ID | Chromosome | Position | 3P-seq supported poly(A) site |
| NM\_001129367 | chrV | 15088352-15088674 |  |
| NM\_063621 | chrII | 9443746-9445387 |  |
| NM\_078381 | chrX | 17178454-17178984 |  |
| NM\_062787 | chrII | 5943916-5944330 |  |
| NM\_075928 | chrX | 1794811-1795682 | Yes |
| NM\_071014 | chrV | 1445381-1445894 |  |
| NM\_001136366 | chrIII | 10158920-10160375 |  |
| NM\_065373 | chrIII | 3829848-3830213 | Yes |
| NM\_066930 | chrIII | 10585771-10586224 |  |
| NM\_001038413 | chrV | 1957416-1957932 | Yes |
| NM\_061390 | chrII | 683772-684121 |  |

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