

Figure S1

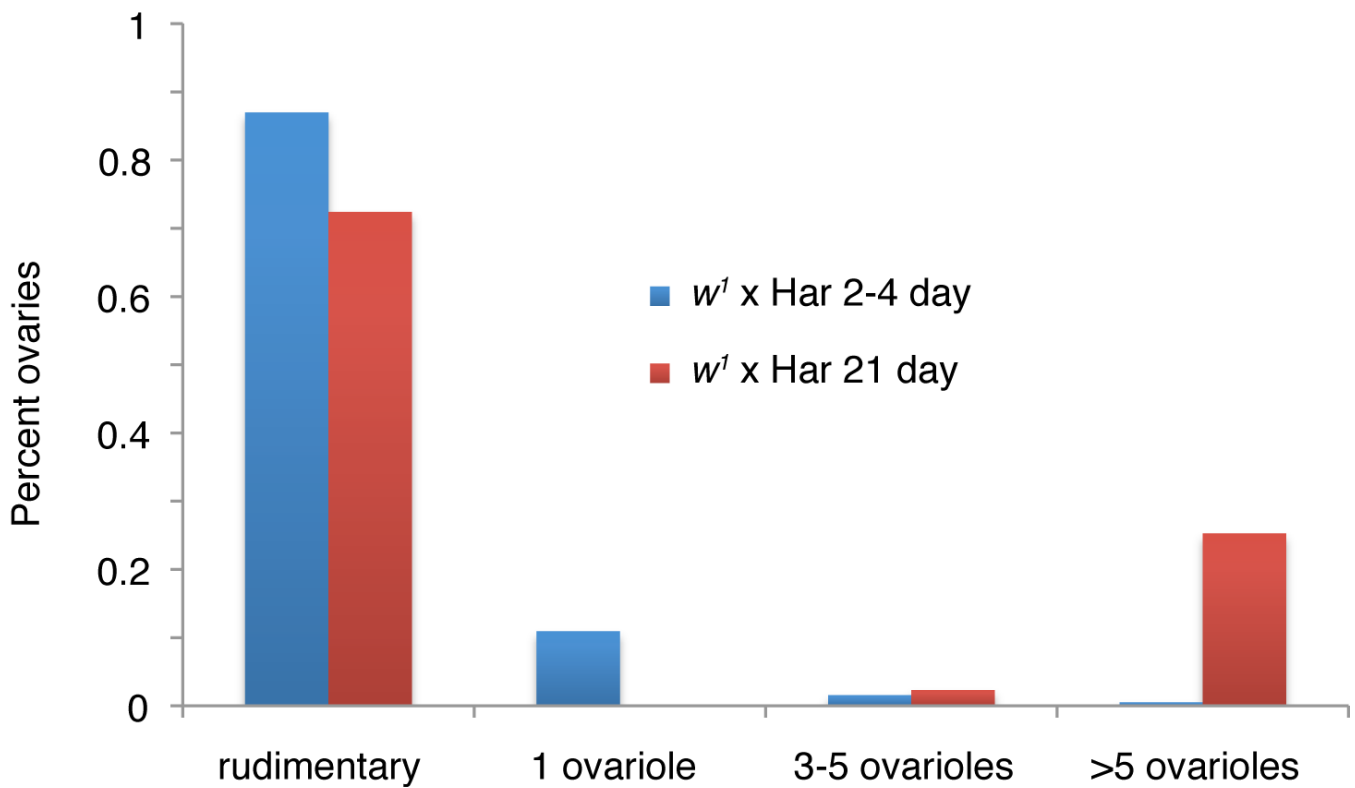


Figure S1, related to Figure 1. Ovary morphology as a function of F1 hybrid age. Plotted are percentages of ovaries that have 0 (rudimentary ovary), 1, 3-5, and >5 ovarioles that each contains >5 egg chambers.

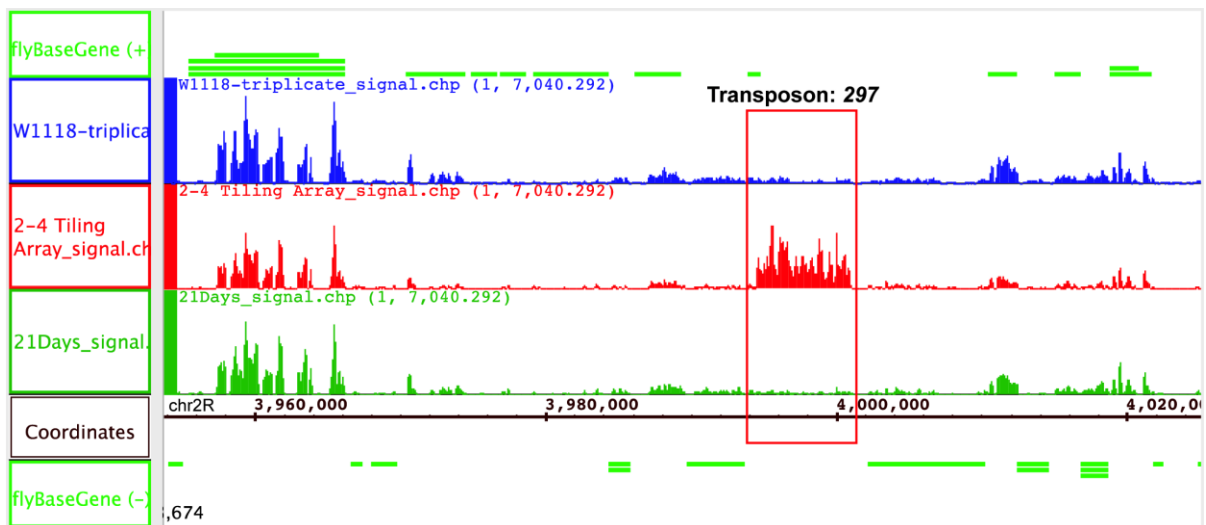


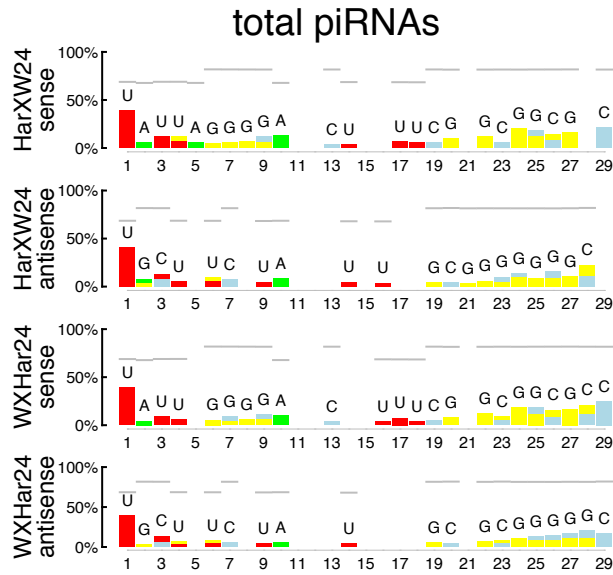
Figure S2, related to Figure 4. Gene and transposon expression in dysgenic ovaries. Genome Browser screen shot showing the maternal w^1 (blue), 2-4 day old dysgenic ovaries (red), and 21 day old dysgenic ovaries (green). The position of a 297 transposon is indicated by the red box. The element is silenced in the parental strain, but over-expressed in 2-4 day old dysgenic ovaries. At 21 days, however, silencing is restored.

Figure S3A. Detailed analysis of piRNAs in Har x w^1 2-4 day and w^1 x Har 2-4 day ovaries. The figure presents the 135 transposon families plus the tandem repeat *mst40*. (A, B) Sequence-bias plot (“sequence-excess logo”) for all piRNAs mapping to the transposon family (A) or for piRNAs with ping-pong partners (B). The graphs report only nucleotide biases significantly different from the intrinsic bias of the transposon family itself. The gray bars indicate the maximum possible value for each position.

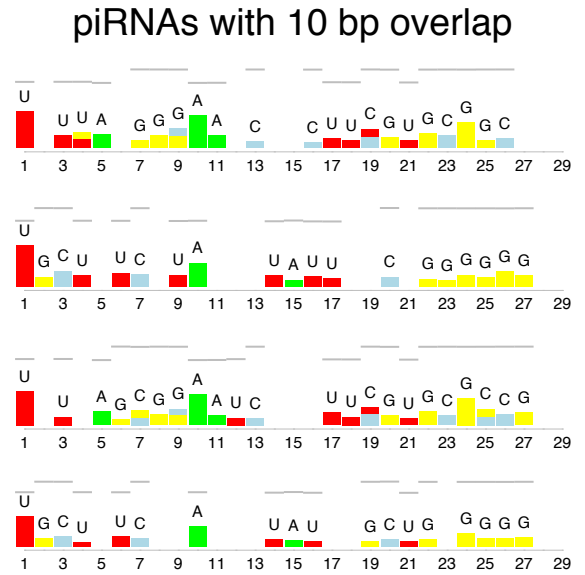
(C, D) The abundance (per million) of piRNAs (23–29 nt) in Har x w^1 2-4 day (C) and w^1 x Har 2-4 day ovaries (D) for each base-pair position of the transposon consensus sequence. Abundance was both normalized by the number of times a piRNA mapped to the genome and calibrated to the total abundance of sequences corresponding to non-coding RNAs in the sample. For each base, the total normalized abundance of piRNAs that fall on that position is reported. Here and below, blue denotes sense strand-mapping piRNAs; red, antisense- strand mapping piRNAs.

(E, F) Length distribution of 19–29 nt RNAs mapping to the transposon family for Har x w^1 2-4 day (E) and w^1 x Har 2-4 day ovaries (F). The number of reads was normalized as in (C) and (D). (G, H) Distribution of the length of 5' overlaps between sense and antisense piRNAs mapped to the transposon family for Har x w^1 2-4 day (G) and w^1 x Har 2-4 day (H) ovaries. Only pairs that overlapped at their 5' ends were included. A peak at 10 bp indicates ping-pong pairing.

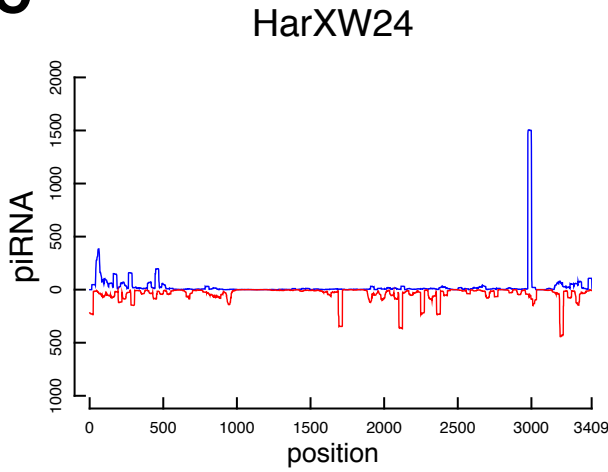
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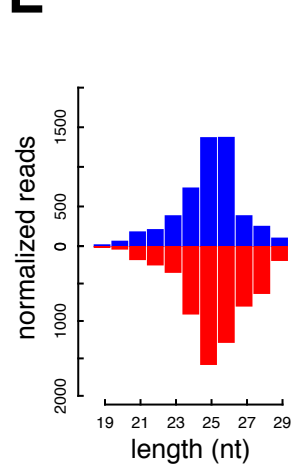
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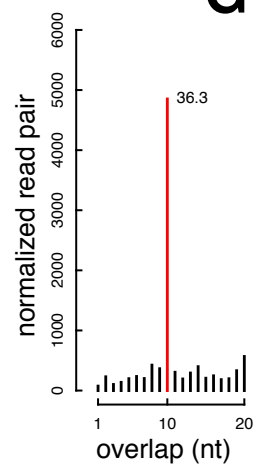
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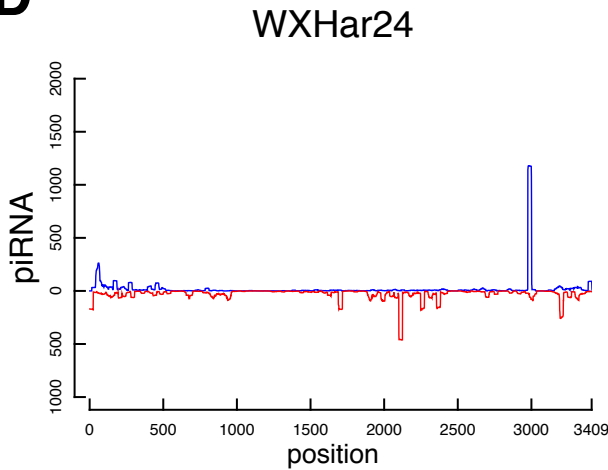
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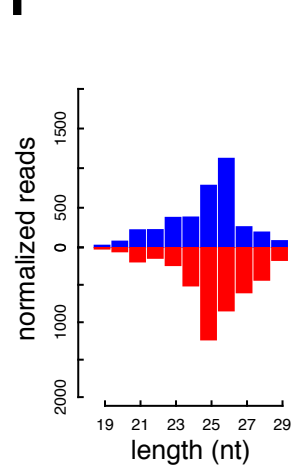
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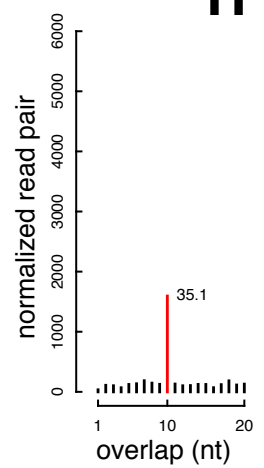
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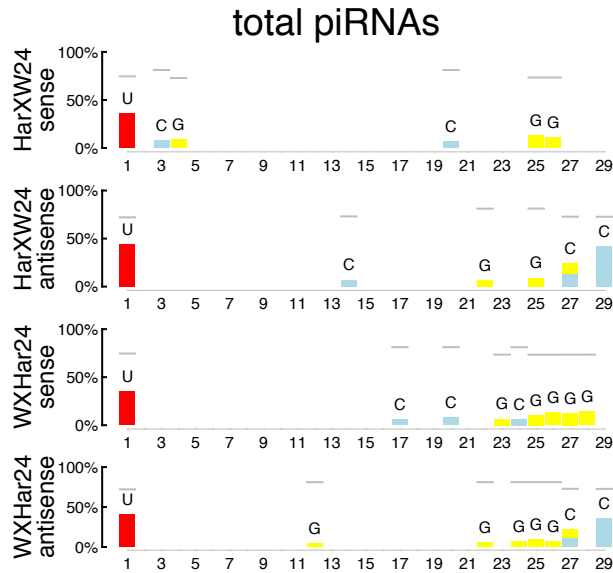
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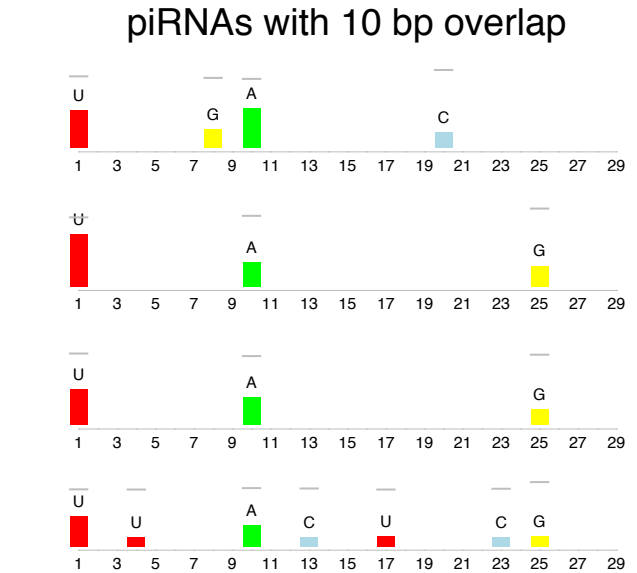
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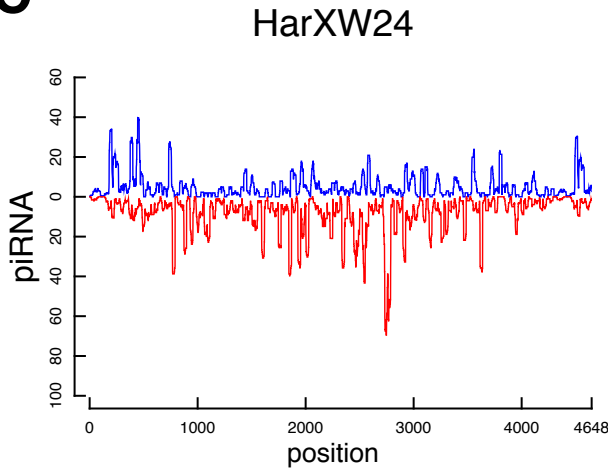
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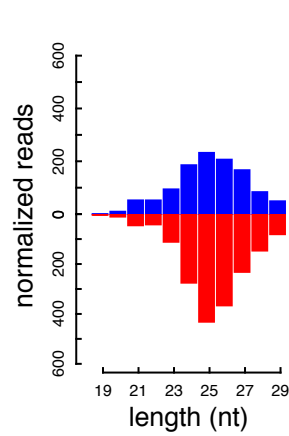
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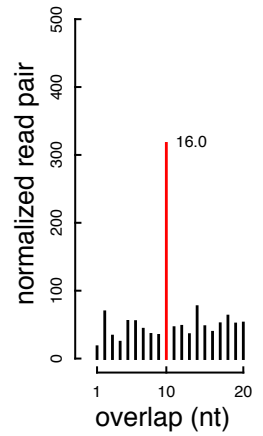
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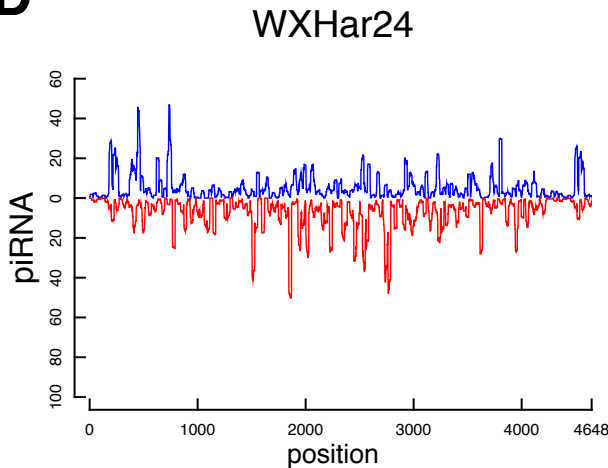
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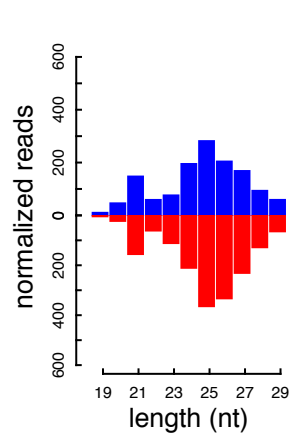
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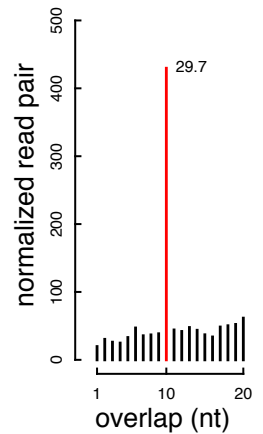
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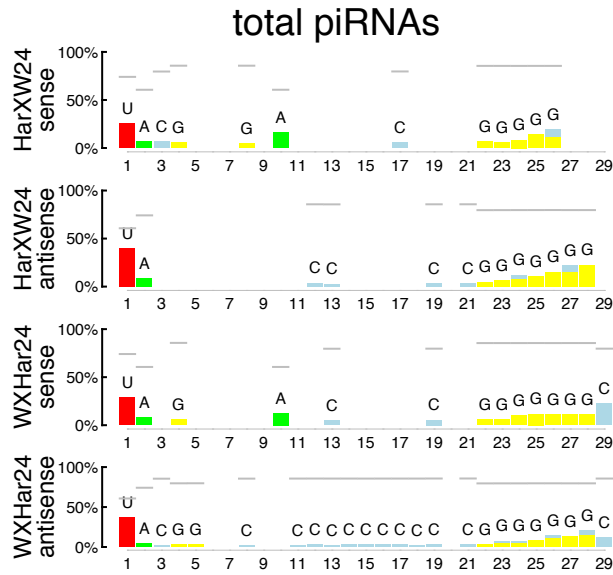


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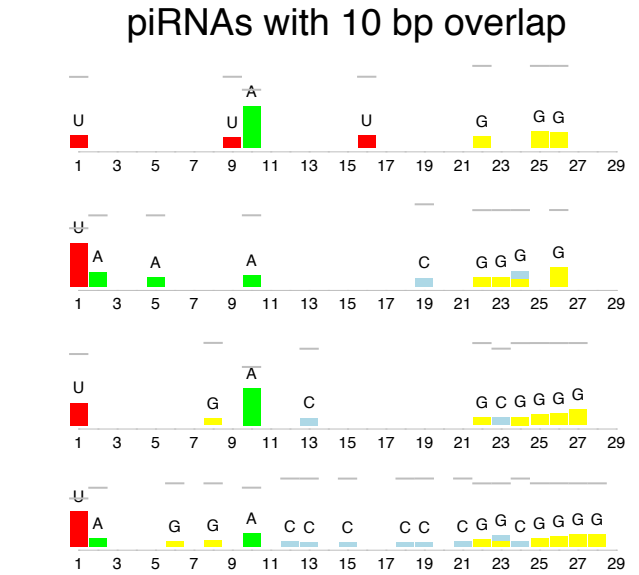


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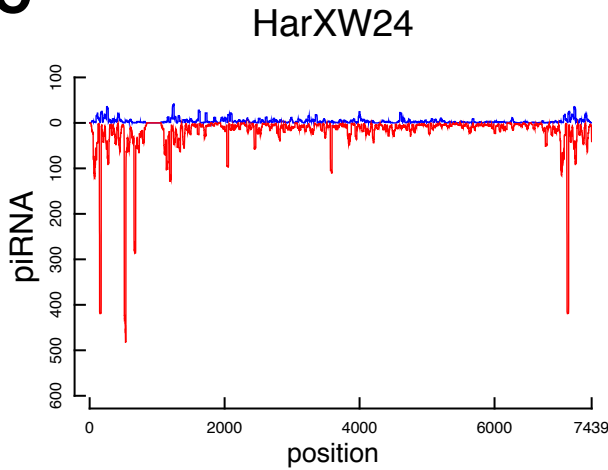
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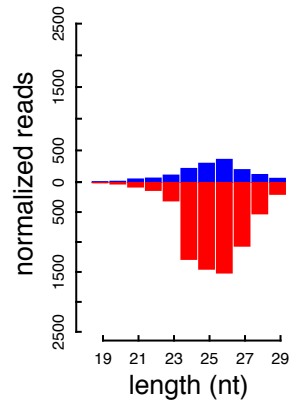
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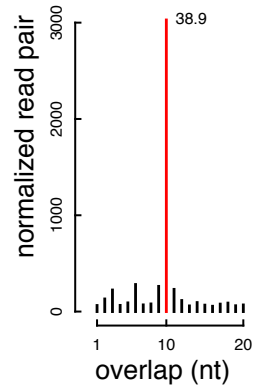
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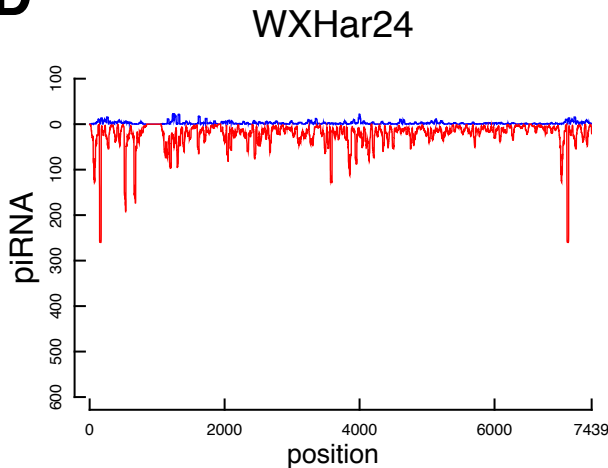
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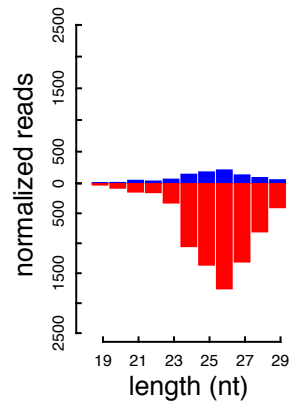
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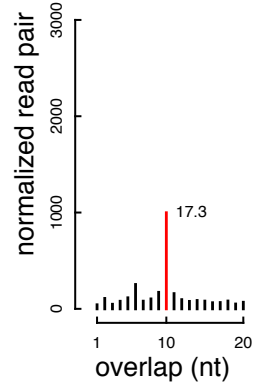
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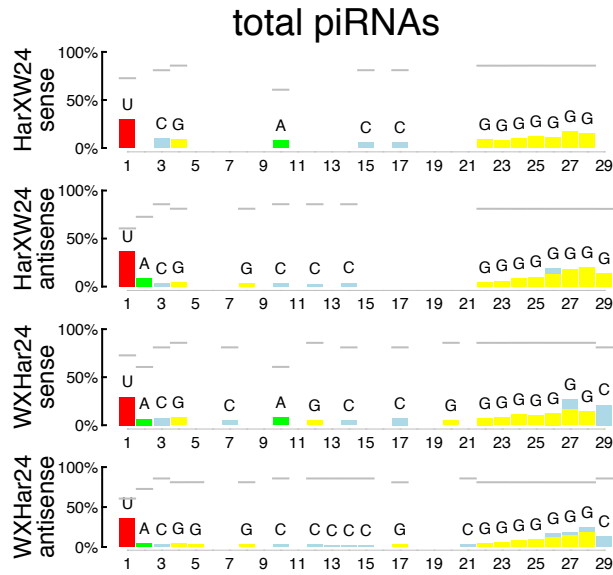
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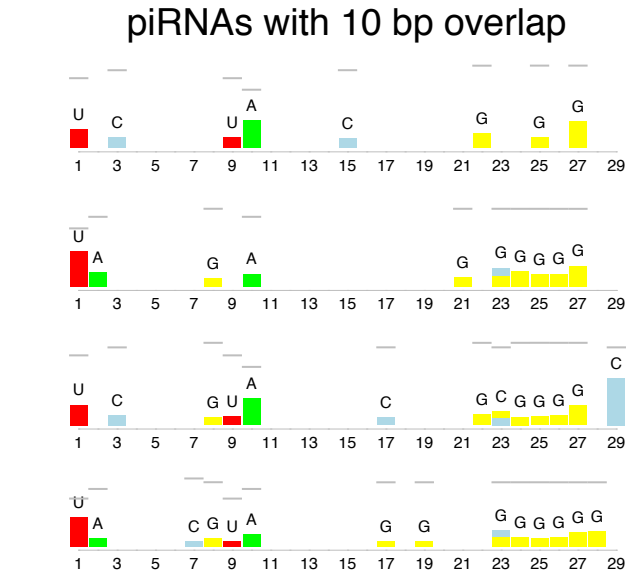
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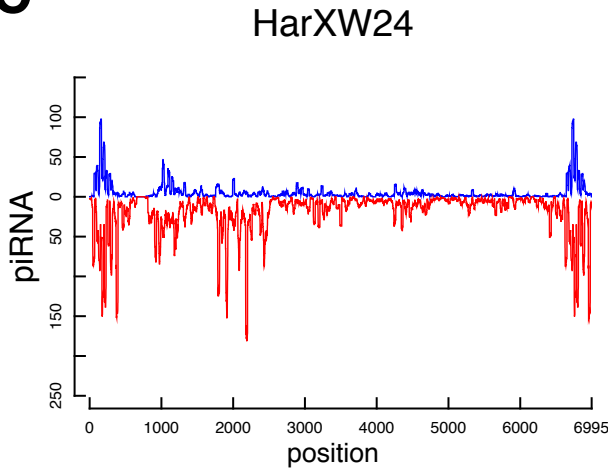
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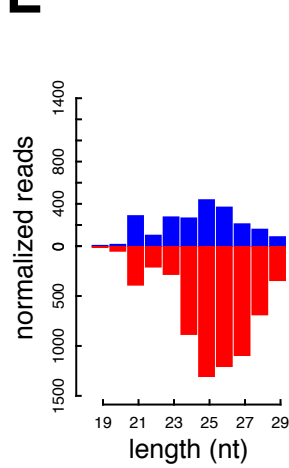
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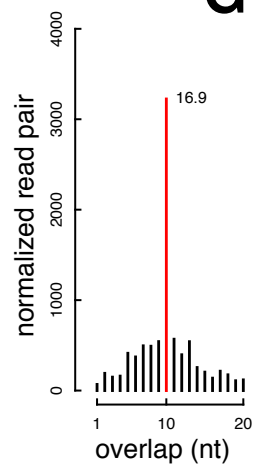
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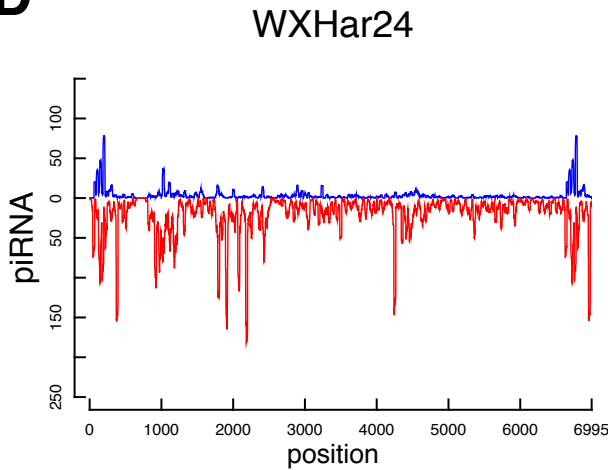
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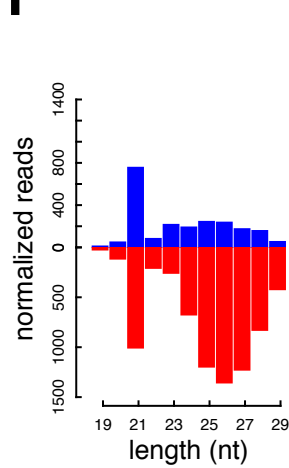
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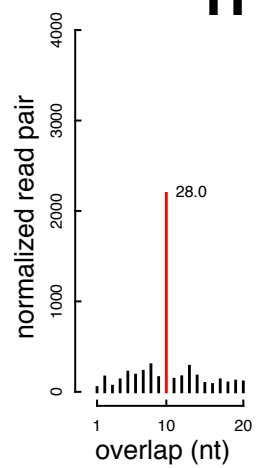
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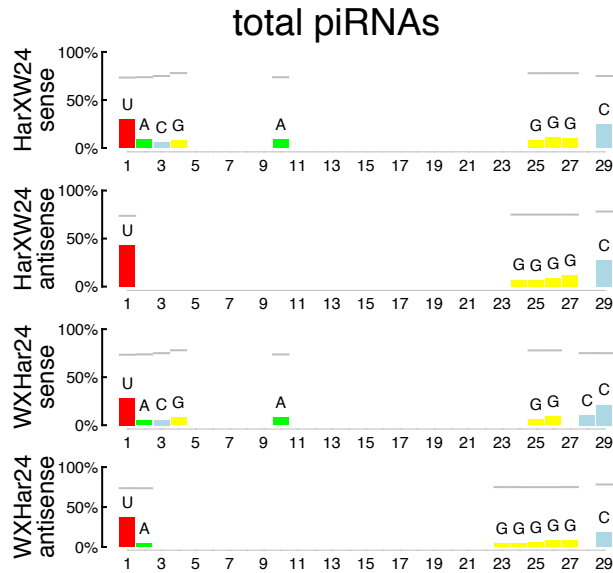
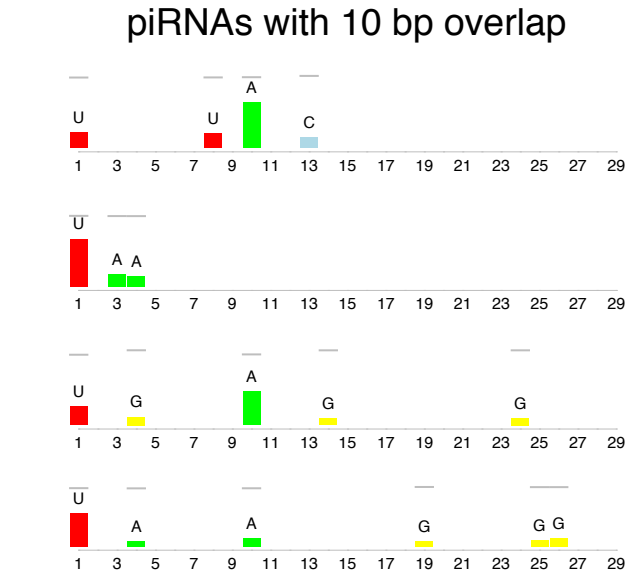
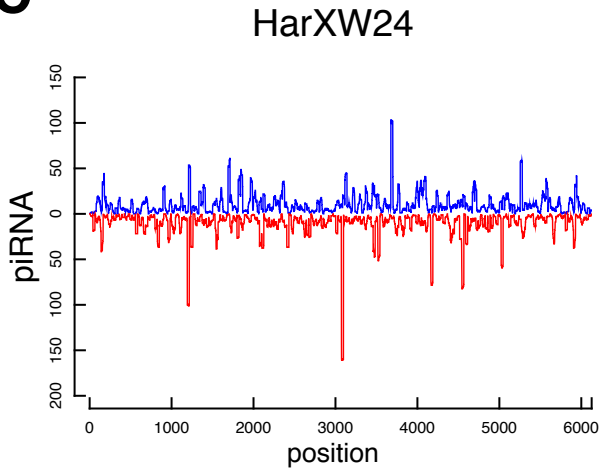
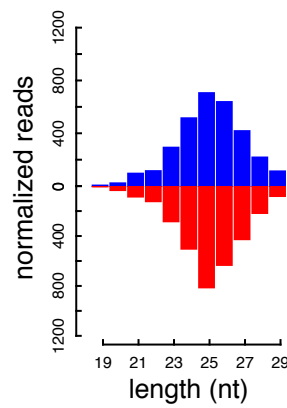
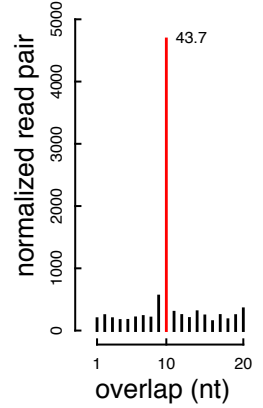
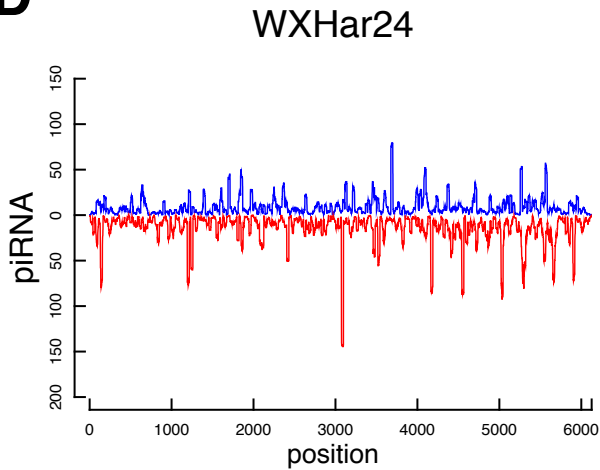
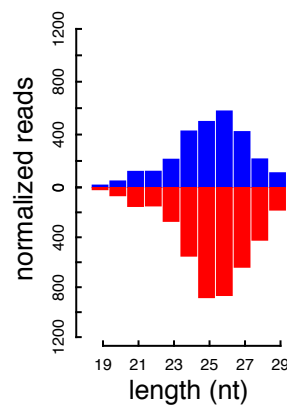
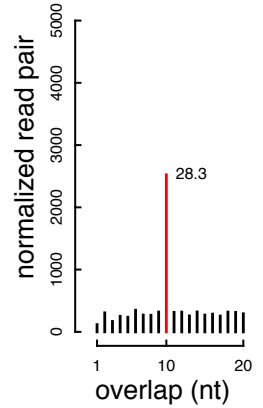
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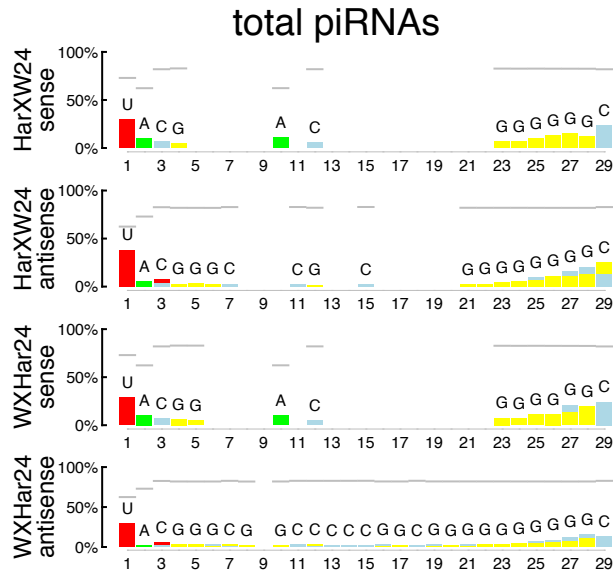
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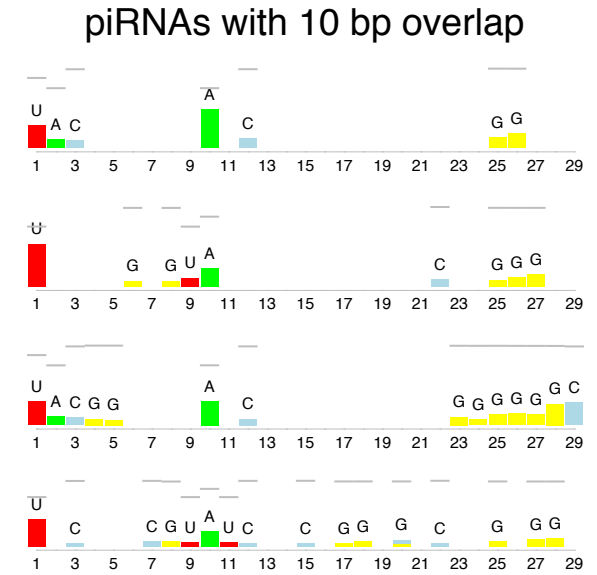
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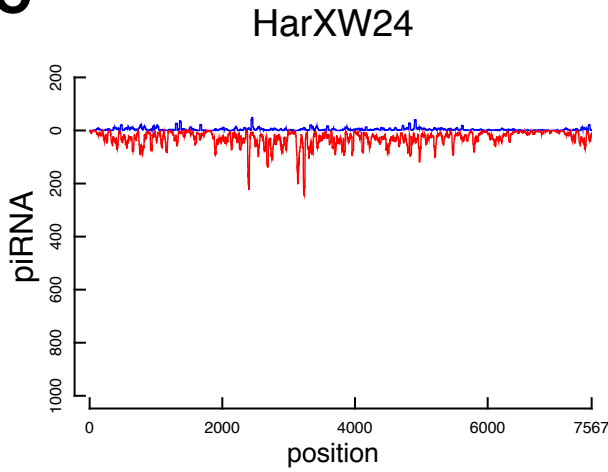
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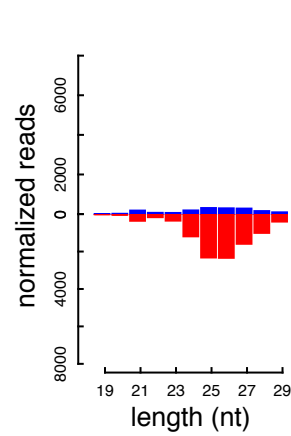
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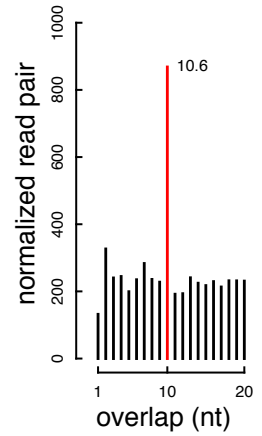
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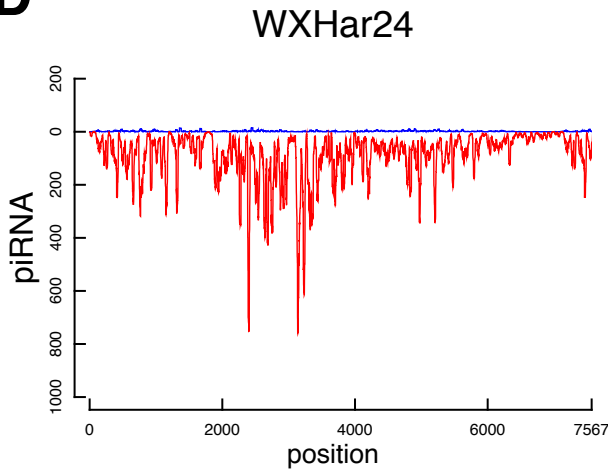
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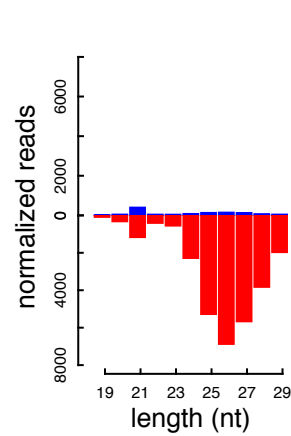
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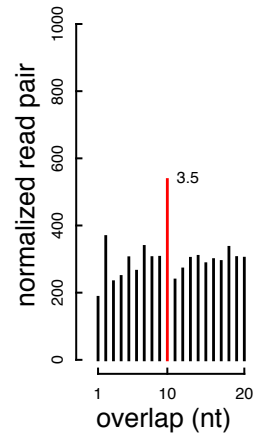
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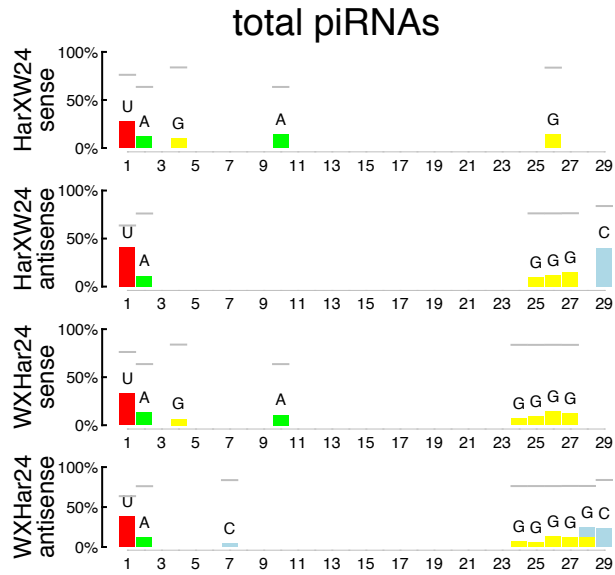
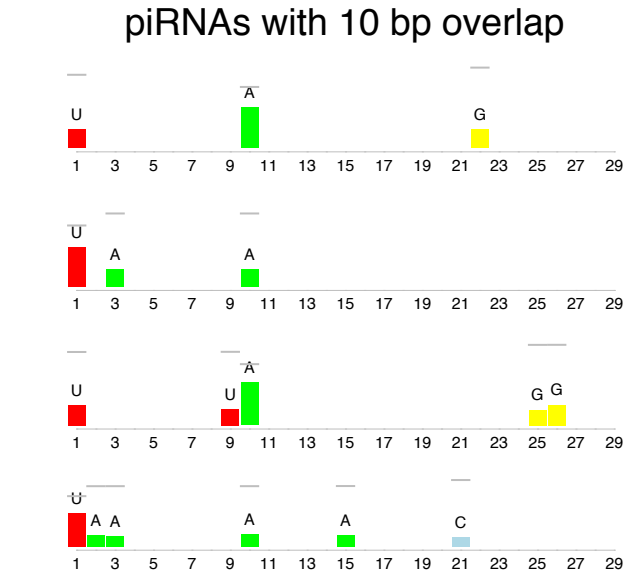
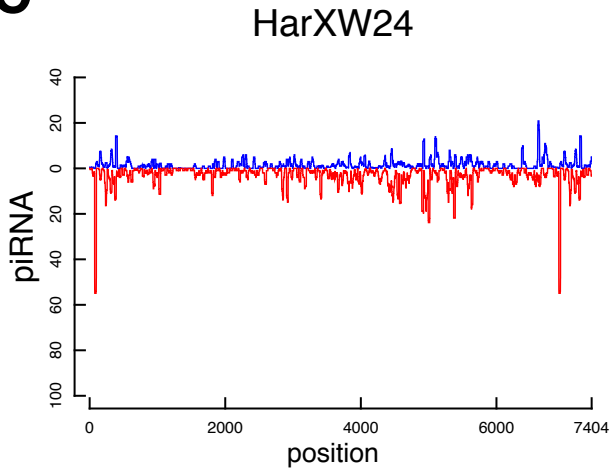
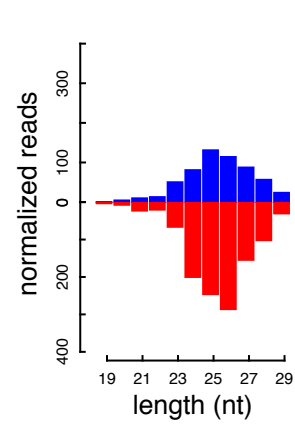
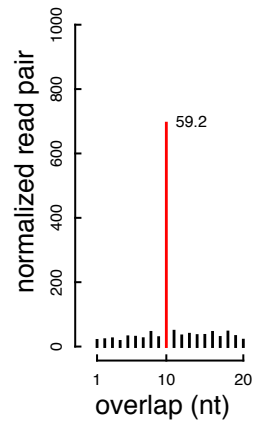
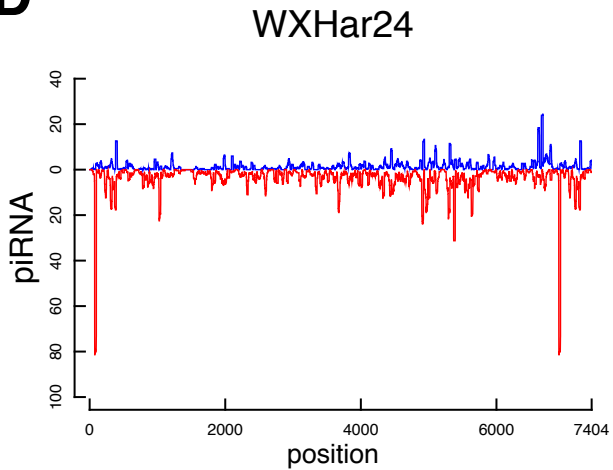
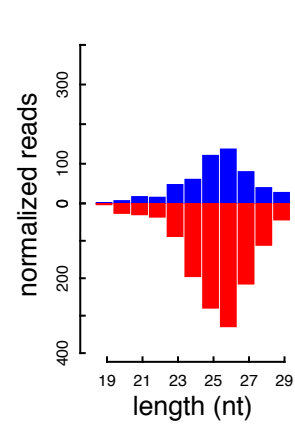
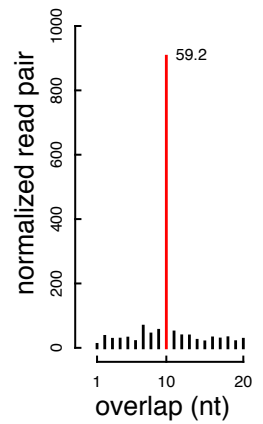
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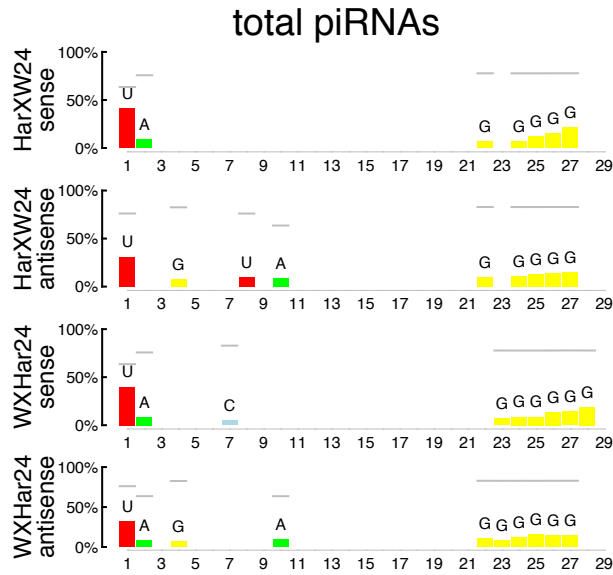
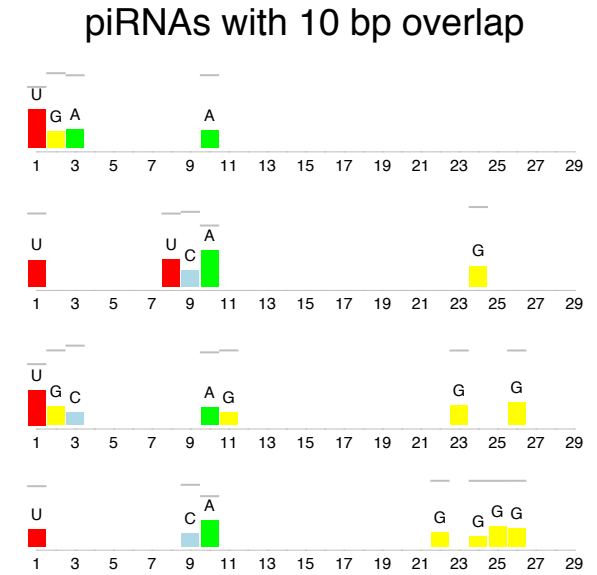
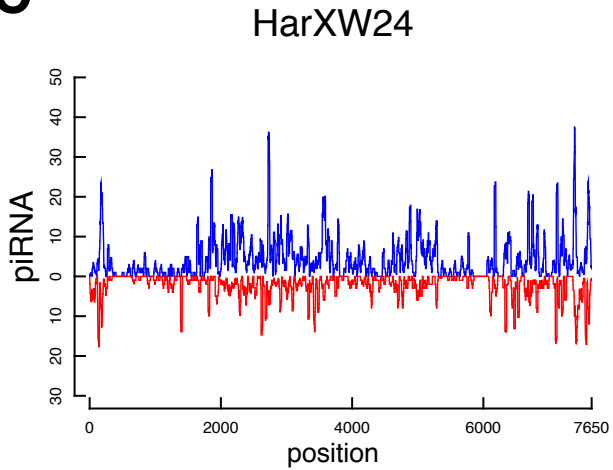
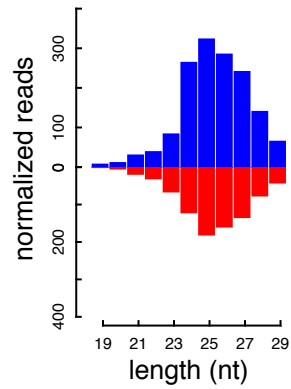
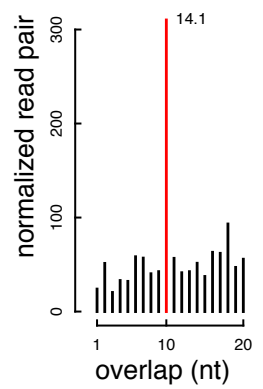
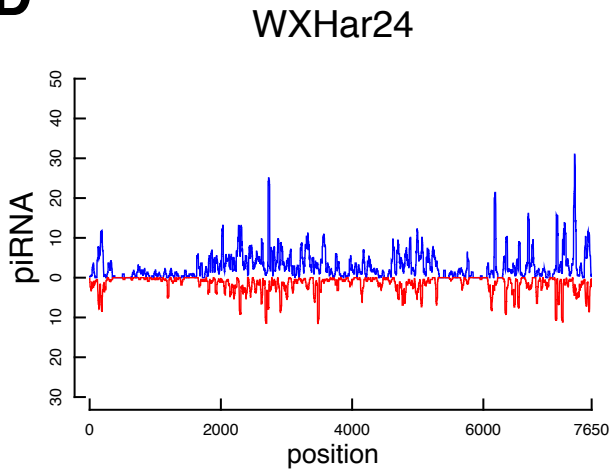
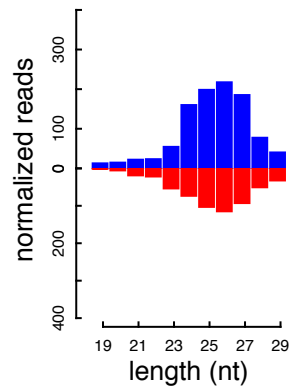
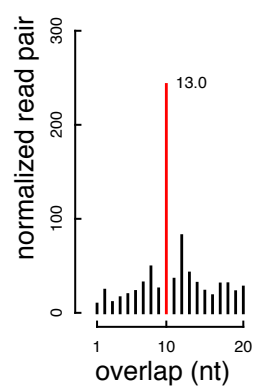
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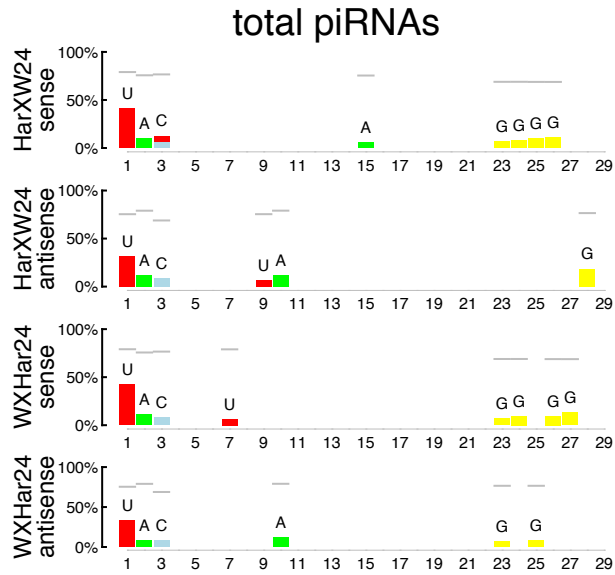
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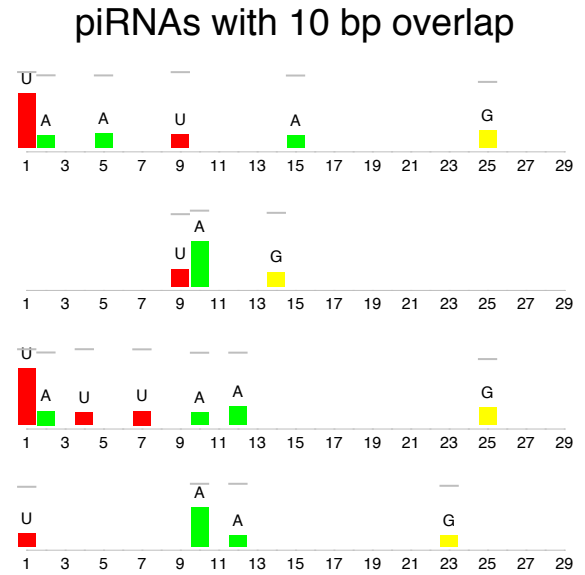
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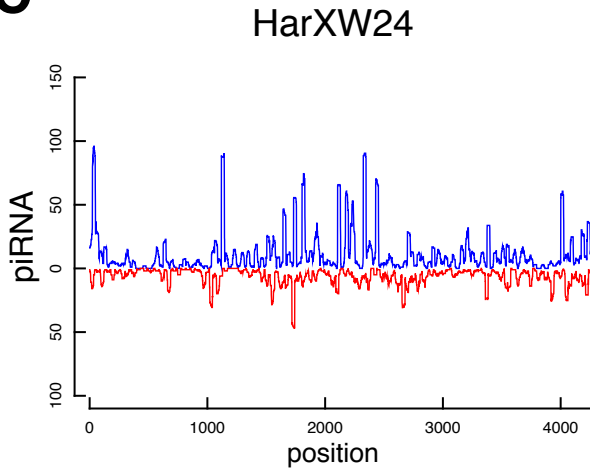
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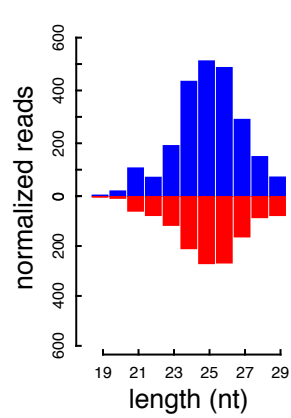
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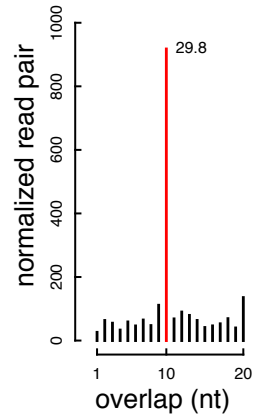
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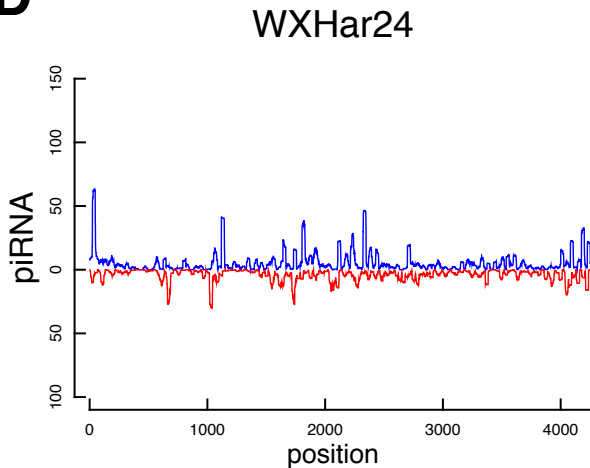
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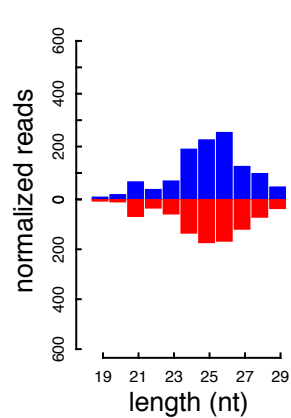
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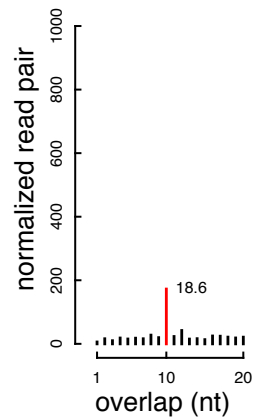
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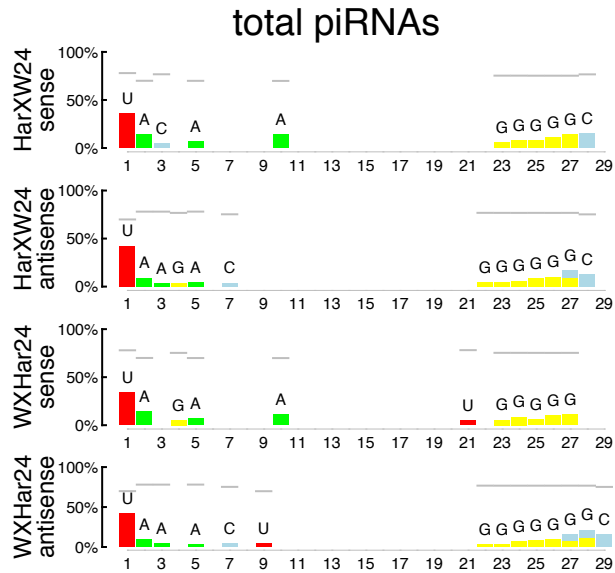
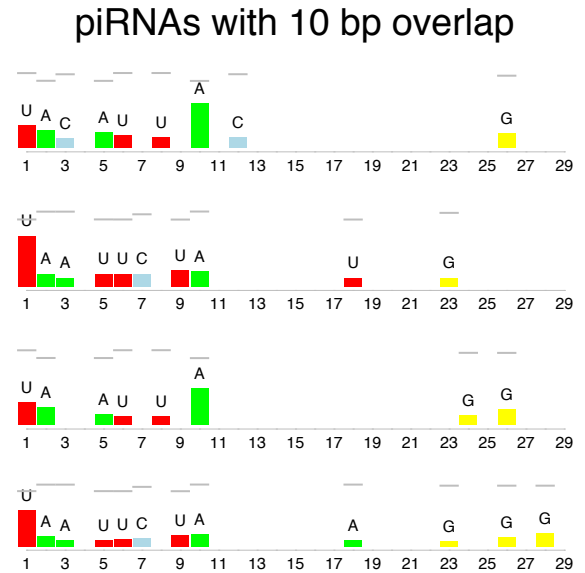
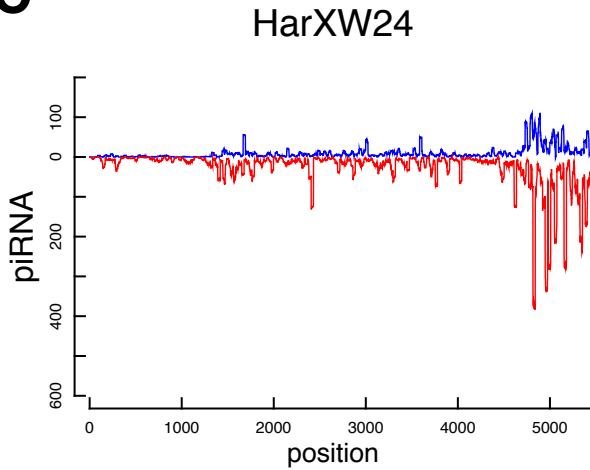
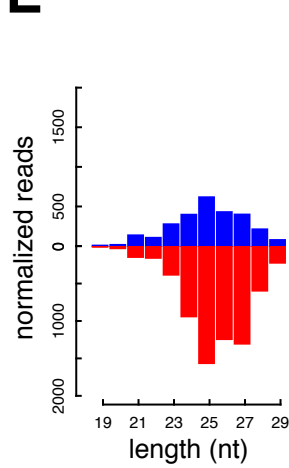
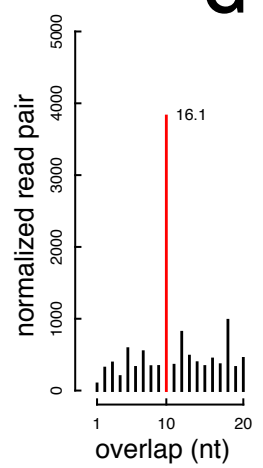
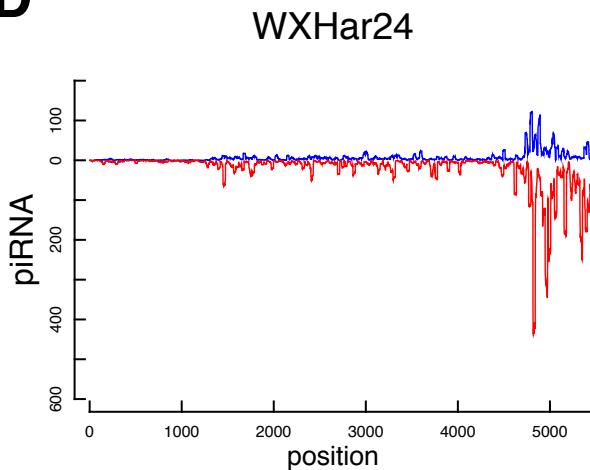
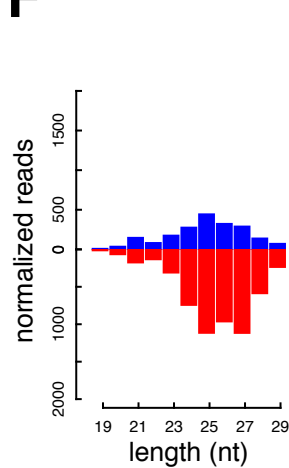
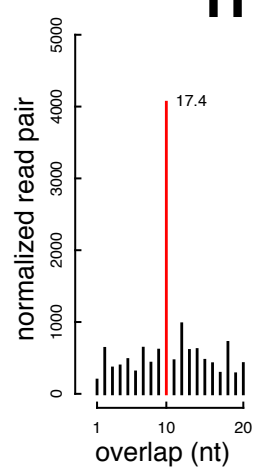
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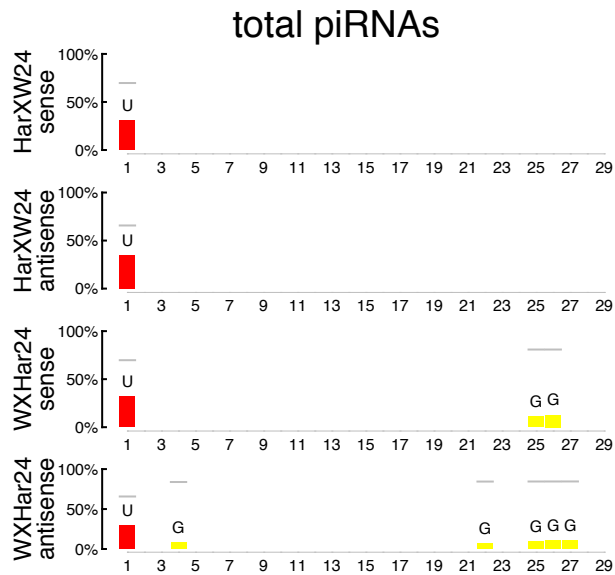
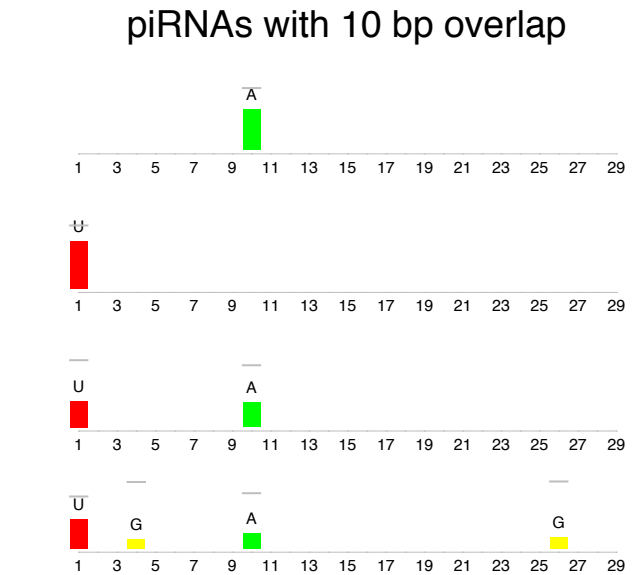
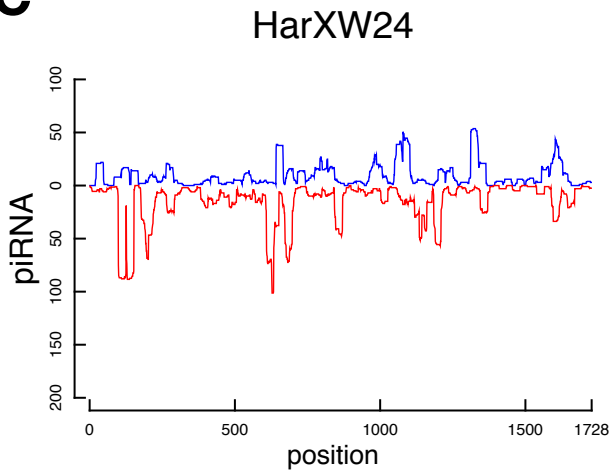
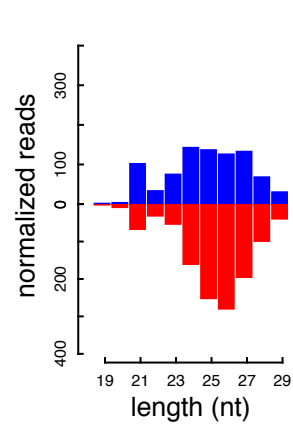
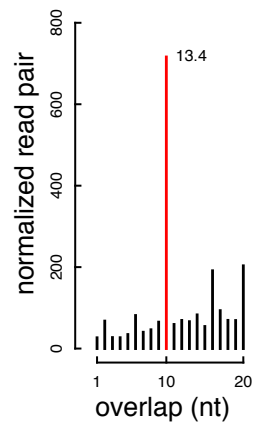
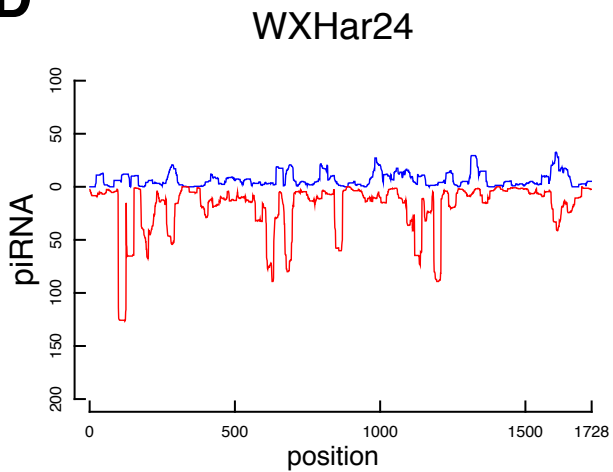
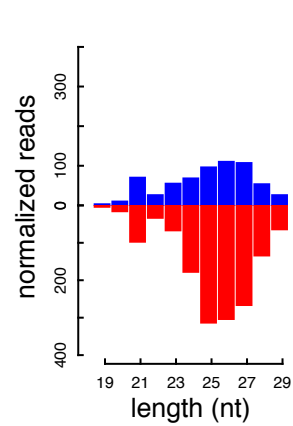
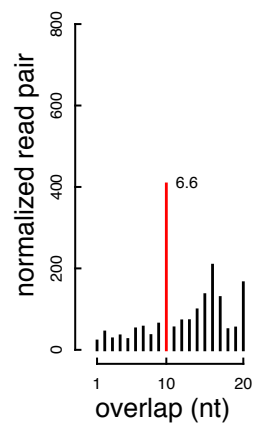
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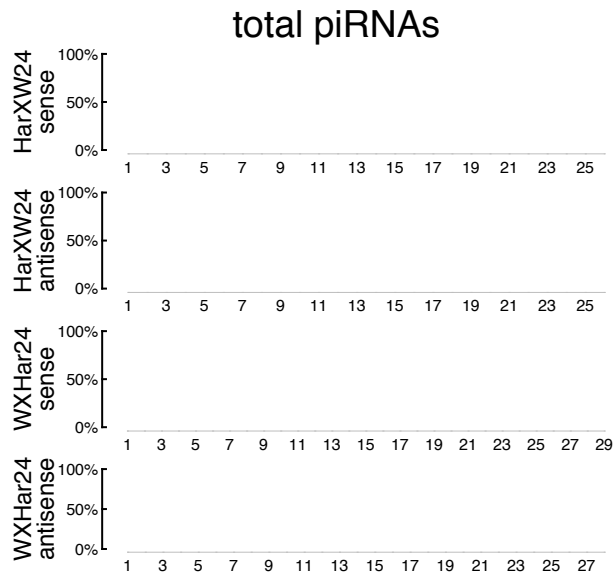
baggins

A**B****C****E****G****D****F****H**

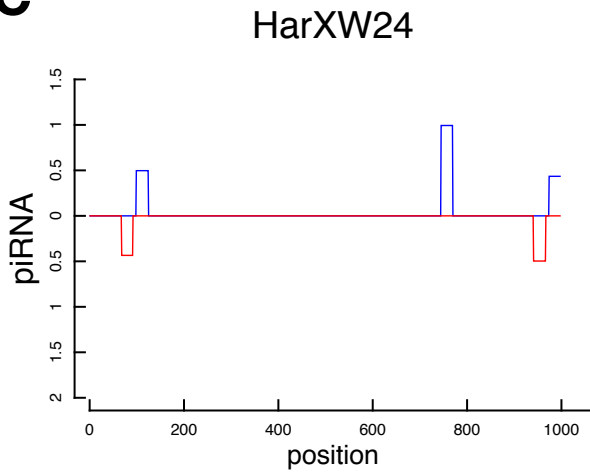
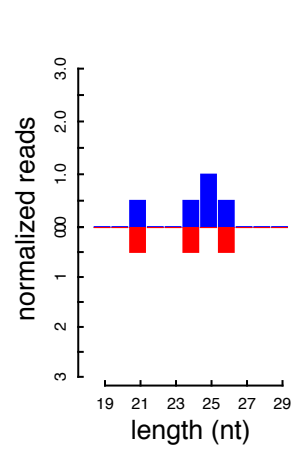
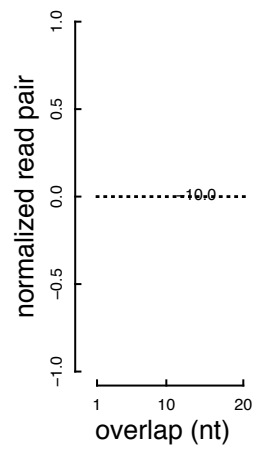
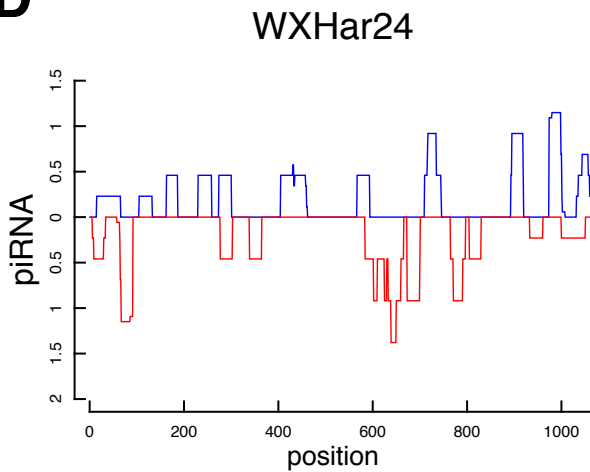
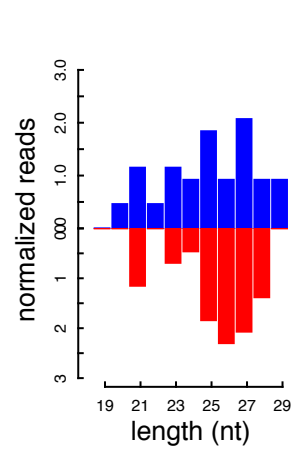
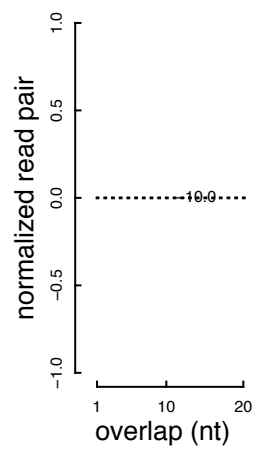
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A**B****C****E****G****D****F****H**

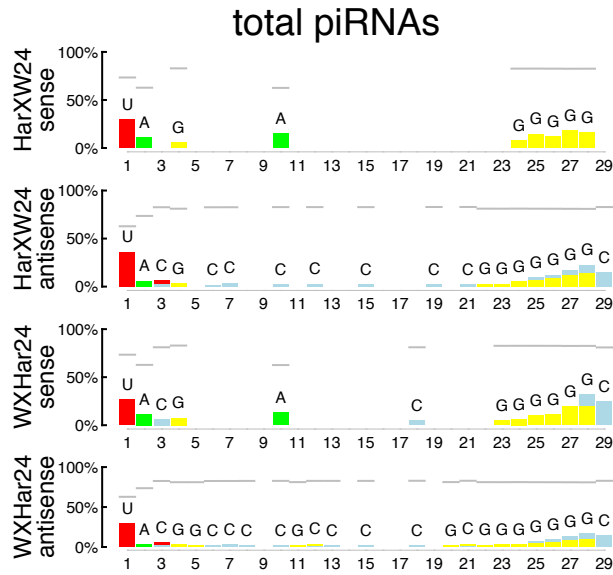
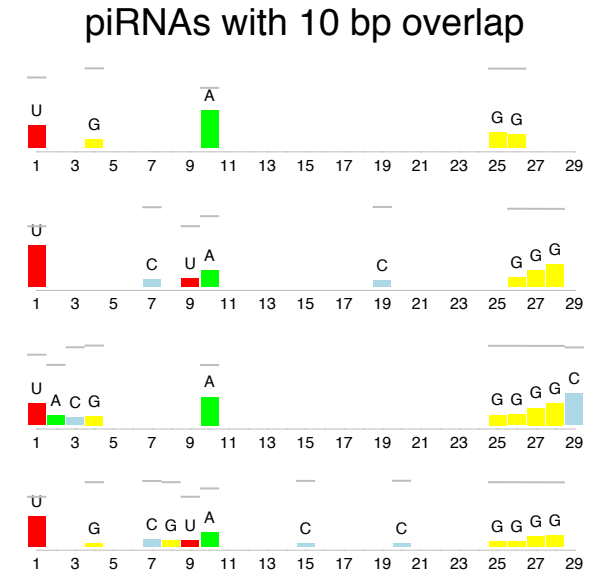
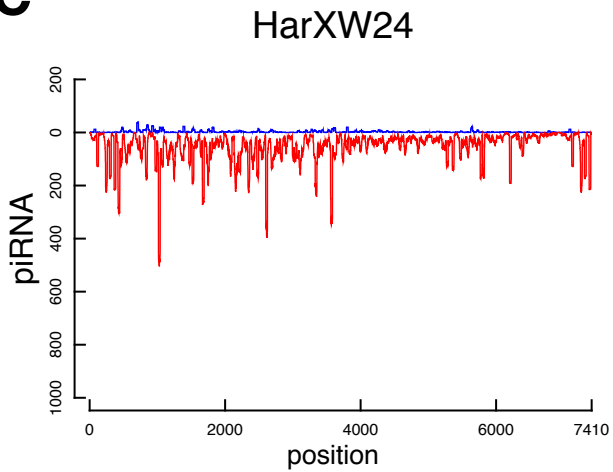
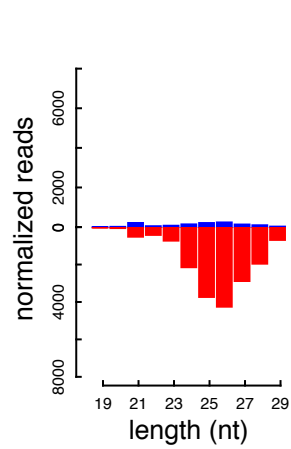
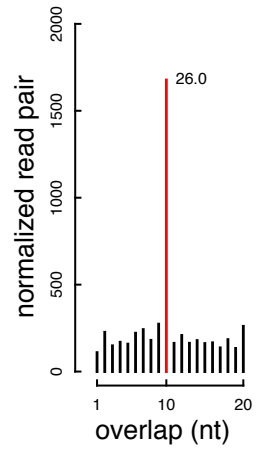
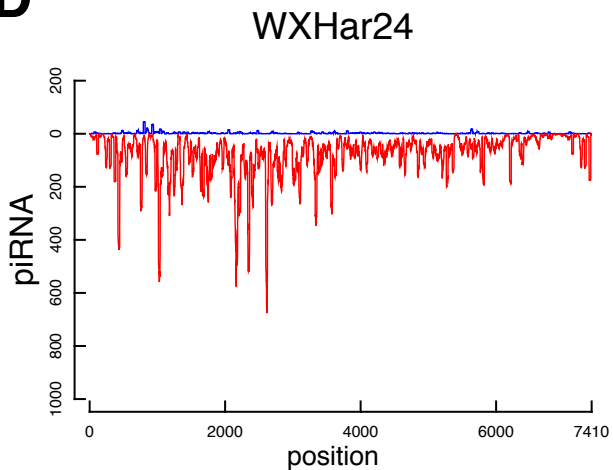
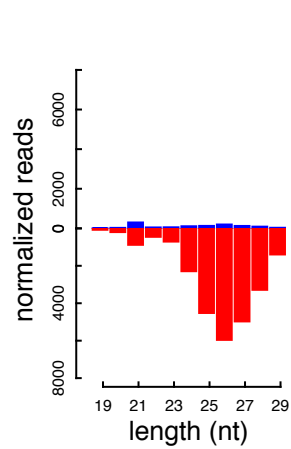
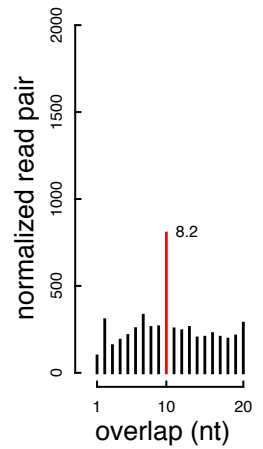
Bari2

A**B**

piRNAs with 10 bp overlap

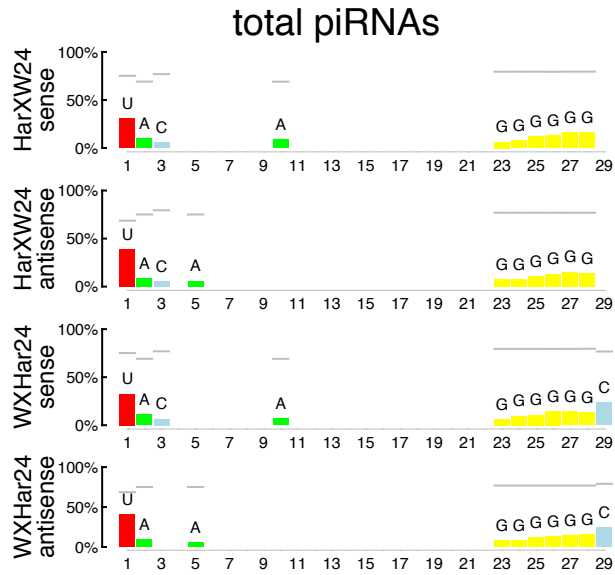
C**E****G****D****F****H**

blood

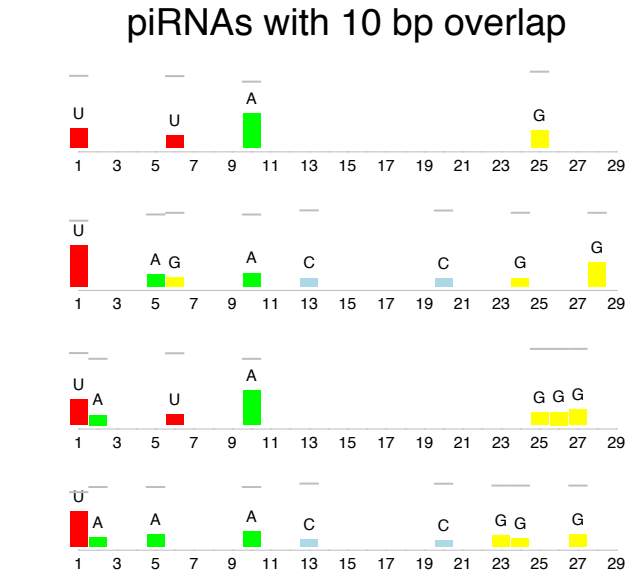
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BS

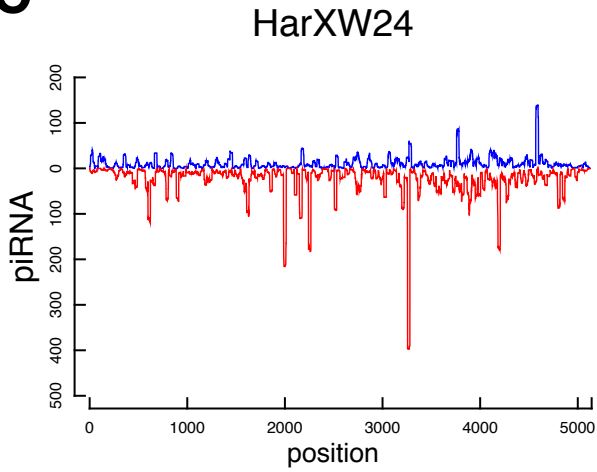
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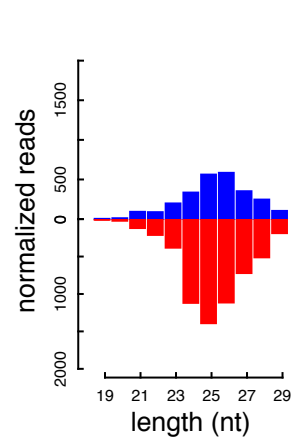
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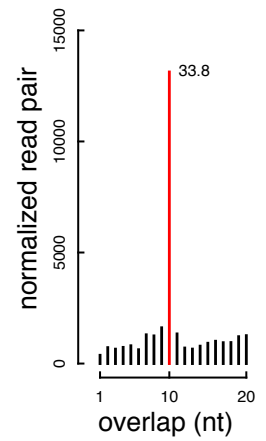
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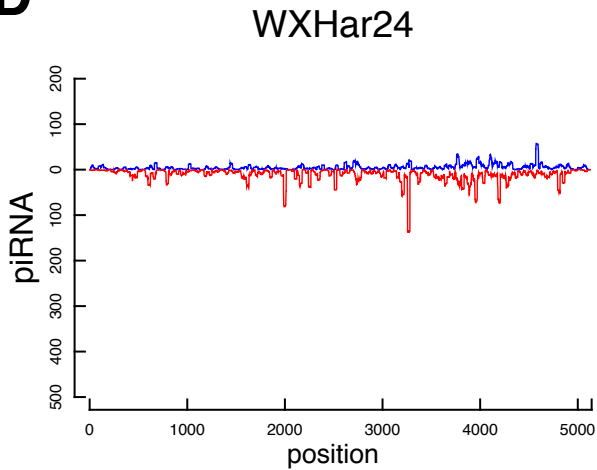
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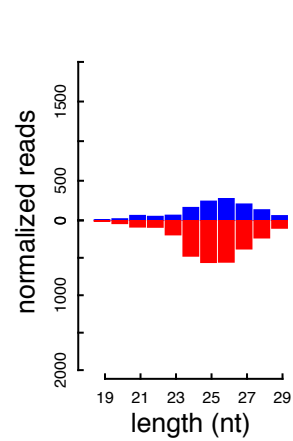
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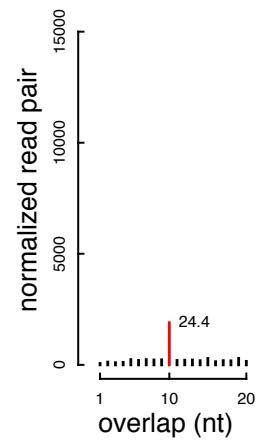
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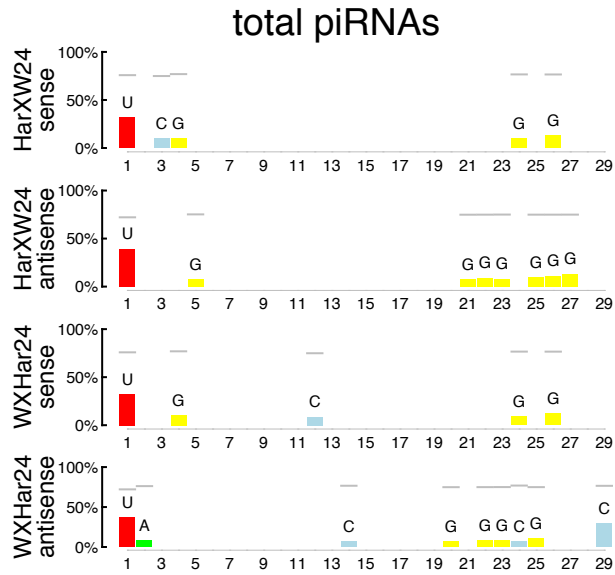
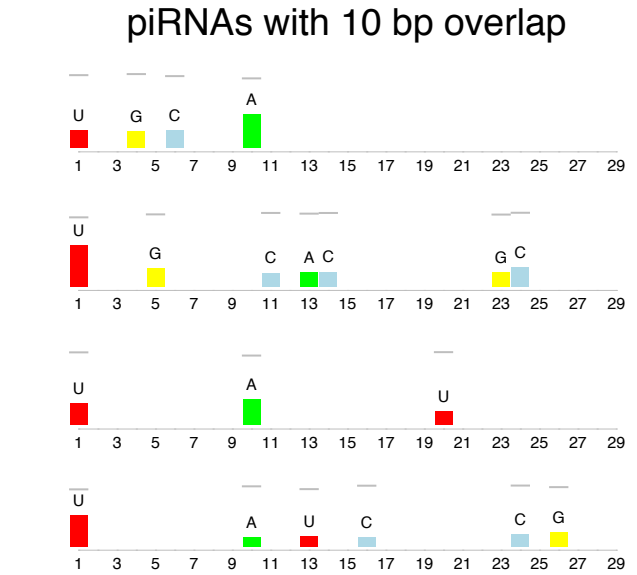
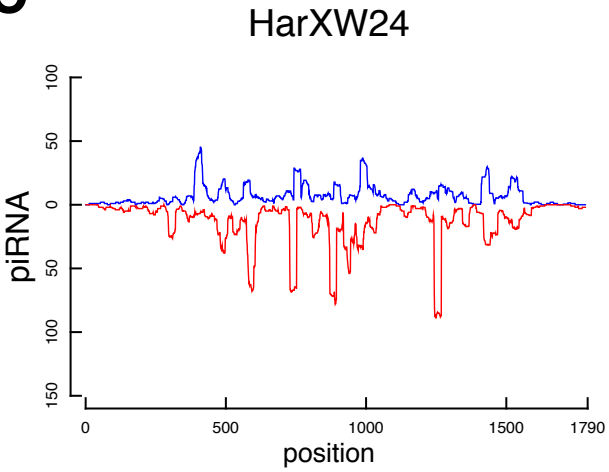
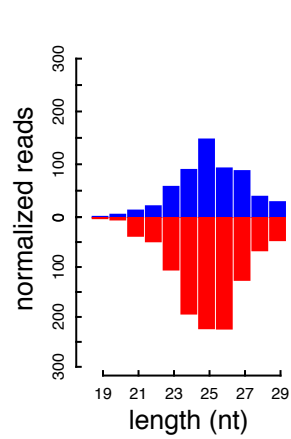
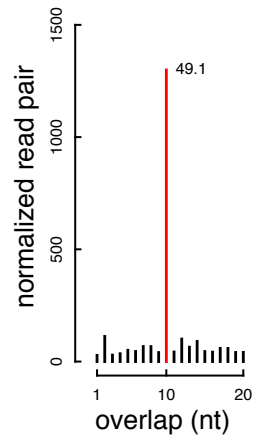
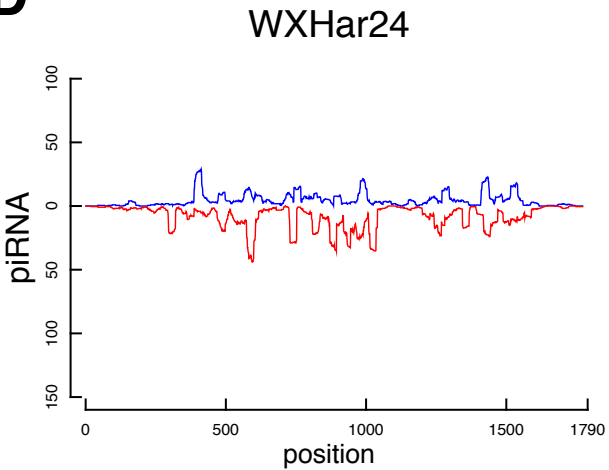
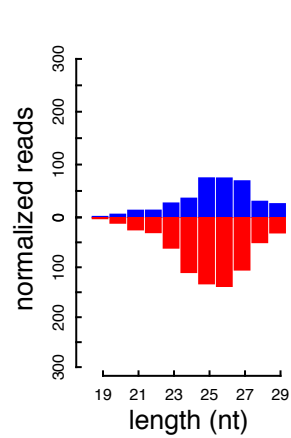
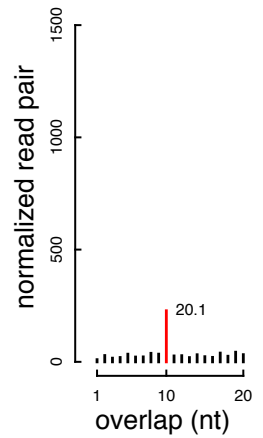
F



H



BS3

A**B****C****E****G****D****F****H**

BS3#2

A

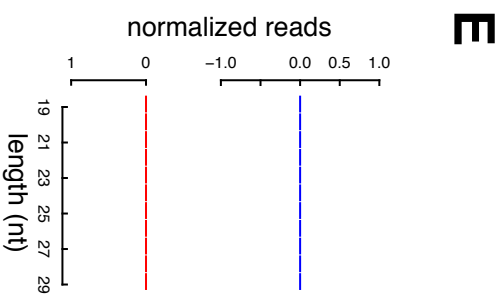
WXHar24 antisense WXHar24 sense HarXW24 antisense HarXW24 sense

total piRNAs

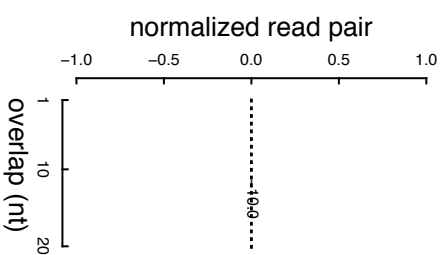
B

piRNAs with 10 bp overlap

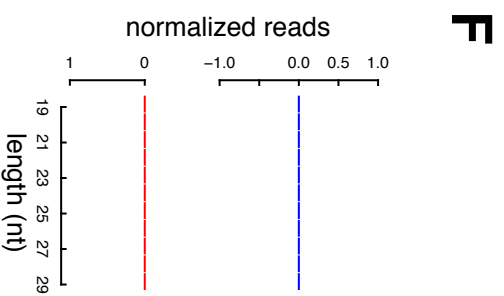
C



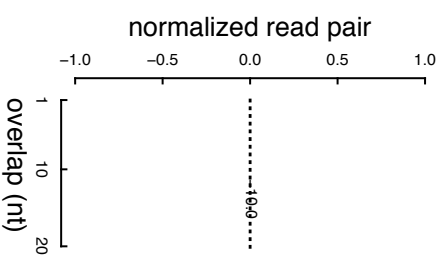
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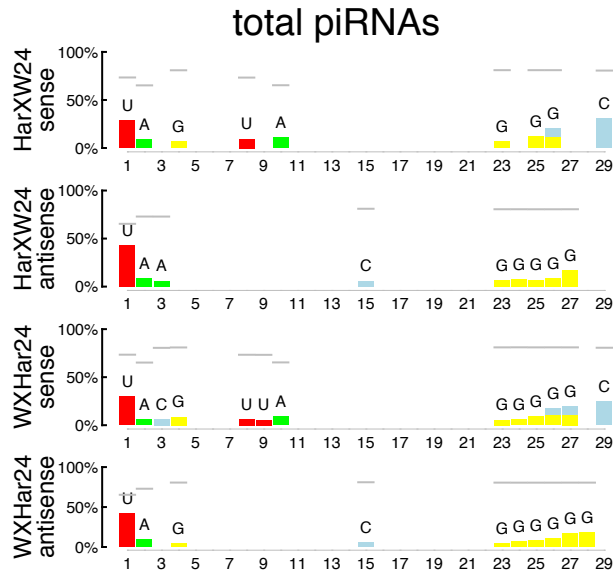
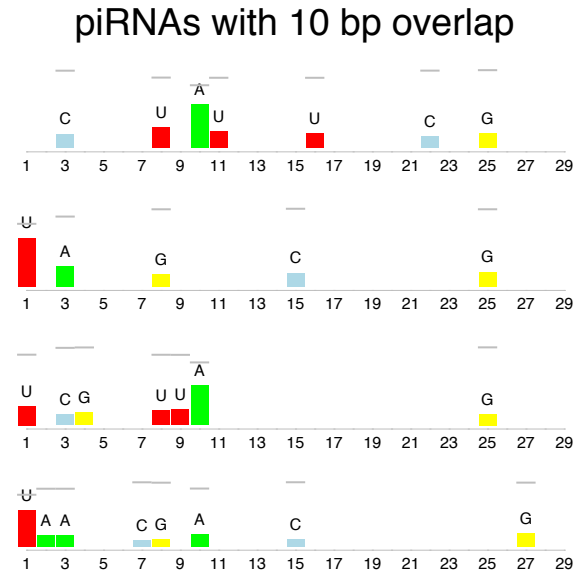
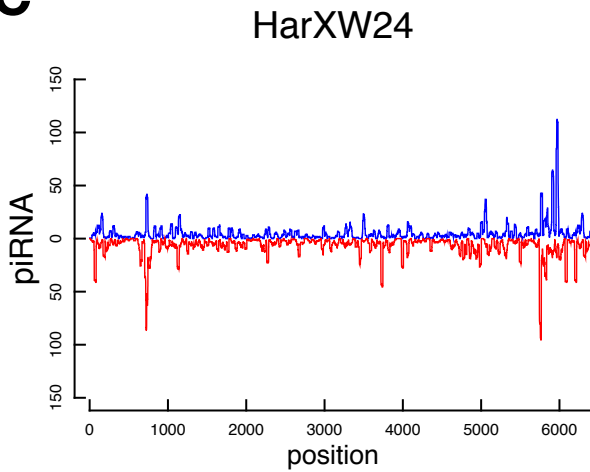
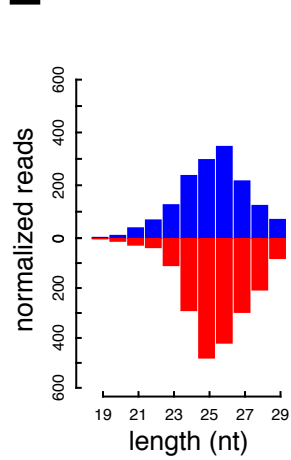
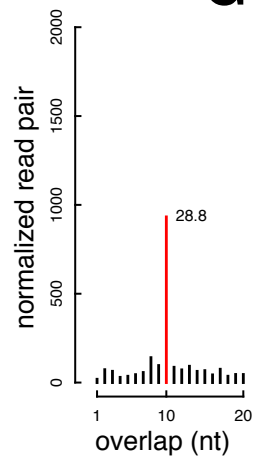
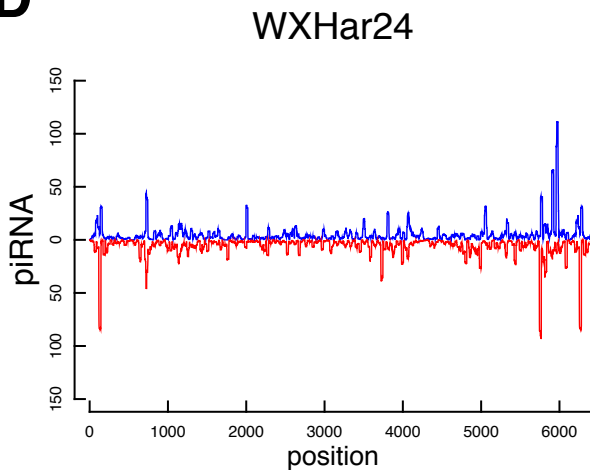
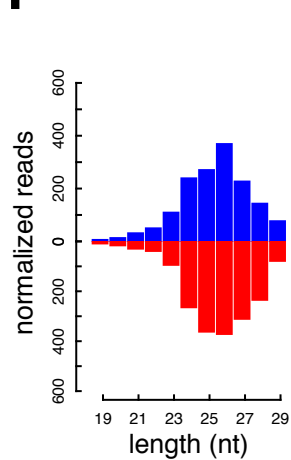
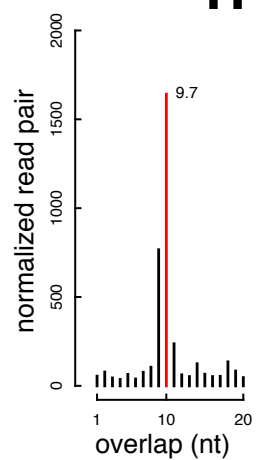
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H

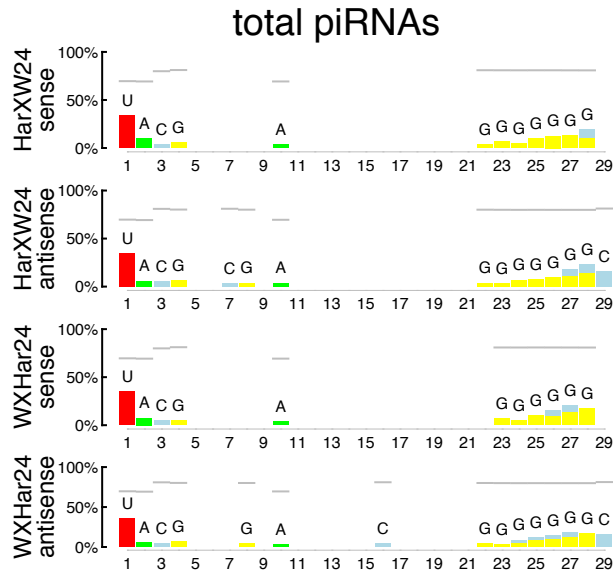


Burdock

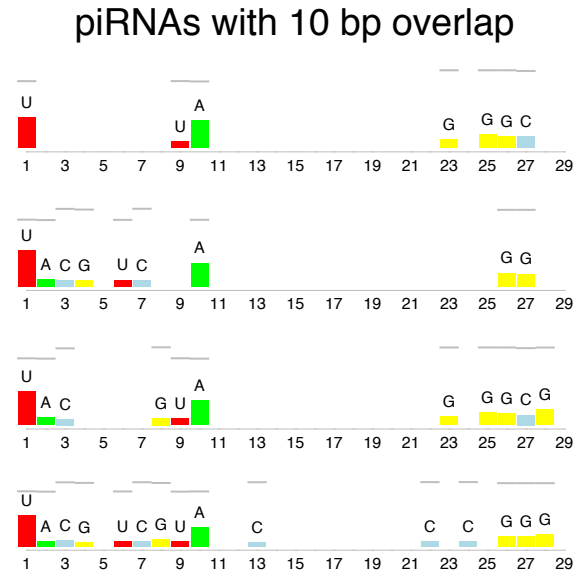
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Circe

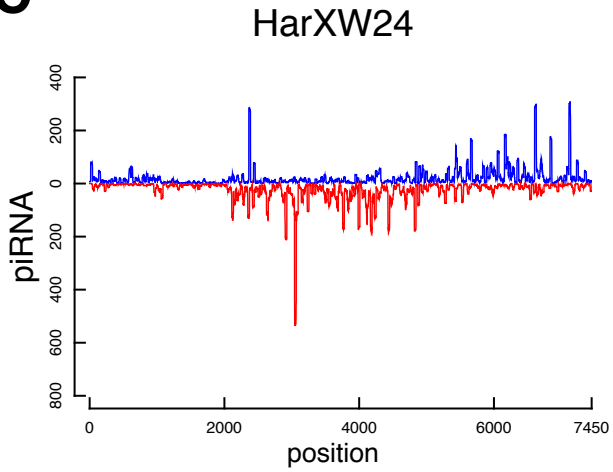
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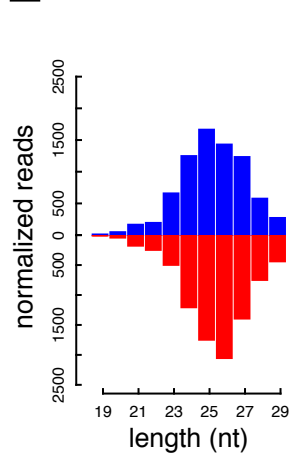
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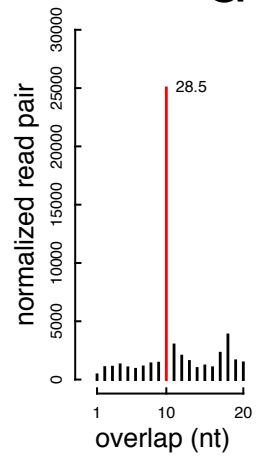
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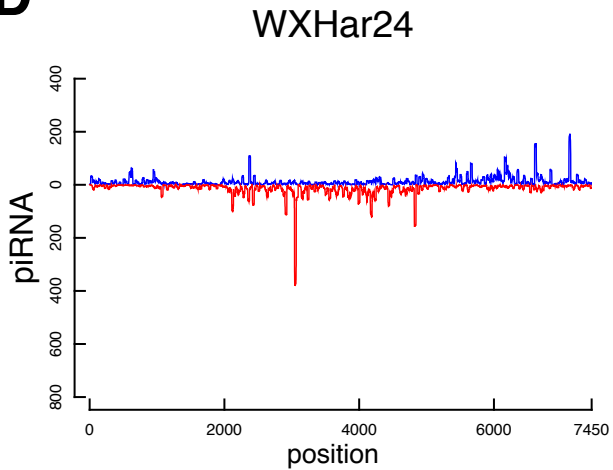
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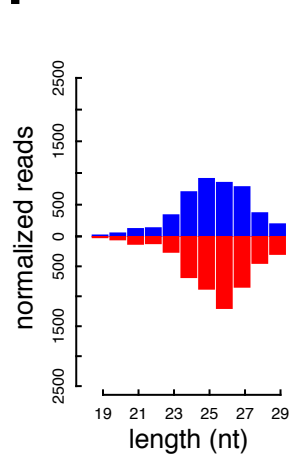
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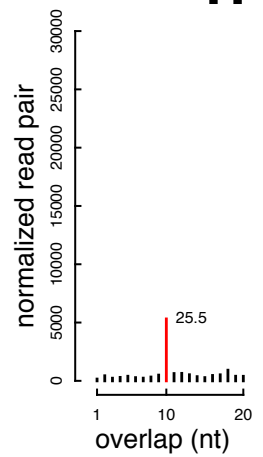
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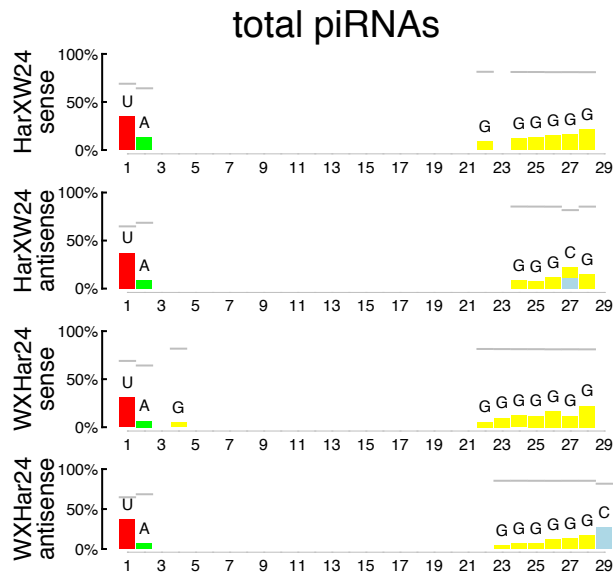
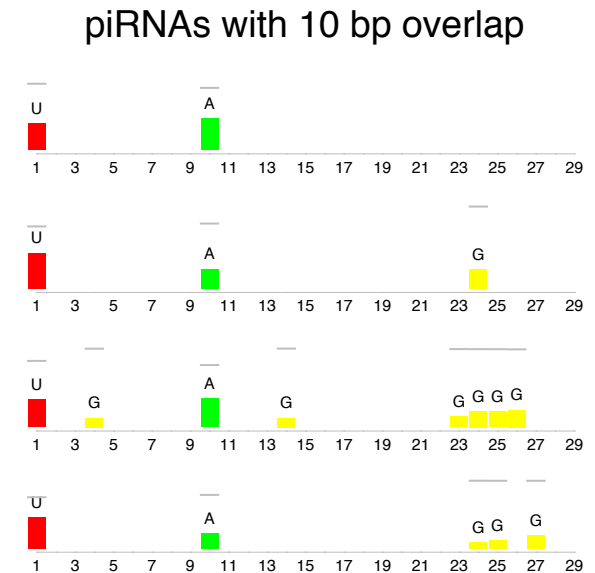
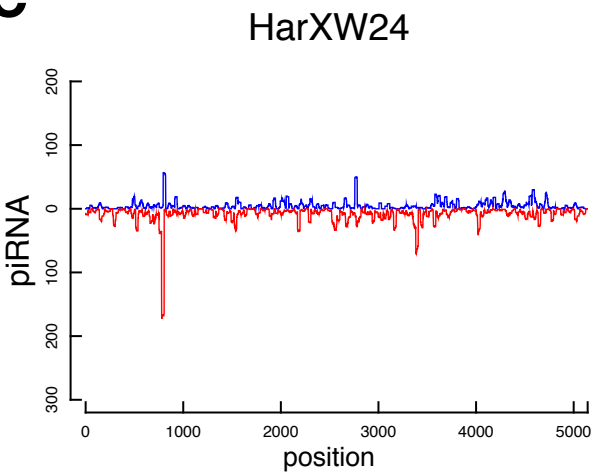
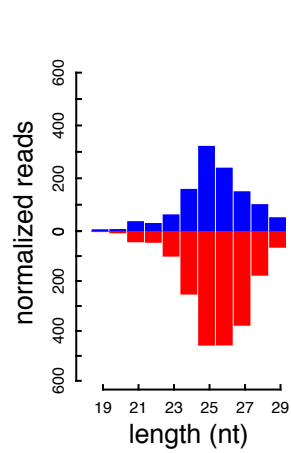
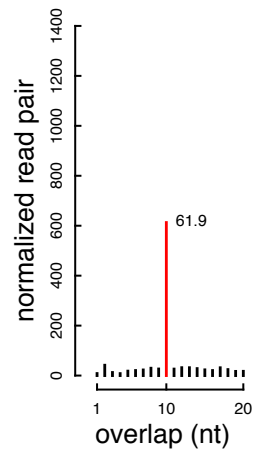
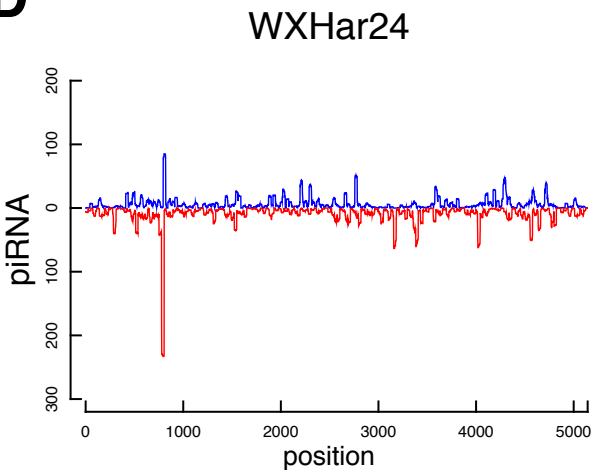
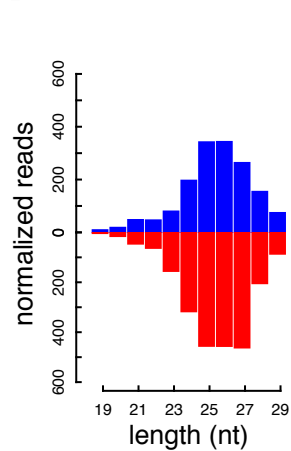
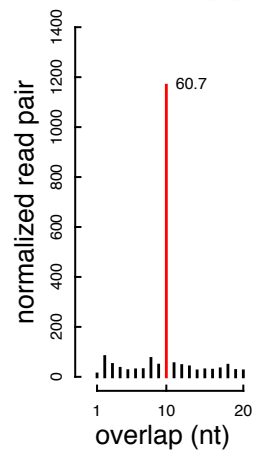
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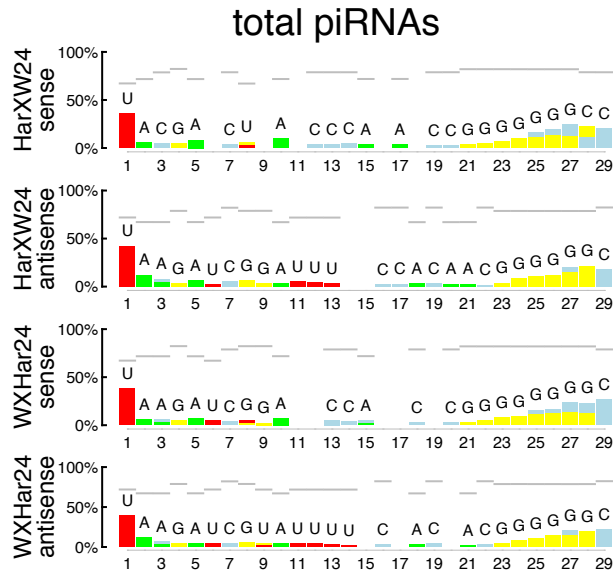
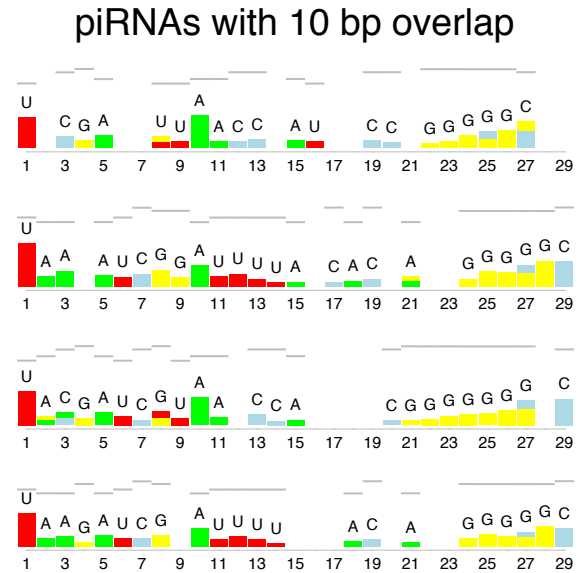
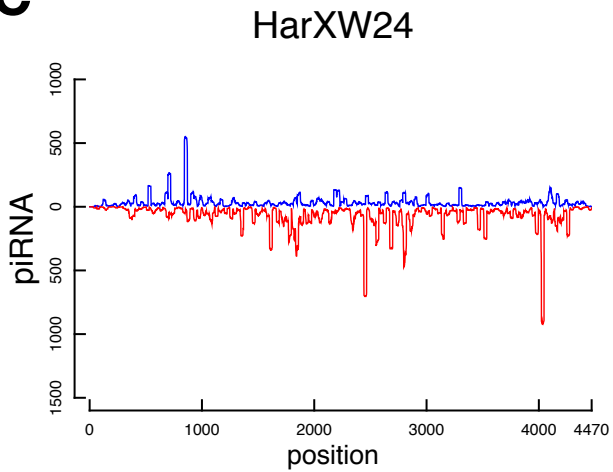
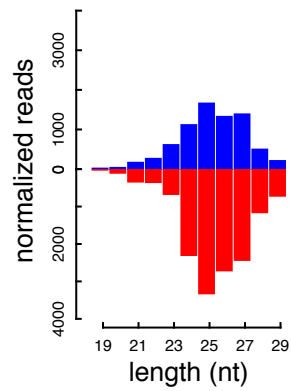
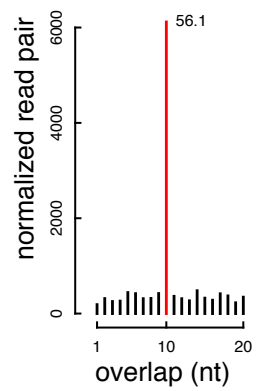
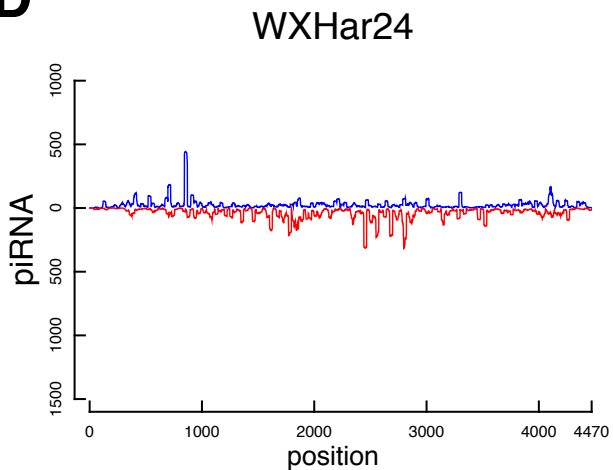
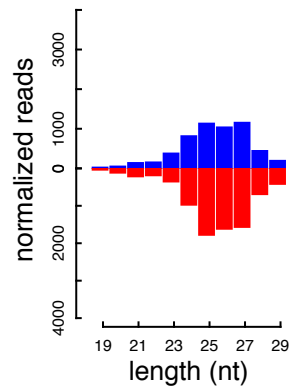
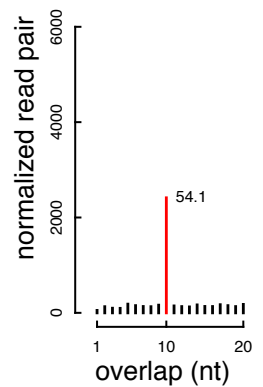
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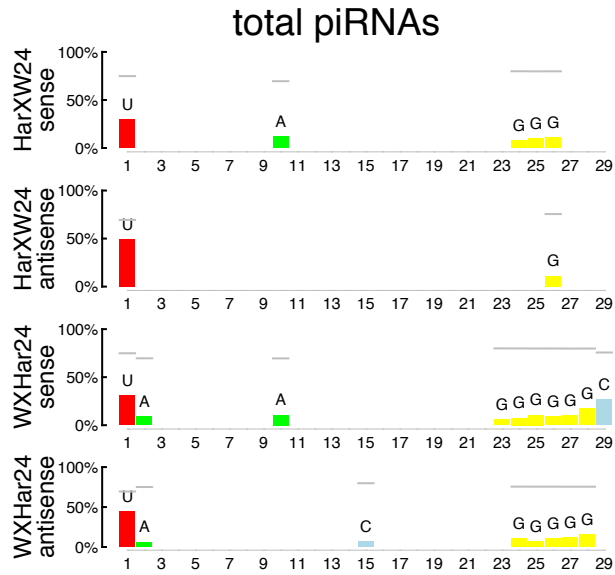
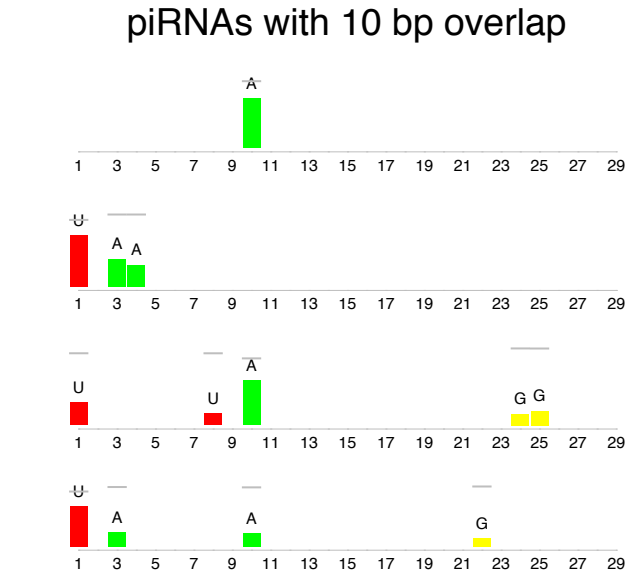
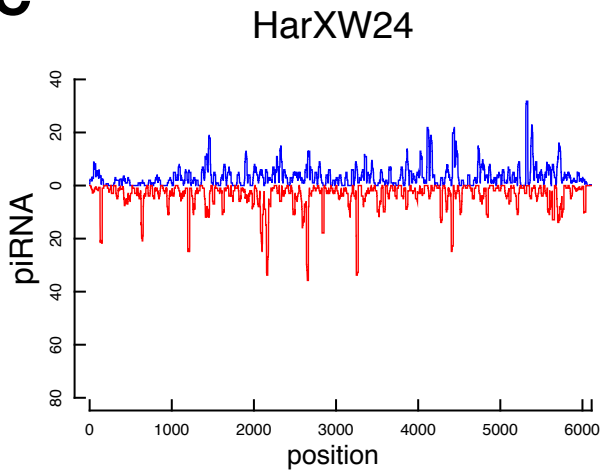
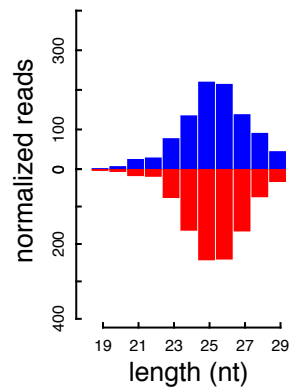
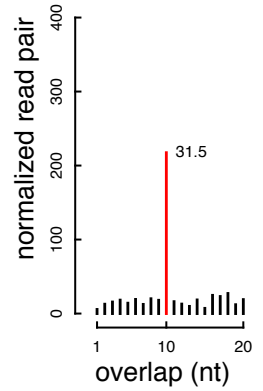
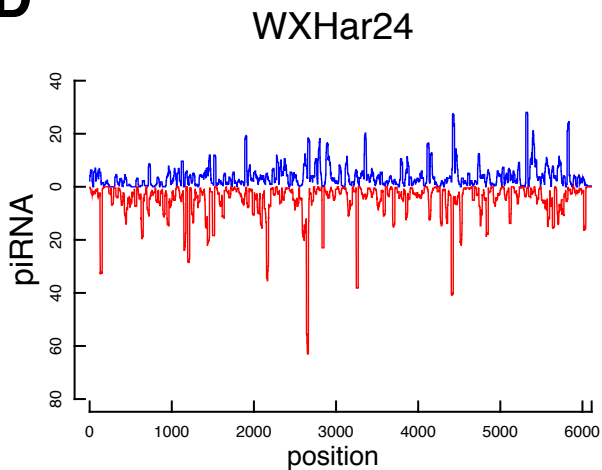
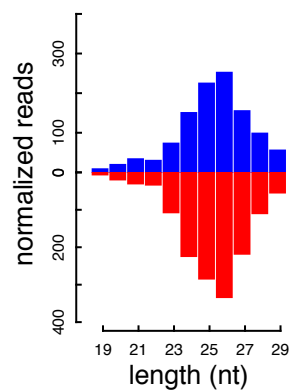
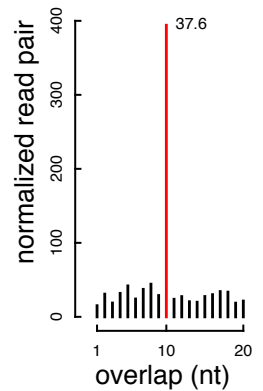
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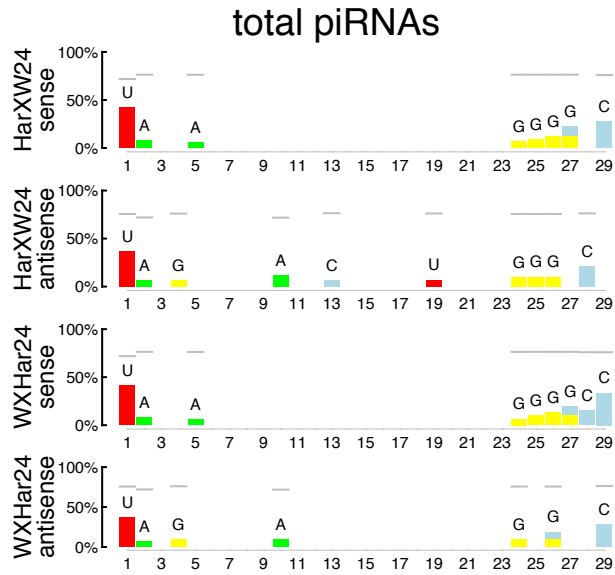
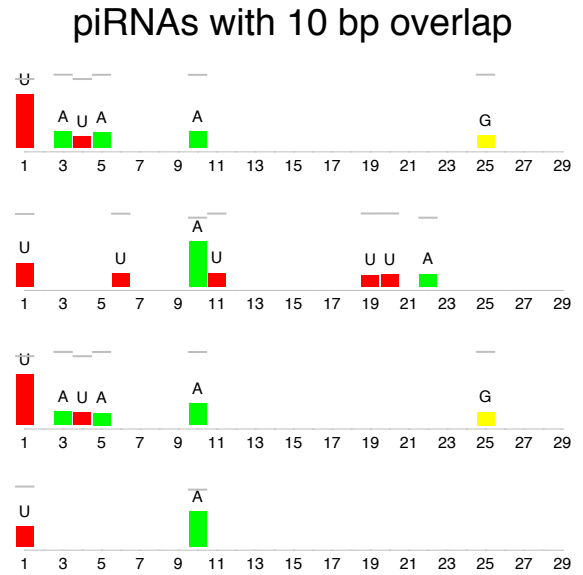
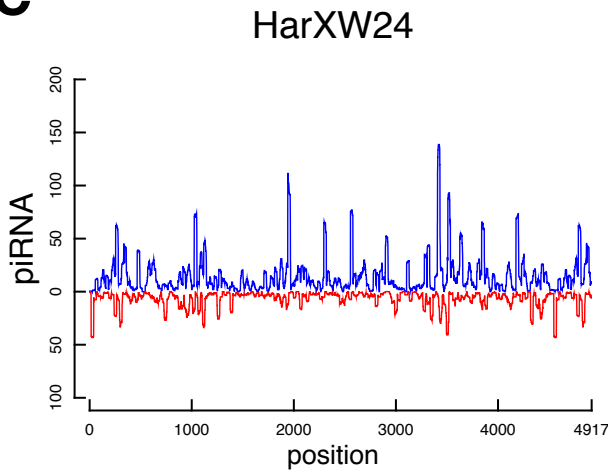
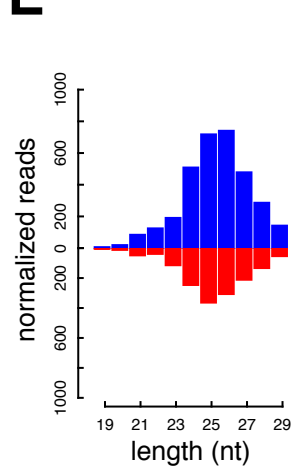
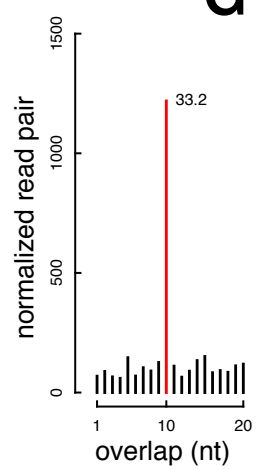
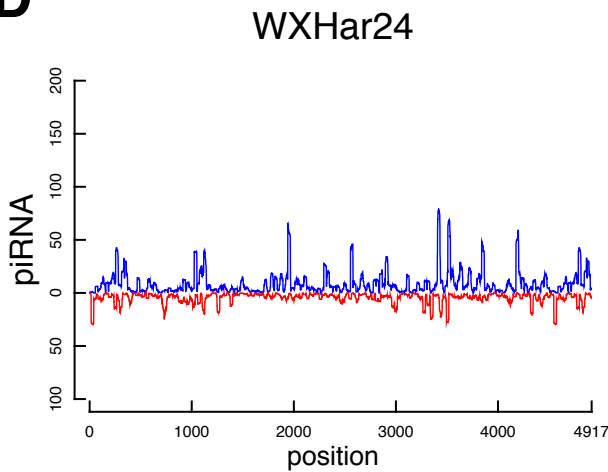
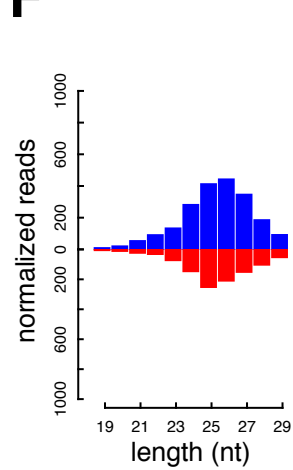
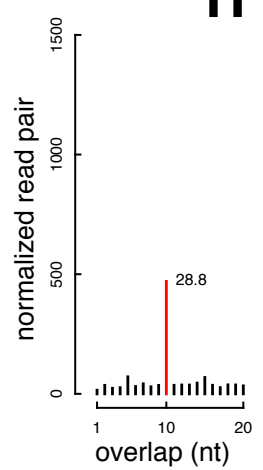
Cr1a

A**B****C****E****G****D****F****H**

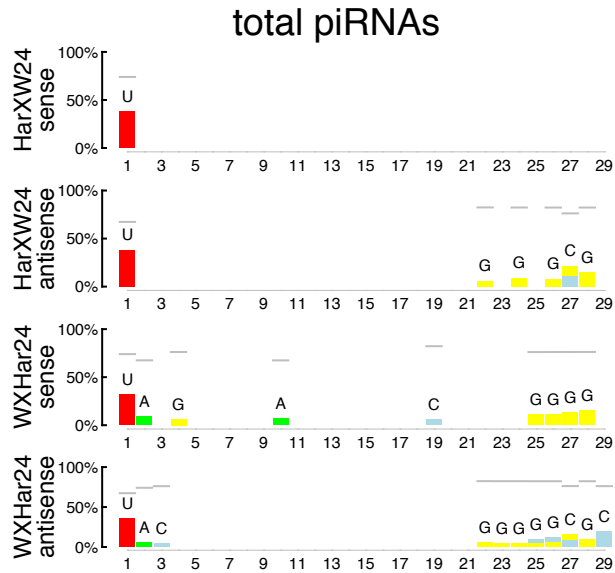
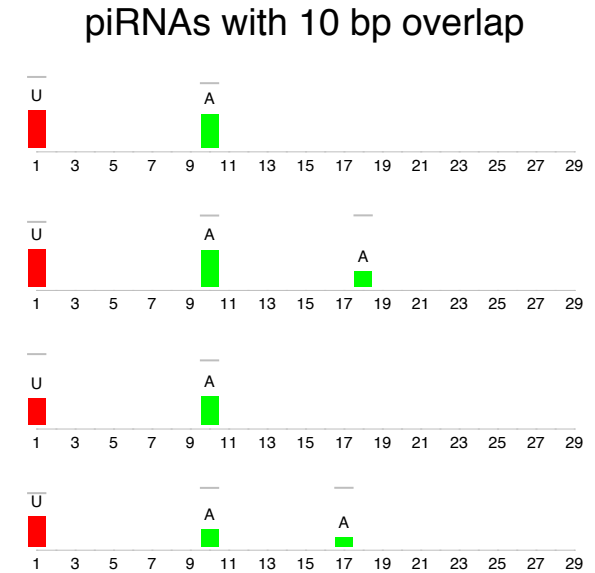
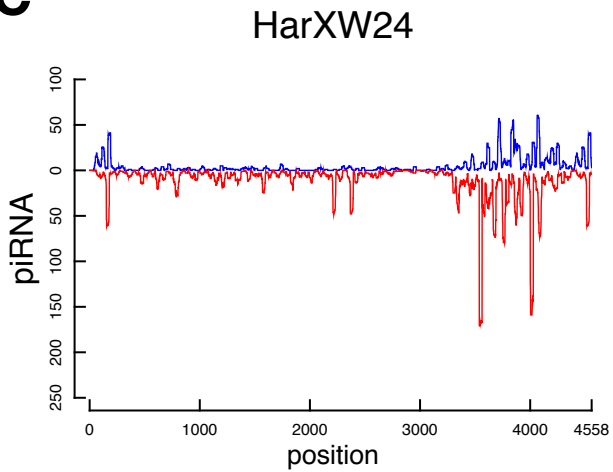
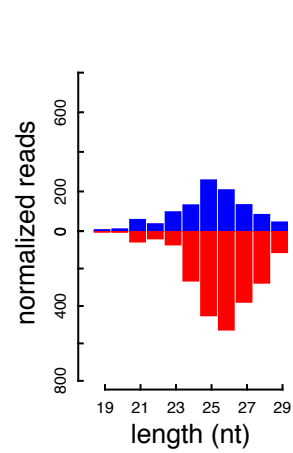
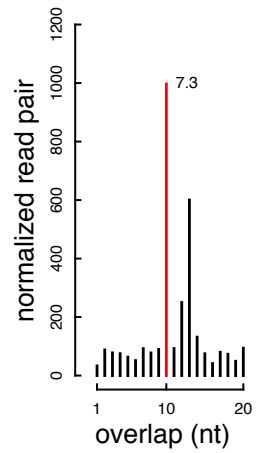
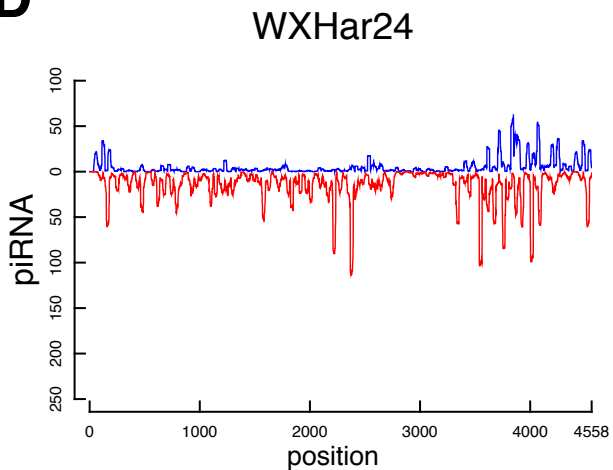
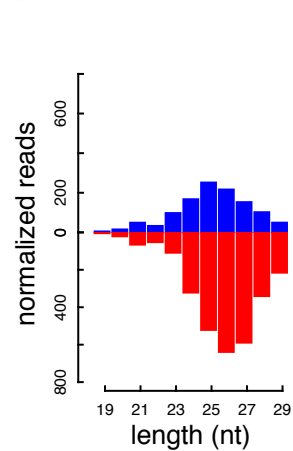
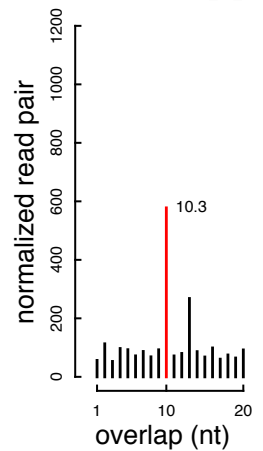
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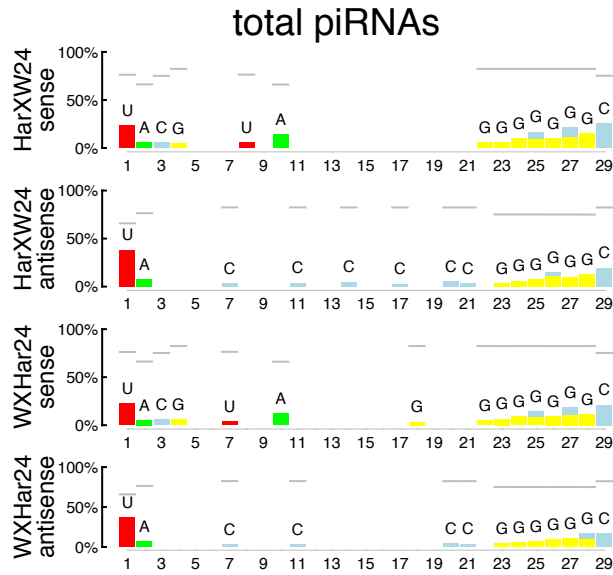
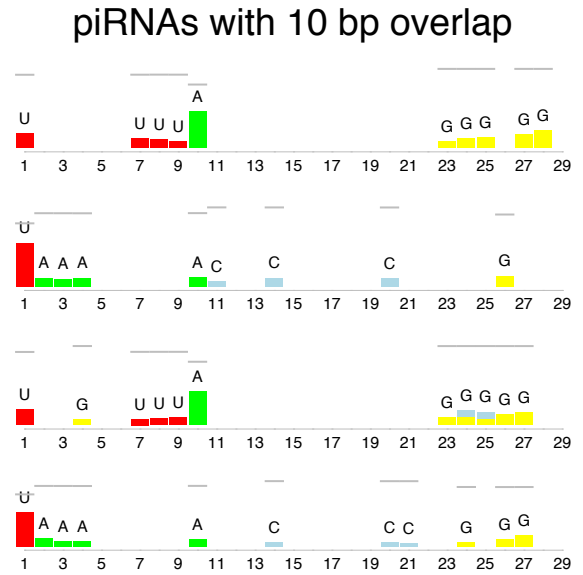
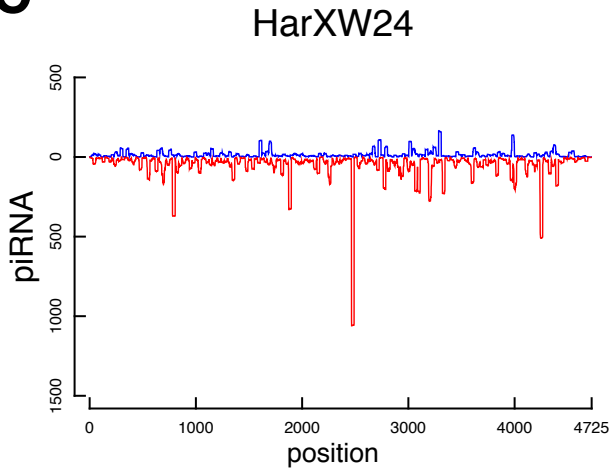
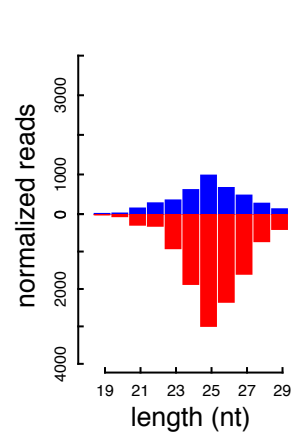
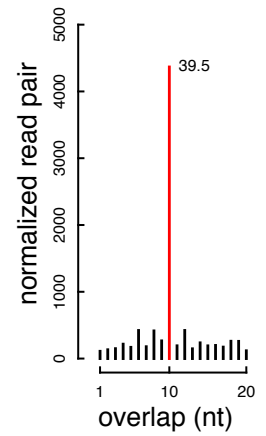
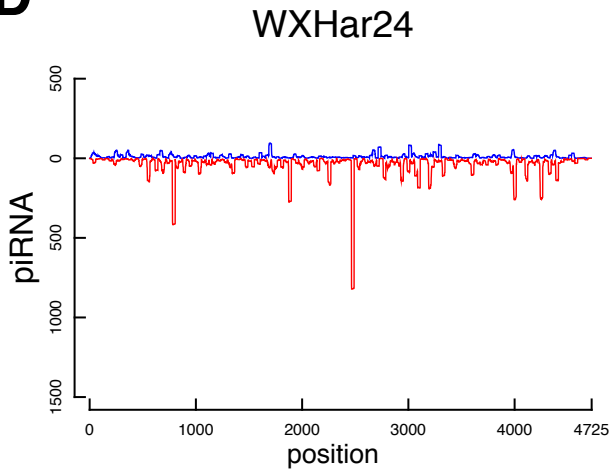
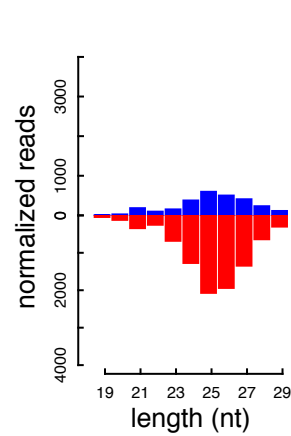
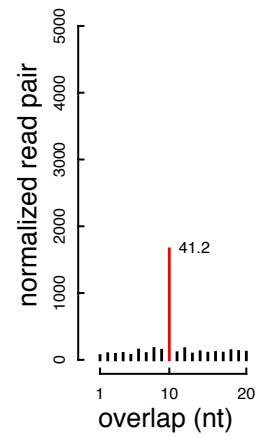
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A**B****C****E****G****D****F****H**

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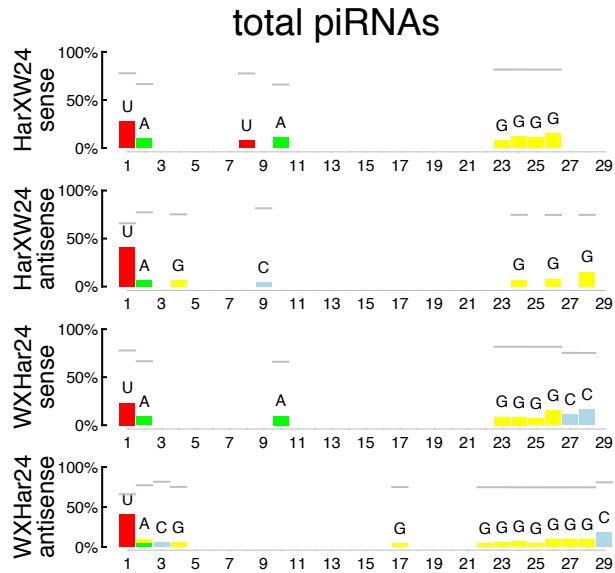
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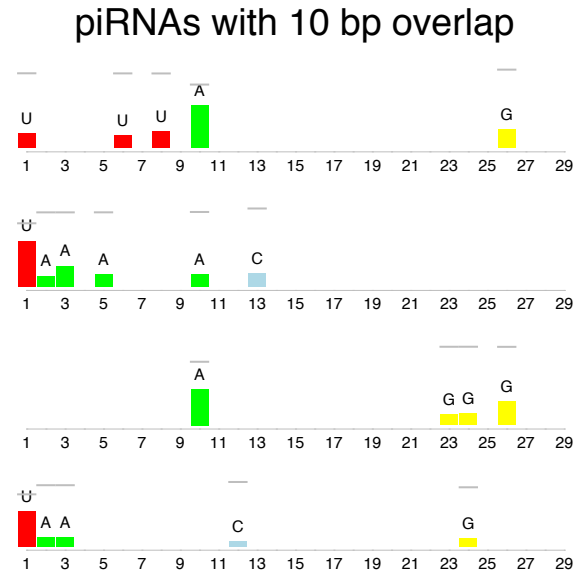
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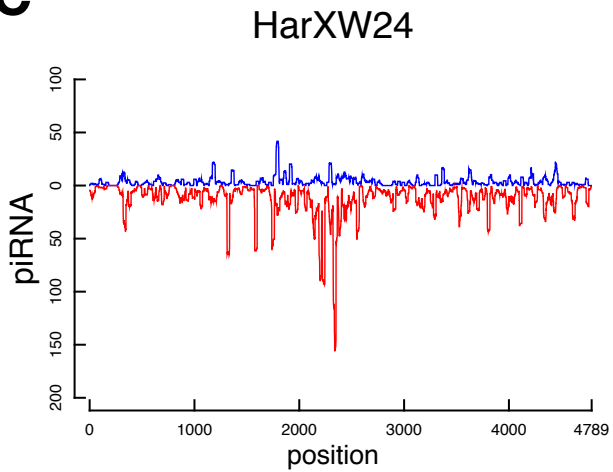
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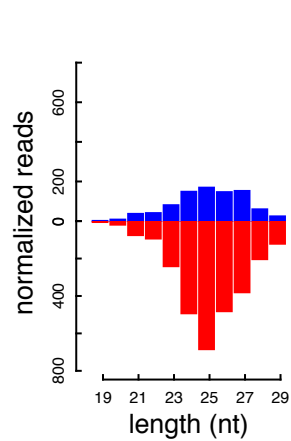
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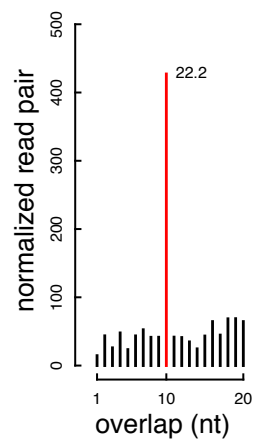
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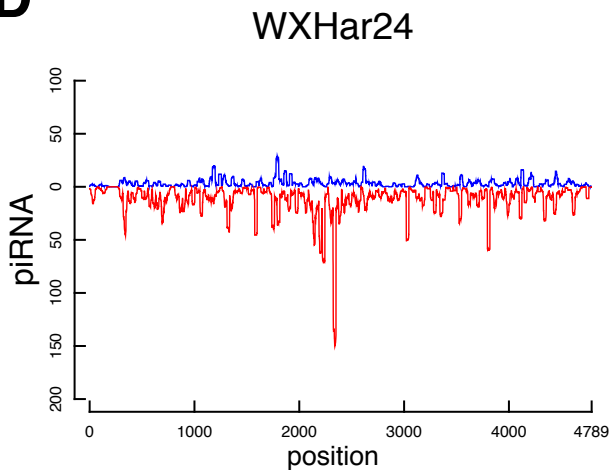
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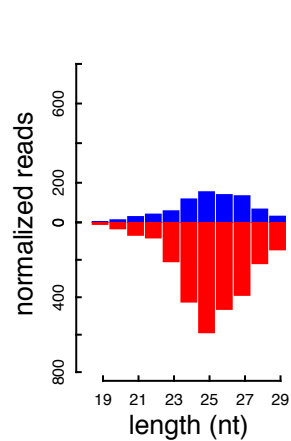
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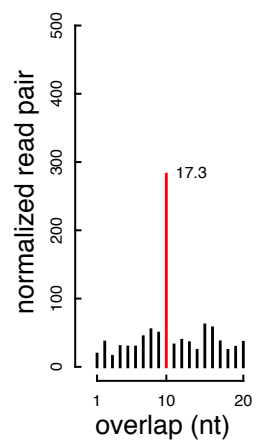
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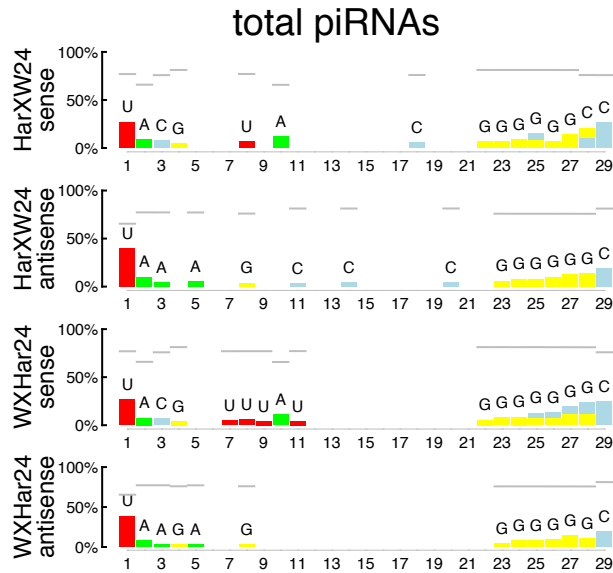


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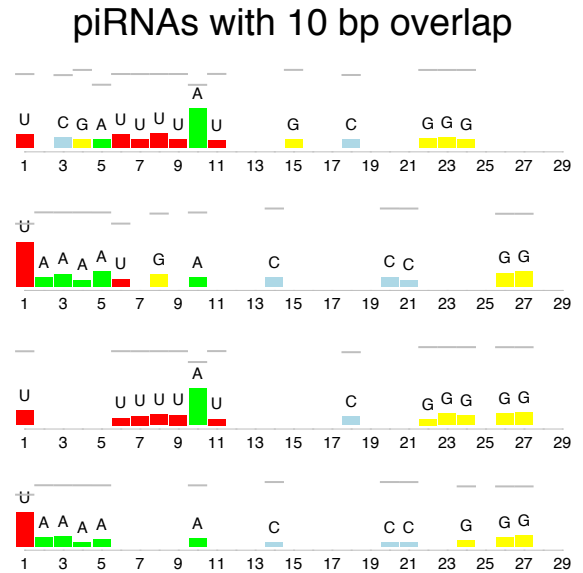


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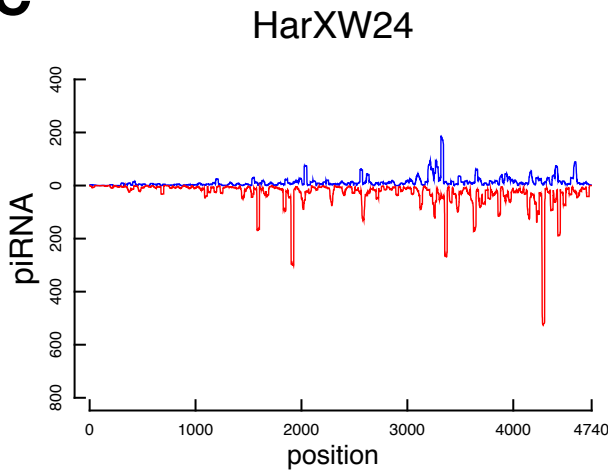
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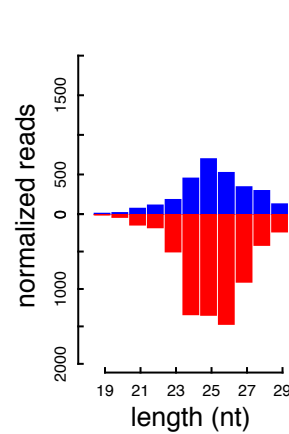
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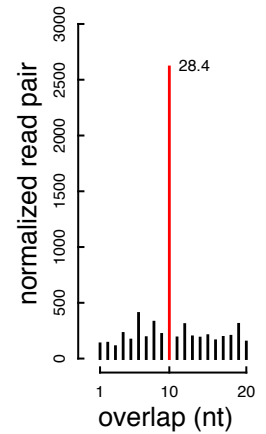
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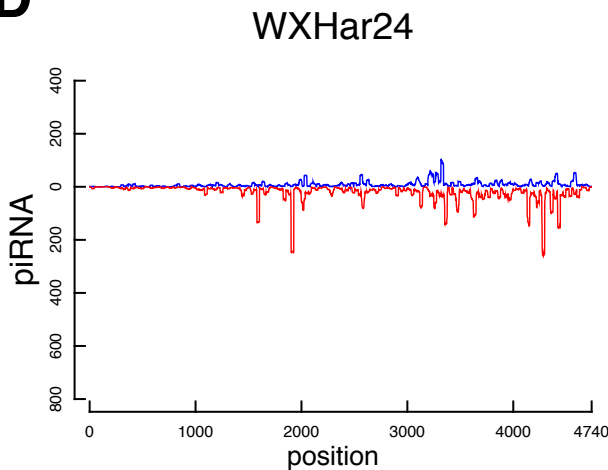
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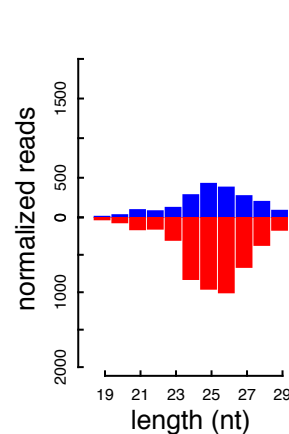
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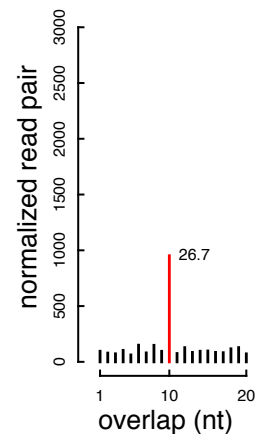
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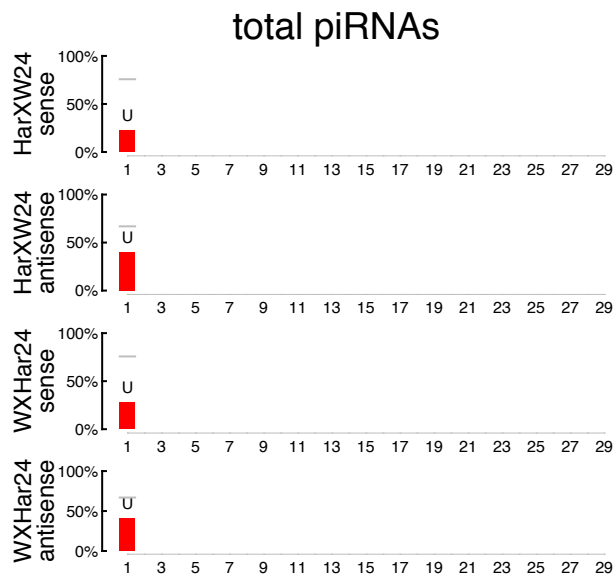
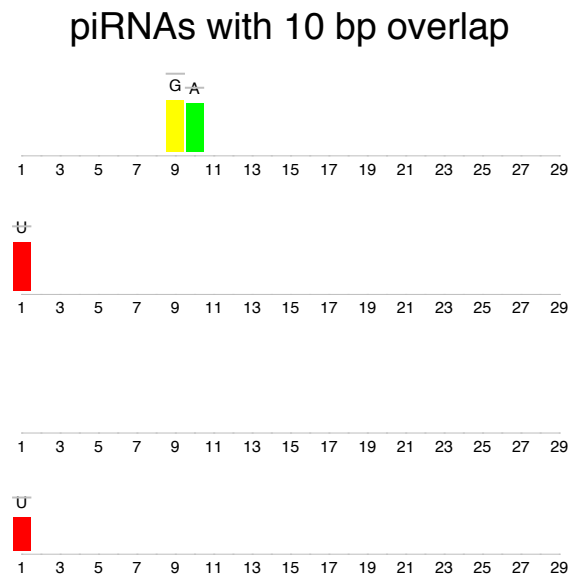
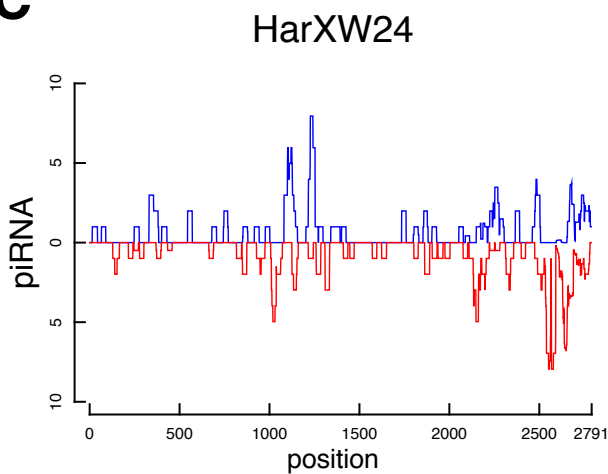
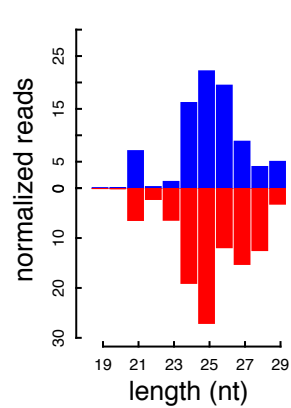
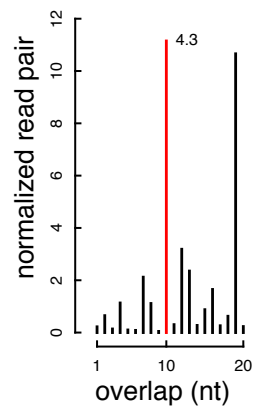
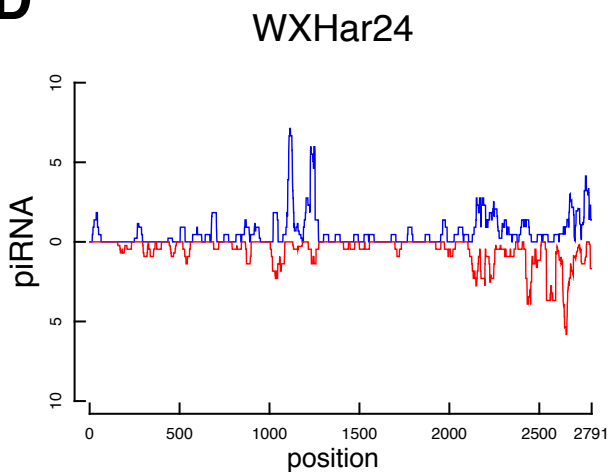
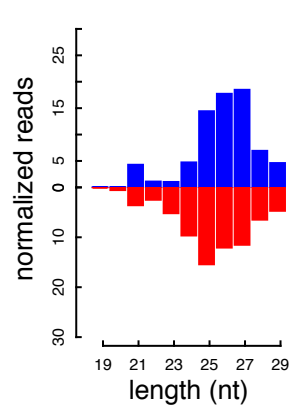
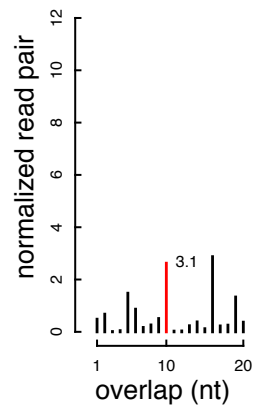
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H

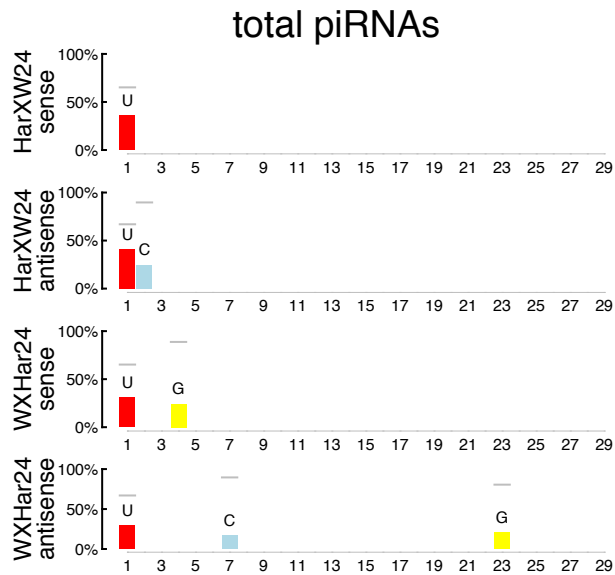


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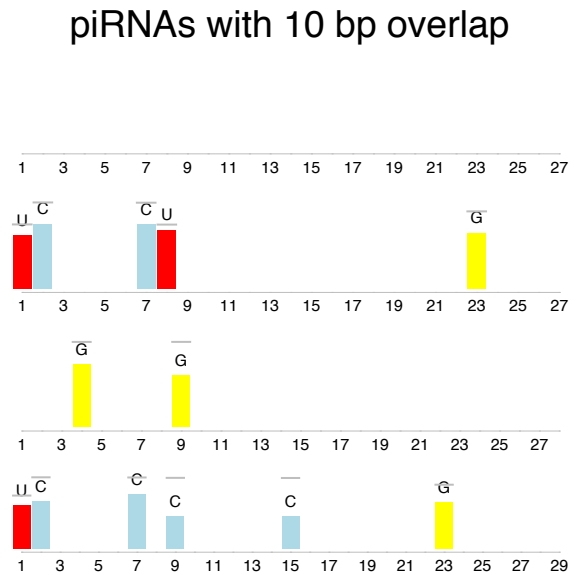
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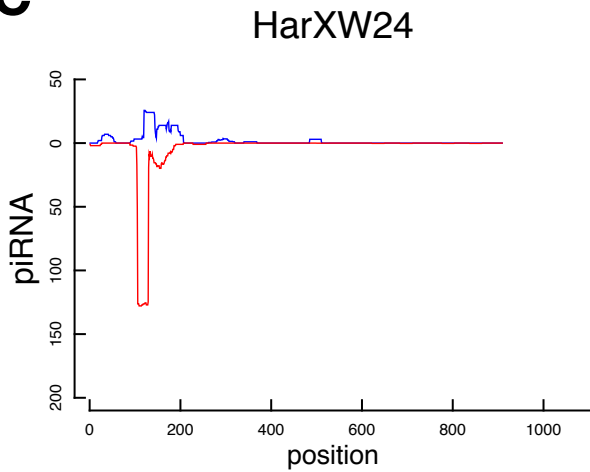
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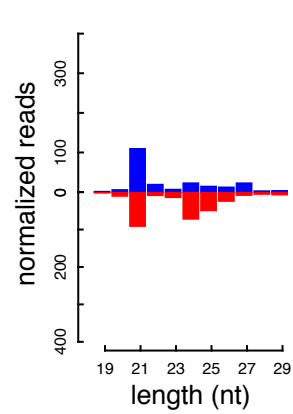
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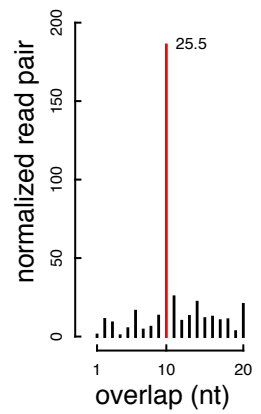
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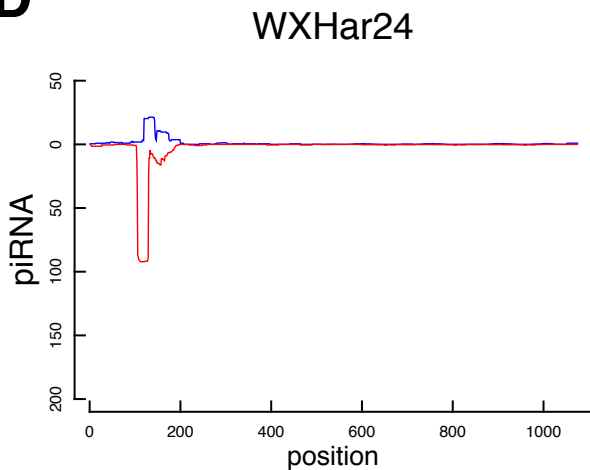
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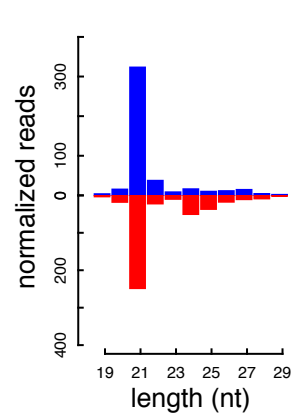
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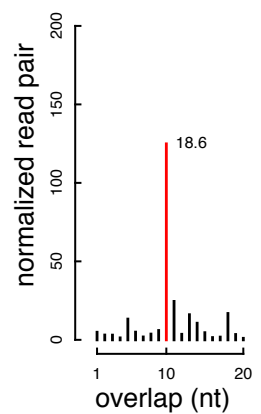
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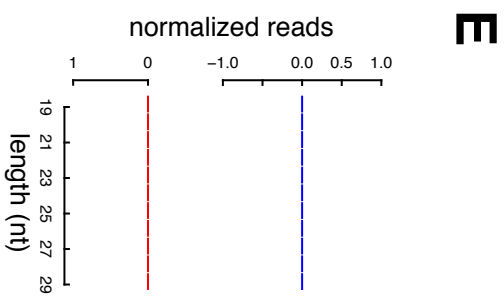
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total piRNAs

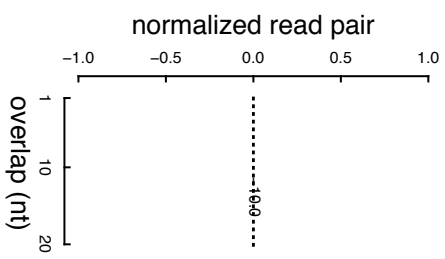
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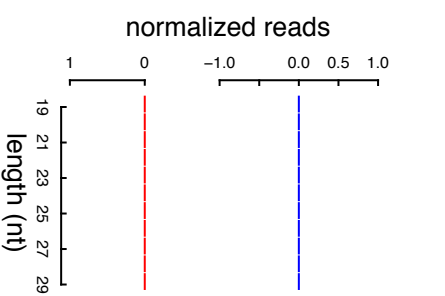
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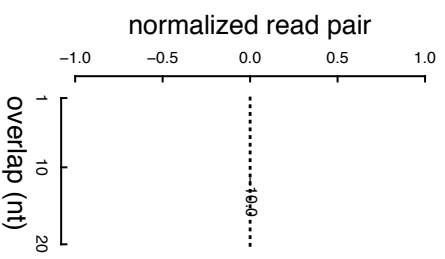
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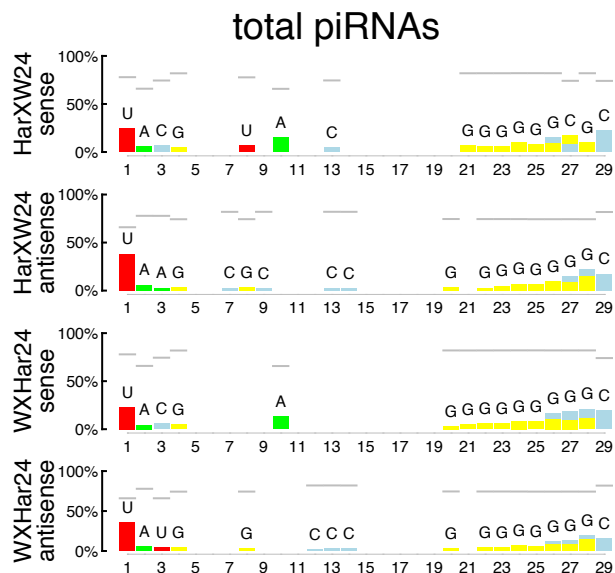


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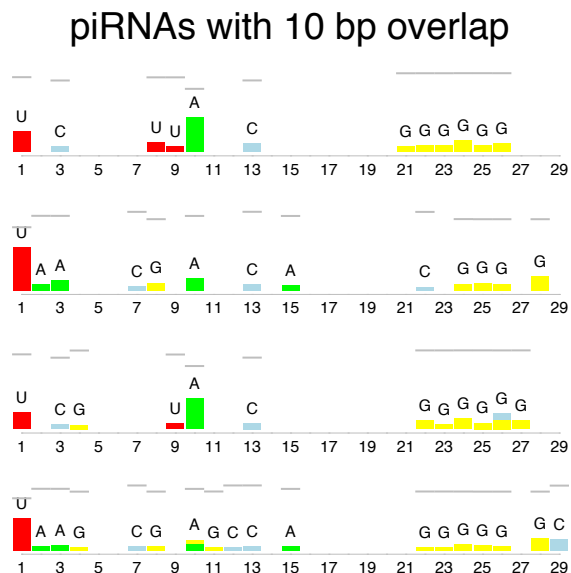


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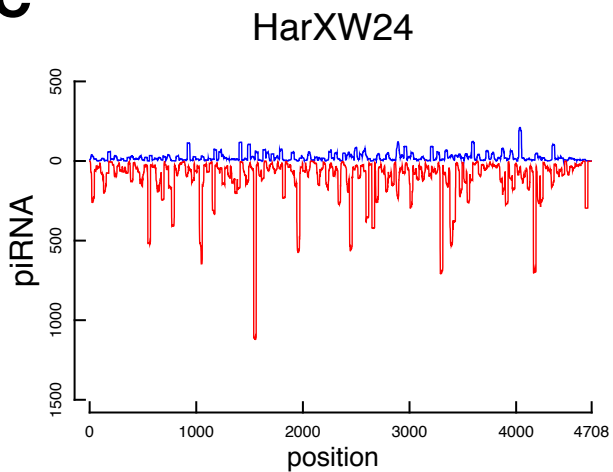
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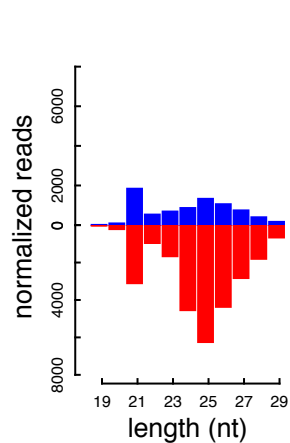
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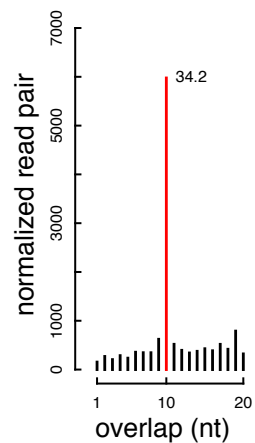
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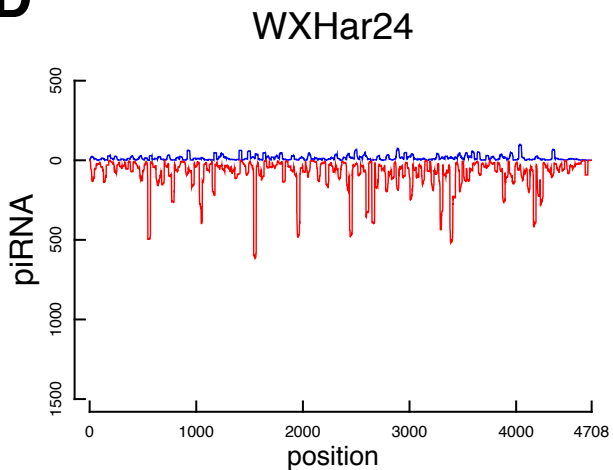
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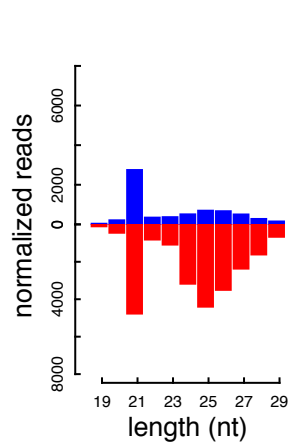
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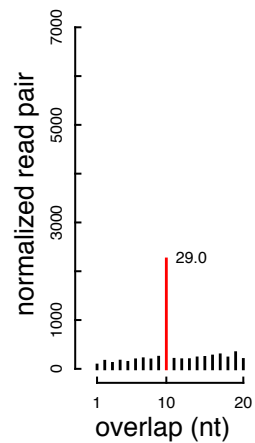
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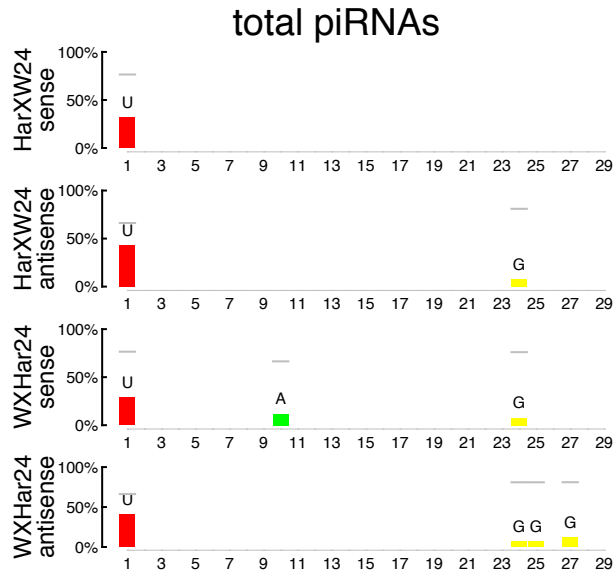
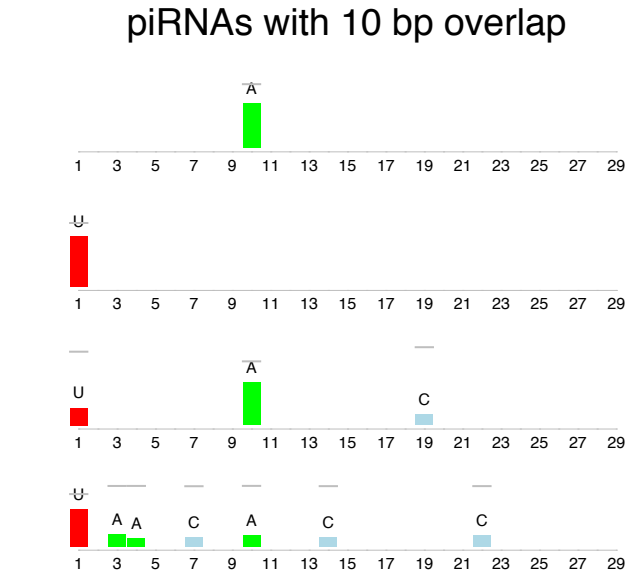
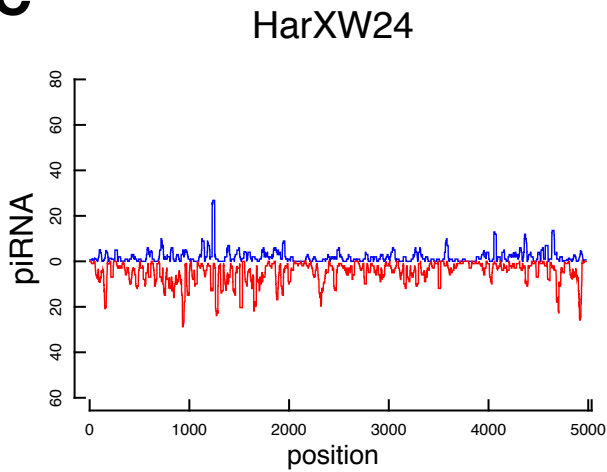
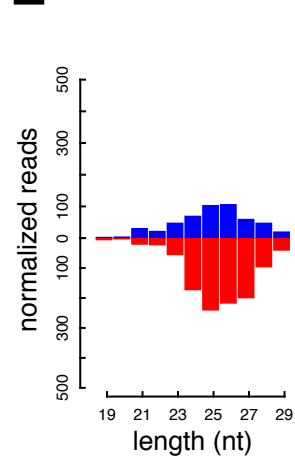
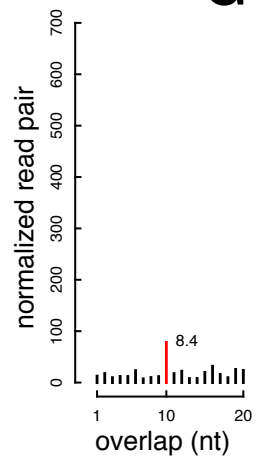
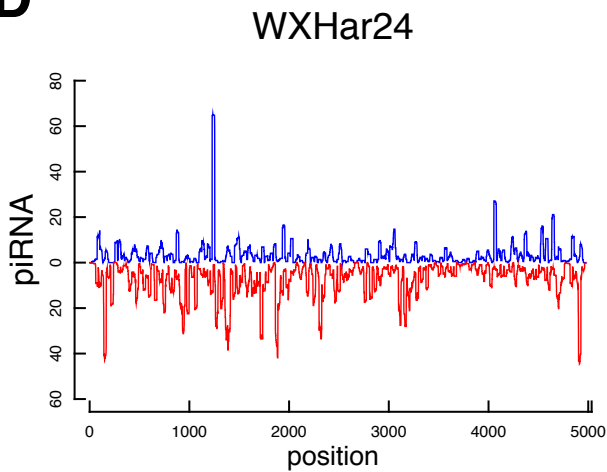
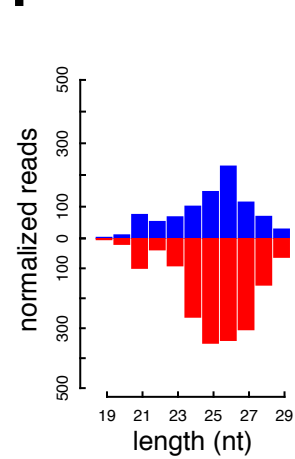
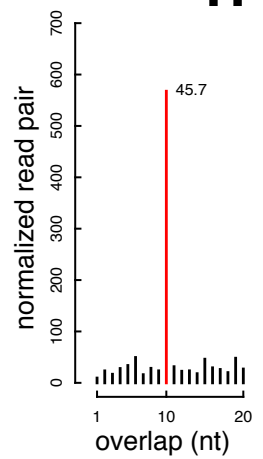
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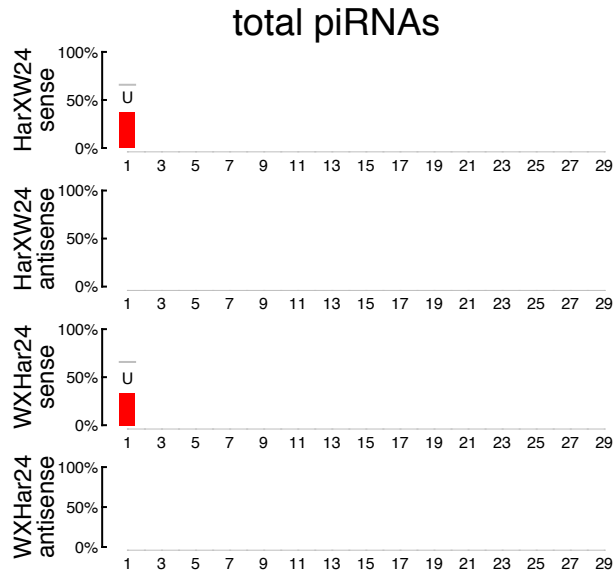


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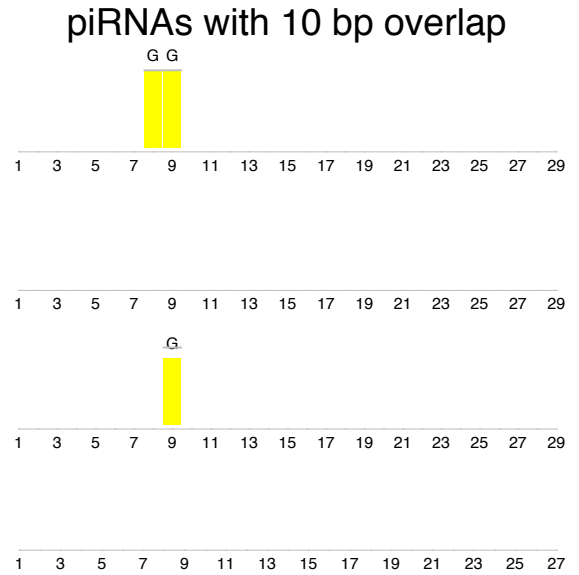
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frogger

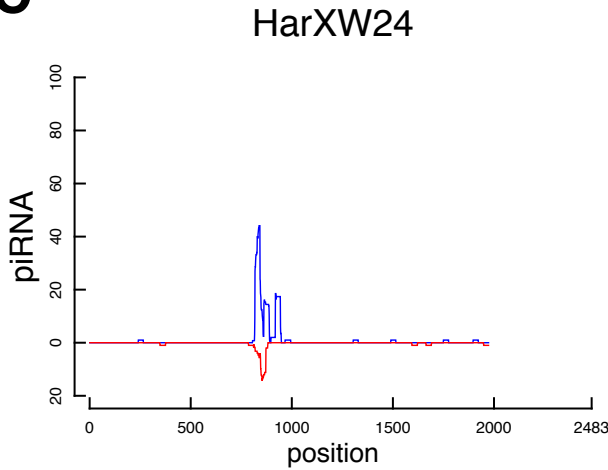
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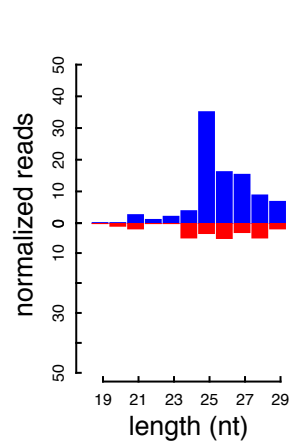
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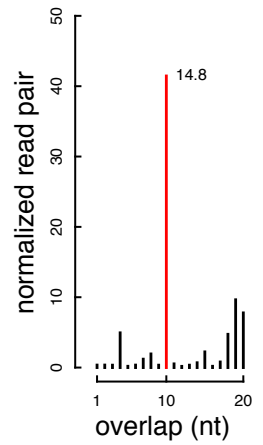
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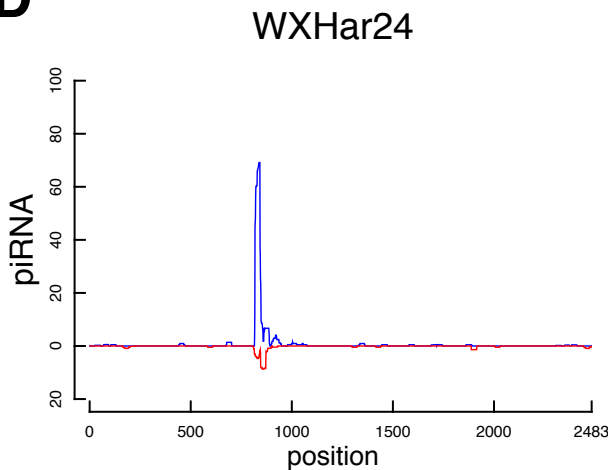
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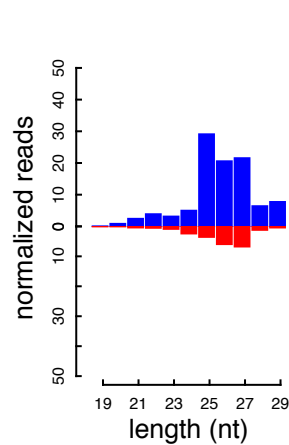
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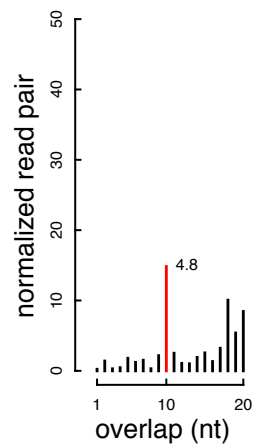
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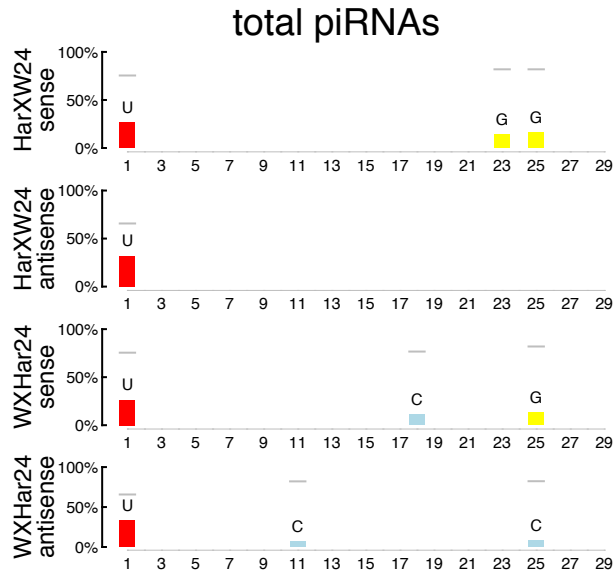
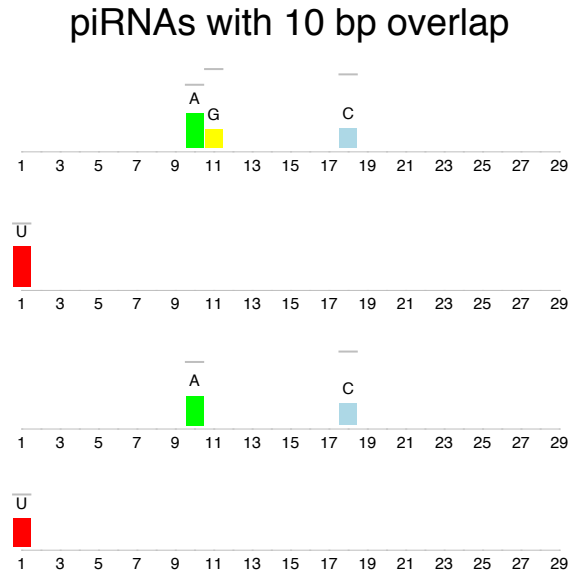
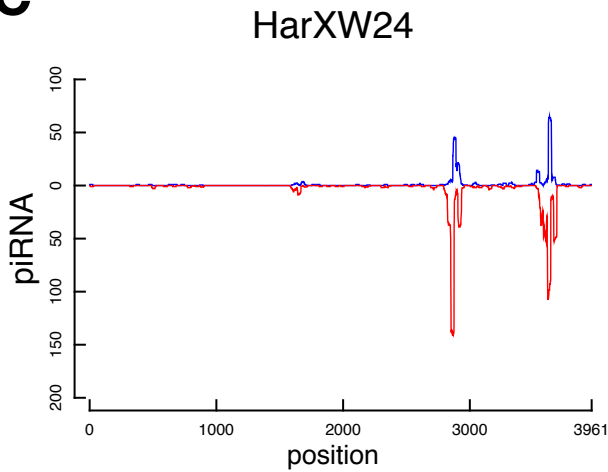
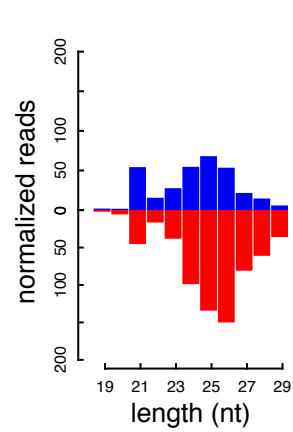
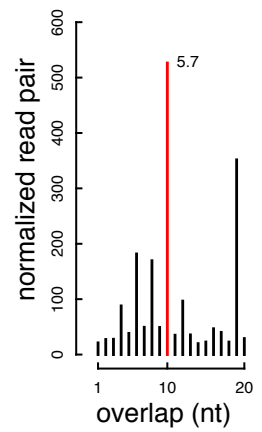
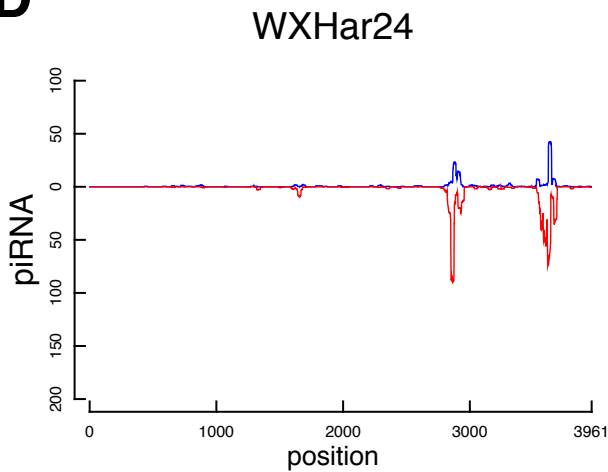
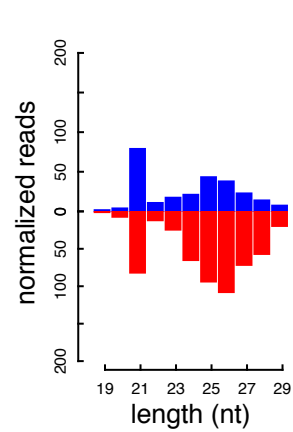
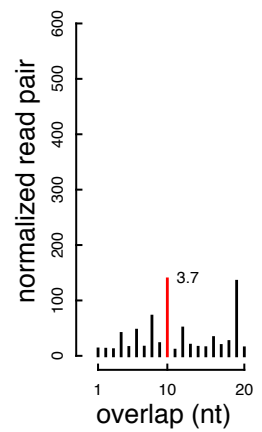
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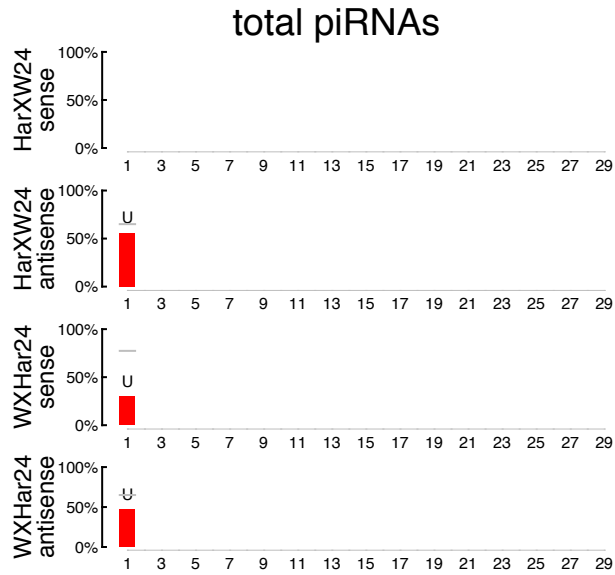
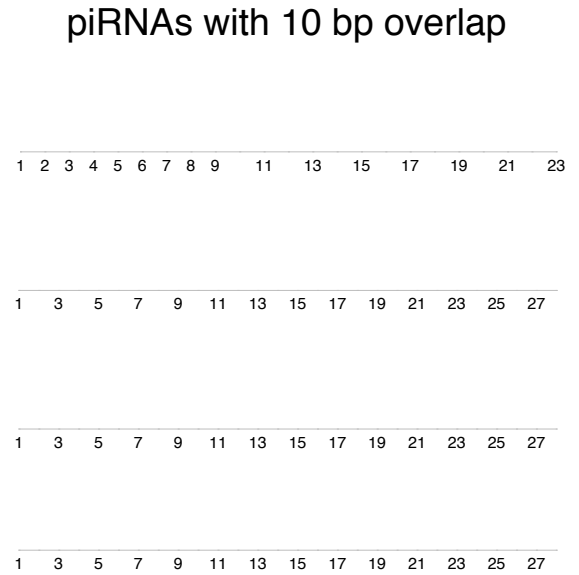
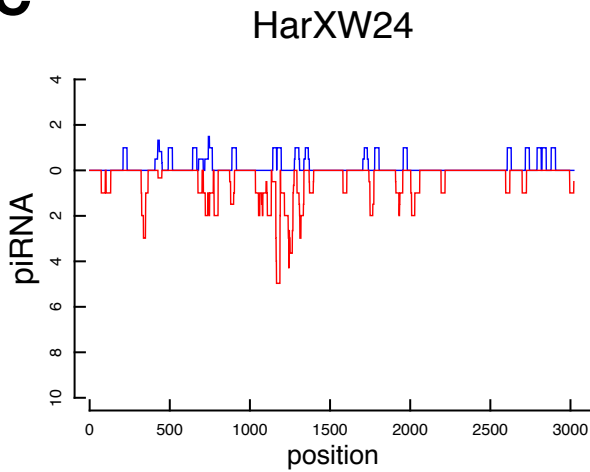
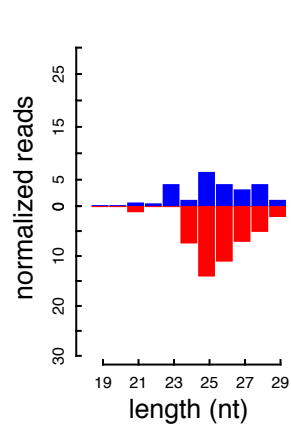
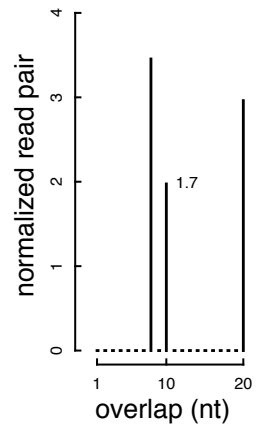
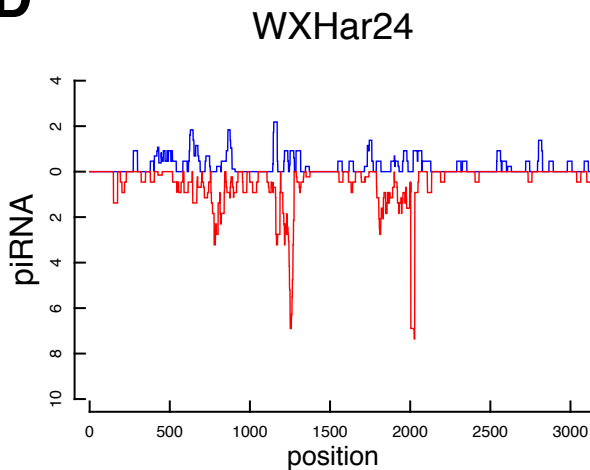
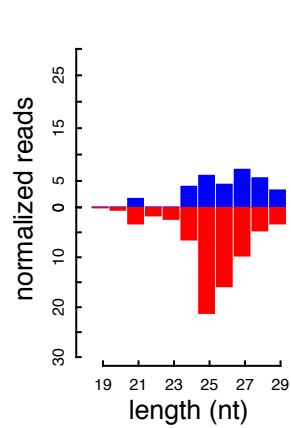
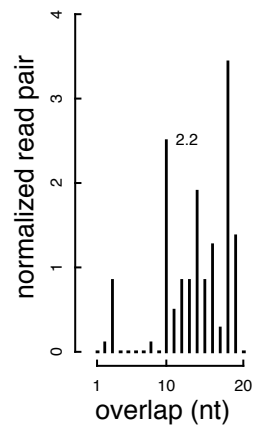
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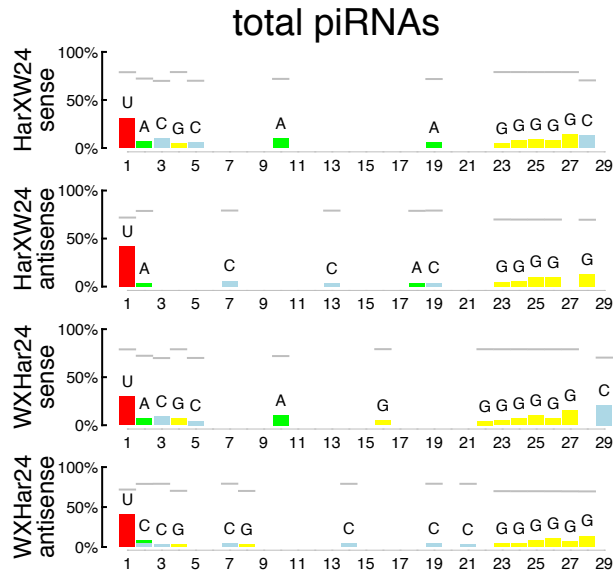
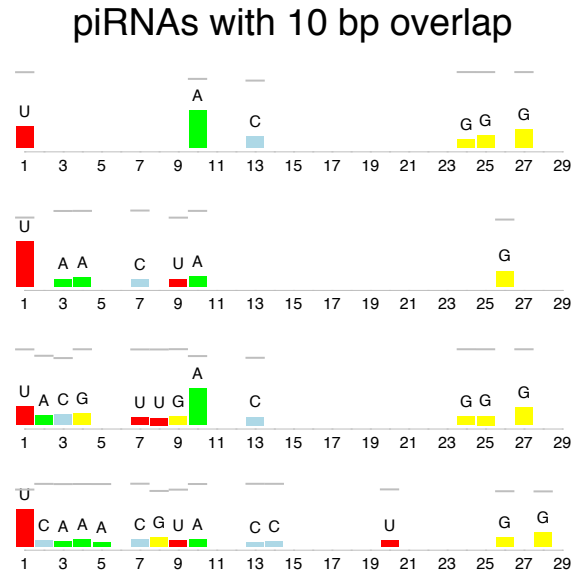
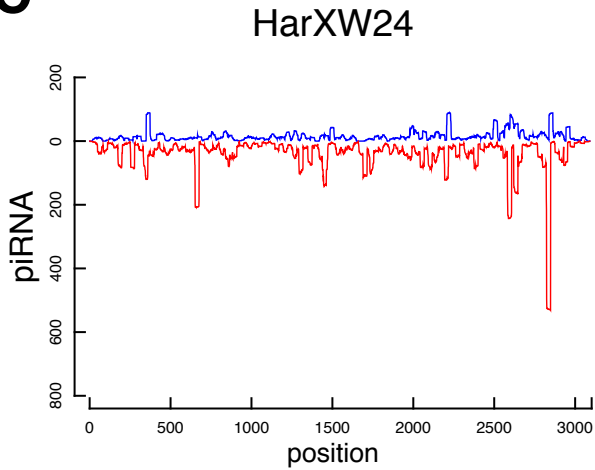
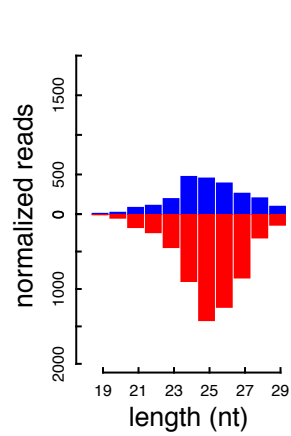
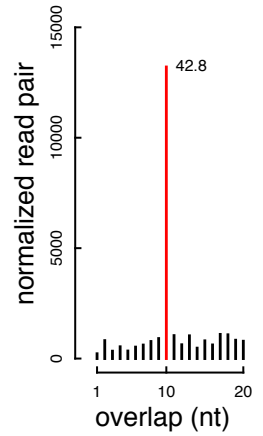
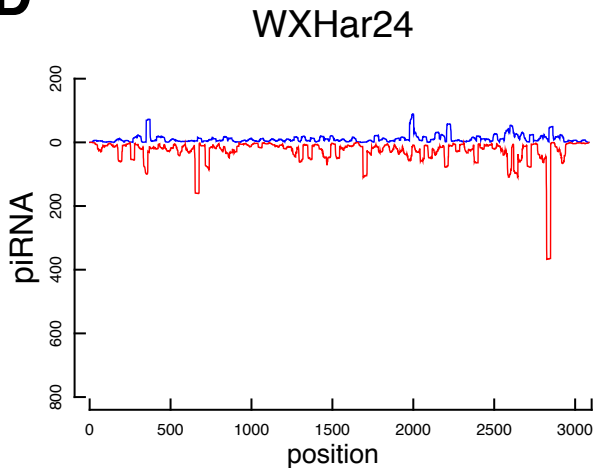
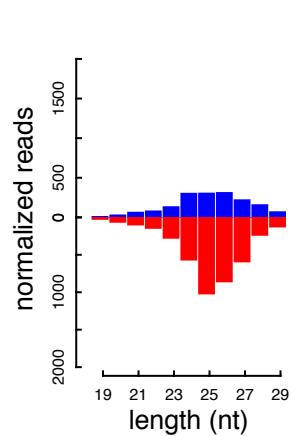
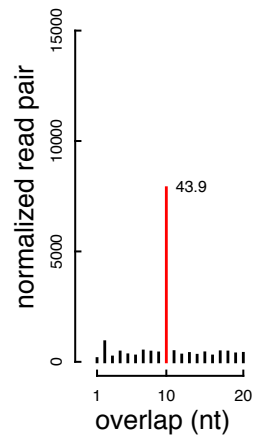
Fw2

A**B****C****E****G****D****F****H**

Fw3

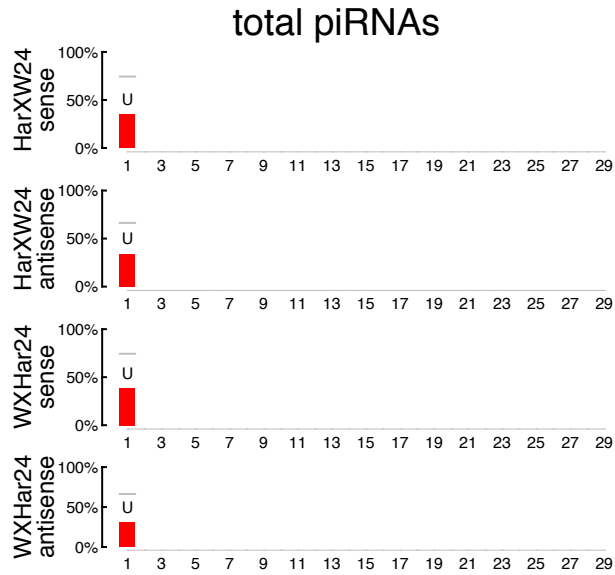
A**B****C****E****G****D****F****H**

G2

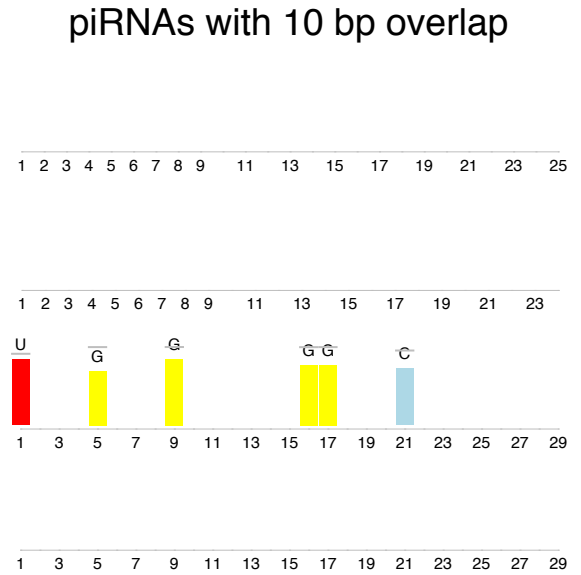
A**B****C****E****G****D****F****H**

G3

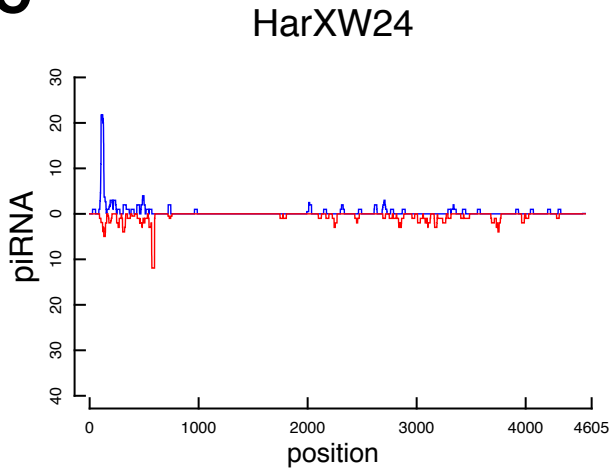
A



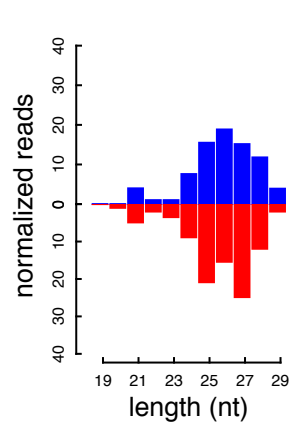
B



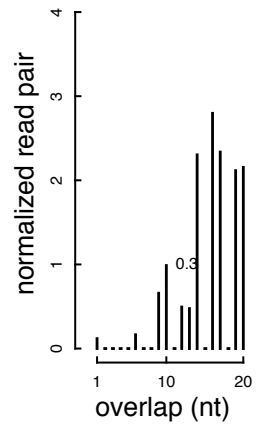
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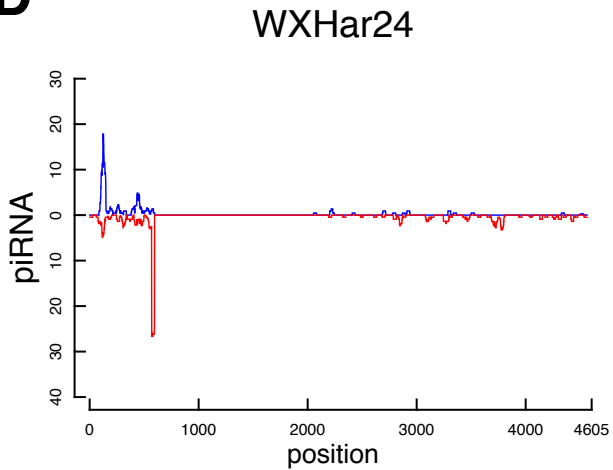
E



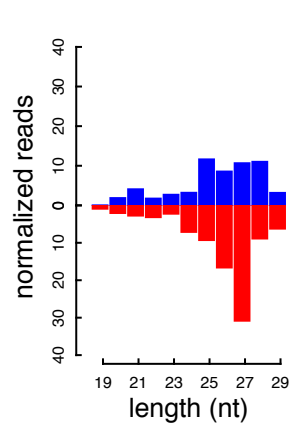
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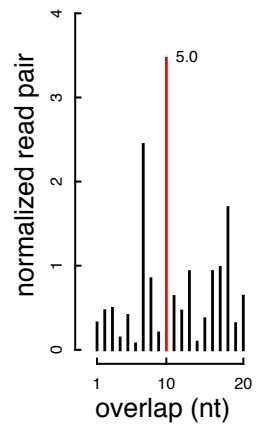
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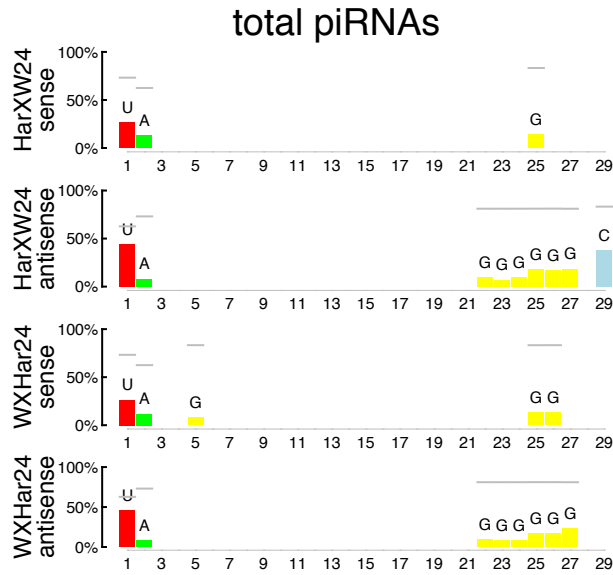
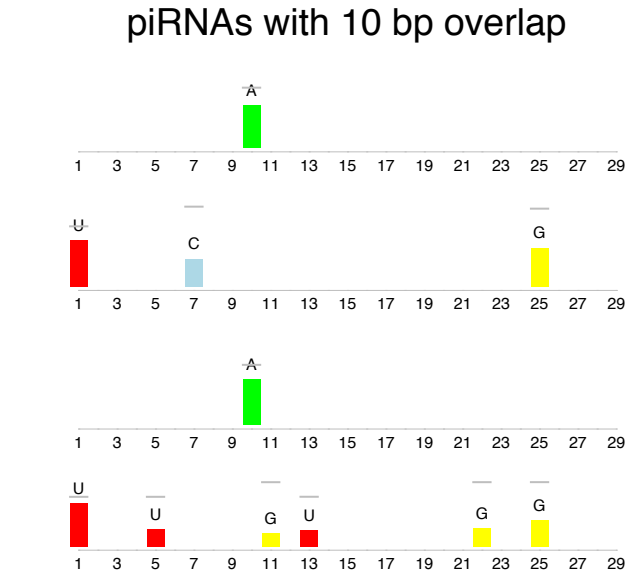
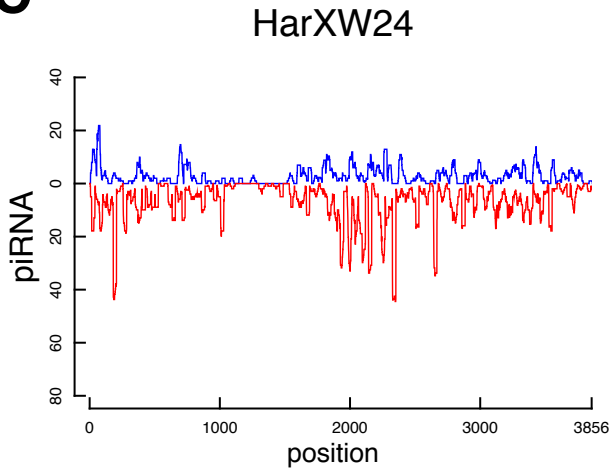
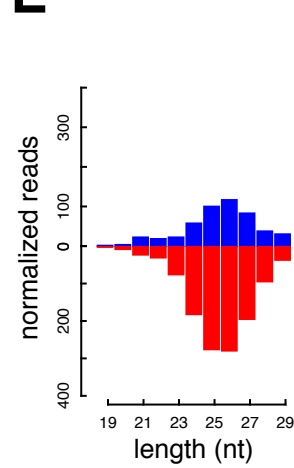
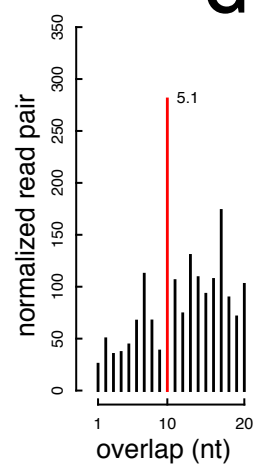
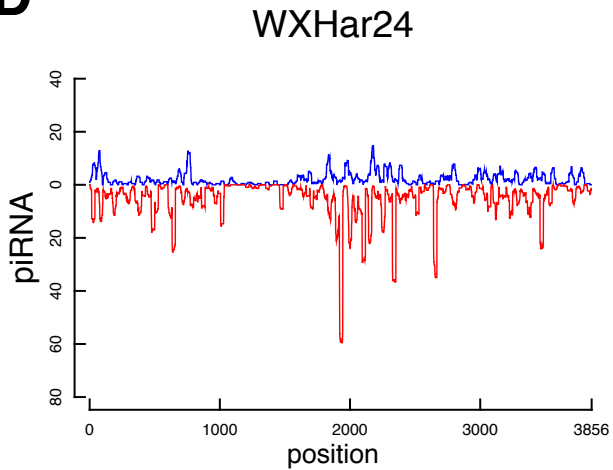
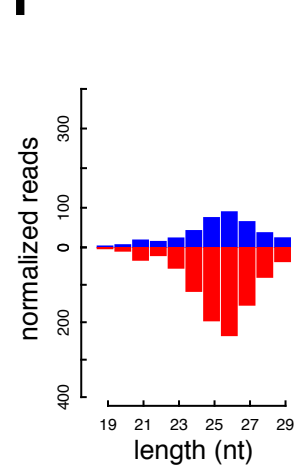
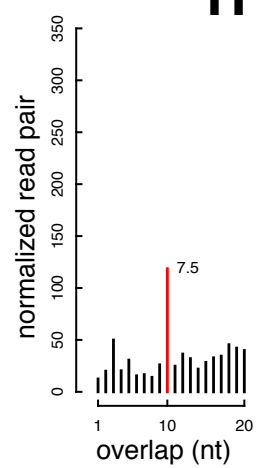
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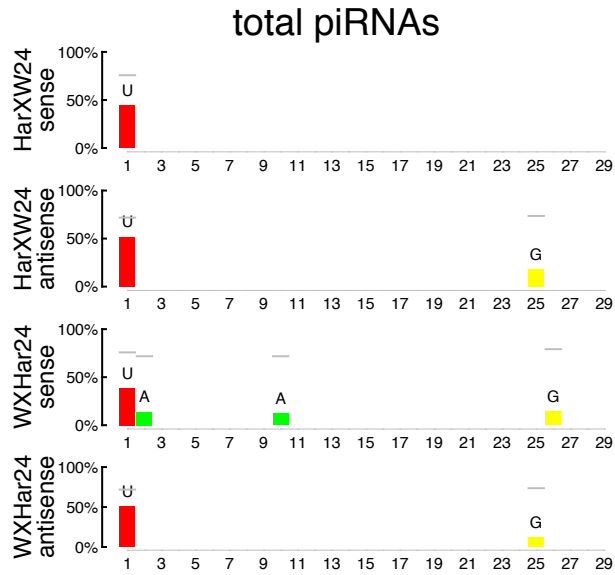
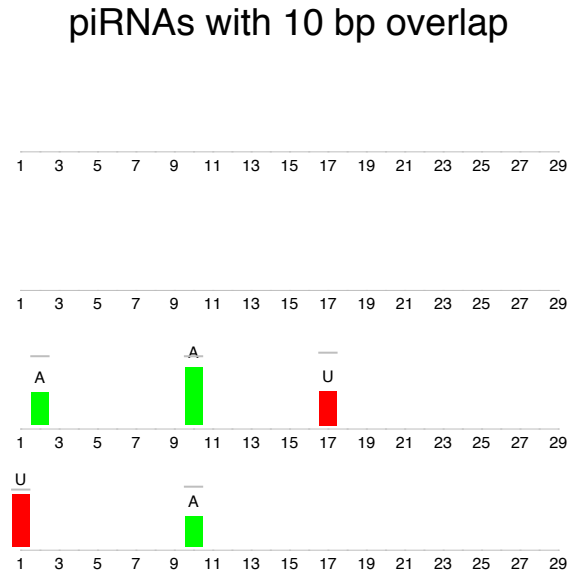
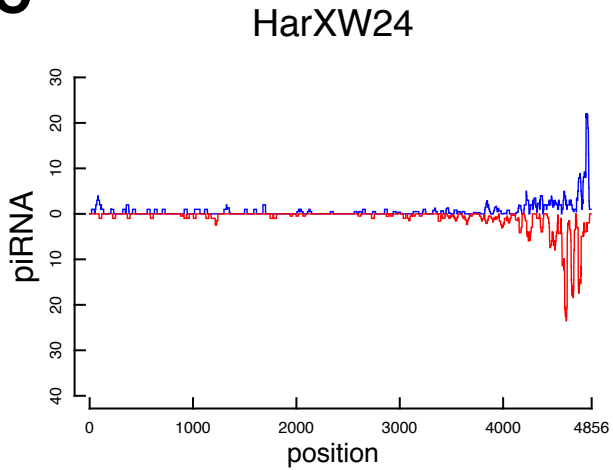
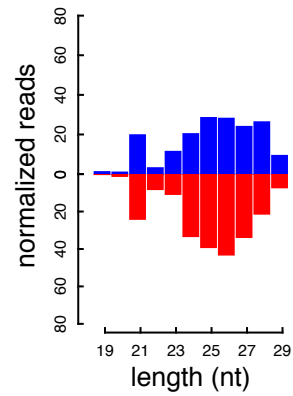
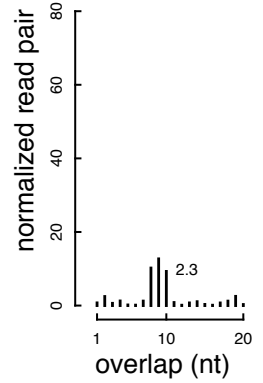
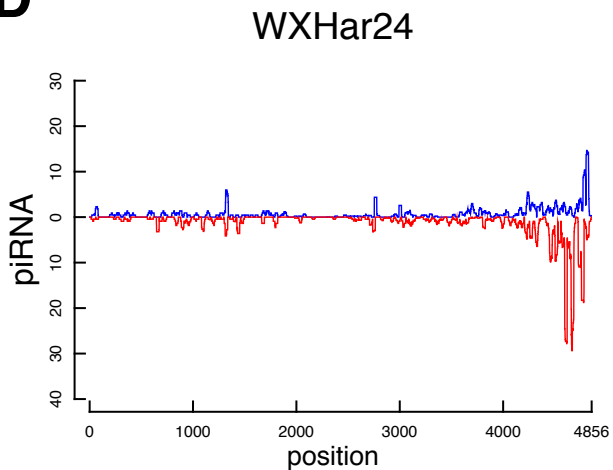
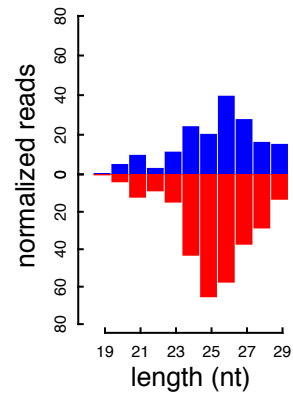
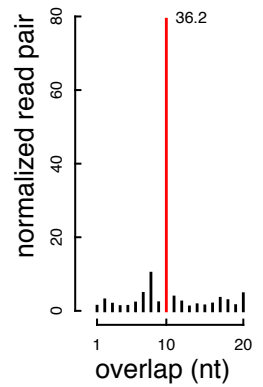
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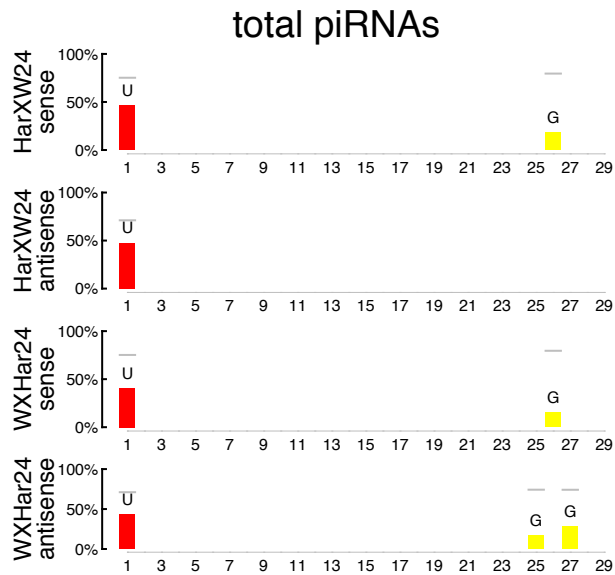
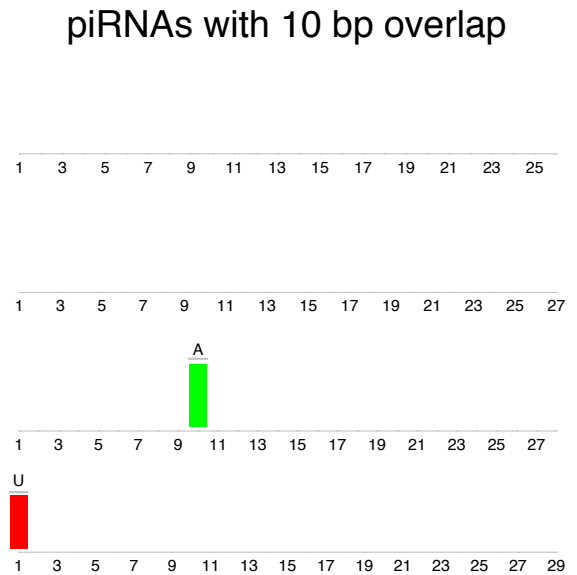
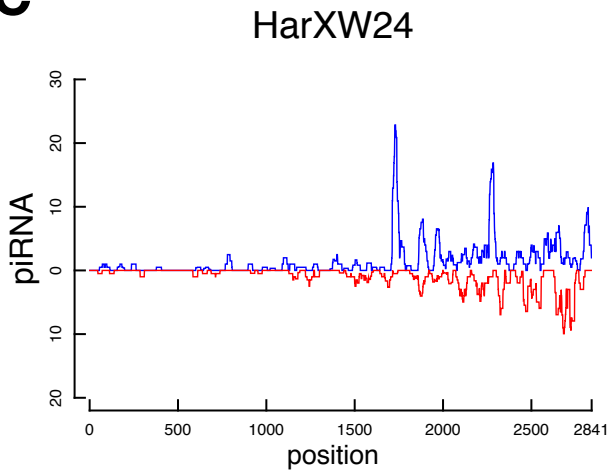
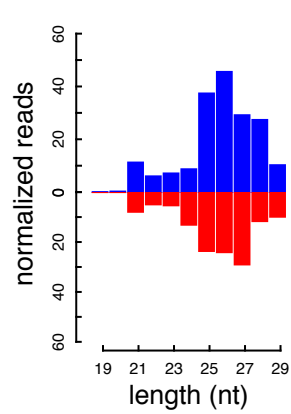
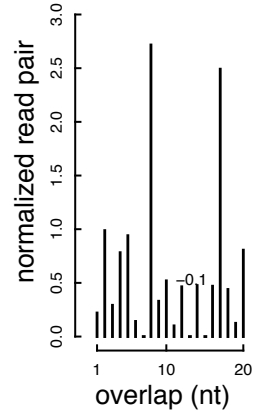
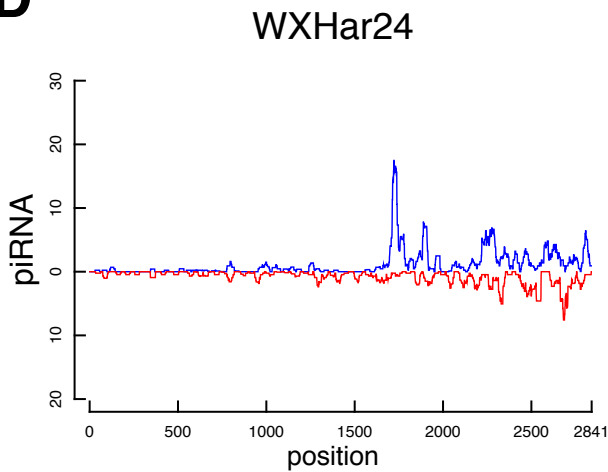
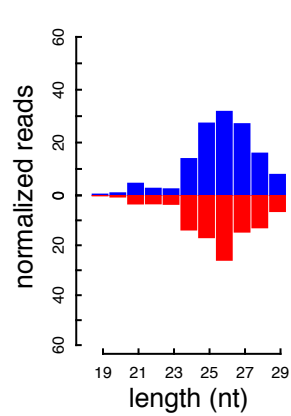
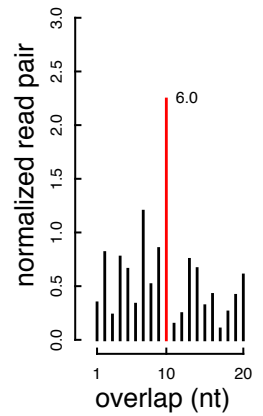
G4

A**B****C****E****G****D****F****H**

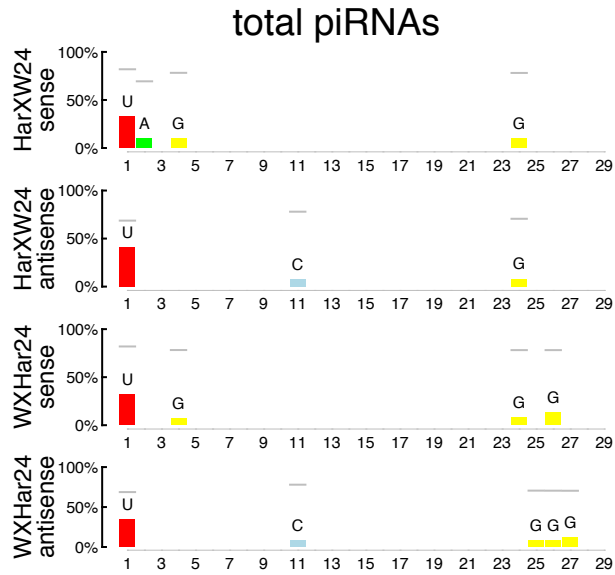
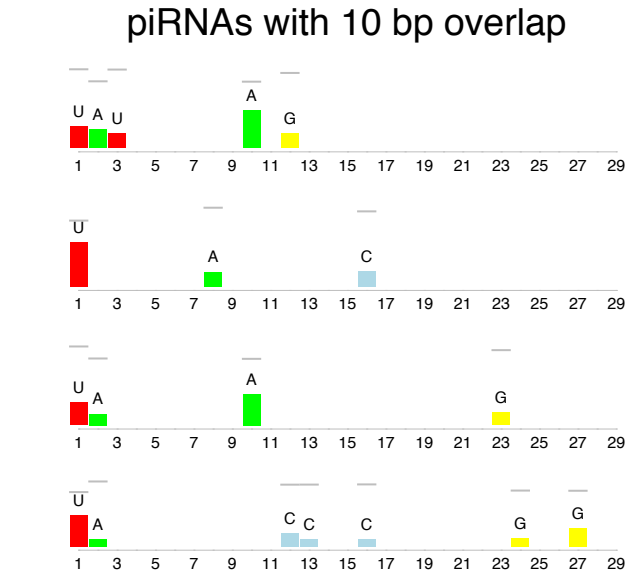
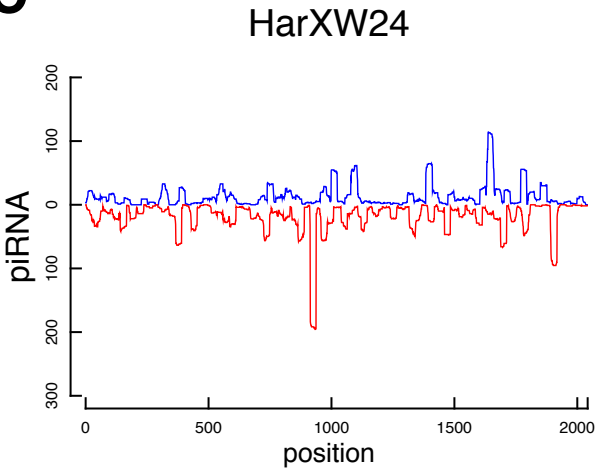
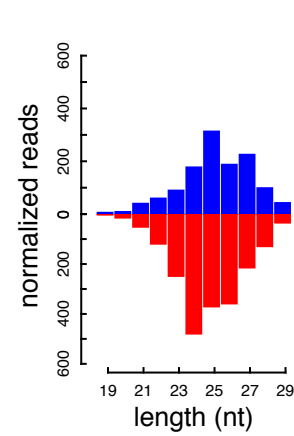
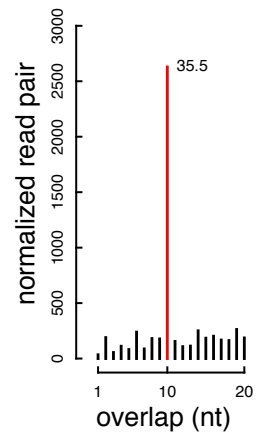
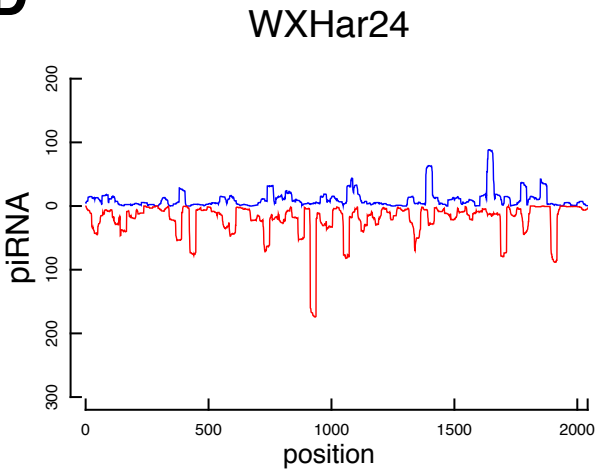
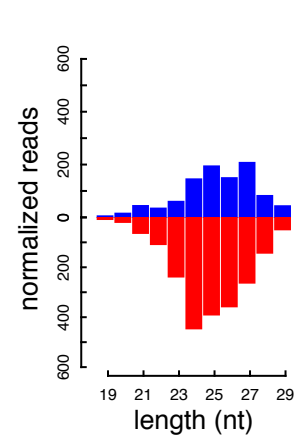
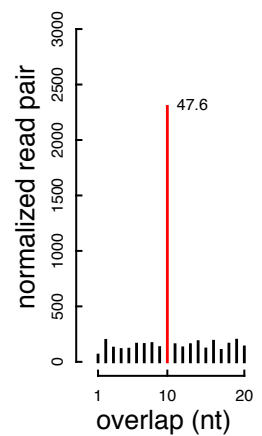
G5

A**B****C****E****G****D****F****H**

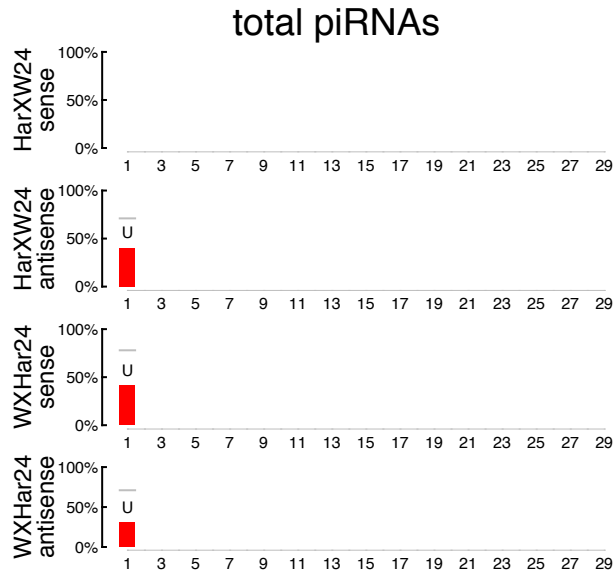
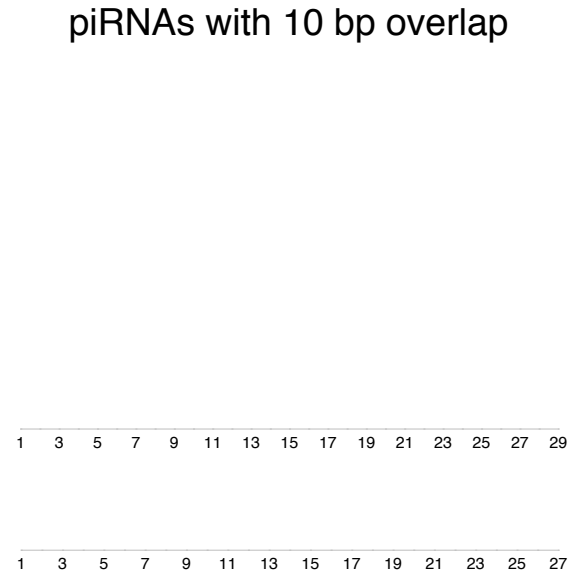
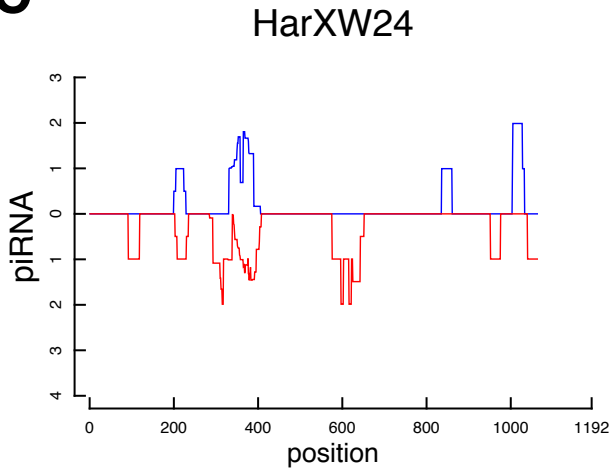
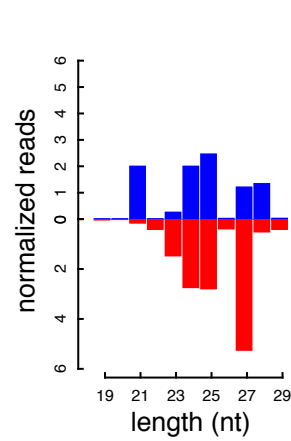
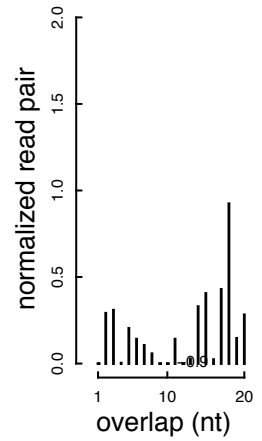
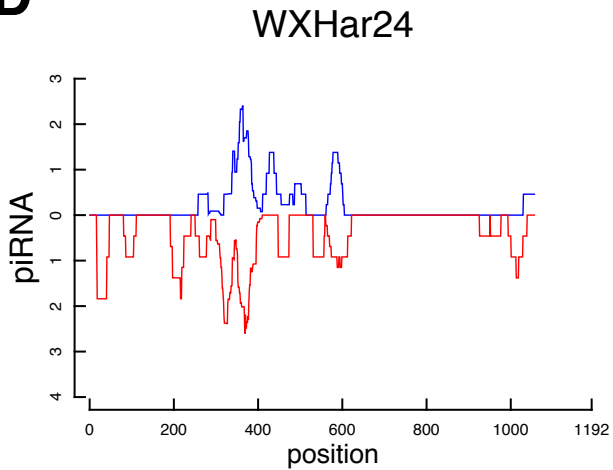
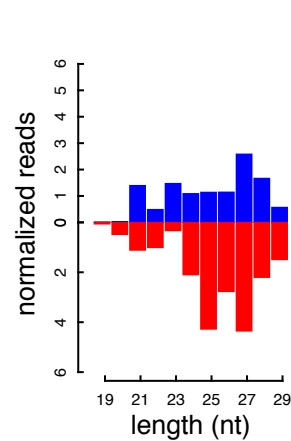
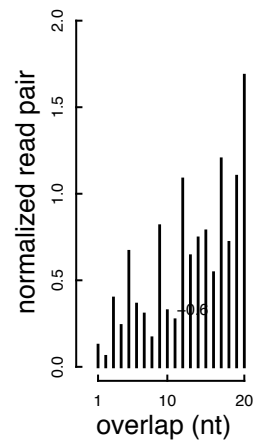
G5A

A**B****C****E****G****D****F****H**

G6

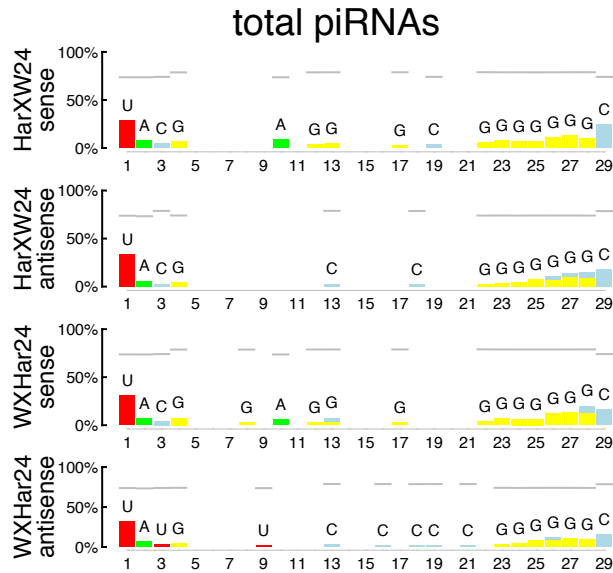
A**B****C****E****G****D****F****H**

G7

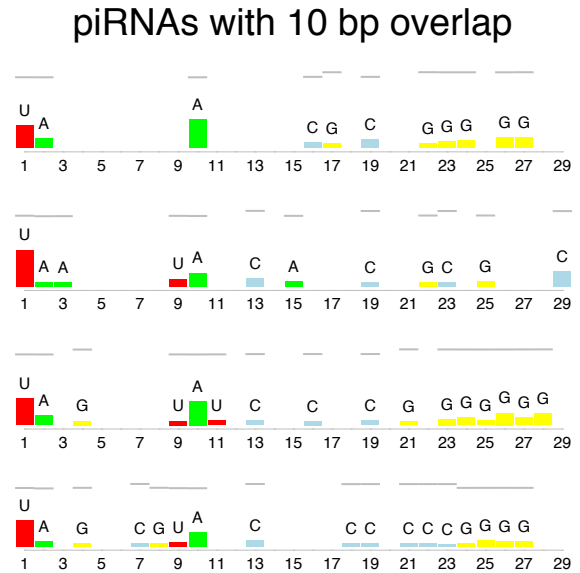
A**B****C****E****G****D****F****H**

GATE

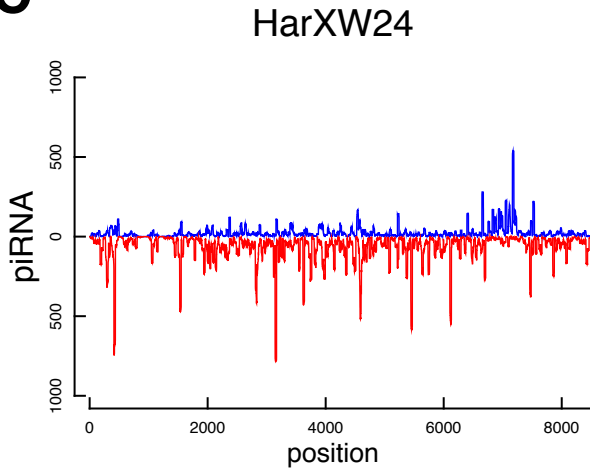
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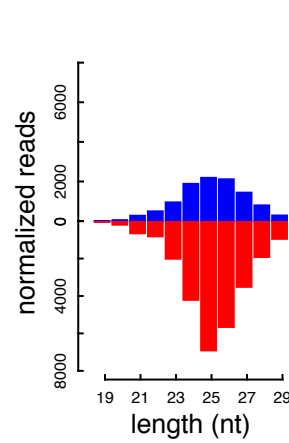
B



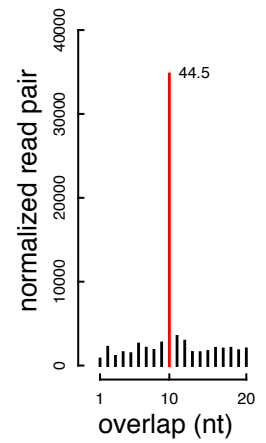
C



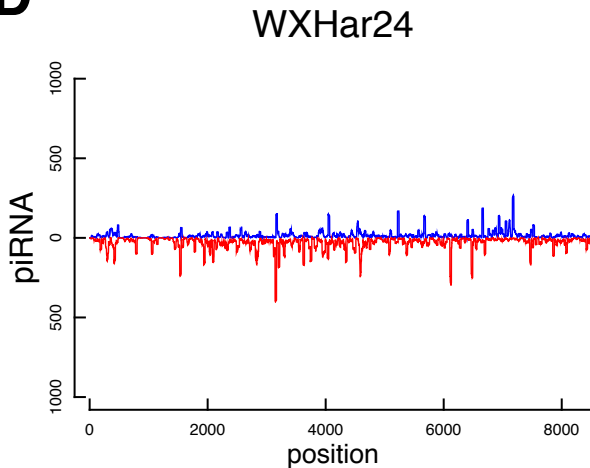
E



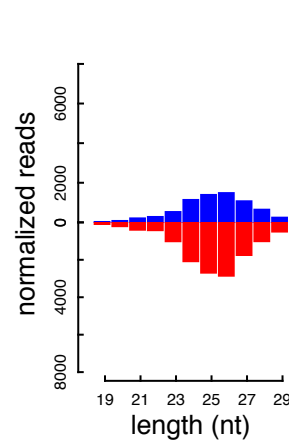
G



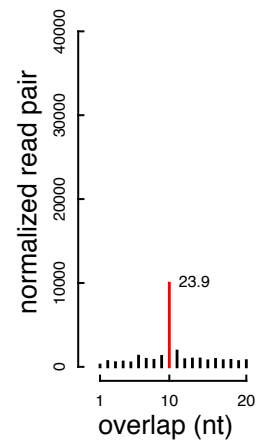
D



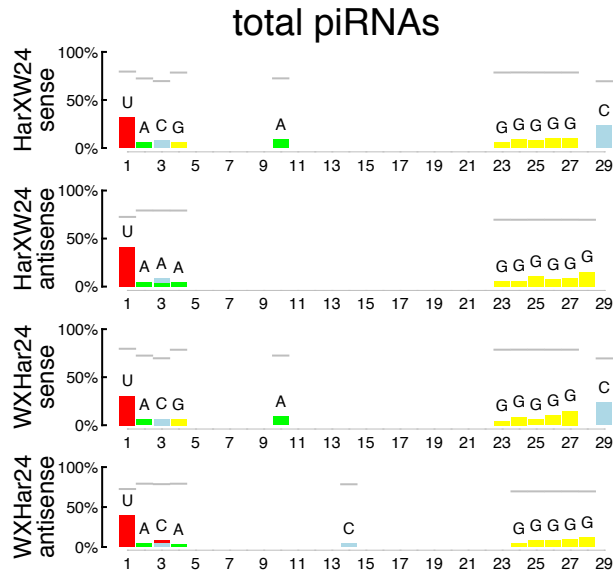
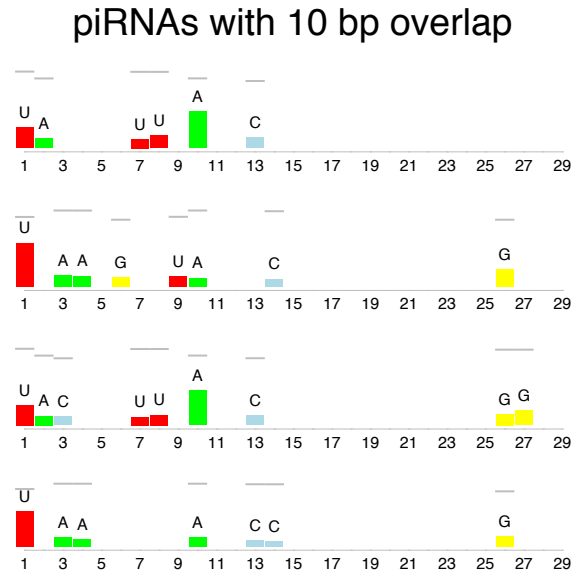
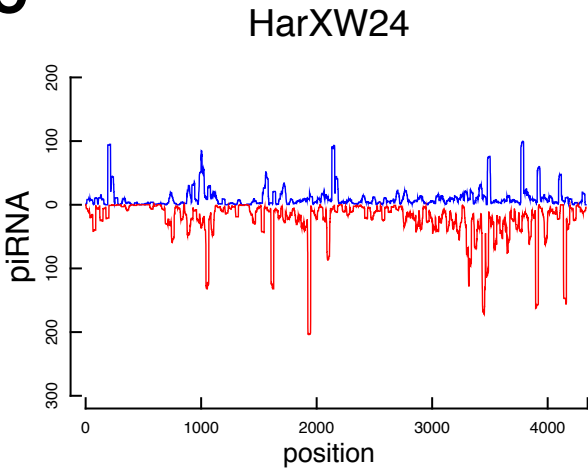
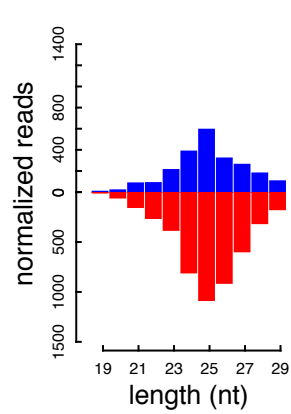
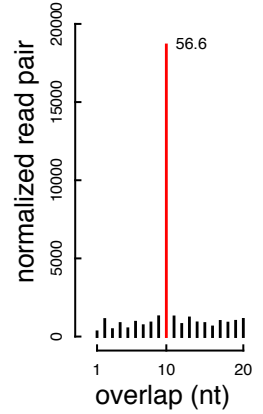
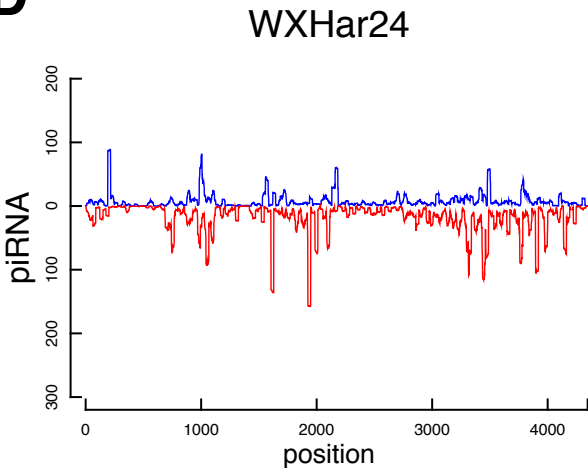
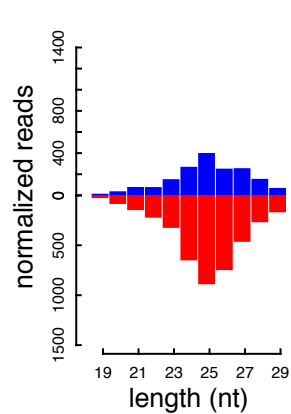
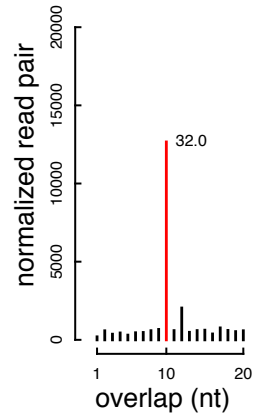
F



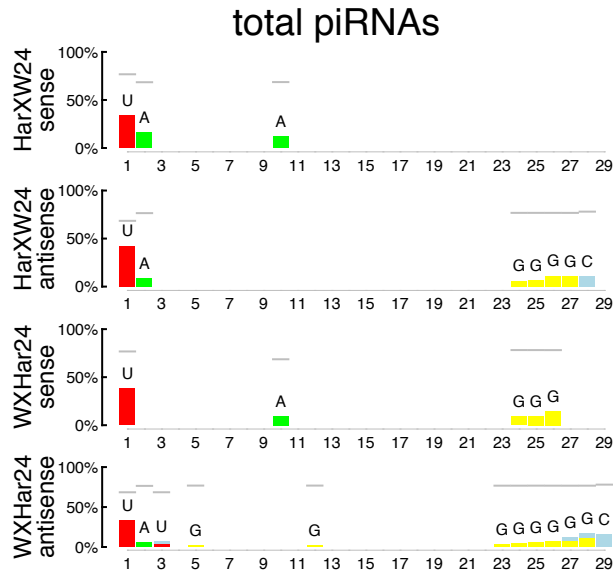
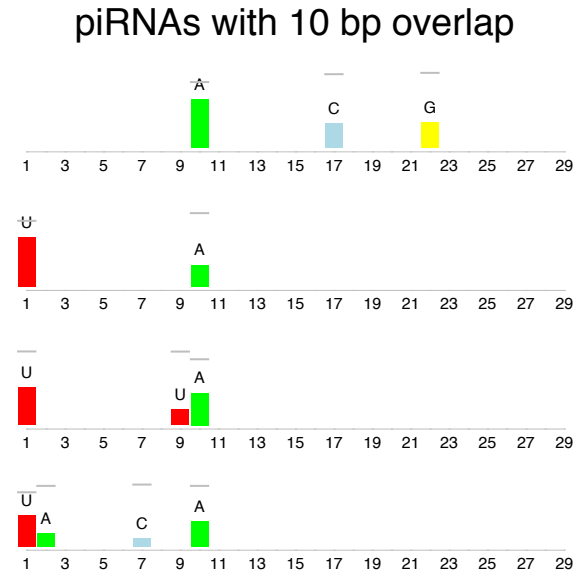
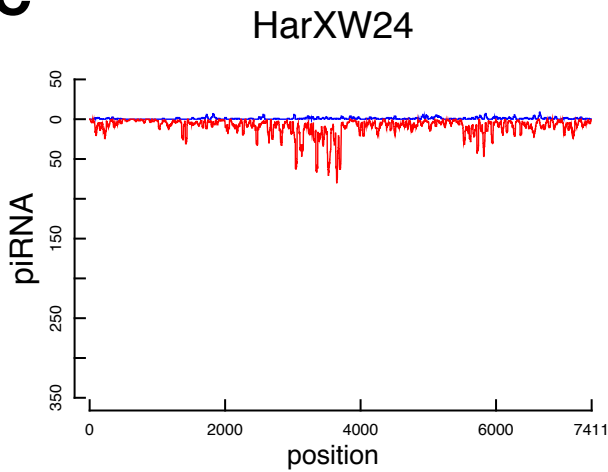
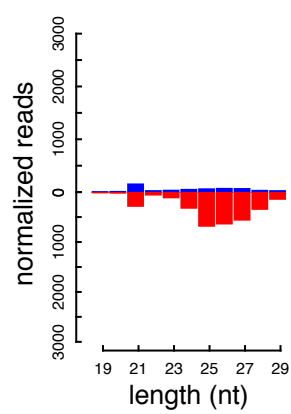
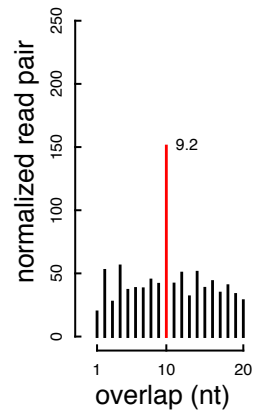
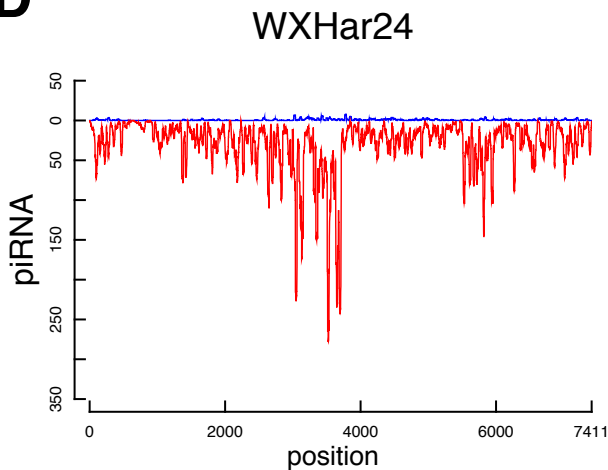
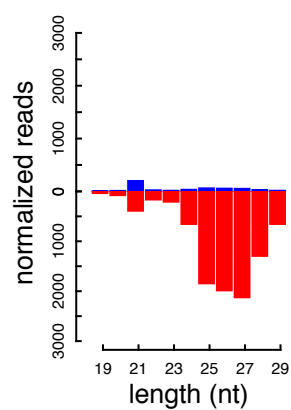
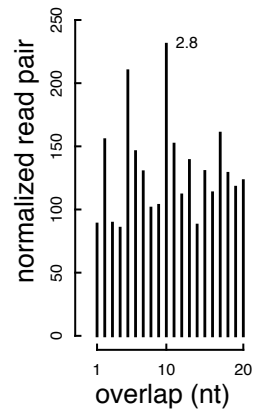
H



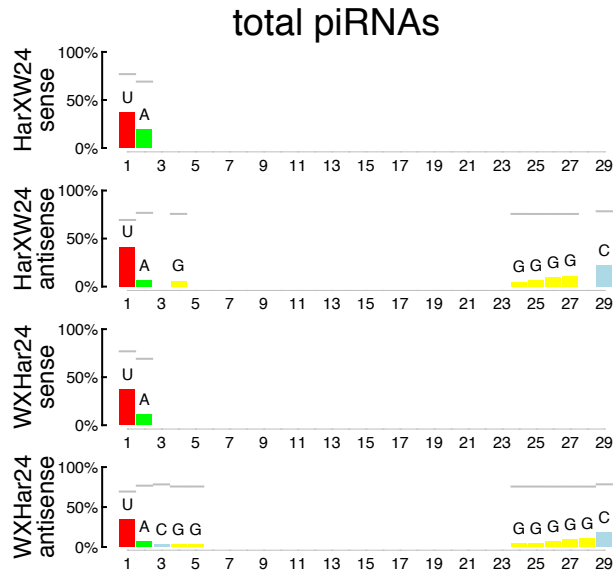
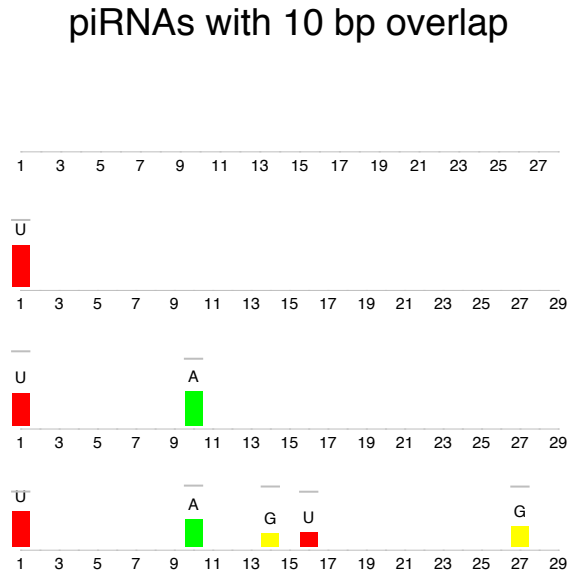
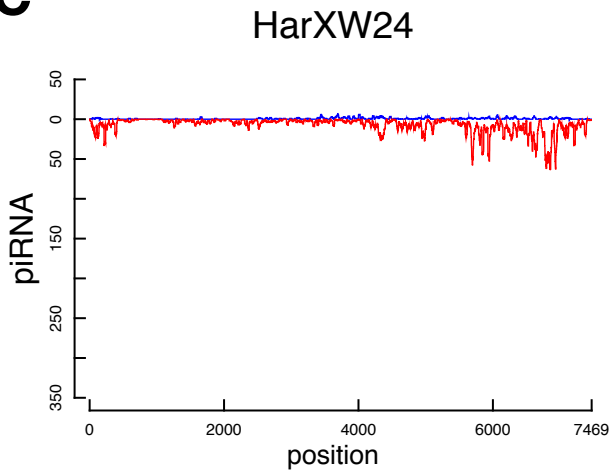
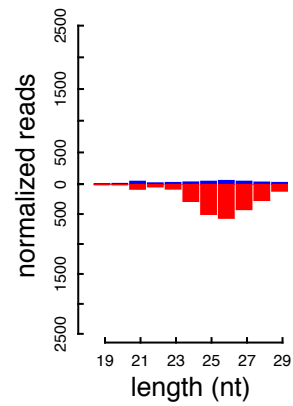
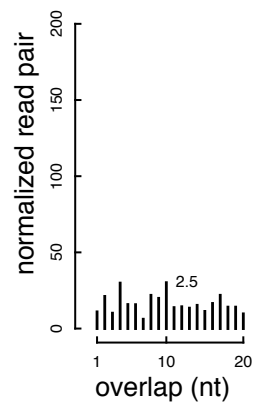
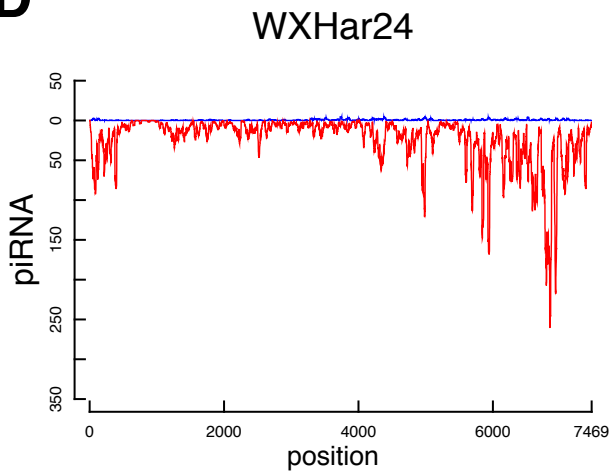
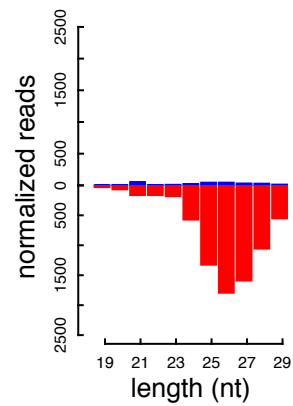
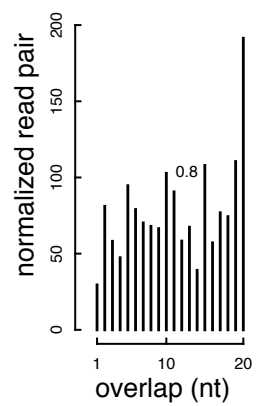
G element

A**B****C****E****G****D****F****H**

gtwin

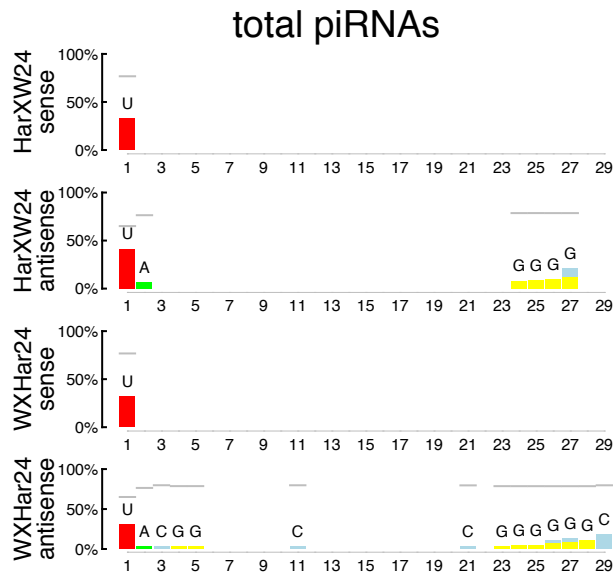
A**B****C****E****G****D****F****H**

gypsy

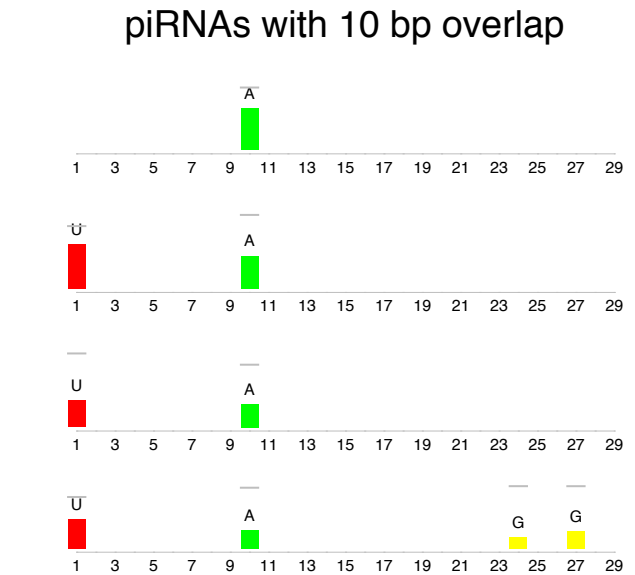
A**B****C****E****G****D****F****H**

gypsy10

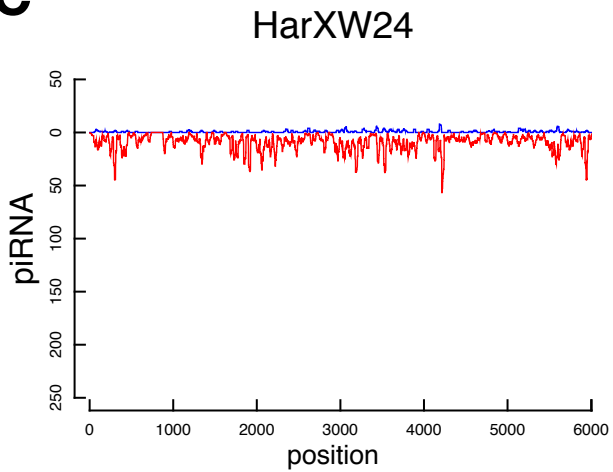
A



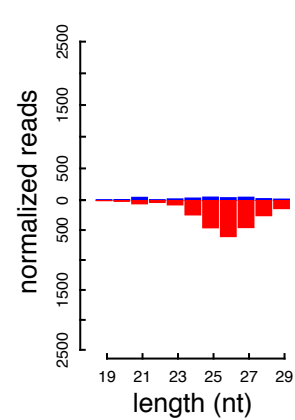
B



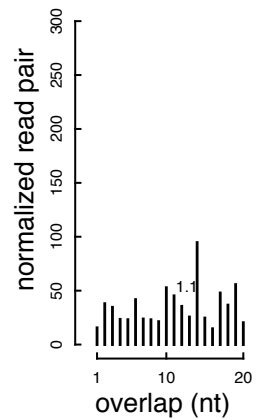
C



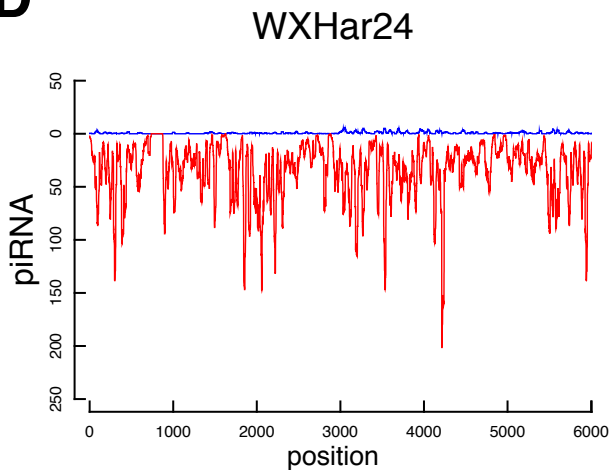
E



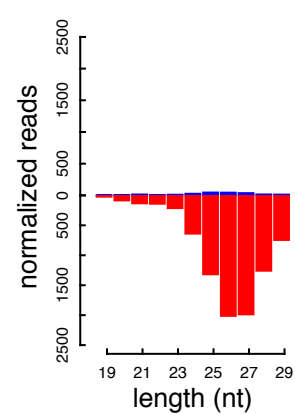
G



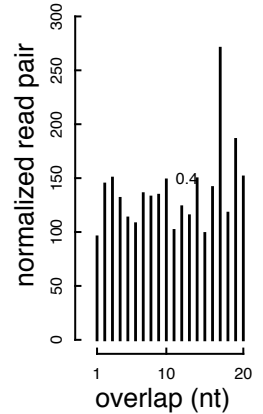
D



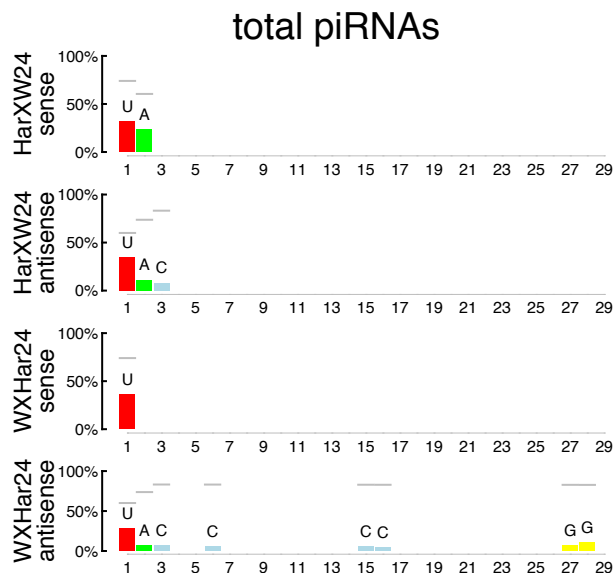
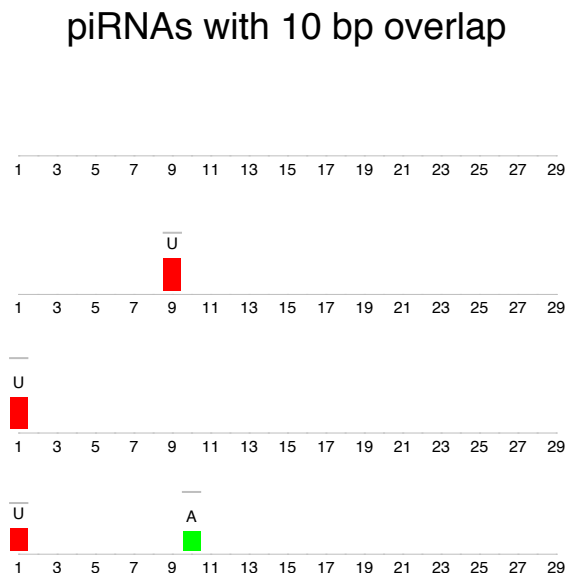
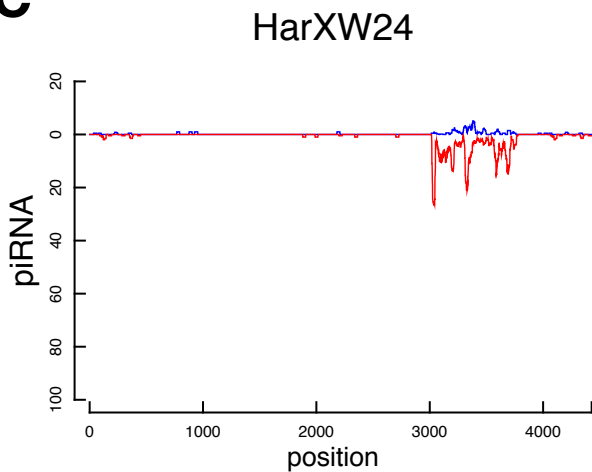
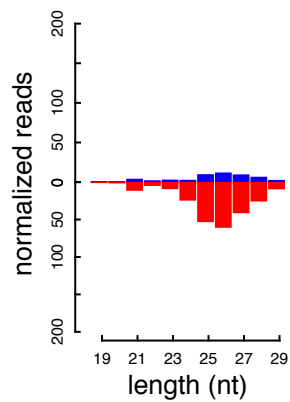
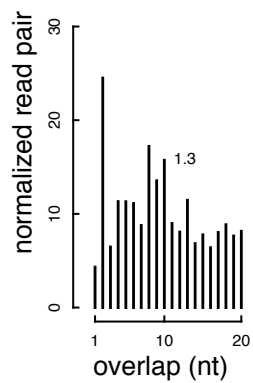
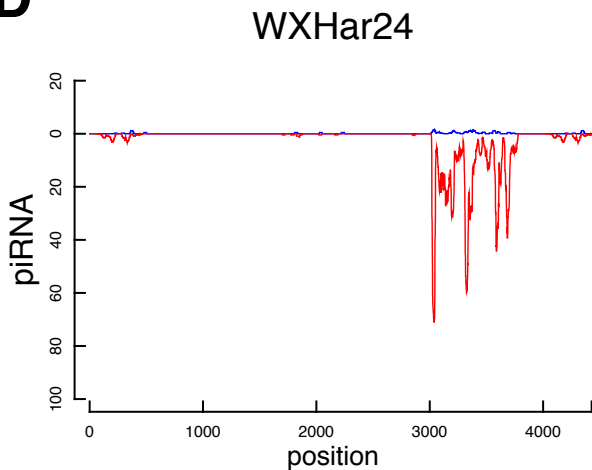
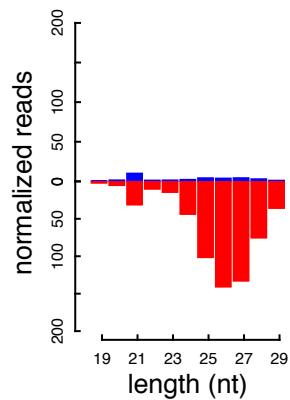
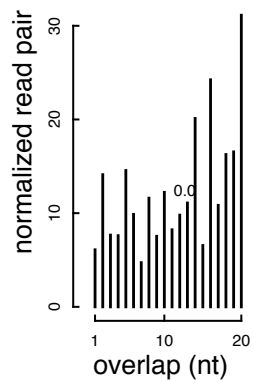
F



H

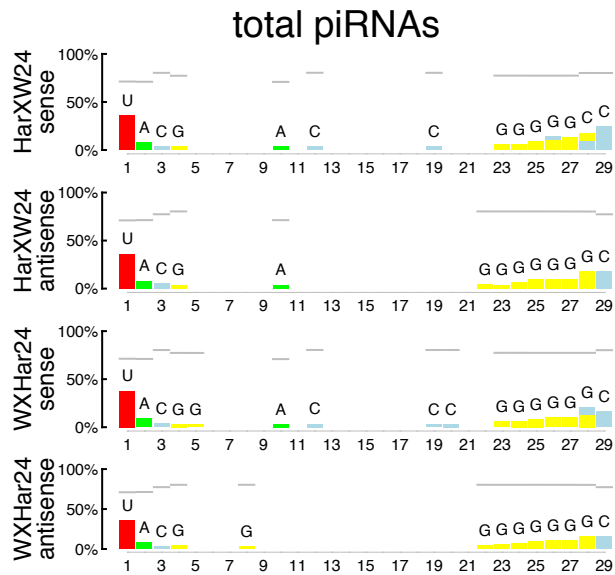


gypsy11

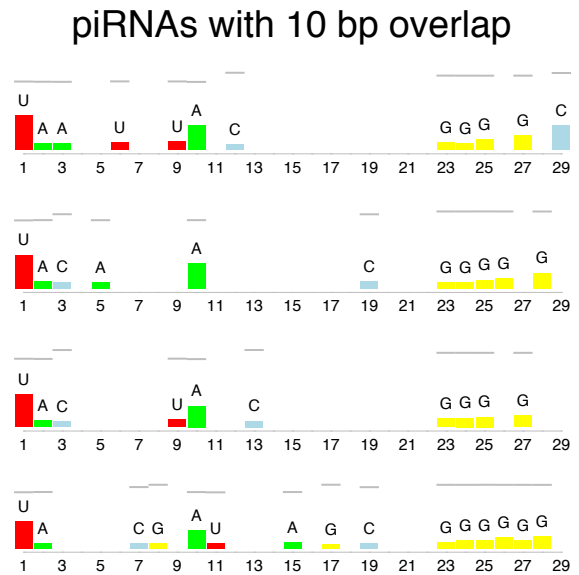
A**B****C****E****G****D****F****H**

gypsy12

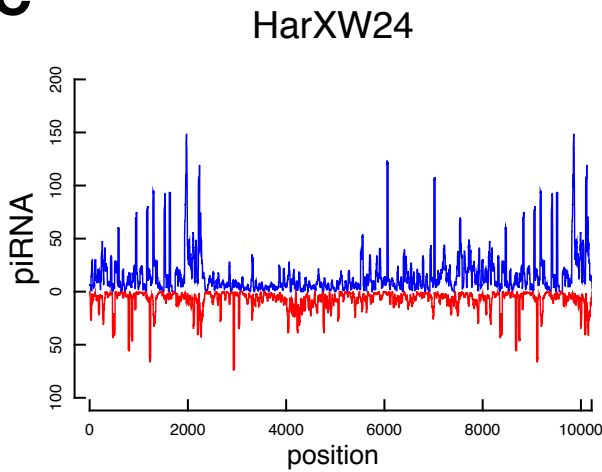
A



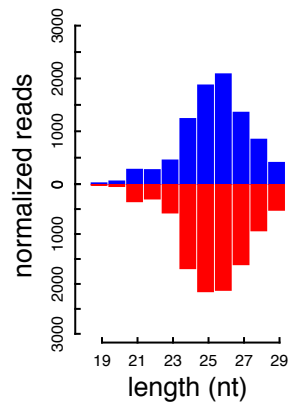
B



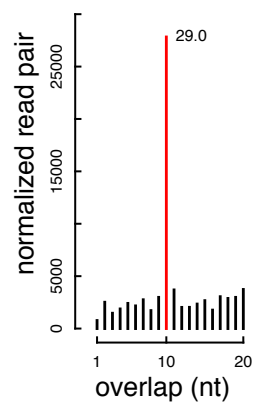
C



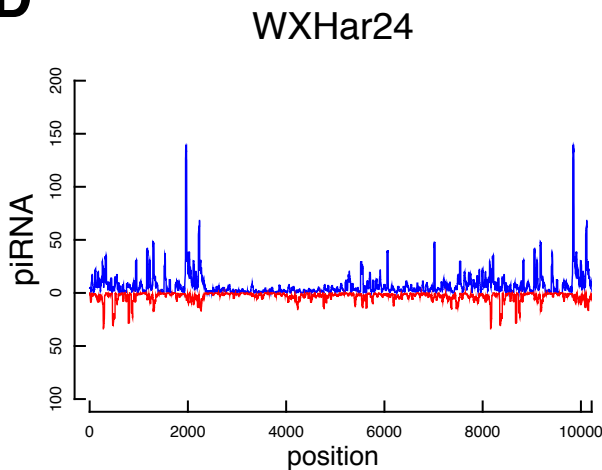
E



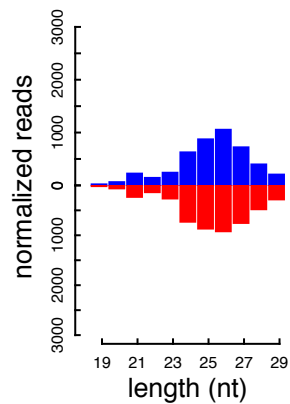
G



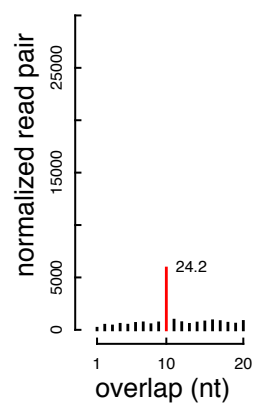
D



F



H



gypsy12#2

A

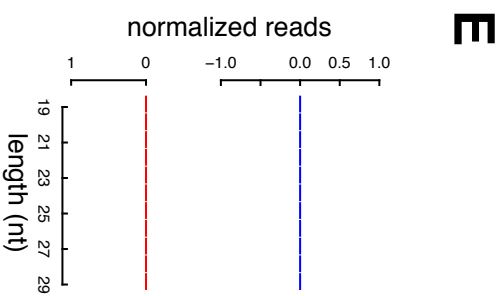
WXHar24 antisense WXHar24 sense HarXW24 antisense HarXW24 sense

total piRNAs

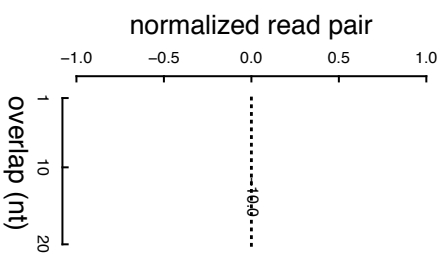
B

piRNAs with 10 bp overlap

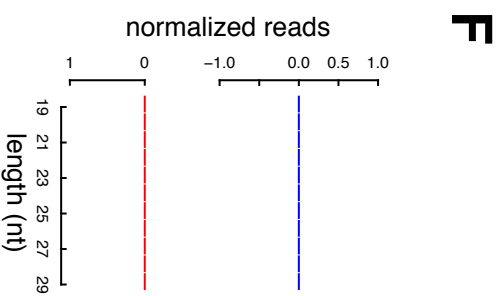
C



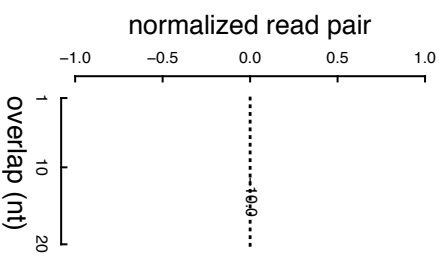
G



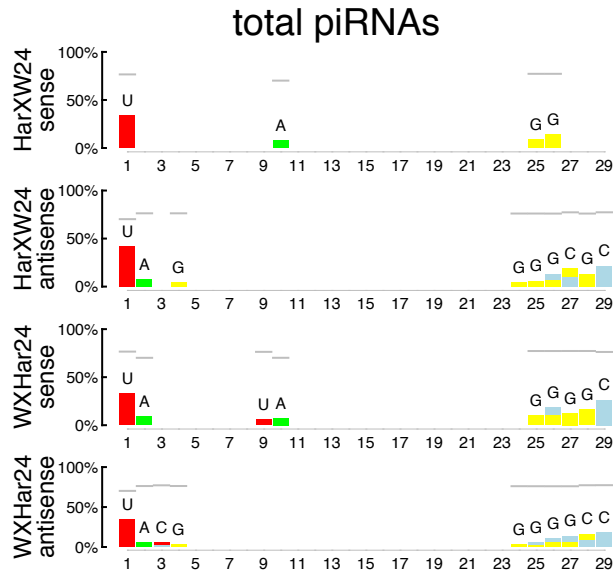
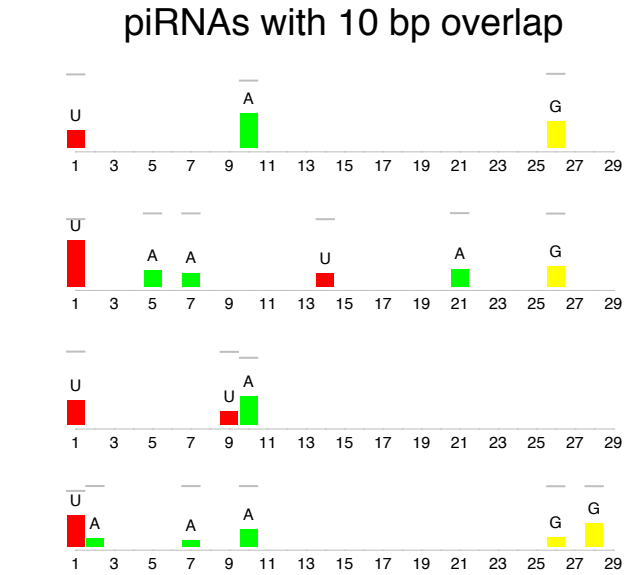
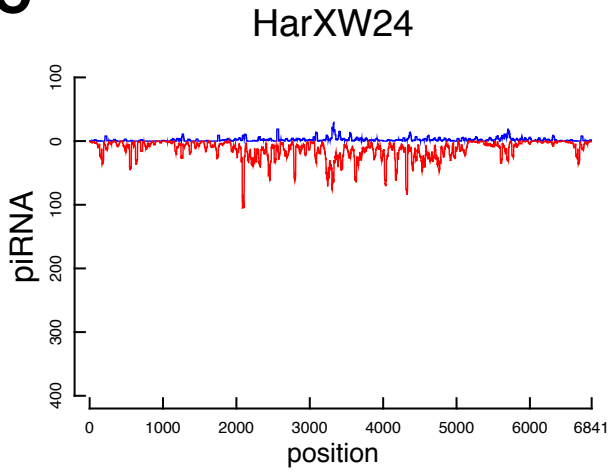
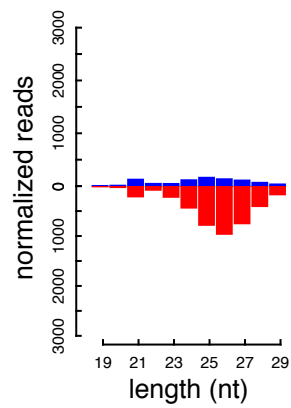
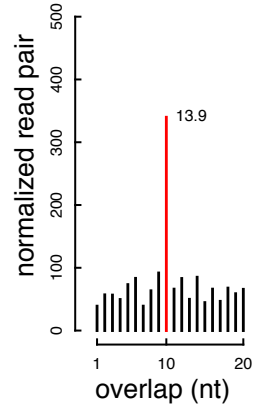
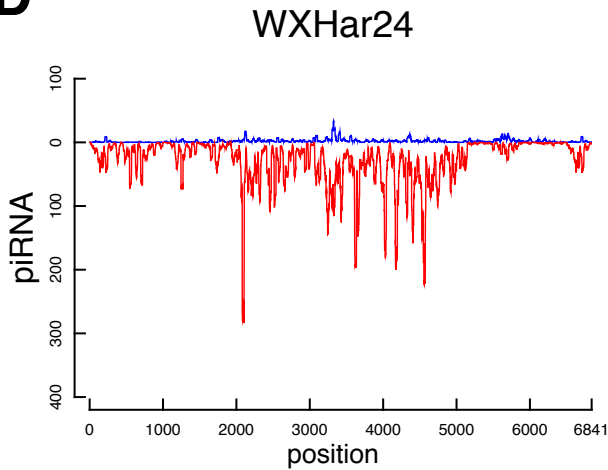
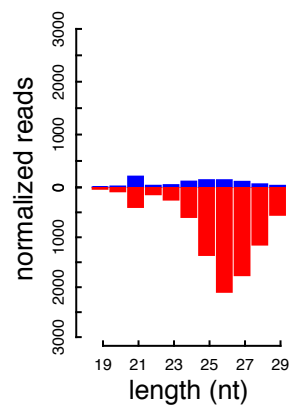
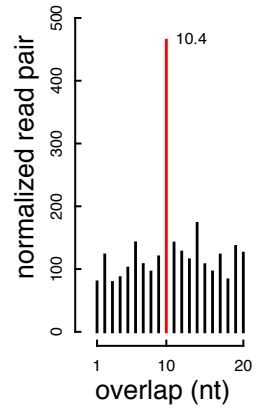
D



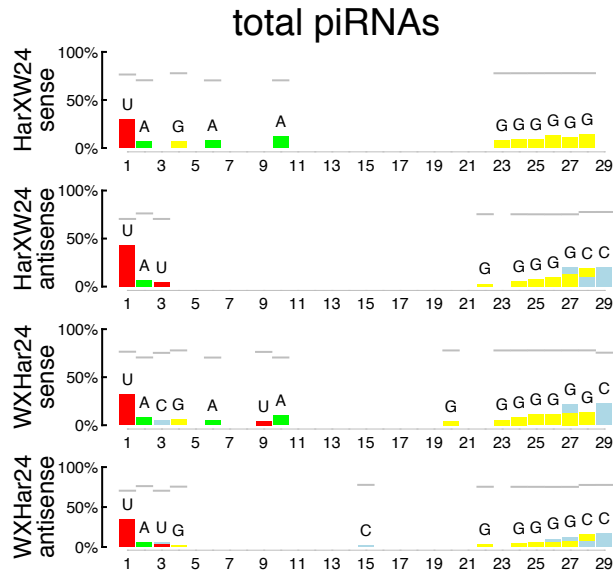
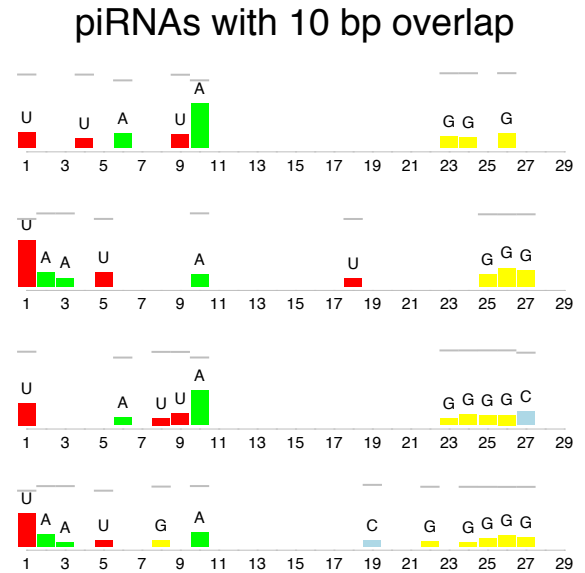
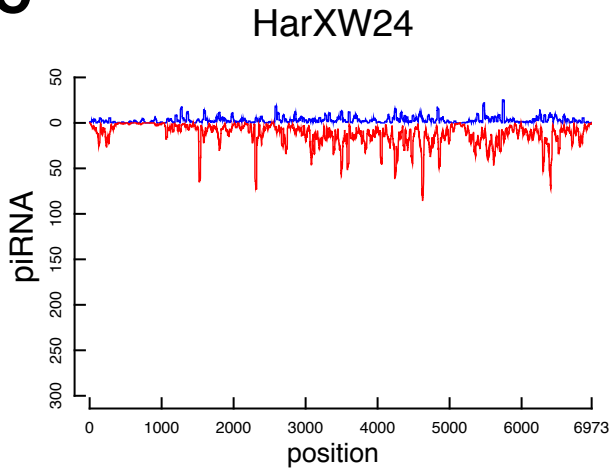
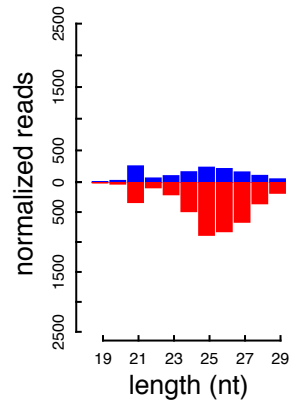
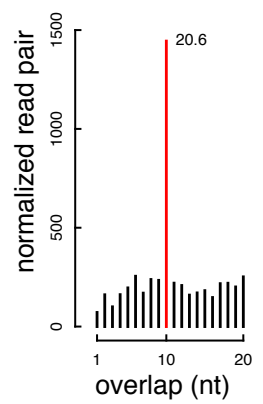
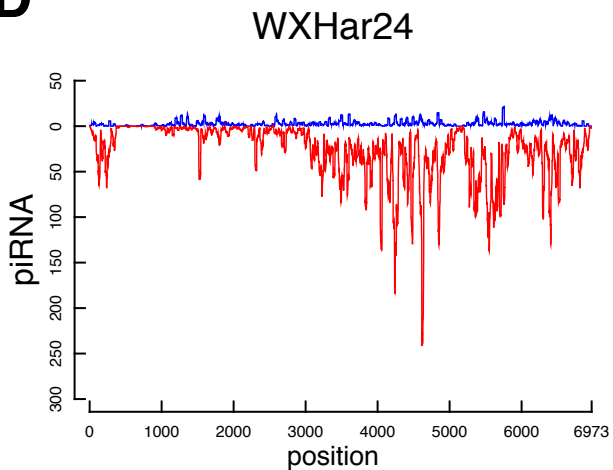
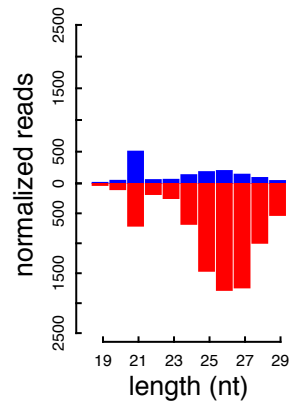
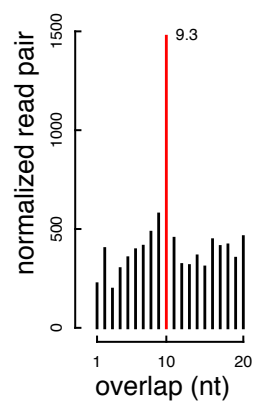
H



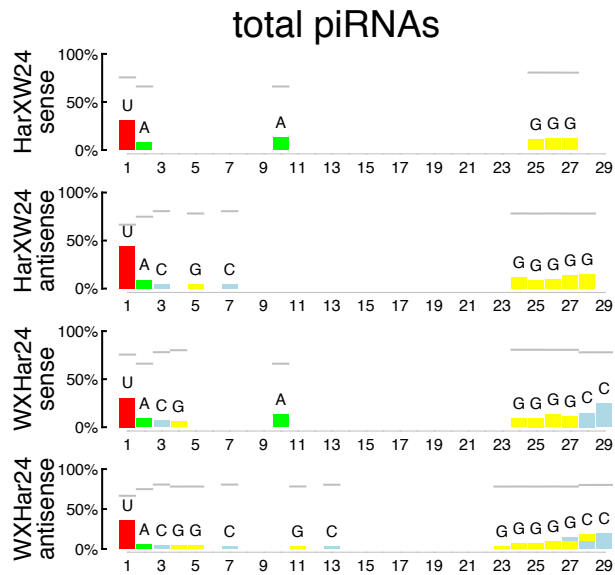
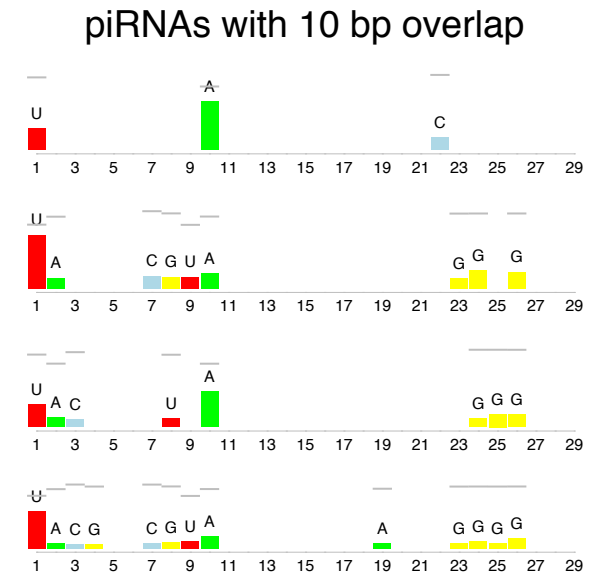
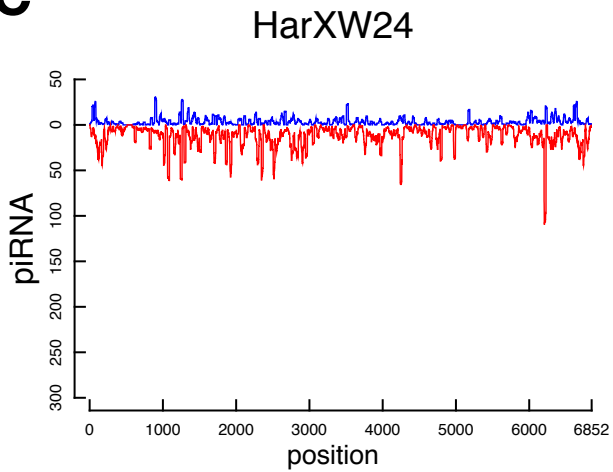
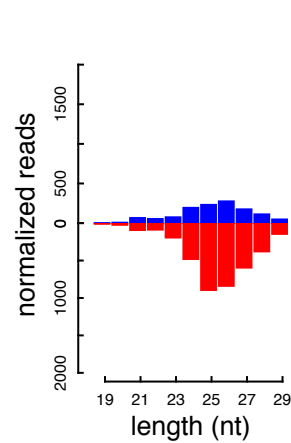
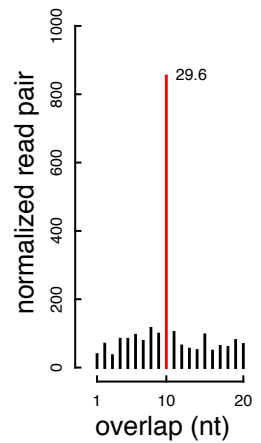
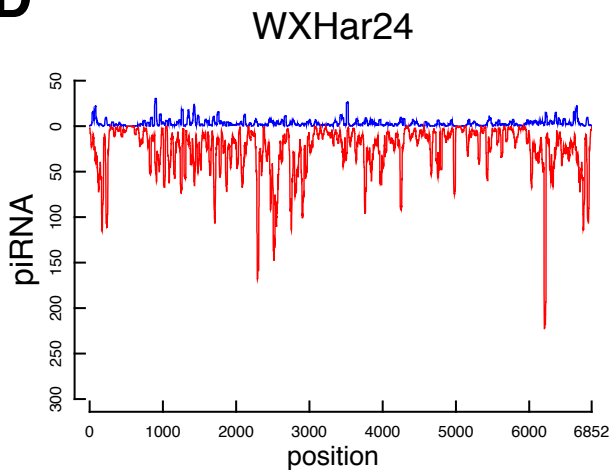
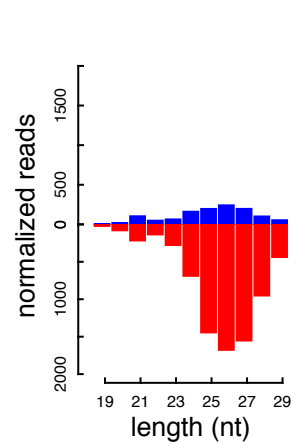
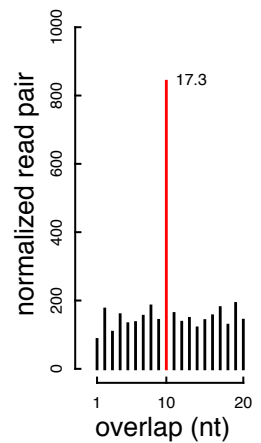
gypsy2

A**B****C****E****G****D****F****H**

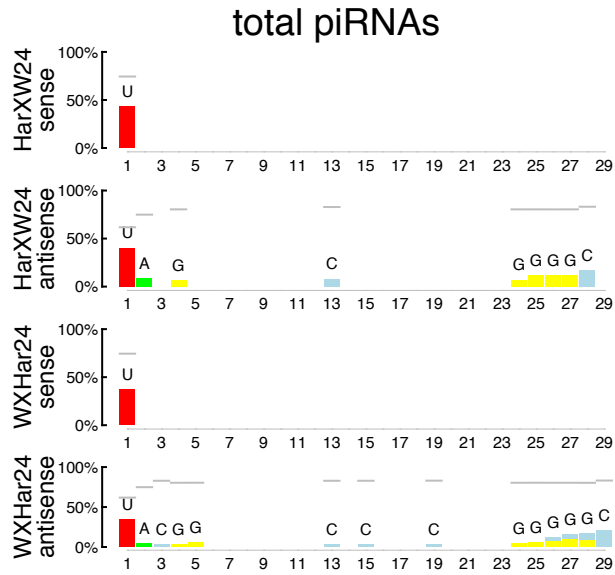
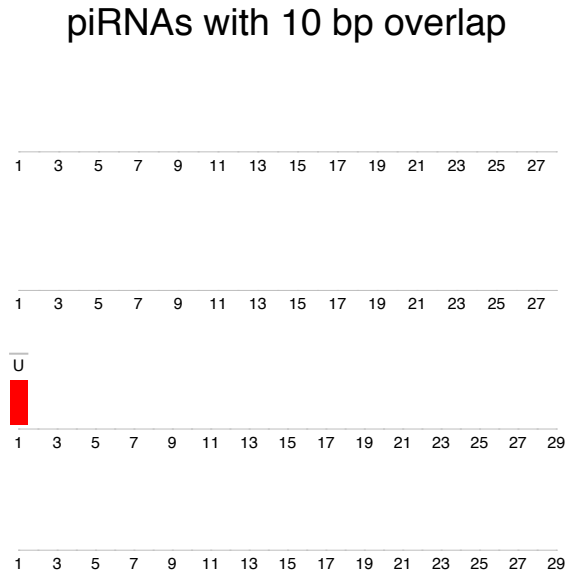
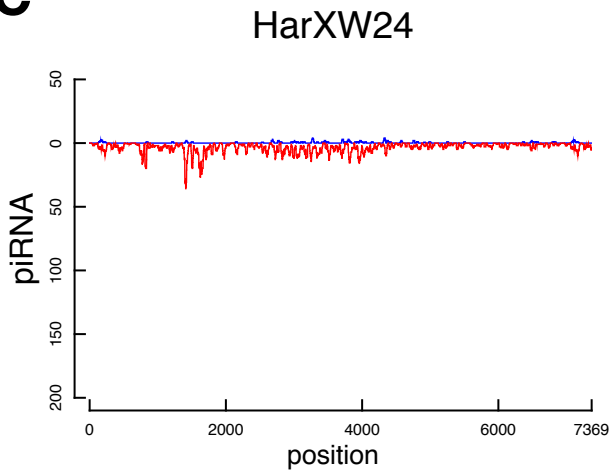
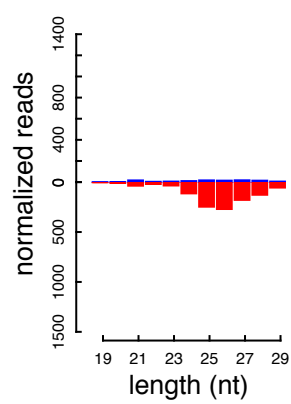
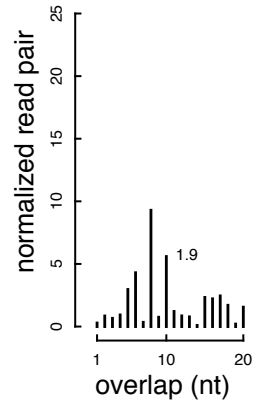
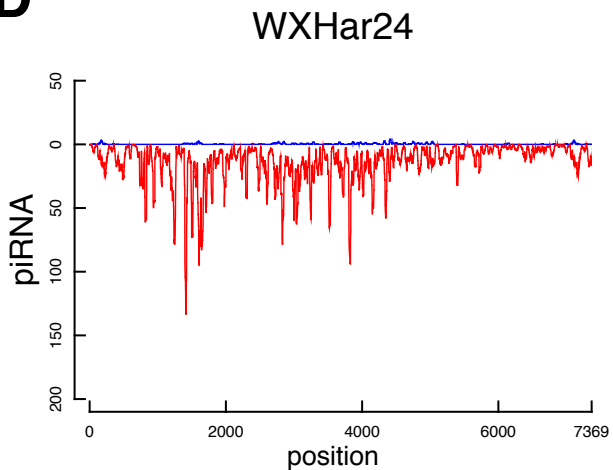
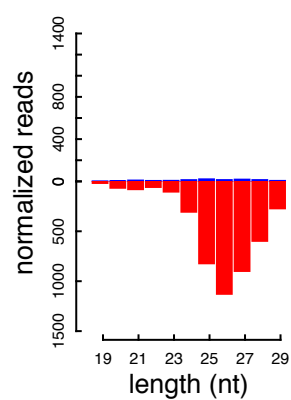
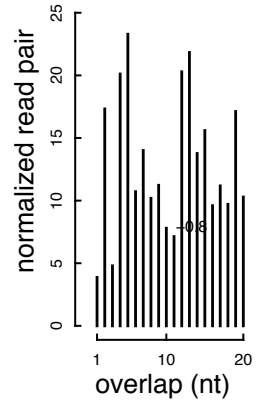
gypsy3

A**B****C****E****G****D****F****H**

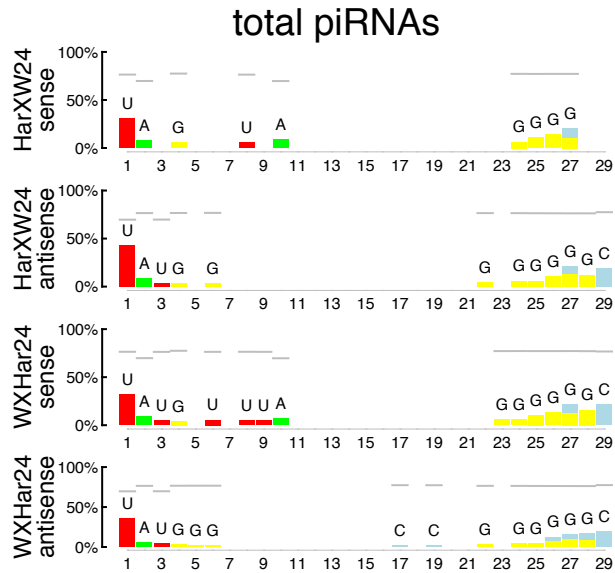
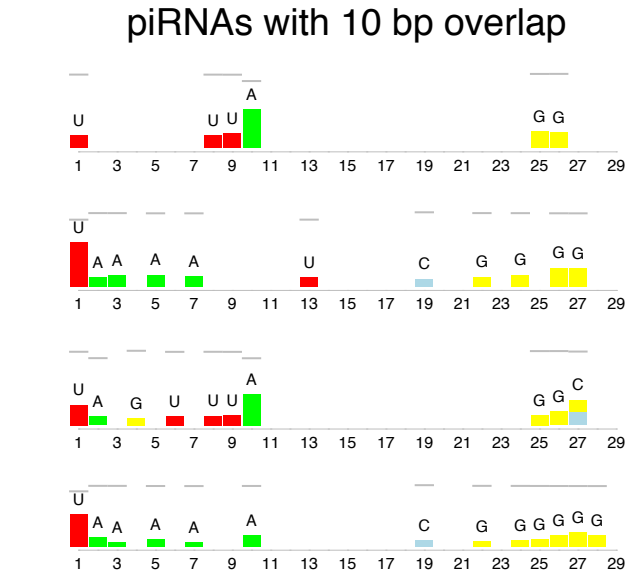
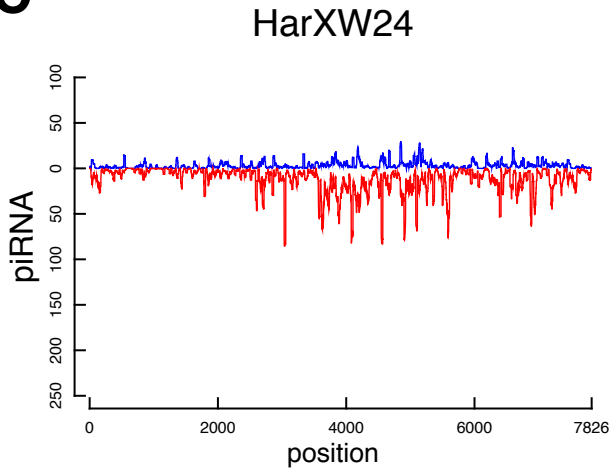
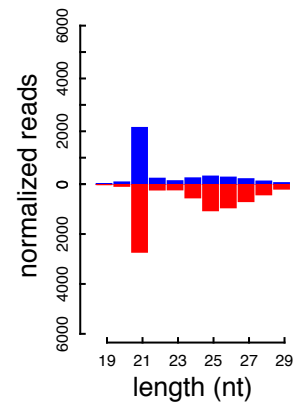
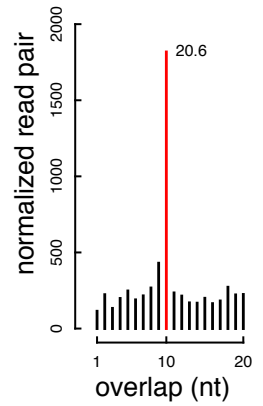
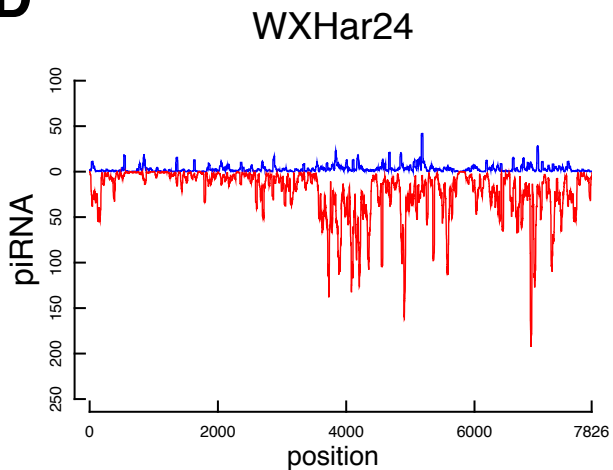
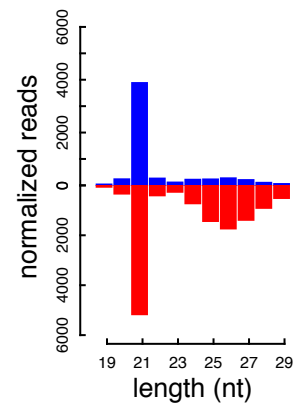
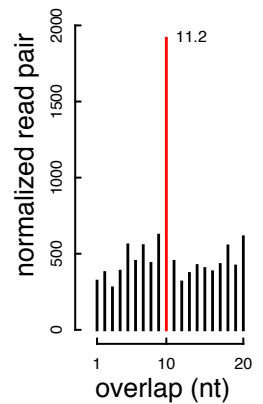
gypsy4

A**B****C****E****G****D****F****H**

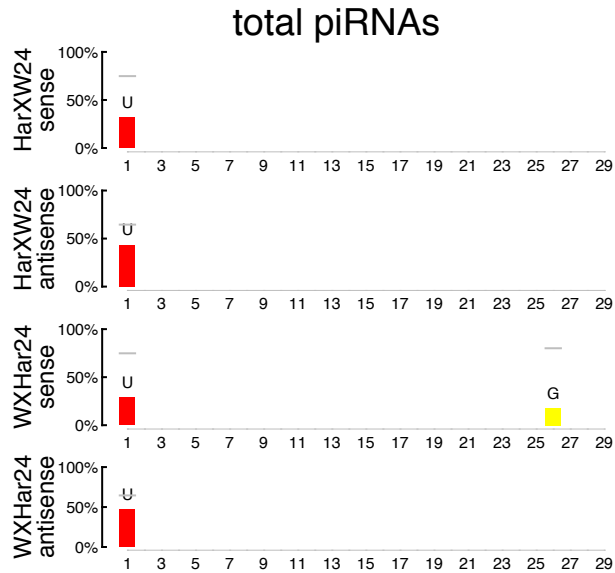
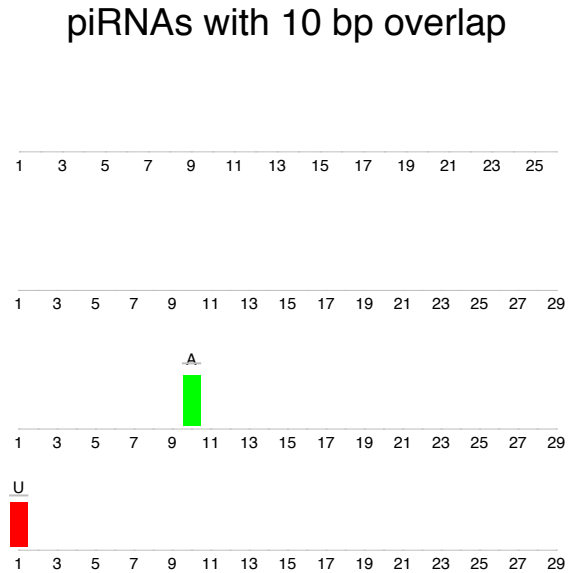
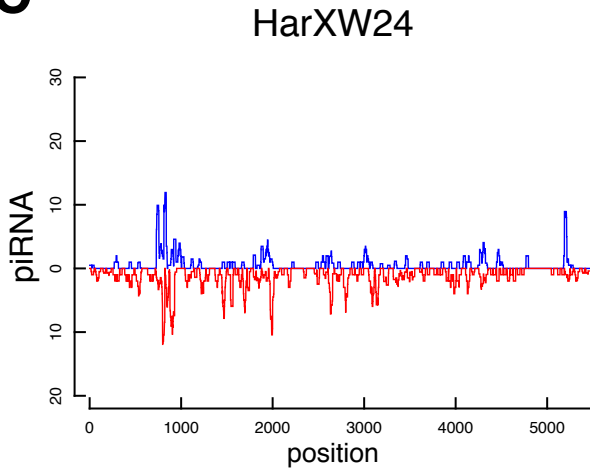
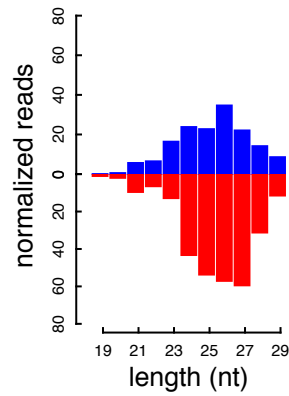
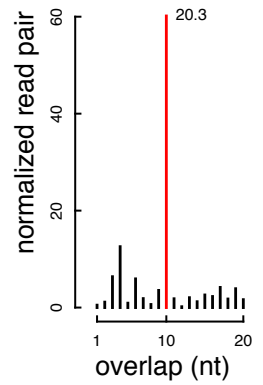
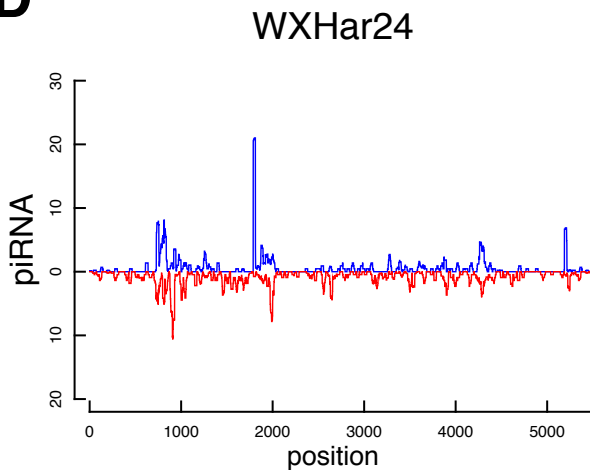
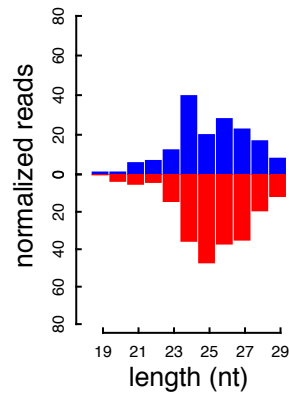
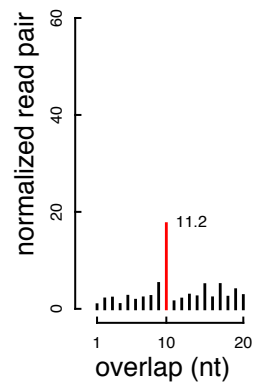
gypsy5

A**B****C****E****G****D****F****H**

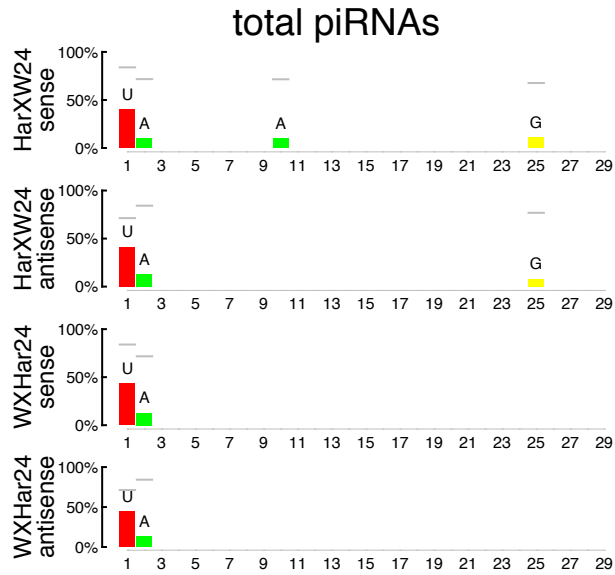
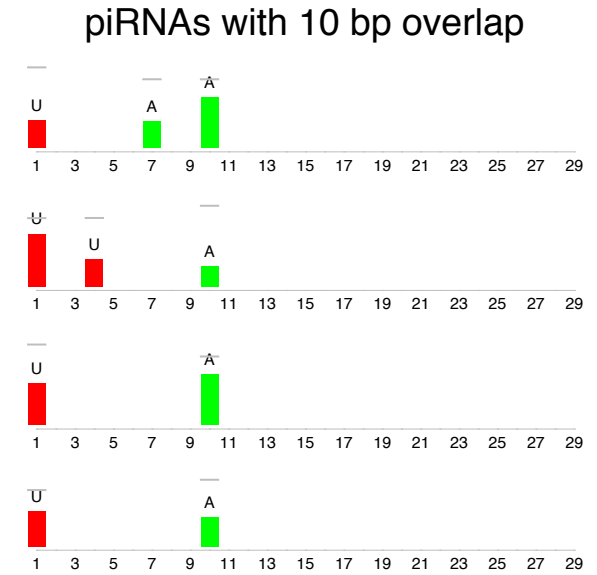
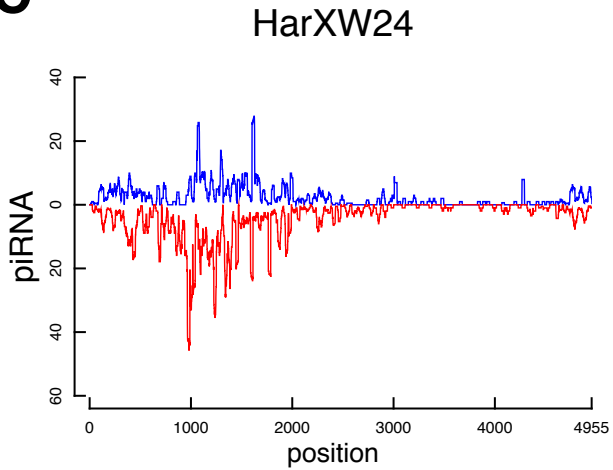
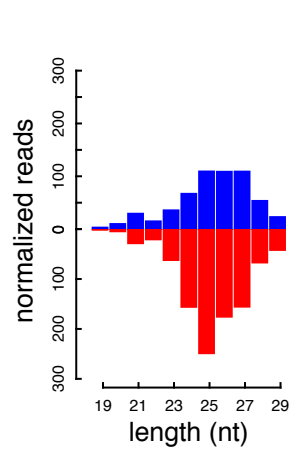
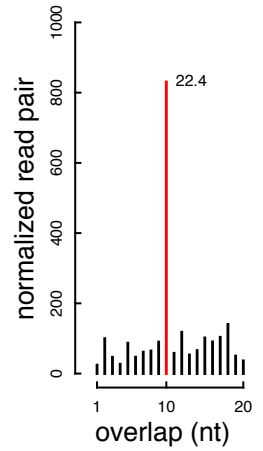
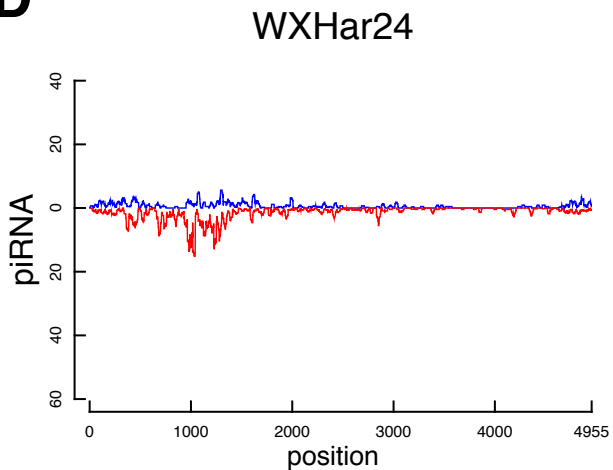
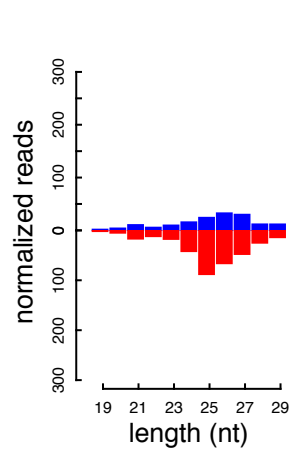
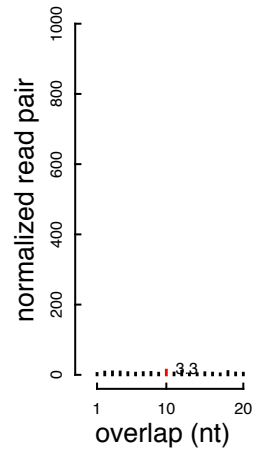
gypsy6

A**B****C****E****G****D****F****H**

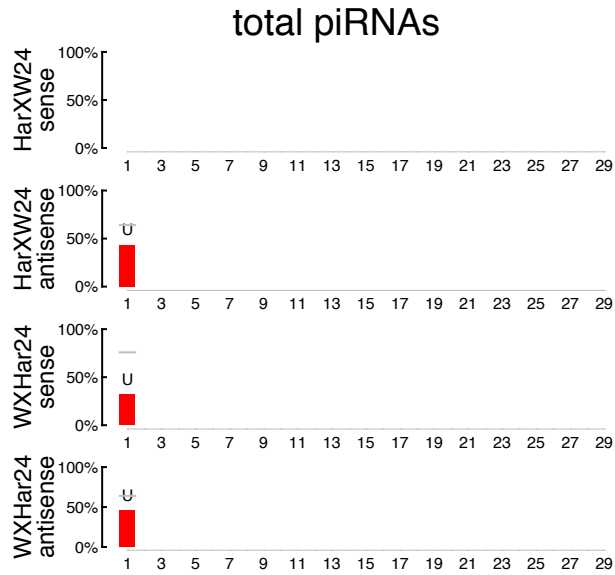
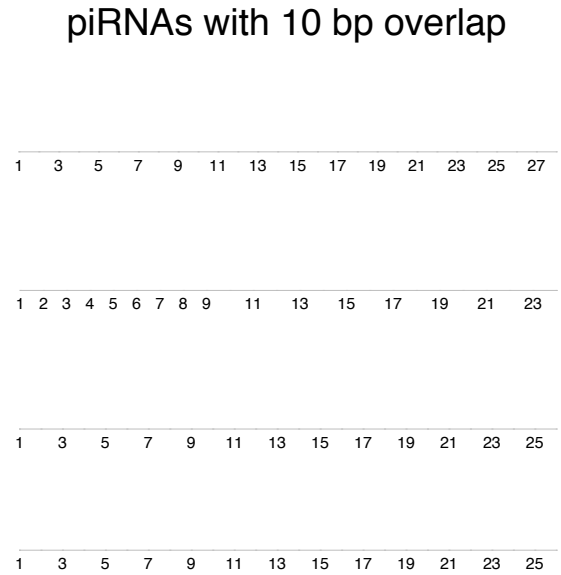
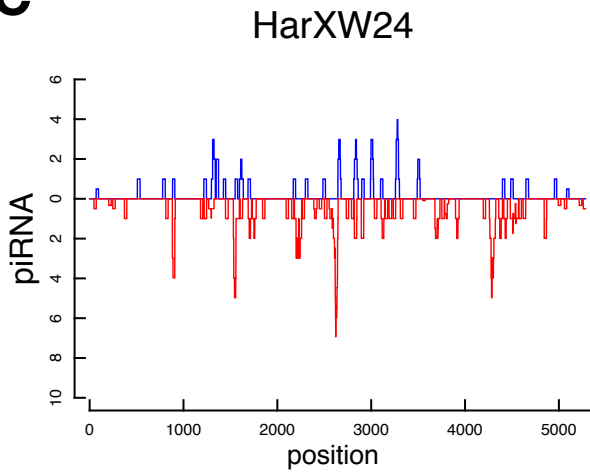
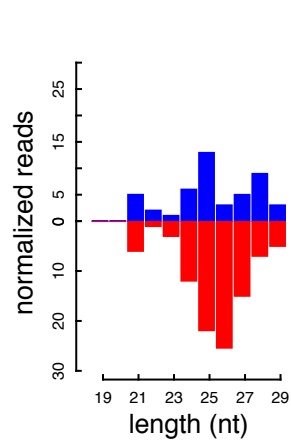
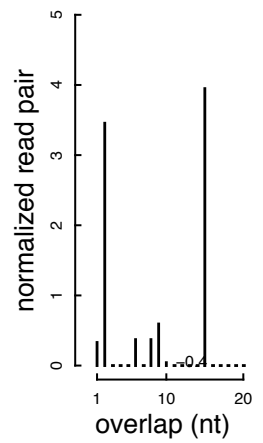
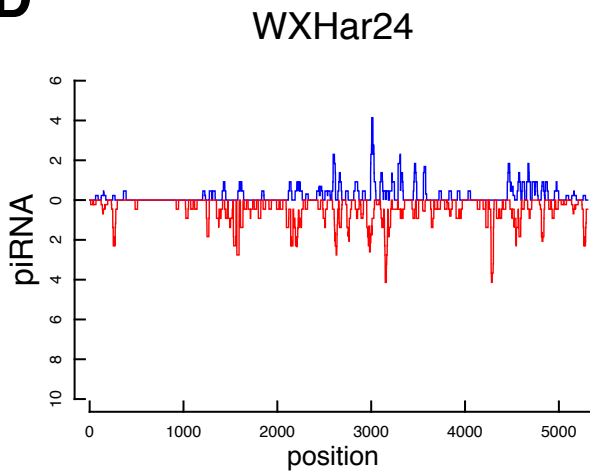
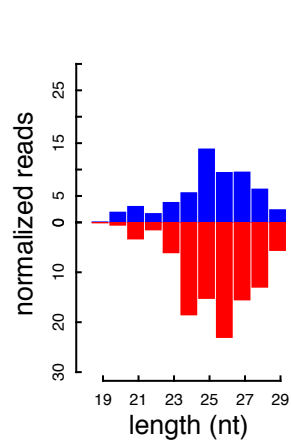
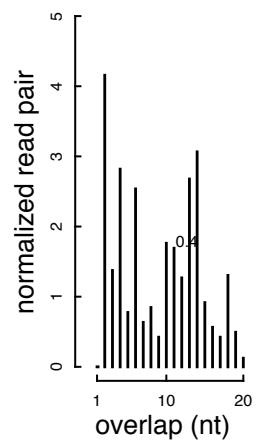
gypsy7

A**B****C****E****G****D****F****H**

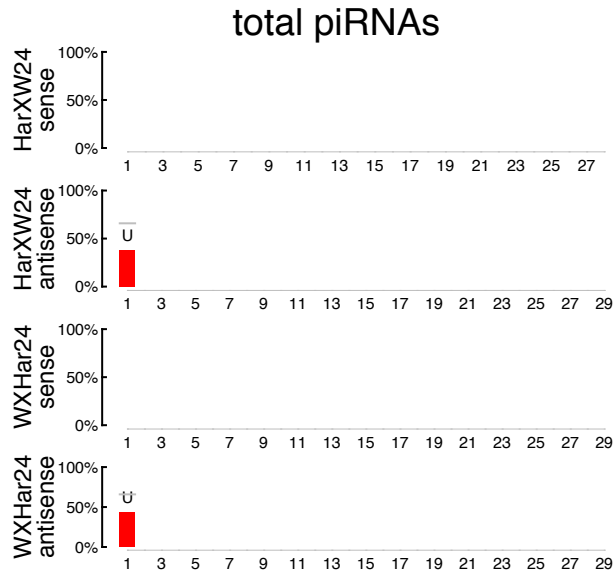
gypsy8

A**B****C****E****G****D****F****H**

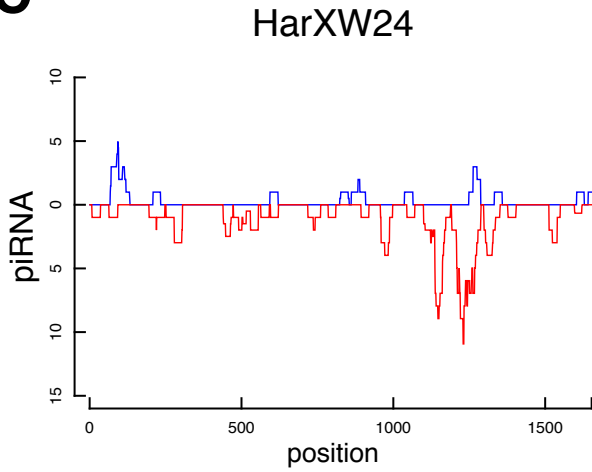
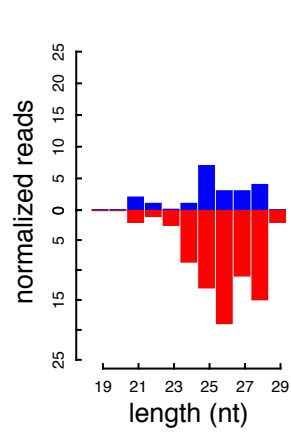
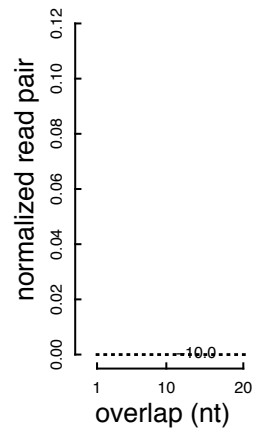
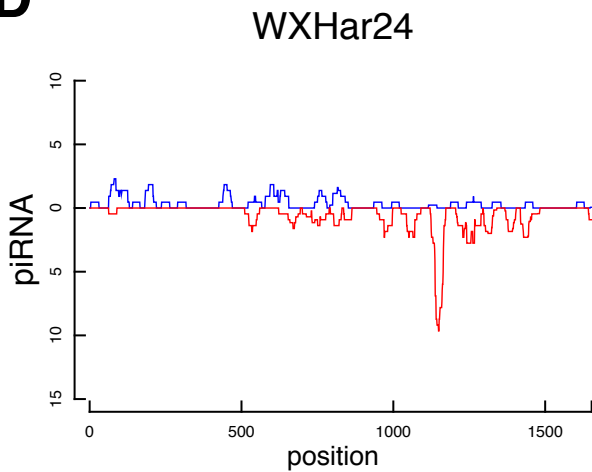
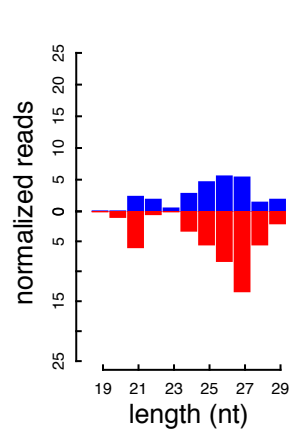
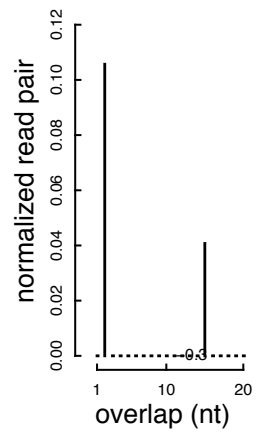
gypsy9

A**B****C****E****G****D****F****H**

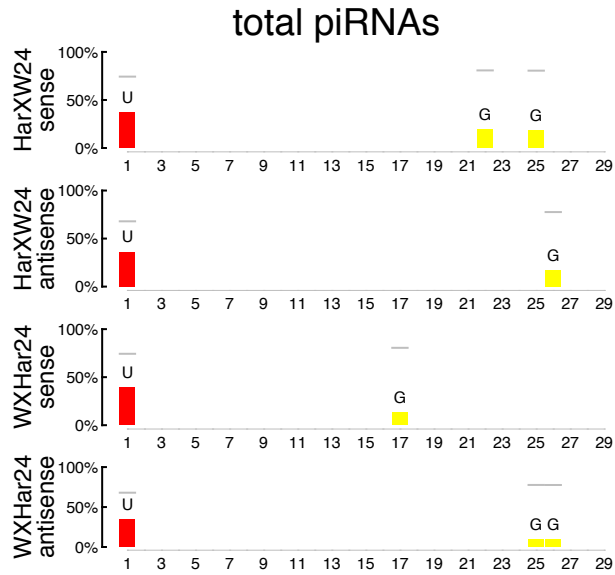
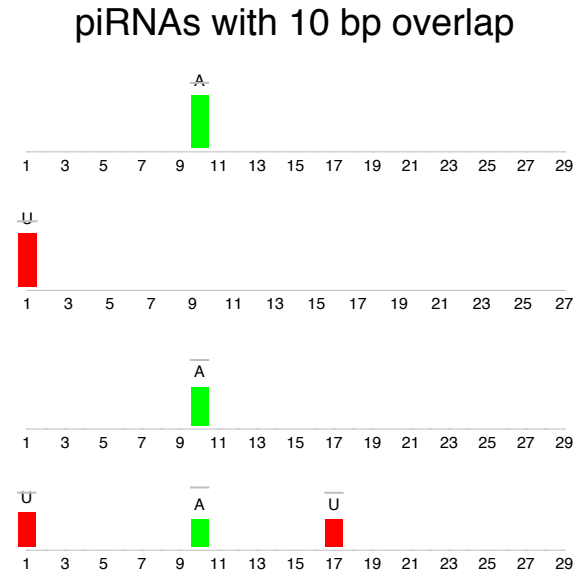
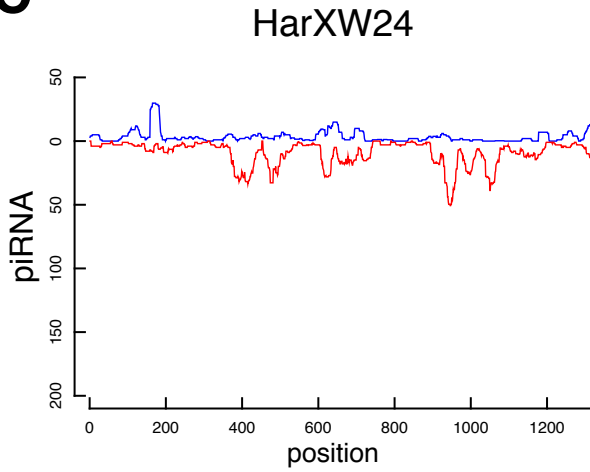
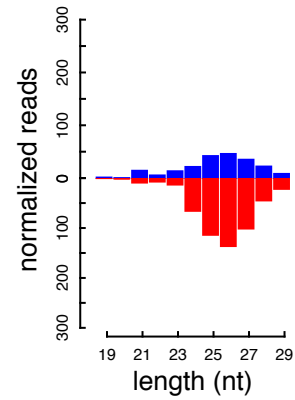
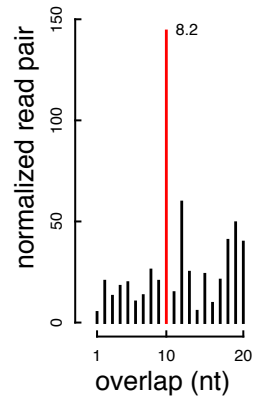
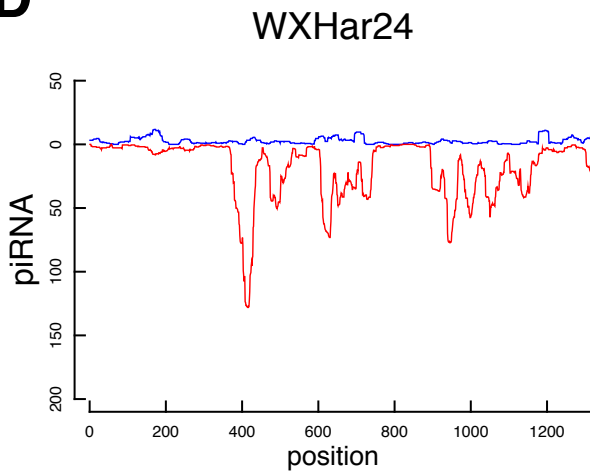
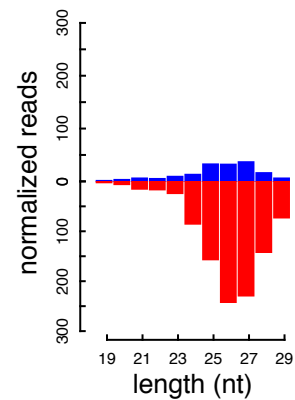
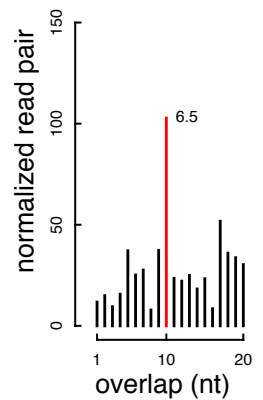
HB

A**B**

piRNAs with 10 bp overlap

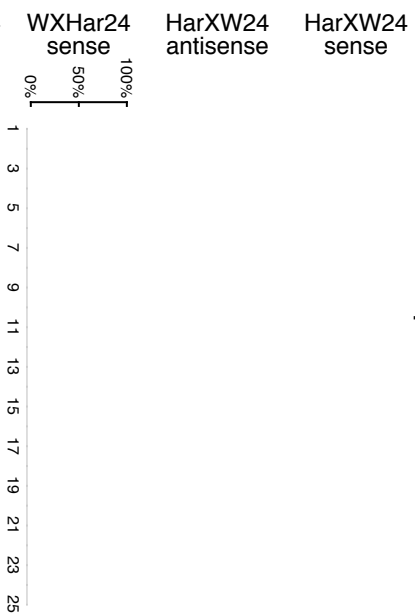
C**E****G****D****F****H**

Helena

A**B****C****E****G****D****F****H**

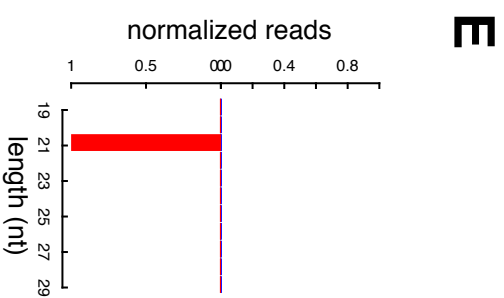
Helitron

A total piRNAs

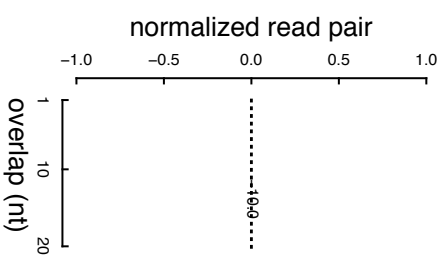


B piRNAs with 10 bp overlap

C

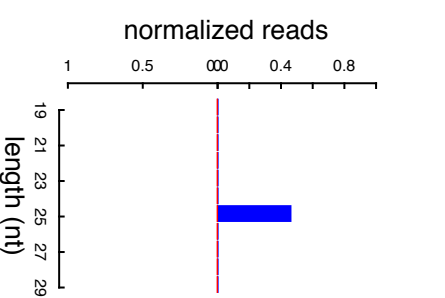


E

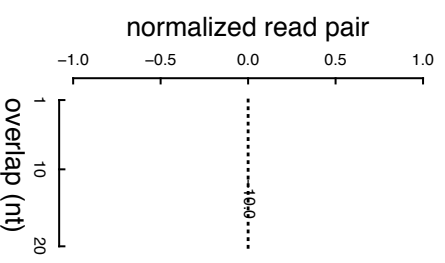


G

D

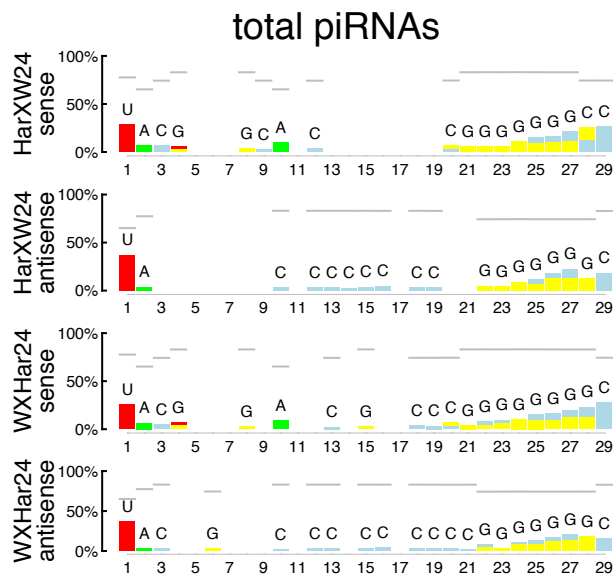
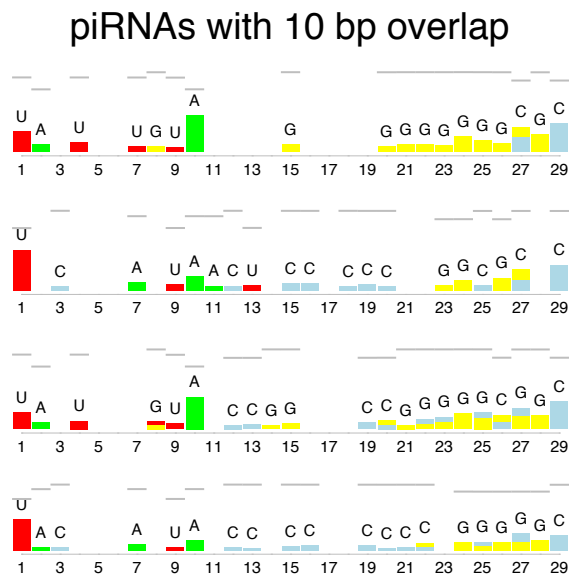
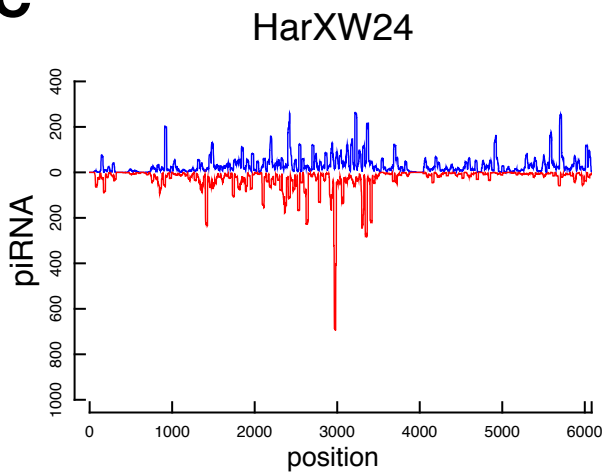
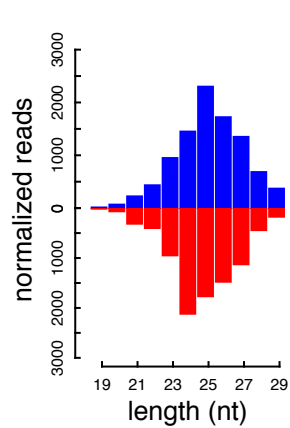
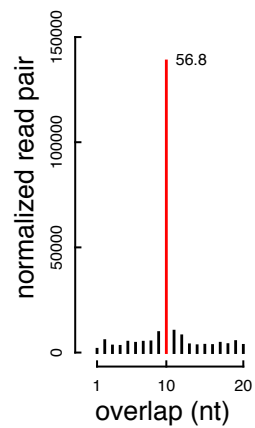
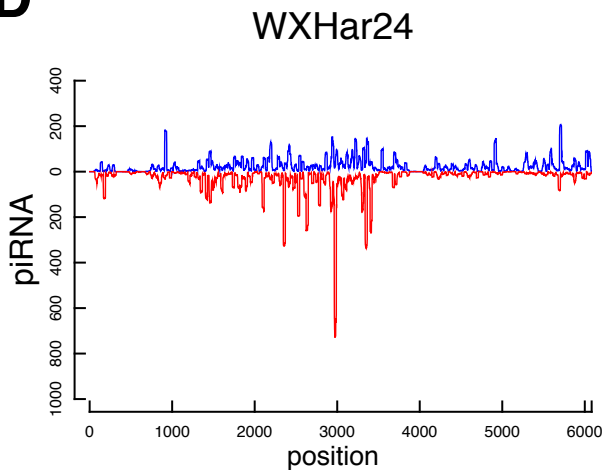
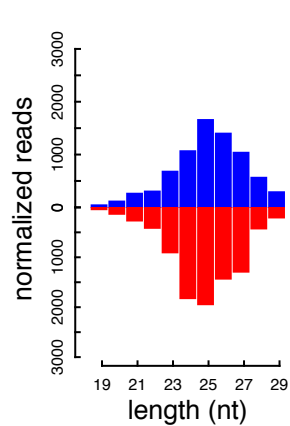
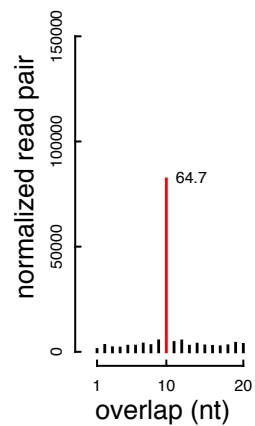


F



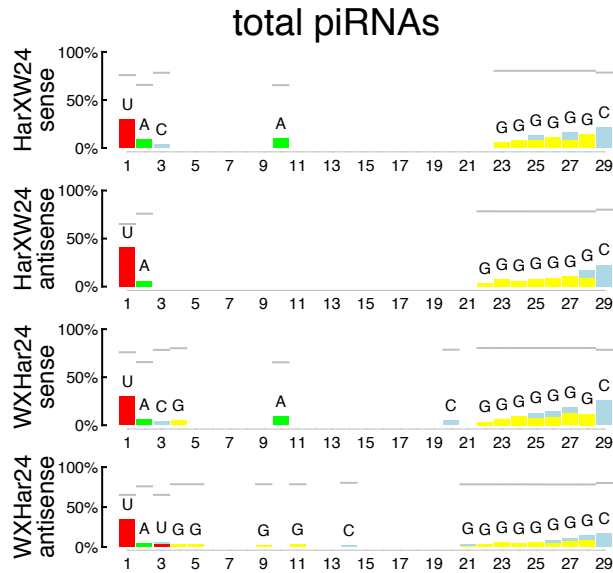
H

HeT A

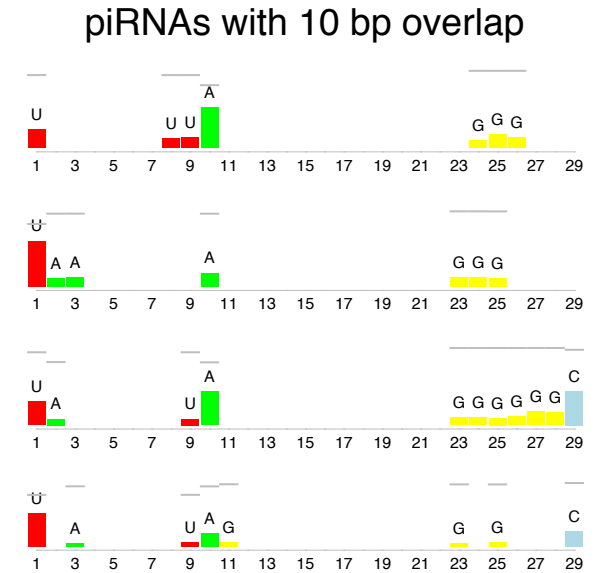
A**B****C****E****G****D****F****H**

HMS Beagle

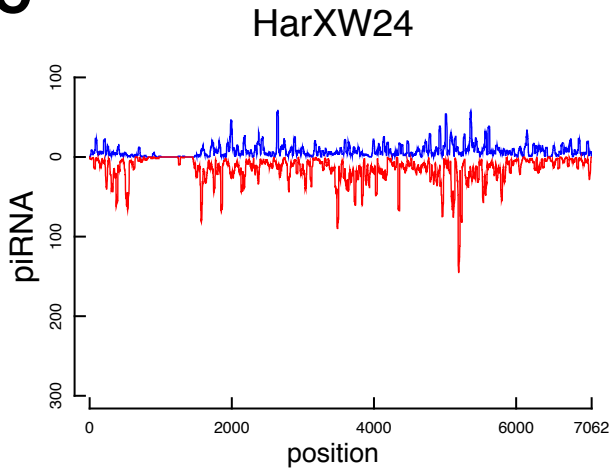
A



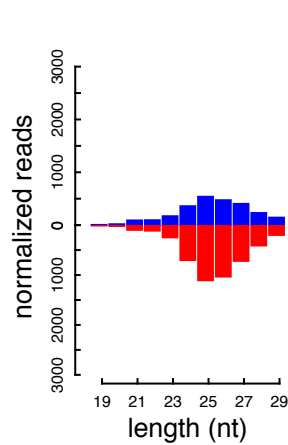
B



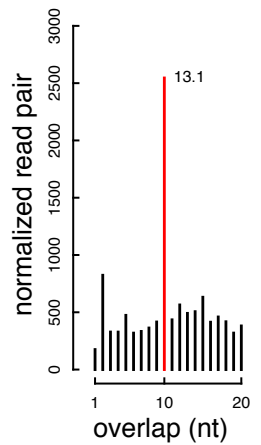
C



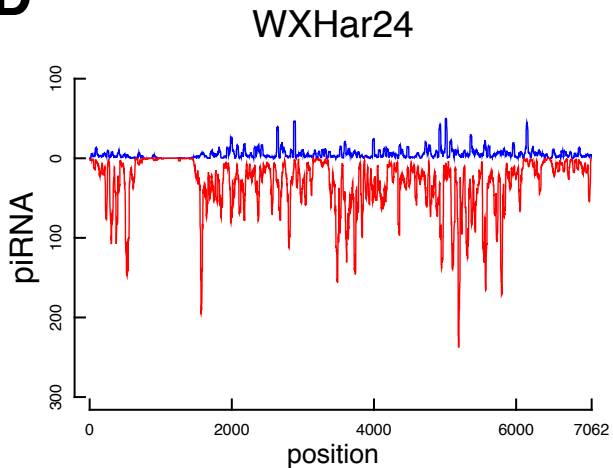
E



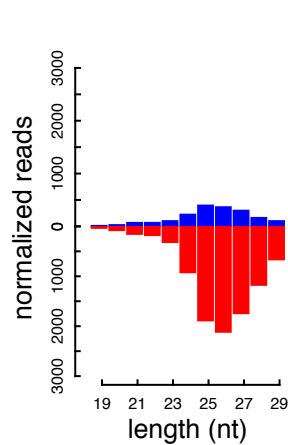
G



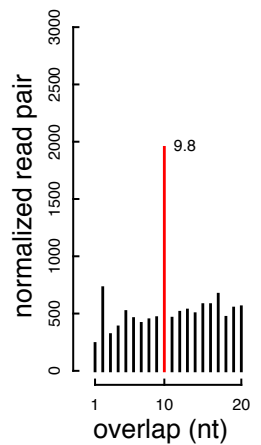
D



F

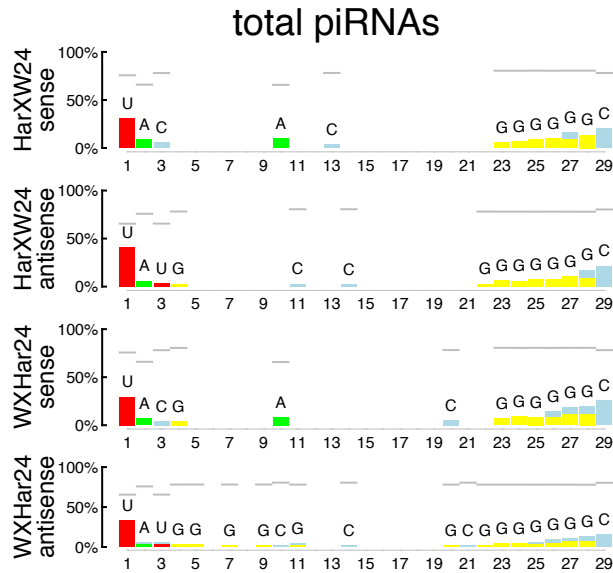


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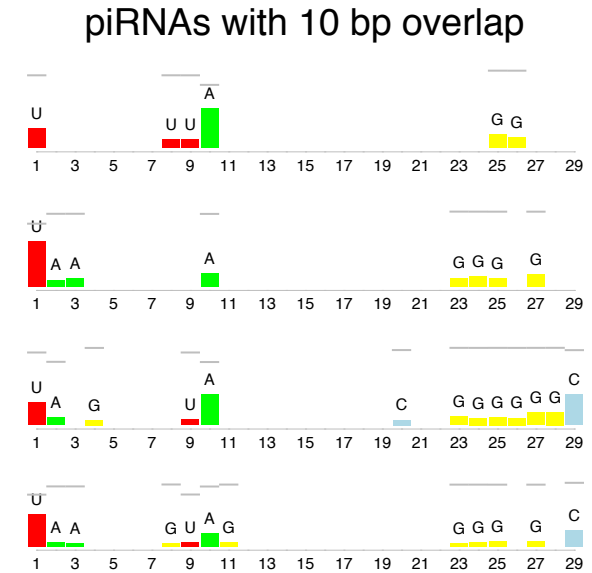


HMS Beagle2

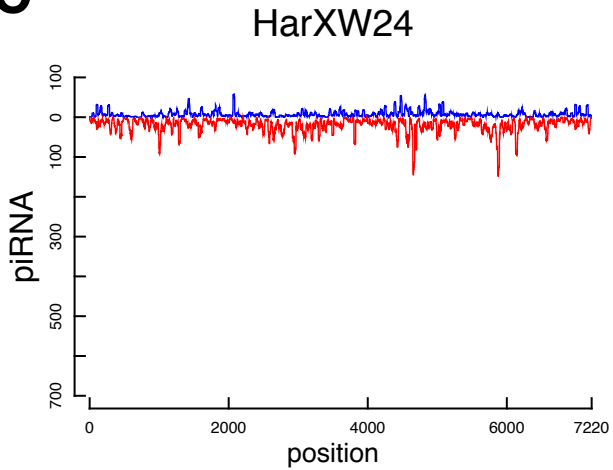
A



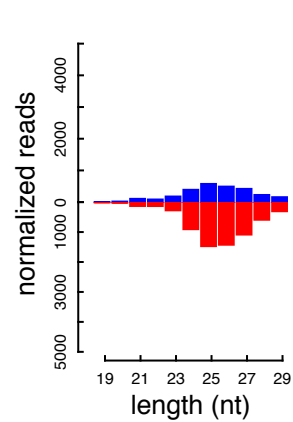
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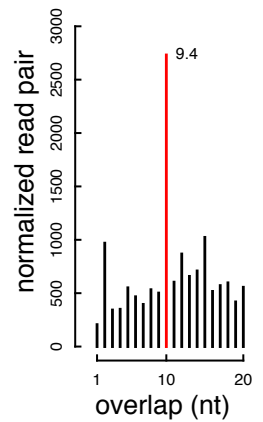
C



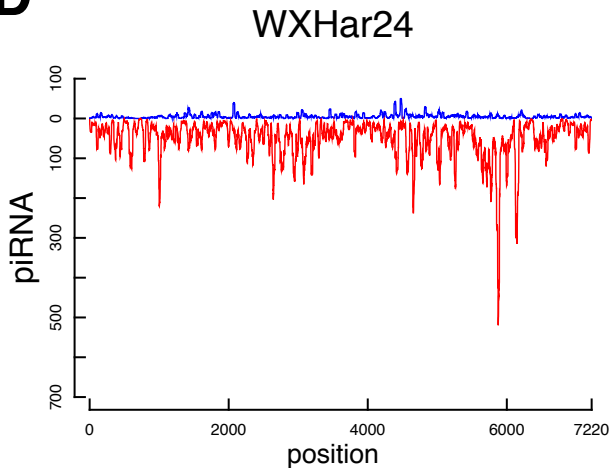
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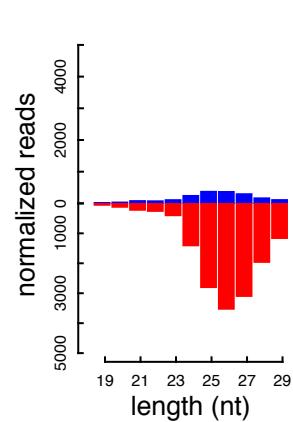
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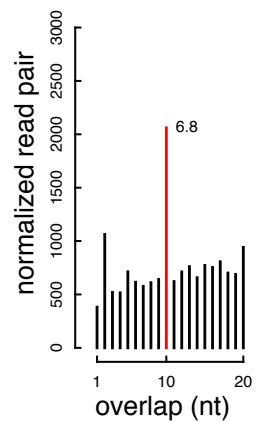
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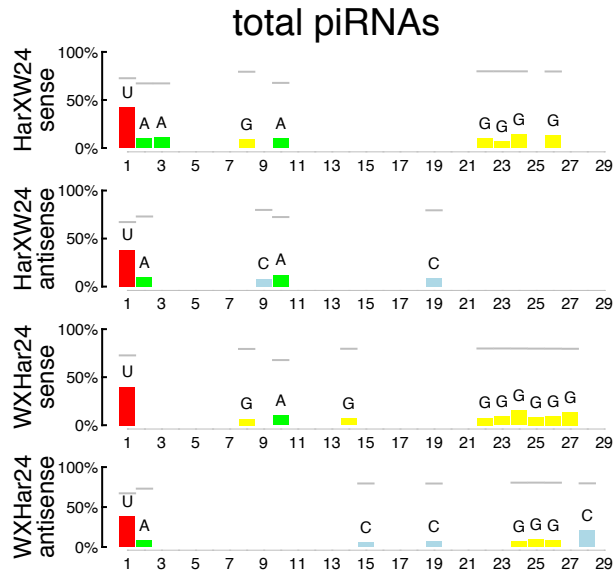
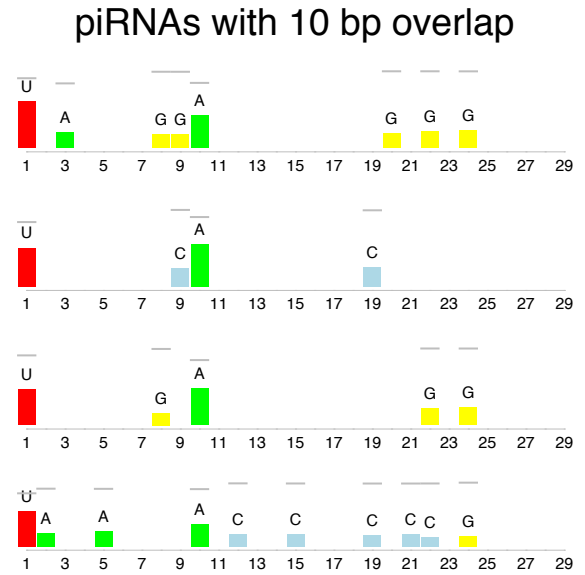
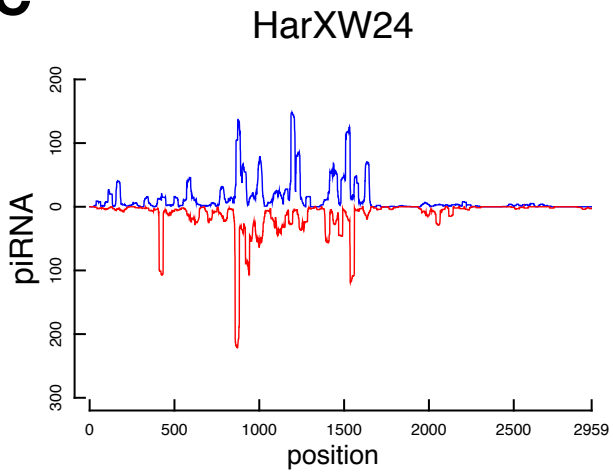
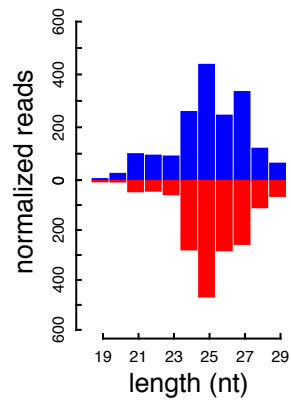
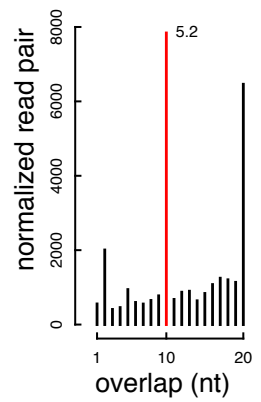
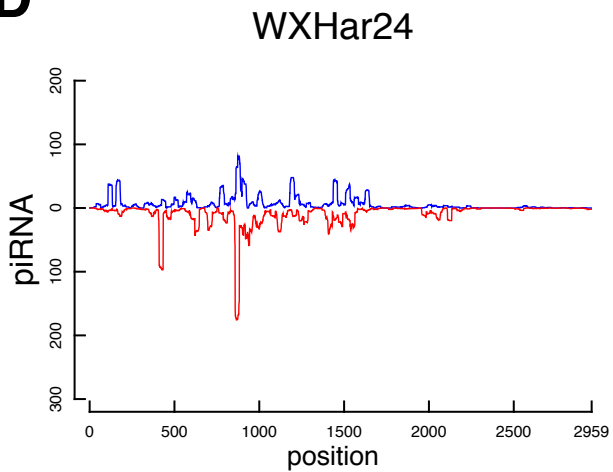
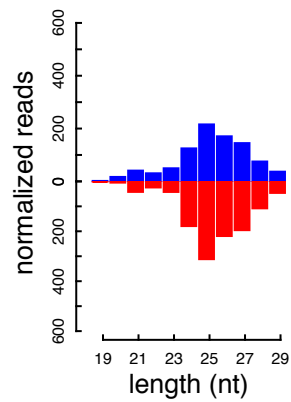
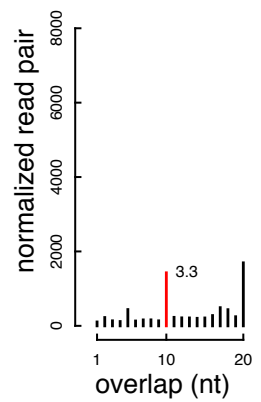
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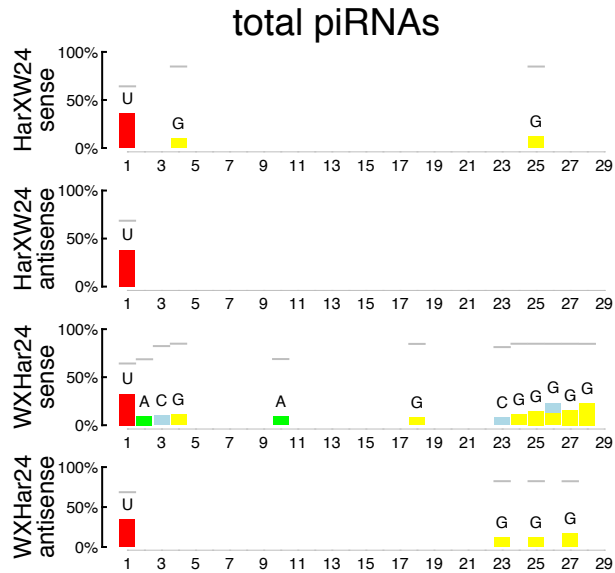
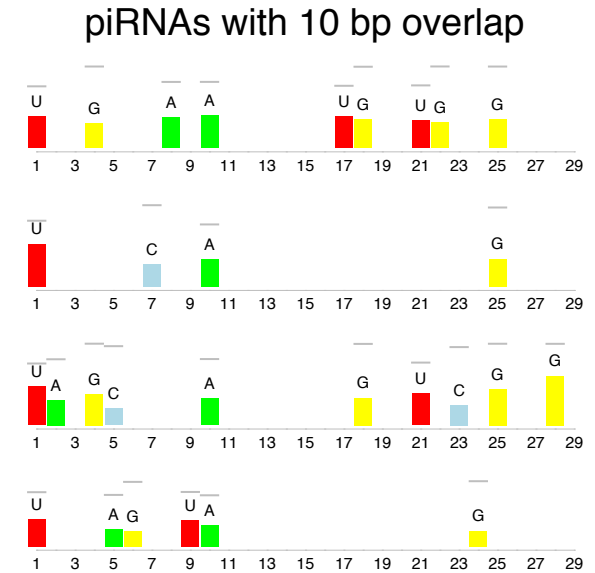
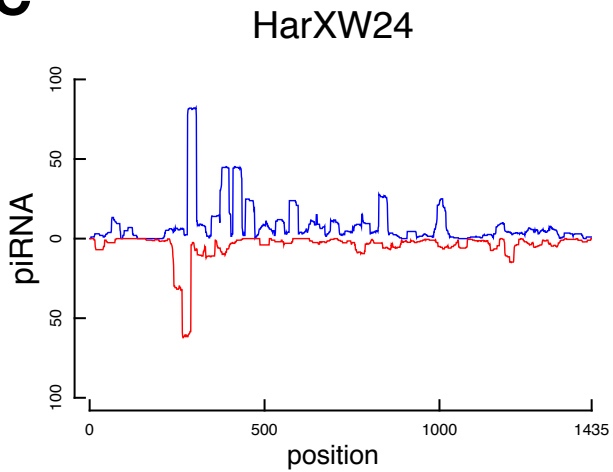
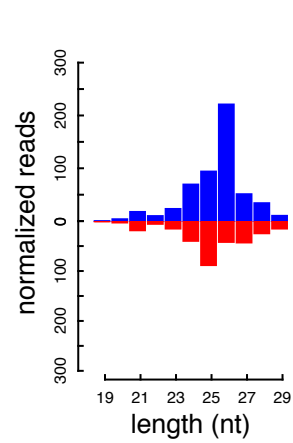
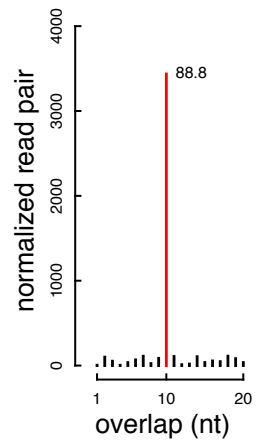
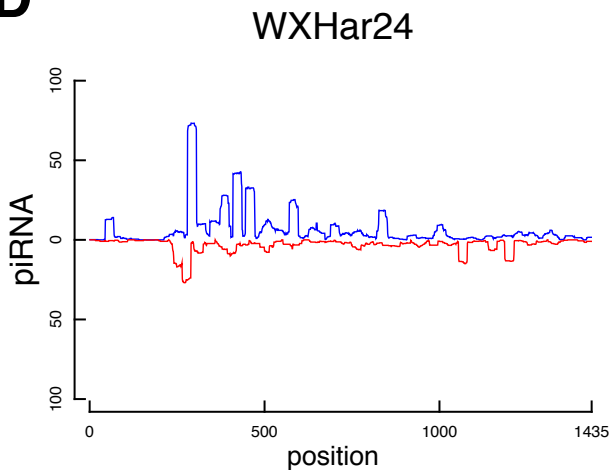
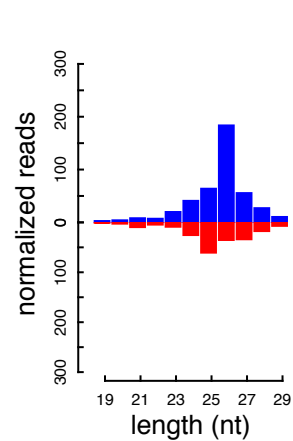
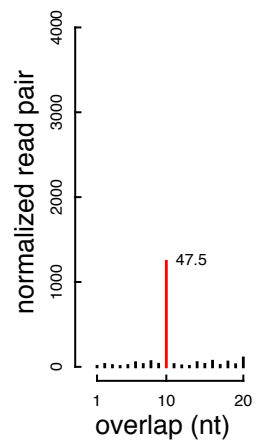
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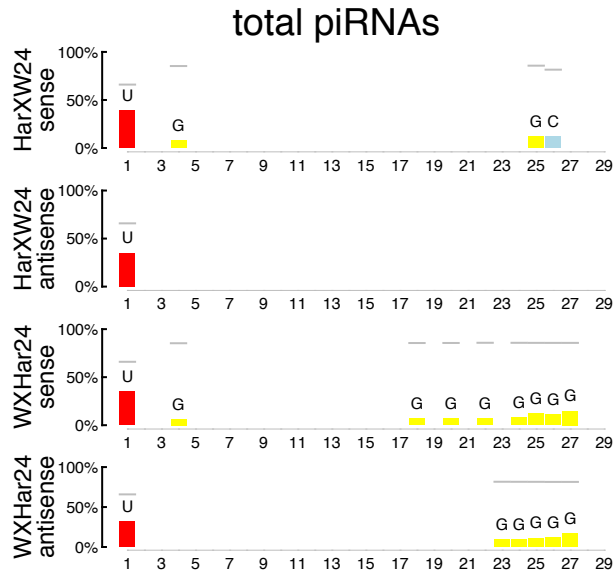
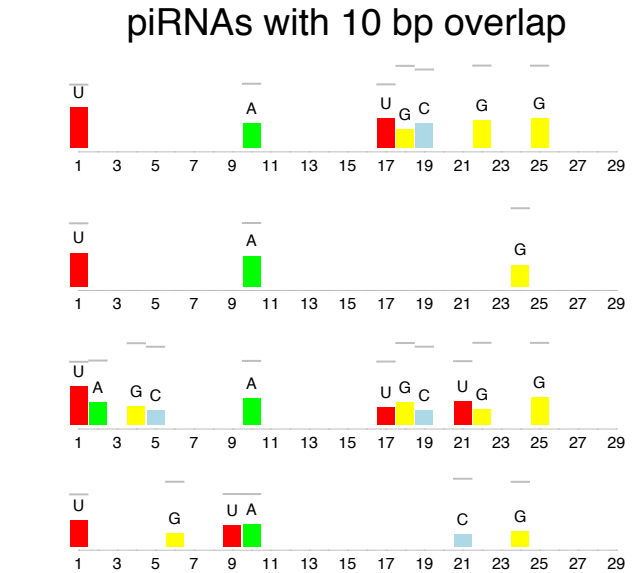
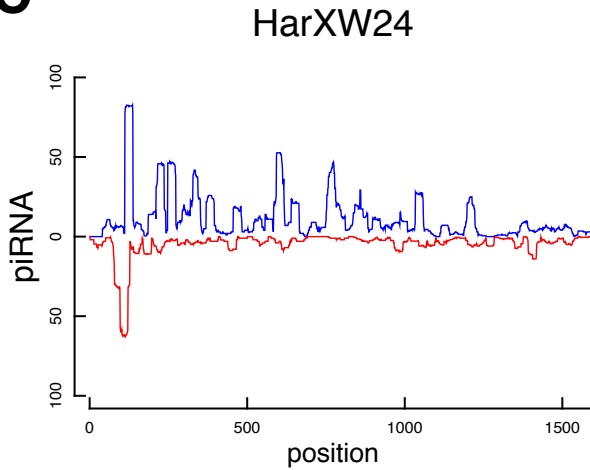
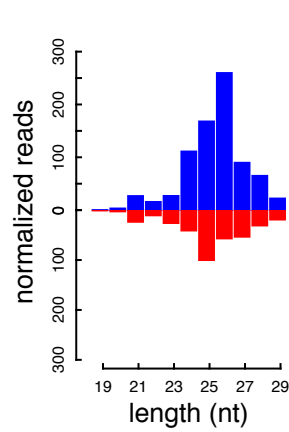
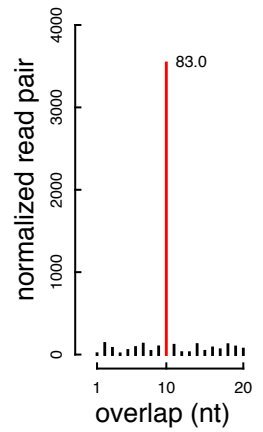
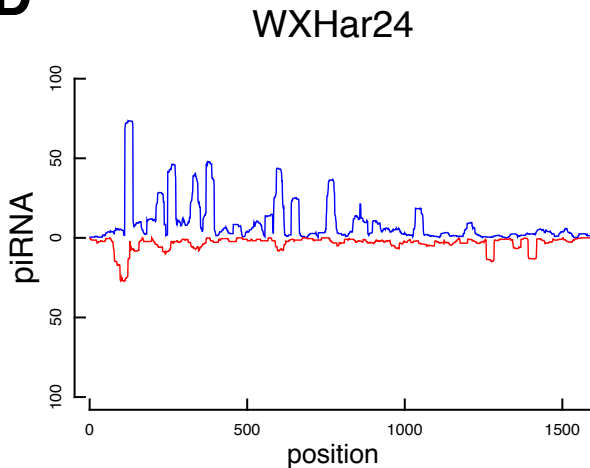
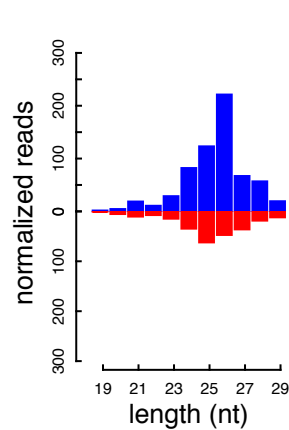
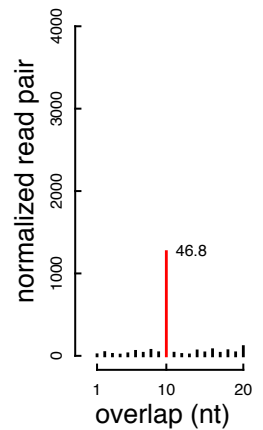
hobo

A**B****C****E****G****D****F****H**

hopper

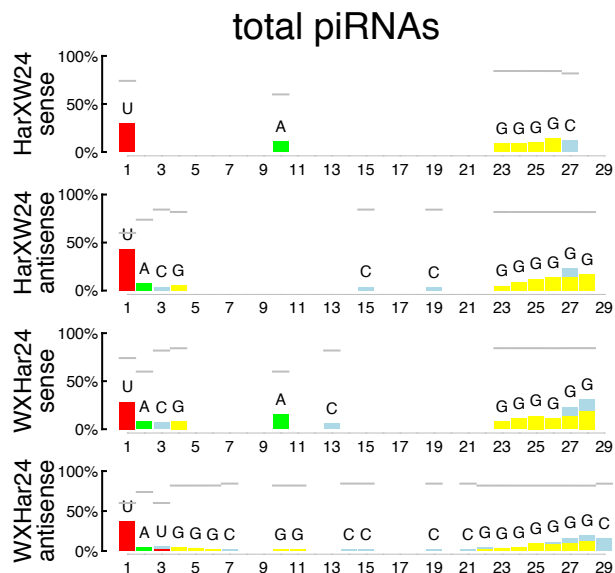
A**B****C****E****G****D****F****H**

hopper2

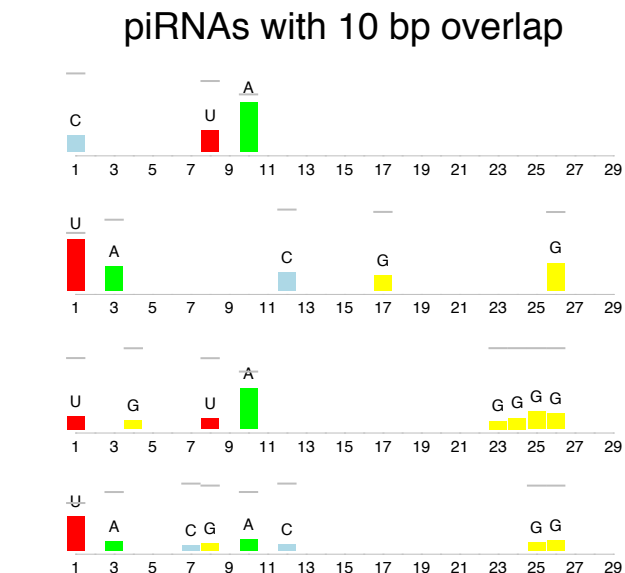
A**B****C****E****G****D****F****H**

Idefix

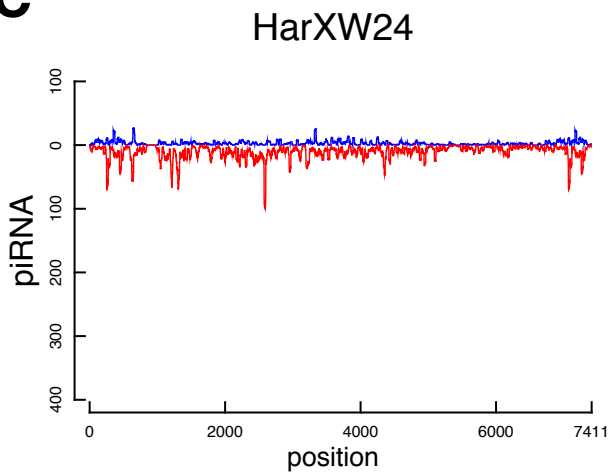
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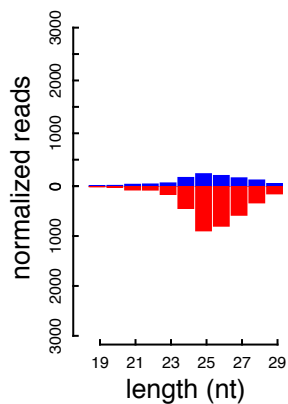
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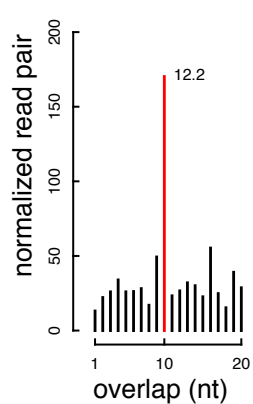
C



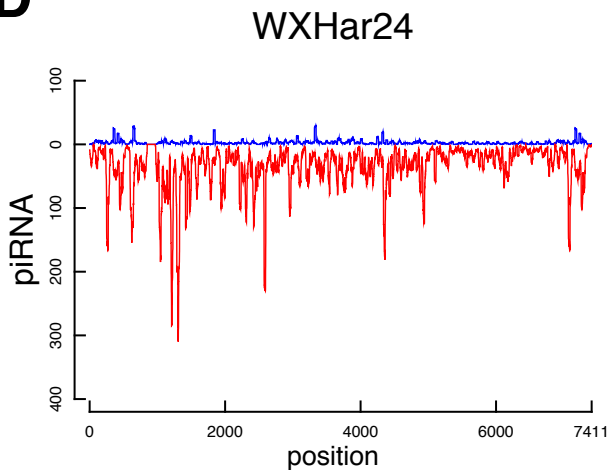
E



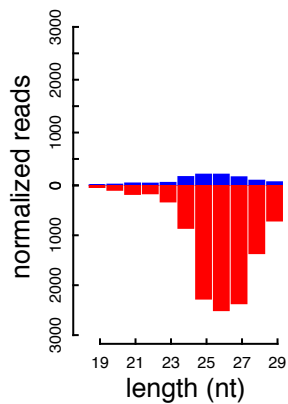
G



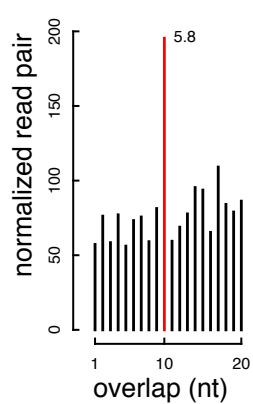
D



F

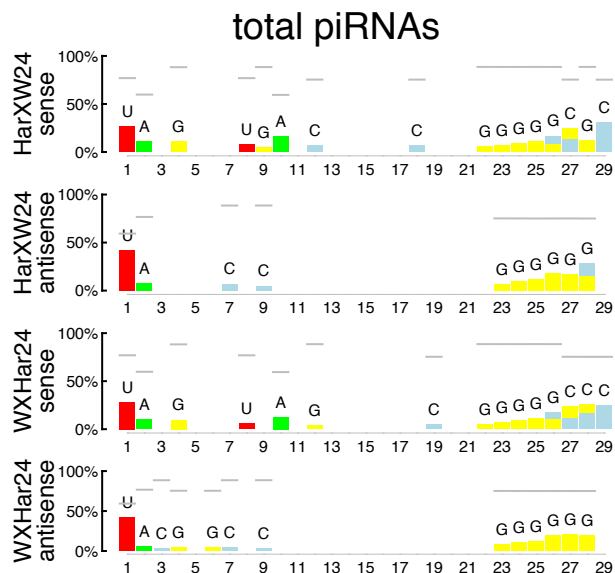


H

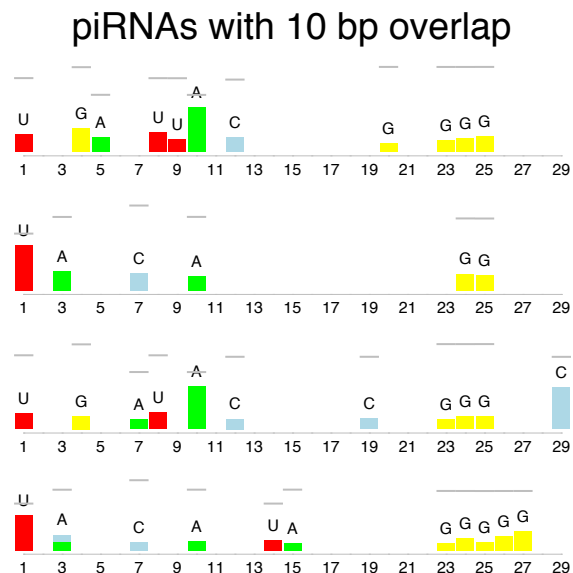


I element

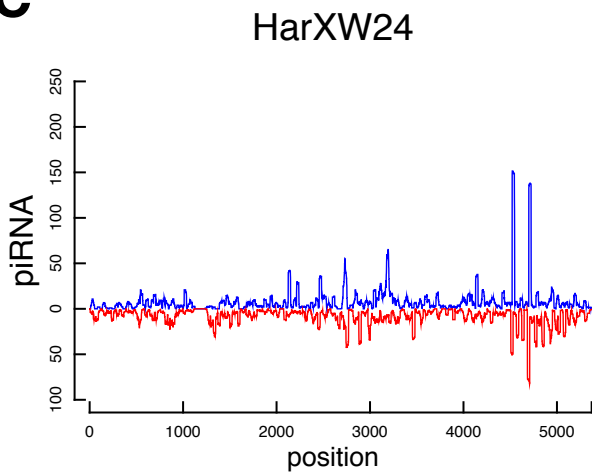
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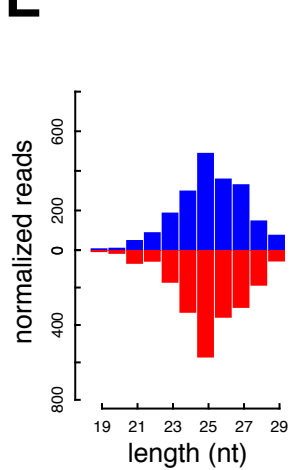
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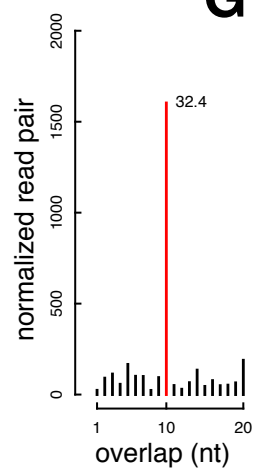
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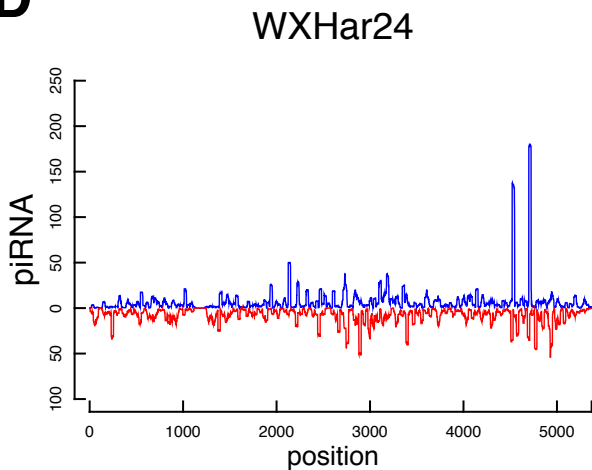
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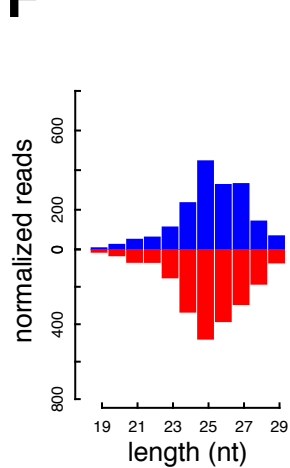
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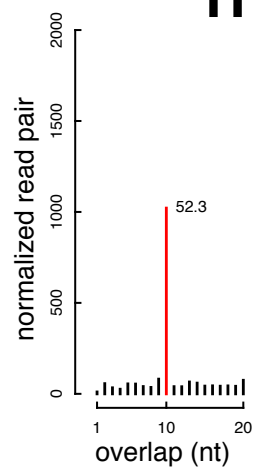
D



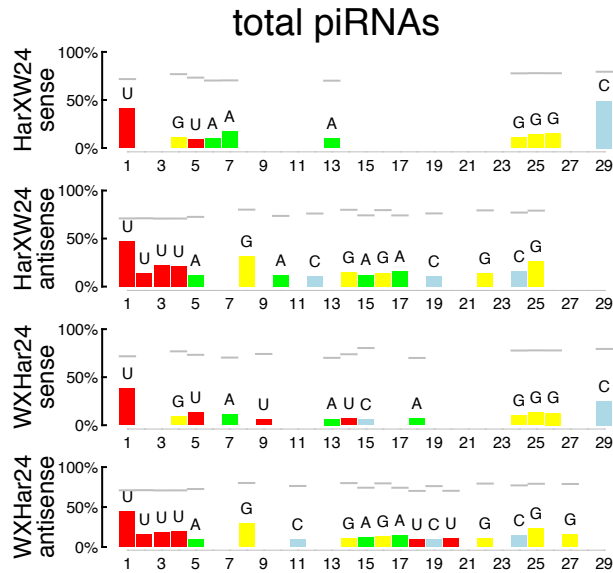
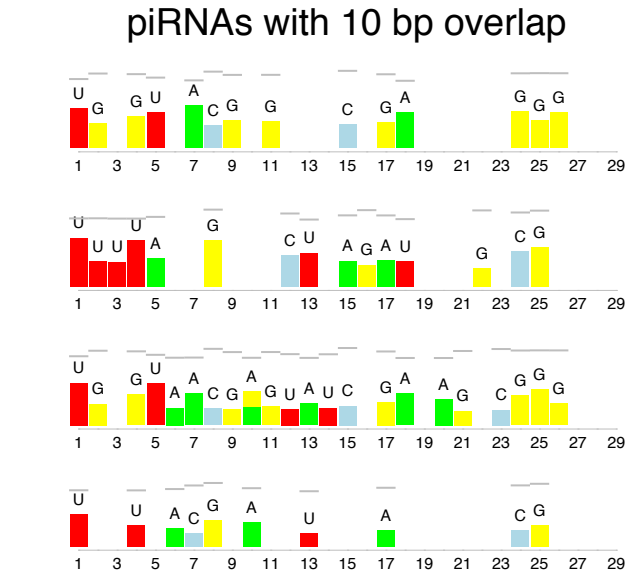
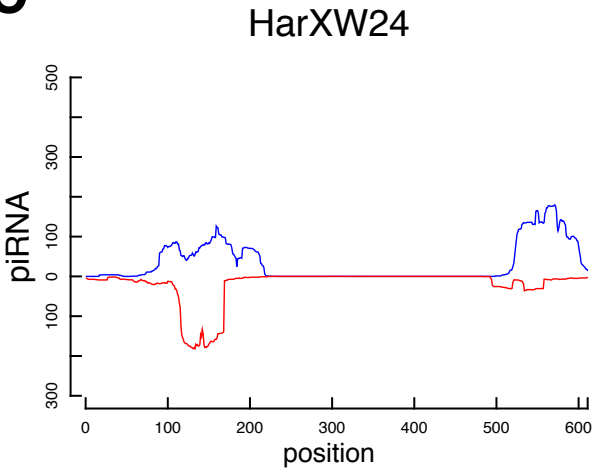
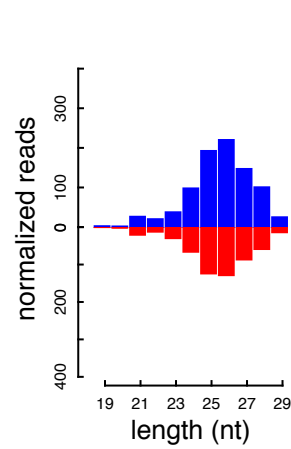
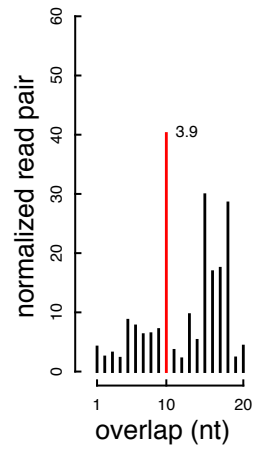
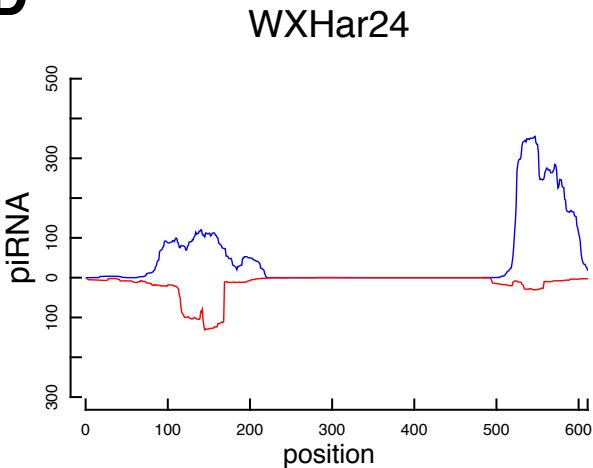
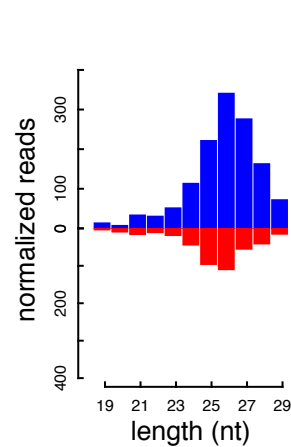
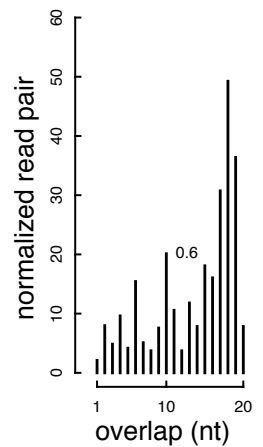
F



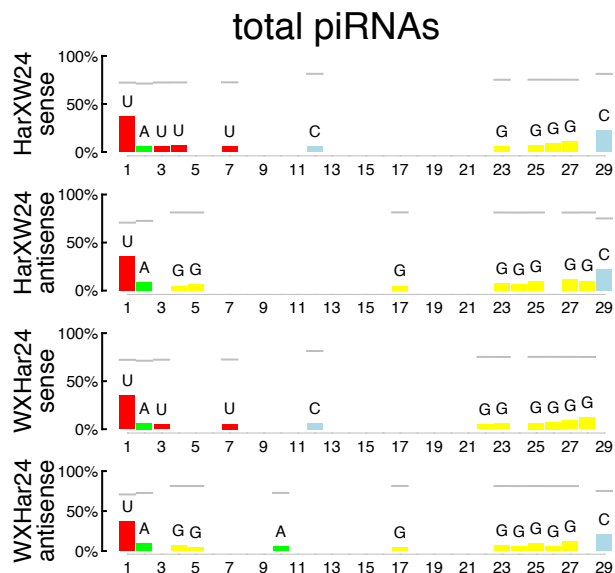
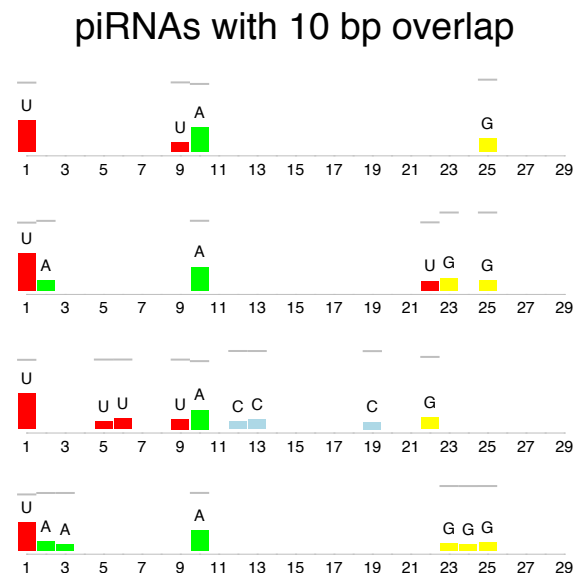
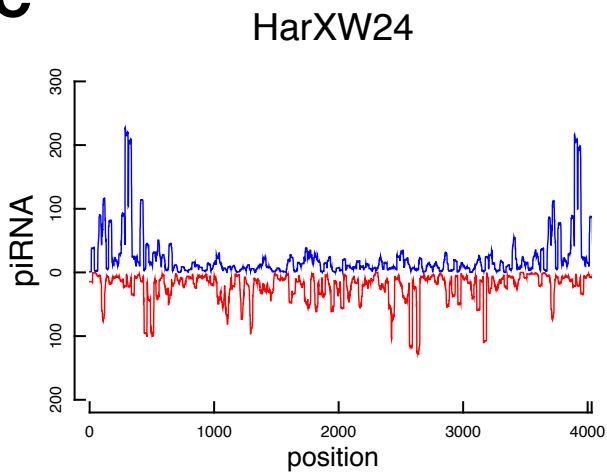
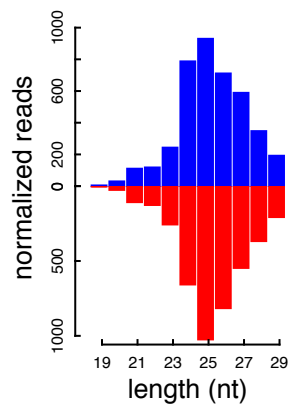
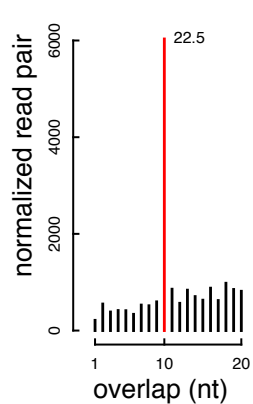
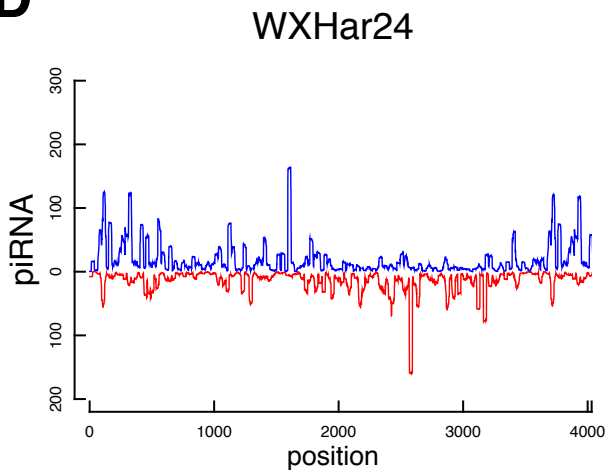
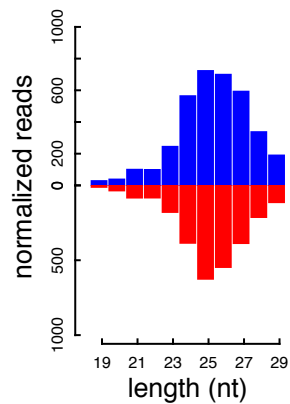
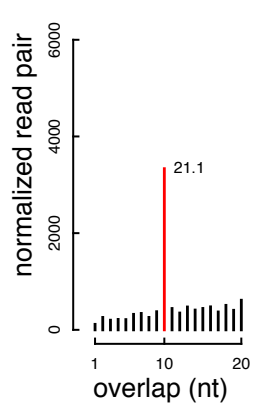
H



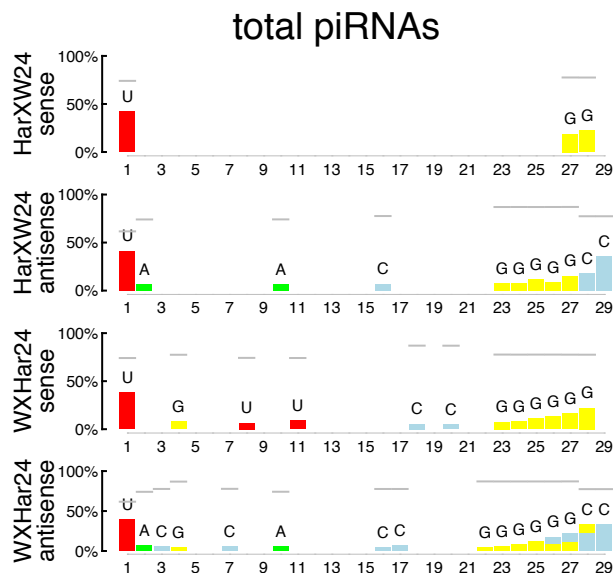
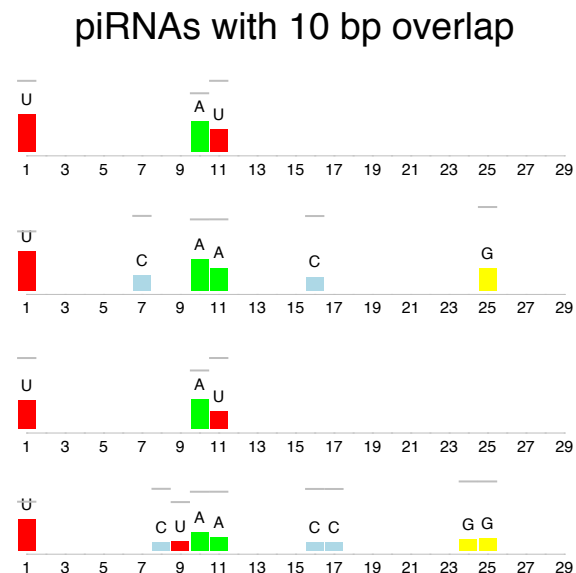
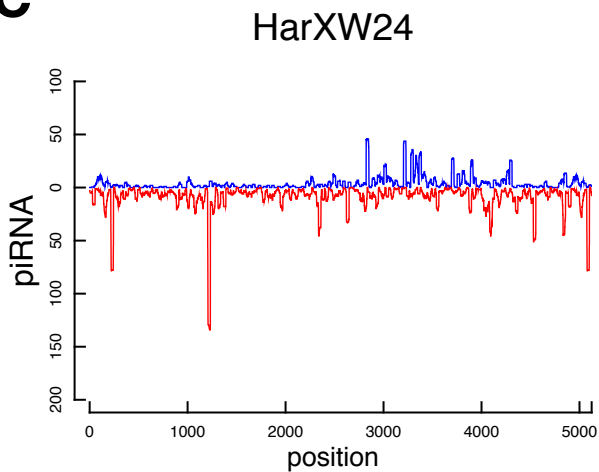
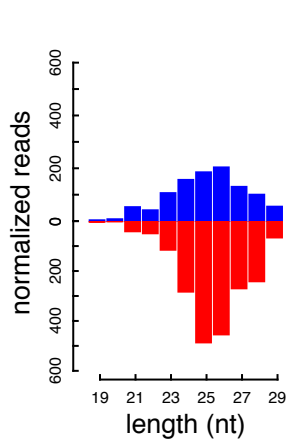
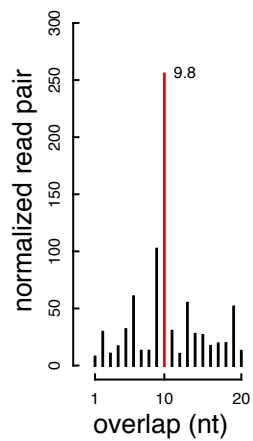
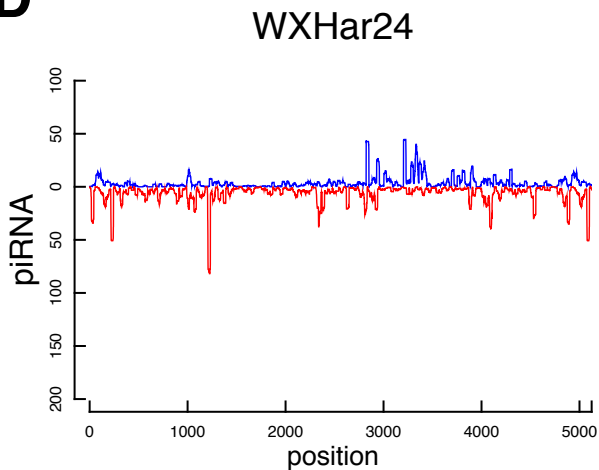
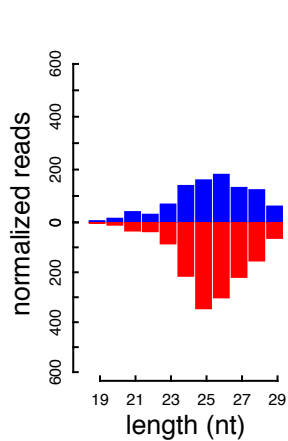
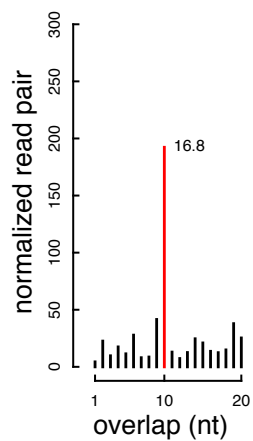
INE 1

A**B****C****E****G****D****F****H**

invader1

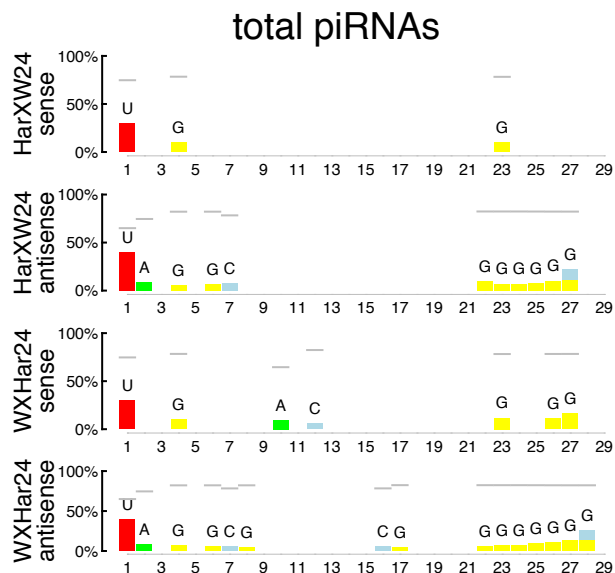
A**B****C****E****G****D****F****H**

invader2

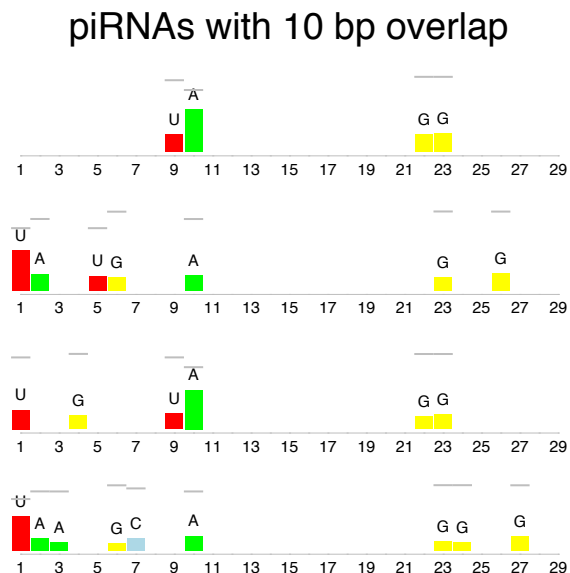
A**B****C****E****G****D****F****H**

invader3

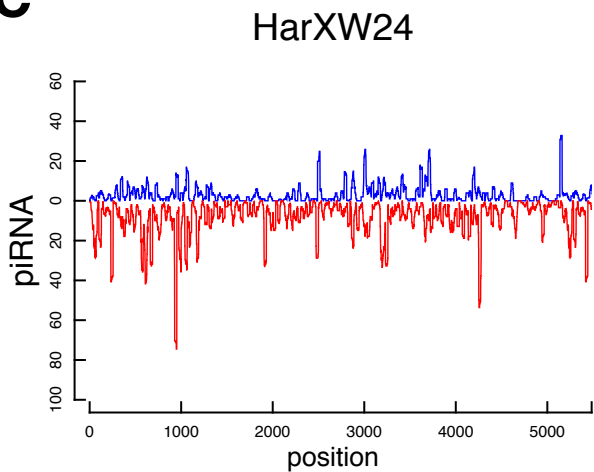
A



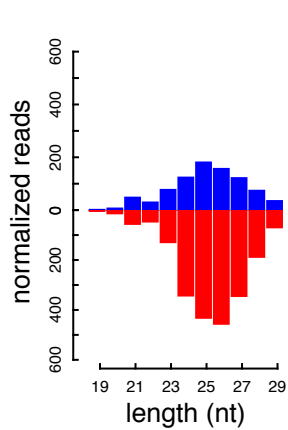
B



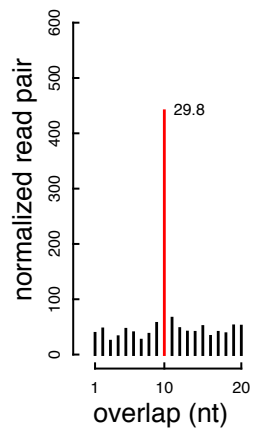
C



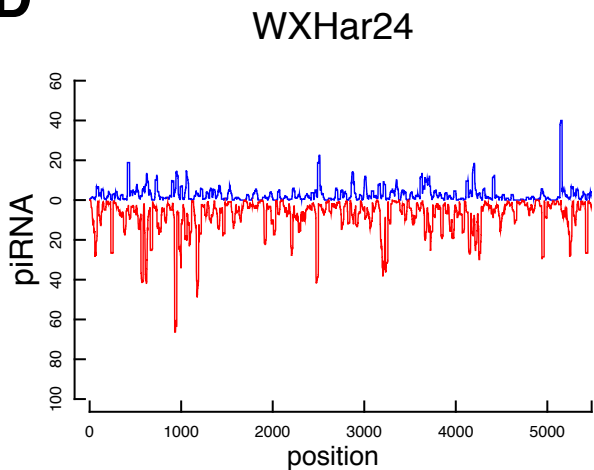
E



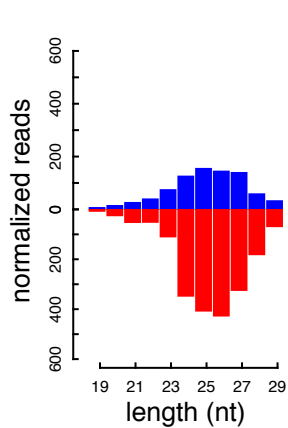
G



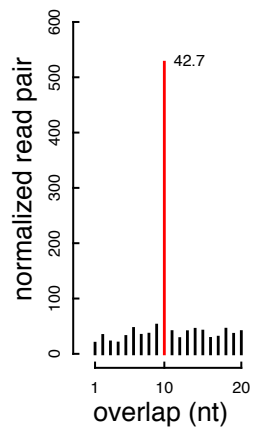
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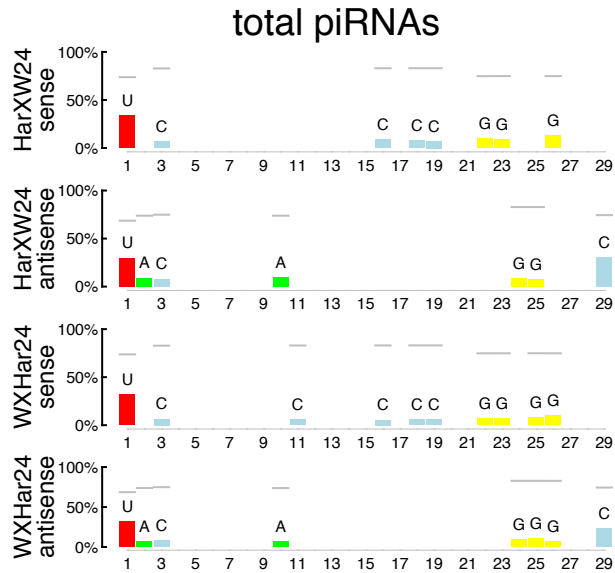
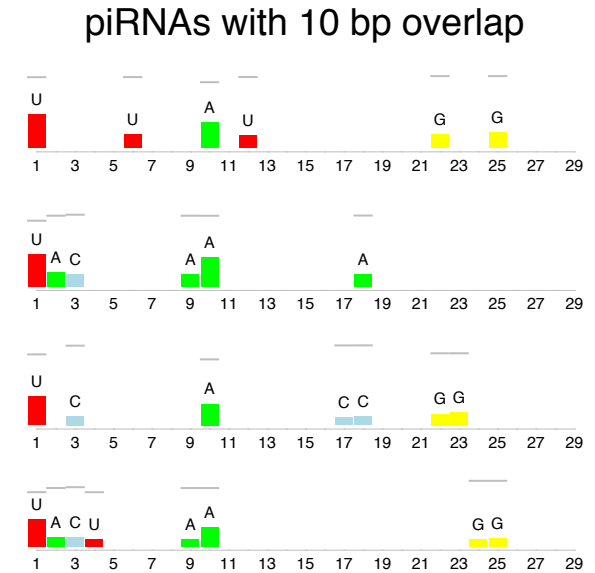
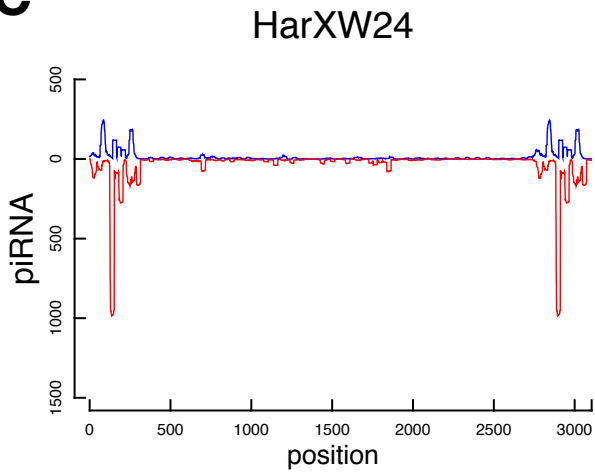
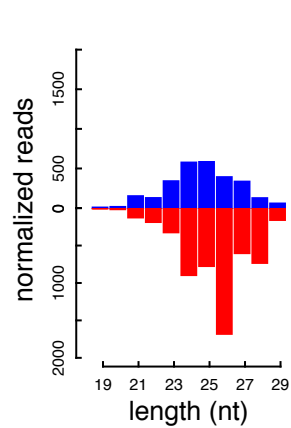
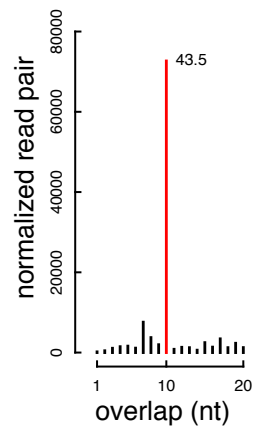
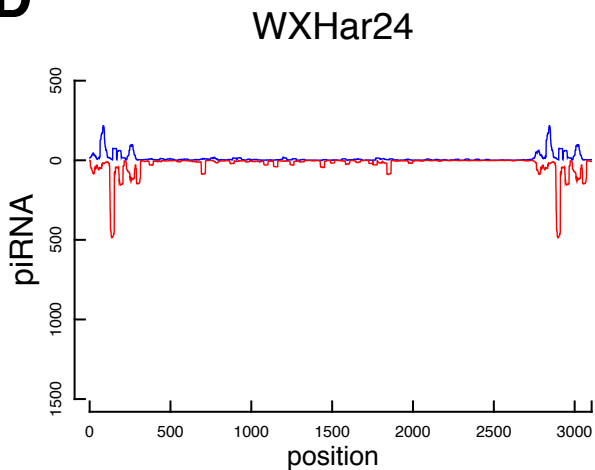
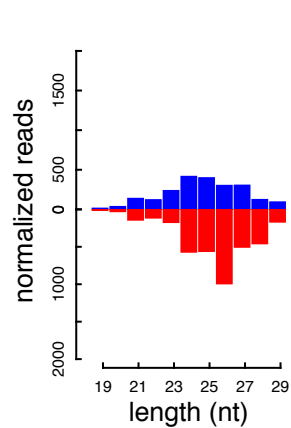
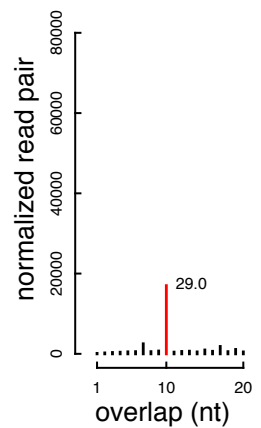
F



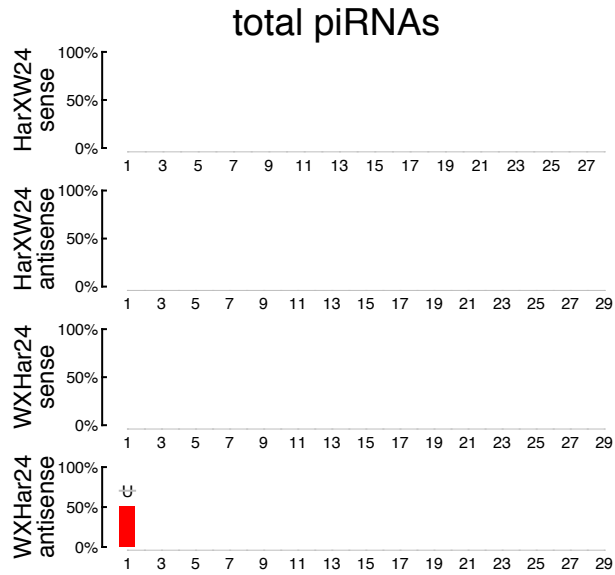
H



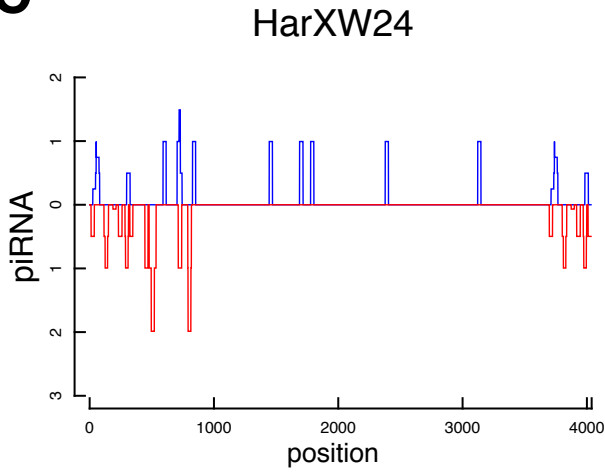
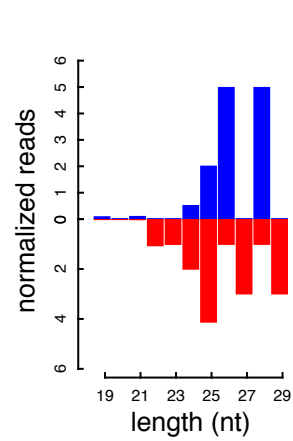
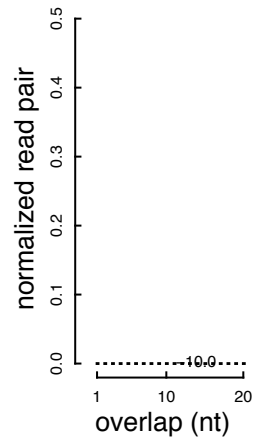
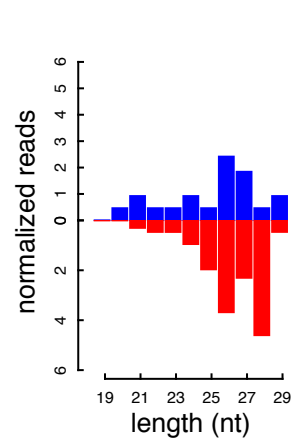
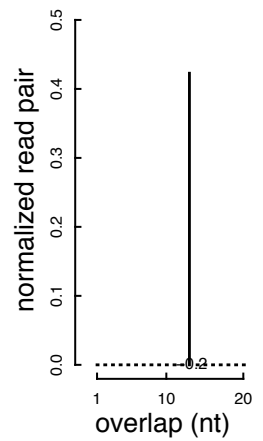
invader4

A**B****C****E****G****D****F****H**

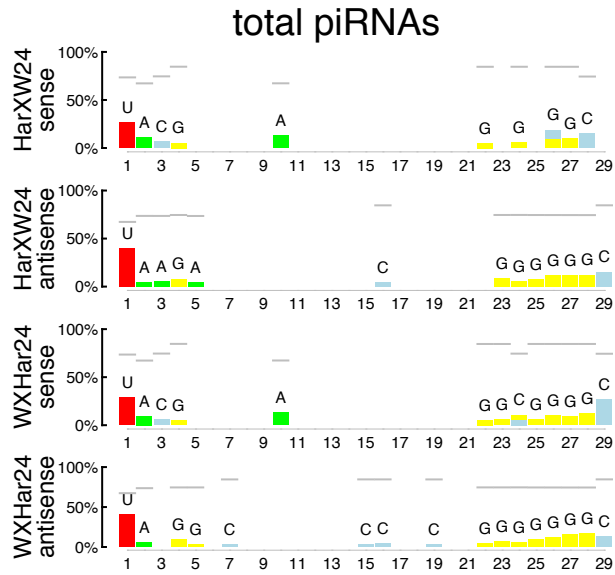
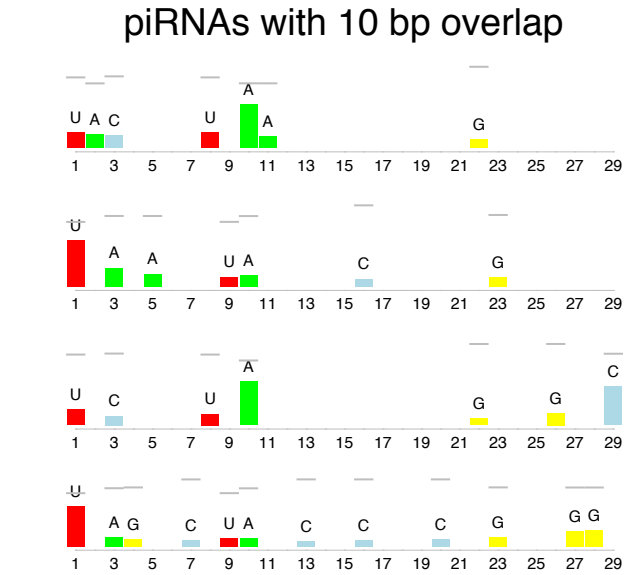
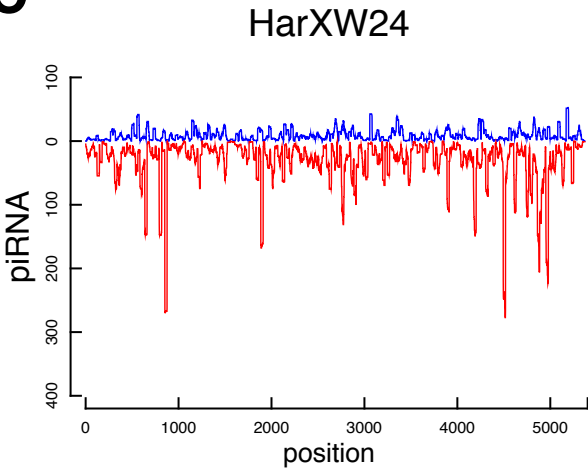
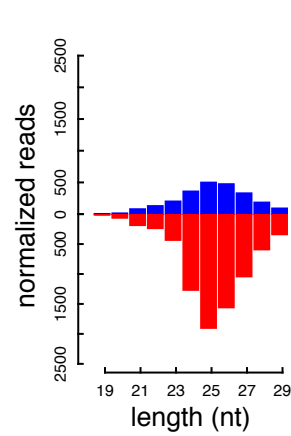
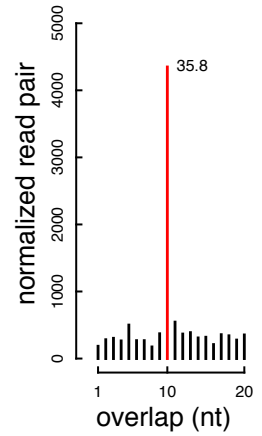
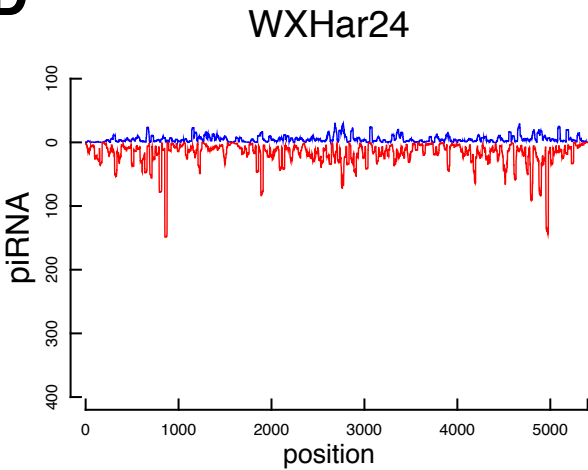
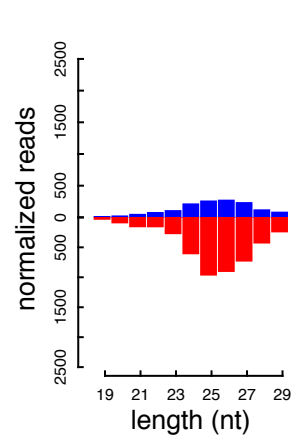
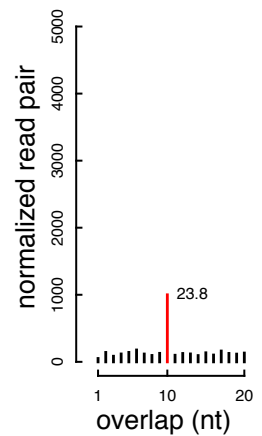
invader5

A**B**

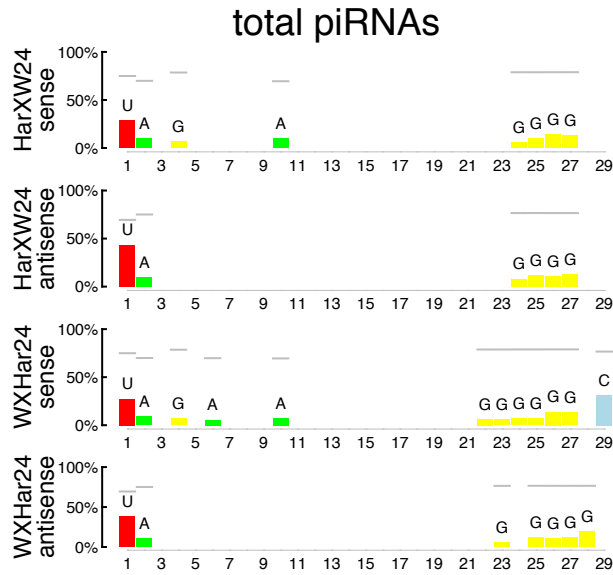
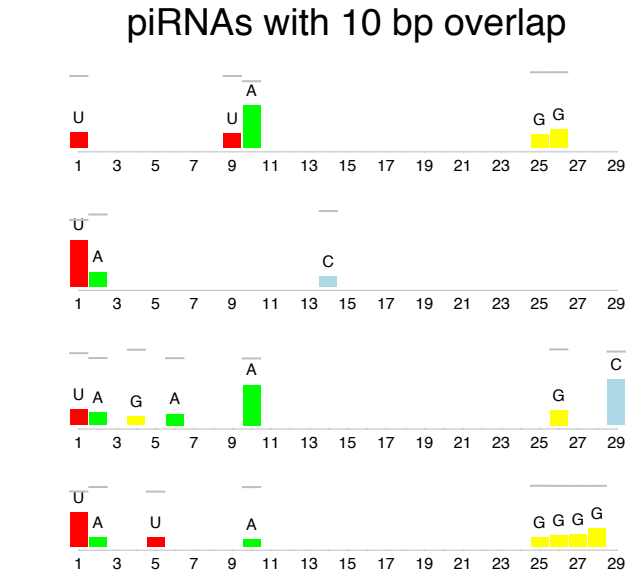
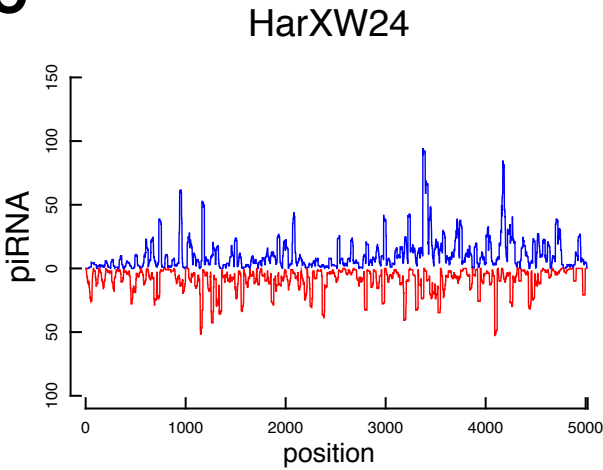
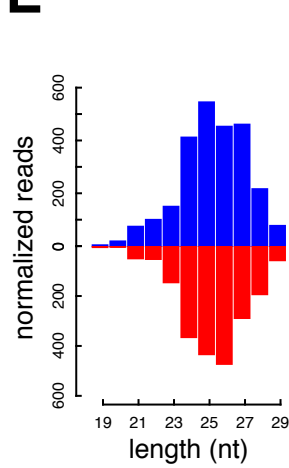
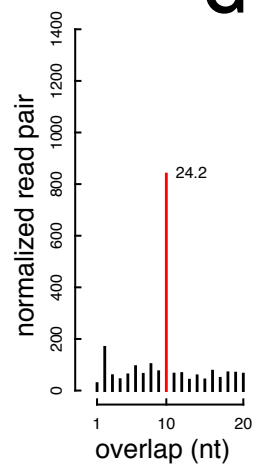
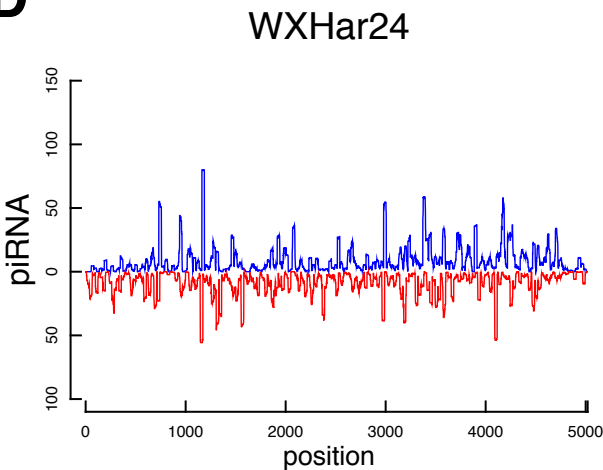
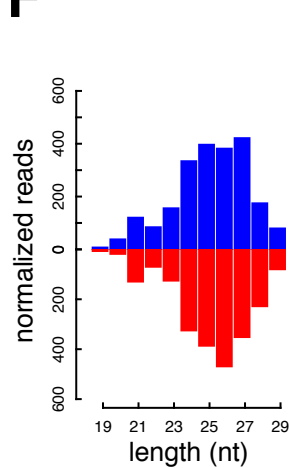
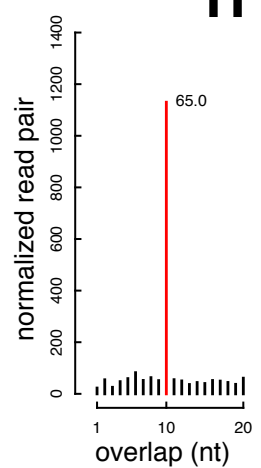
piRNAs with 10 bp overlap

C**E****G****D****F****H**

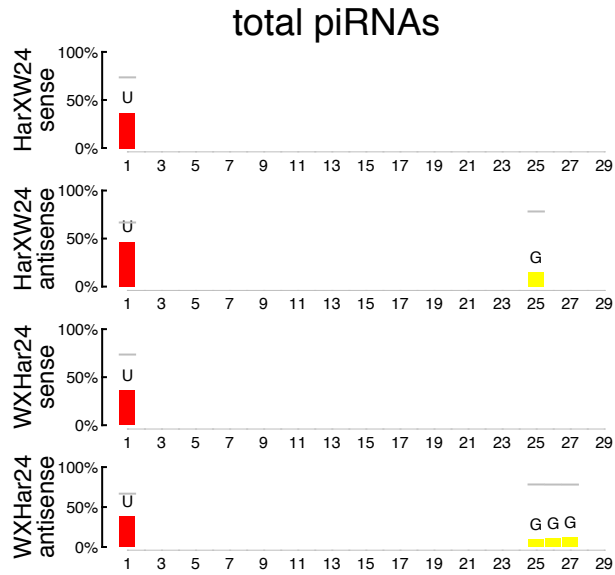
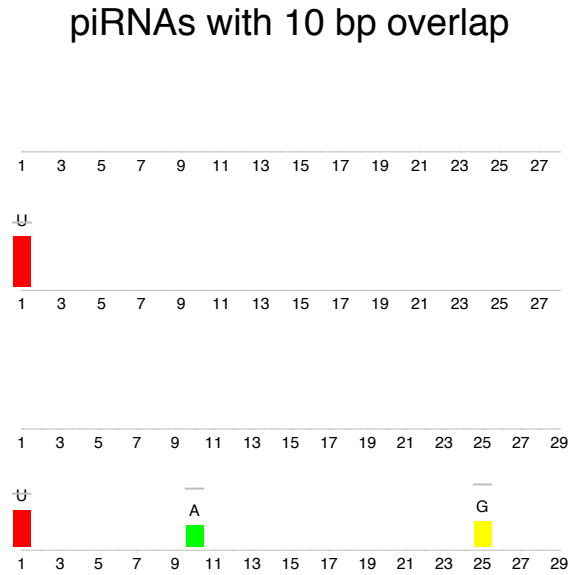
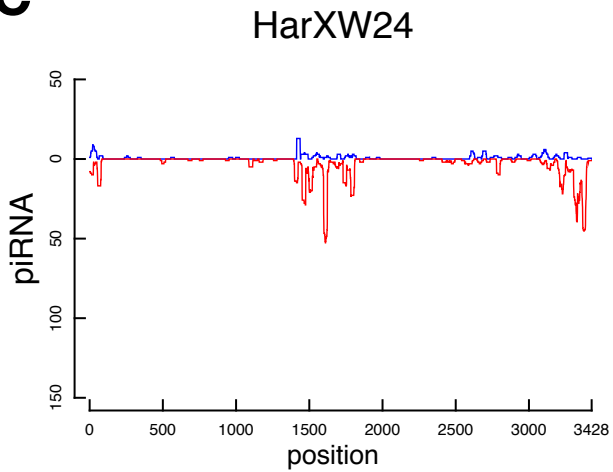
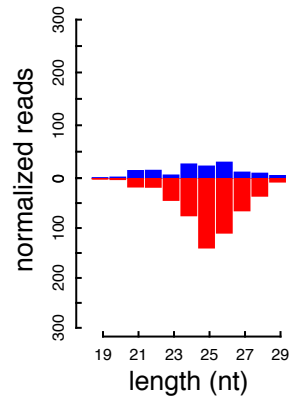
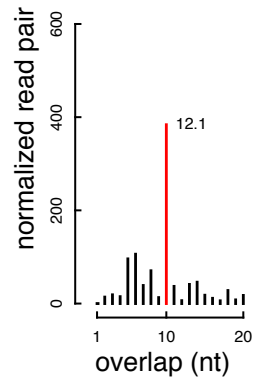
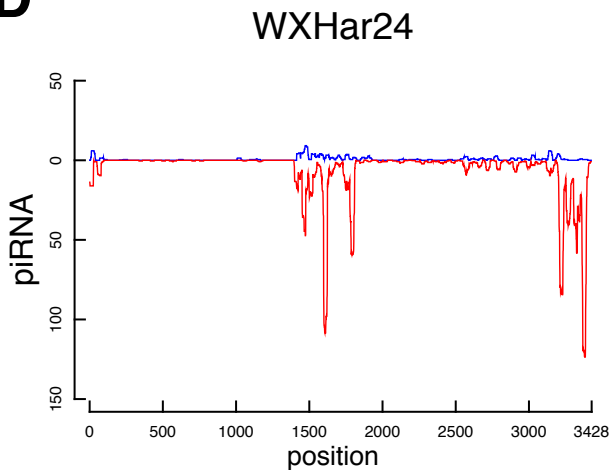
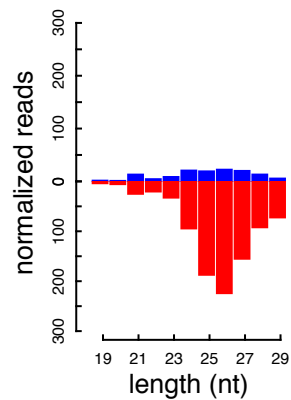
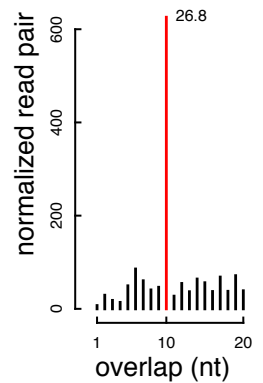
lvk

A**B****C****E****G****D****F****H**

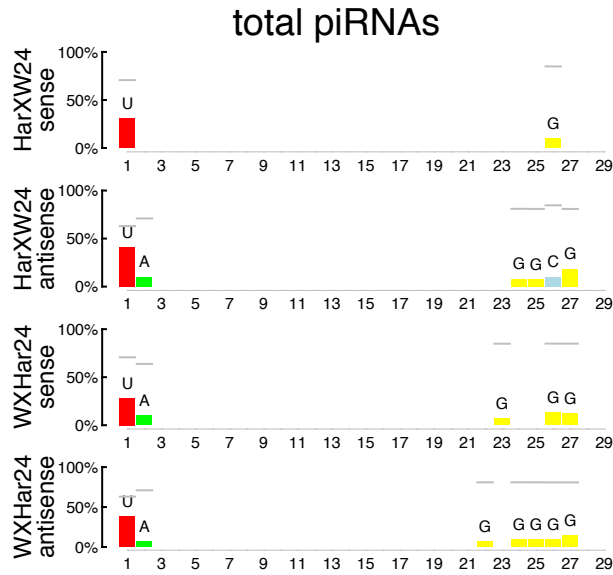
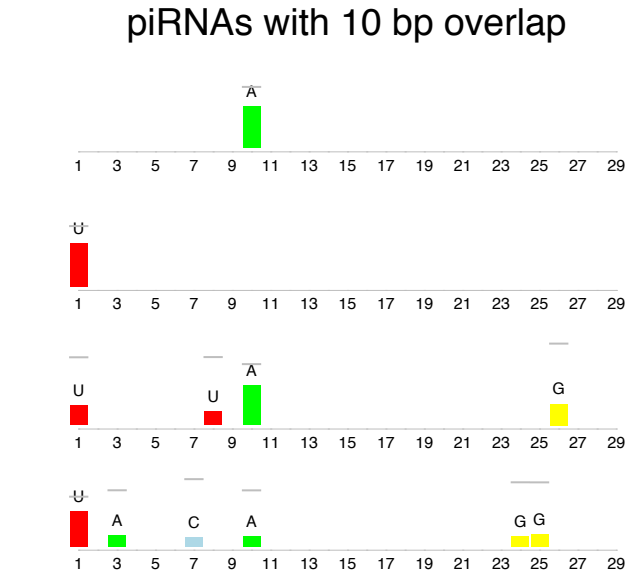
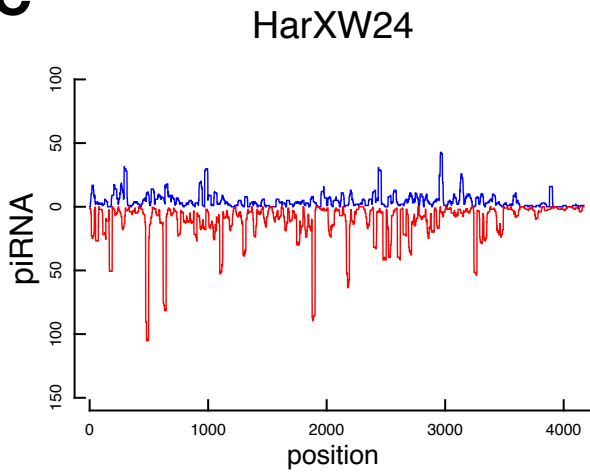
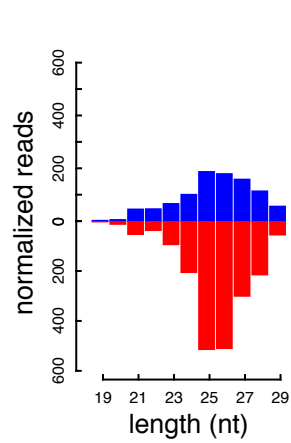
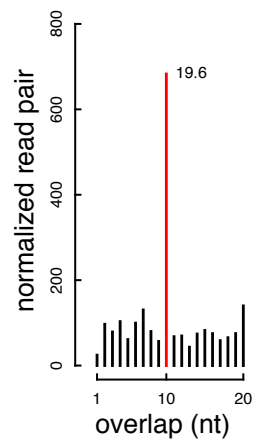
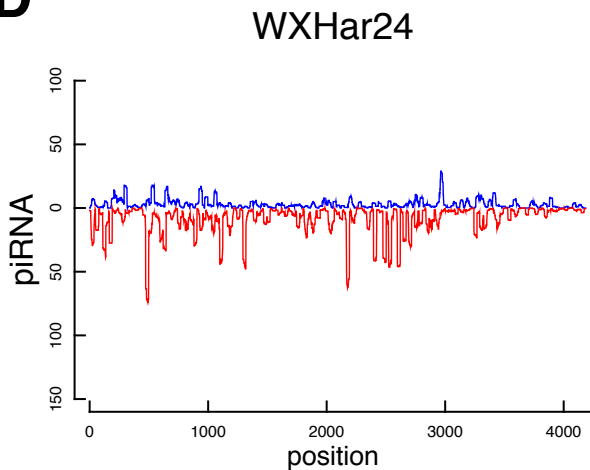
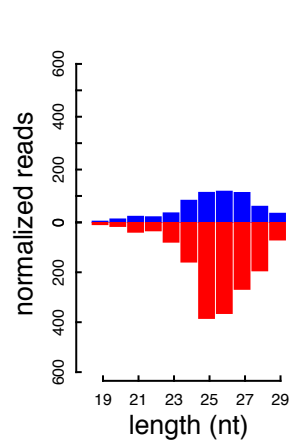
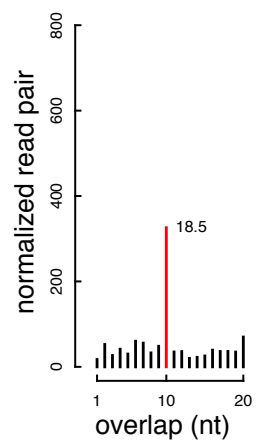
jockey

A**B****C****E****G****D****F****H**

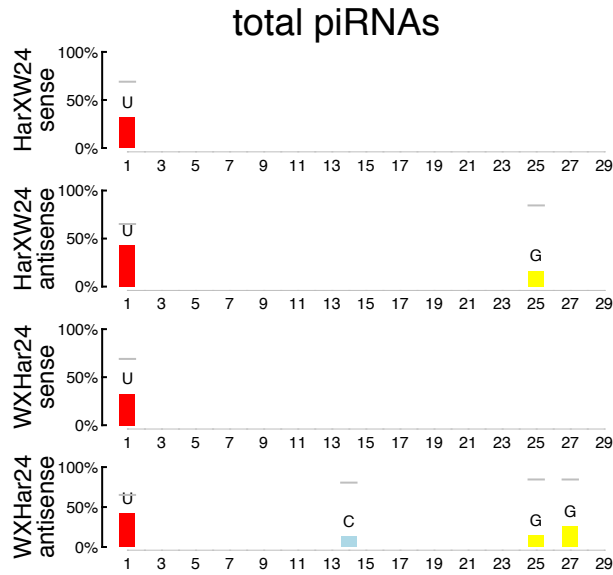
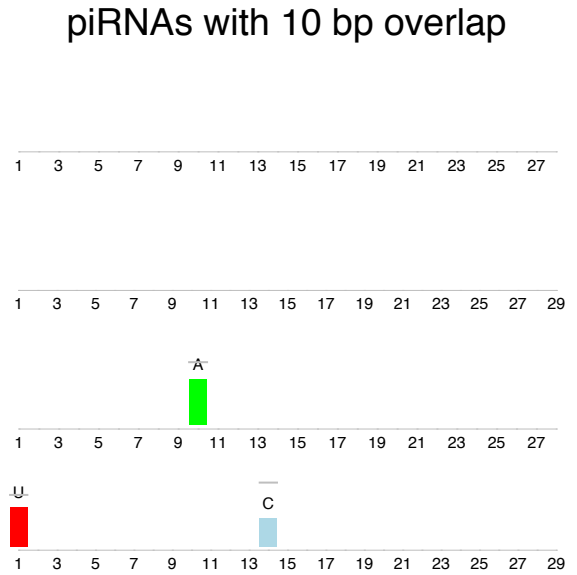
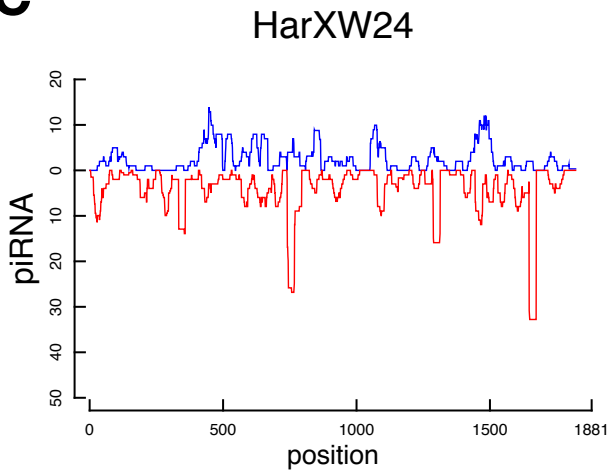
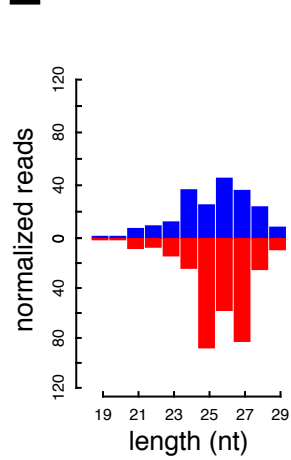
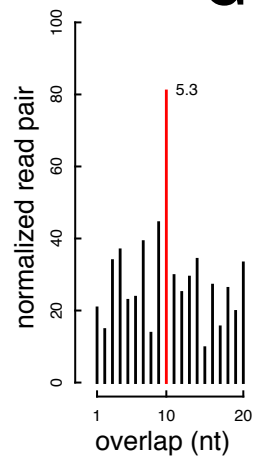
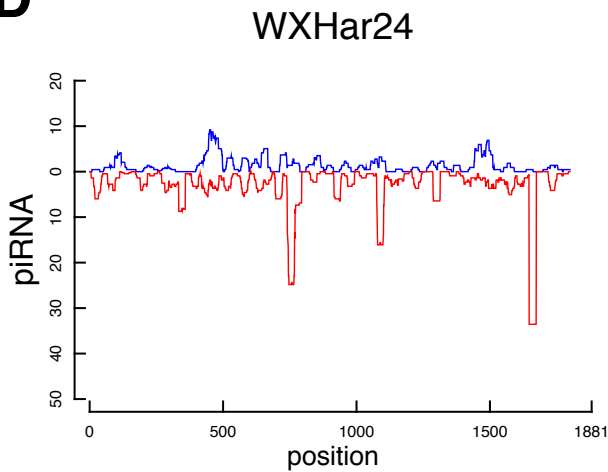
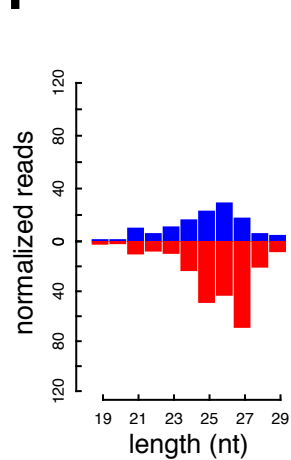
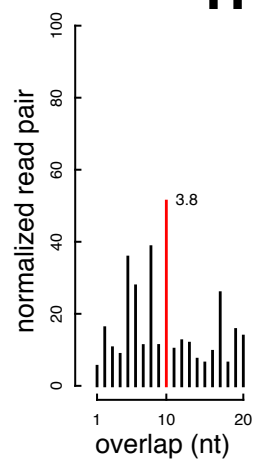
jockey2

A**B****C****E****G****D****F****H**

Juan

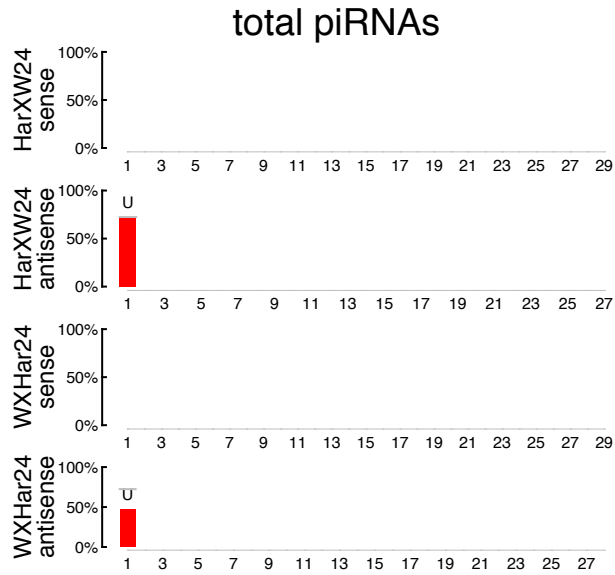
A**B****C****E****G****D****F****H**

looper1

A**B****C****E****G****D****F****H**

mariner2

A

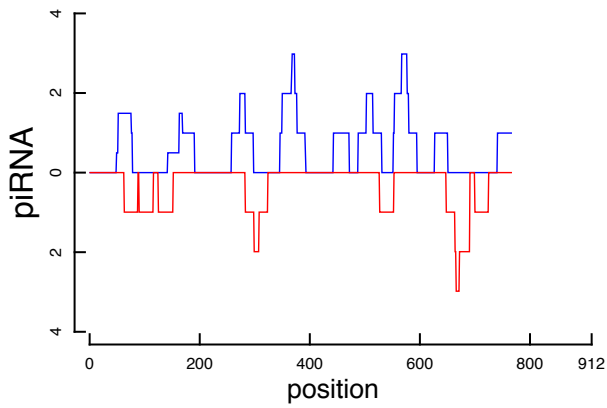


B

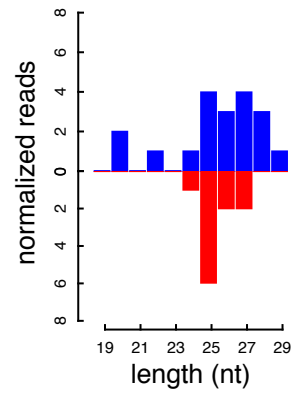
piRNAs with 10 bp overlap

C

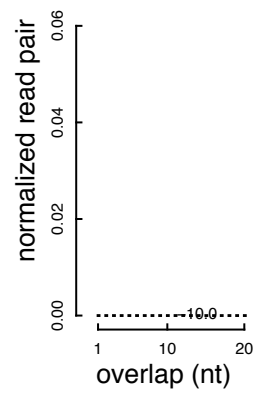
HarXW24



E

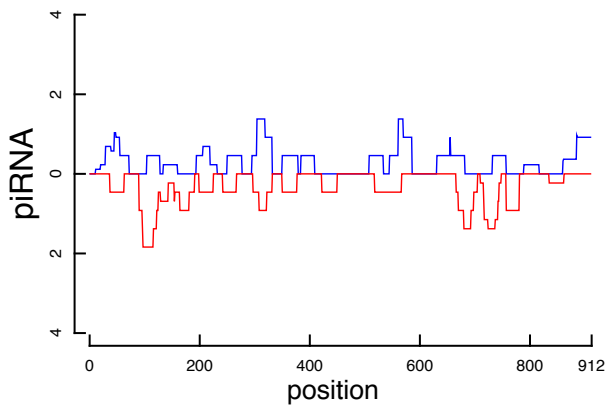


G

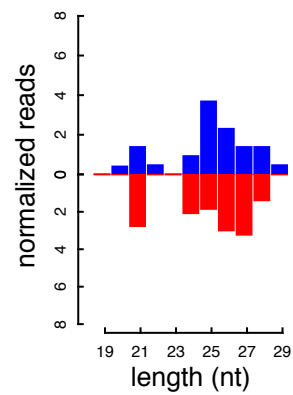


D

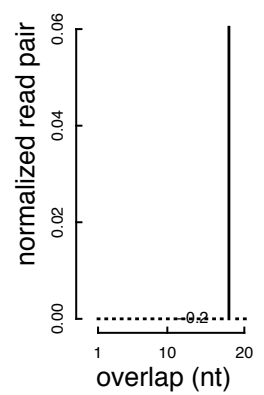
WXHar24



F

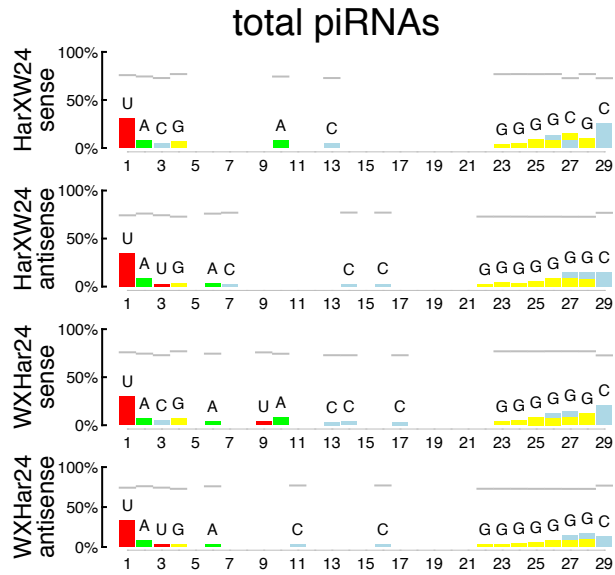


H

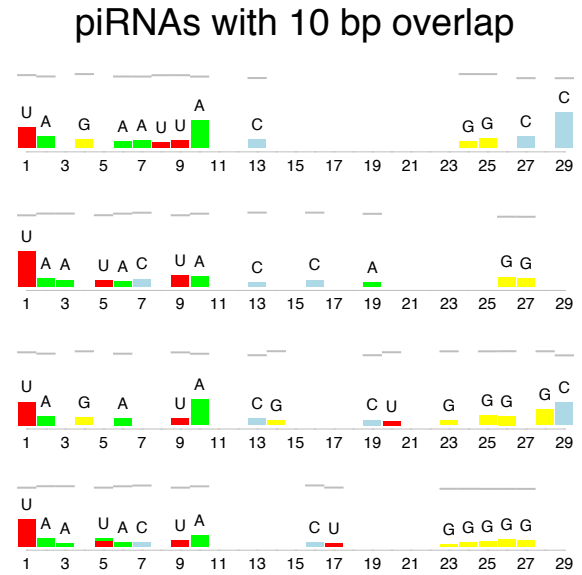


Max element

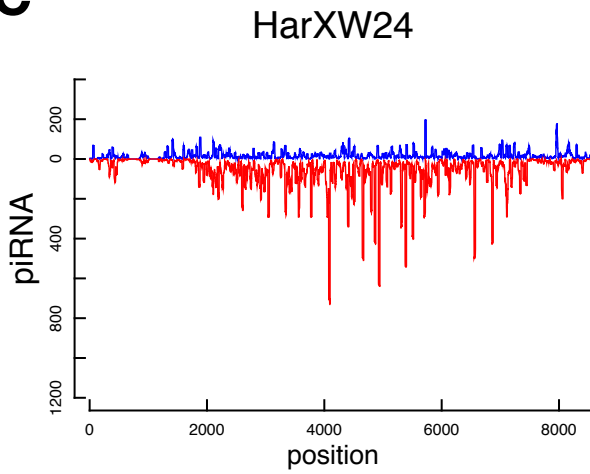
A



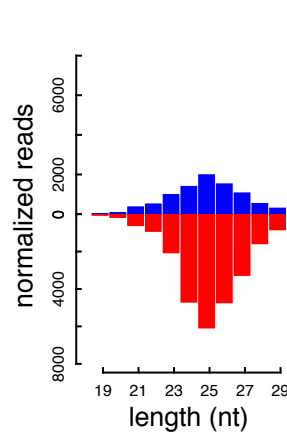
B



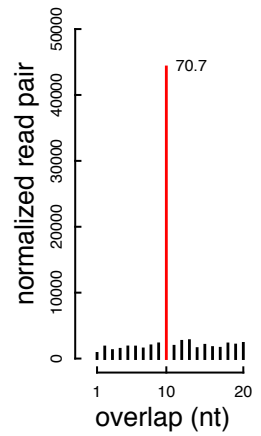
C



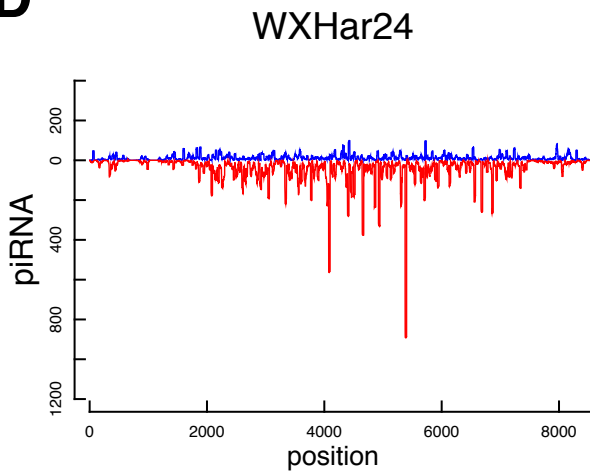
E



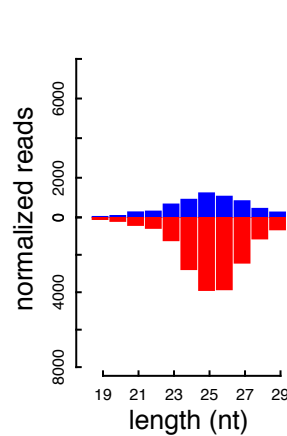
G



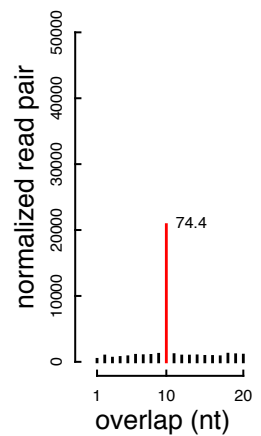
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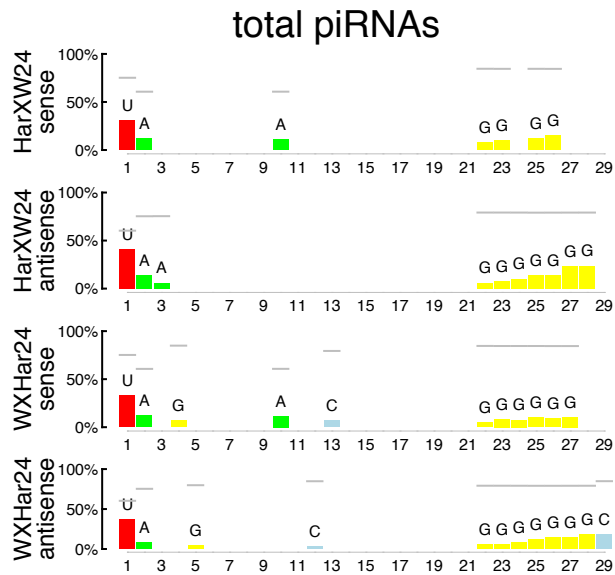
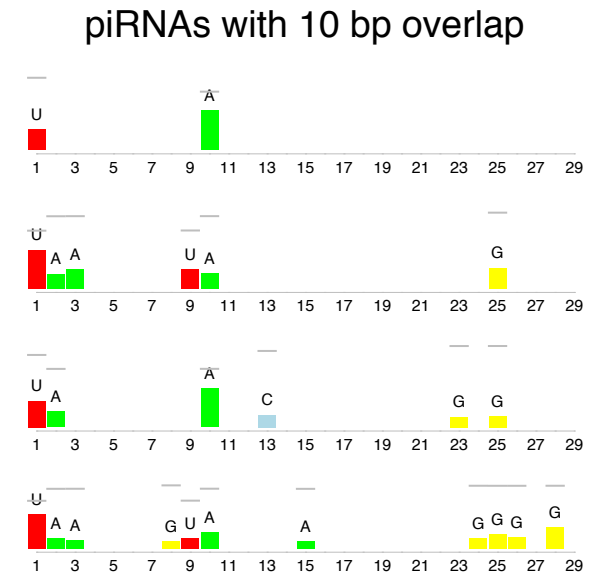
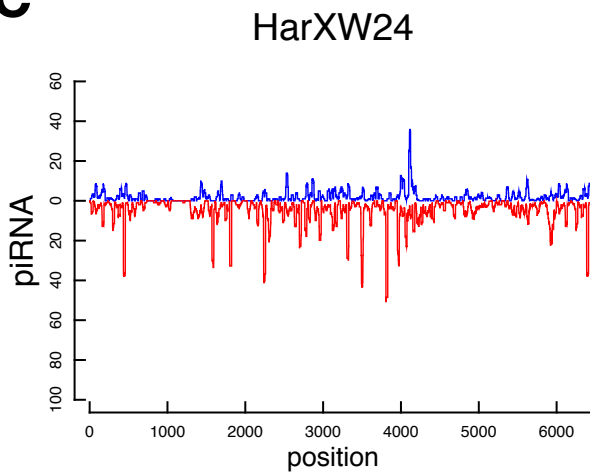
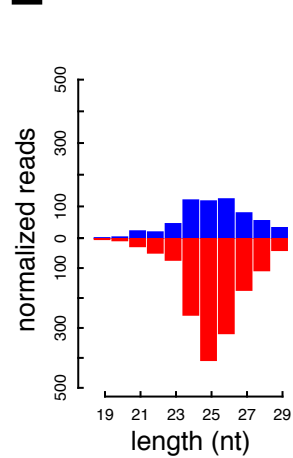
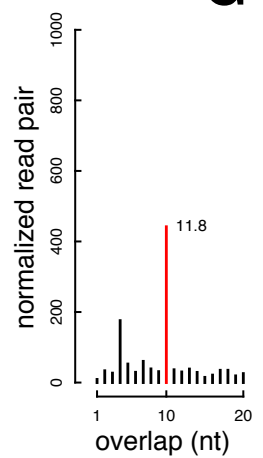
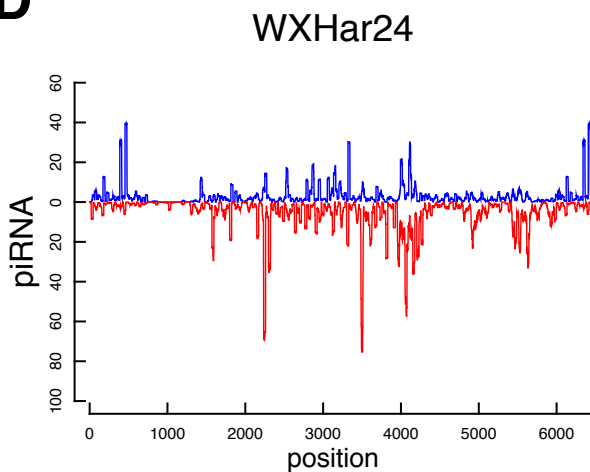
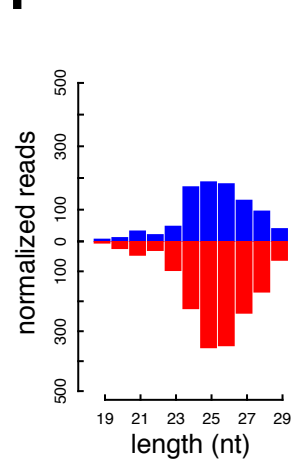
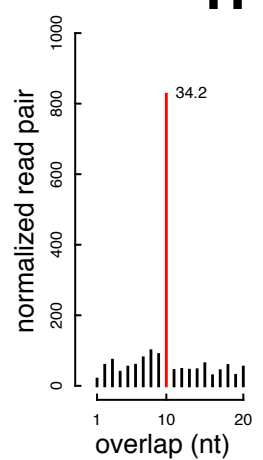
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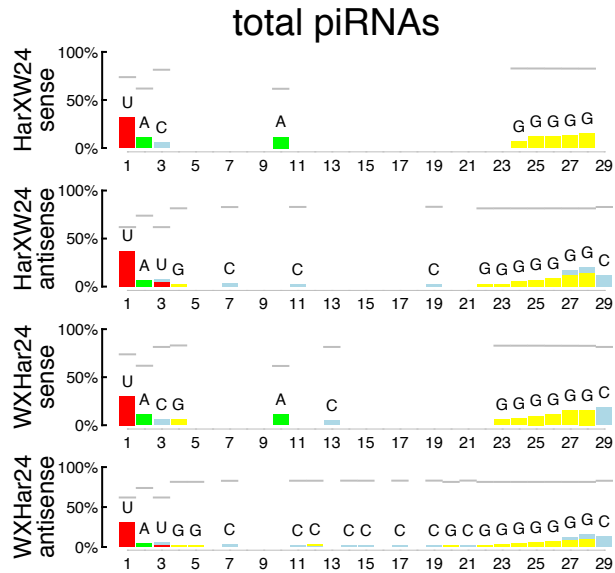
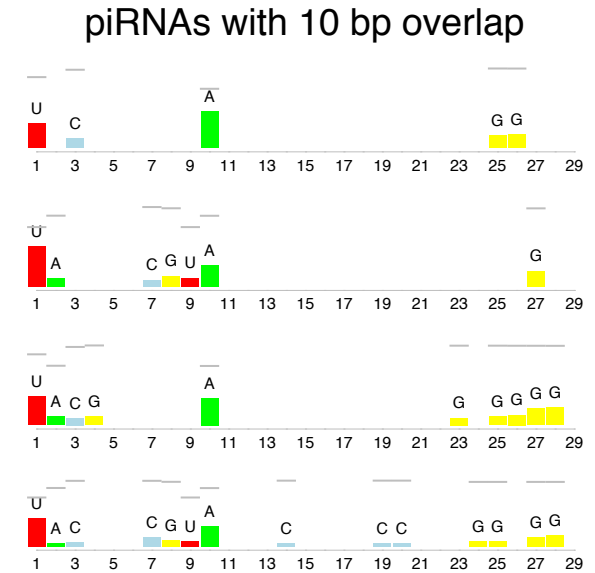
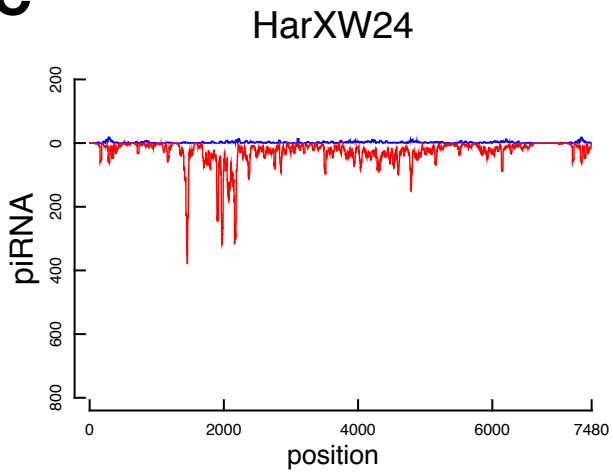
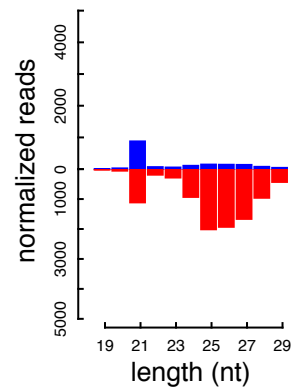
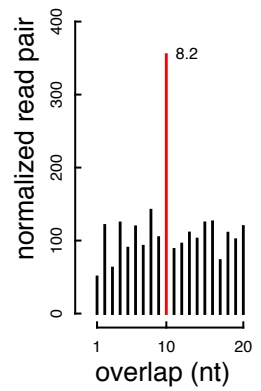
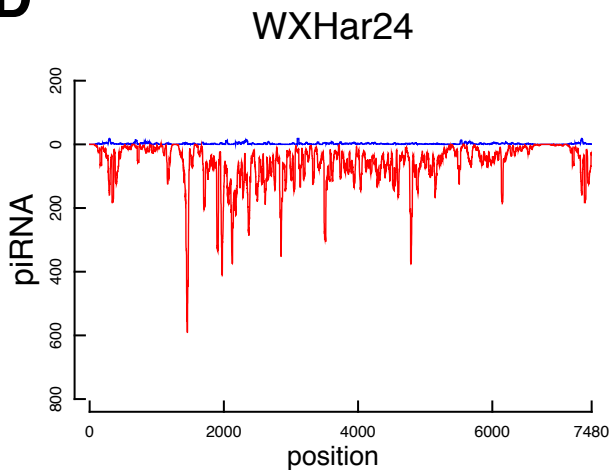
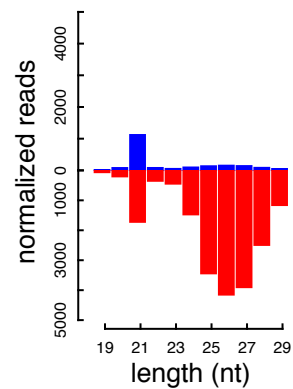
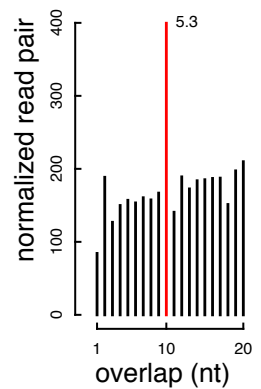
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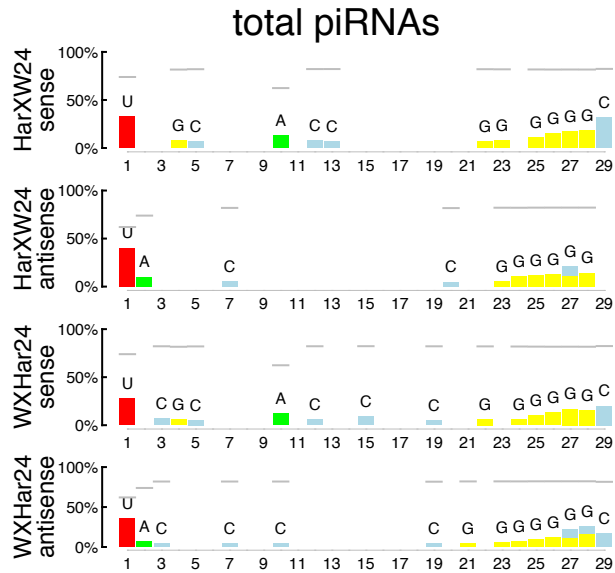
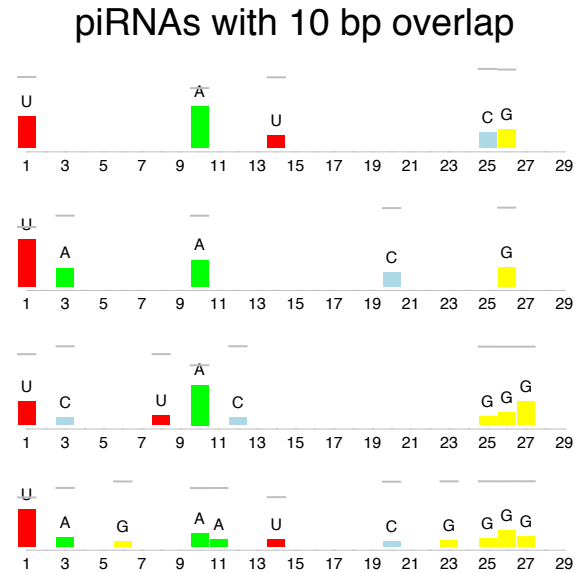
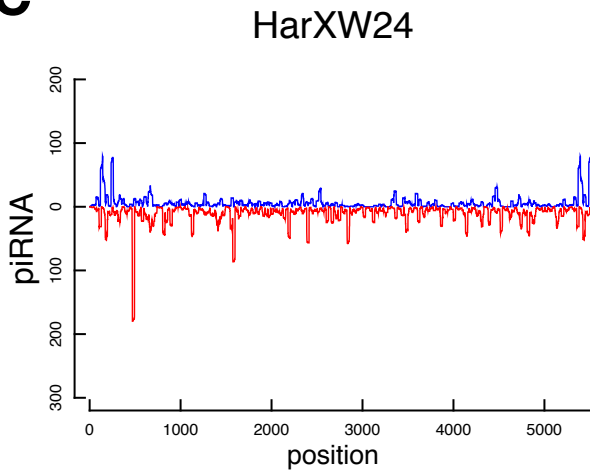
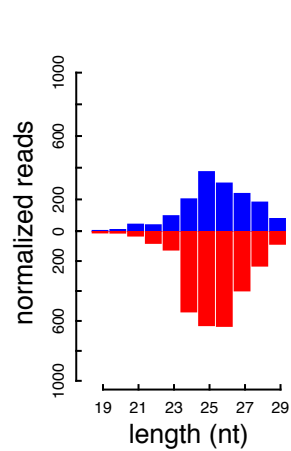
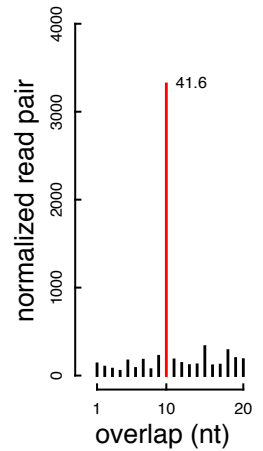
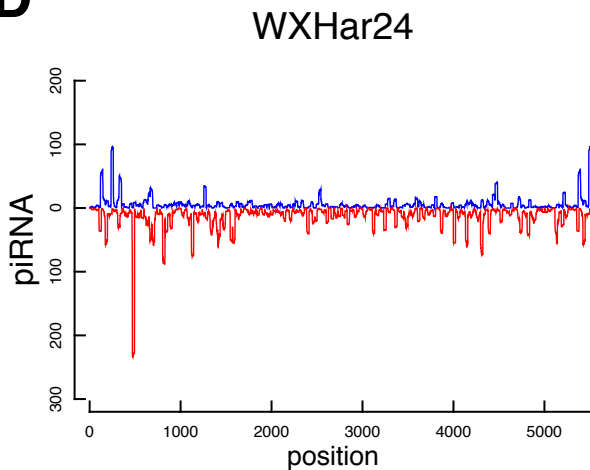
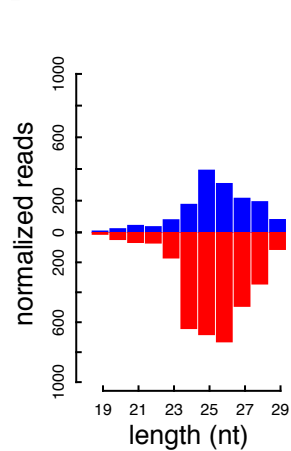
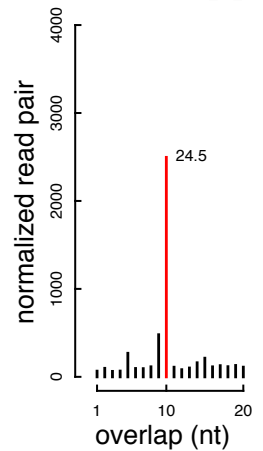
McClintock

A**B****C****E****G****D****F****H**

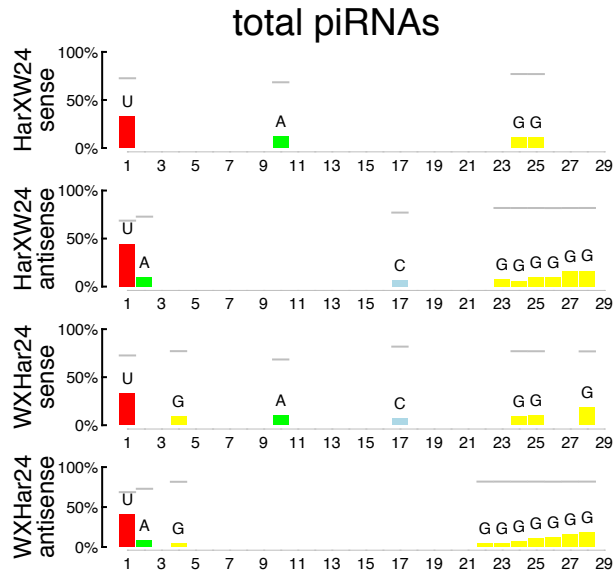
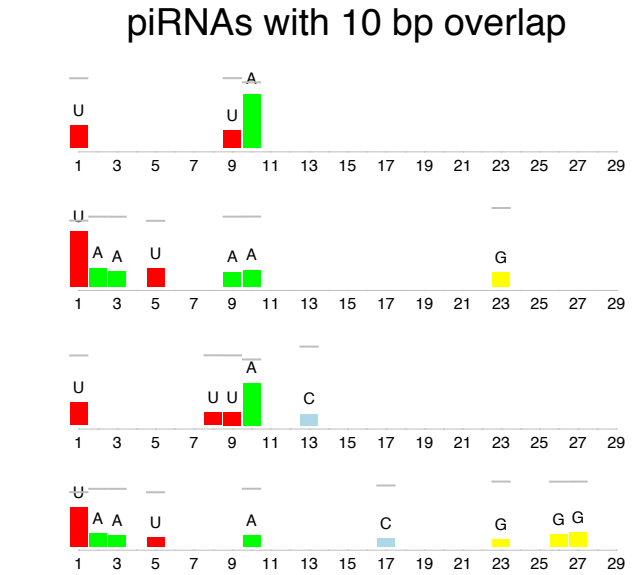
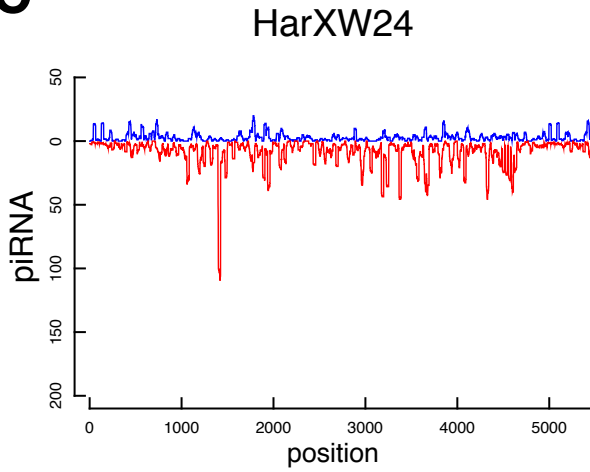
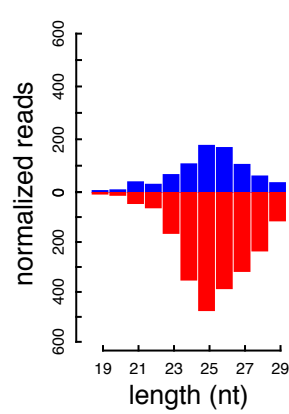
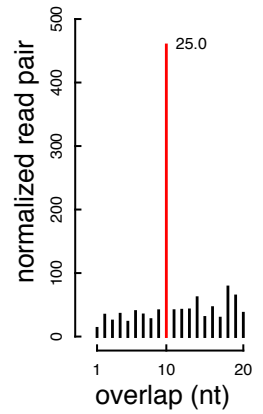
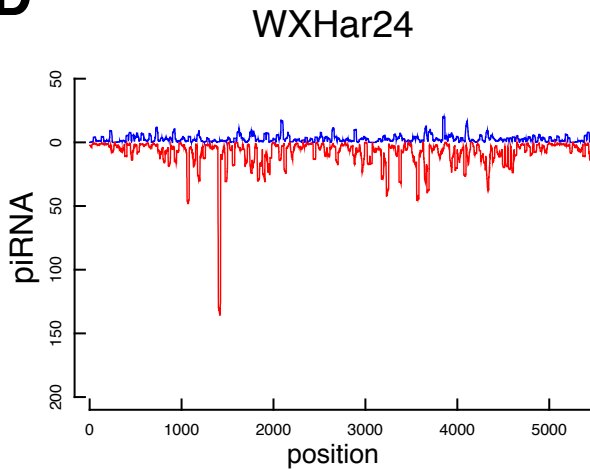
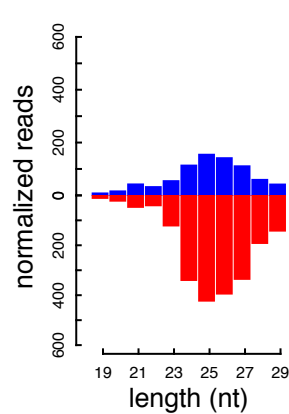
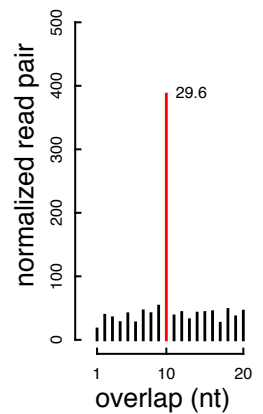
mdg1

A**B****C****E****G****D****F****H**

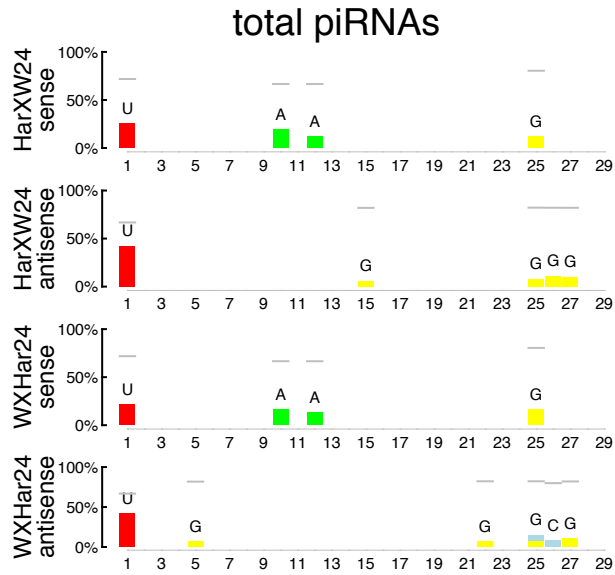
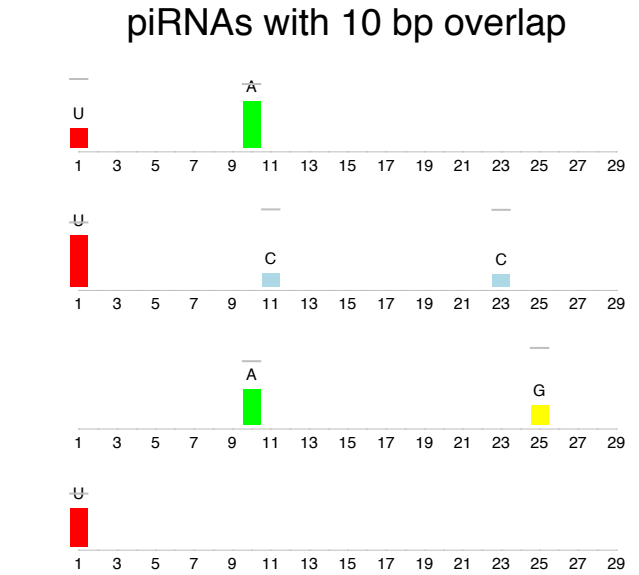
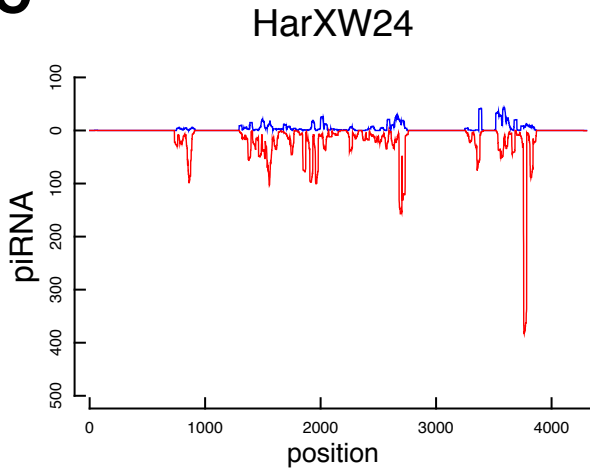
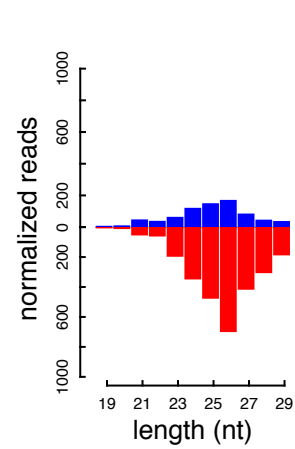
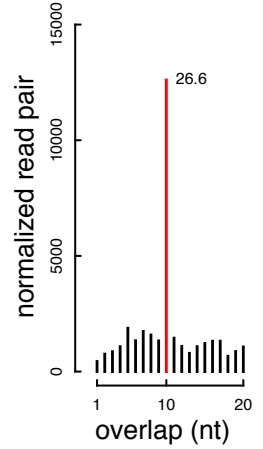
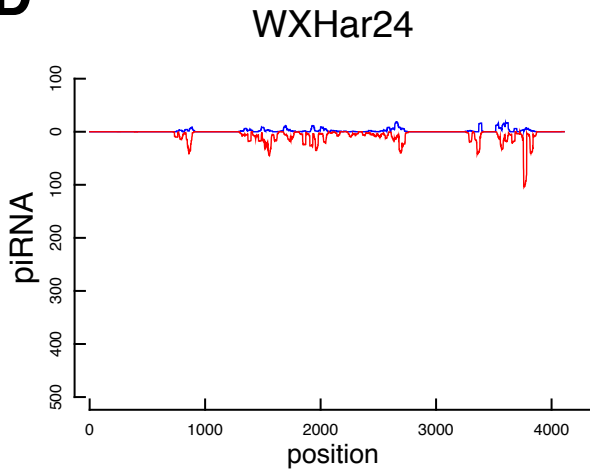
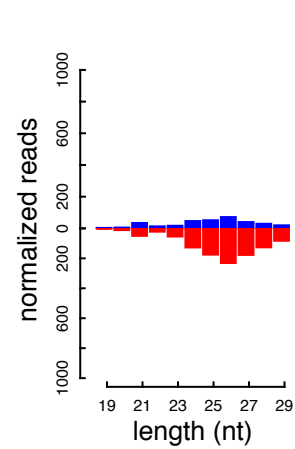
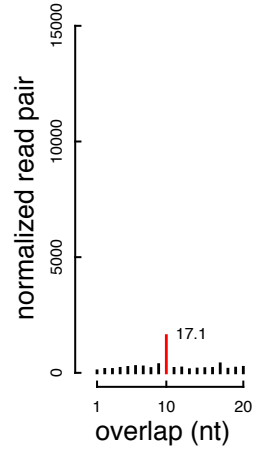
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A**B****C****E****G****D****F****H**

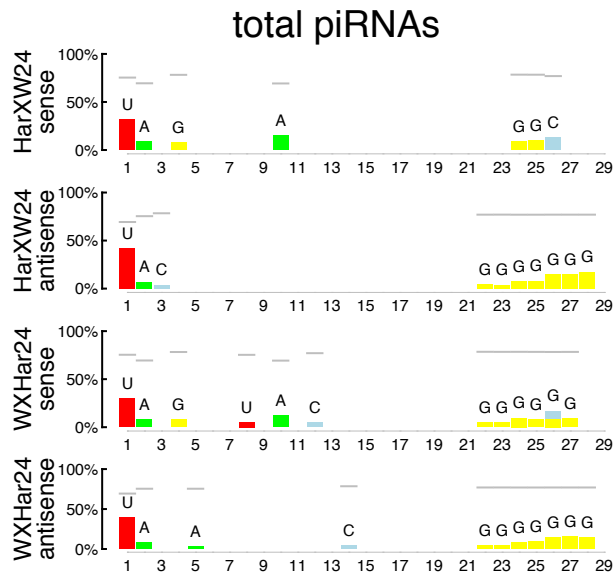
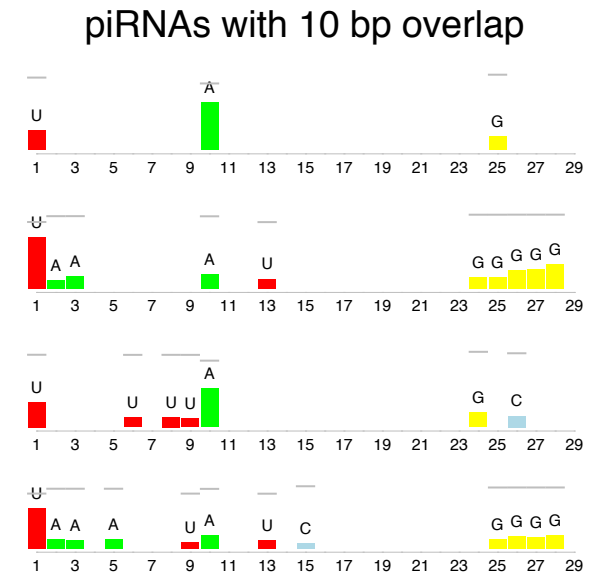
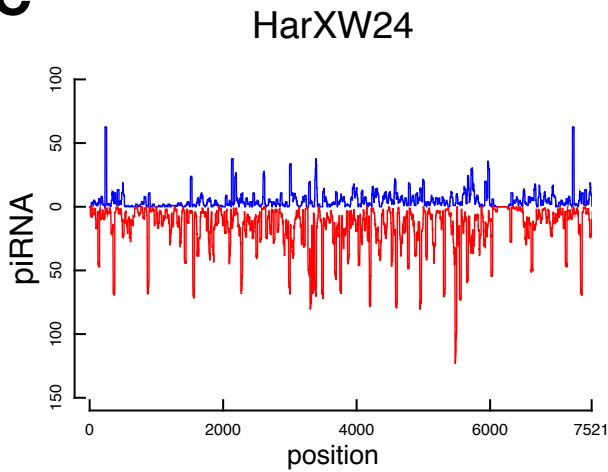
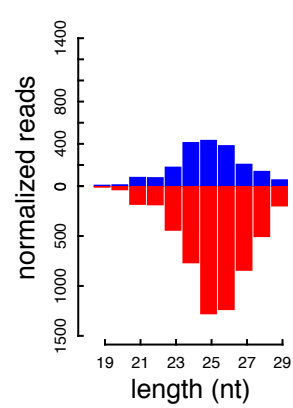
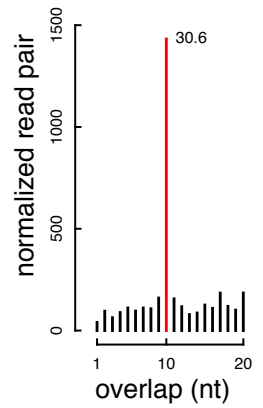
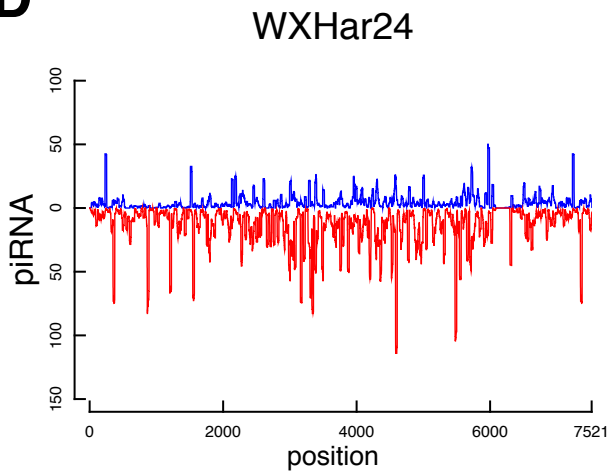
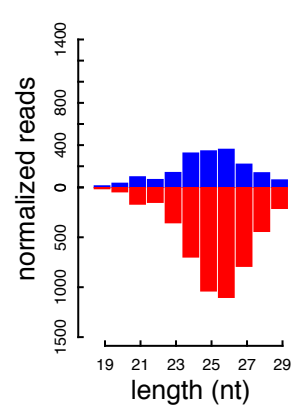
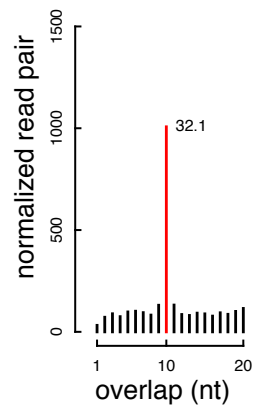
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A**B****C****E****G****D****F****H**

NOF

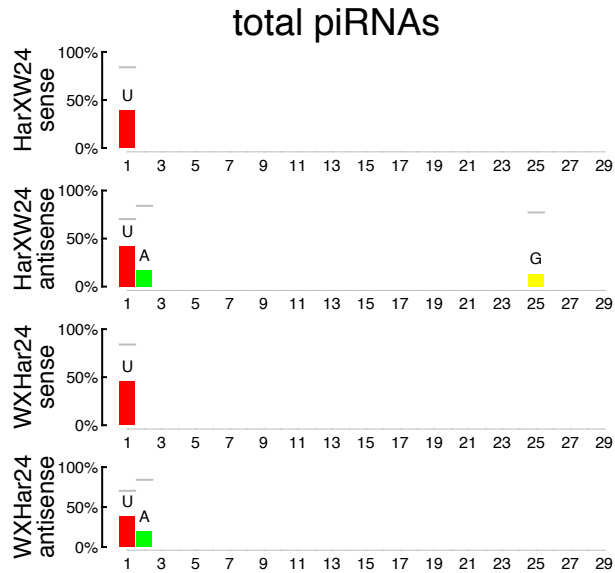
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opus

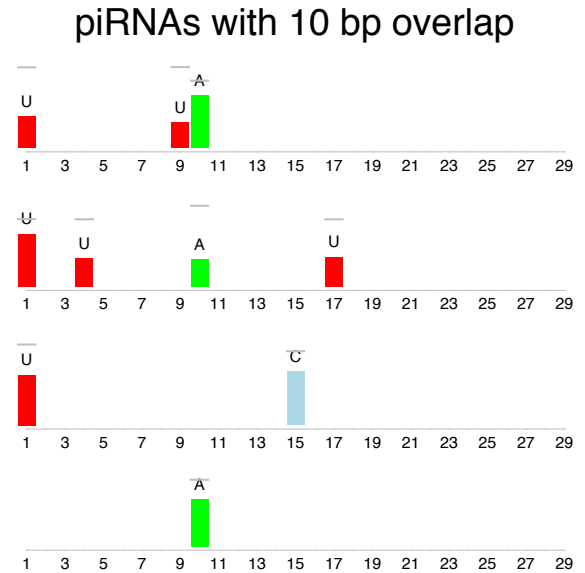
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Osvaldo

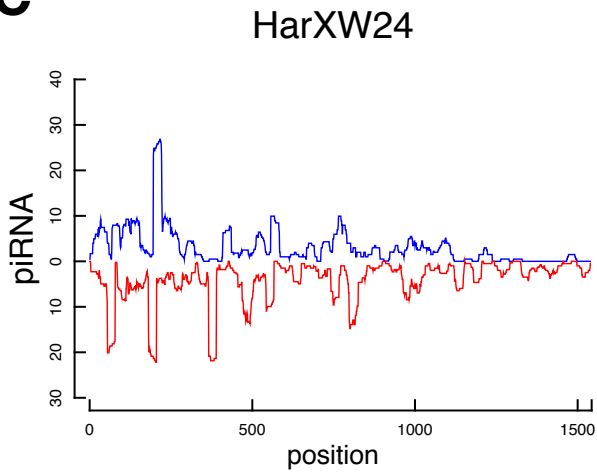
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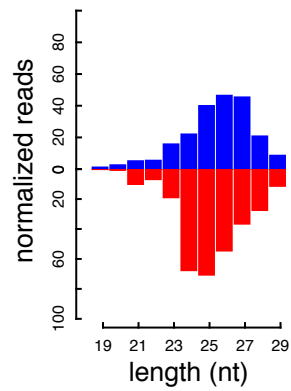
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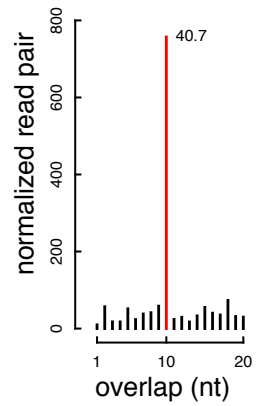
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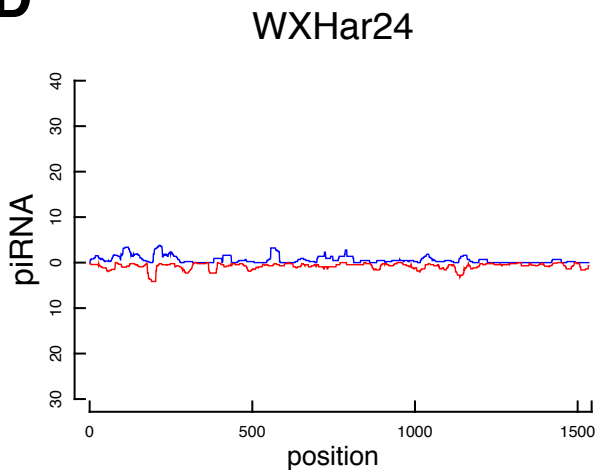
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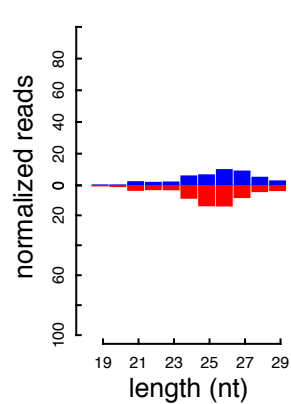
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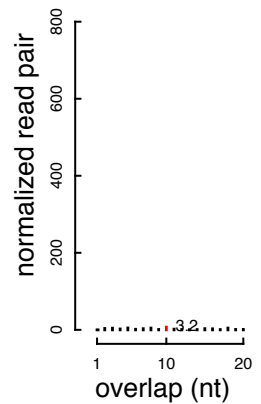
D



F



H



P element

A

WXHar24 antisense WXHar24 sense HarXW24 antisense HarXW24 sense

total piRNAs

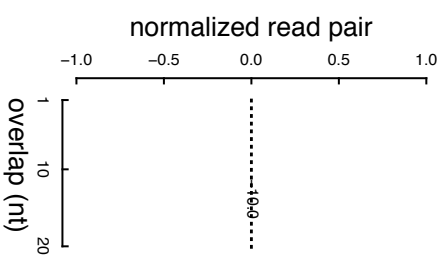
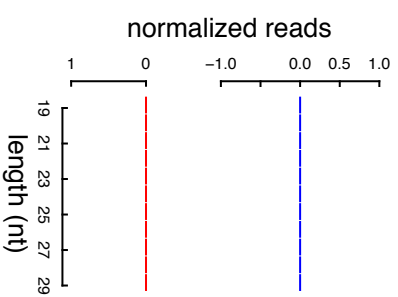
B

piRNAs with 10 bp overlap

C

E

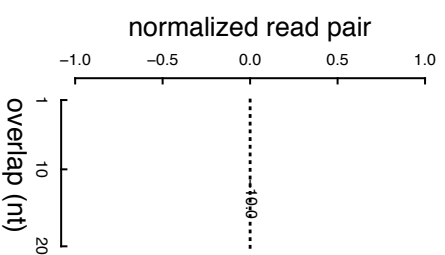
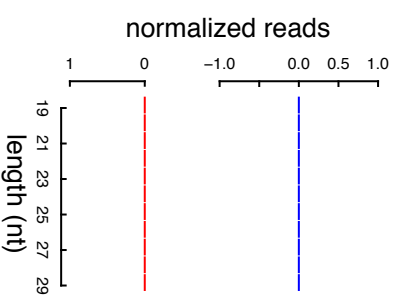
G



D

F

H



Penelope

A

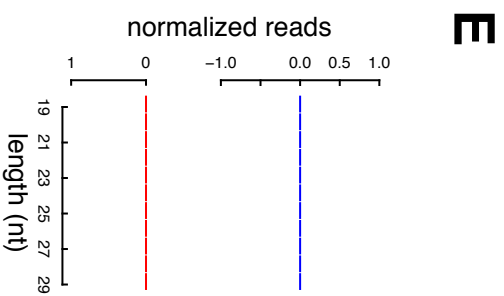
WXHar24 antisense WXHar24 sense HarXW24 antisense HarXW24 sense

total piRNAs

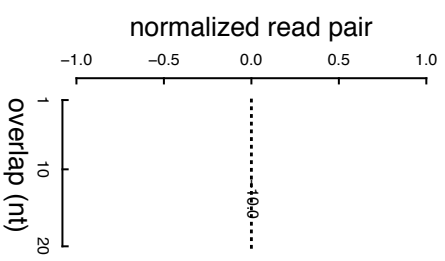
B

piRNAs with 10 bp overlap

C

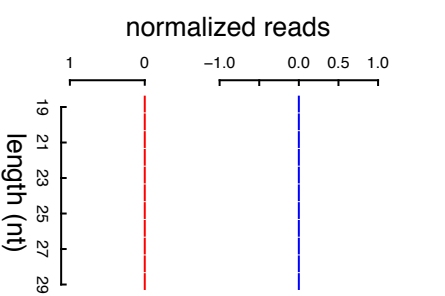


E

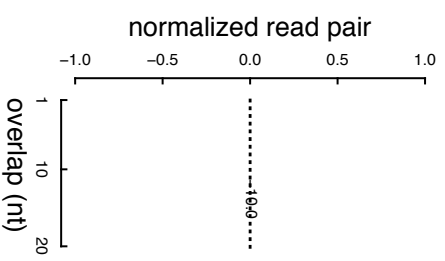


G

D

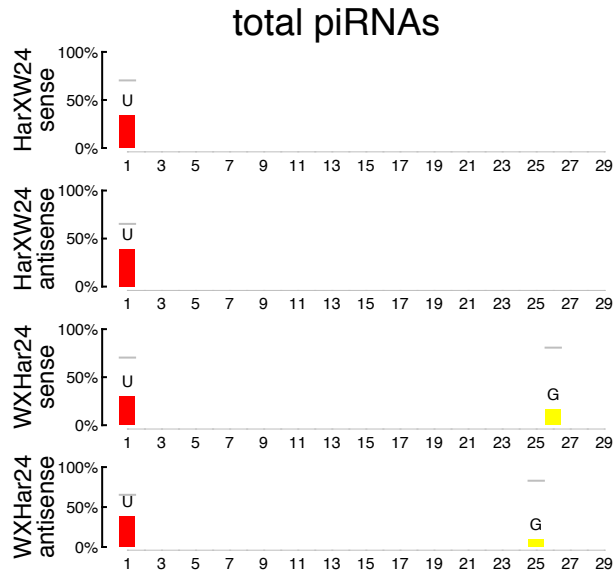
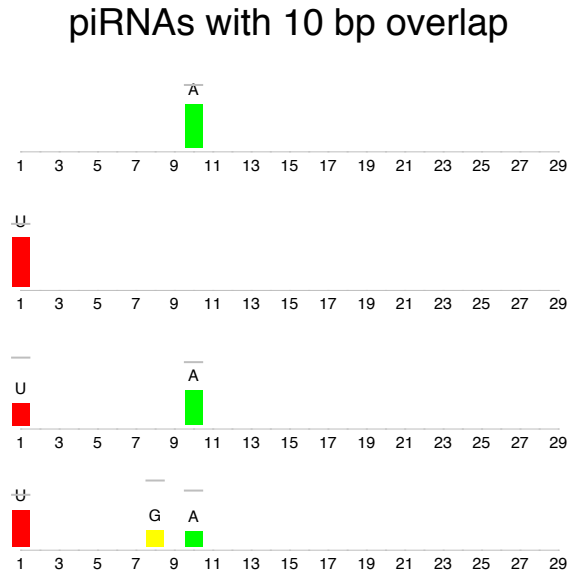
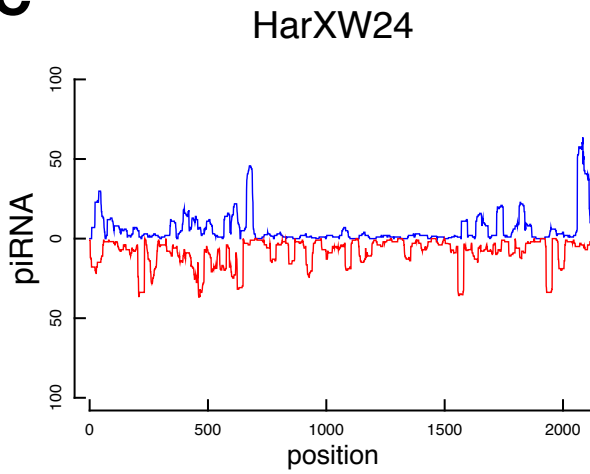
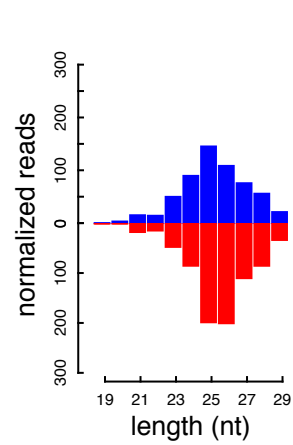
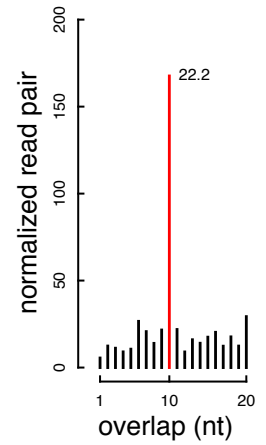
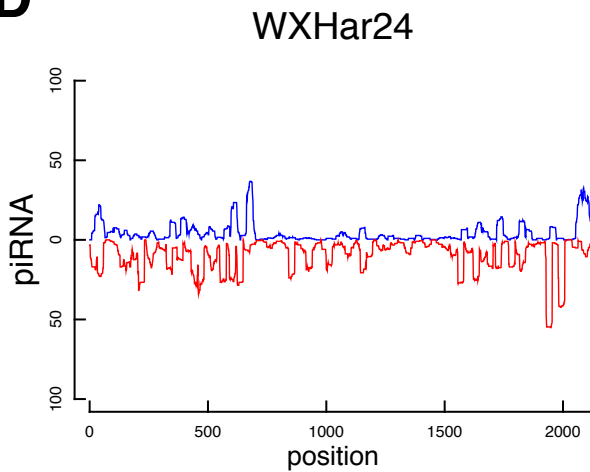
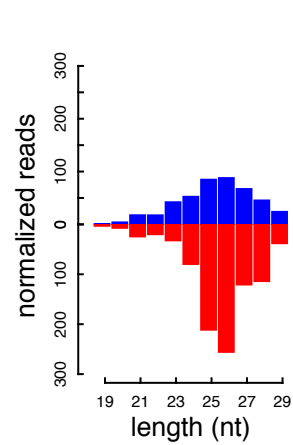
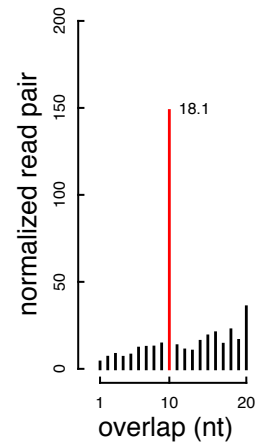


F

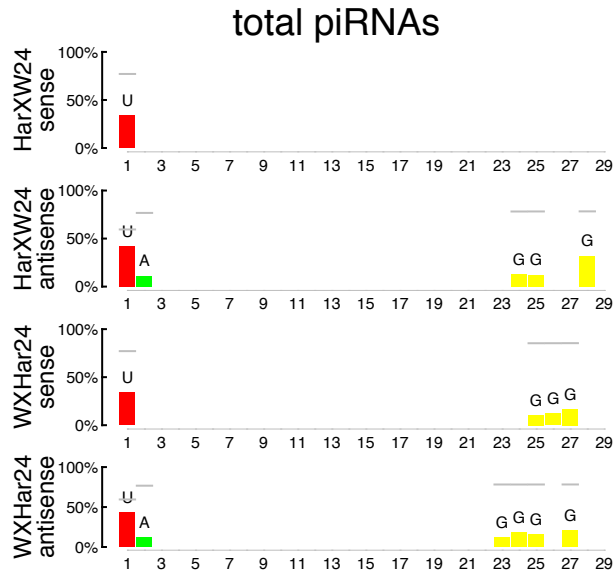
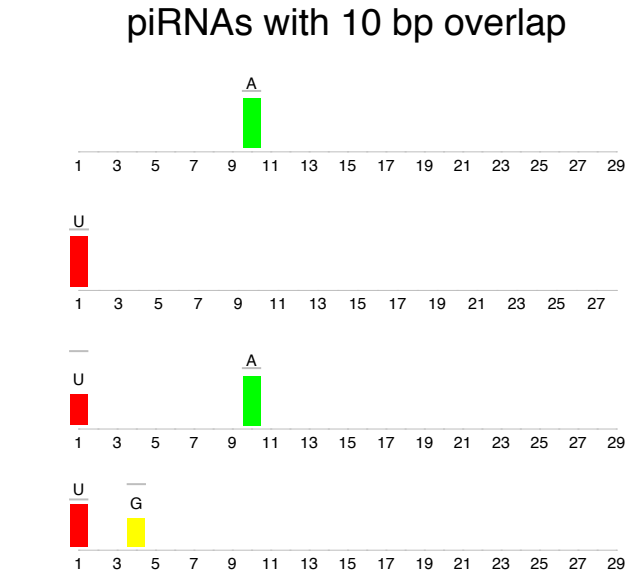
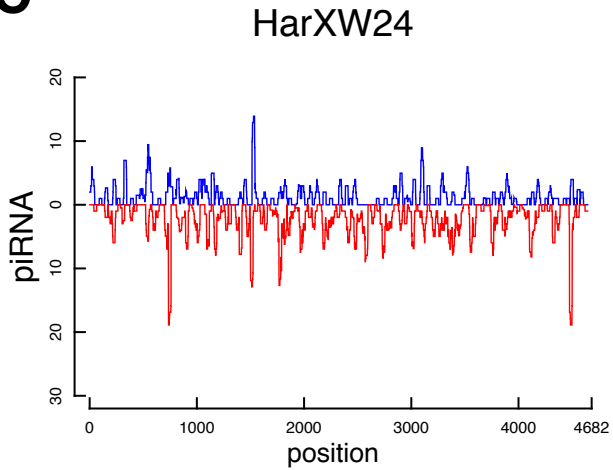
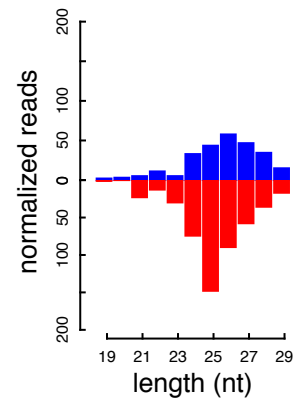
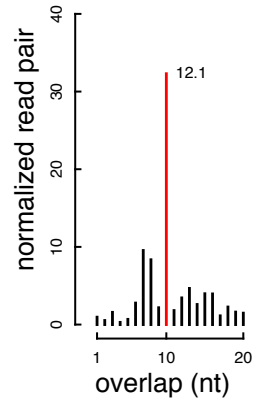
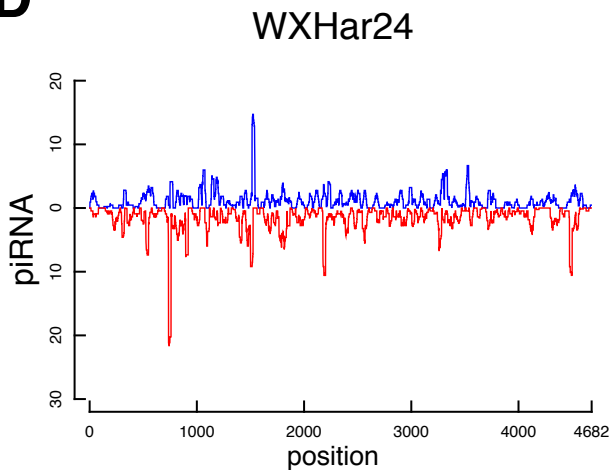
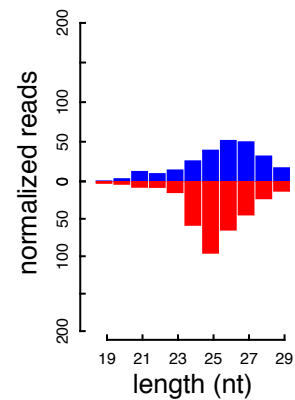
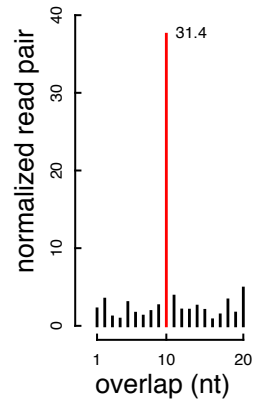


H

pogo

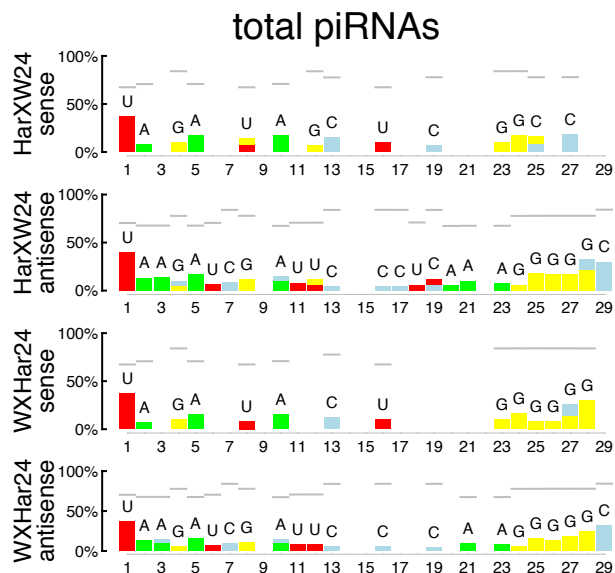
A**B****C****E****G****D****F****H**

Porto1

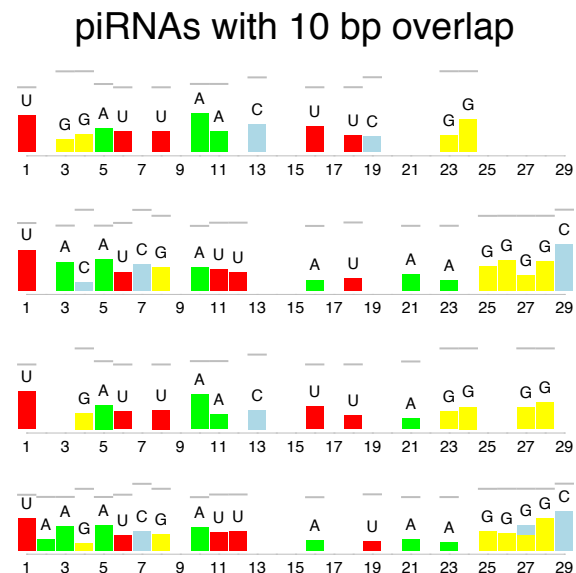
A**B****C****E****G****D****F****H**

Q element

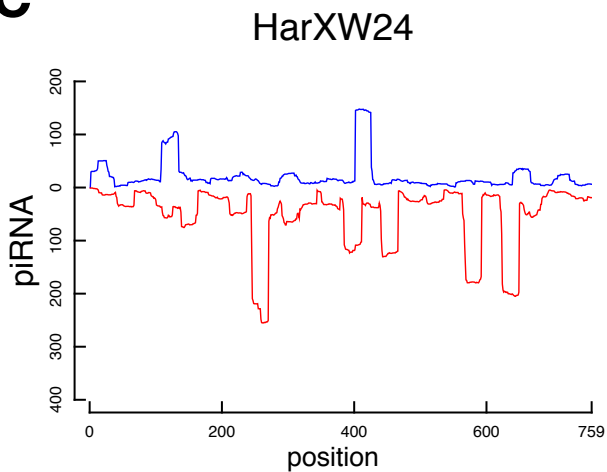
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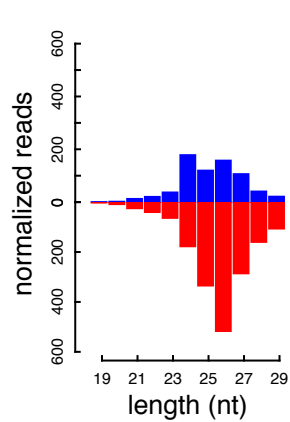
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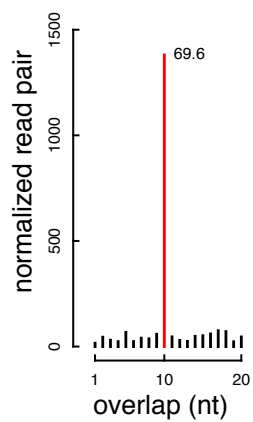
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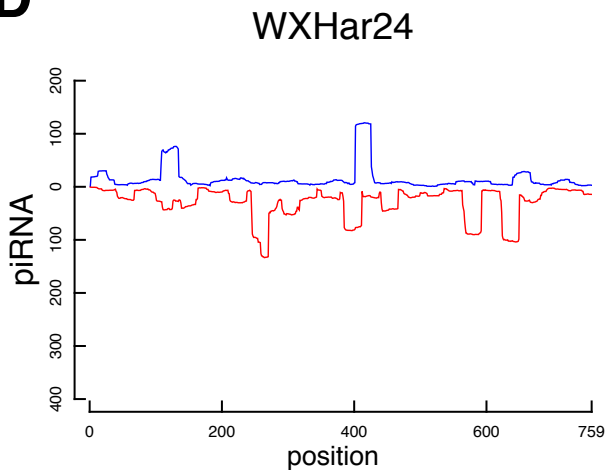
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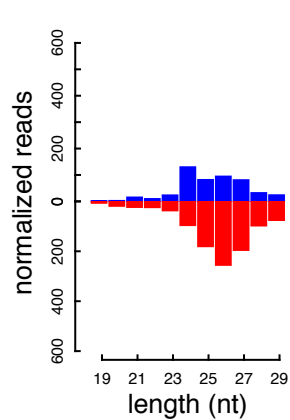
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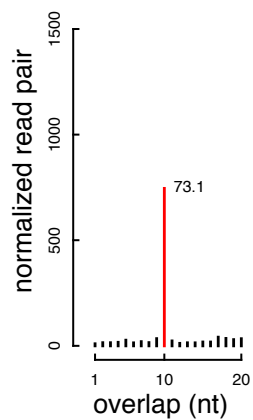
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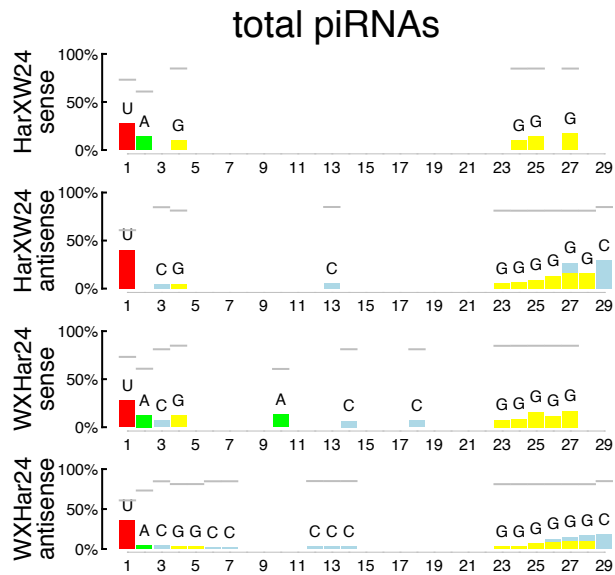
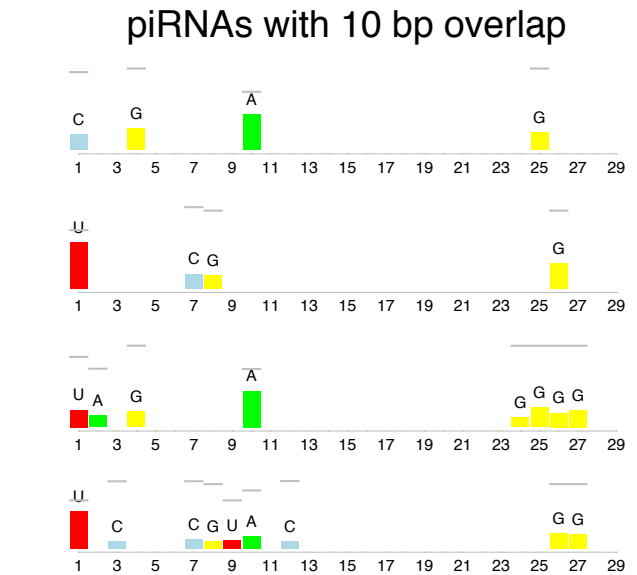
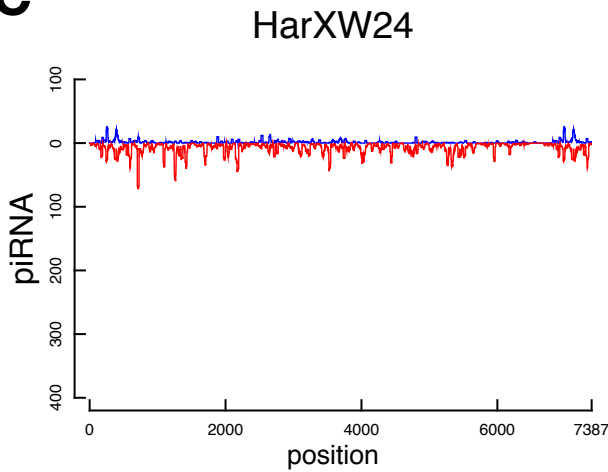
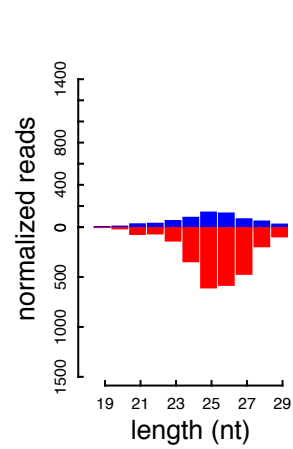
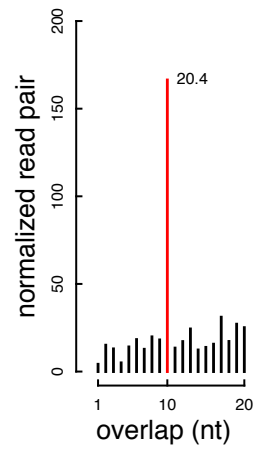
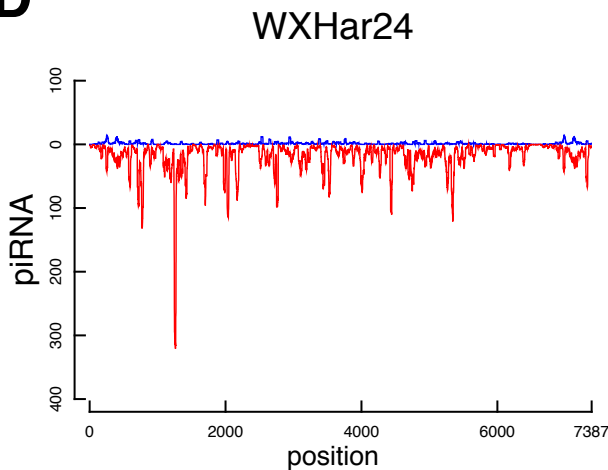
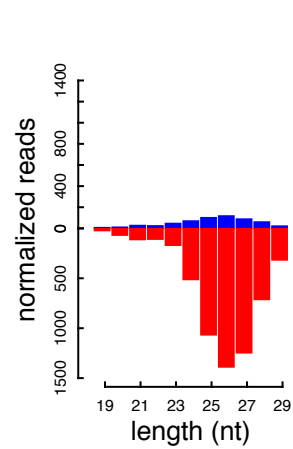
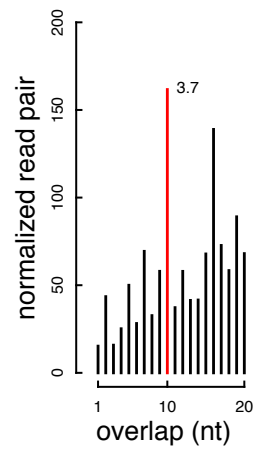
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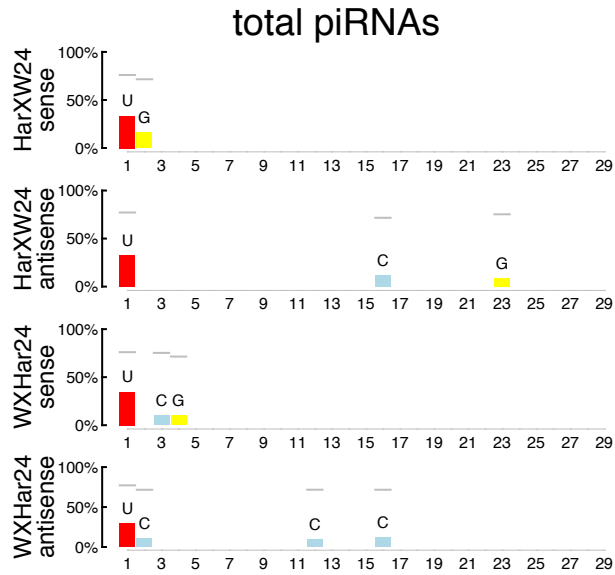
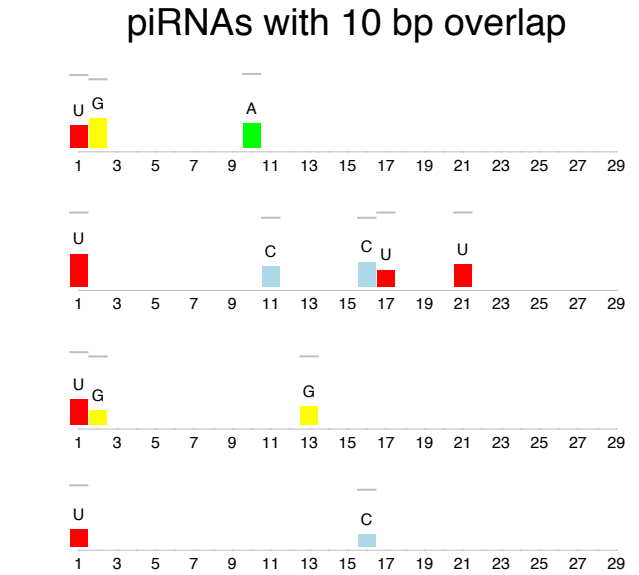
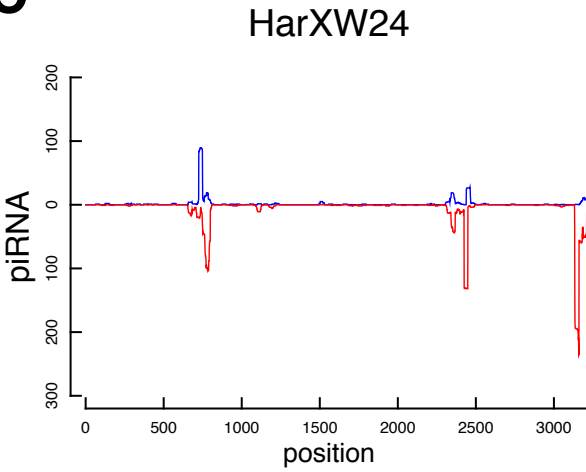
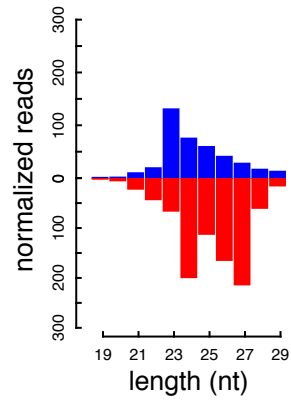
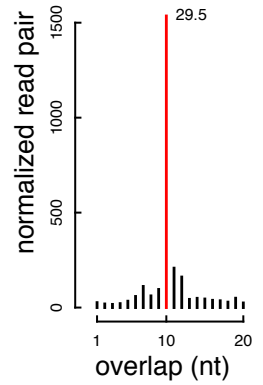
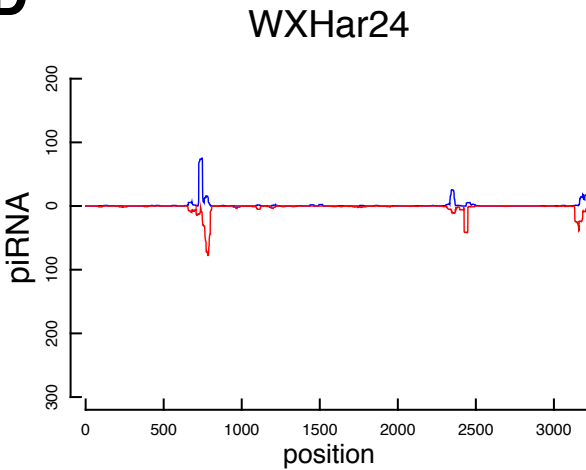
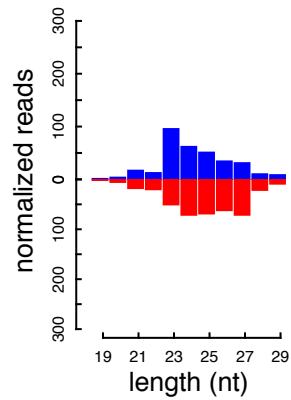
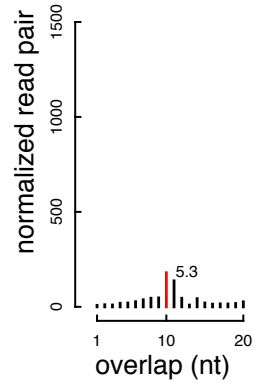
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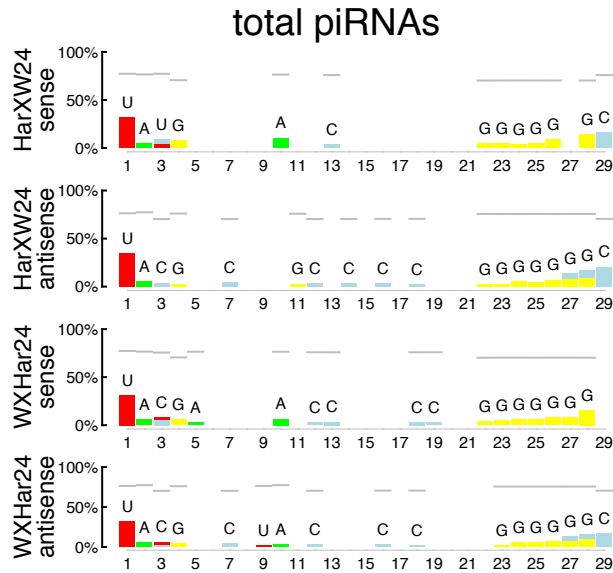
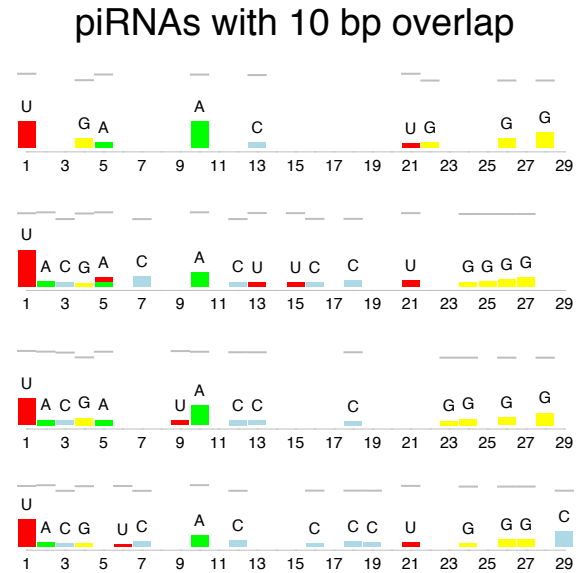
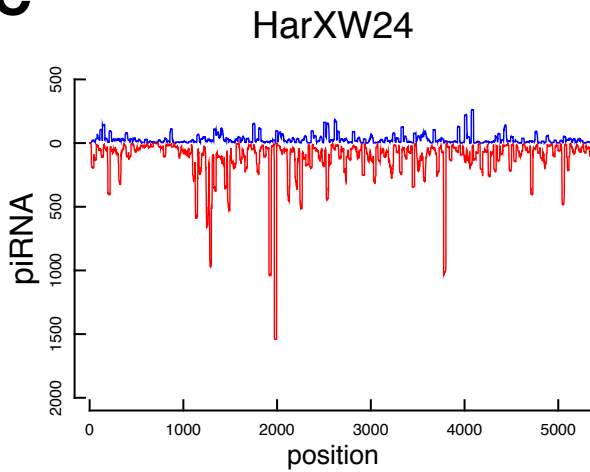
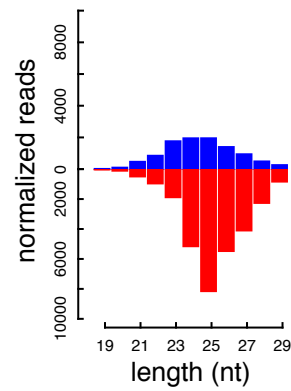
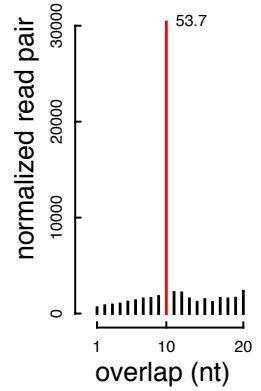
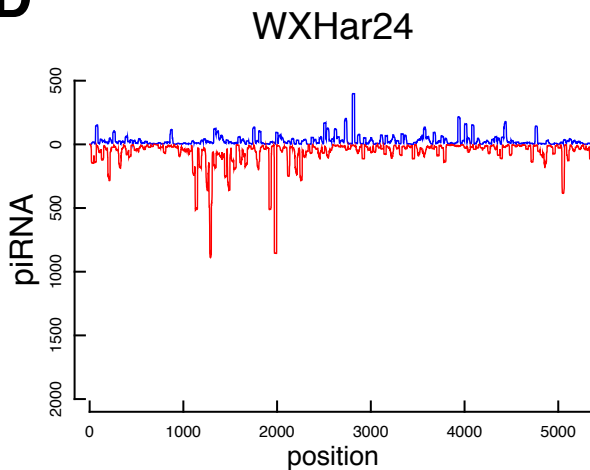
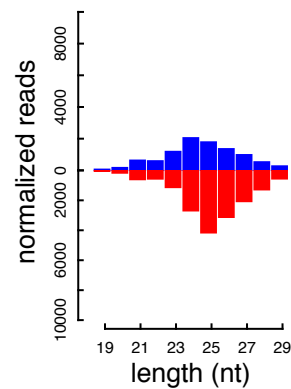
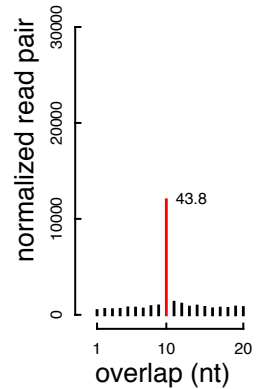
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A**B****C****E****G****D****F****H**

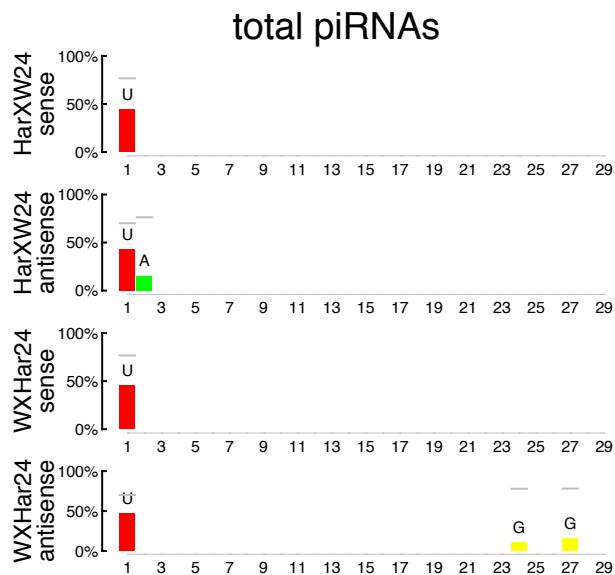
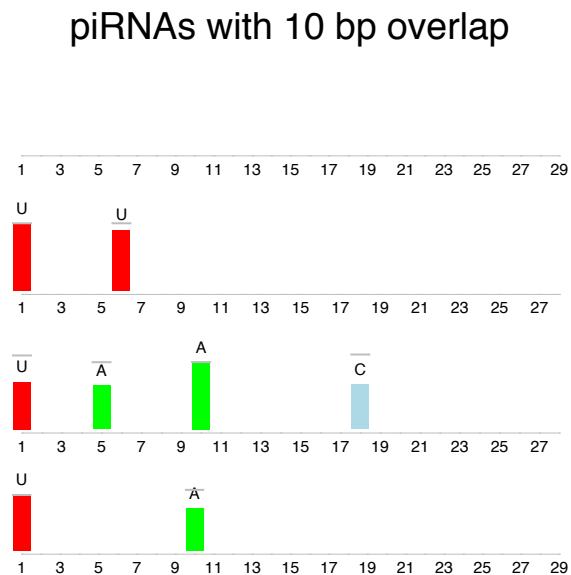
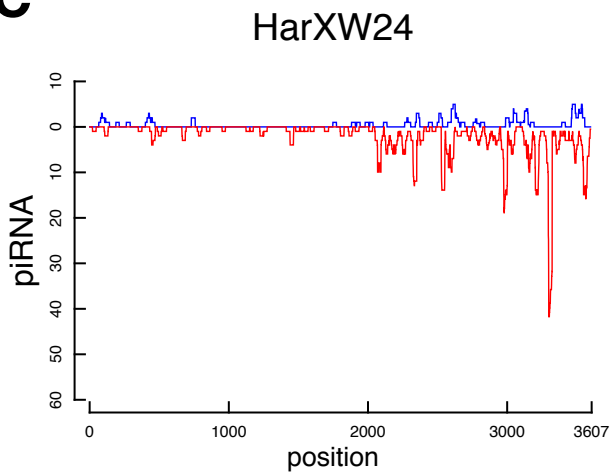
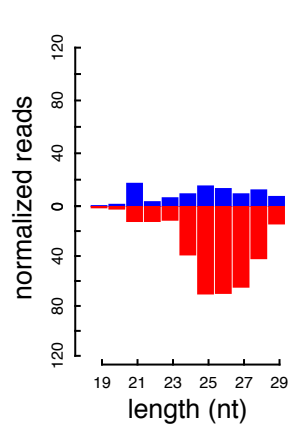
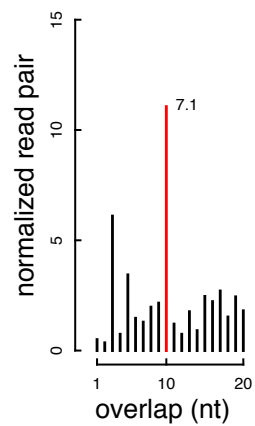
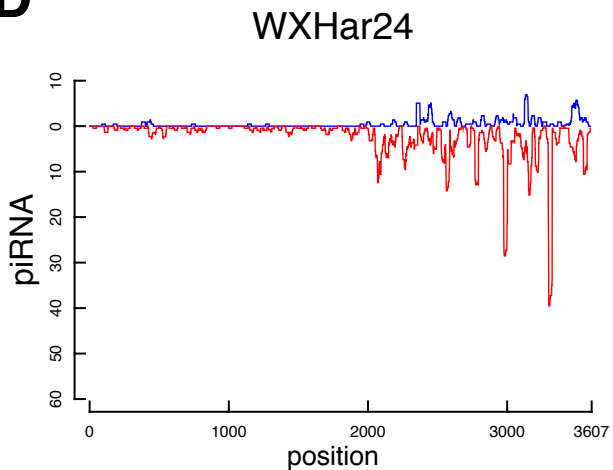
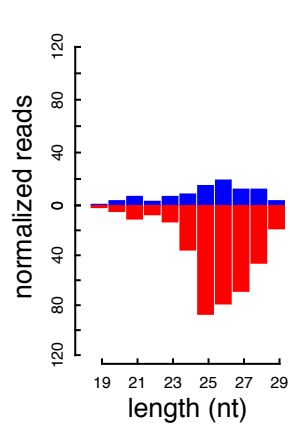
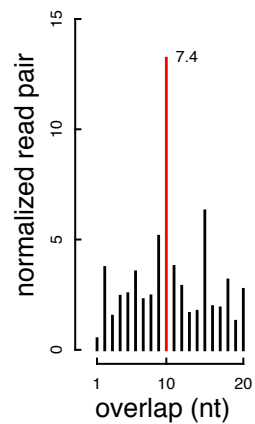
R1 2

A**B****C****E****G****D****F****H**

R1A1 element

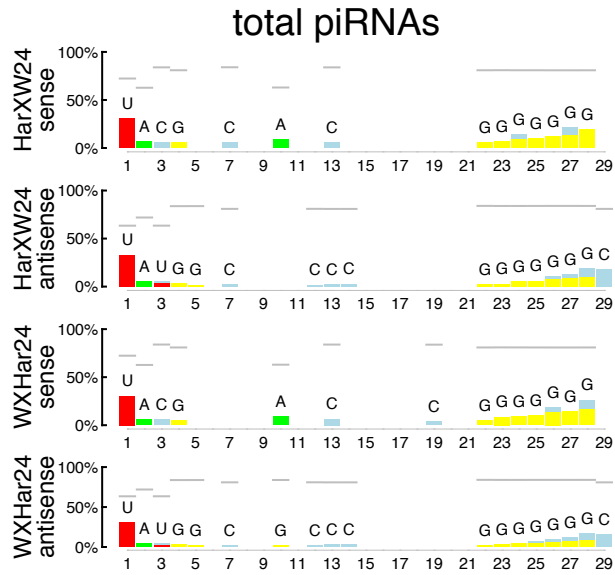
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R2 element

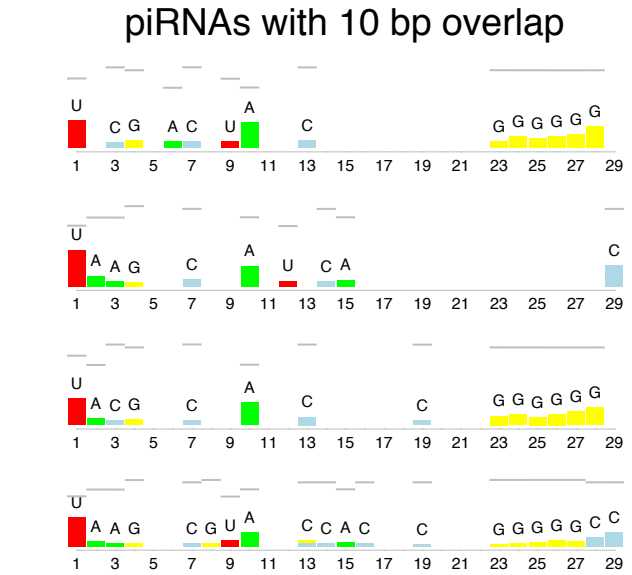
A**B****C****E****G****D****F****H**

roo

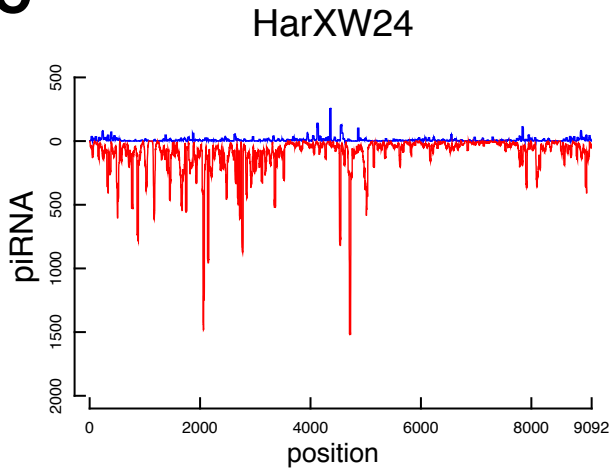
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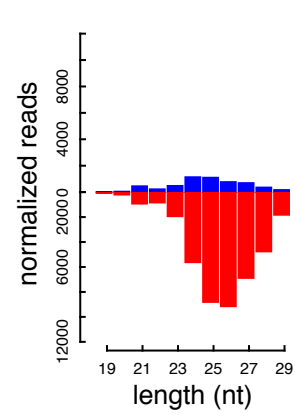
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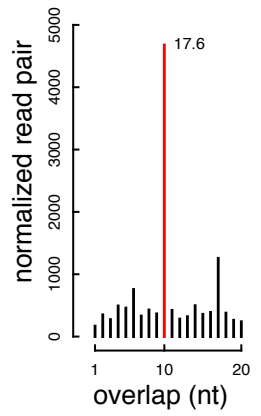
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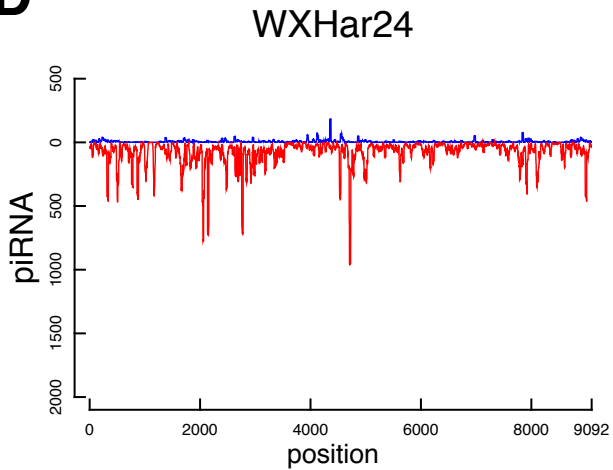
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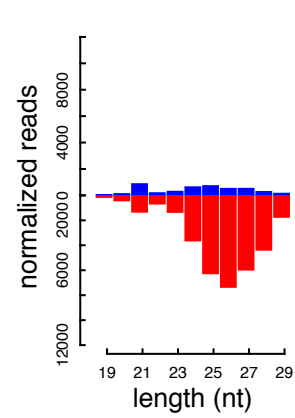
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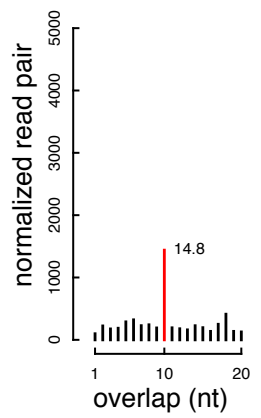
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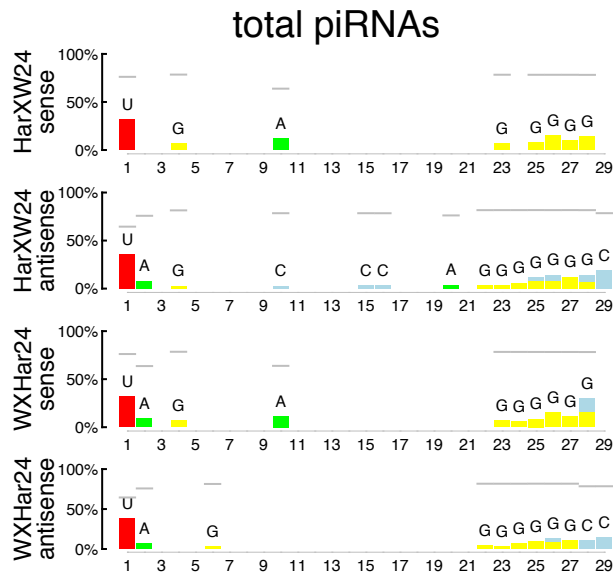
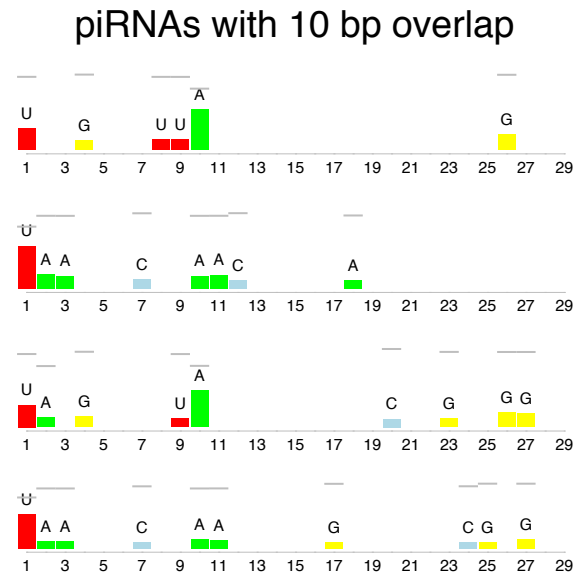
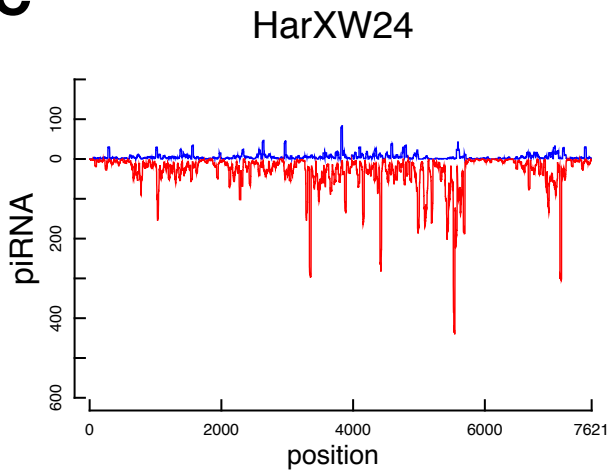
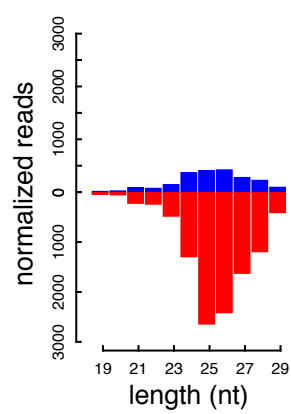
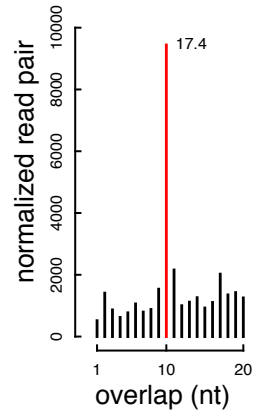
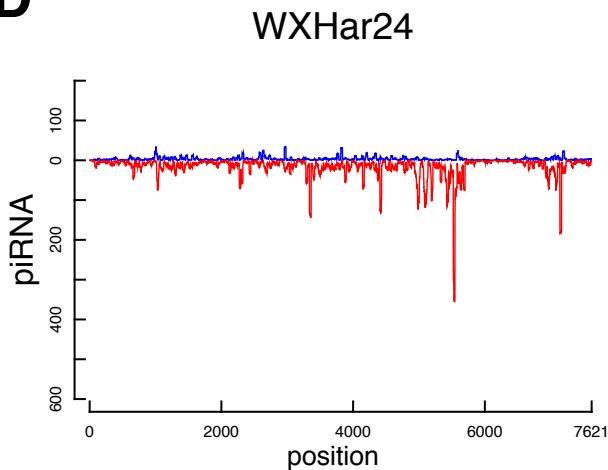
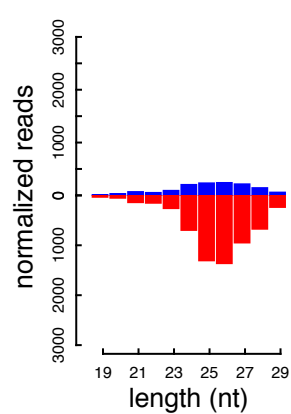
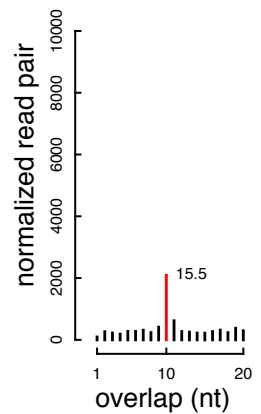
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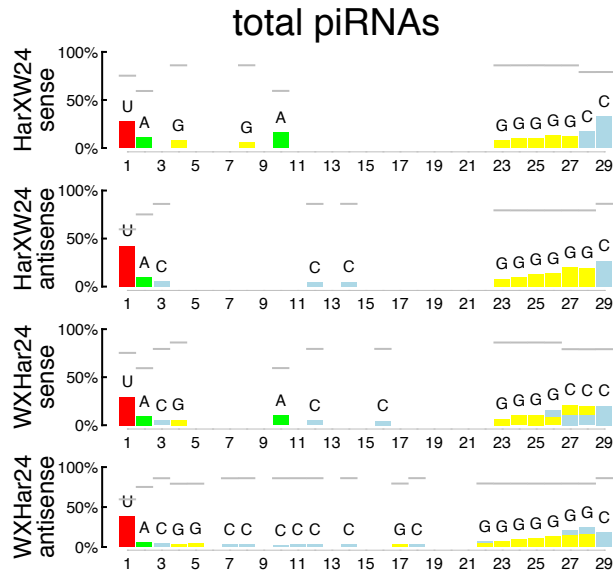
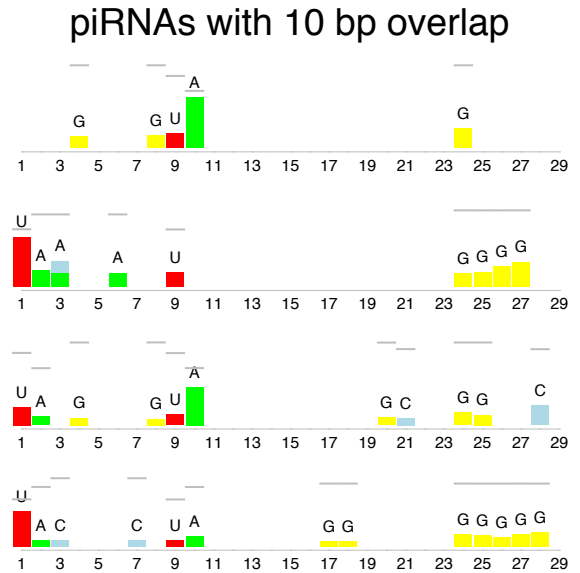
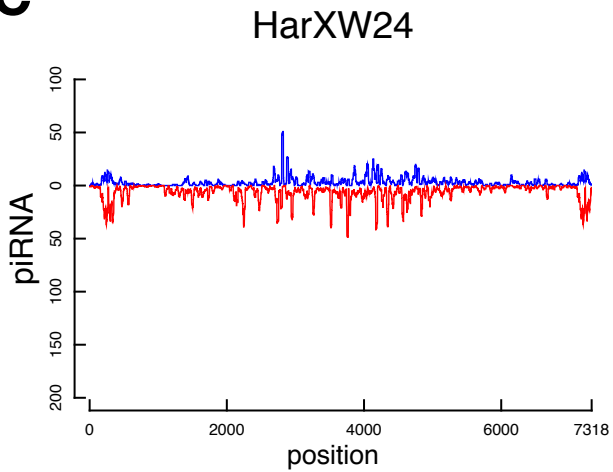
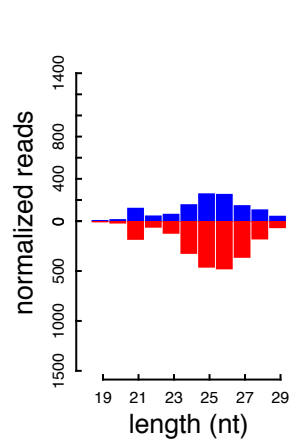
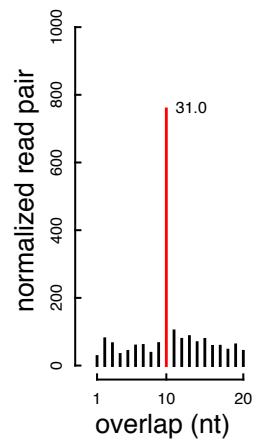
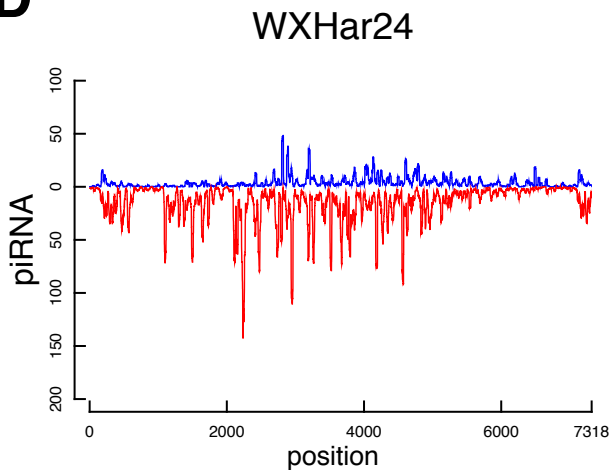
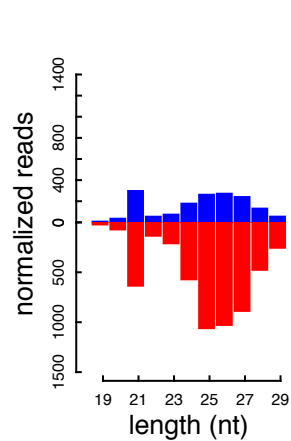
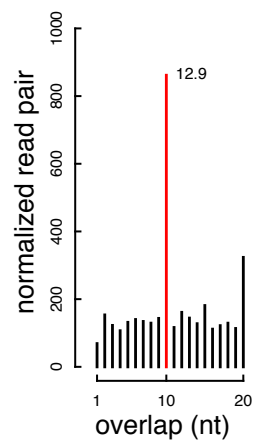
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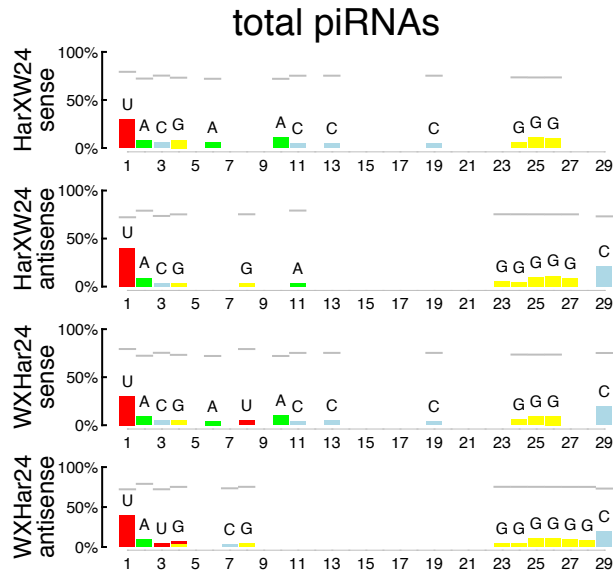
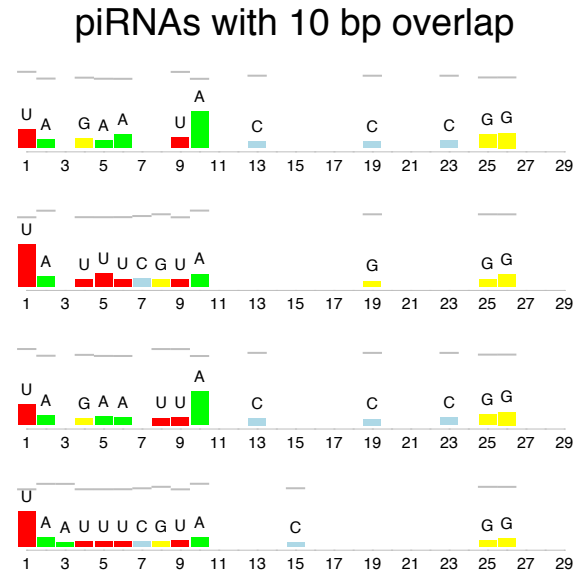
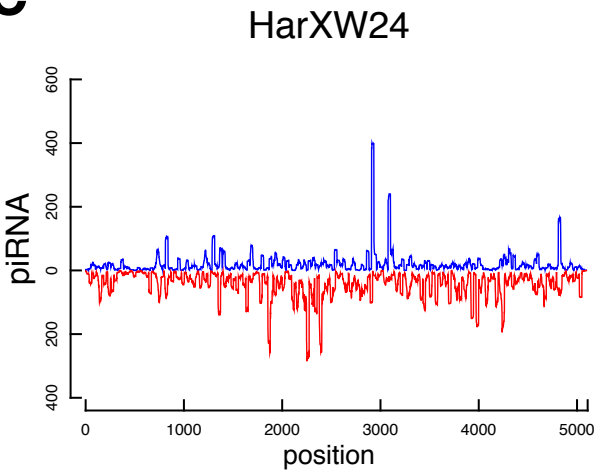
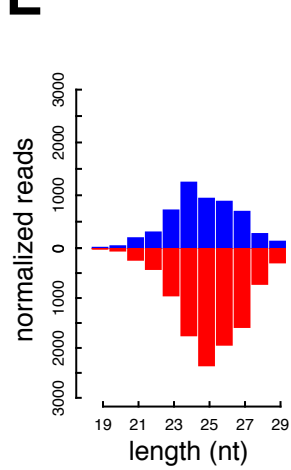
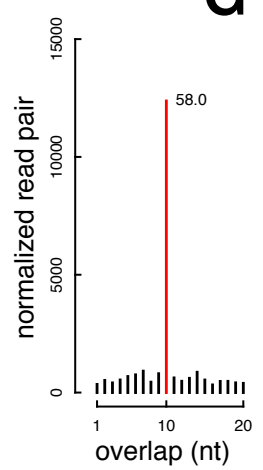
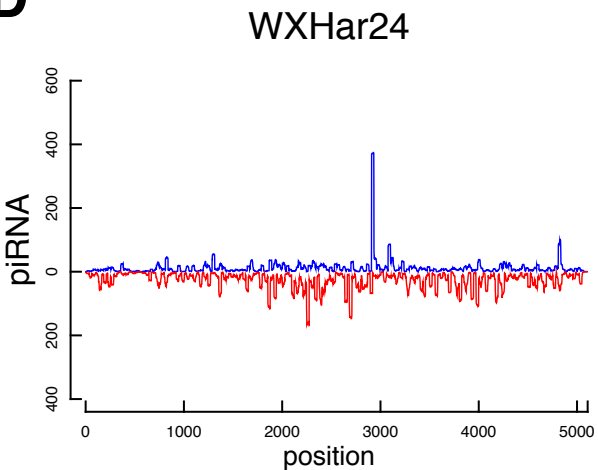
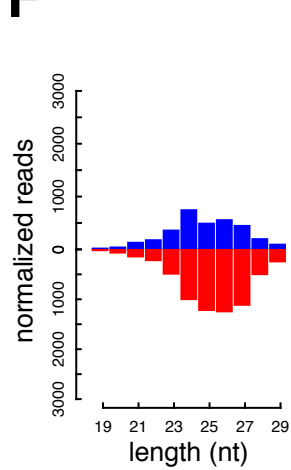
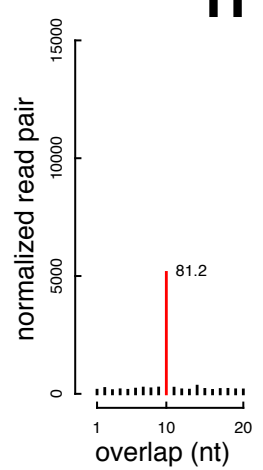
rooA

A**B****C****E****G****D****F****H**

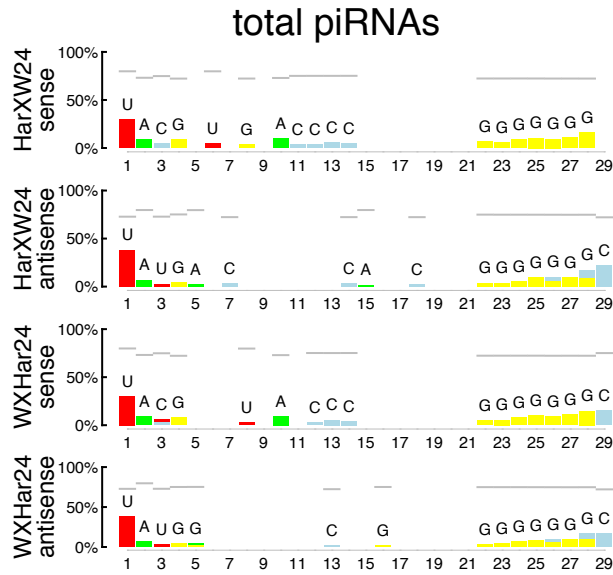
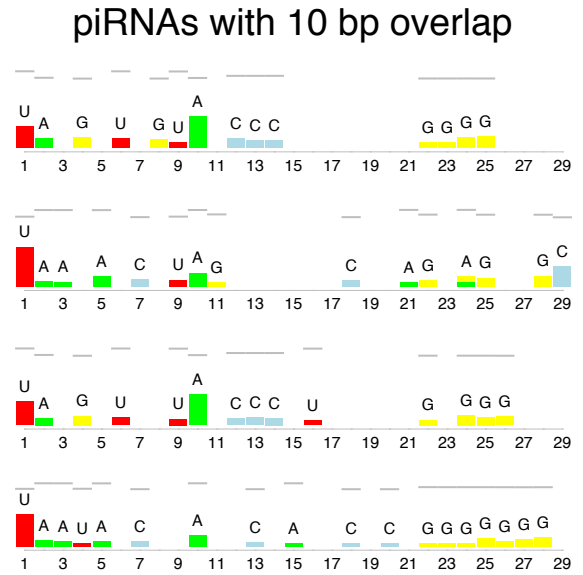
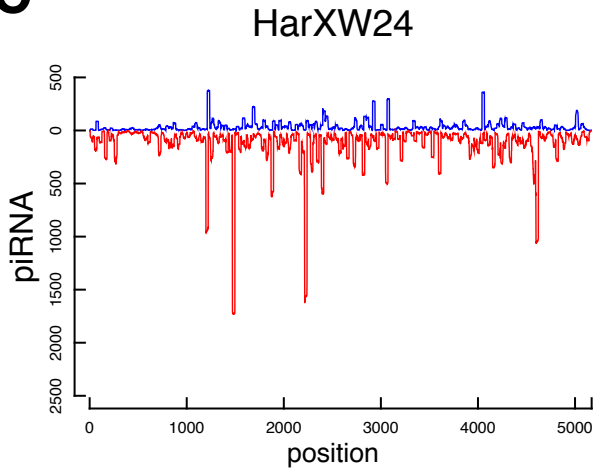
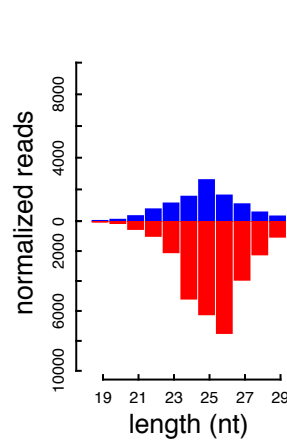
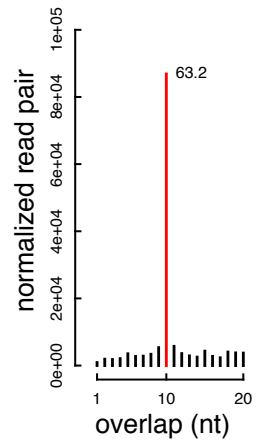
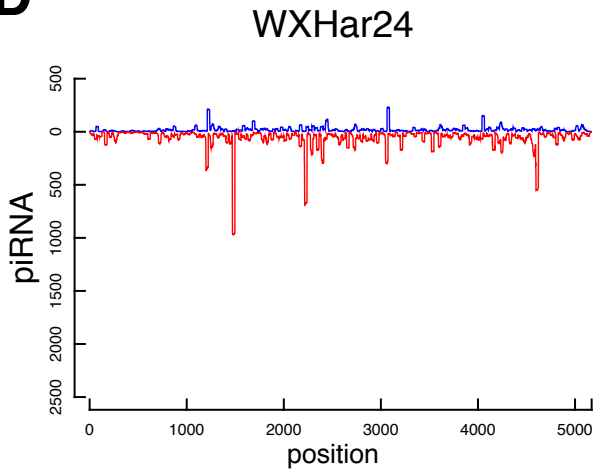
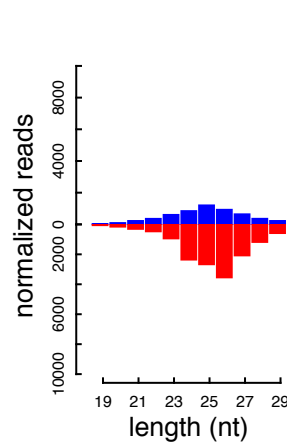
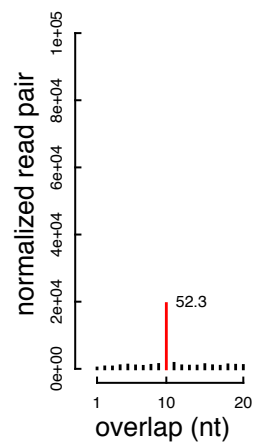
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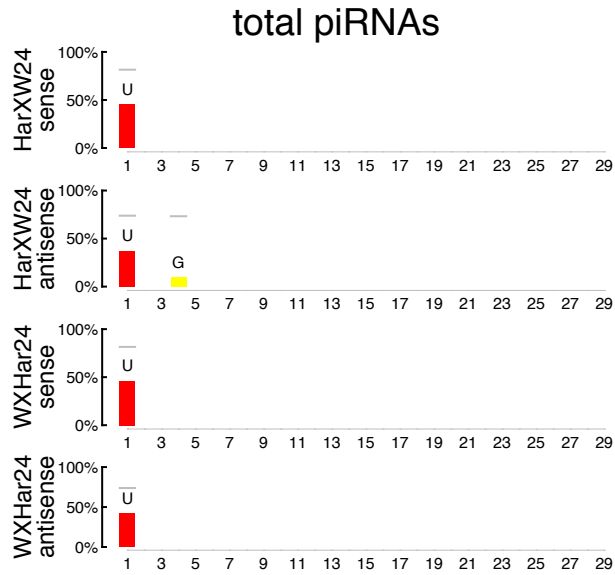
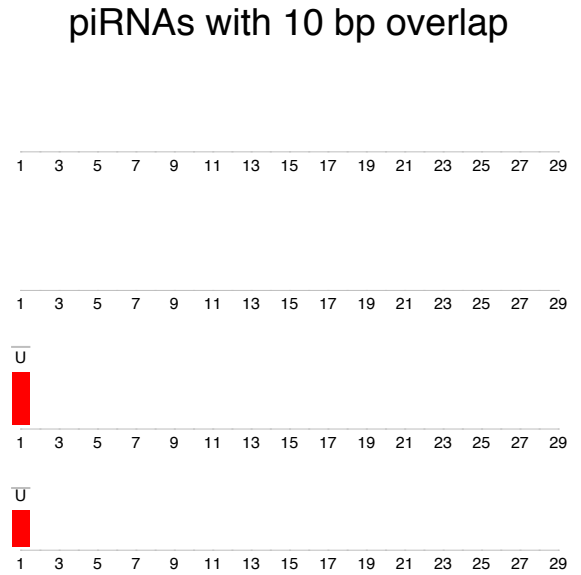
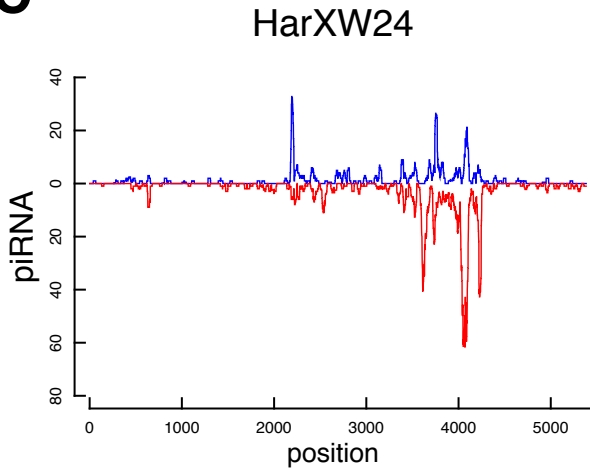
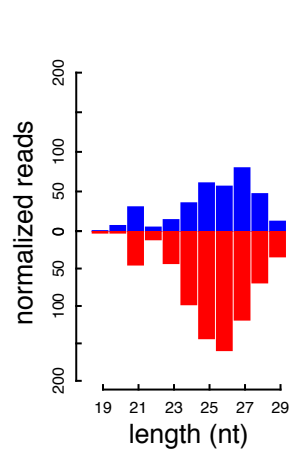
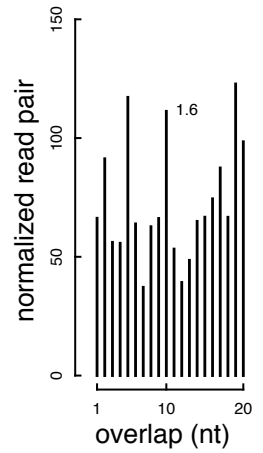
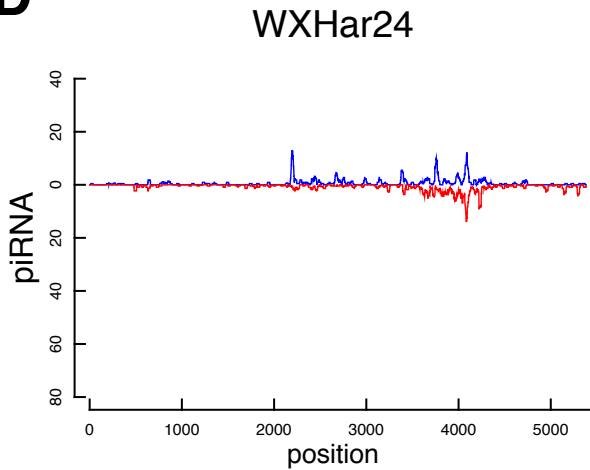
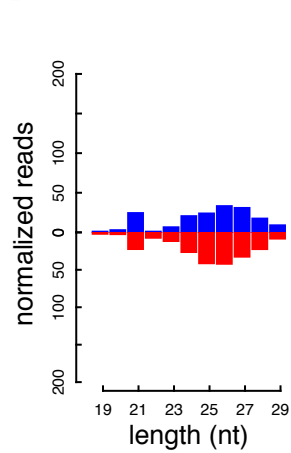
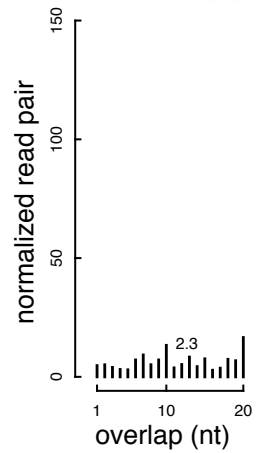
Rt1a

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Rt1b

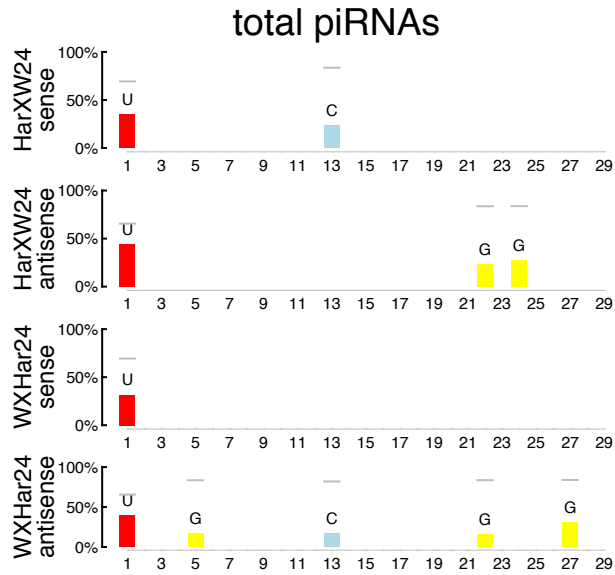
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Rt1c

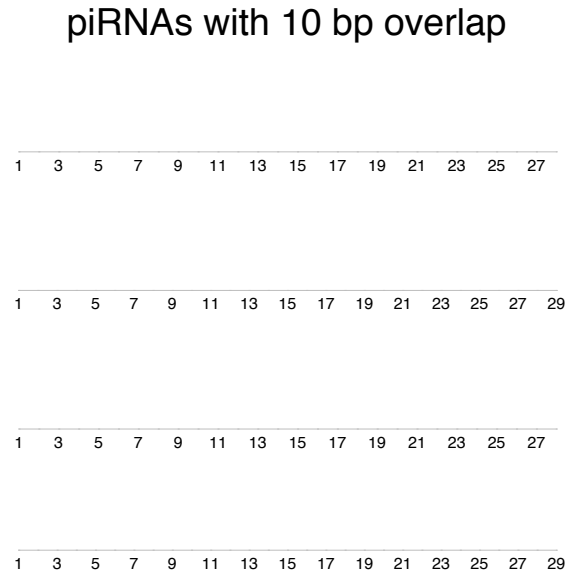
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S2

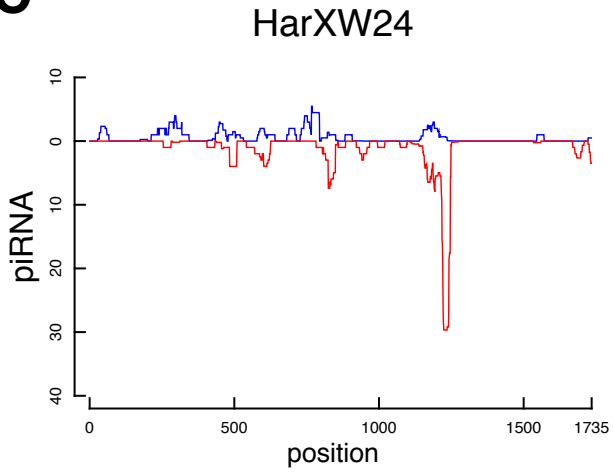
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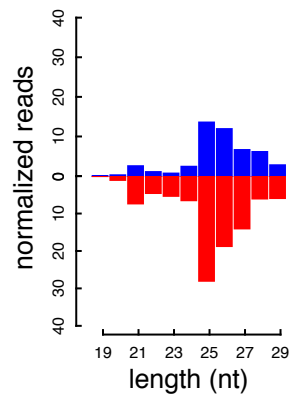
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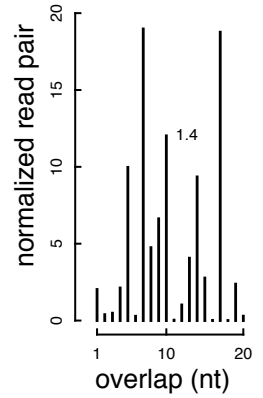
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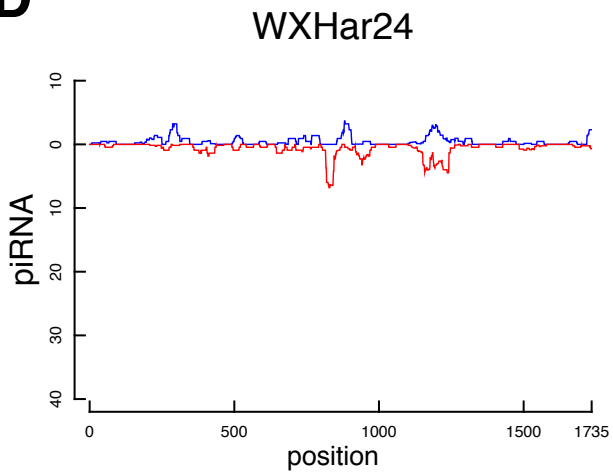
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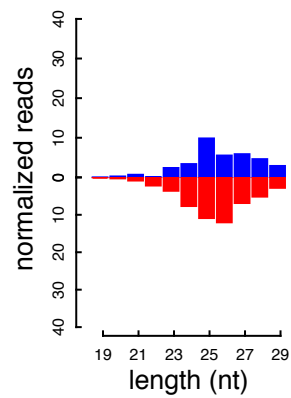
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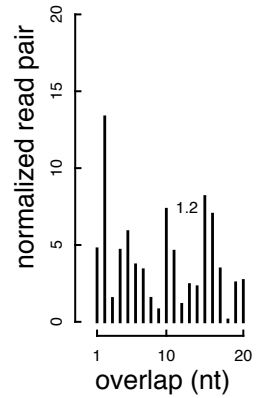
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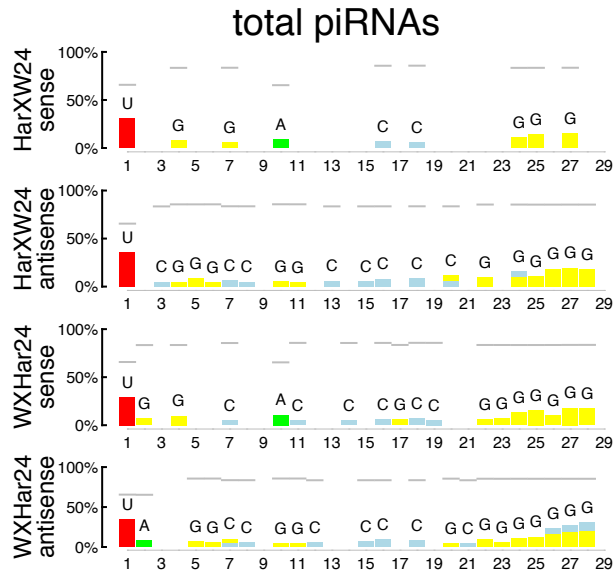


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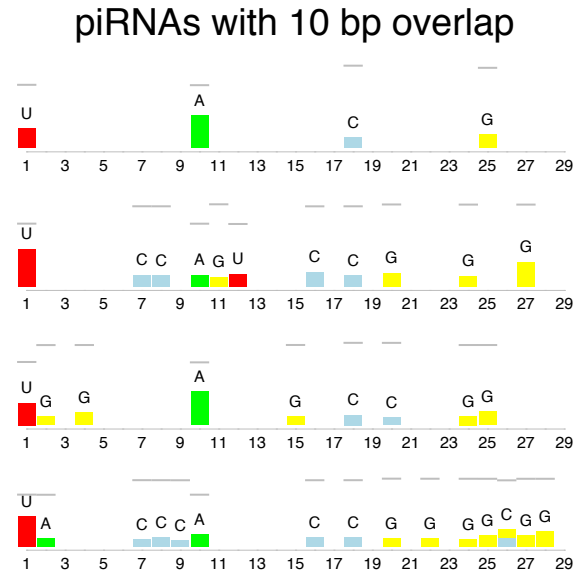


S element

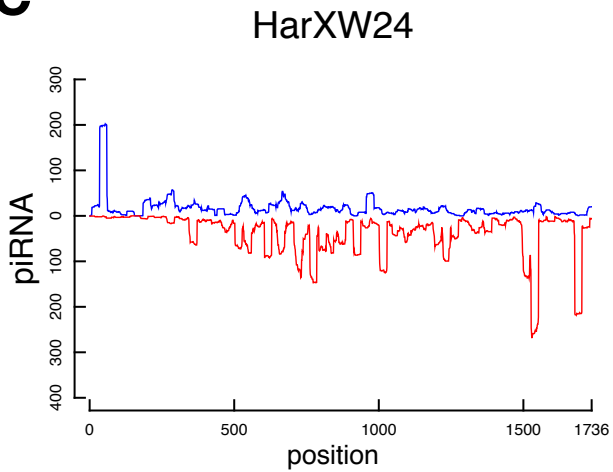
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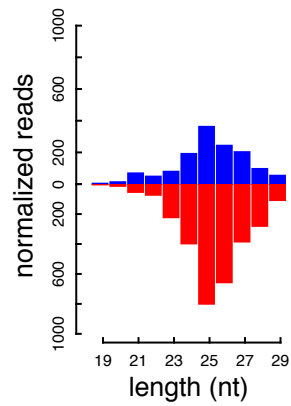
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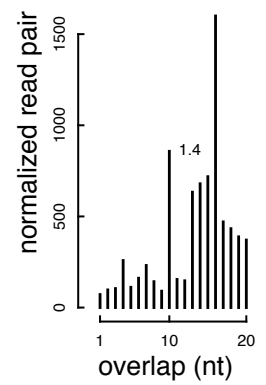
C



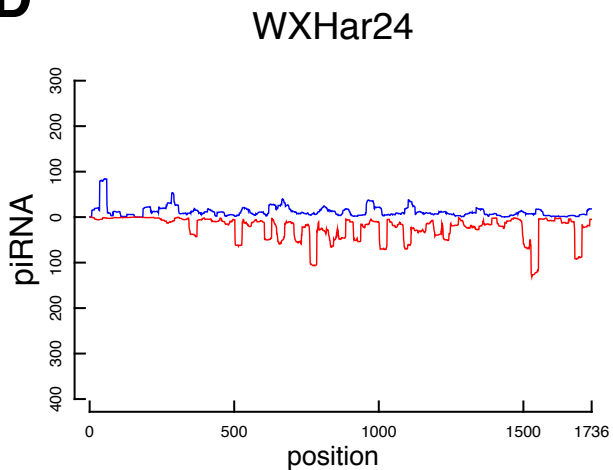
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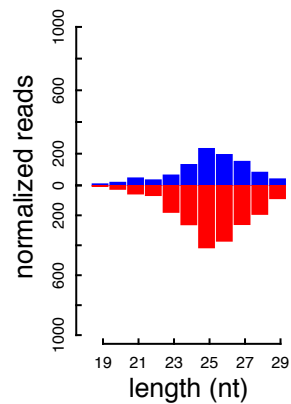
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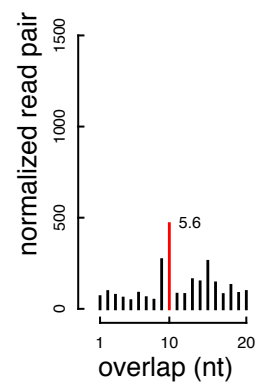
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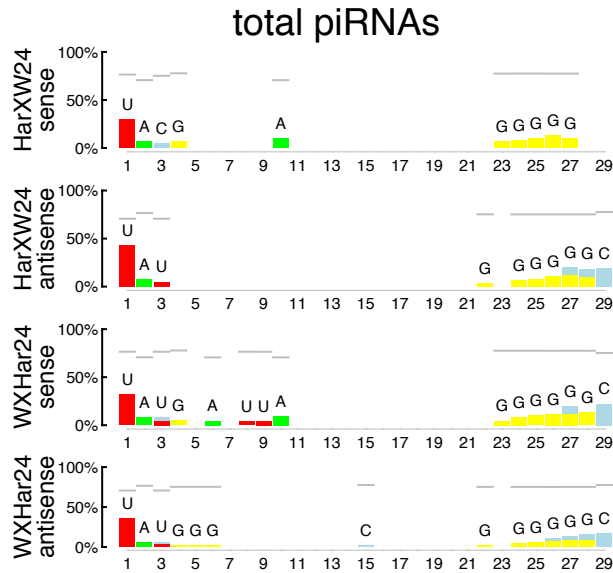
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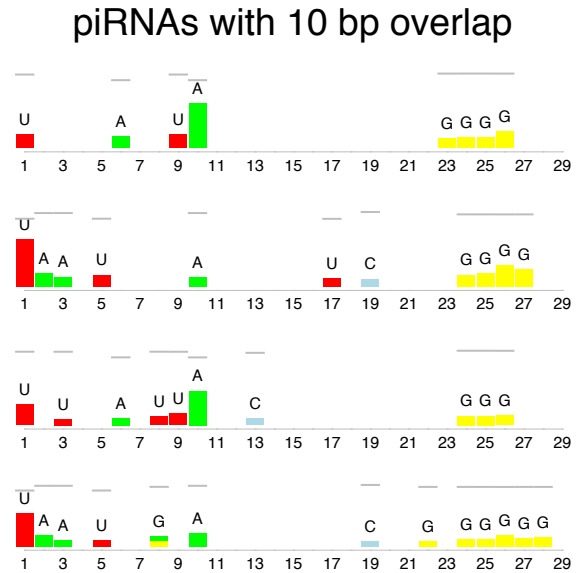
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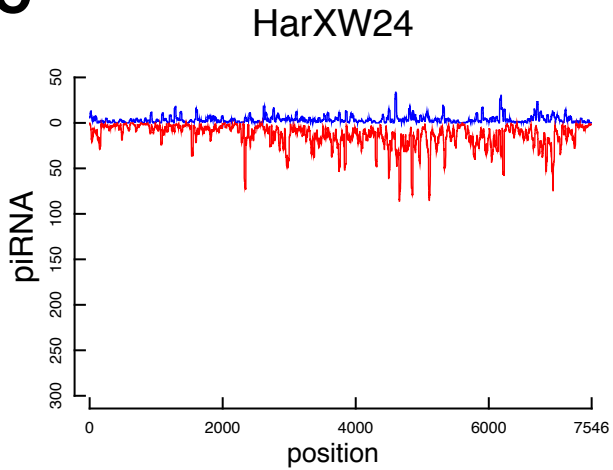
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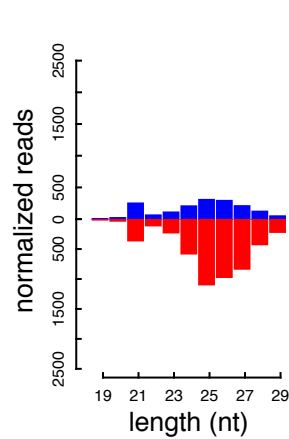
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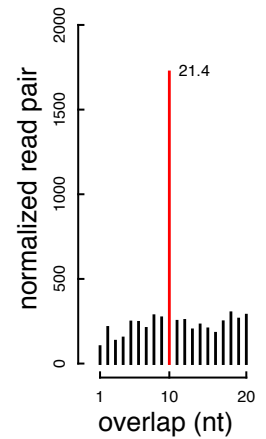
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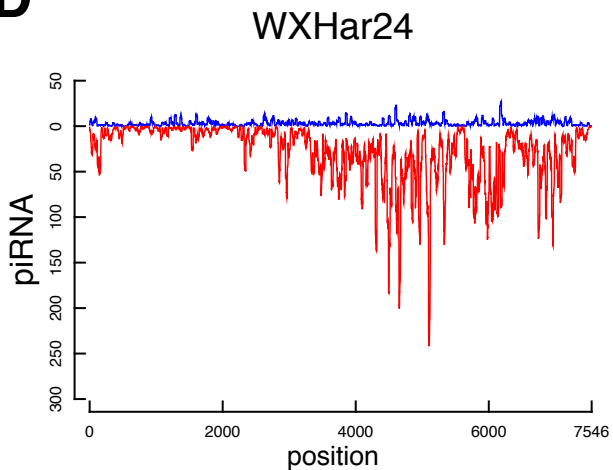
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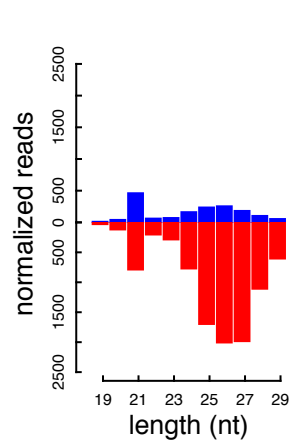
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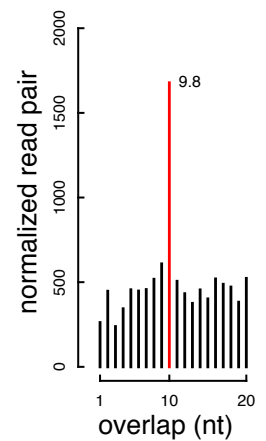
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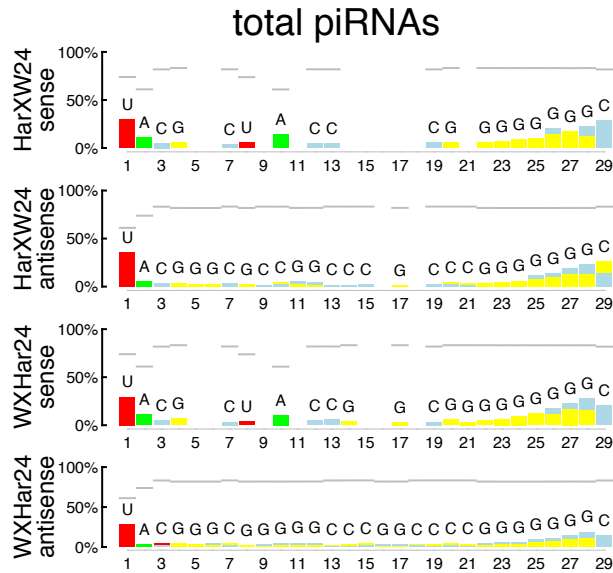
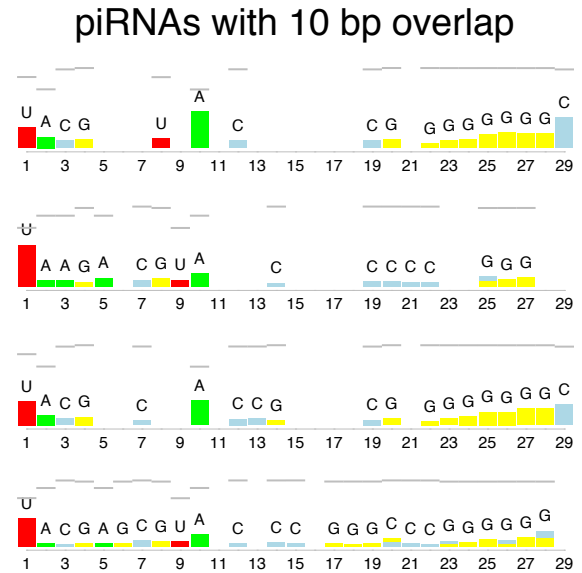
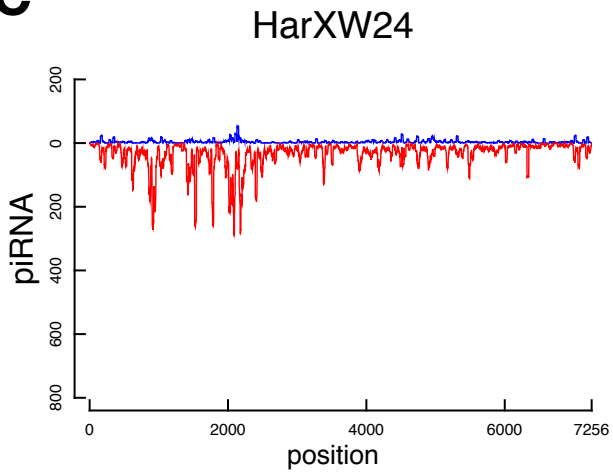
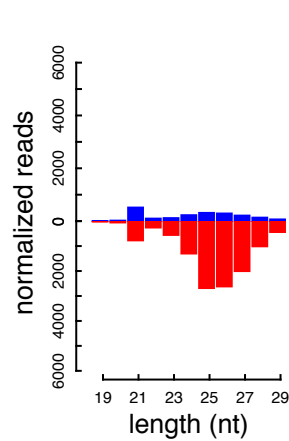
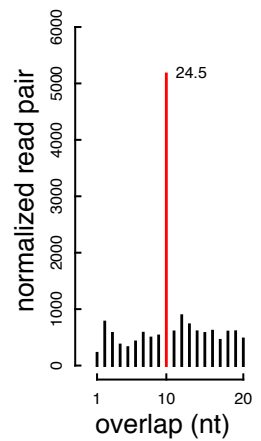
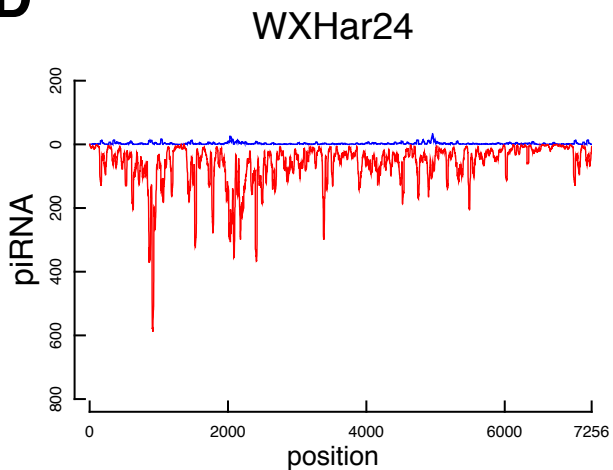
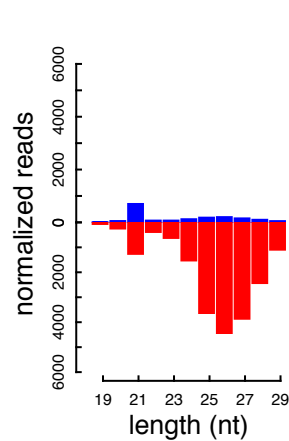
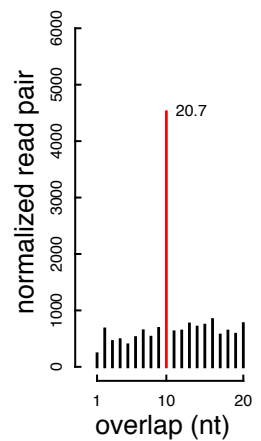
F



H

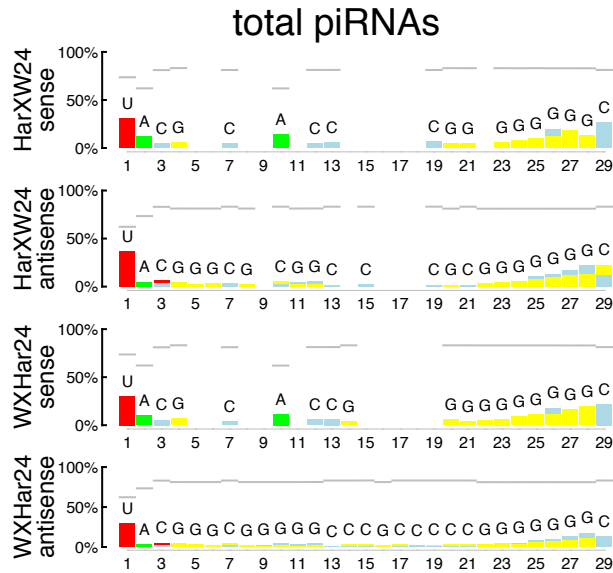


Stalker

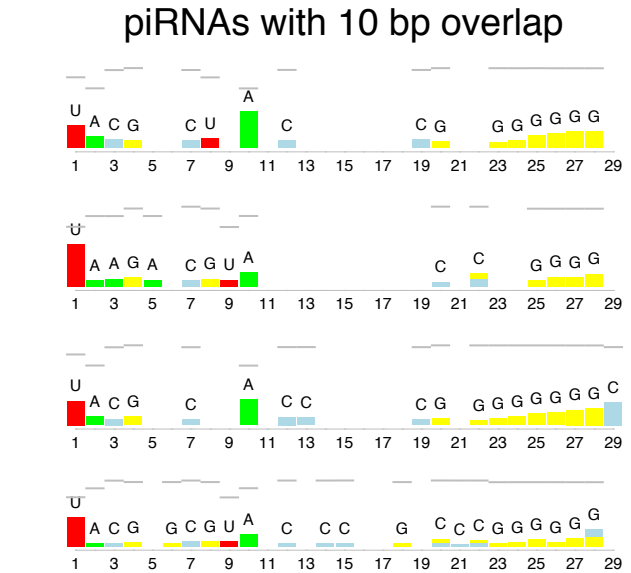
A**B****C****E****G****D****F****H**

Stalker2

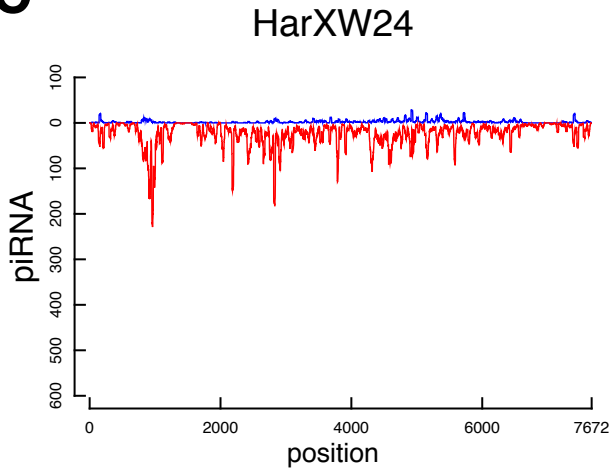
A



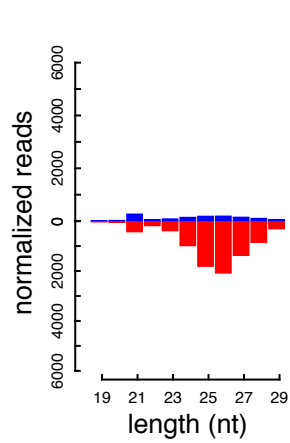
B



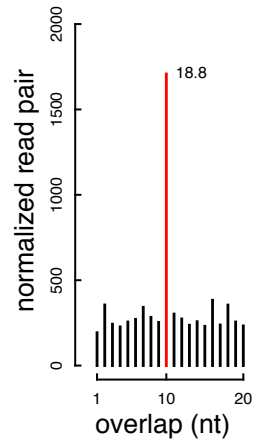
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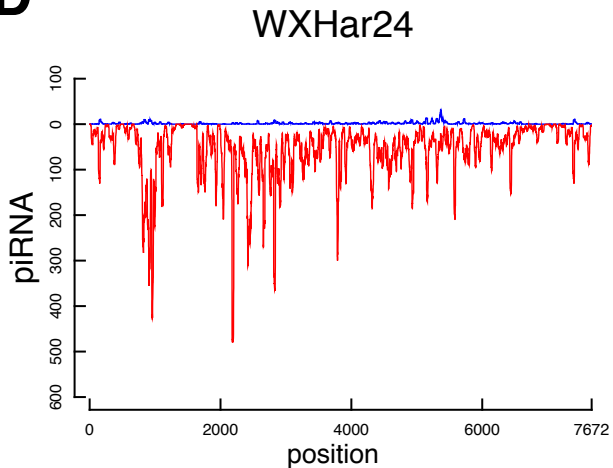
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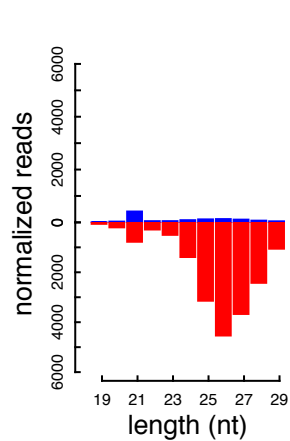
G



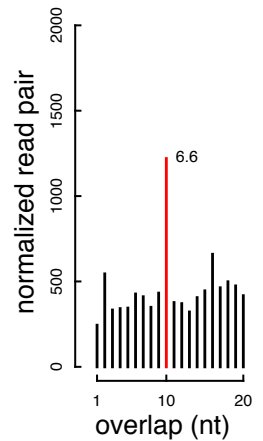
D



F

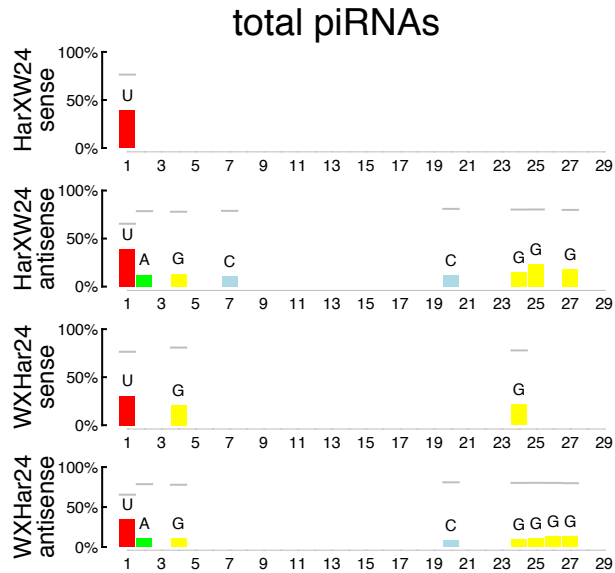


H

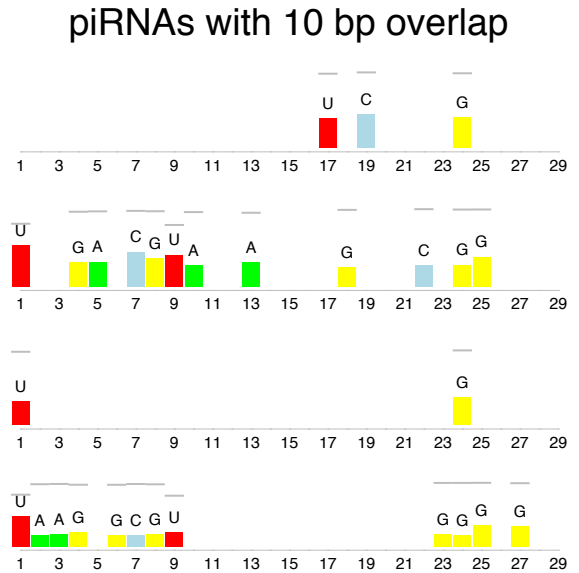


Stalker3

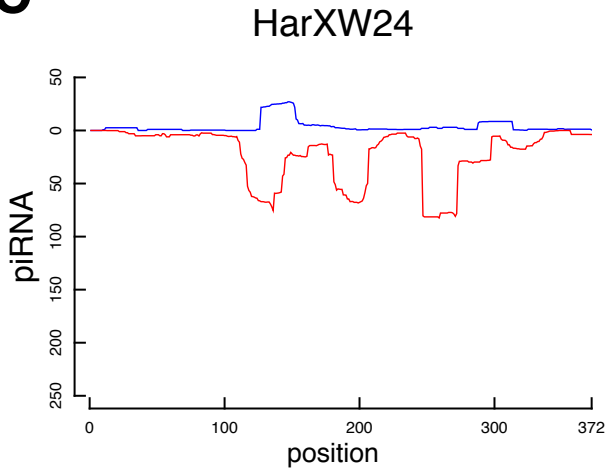
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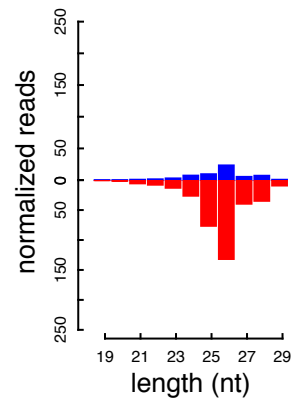
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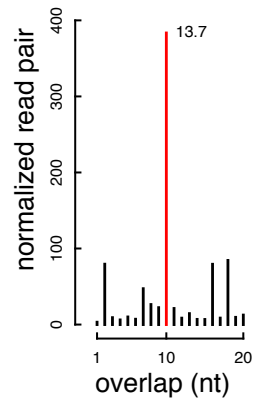
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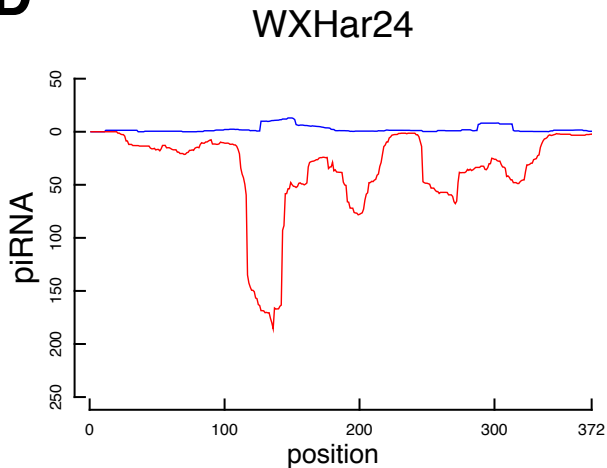
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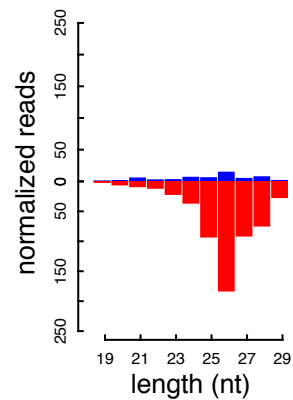
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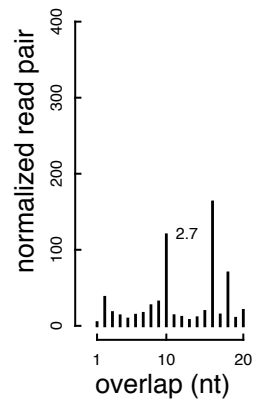
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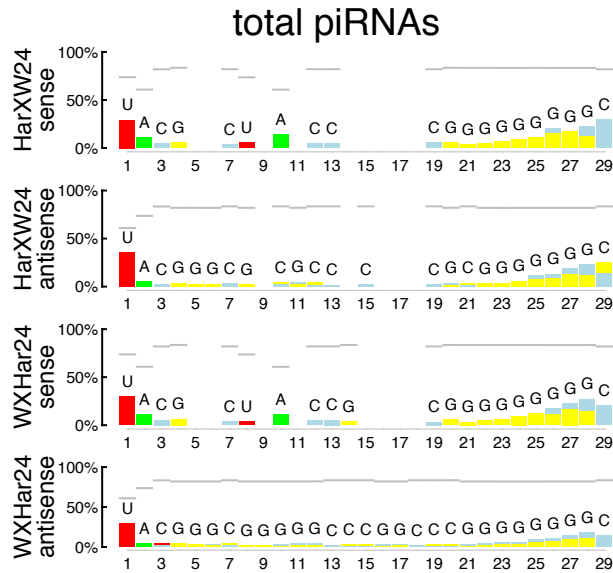
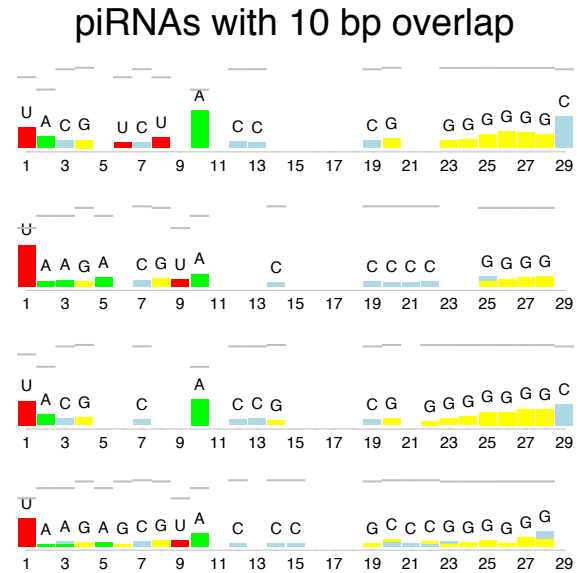
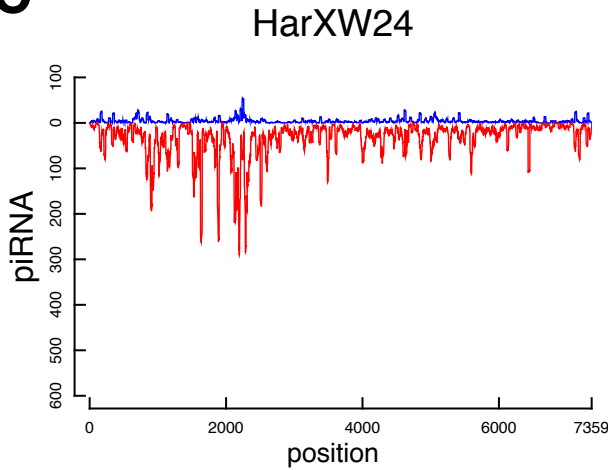
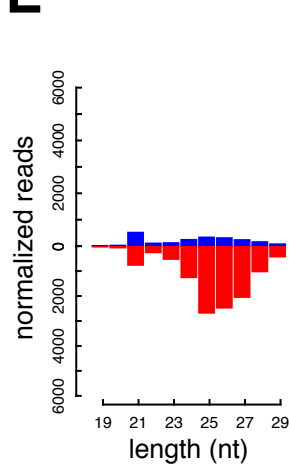
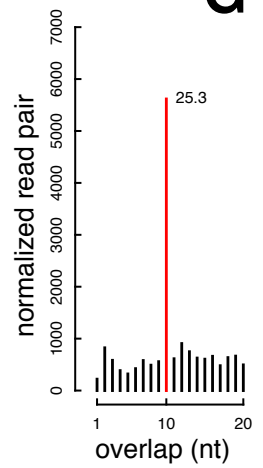
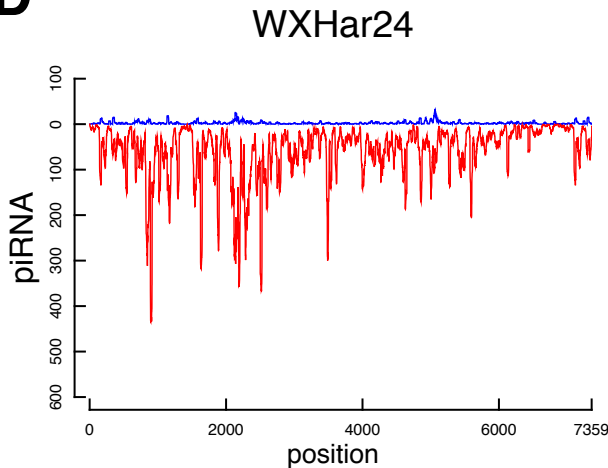
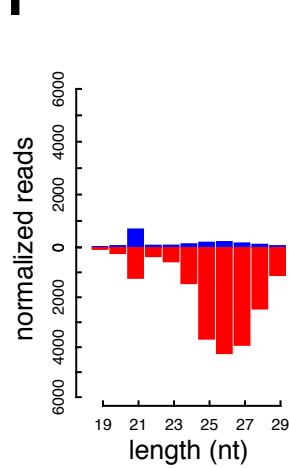
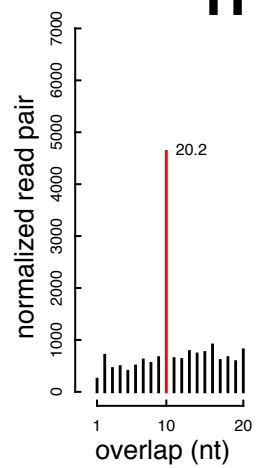
F



H

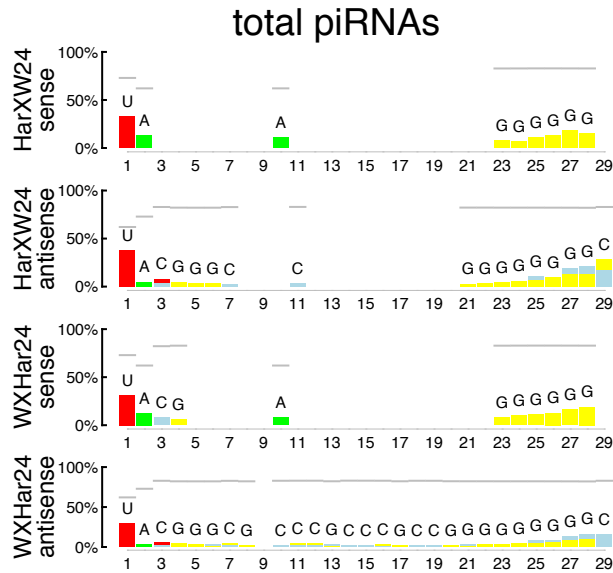


Stalker4

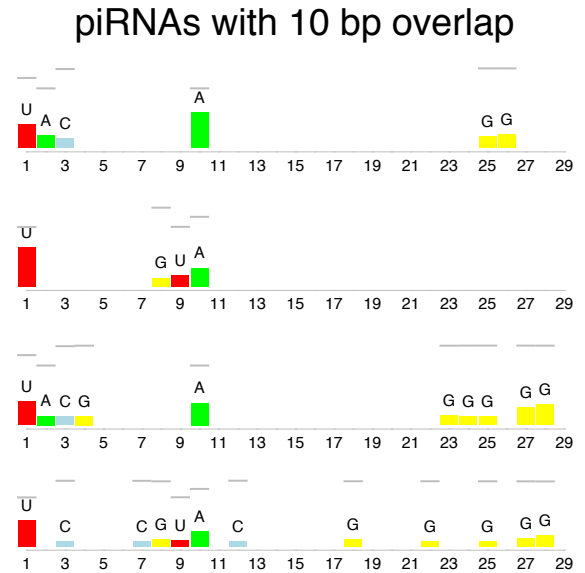
A**B****C****E****G****D****F****H**

Tabor

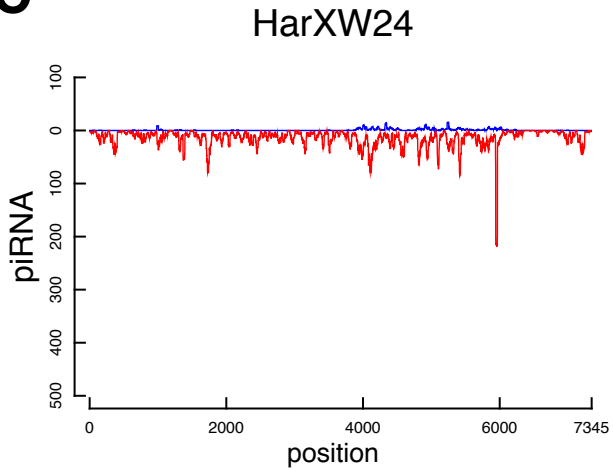
A



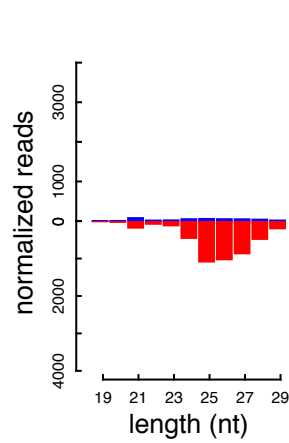
B



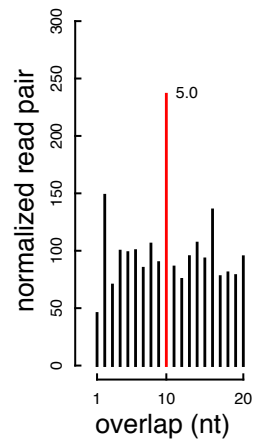
C



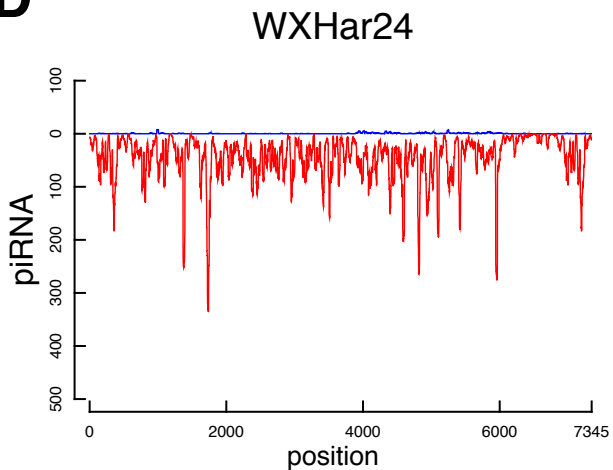
E



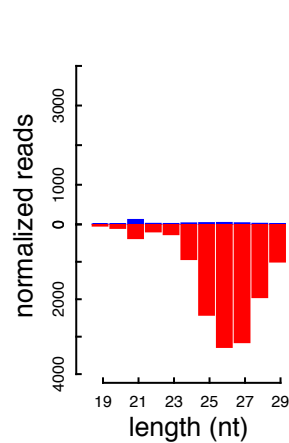
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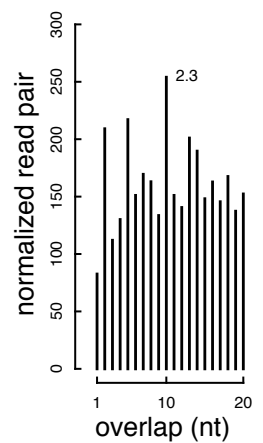
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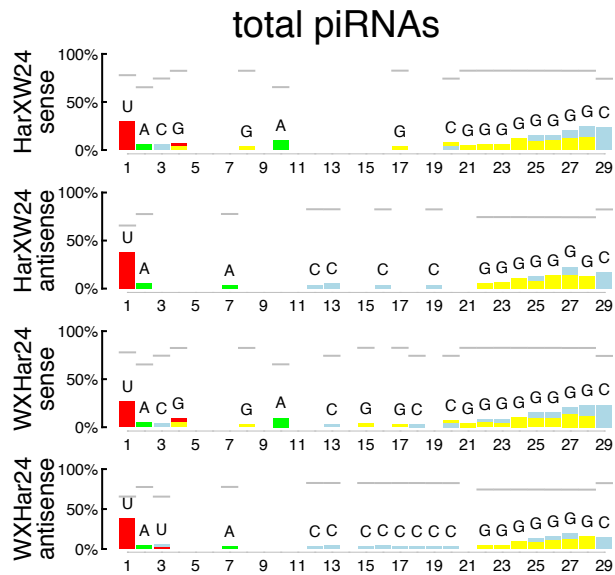
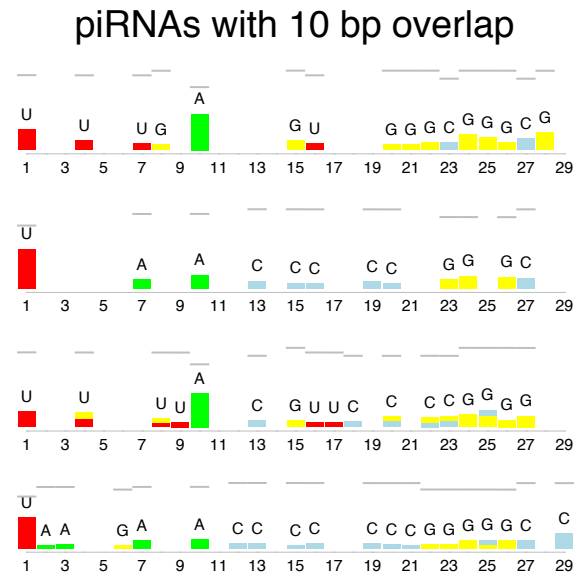
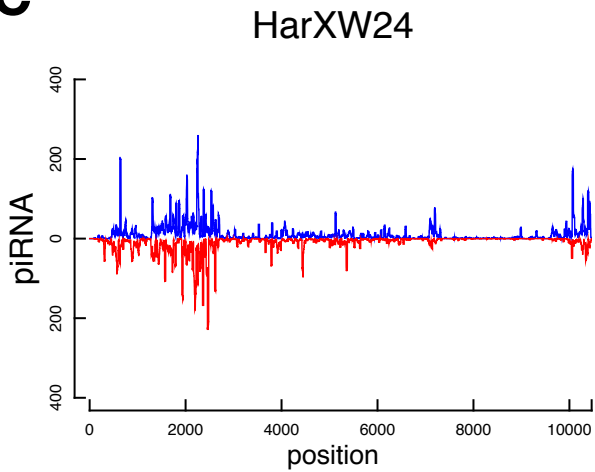
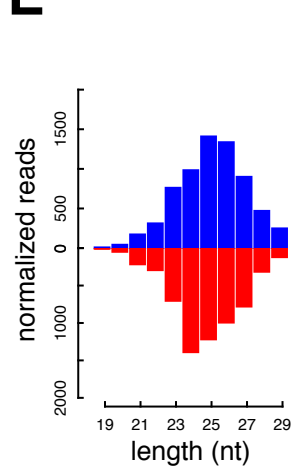
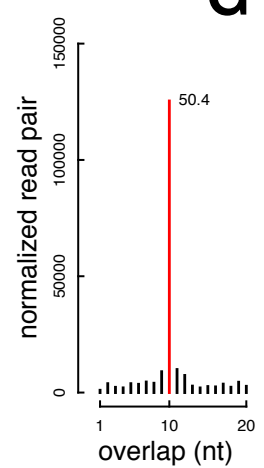
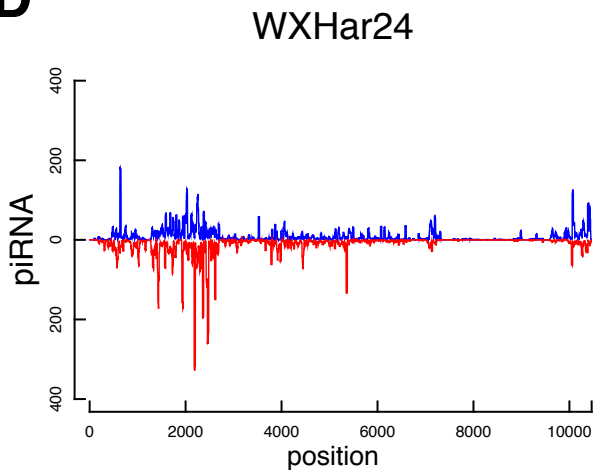
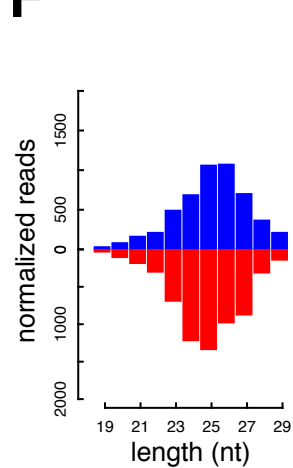
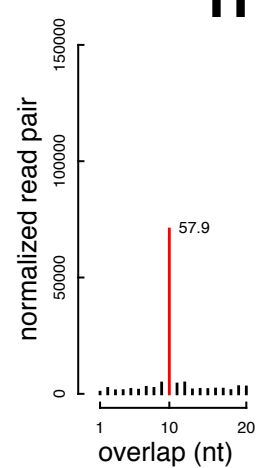
F



H

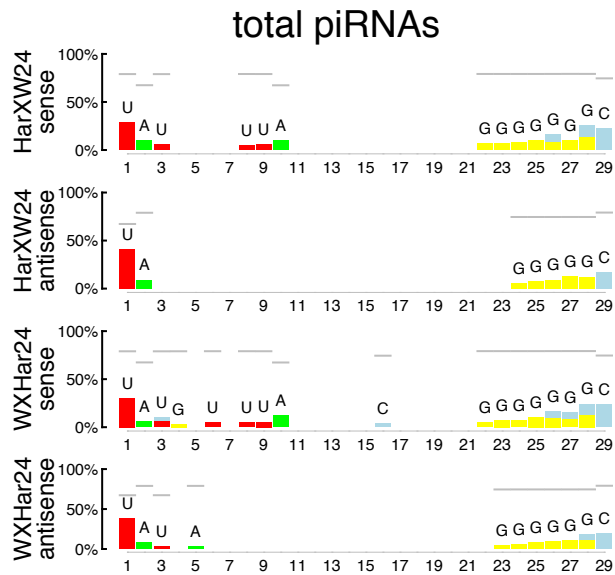


TAHRE

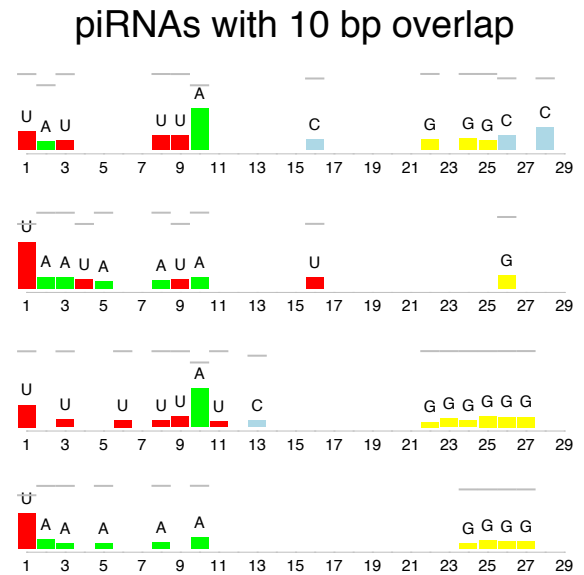
A**B****C****E****G****D****F****H**

TART C TART B TART A

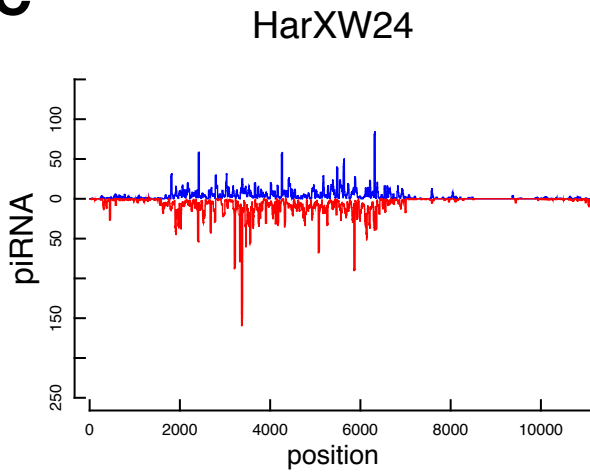
A



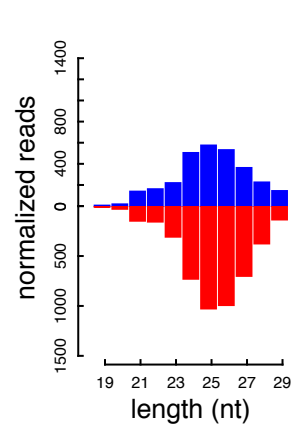
B



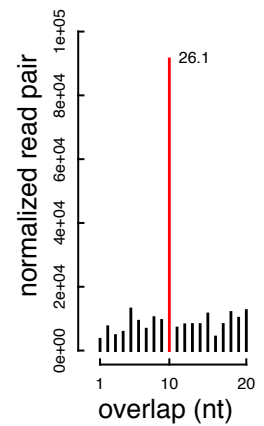
C



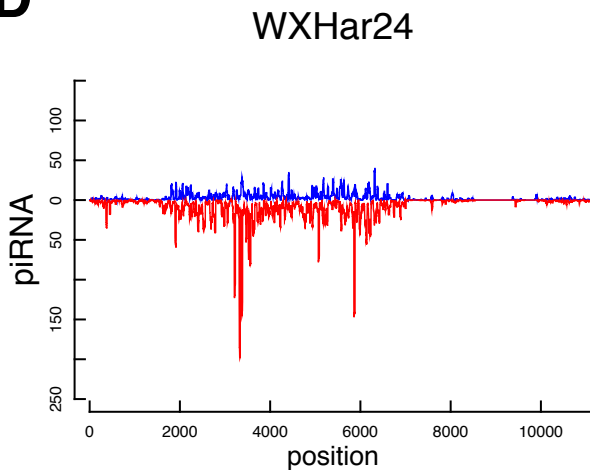
E



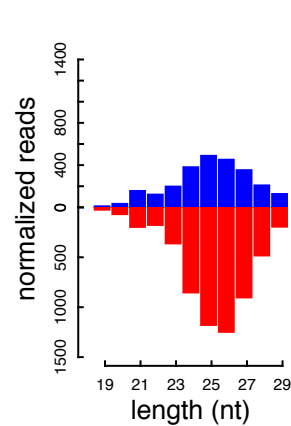
G



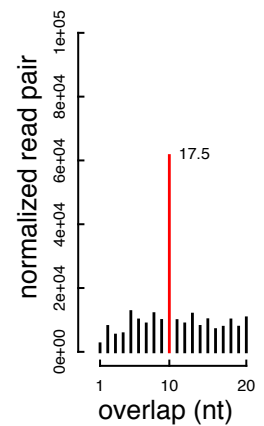
D



F



H



TART C TART B TART A#2

A
total piRNAs

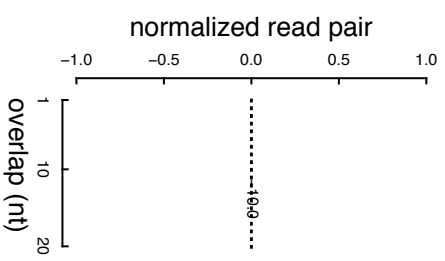
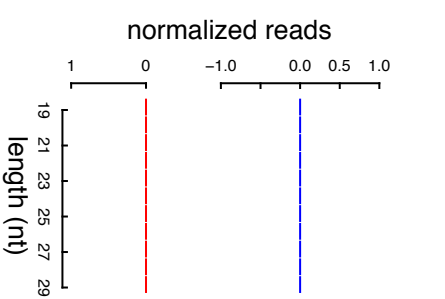
B
piRNAs with 10 bp overlap

WXHar24 antisense WXHar24 sense HarXW24 antisense HarXW24 sense

C

E

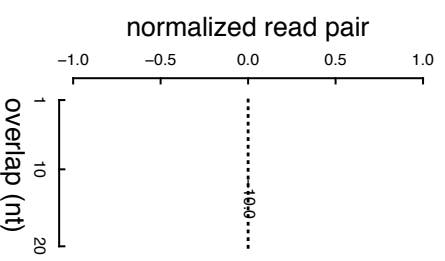
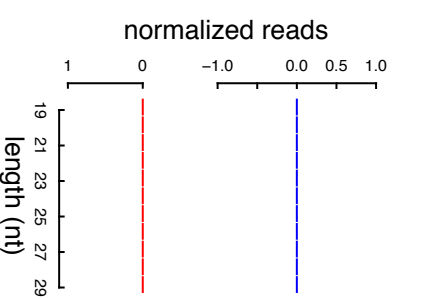
G



D

F

H



TART C TART B TART A#3

A
total piRNAs

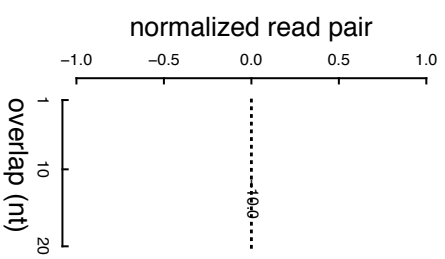
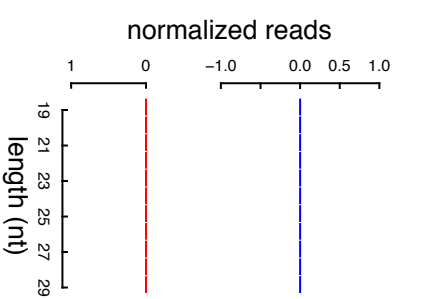
B
piRNAs with 10 bp overlap

WXHar24 antisense WXHar24 sense HarXW24 antisense HarXW24 sense

C

E

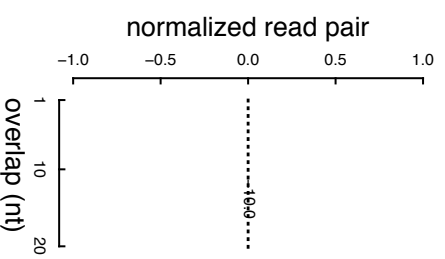
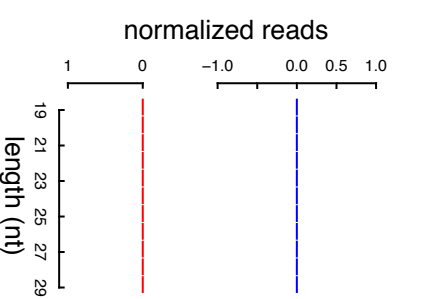
G



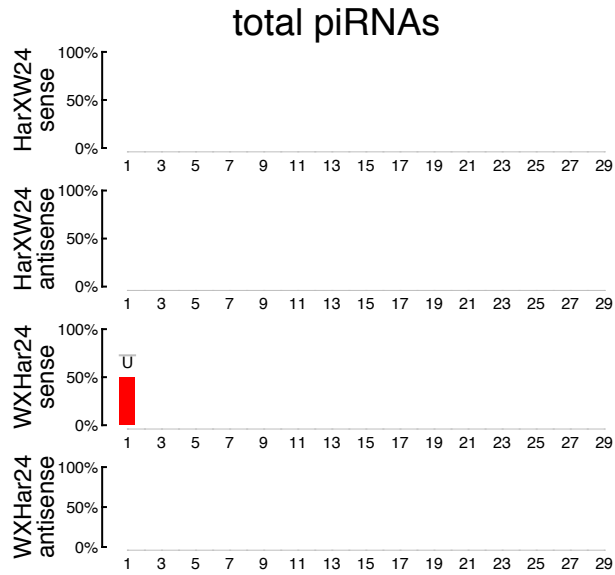
D

F

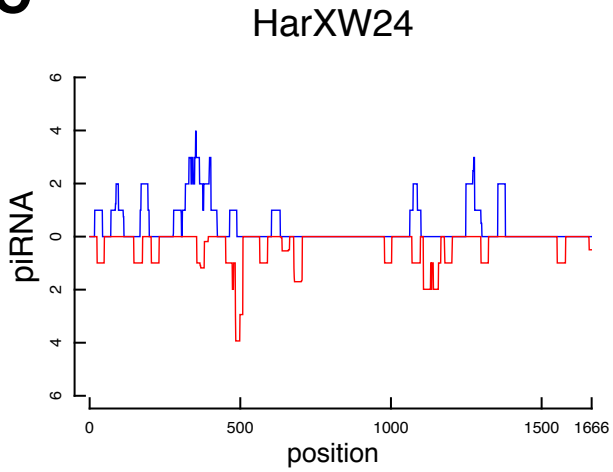
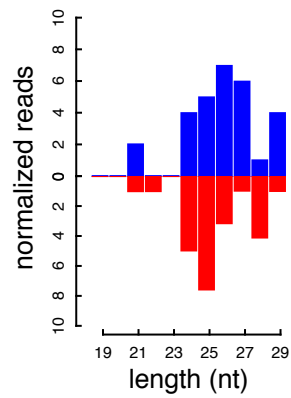
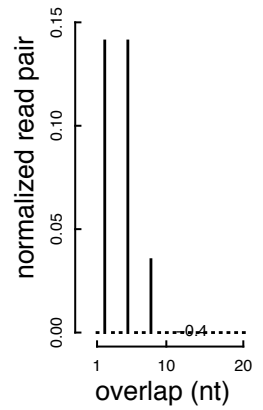
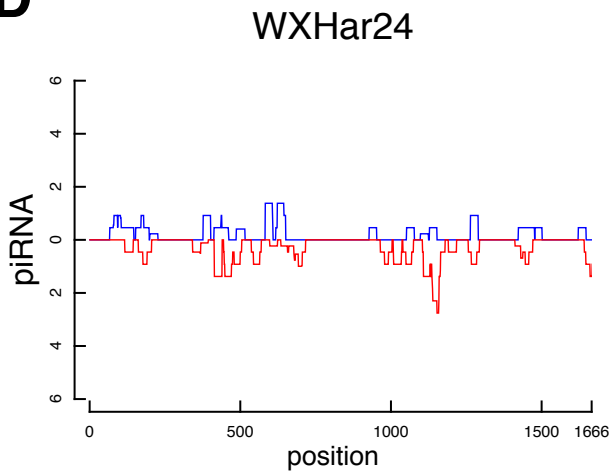
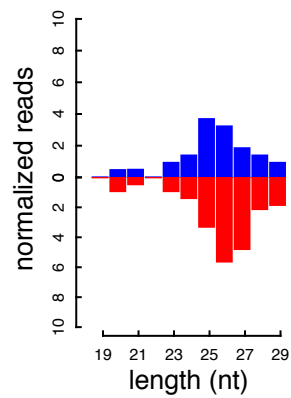
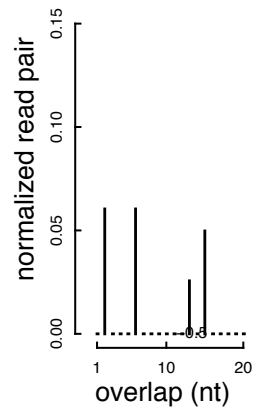
H



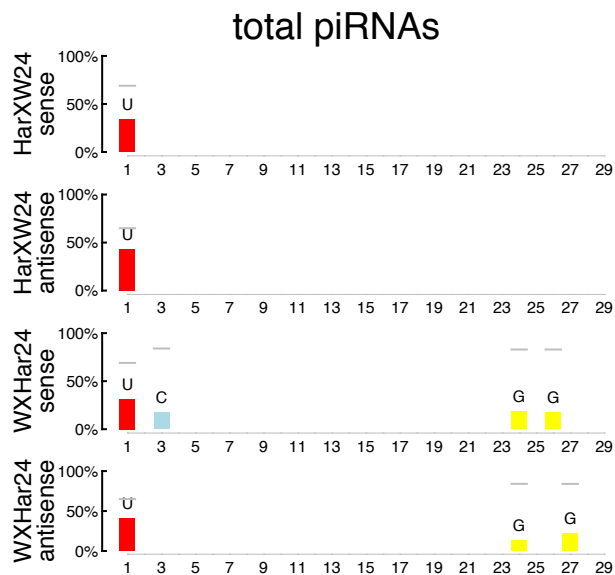
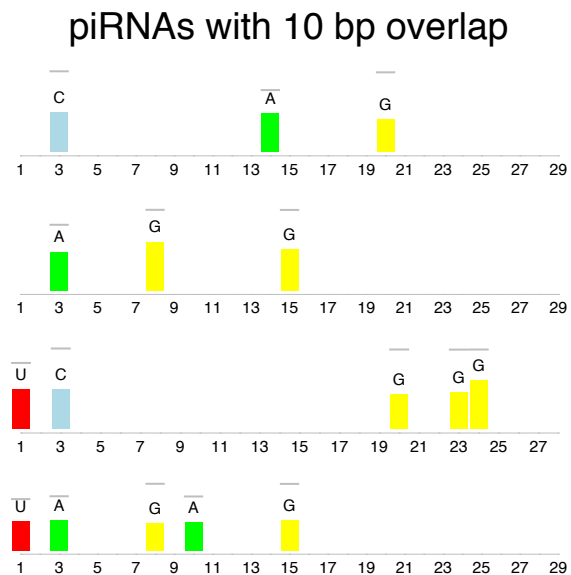
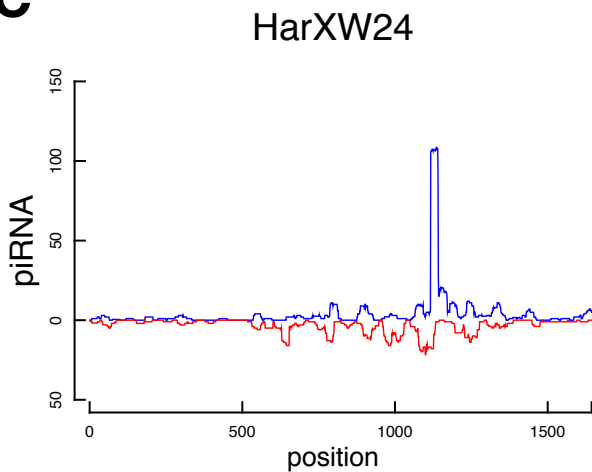
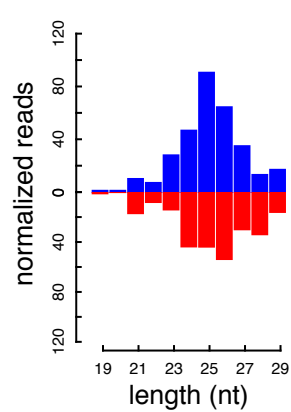
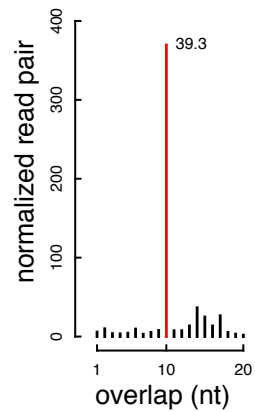
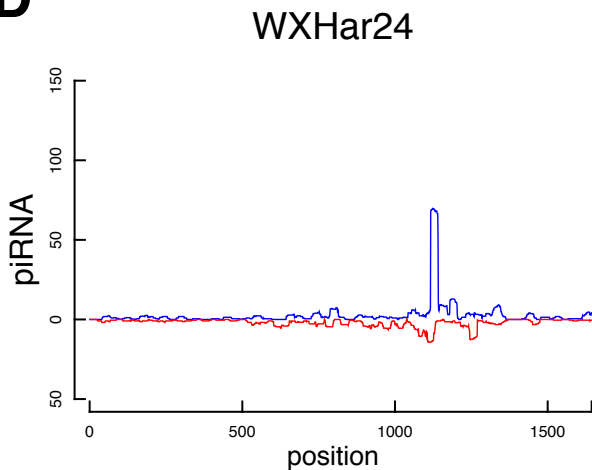
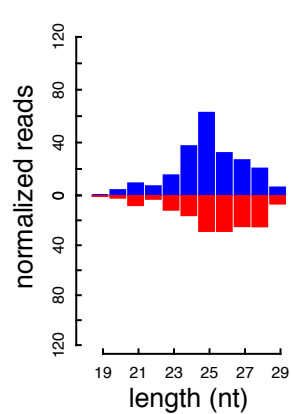
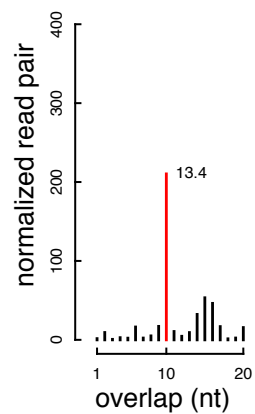
Tc1

A**B**

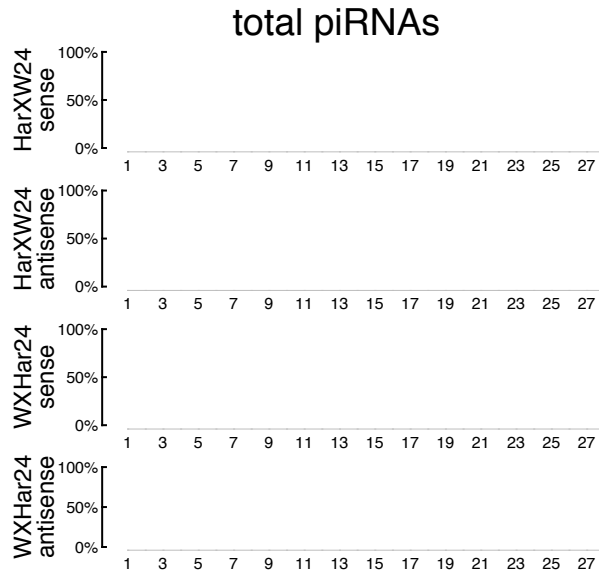
piRNAs with 10 bp overlap

C**E****G****D****F****H**

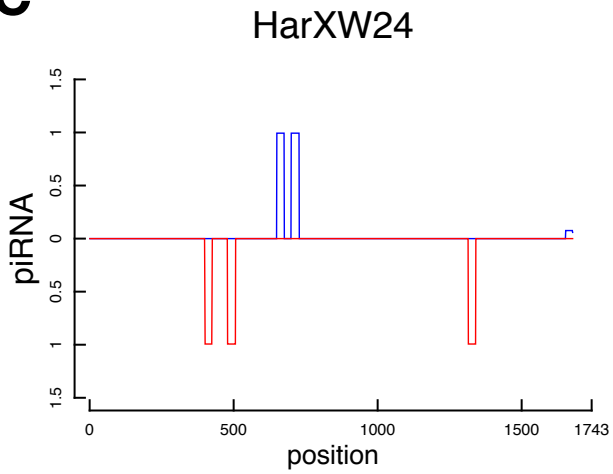
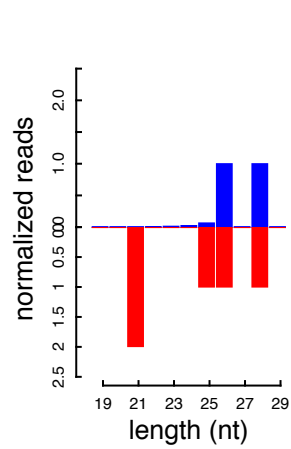
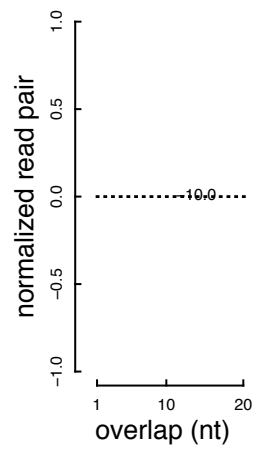
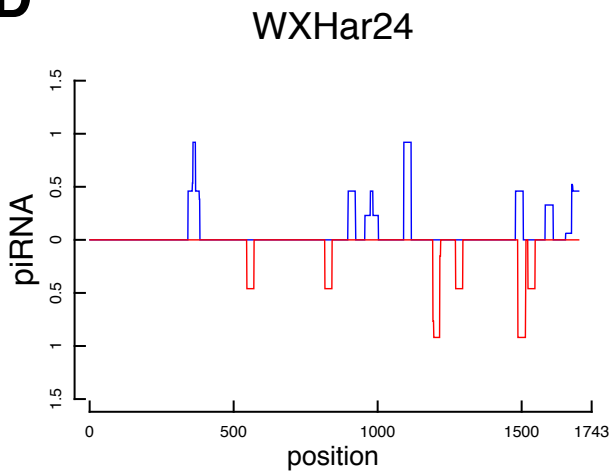
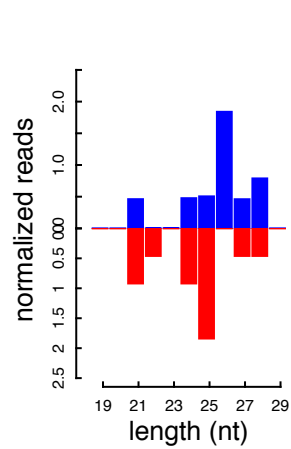
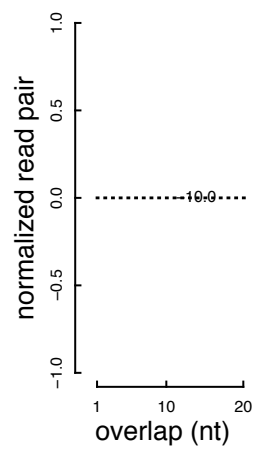
Tc1 2

A**B****C****E****G****D****F****H**

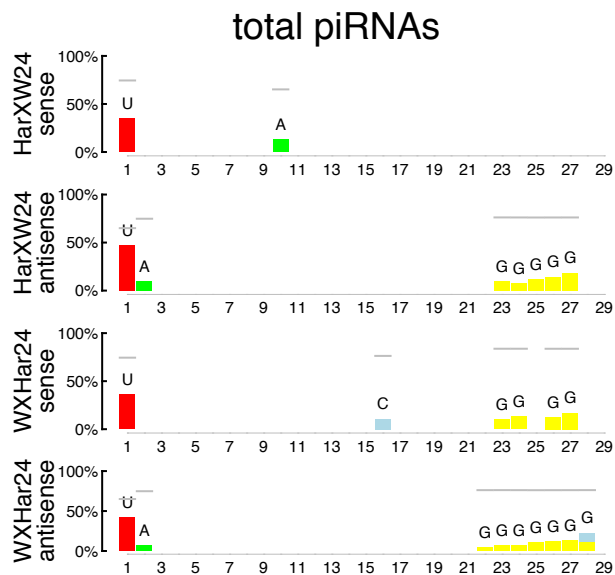
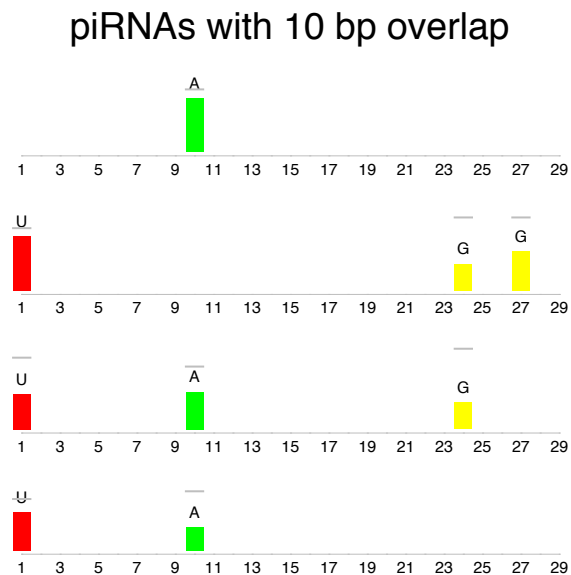
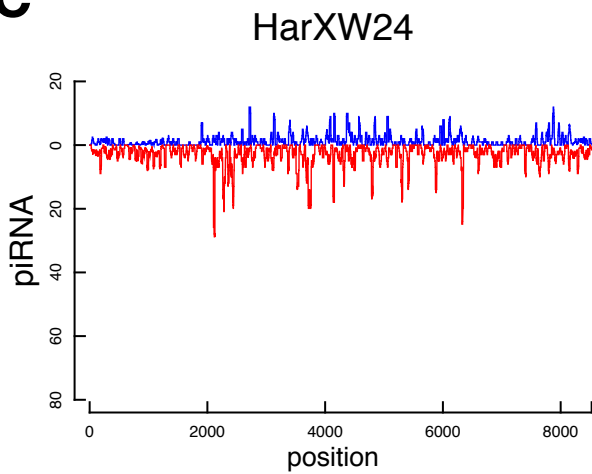
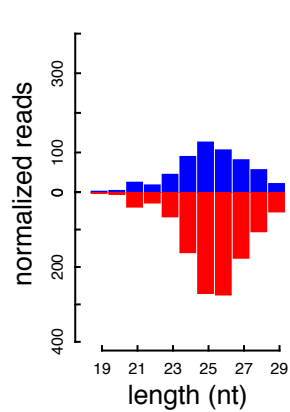
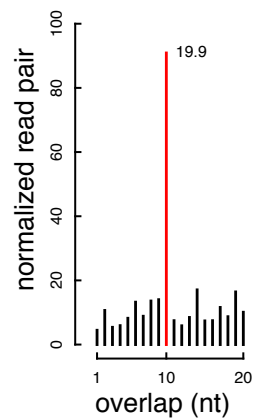
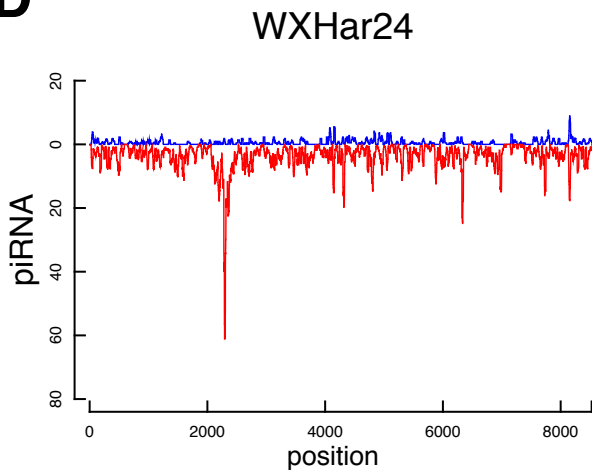
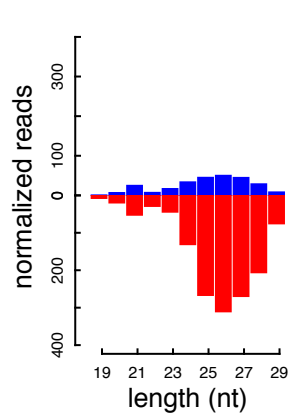
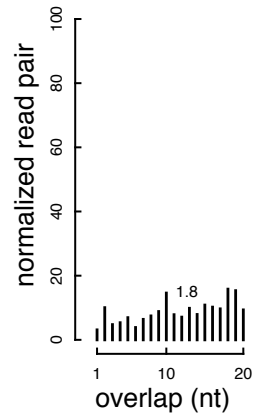
Tc3

A**B**

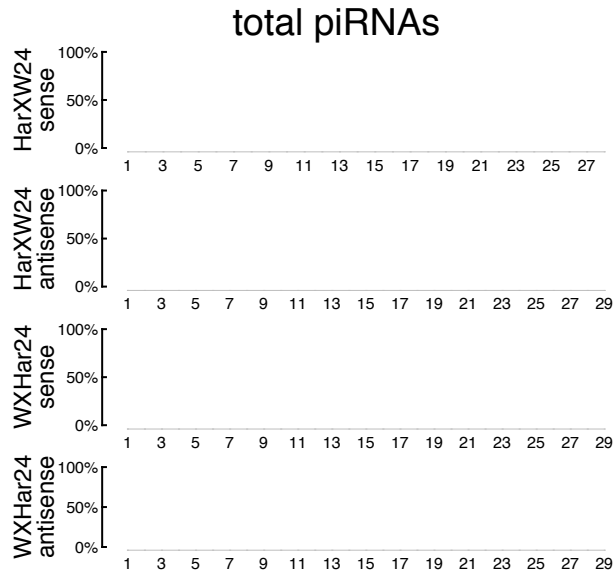
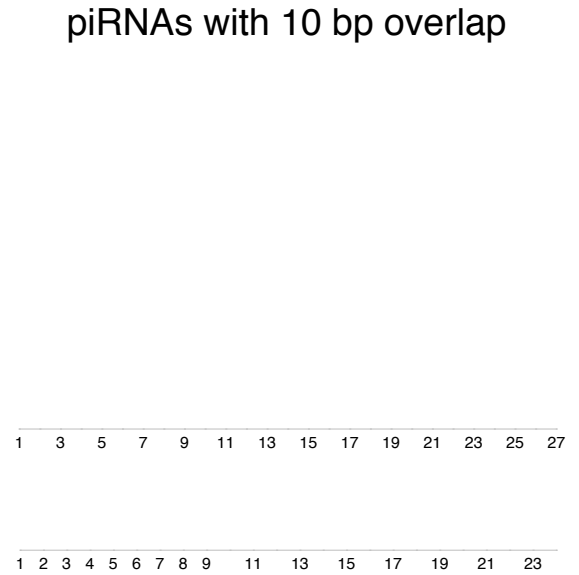
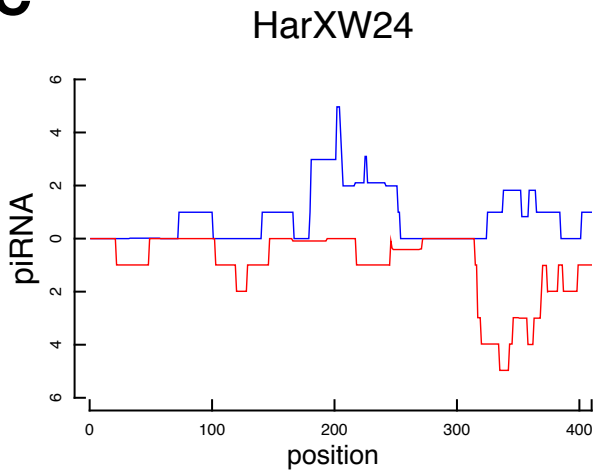
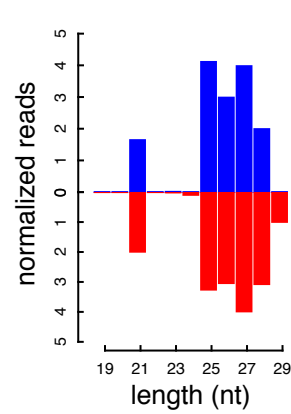
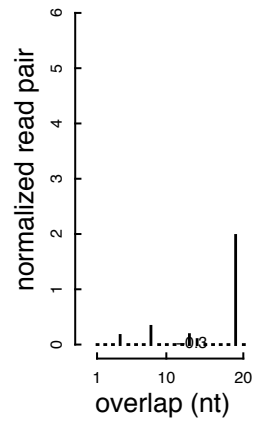
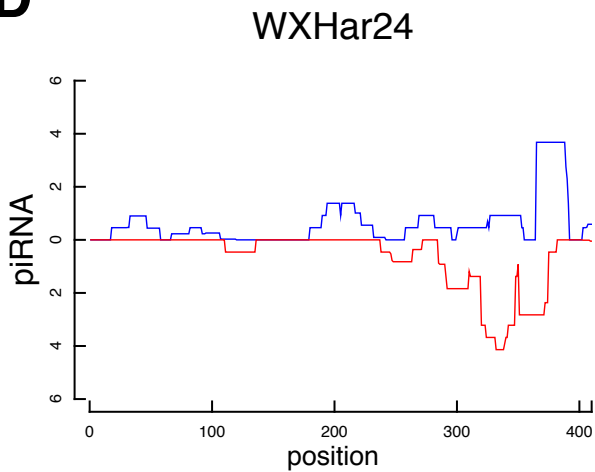
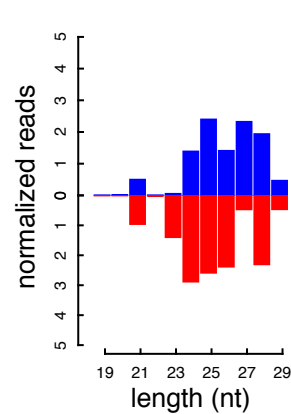
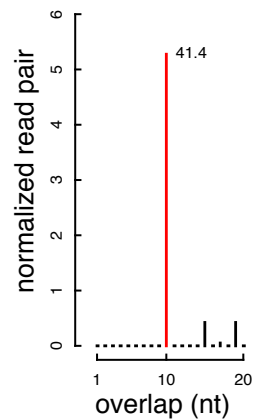
piRNAs with 10 bp overlap

C**E****G****D****F****H**

Tirant

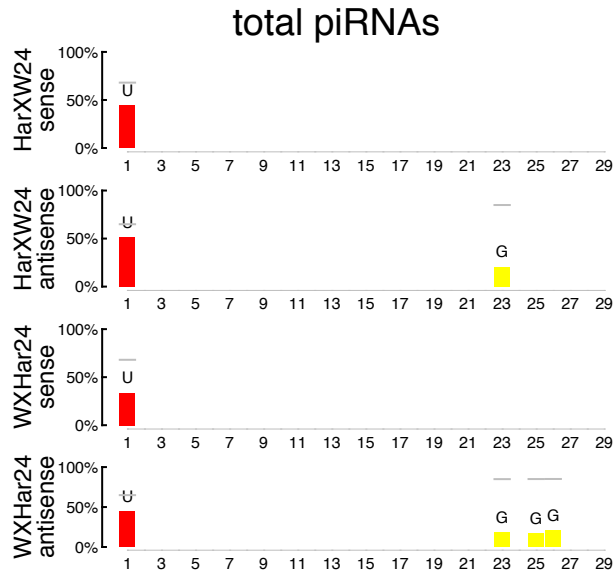
A**B****C****E****G****D****F****H**

Tom1

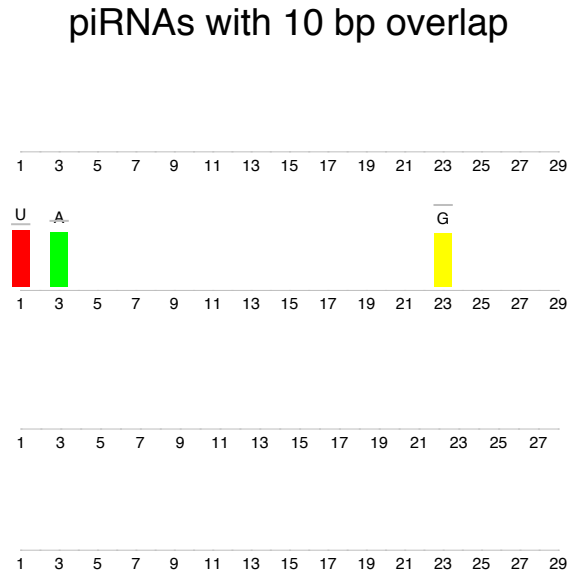
A**B****C****E****G****D****F****H**

transib1

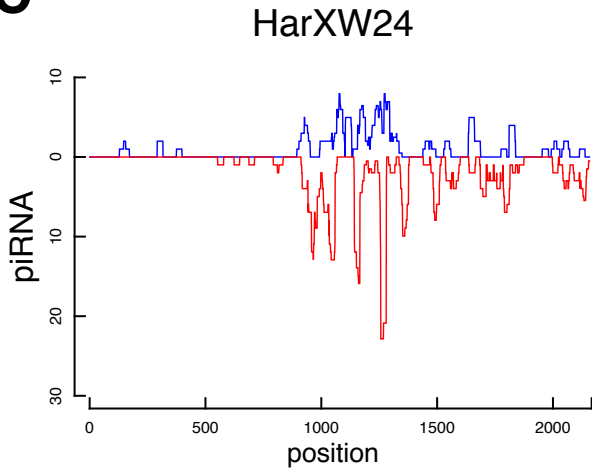
A



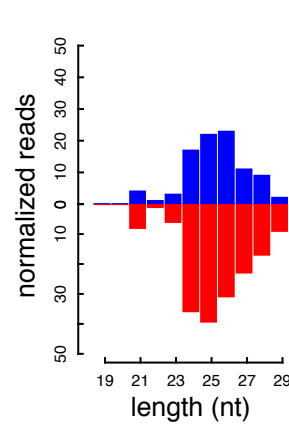
B



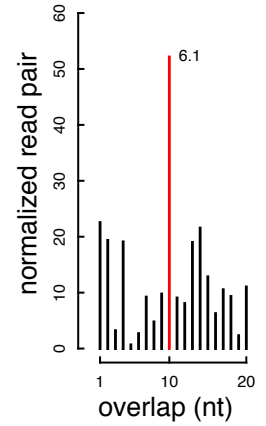
C



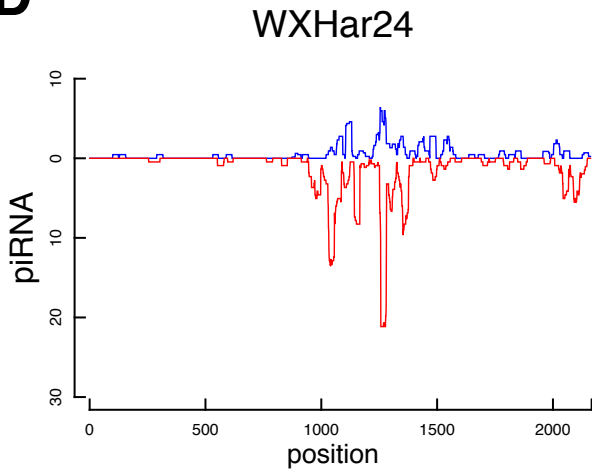
E



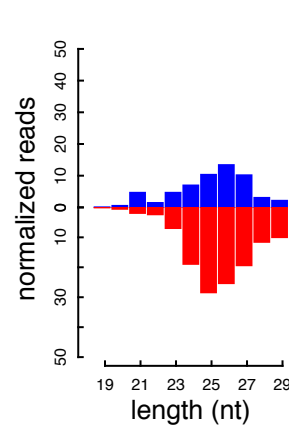
G



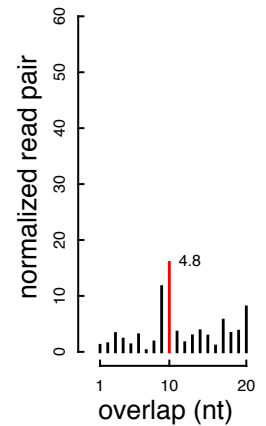
D



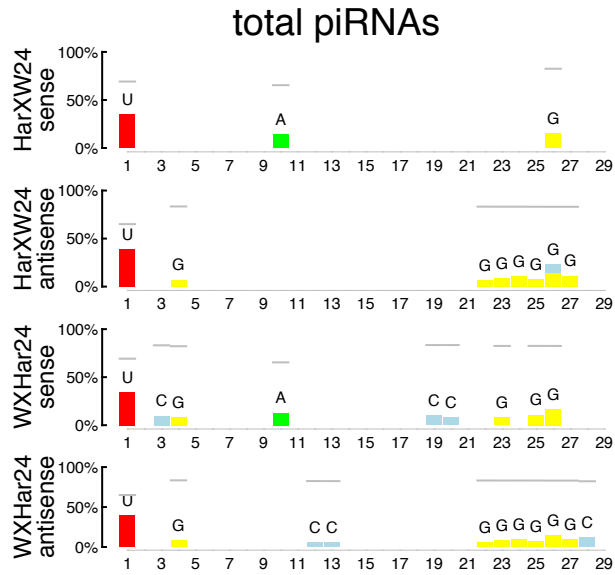
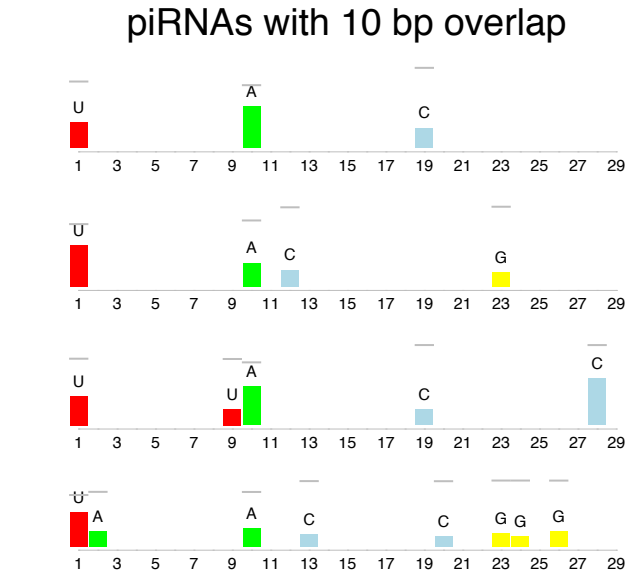
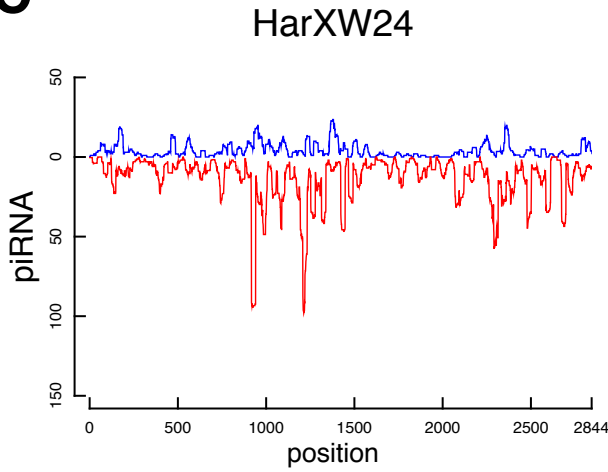
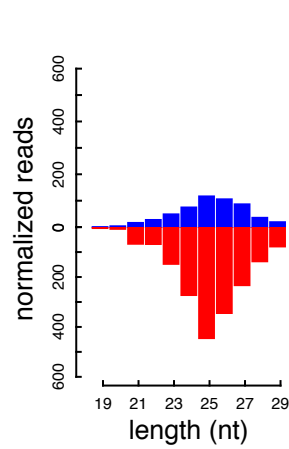
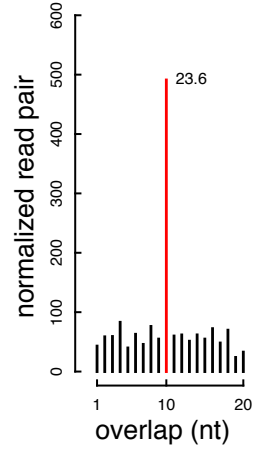
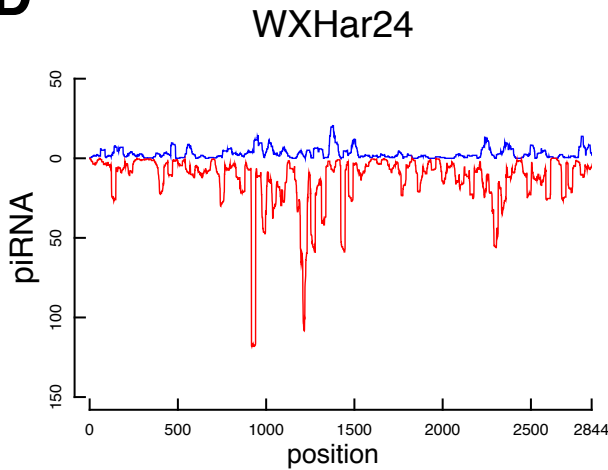
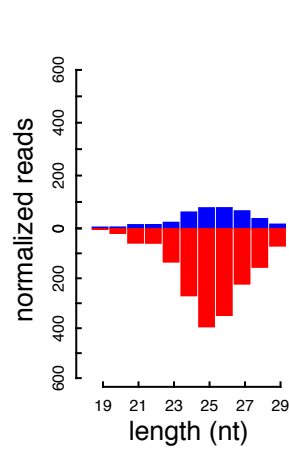
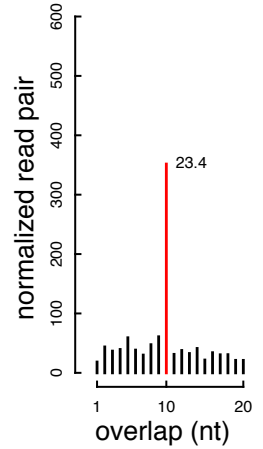
F



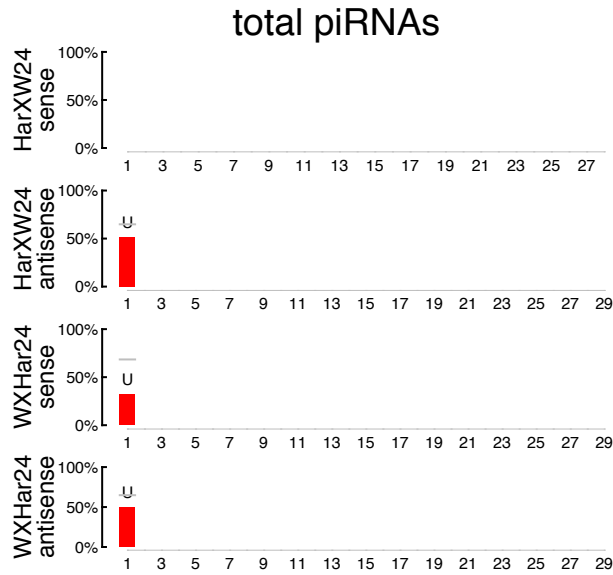
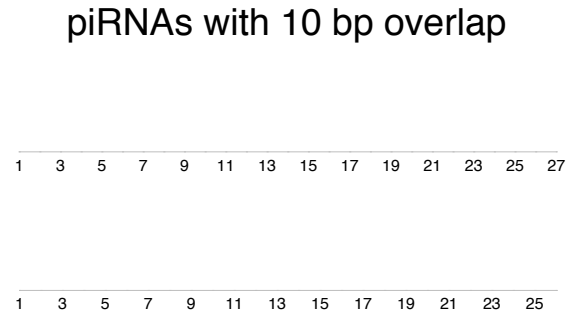
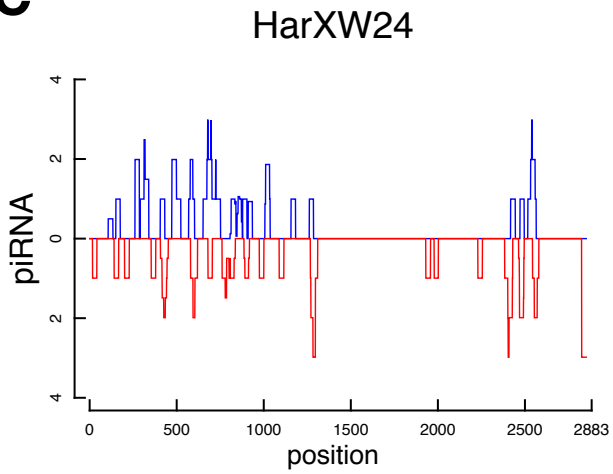
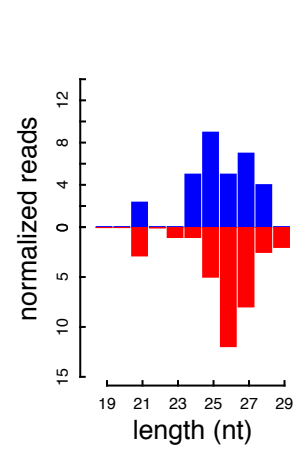
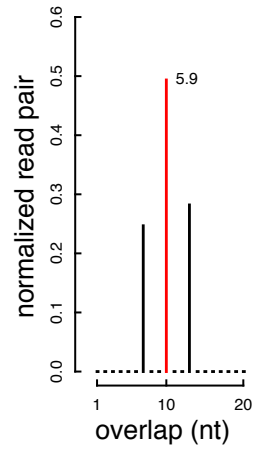
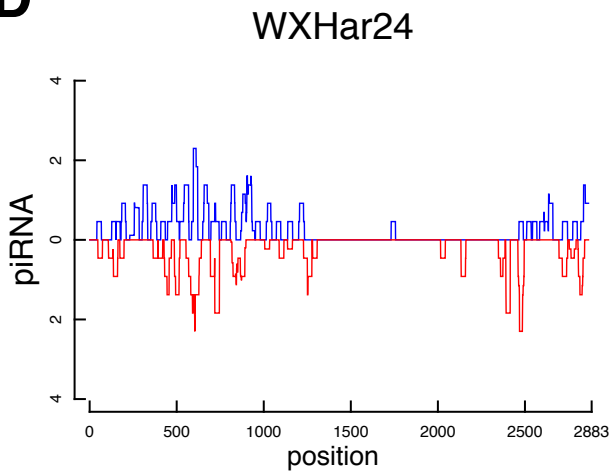
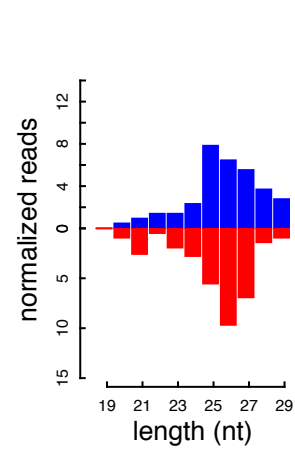
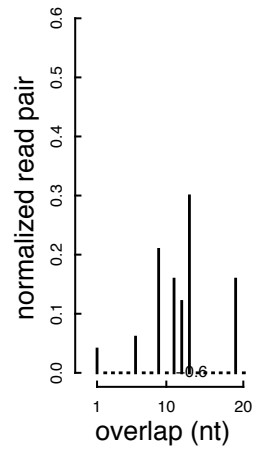
H



transib2

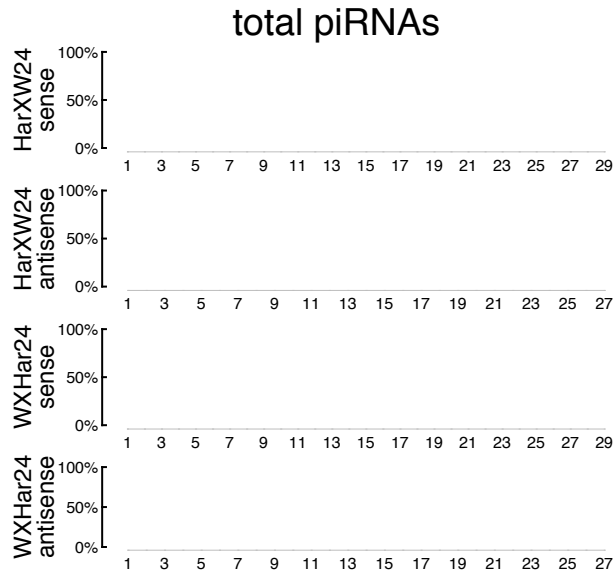
A**B****C****E****G****D****F****H**

transib3

A**B****C****E****G****D****F****H**

transib4

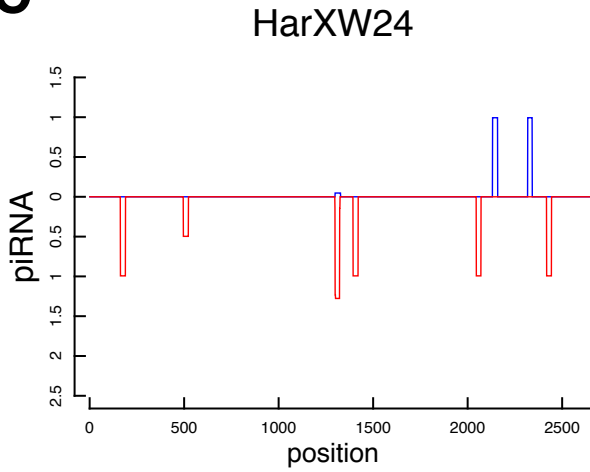
A



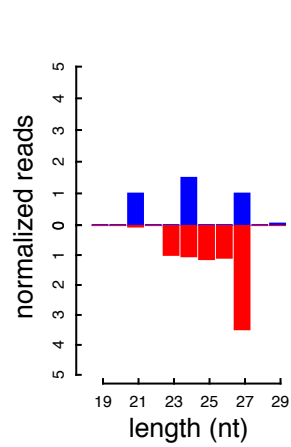
B

piRNAs with 10 bp overlap

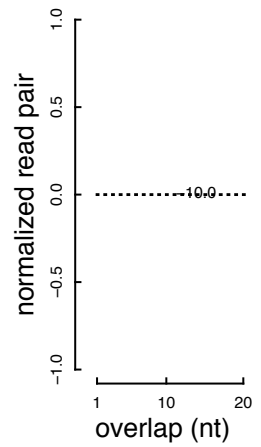
C



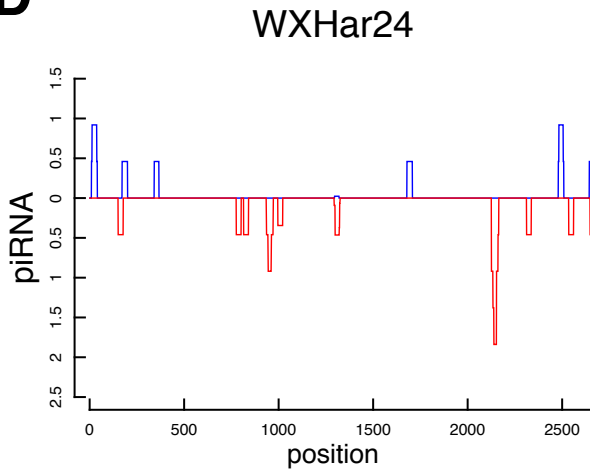
E



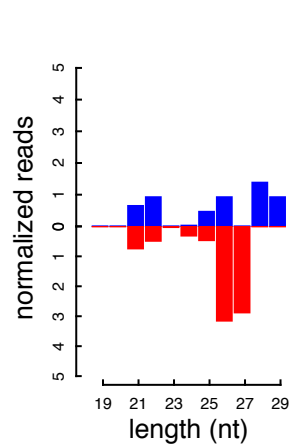
G



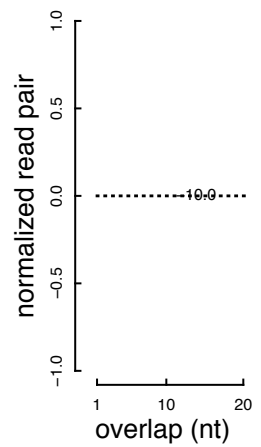
D



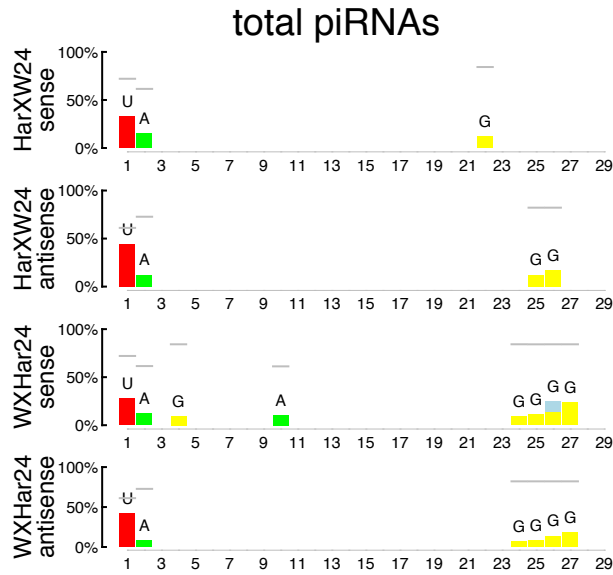
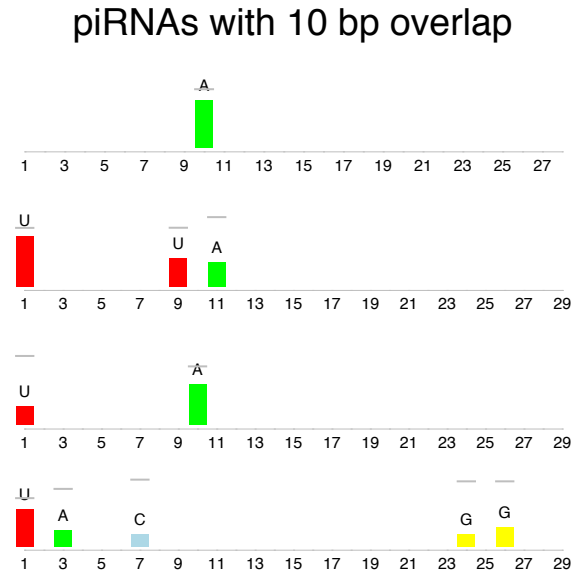
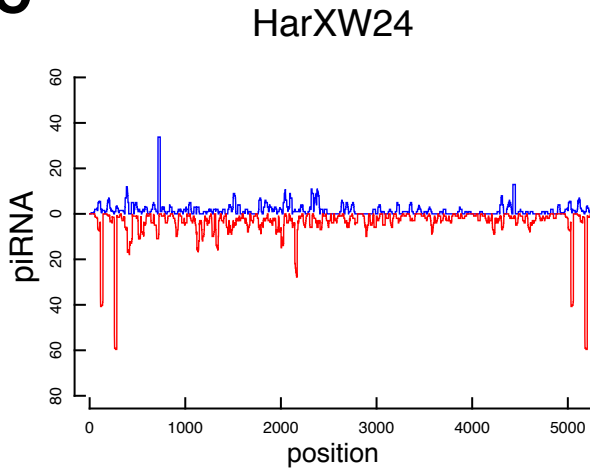
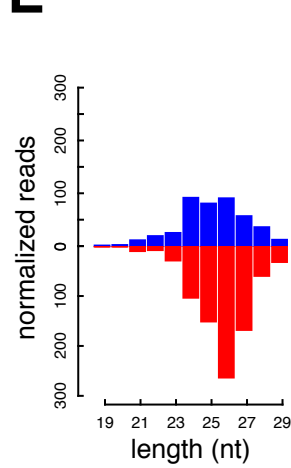
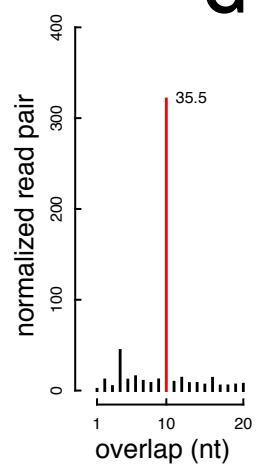
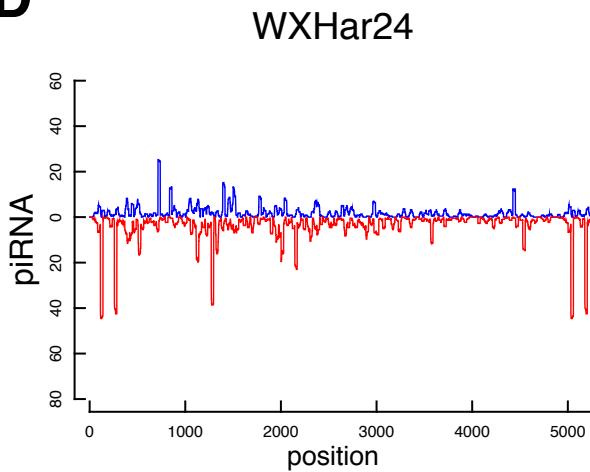
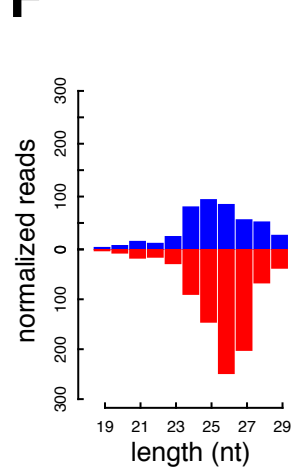
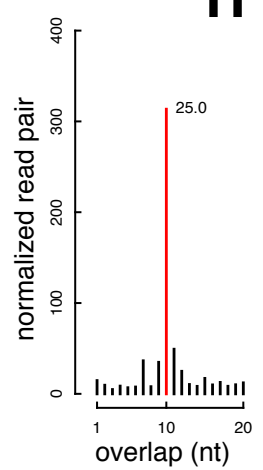
F



H

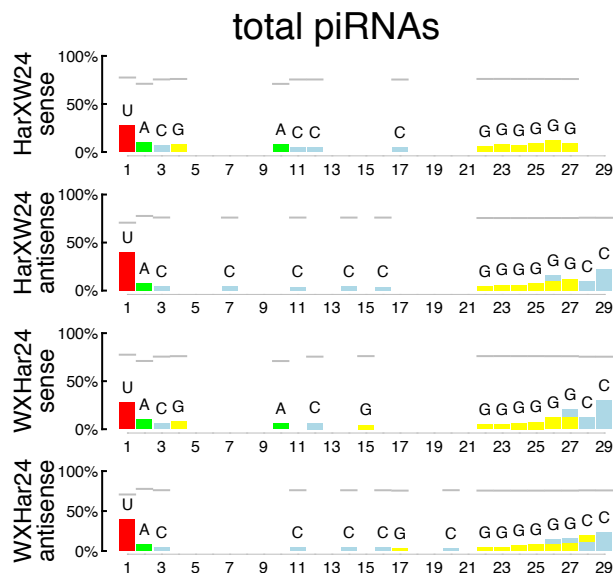


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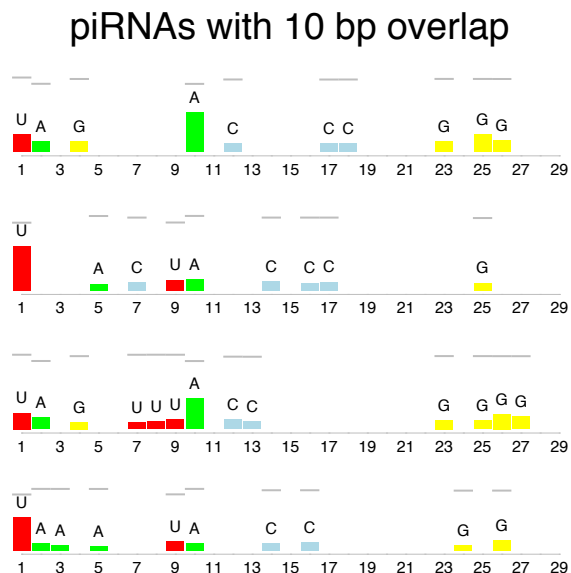
A**B****C****E****G****D****F****H**

X element

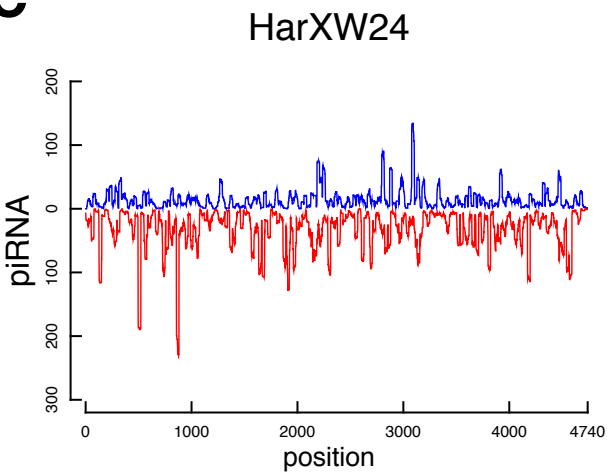
A



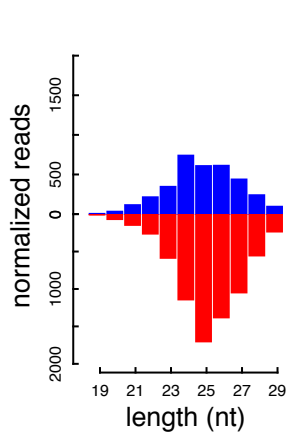
B



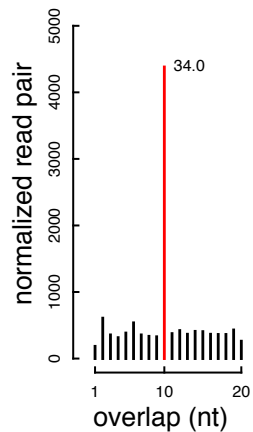
C



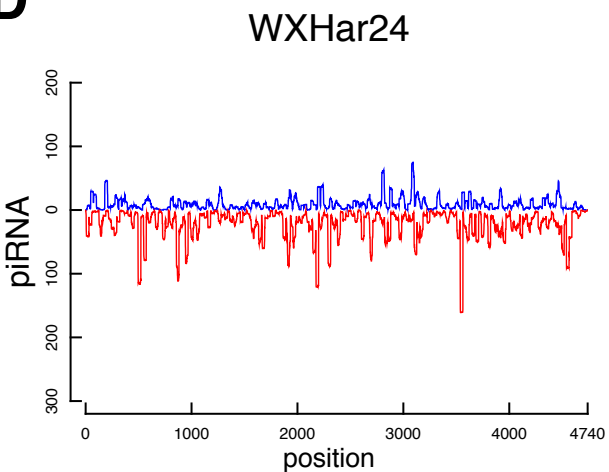
E



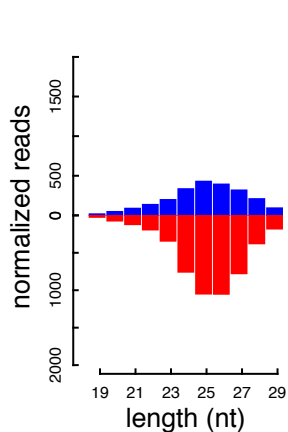
G



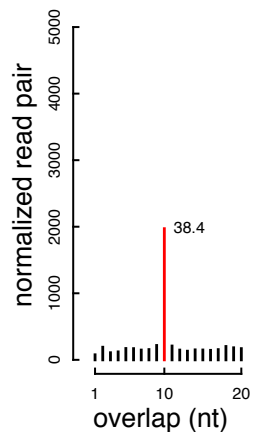
D



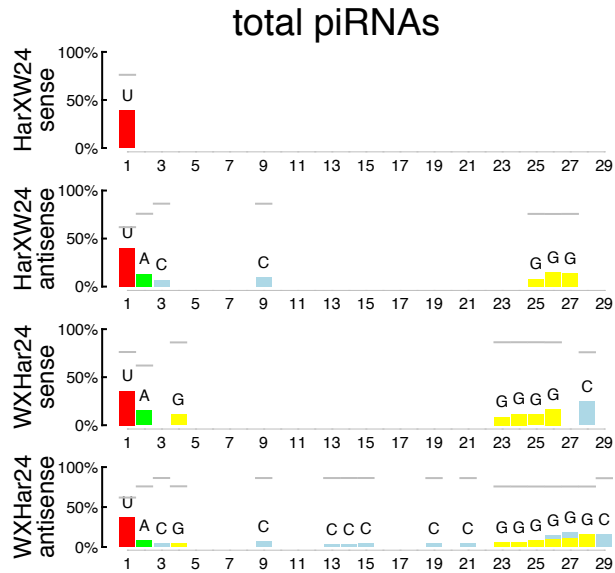
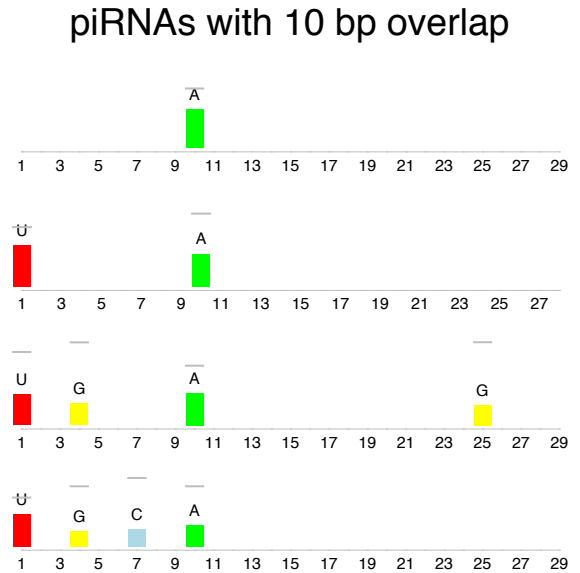
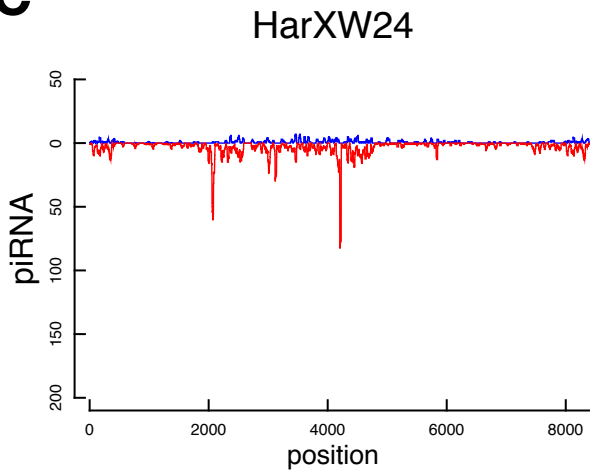
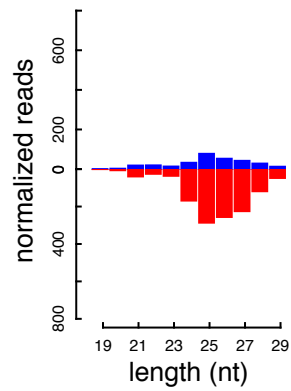
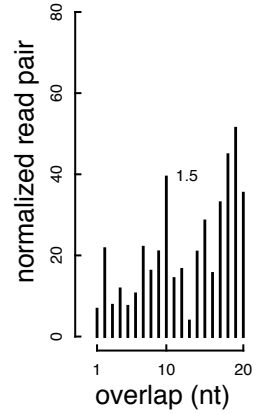
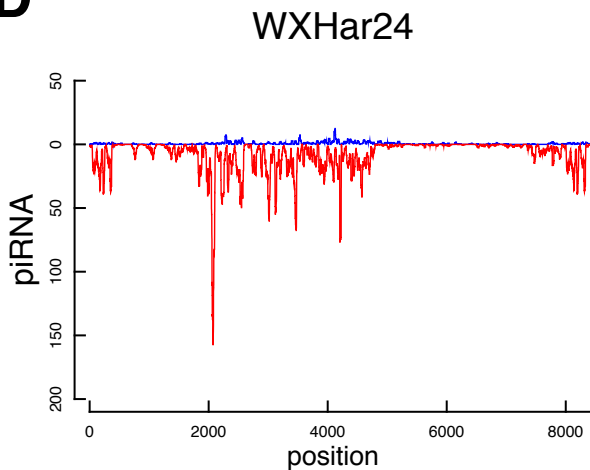
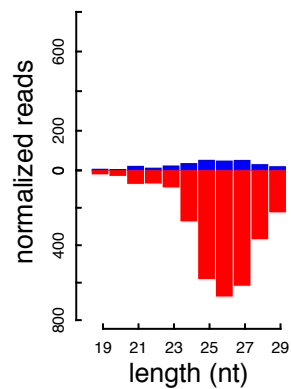
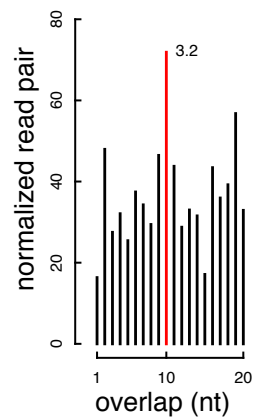
F



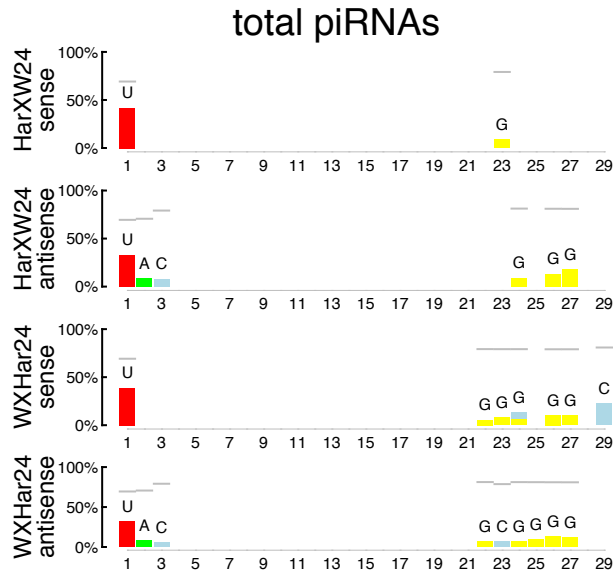
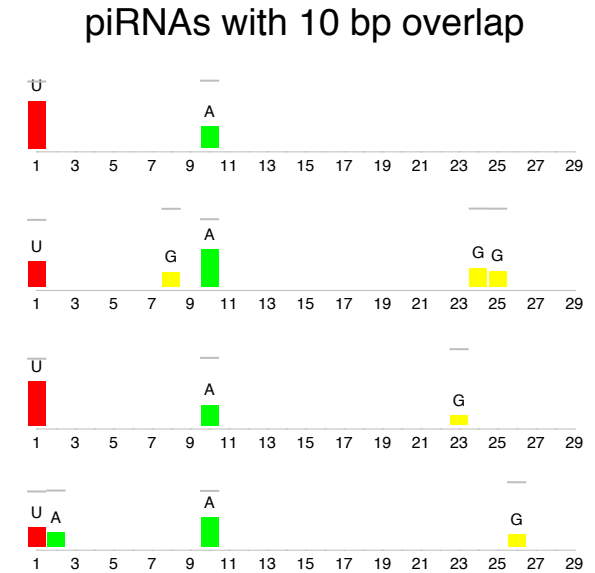
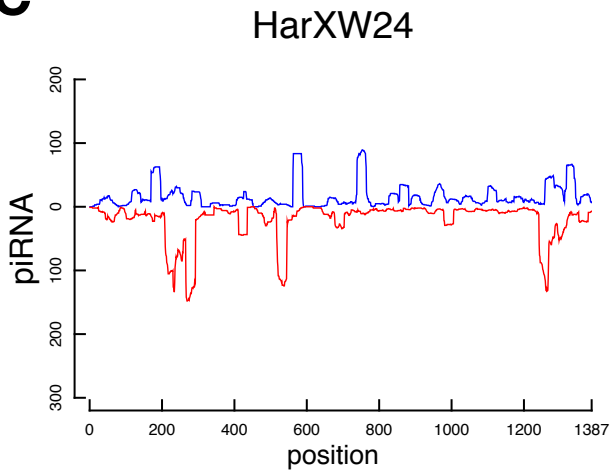
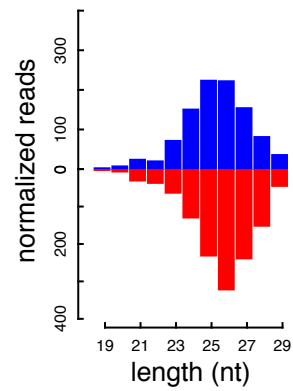
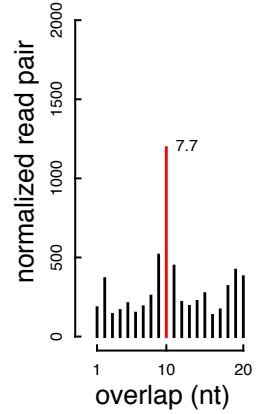
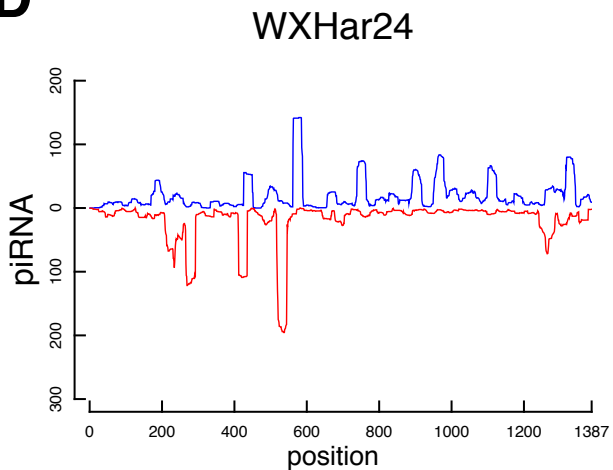
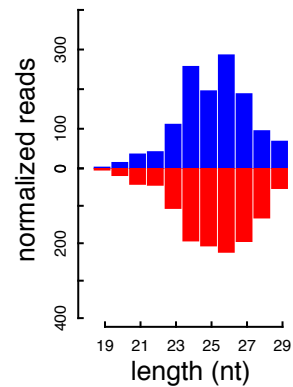
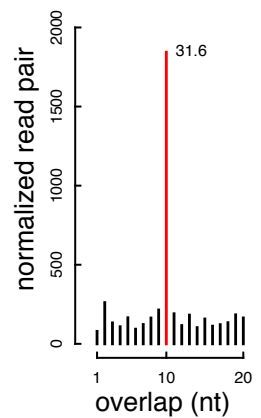
H



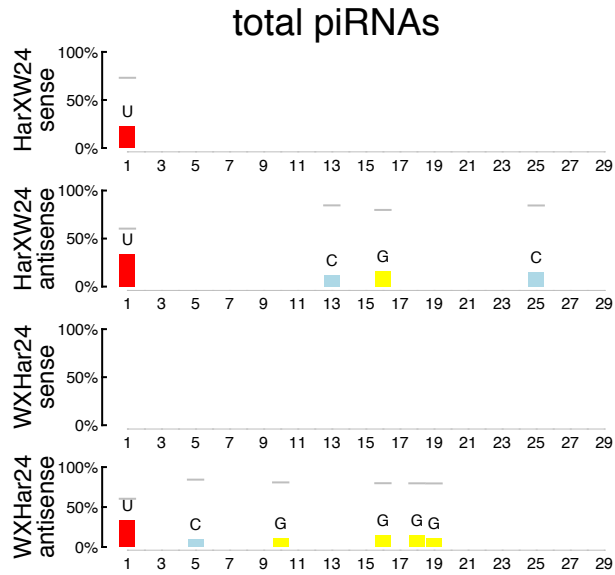
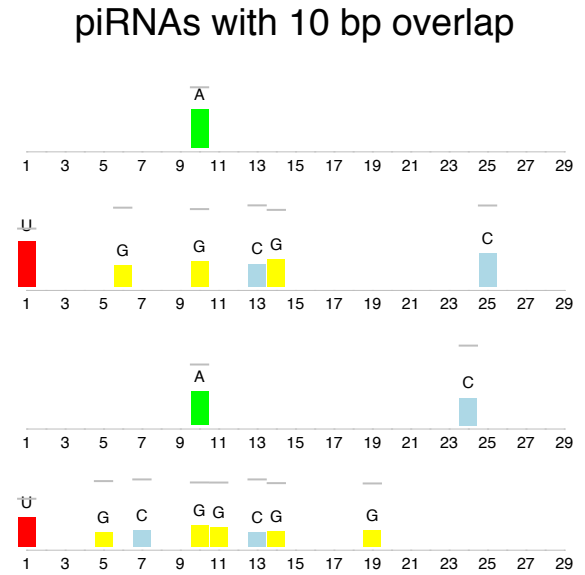
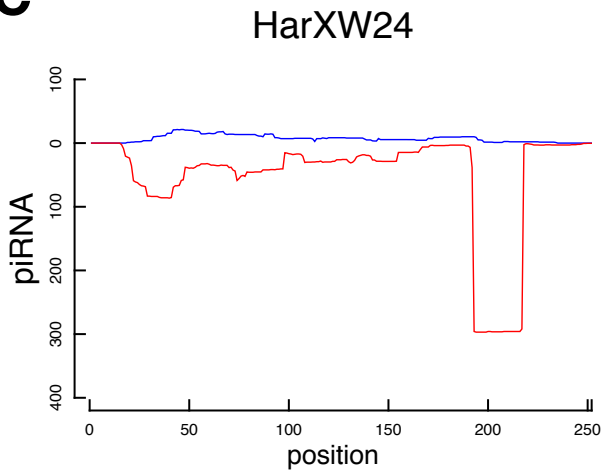
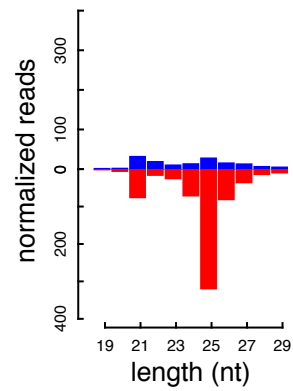
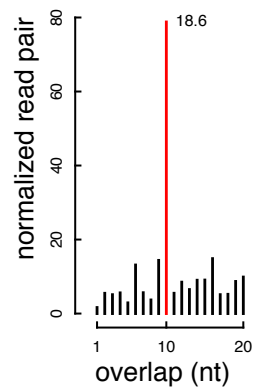
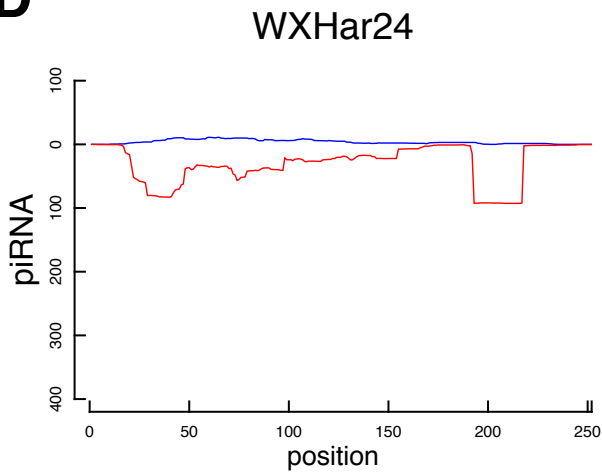
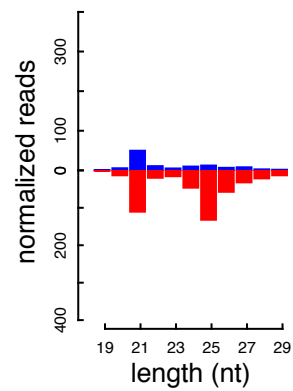
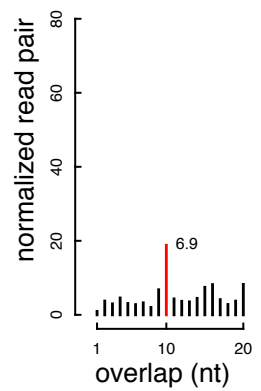
ZAM

A**B****C****E****G****D****F****H**

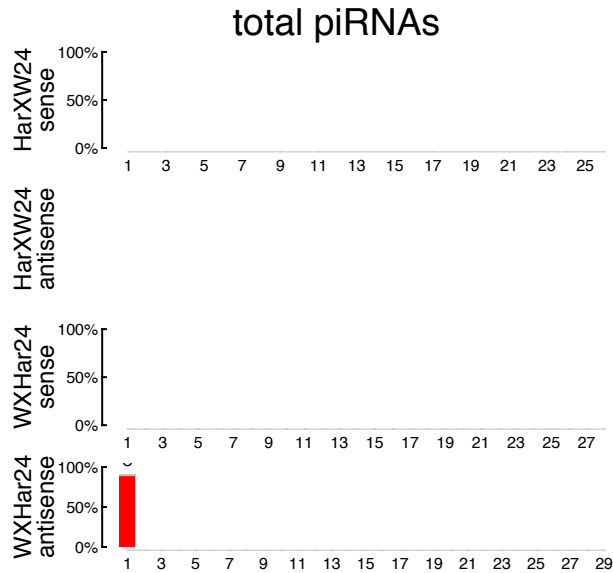
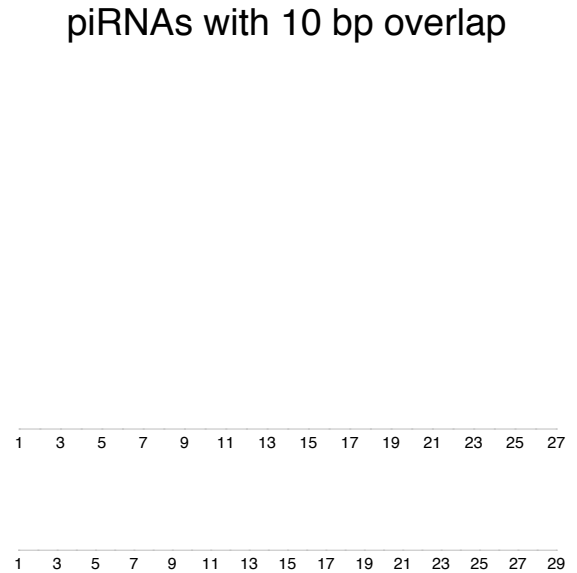
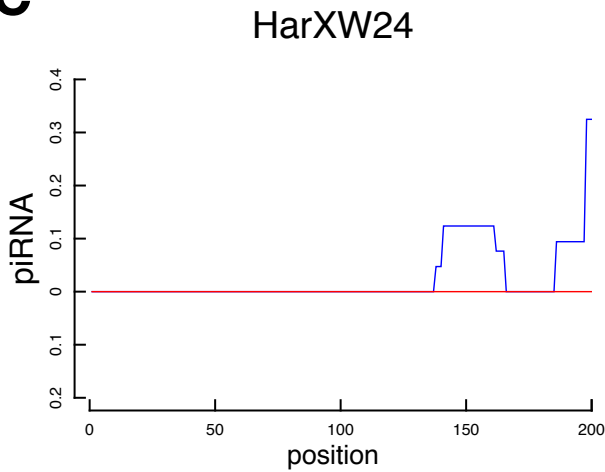
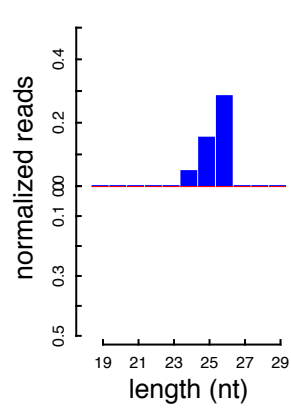
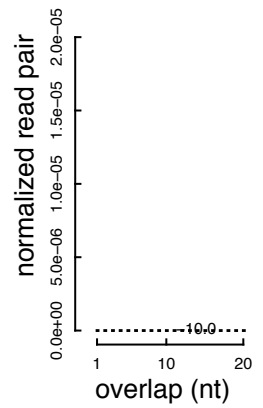
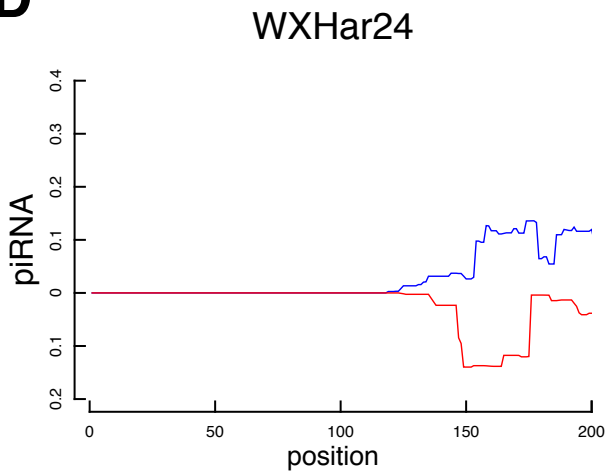
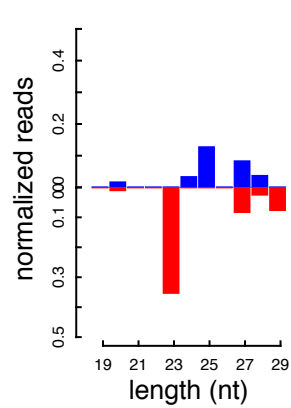
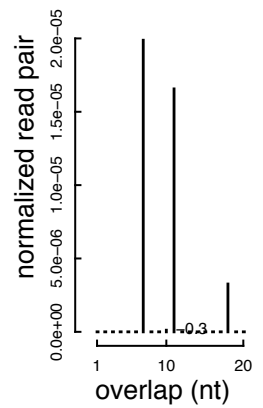
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A**B****C****E****G****D****F****H**

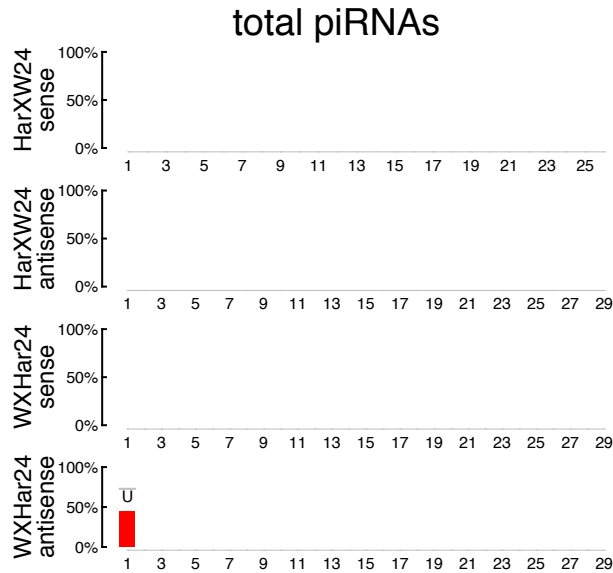
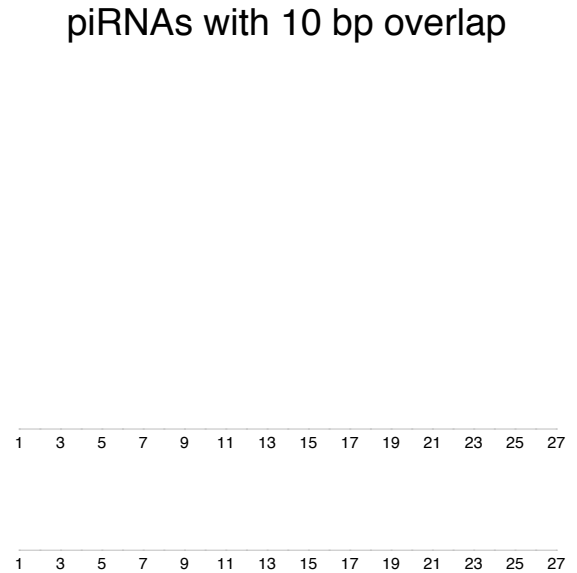
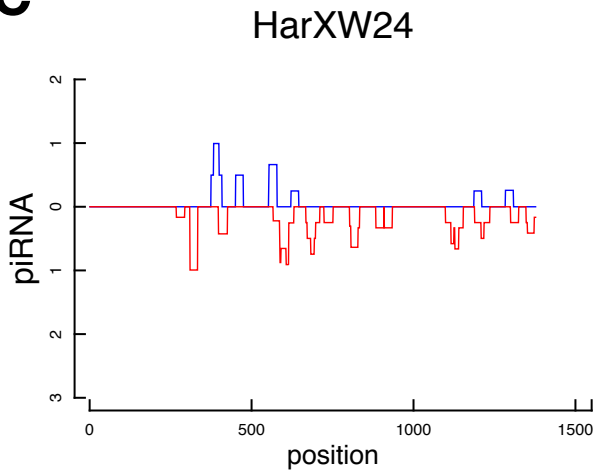
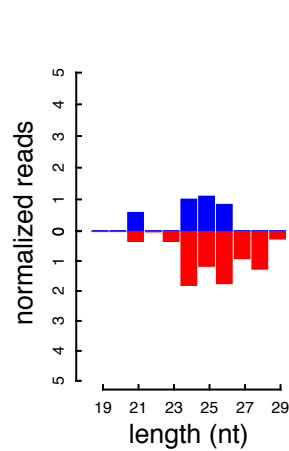
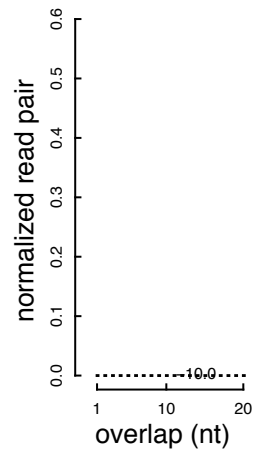
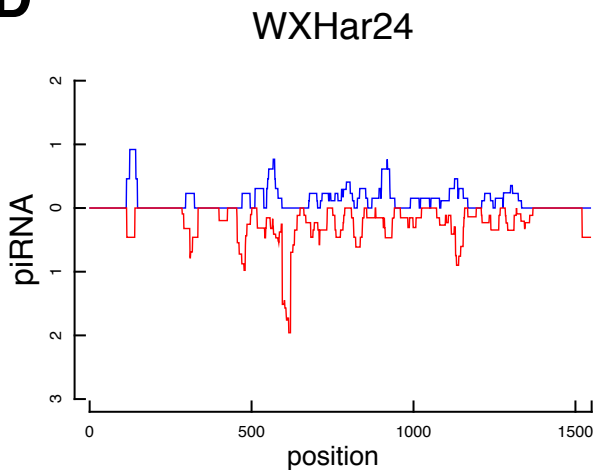
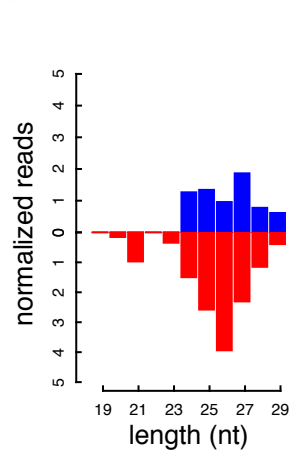
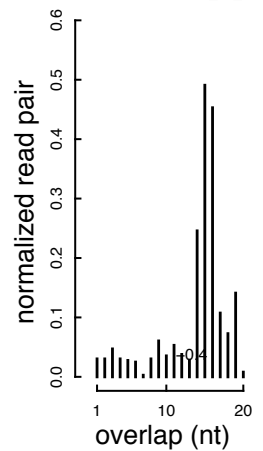
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A**B****C****E****G****D****F****H**

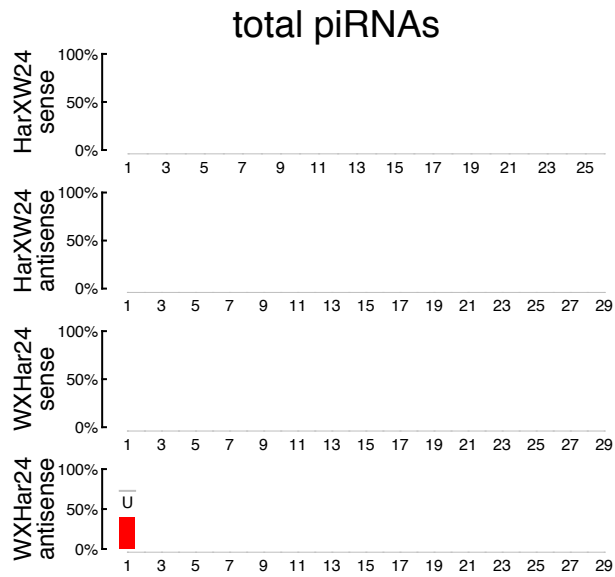
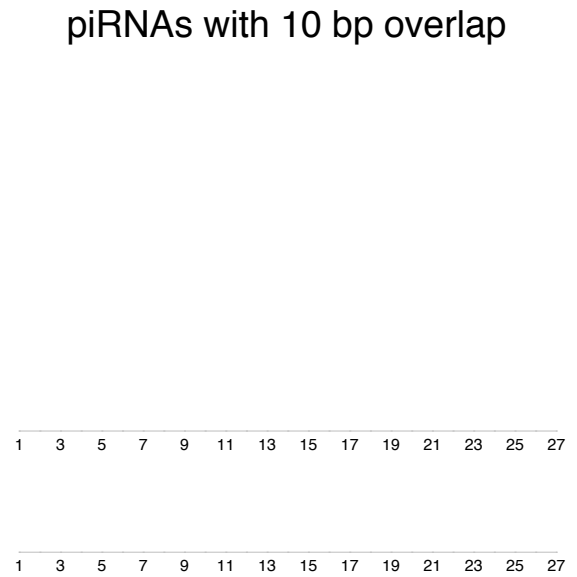
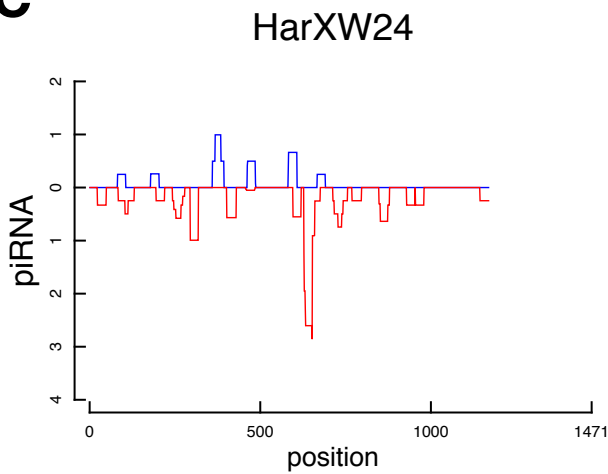
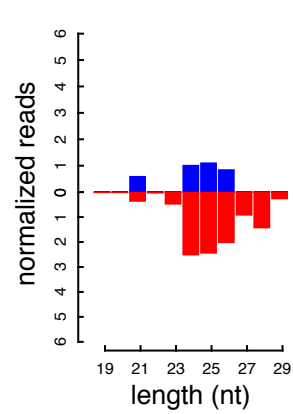
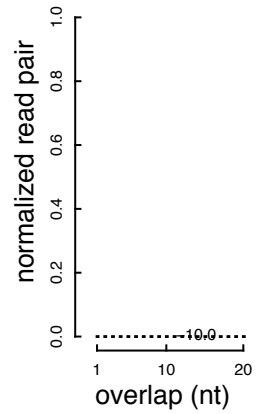
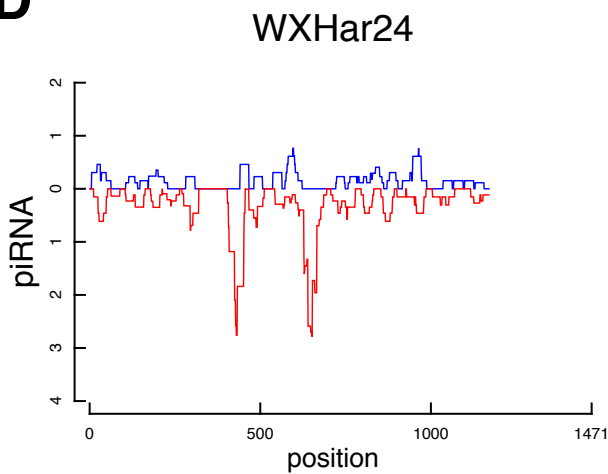
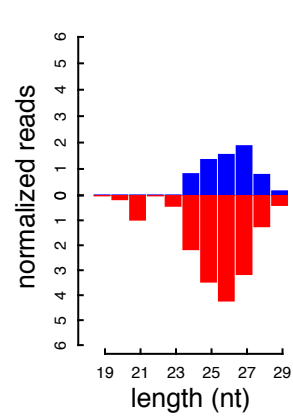
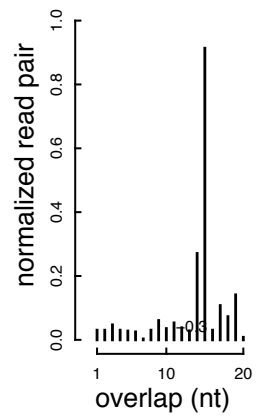
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A**B****C****E****G****D****F****H**

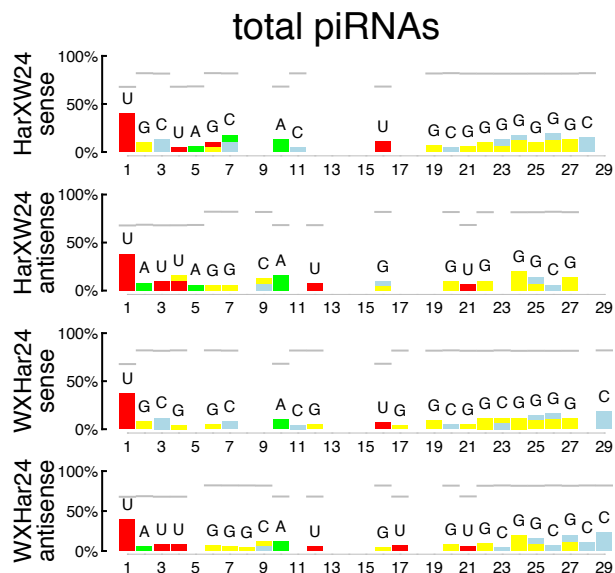
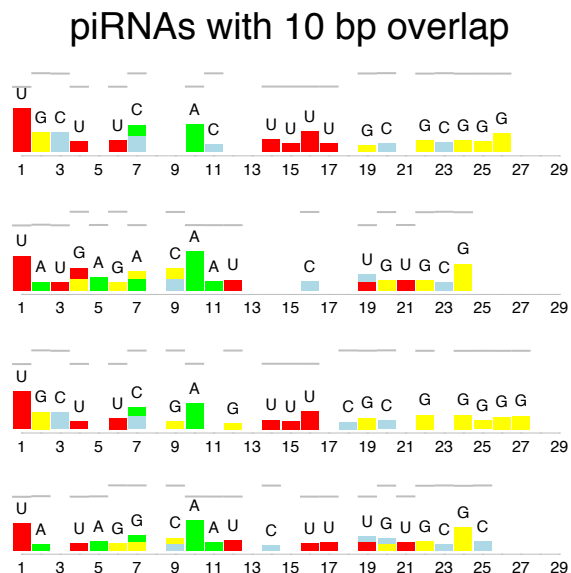
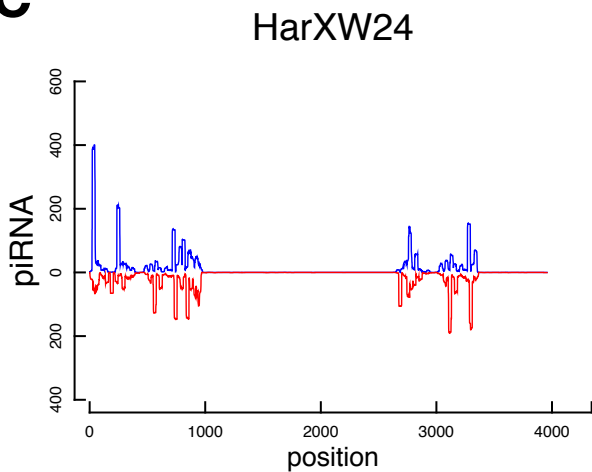
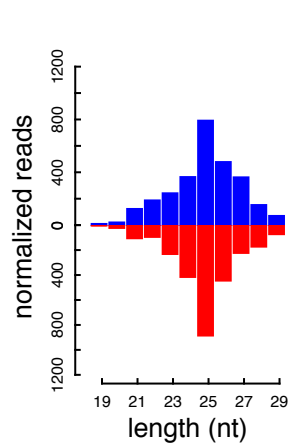
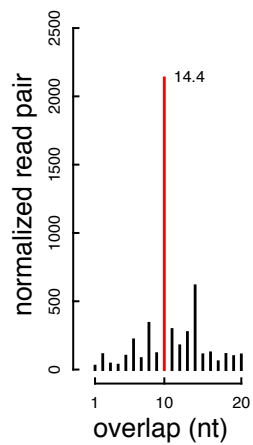
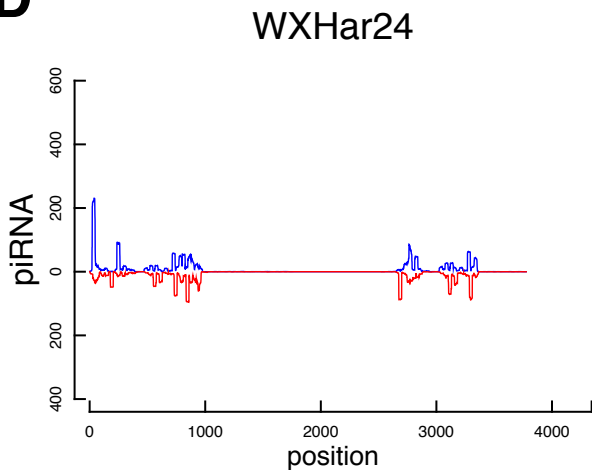
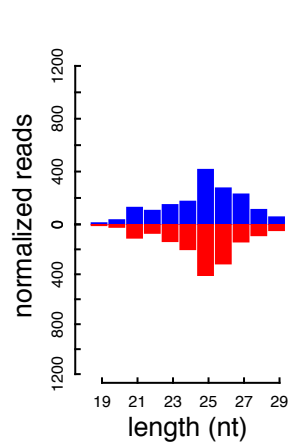
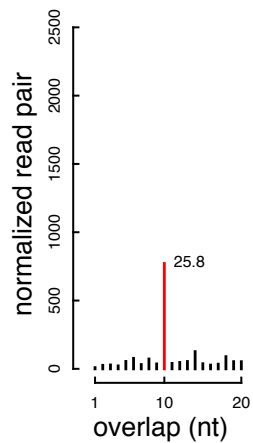
stellate

A**B****C****E****G****D****F****H**

stellateHet

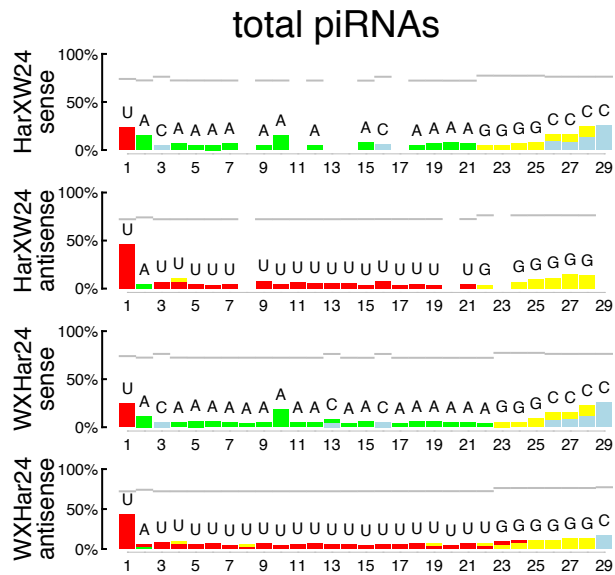
A**B****C****E****G****D****F****H**

suste

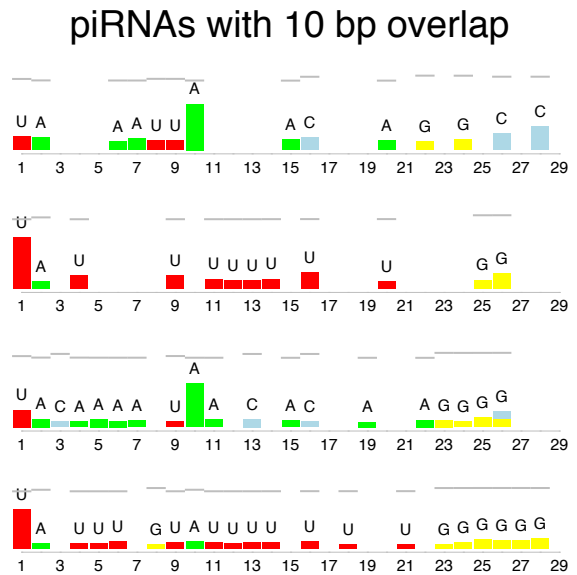
A**B****C****E****G****D****F****H**

TARTA

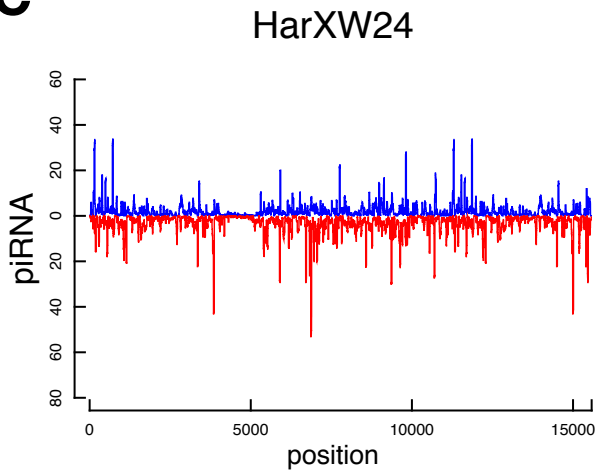
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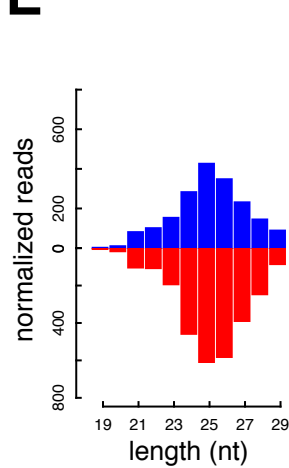
B



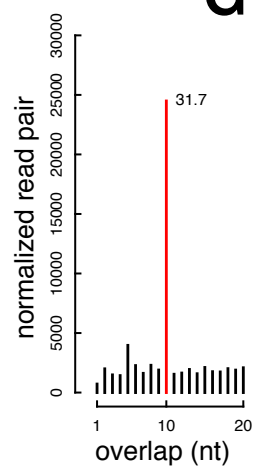
C



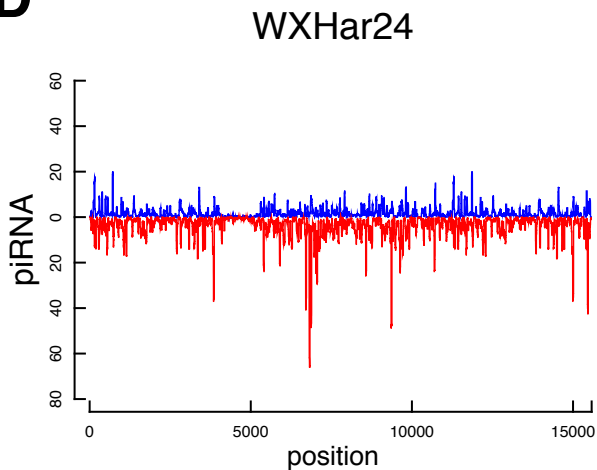
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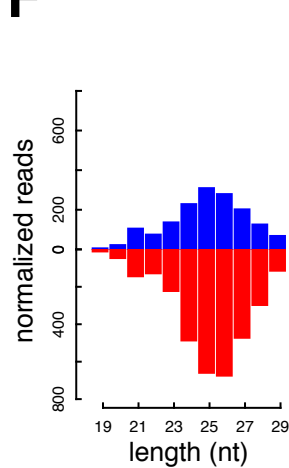
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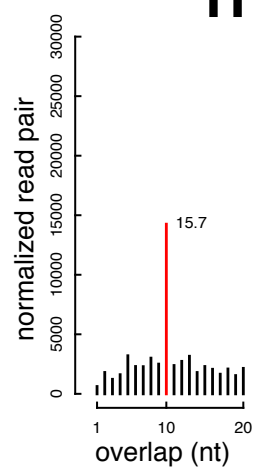
D



F



H



P-element

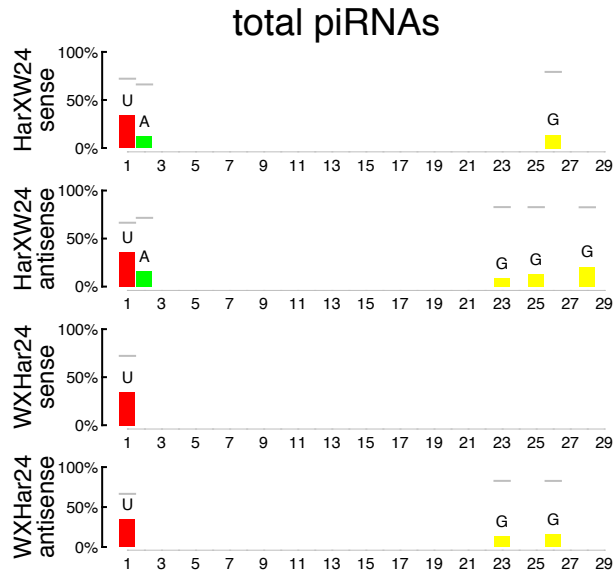
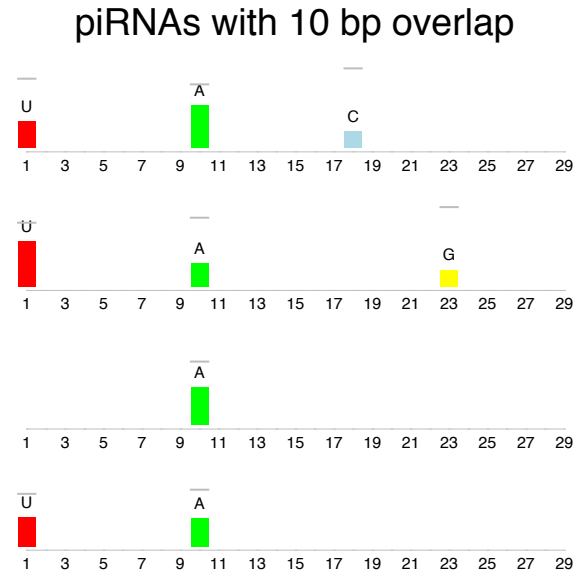
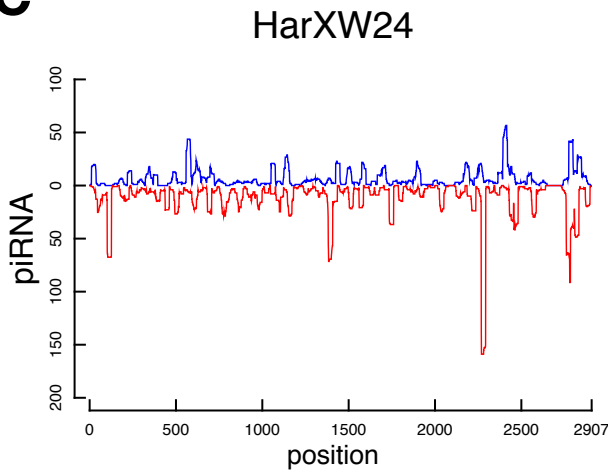
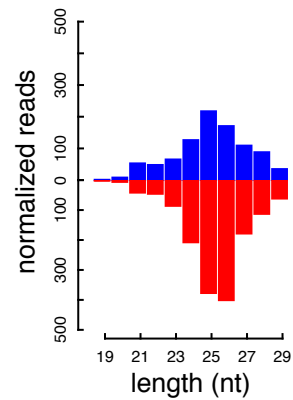
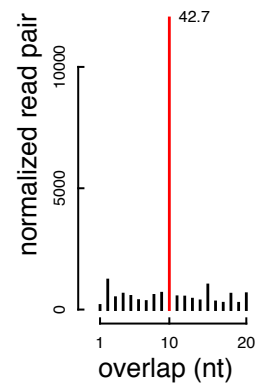
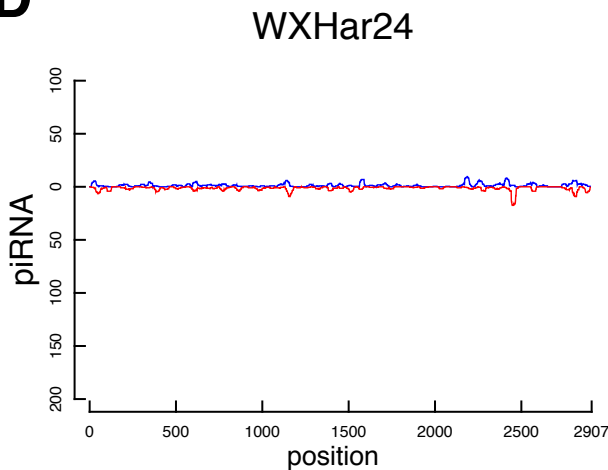
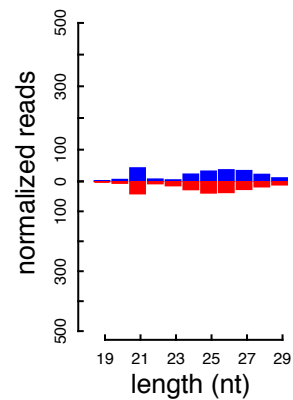
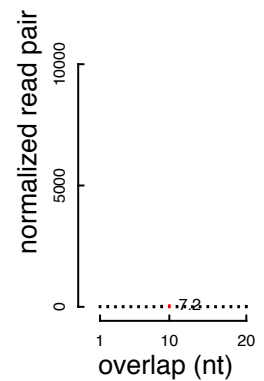
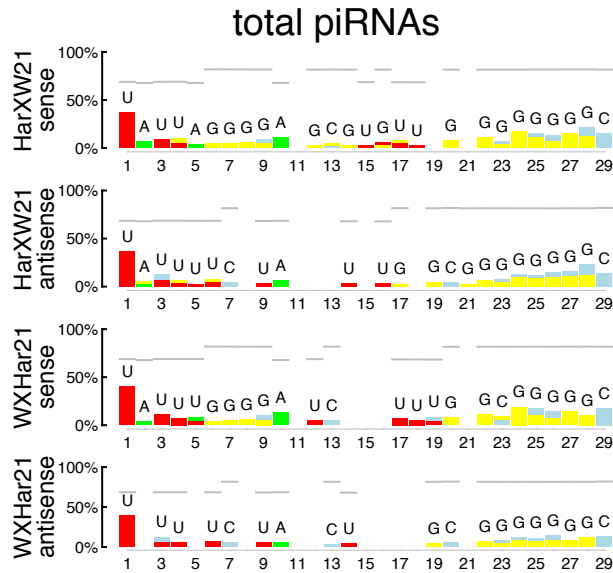
A**B****C****E****G****D****F****H**

Figure S3B. Detailed analysis of piRNAs in Har x w^1 21 day and w^1 x Har 21 day ovaries. The figure presents the 135 transposon families plus the tandem repeat *mst40*. (A, B) Sequence-bias plot (“sequence-excess logo”) for all piRNAs mapping to the transposon family (A) or for piRNAs with ping-pong partners (B). The graphs report only nucleotide biases significantly different from the intrinsic bias of the transposon family itself. The gray bars indicate the maximum possible value for each position.

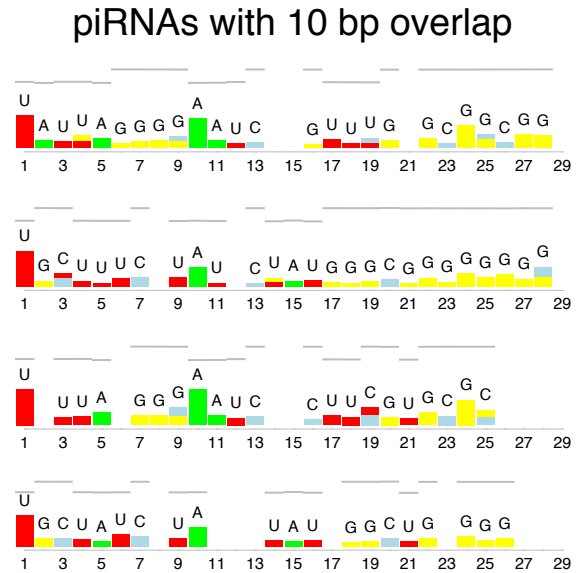
(C, D) The abundance (per million) of piRNAs (23–29 nt) in Har x w^1 21 day (C) and w^1 x Har 21 day ovaries (D) for each base-pair position of the transposon consensus sequence. Abundance was both normalized by the number of times a piRNA mapped to the genome and calibrated to the total abundance of sequences corresponding to non-coding RNAs in the sample. For each base, the total normalized abundance of piRNAs that fall on that position is reported. Here and below, blue denotes sense strand-mapping piRNAs; red, antisense- strand mapping piRNAs.

(E, F) Length distribution of 19–29 nt RNAs mapping to the transposon family for Har x w^1 21 day (E) and w^1 x Har 21 day ovaries (F). The number of reads was normalized as in (C) and (D). (G, H) Distribution of the length of 5' overlaps between sense and antisense piRNAs mapped to the transposon family for Har x w^1 21 day (G) and w^1 x Har 21 day (H) ovaries. Only pairs that overlapped at their 5' ends were included. A peak at 10 bp indicates ping-pong pairing.

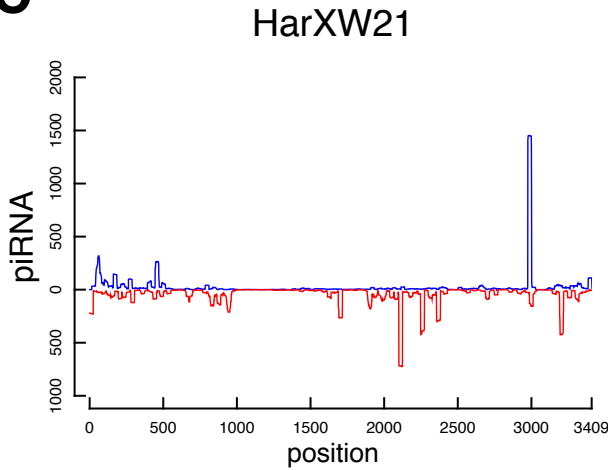
A



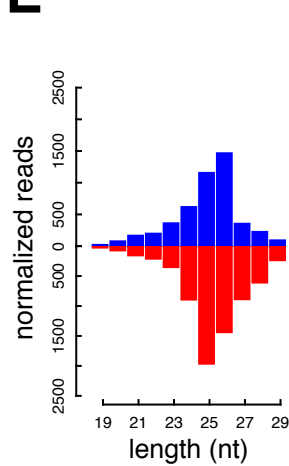
B



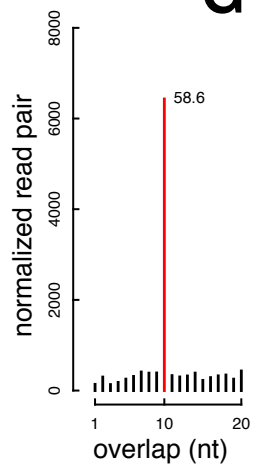
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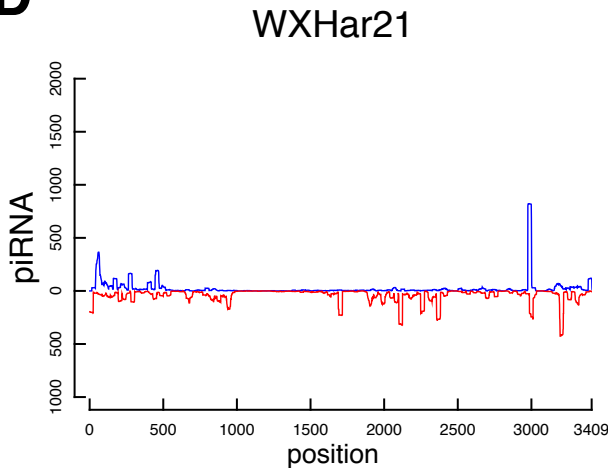
E



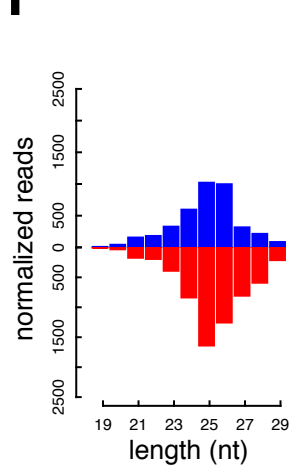
G



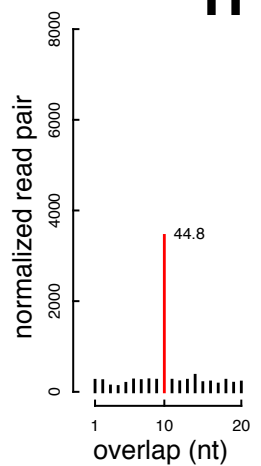
D



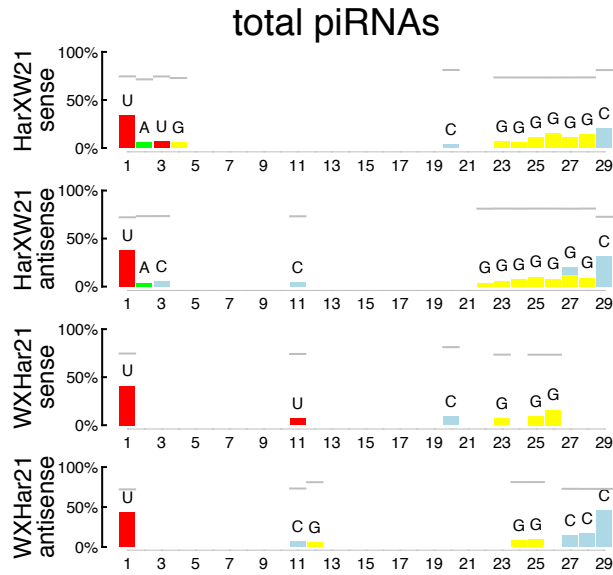
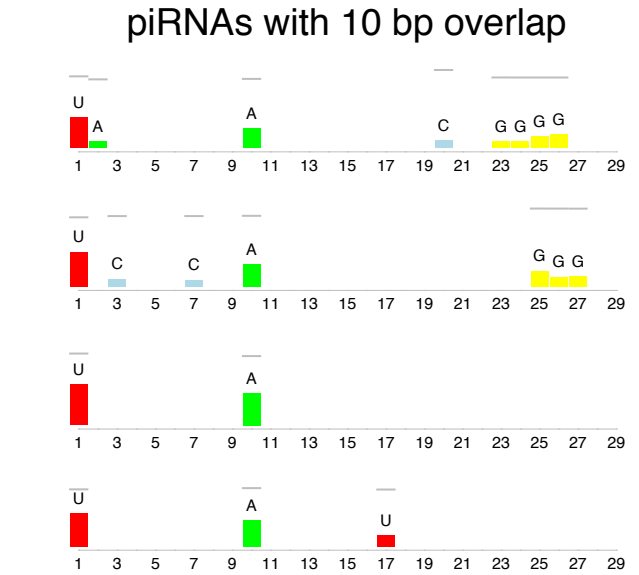
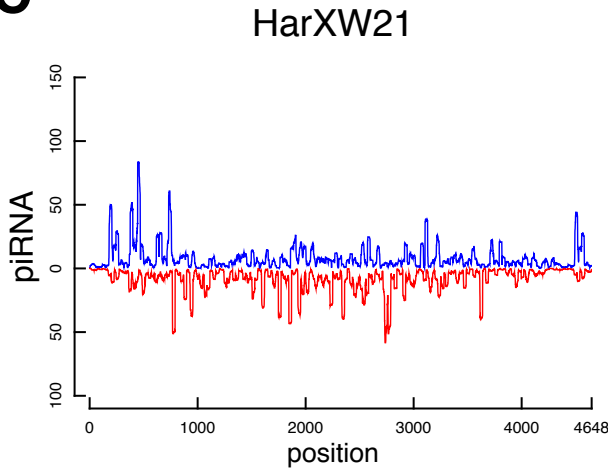
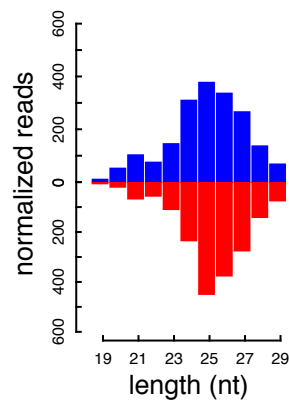
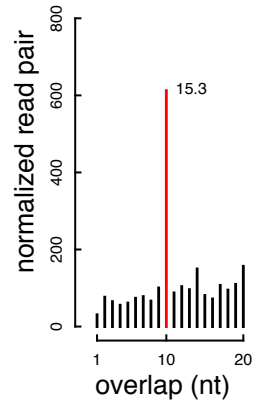
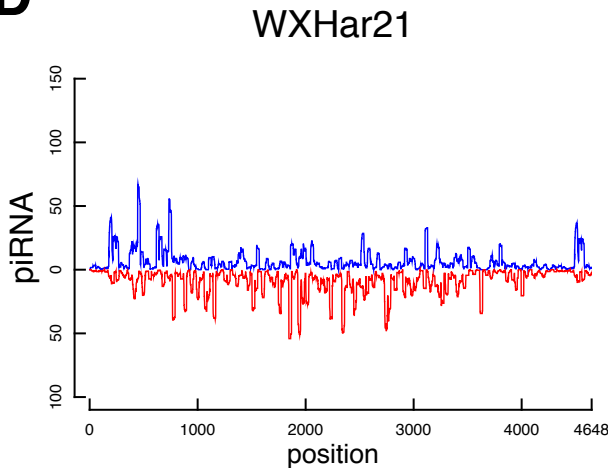
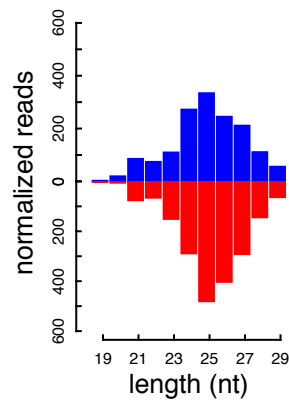
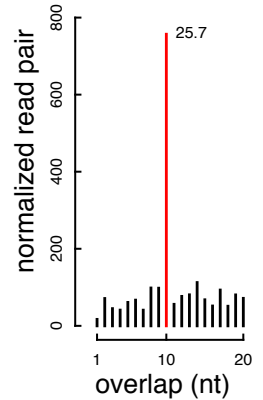
F



H

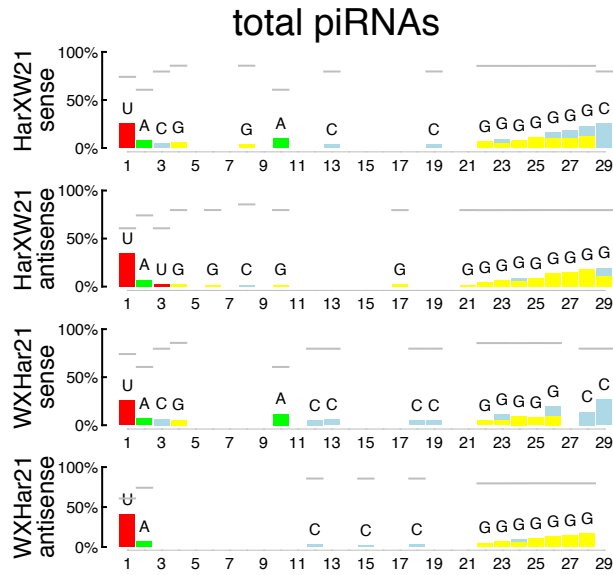


1731

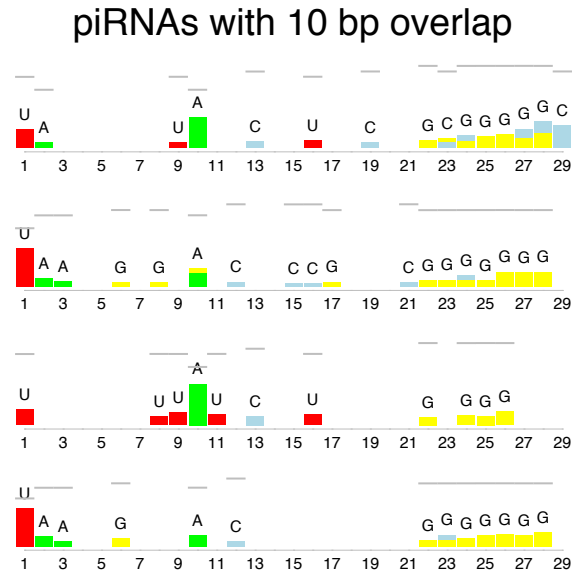
A**B****C****E****G****D****F****H**

17.6

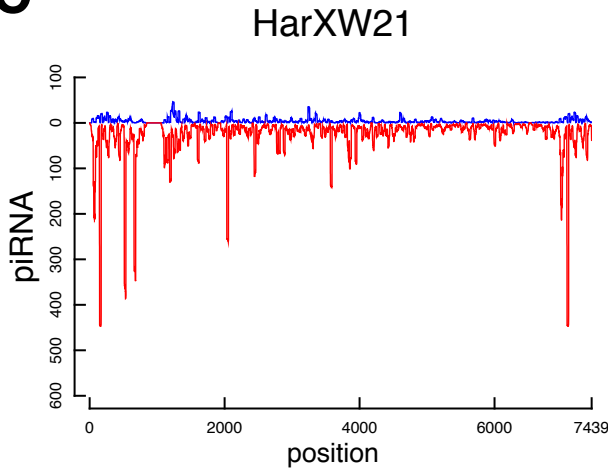
A



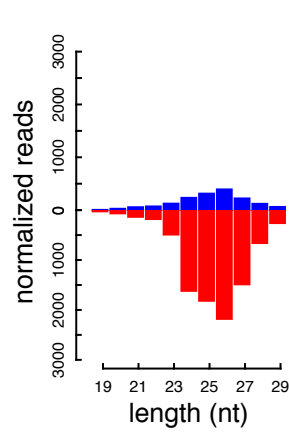
B



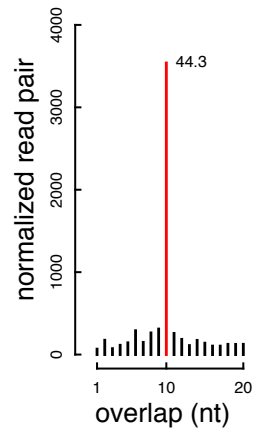
C



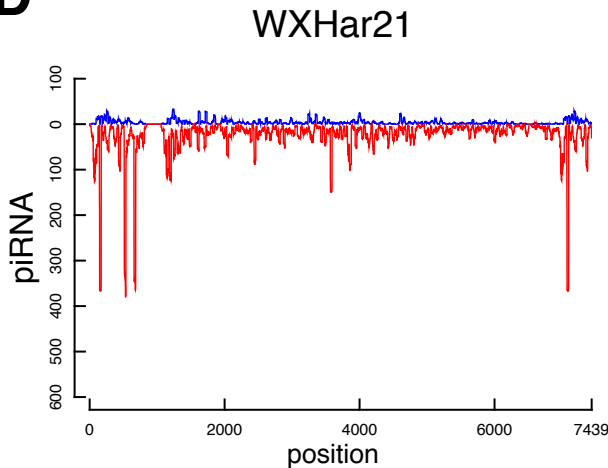
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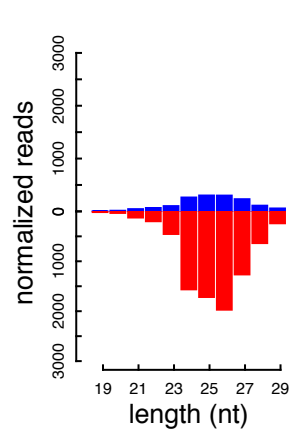
G



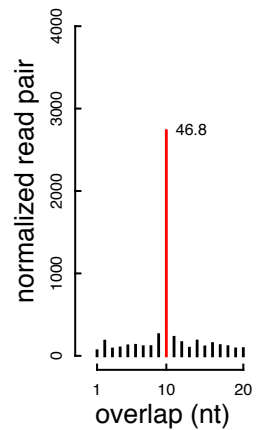
D



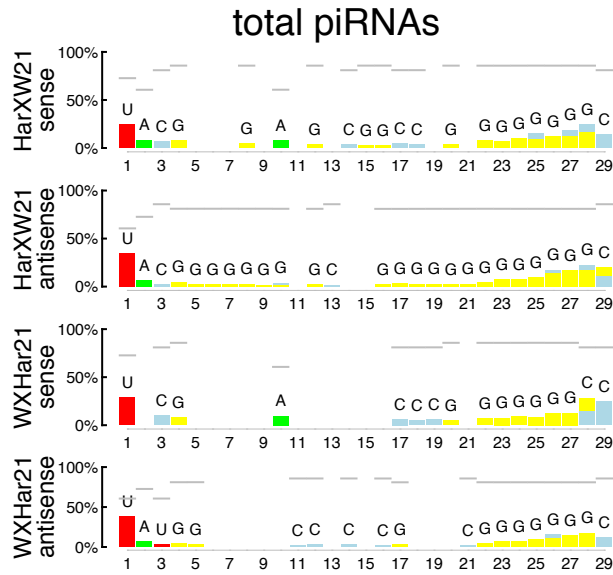
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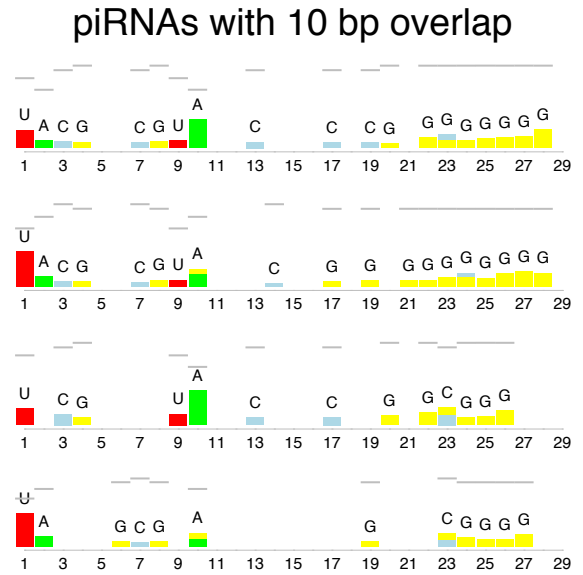
H



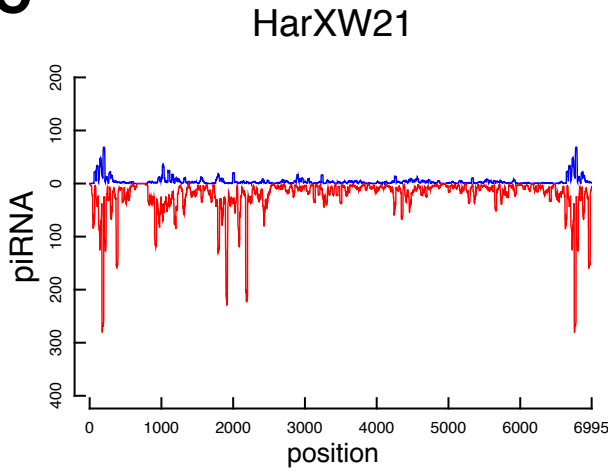
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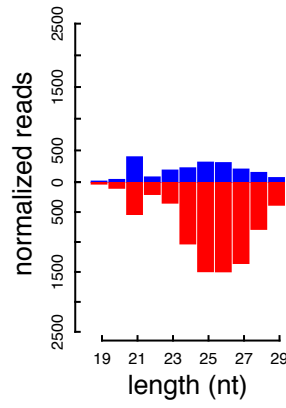
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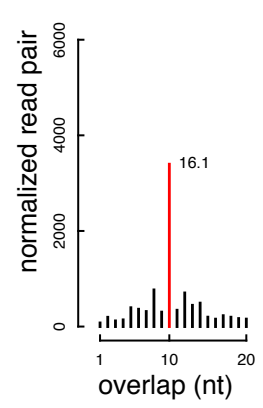
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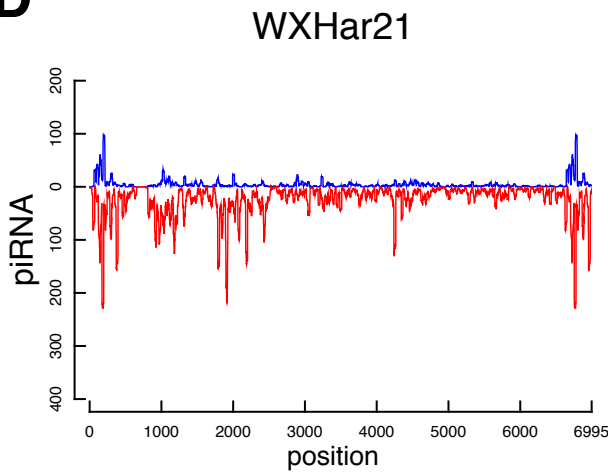
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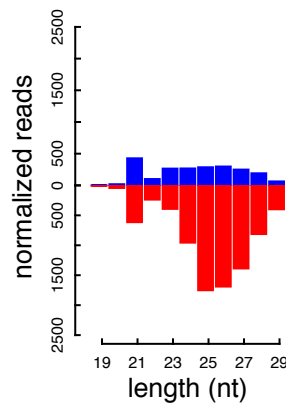
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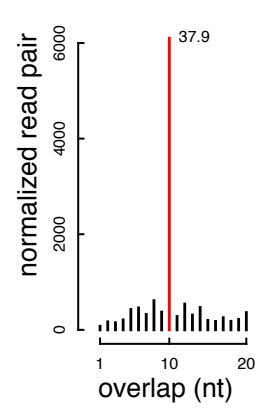
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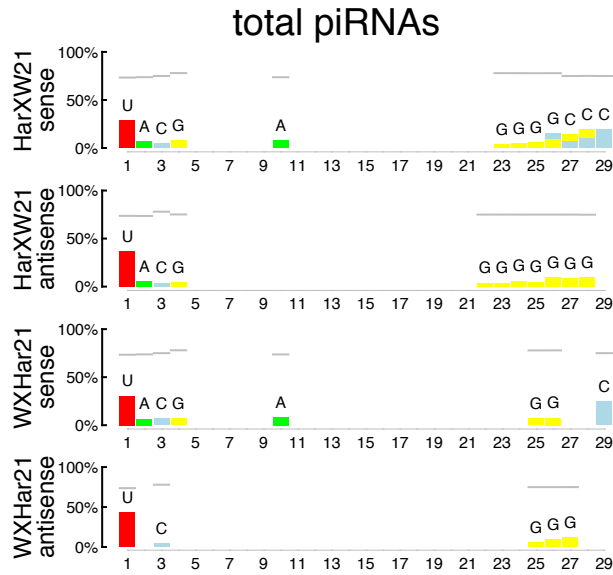
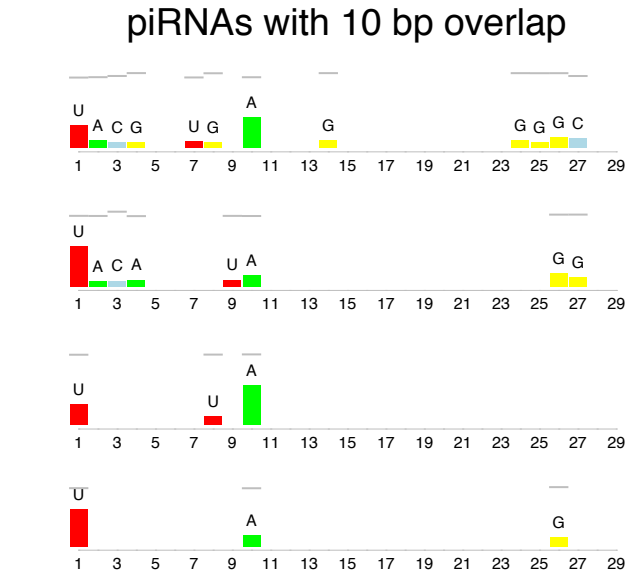
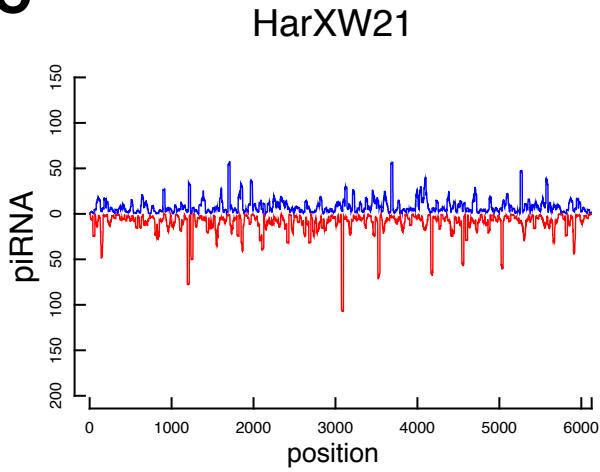
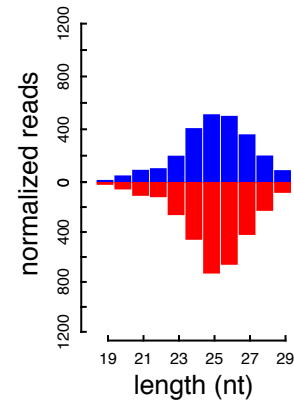
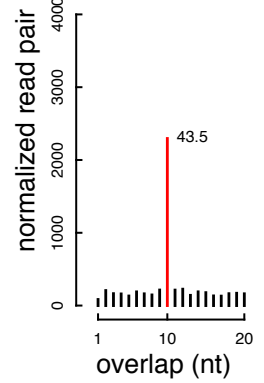
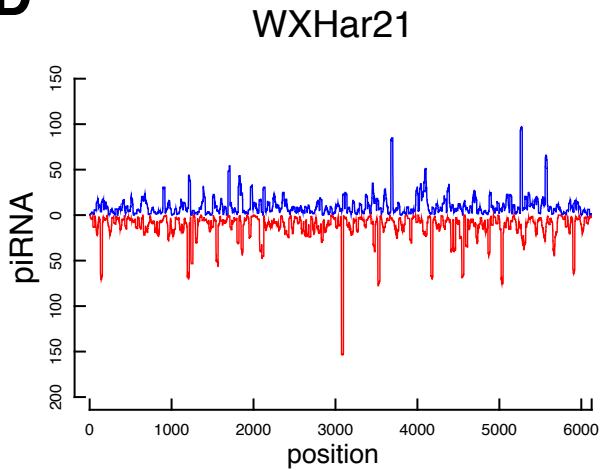
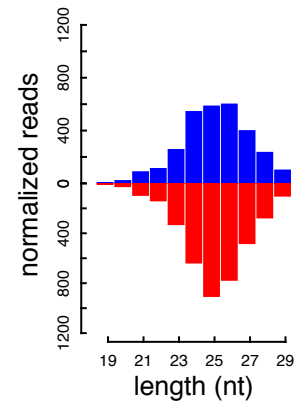
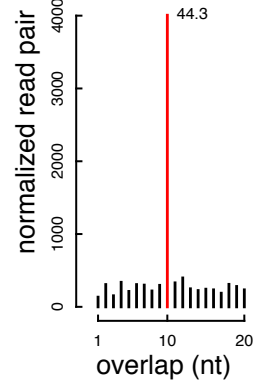
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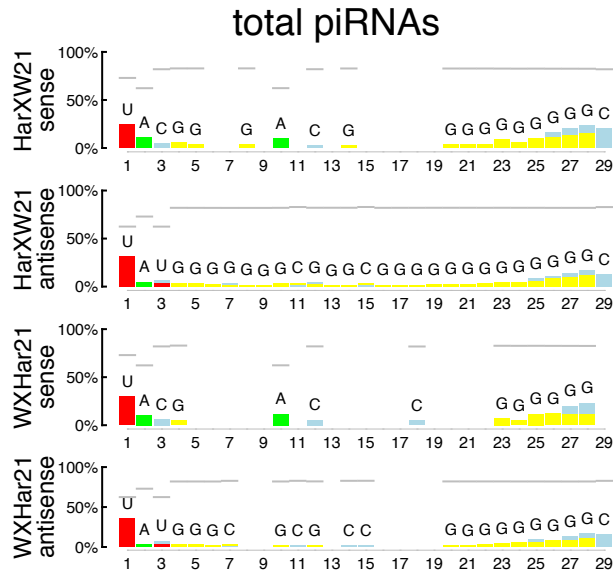
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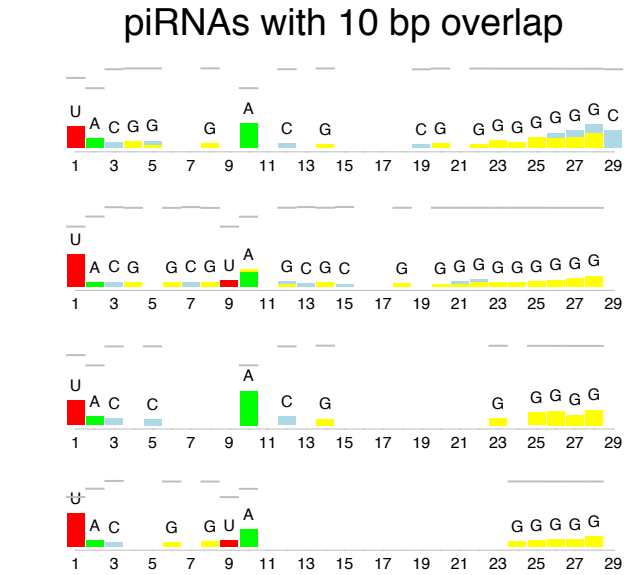
3S18

A**B****C****E****G****D****F****H**

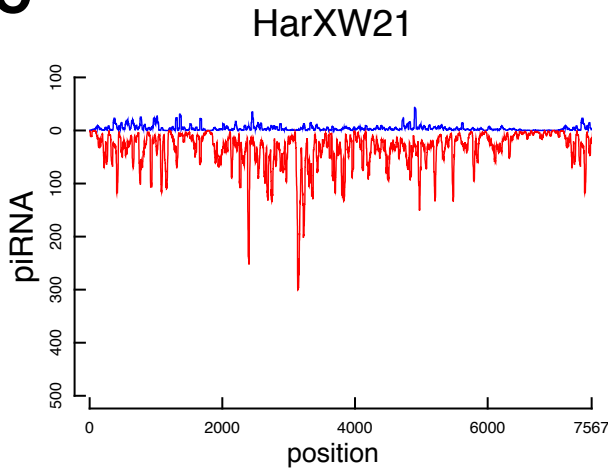
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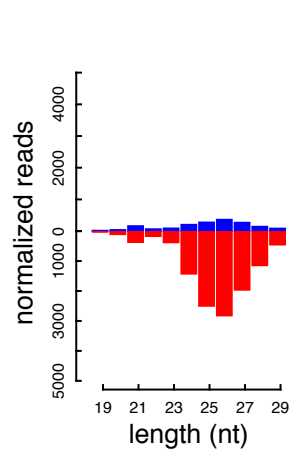
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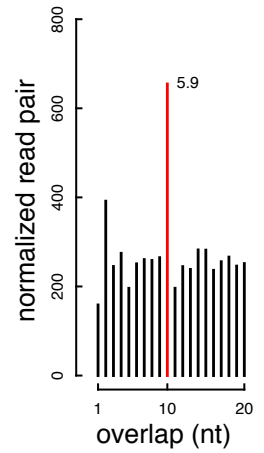
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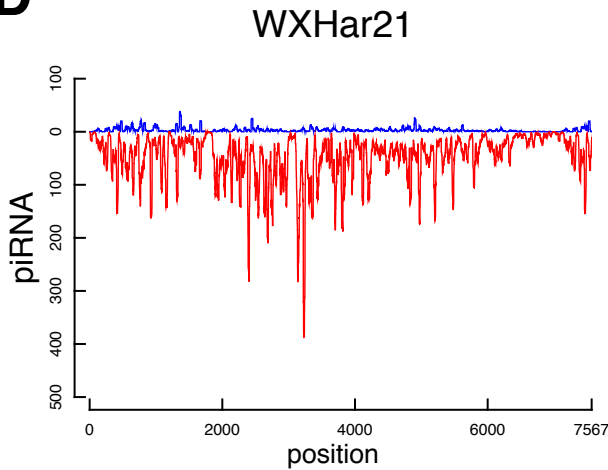
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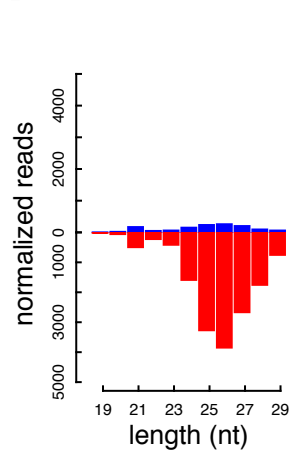
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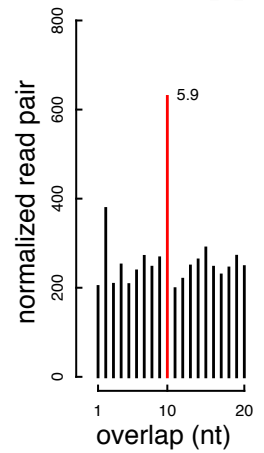
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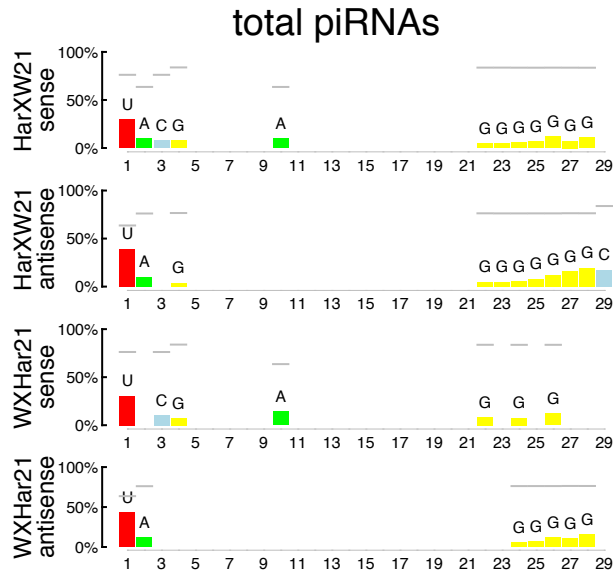
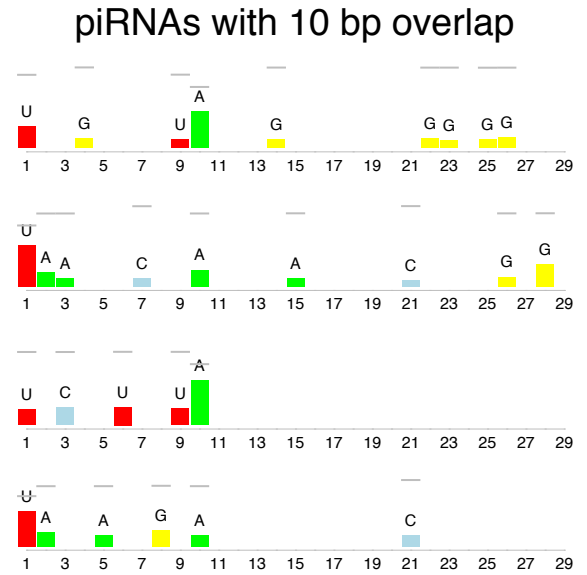
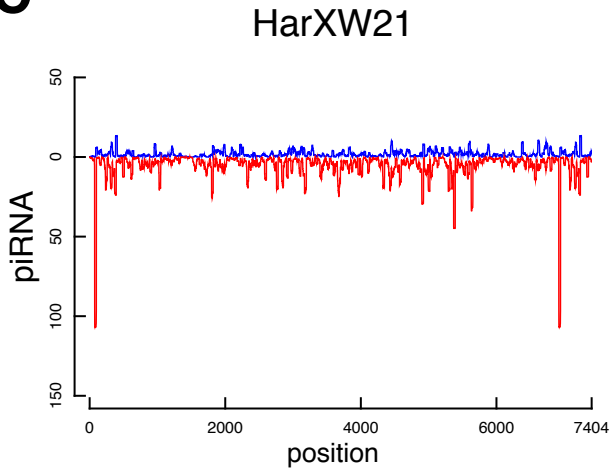
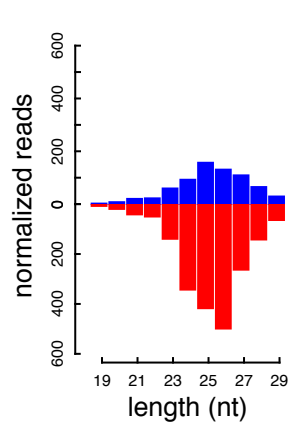
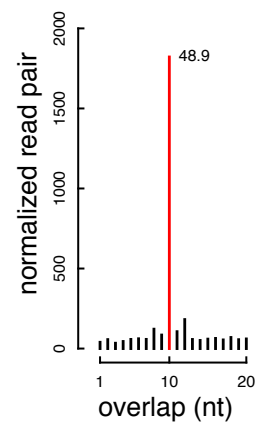
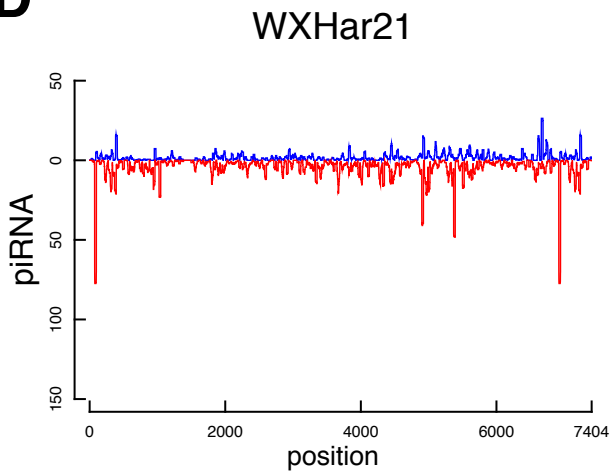
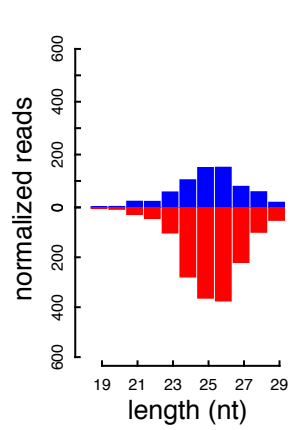
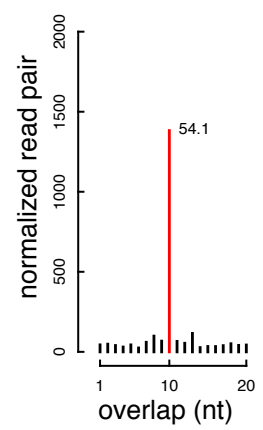
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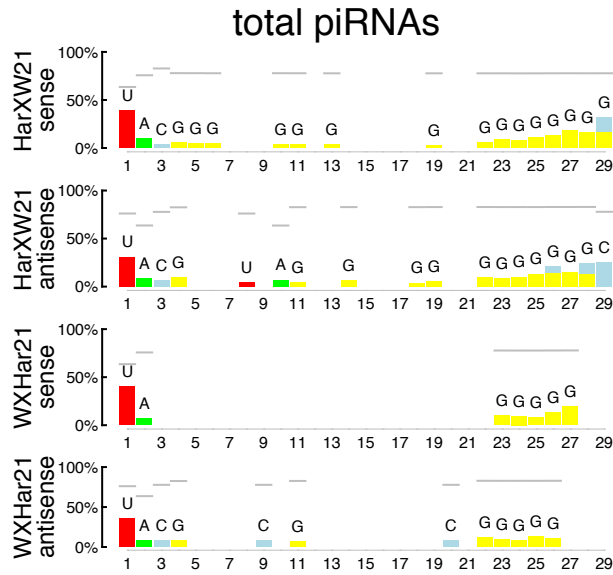
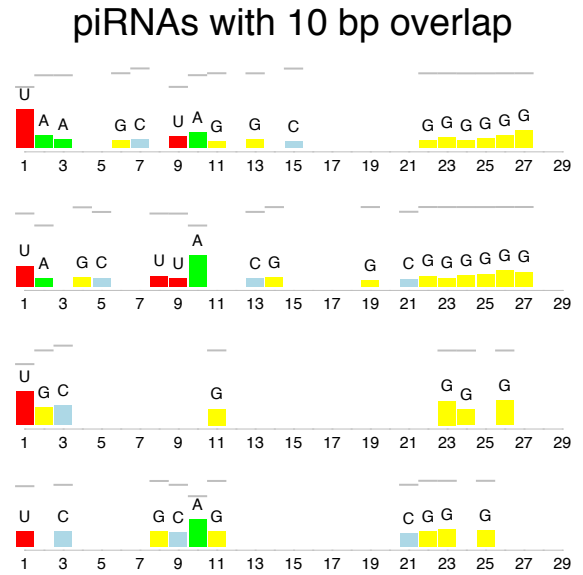
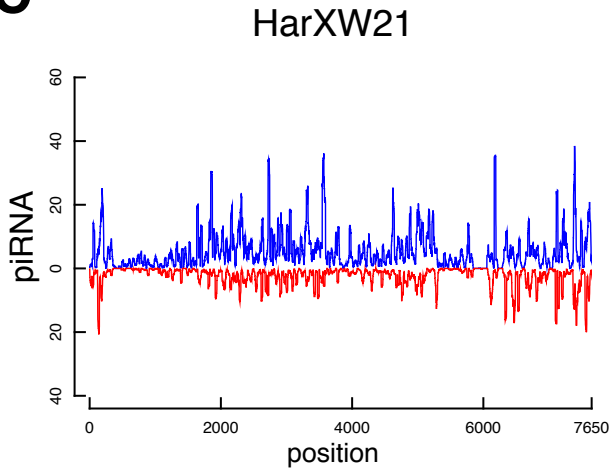
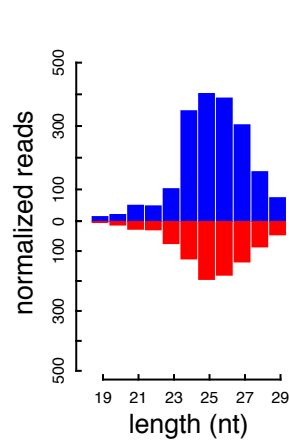
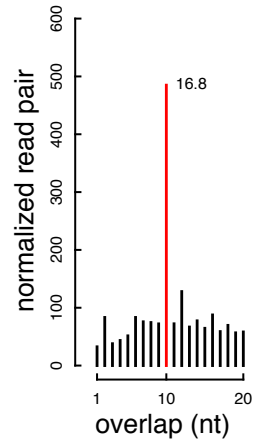
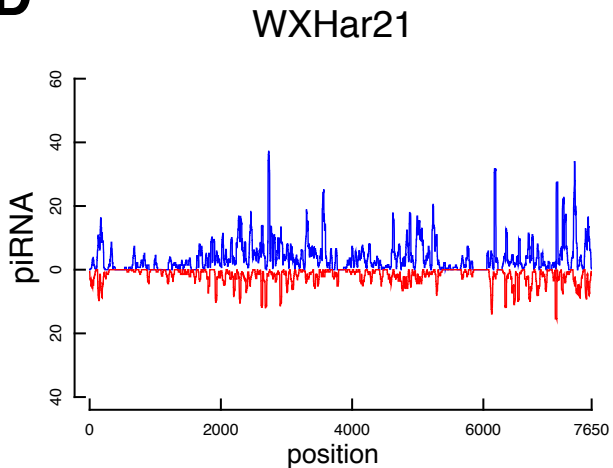
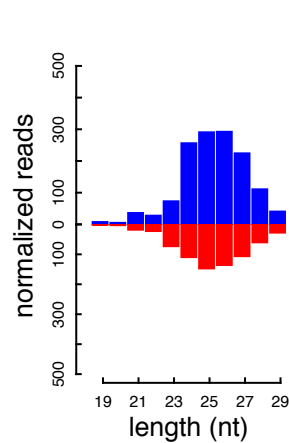
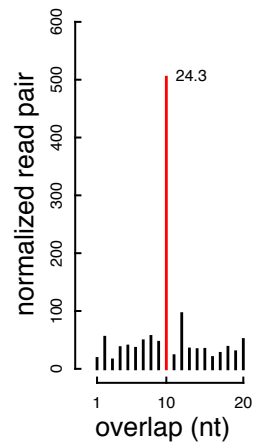
H



accord

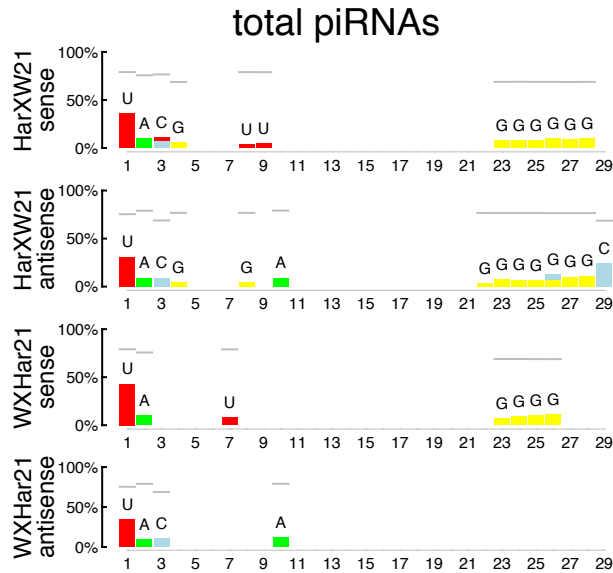
A**B****C****E****G****D****F****H**

accord2

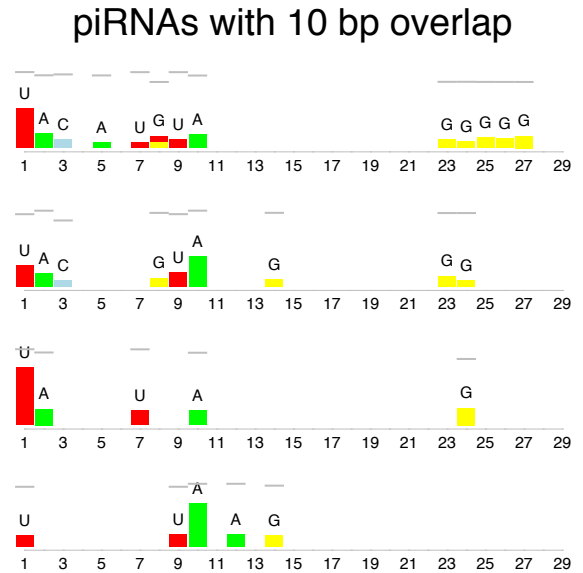
A**B****C****E****G****D****F****H**

aurora element

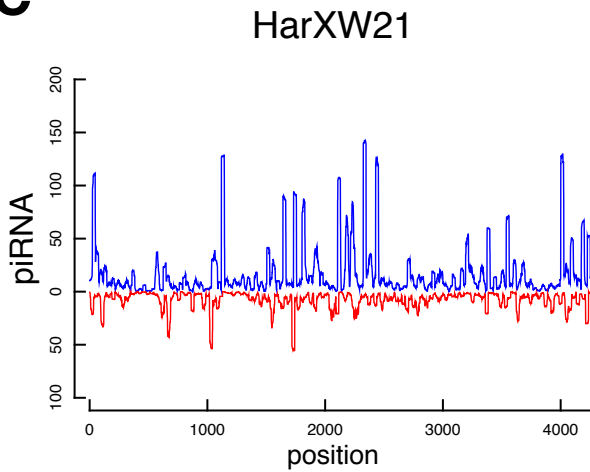
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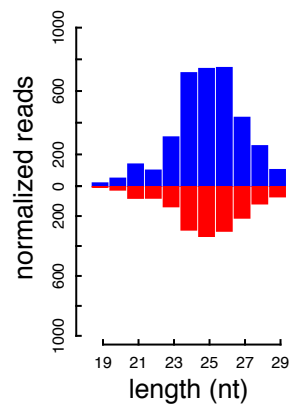
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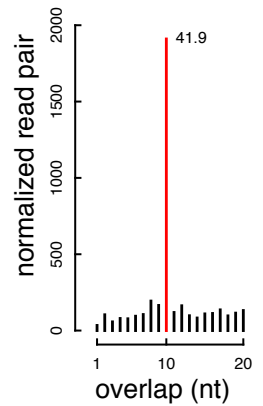
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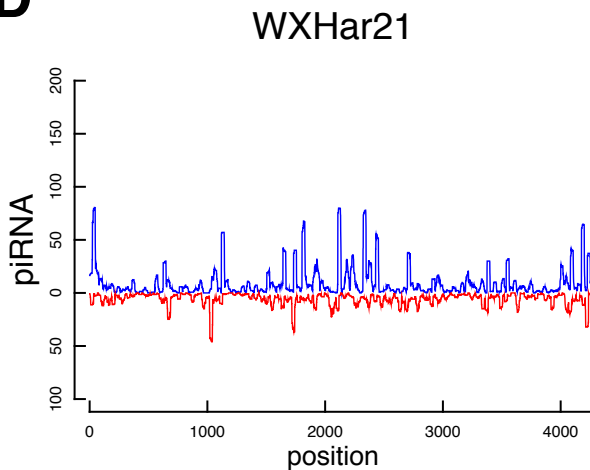
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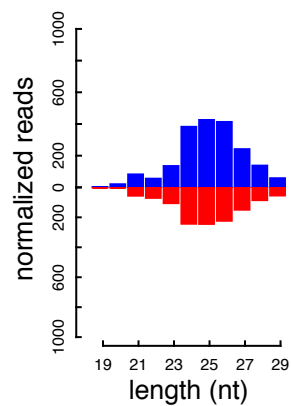
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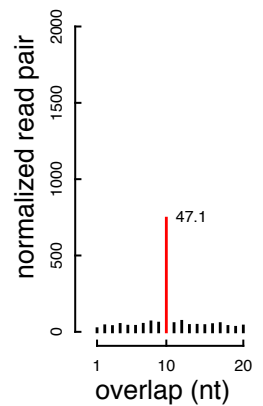
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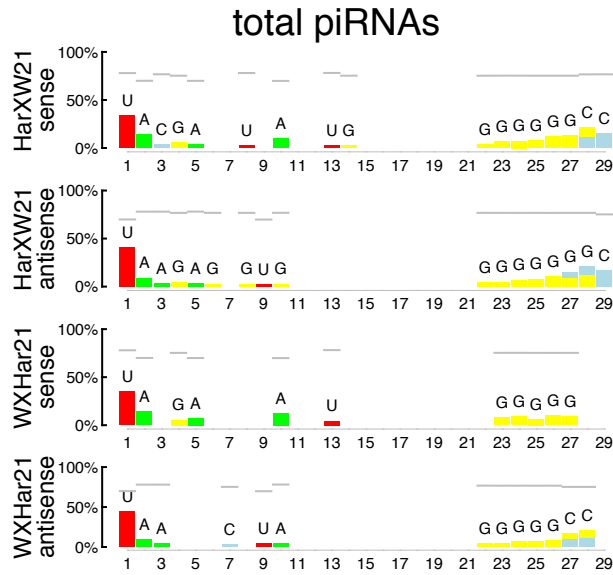
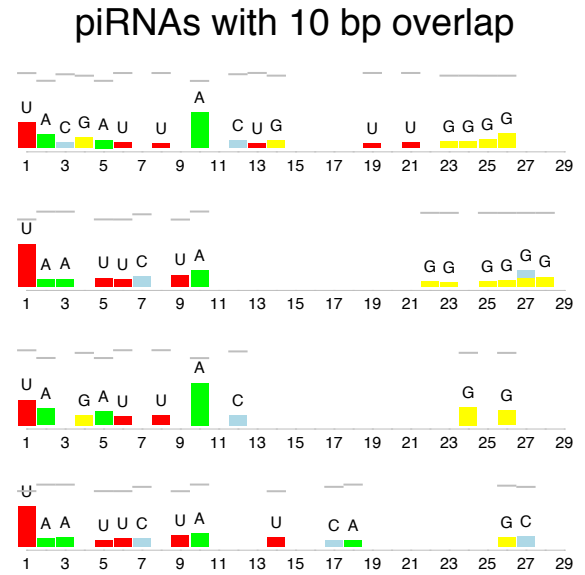
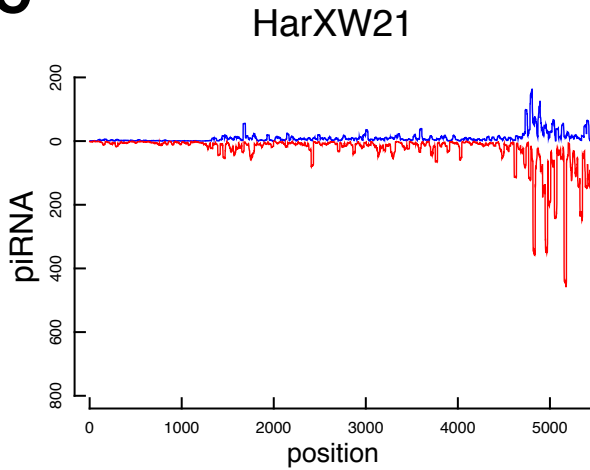
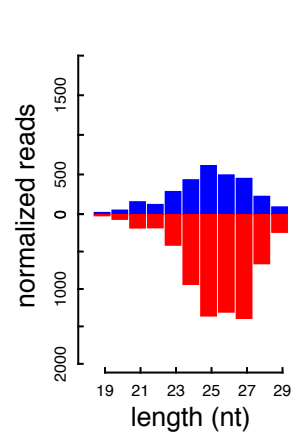
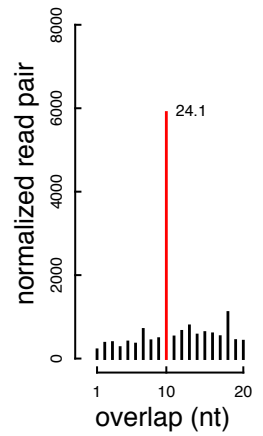
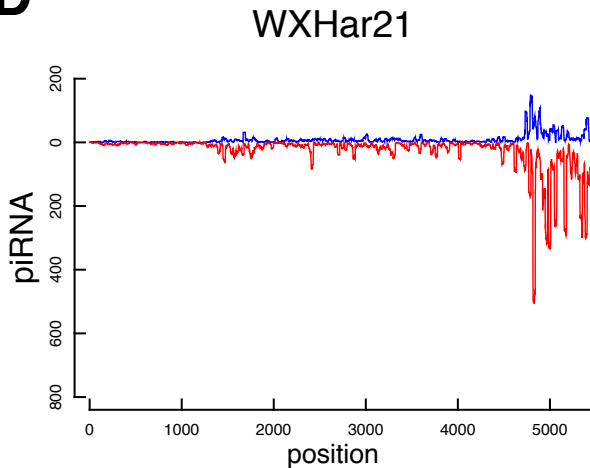
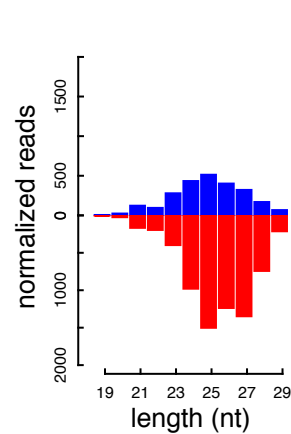
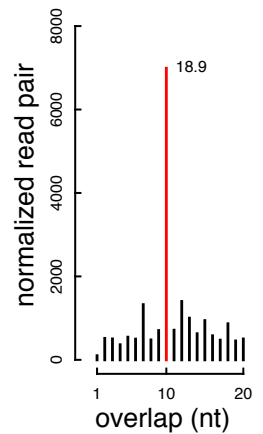
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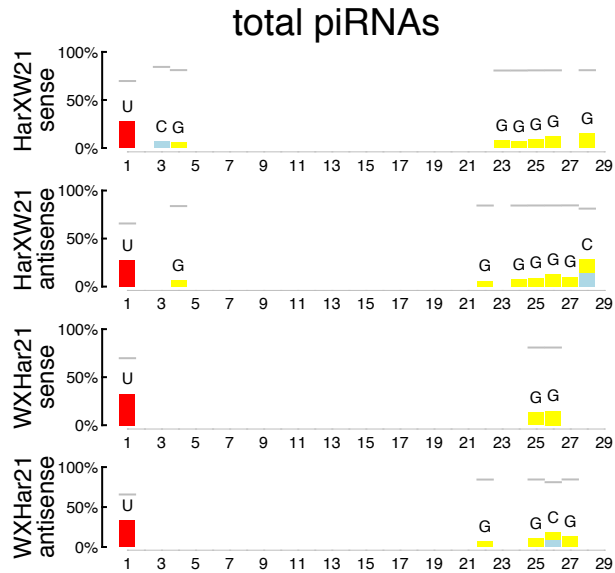
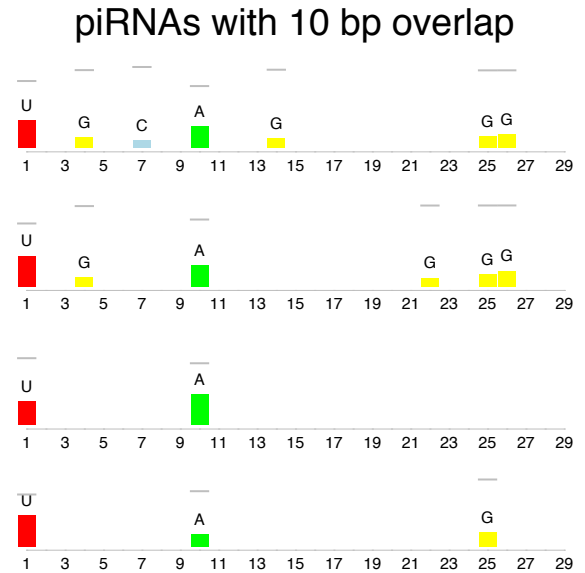
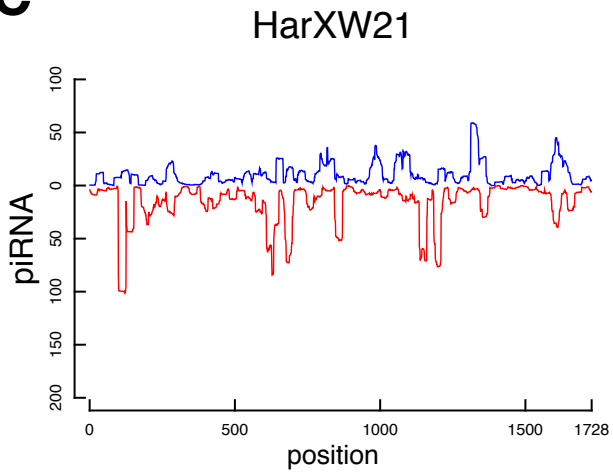
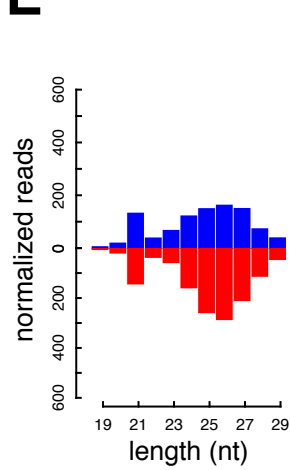
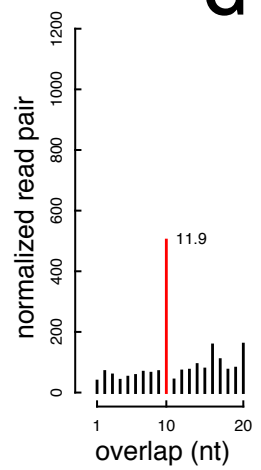
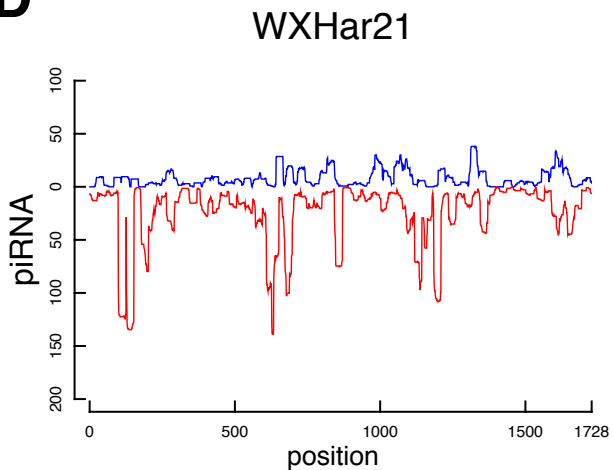
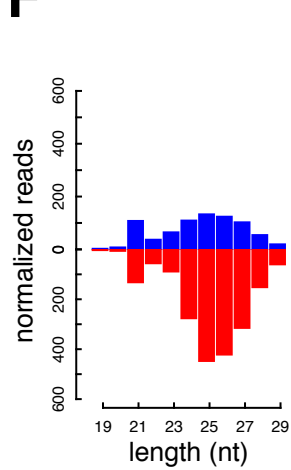
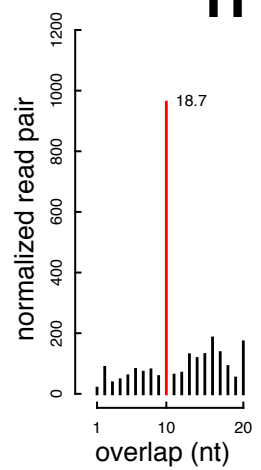
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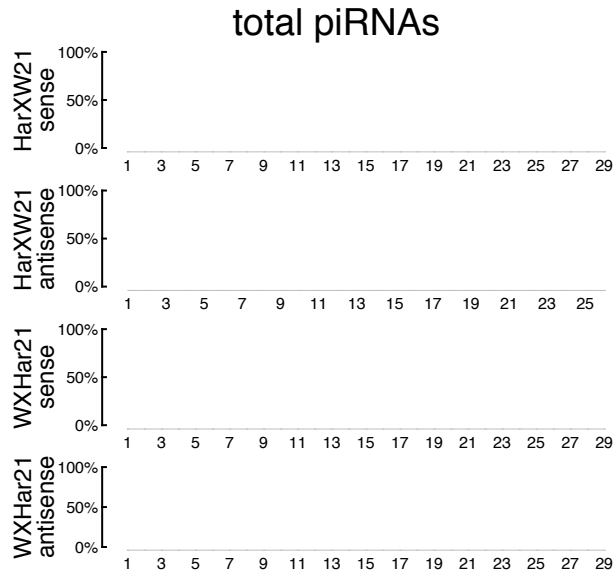
baggins

A**B****C****E****G****D****F****H**

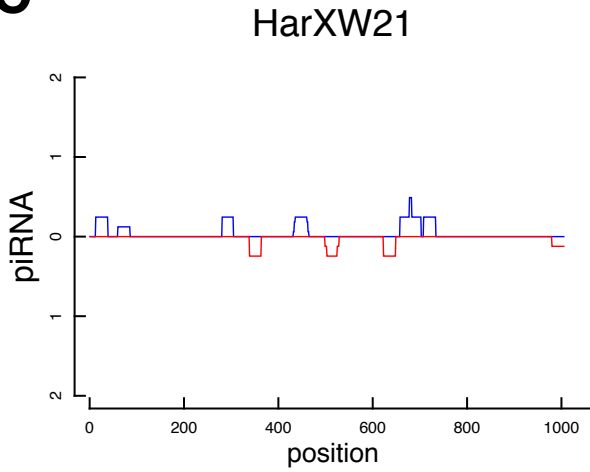
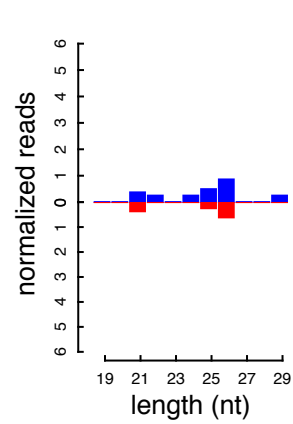
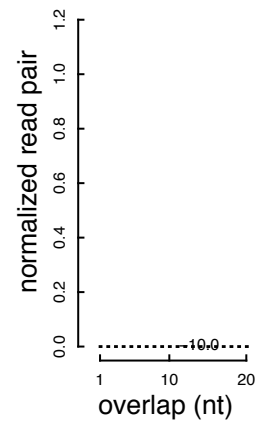
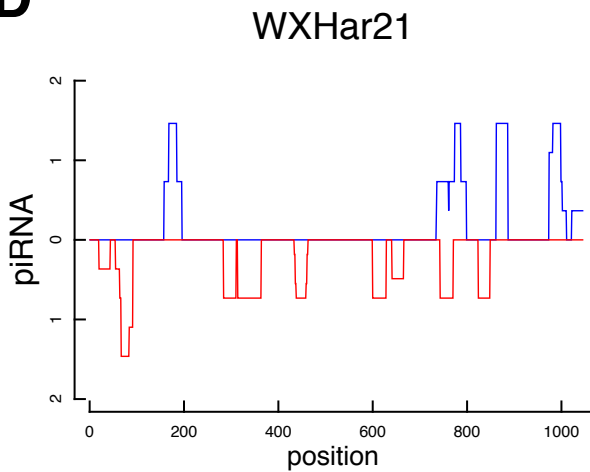
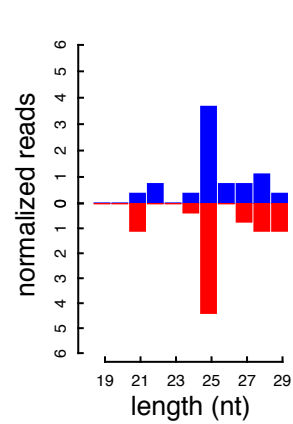
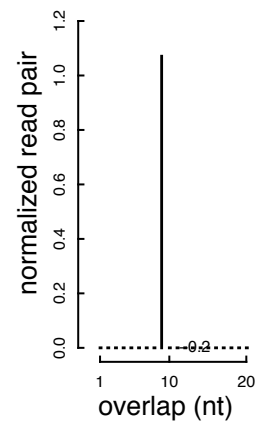
Bari1

A**B****C****E****G****D****F****H**

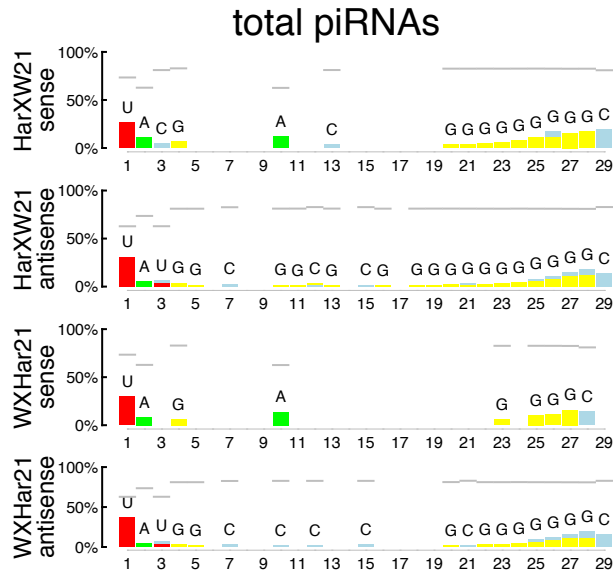
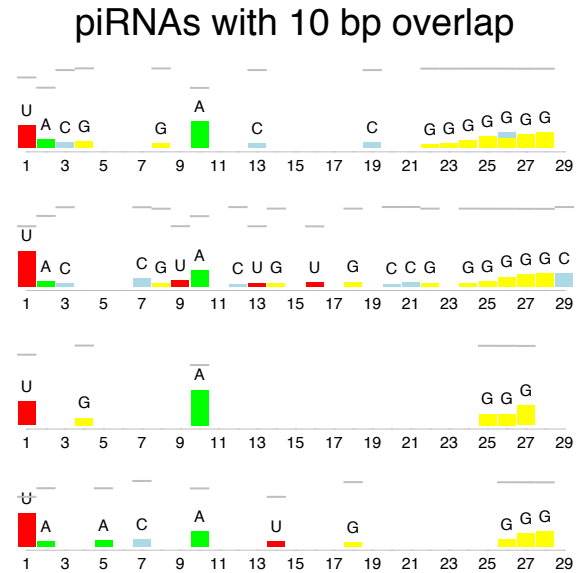
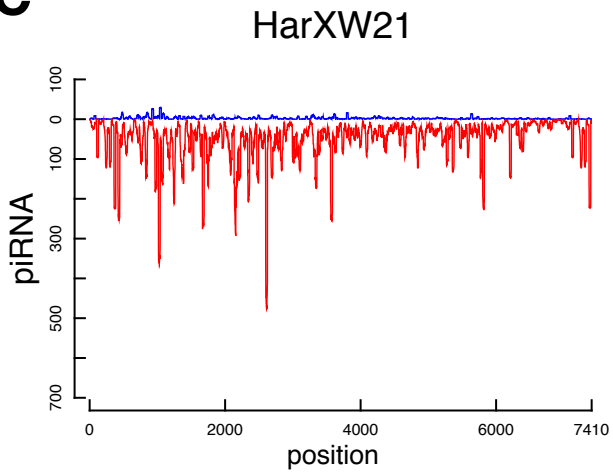
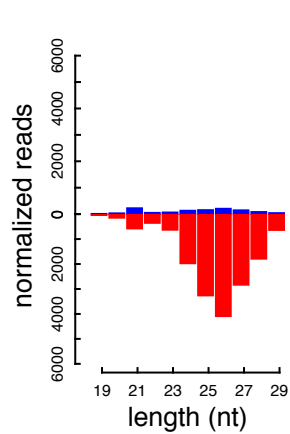
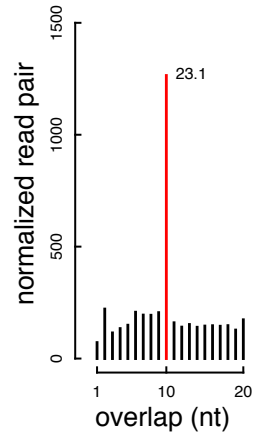
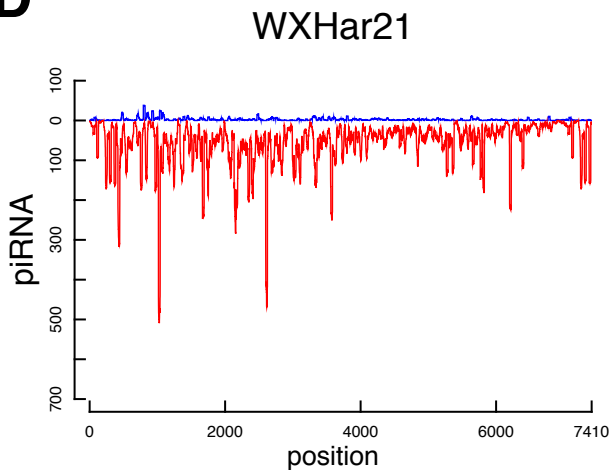
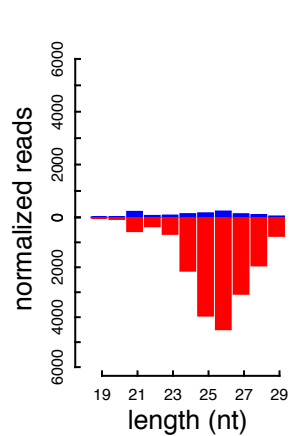
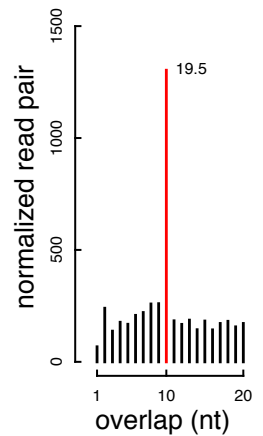
Bari2

A**B**

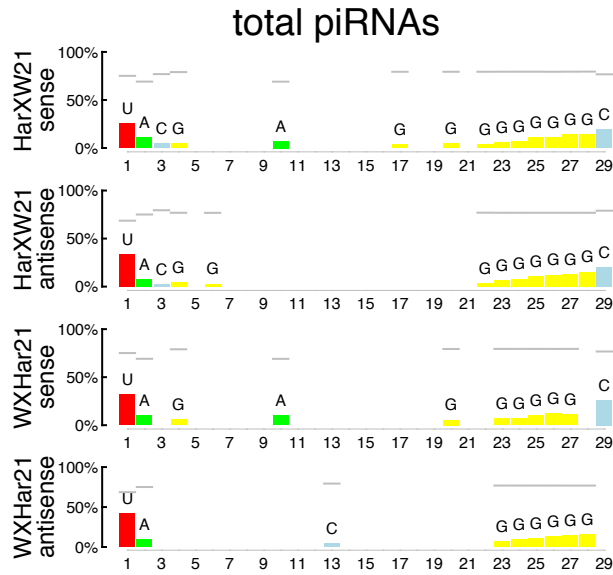
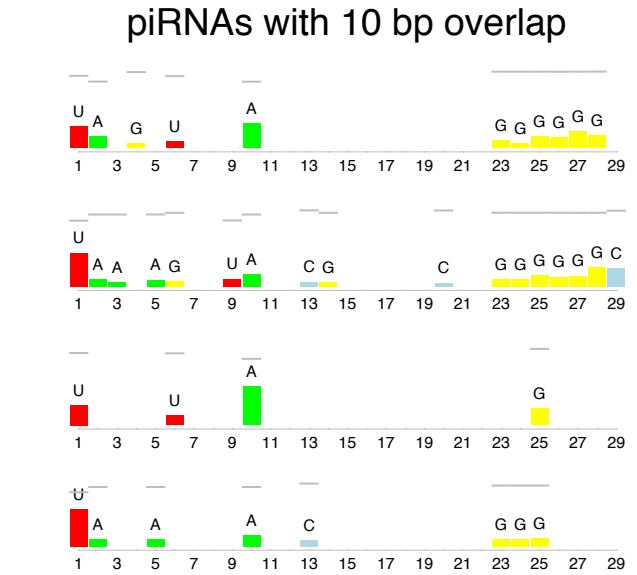
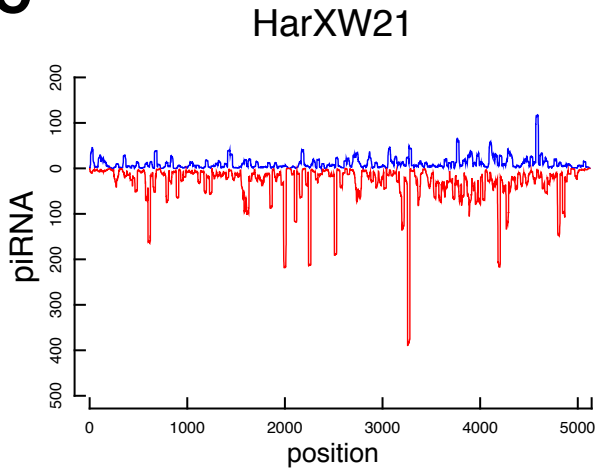
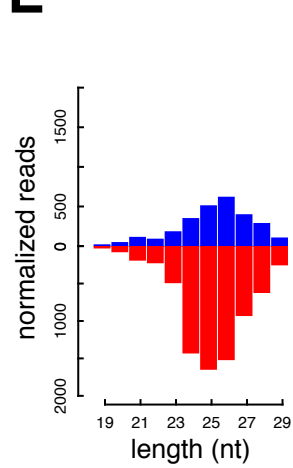
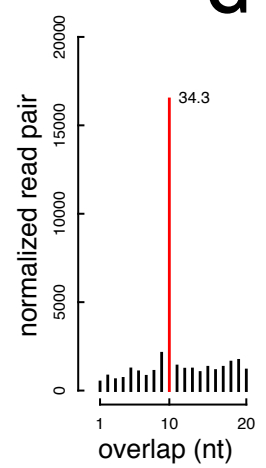
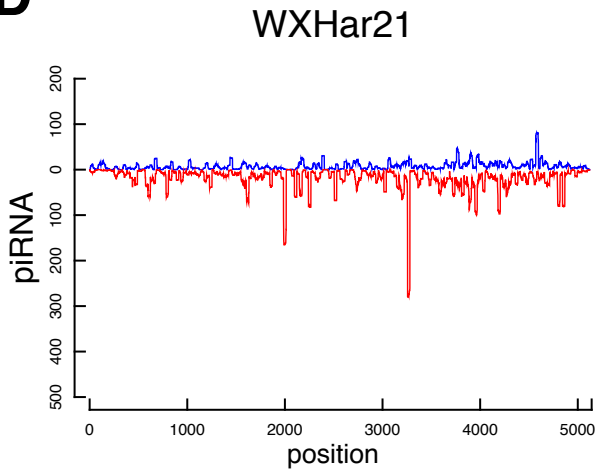
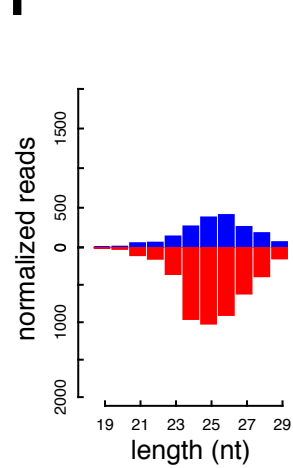
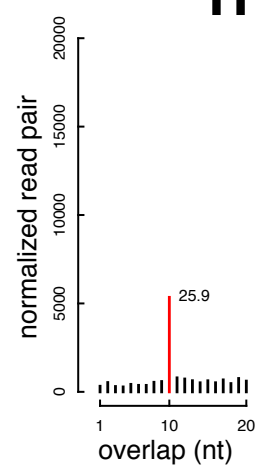
piRNAs with 10 bp overlap

C**E****G****D****F****H**

blood

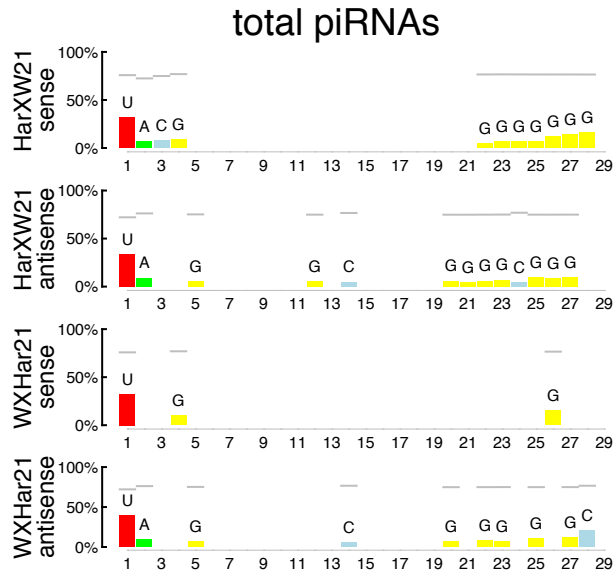
A**B****C****E****G****D****F****H**

BS

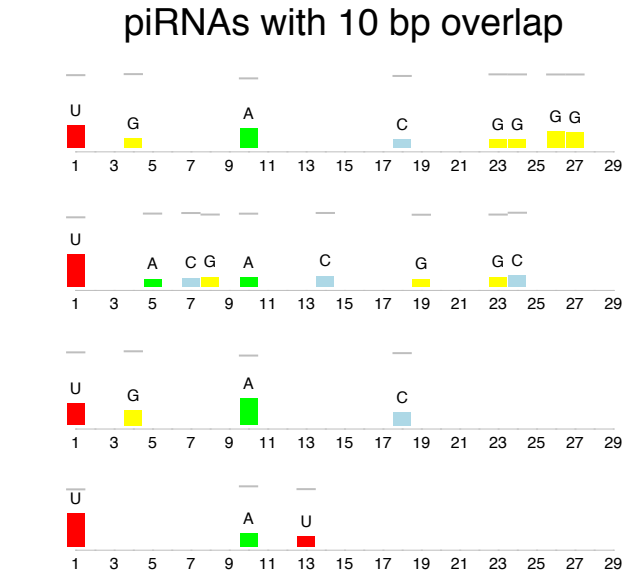
A**B****C****E****G****D****F****H**

BS3

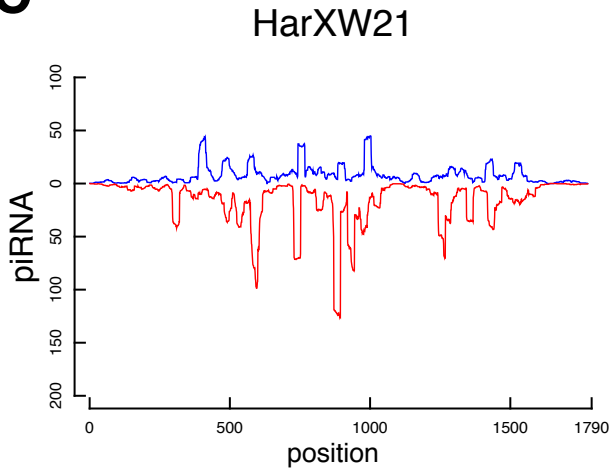
A



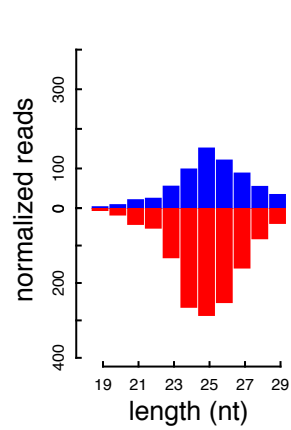
B



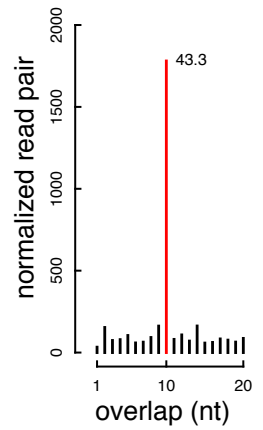
C



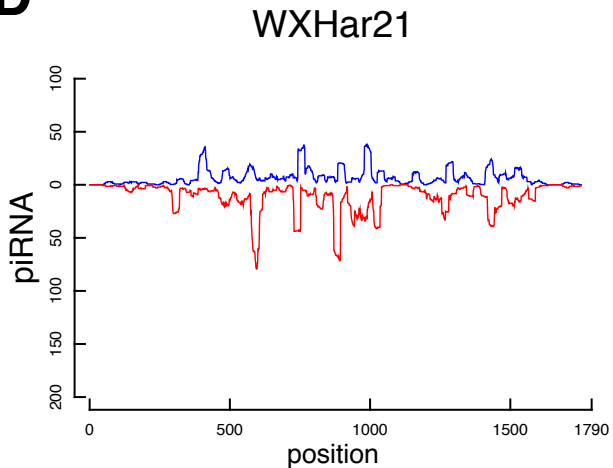
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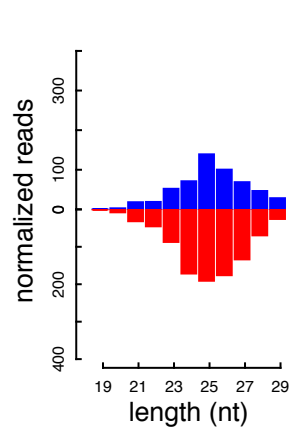
G



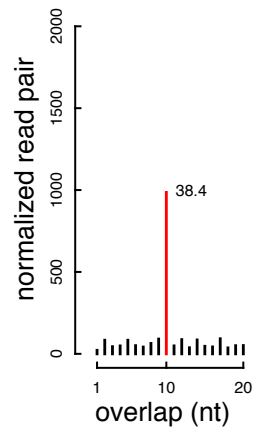
D



F



H



BS3#2

A

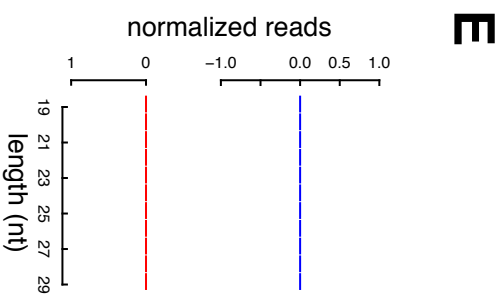
WXHar21 antisense WXHar21 sense HarXW21 antisense HarXW21 sense

total piRNAs

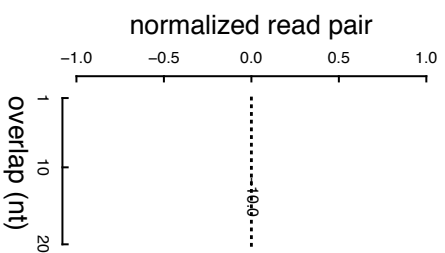
B

piRNAs with 10 bp overlap

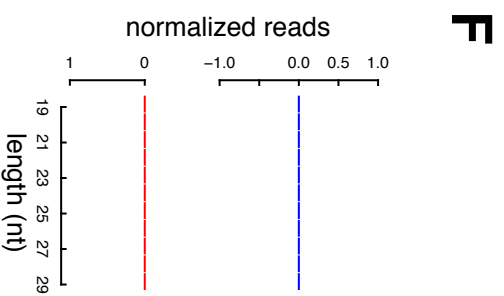
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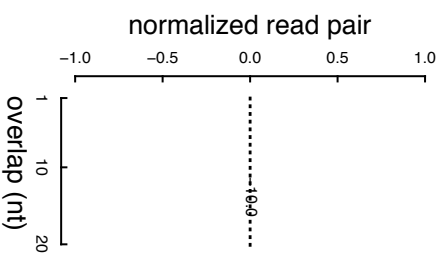
G



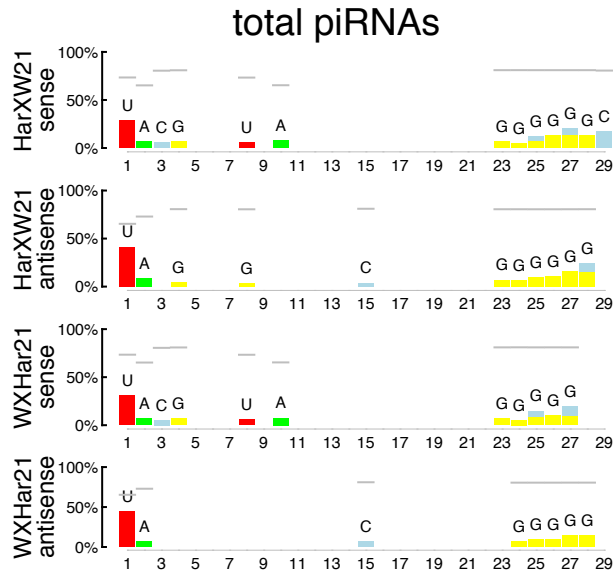
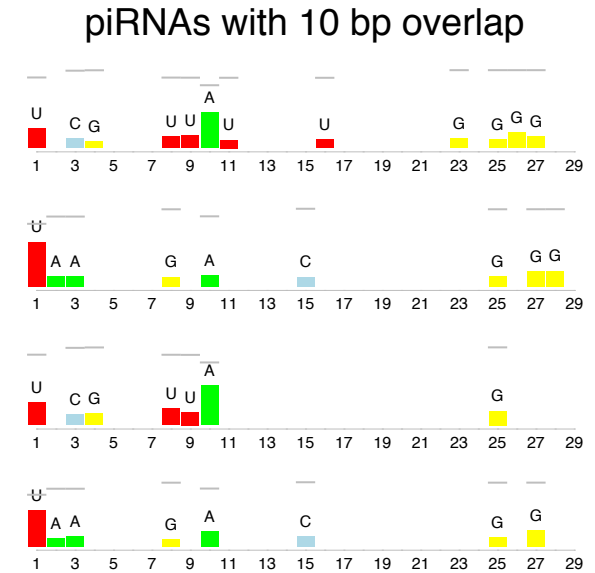
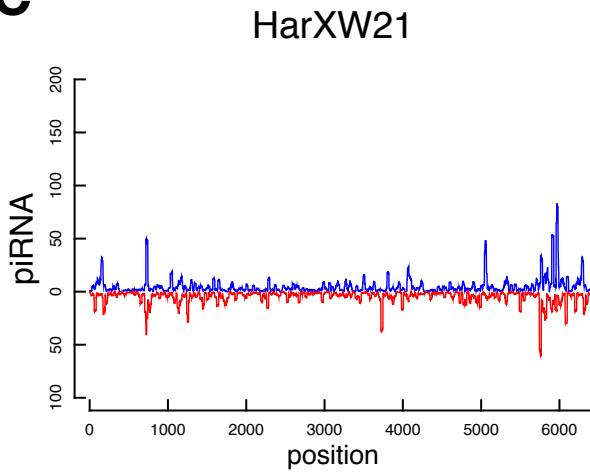
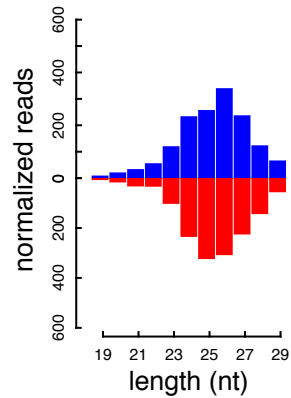
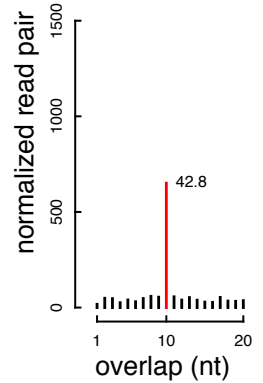
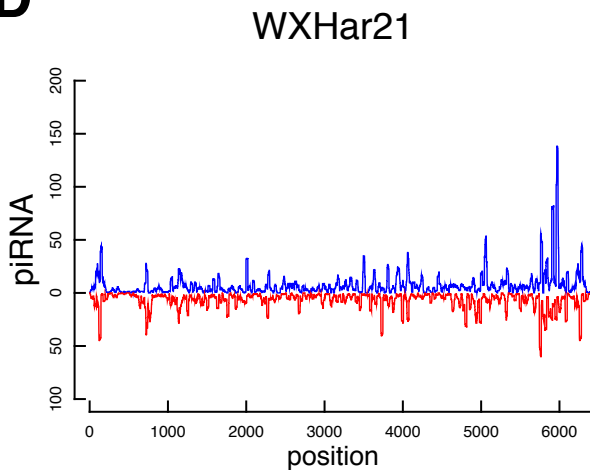
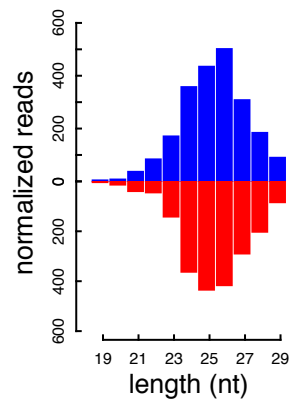
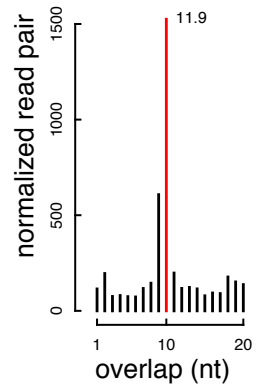
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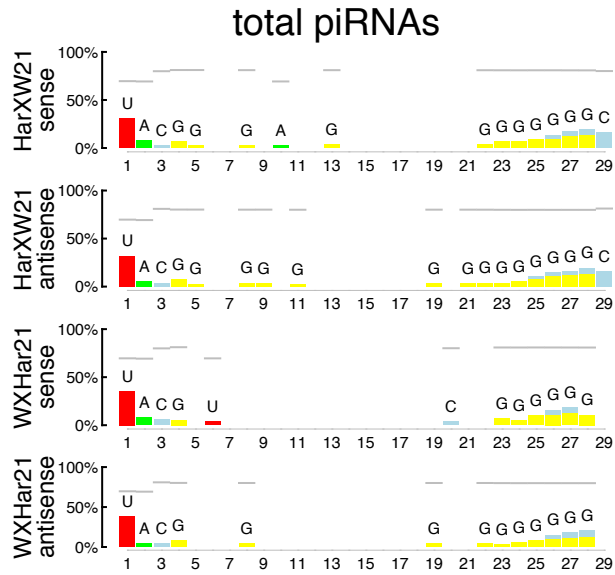
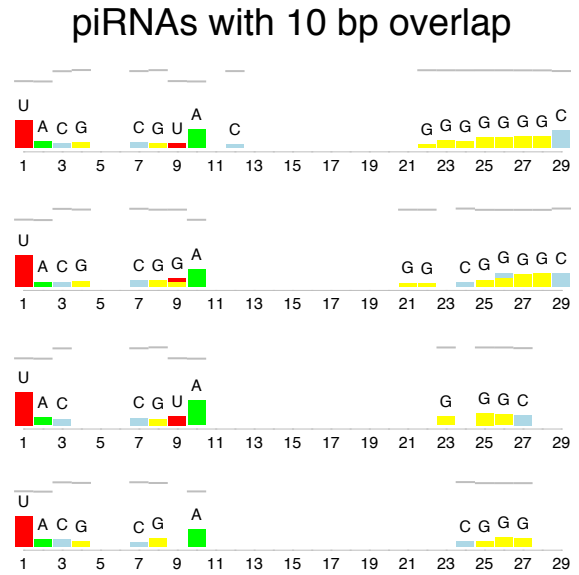
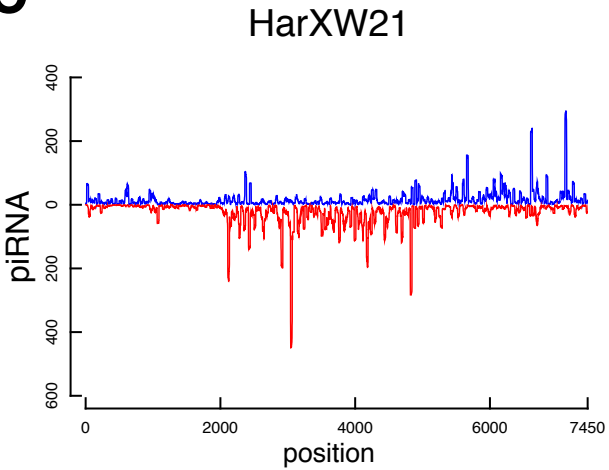
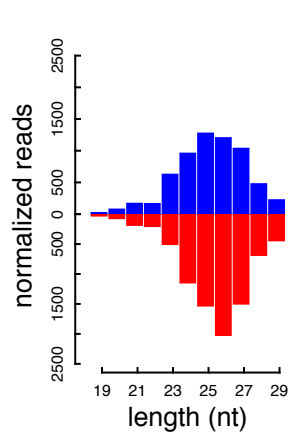
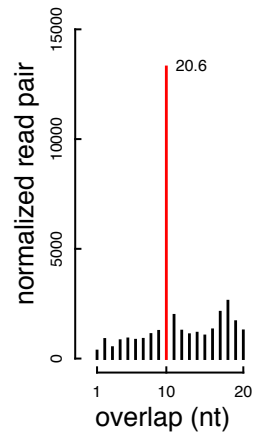
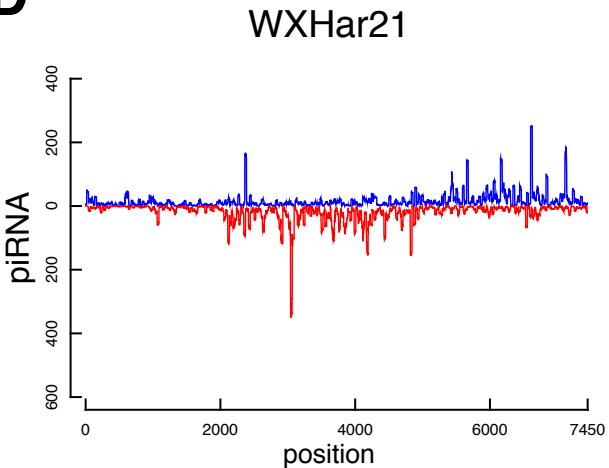
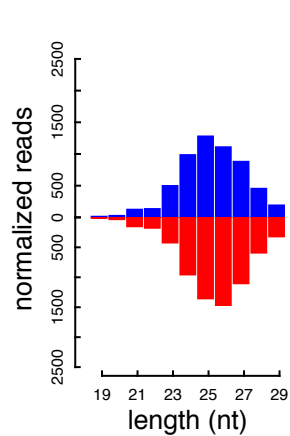
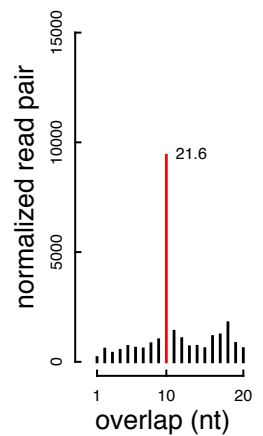
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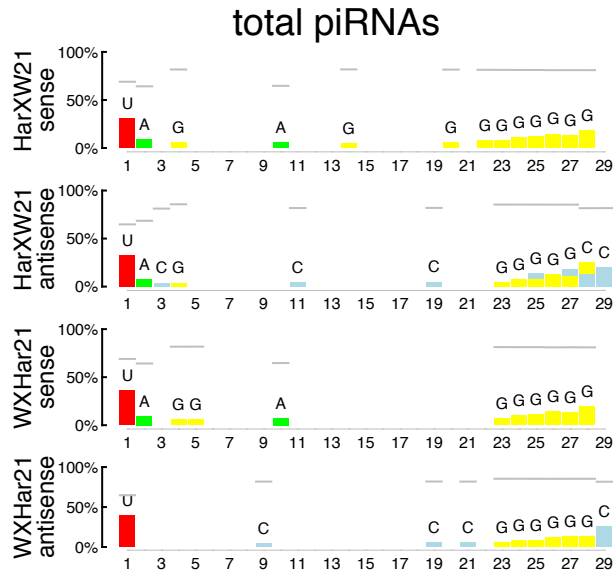
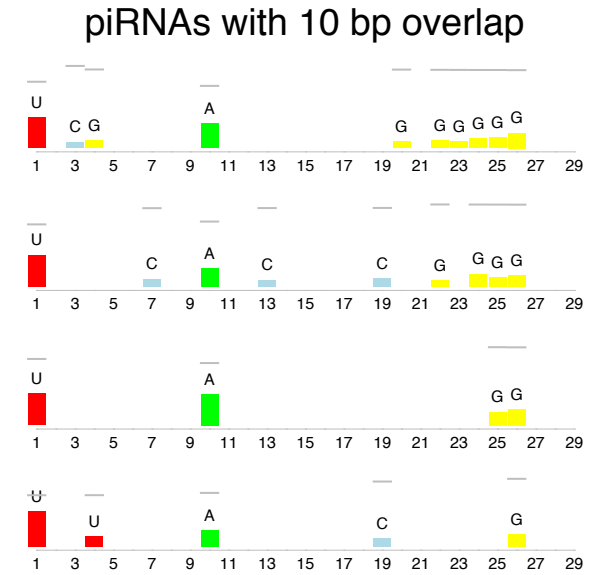
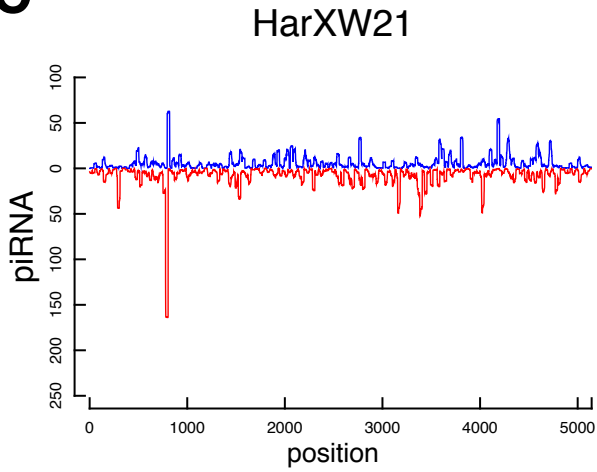
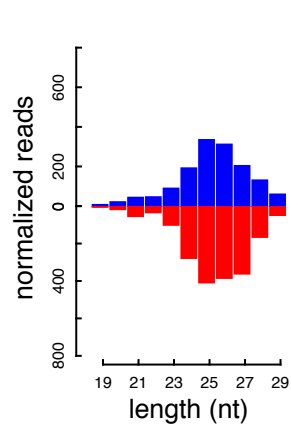
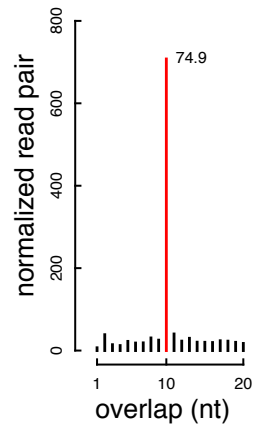
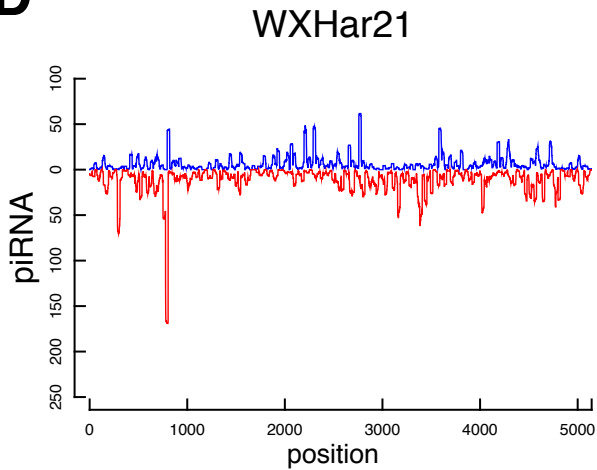
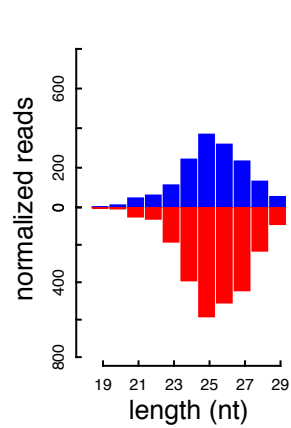
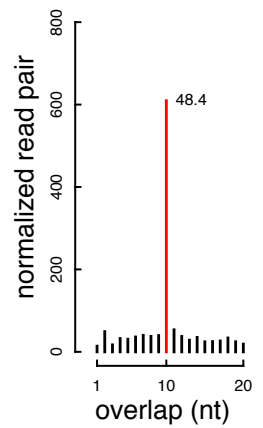
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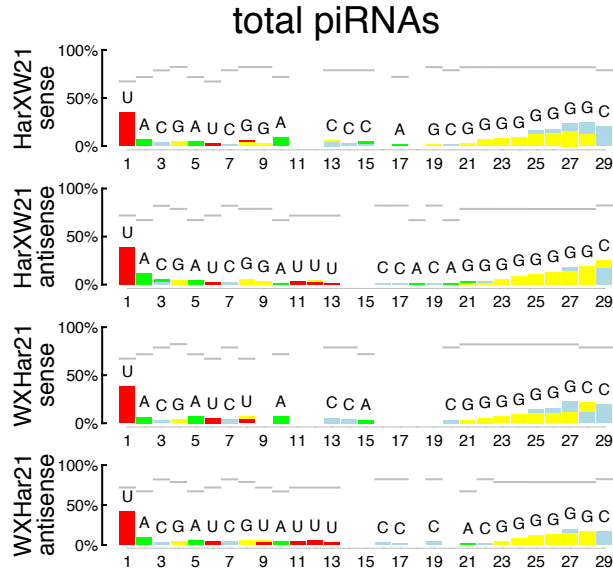
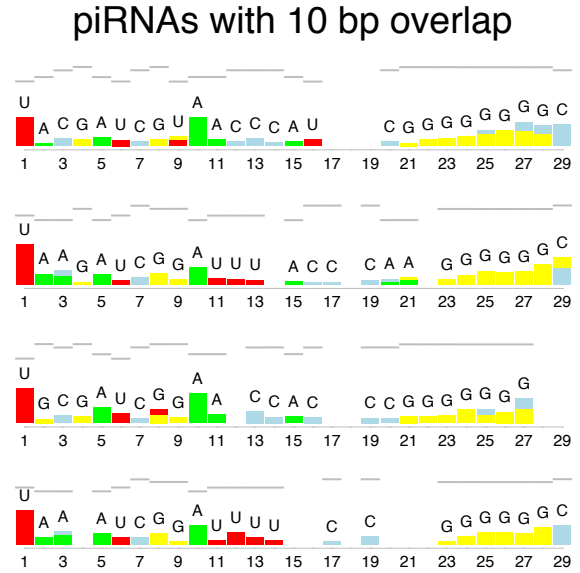
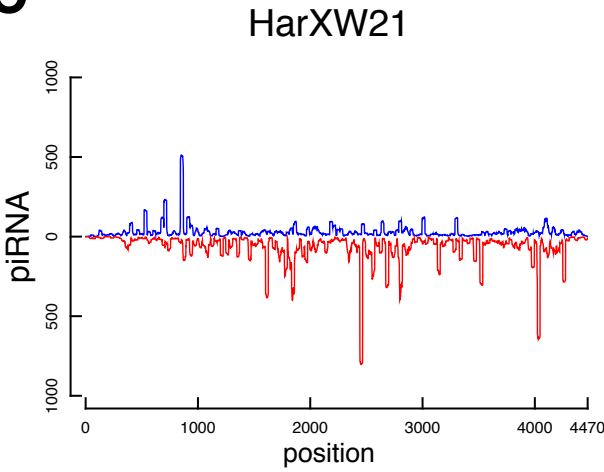
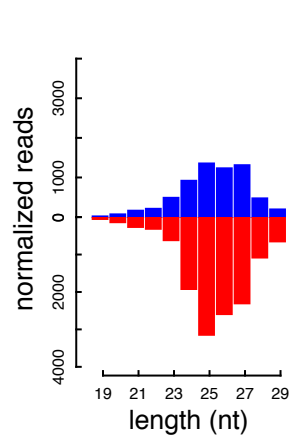
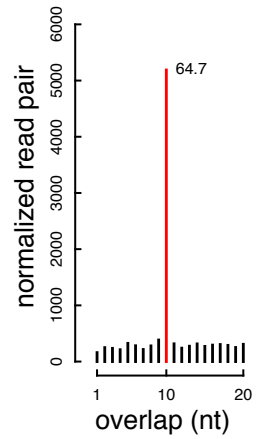
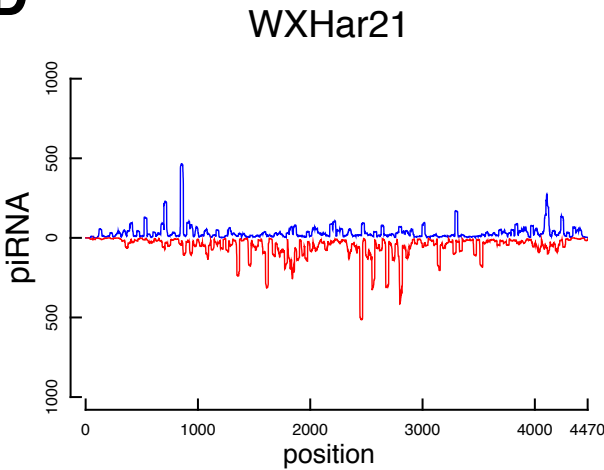
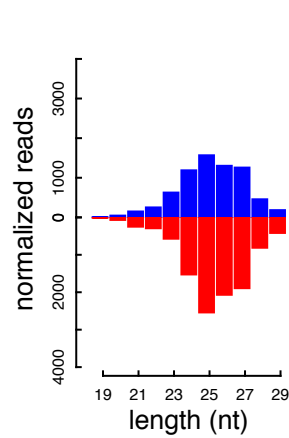
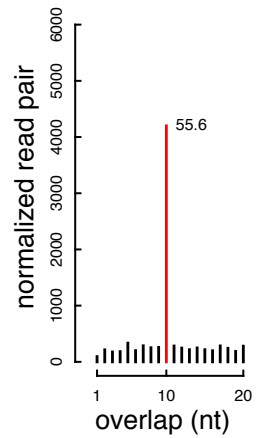
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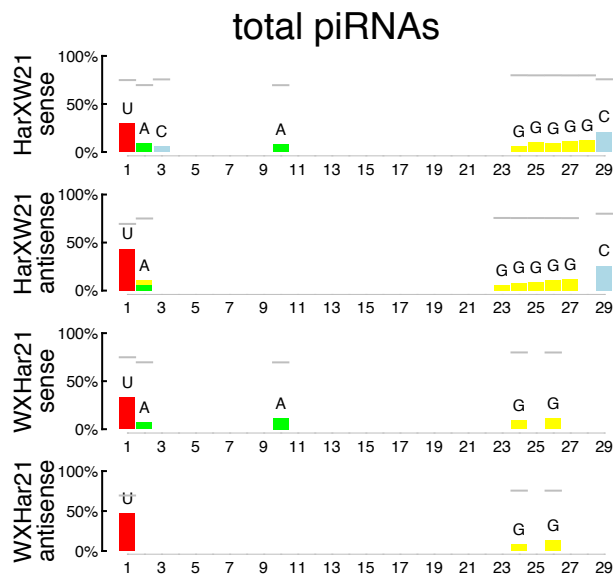
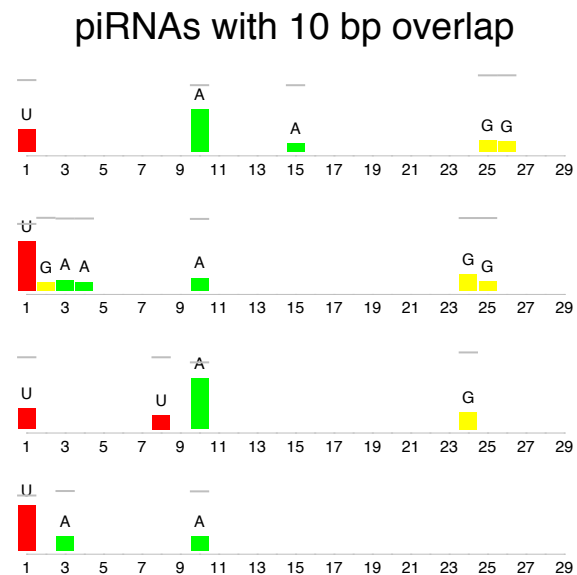
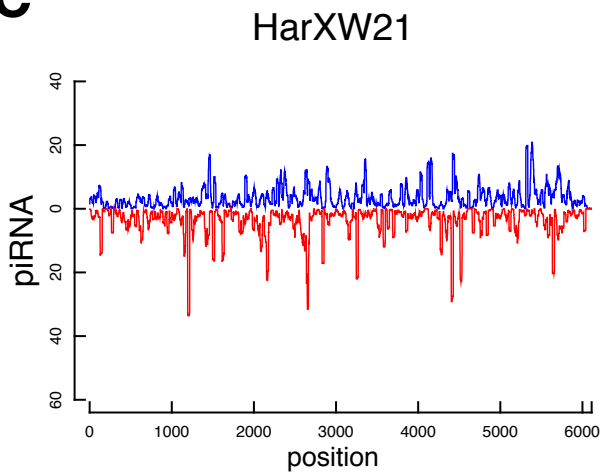
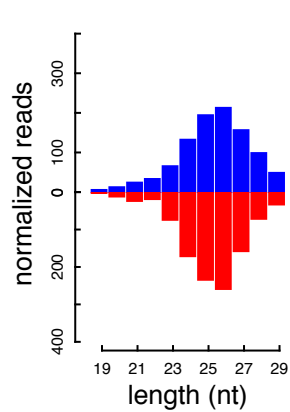
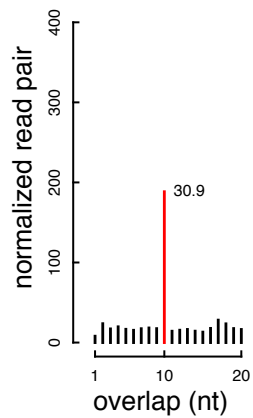
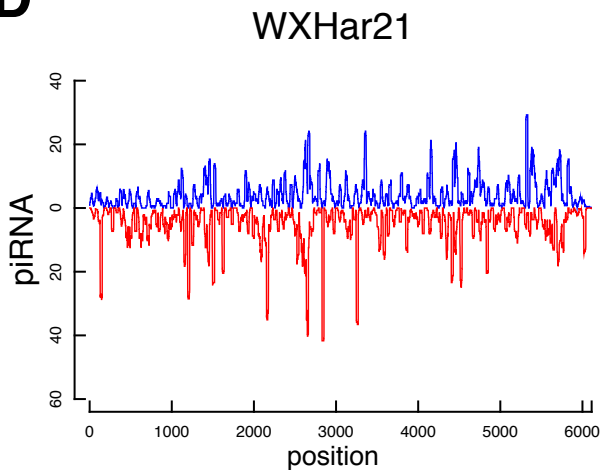
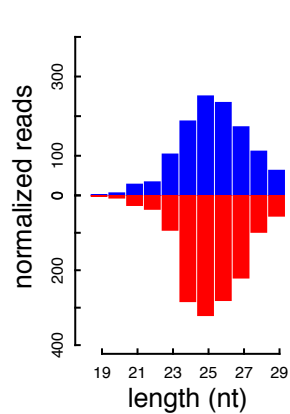
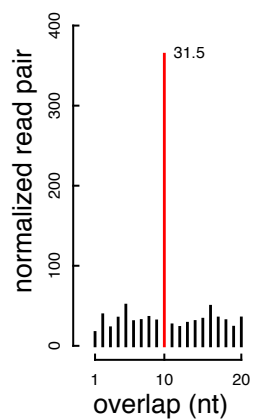
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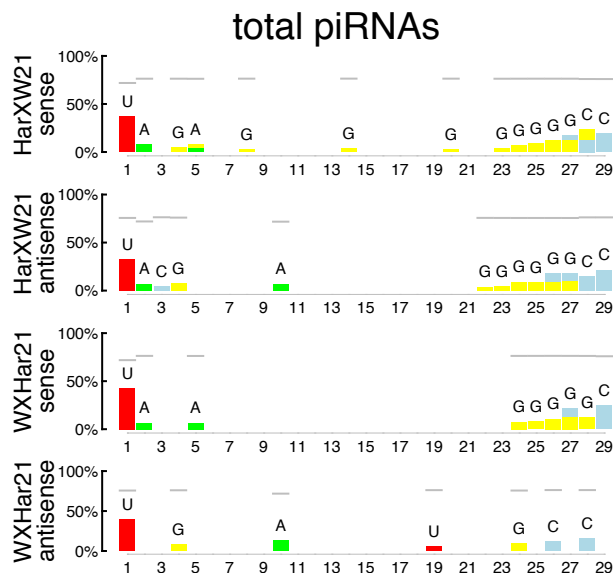
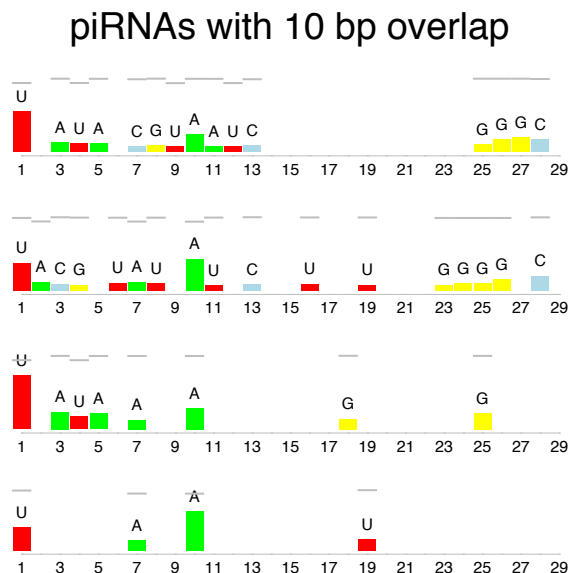
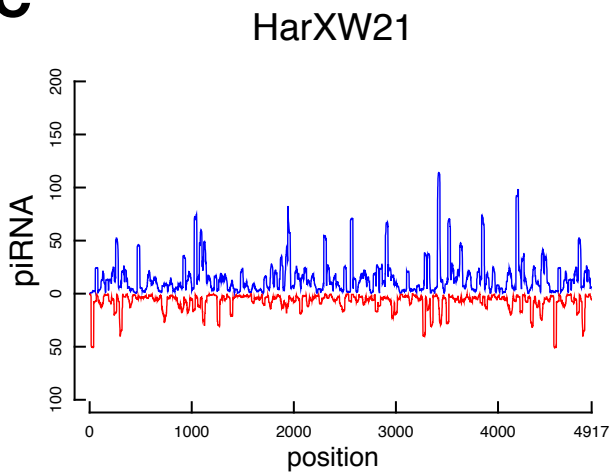
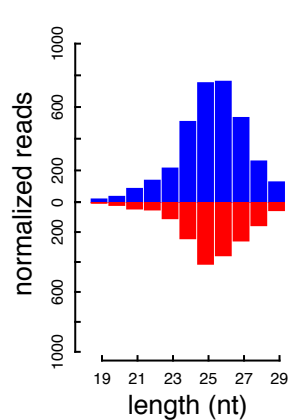
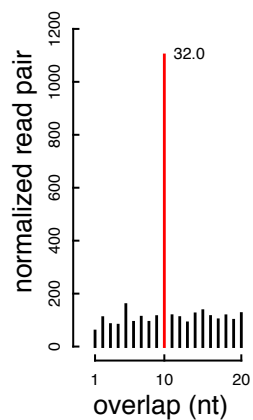
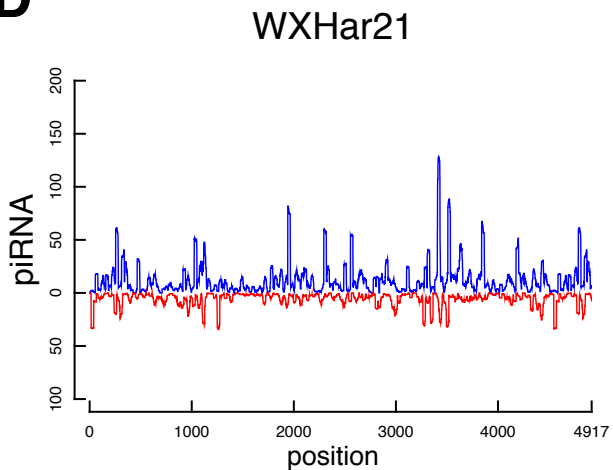
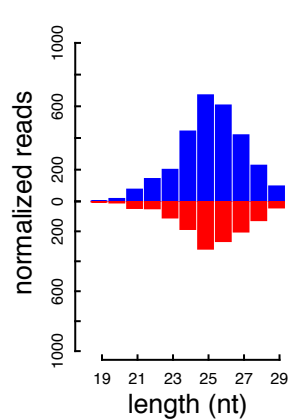
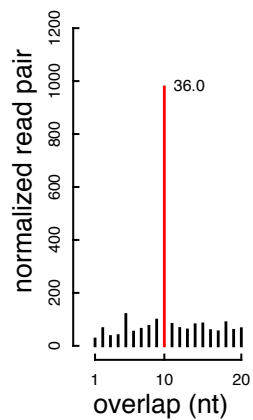
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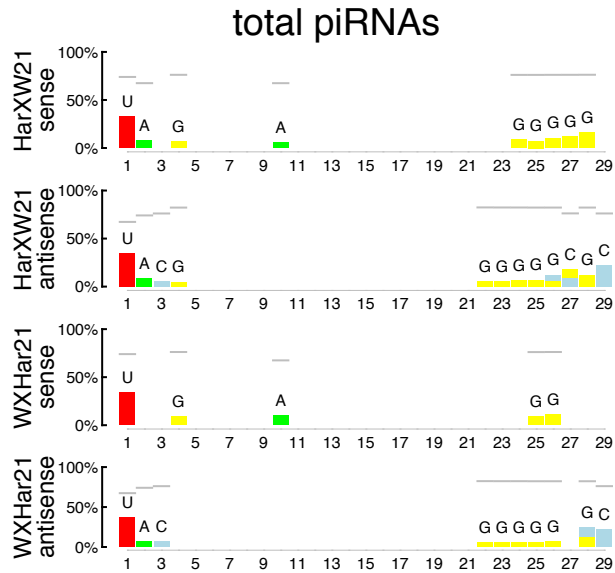
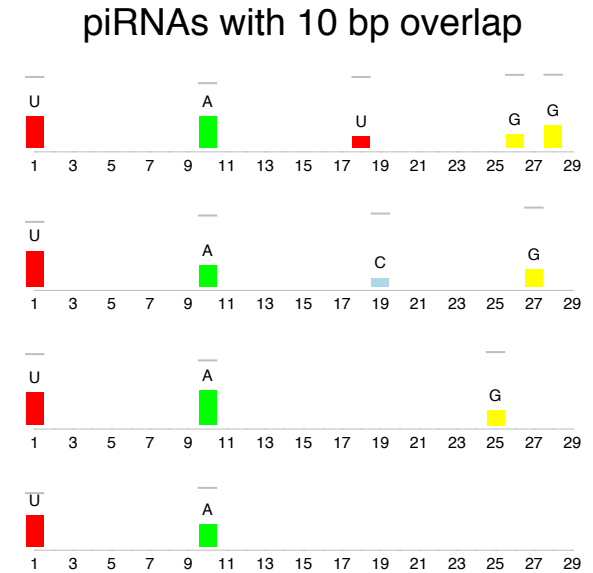
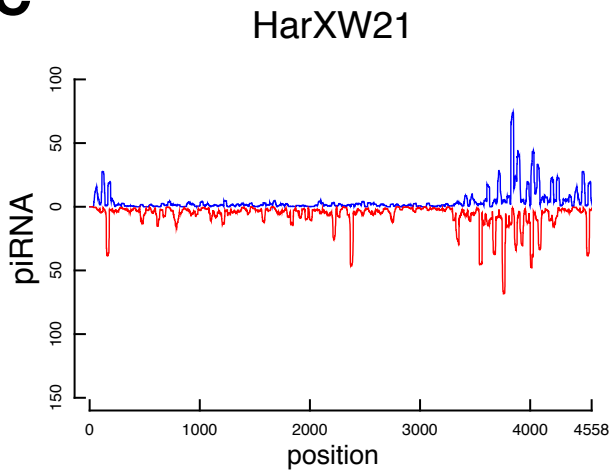
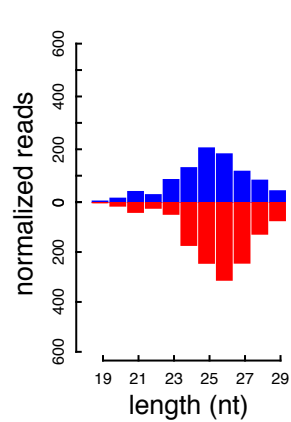
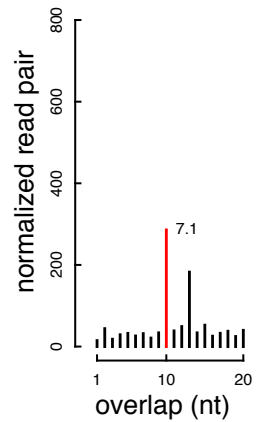
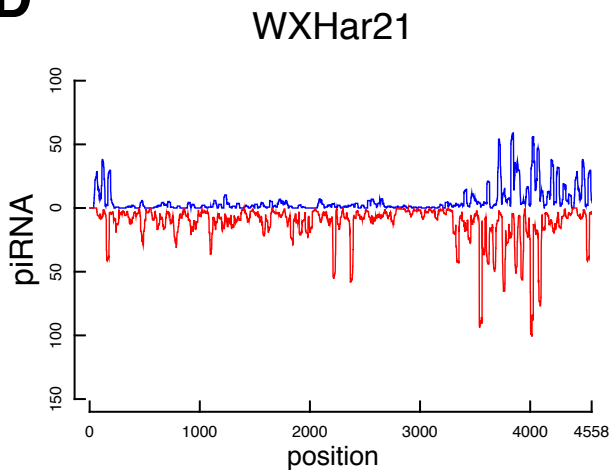
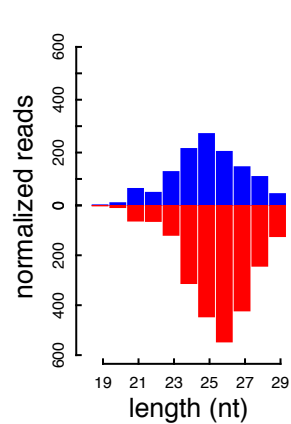
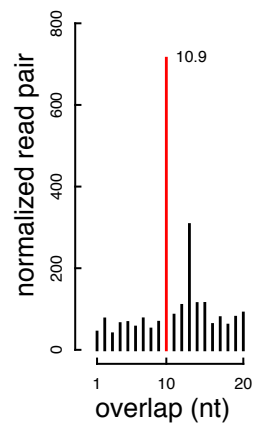
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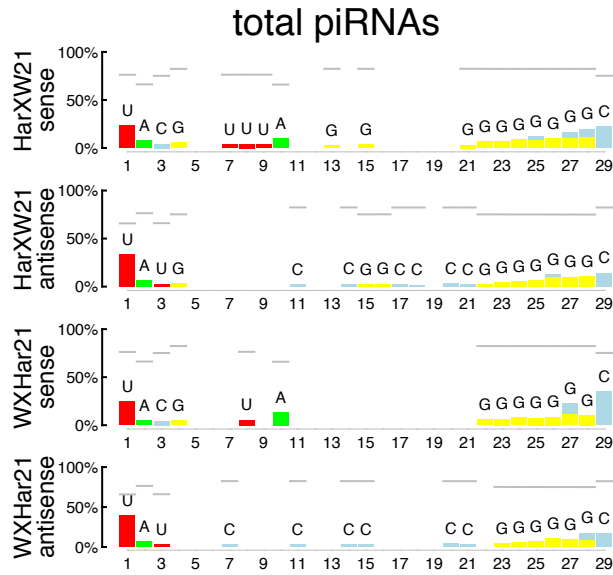
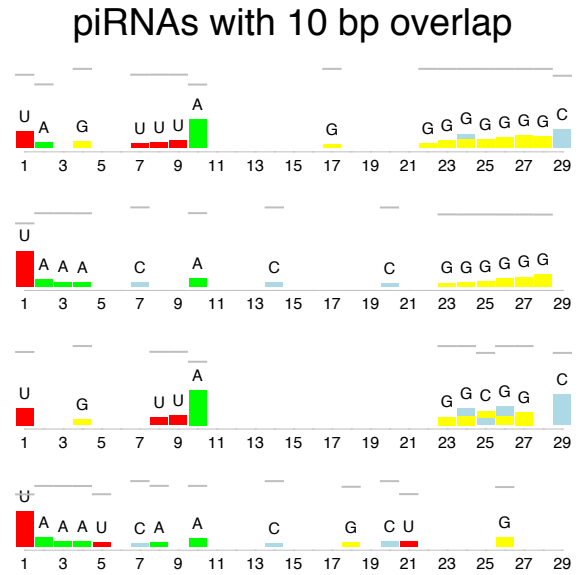
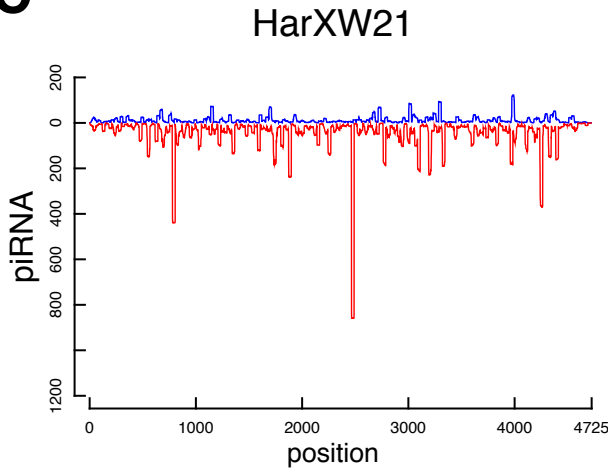
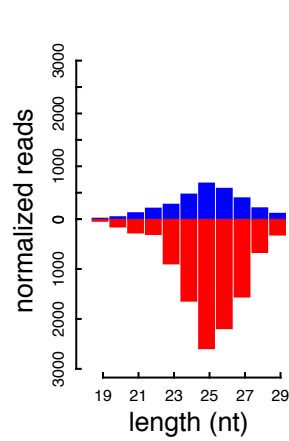
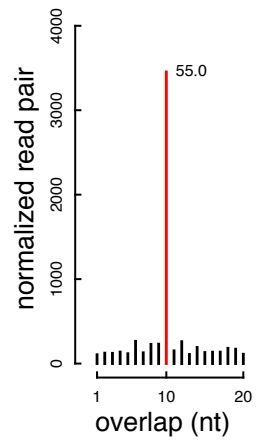
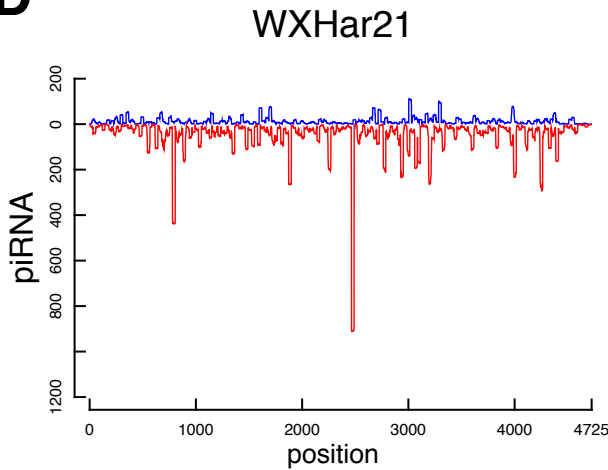
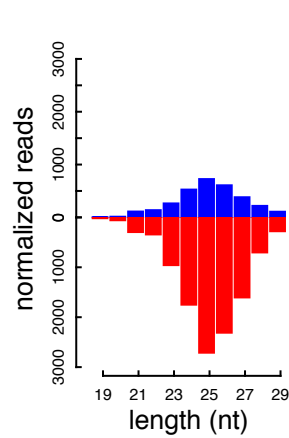
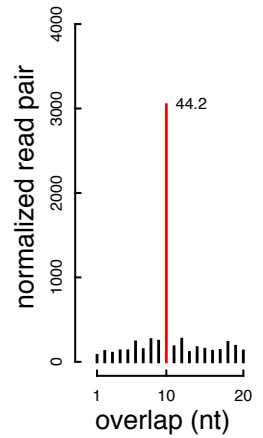
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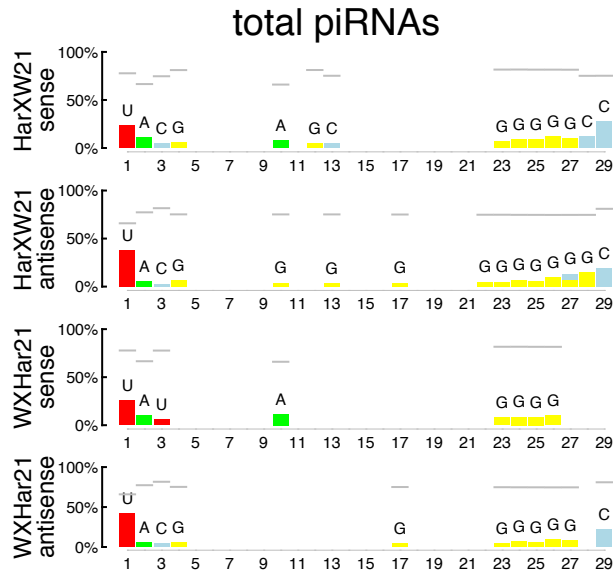
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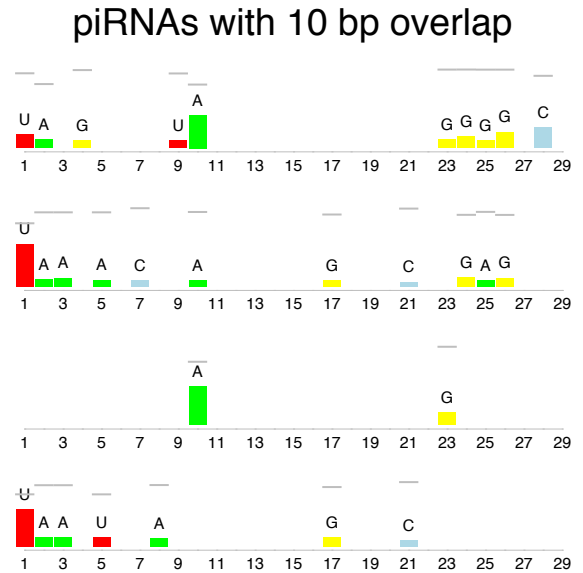
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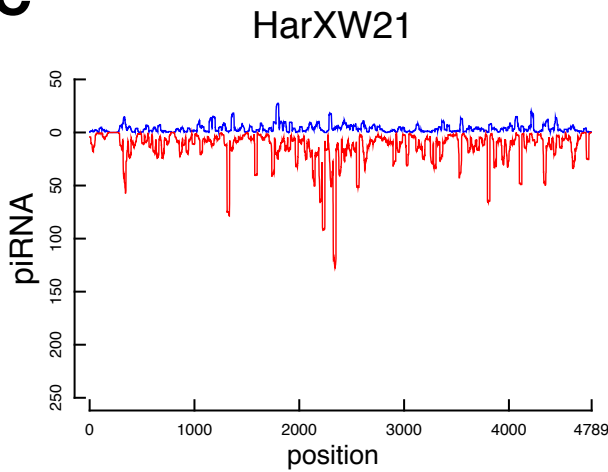
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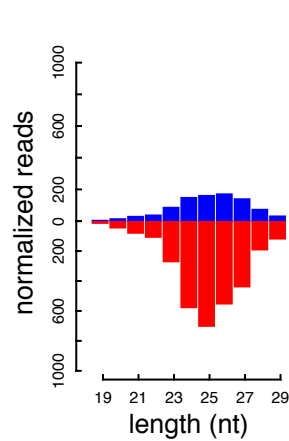
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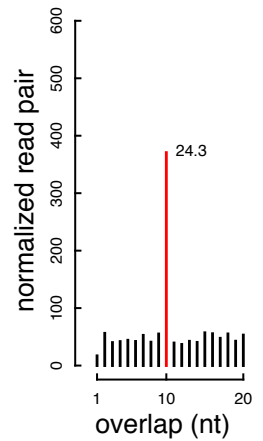
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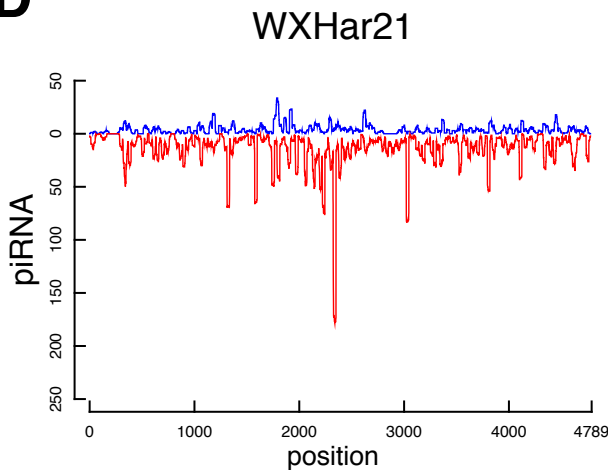
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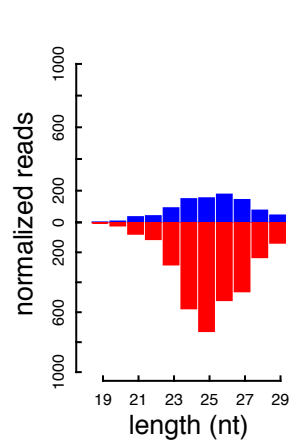
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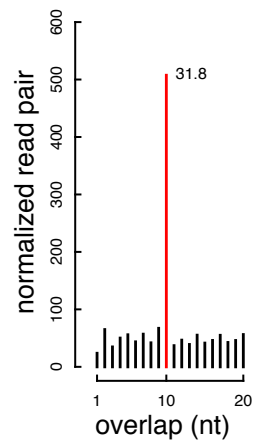
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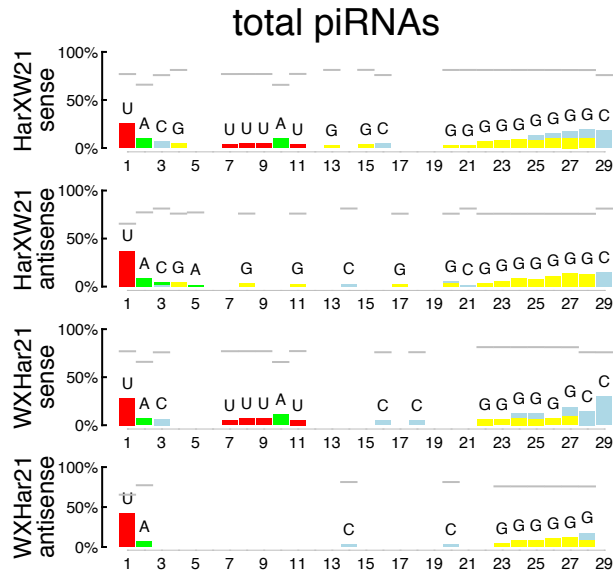


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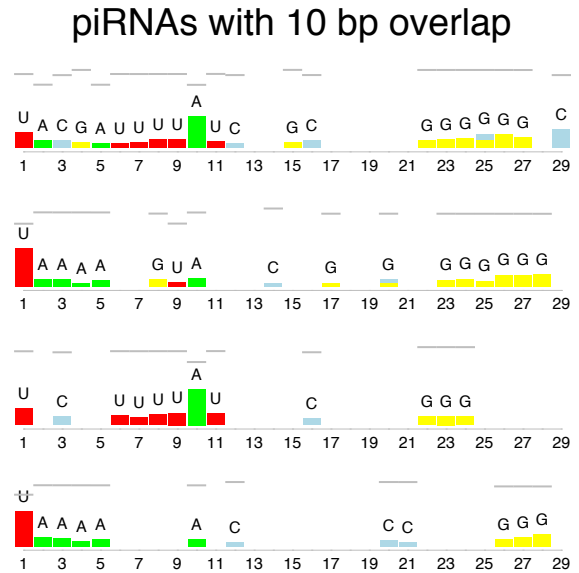


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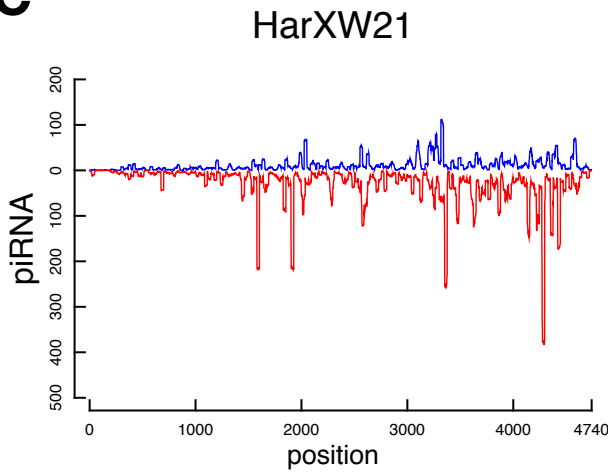
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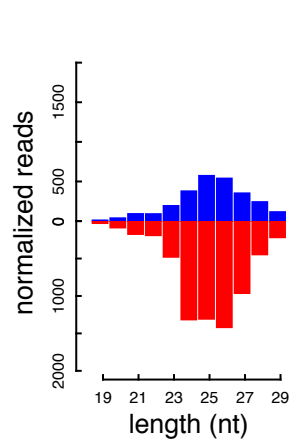
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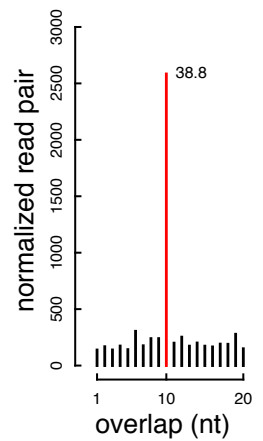
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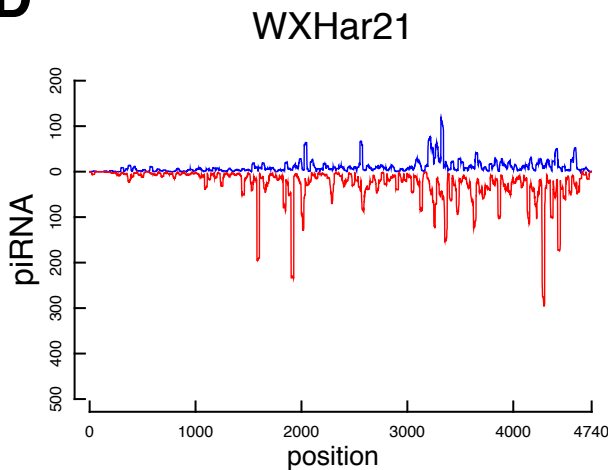
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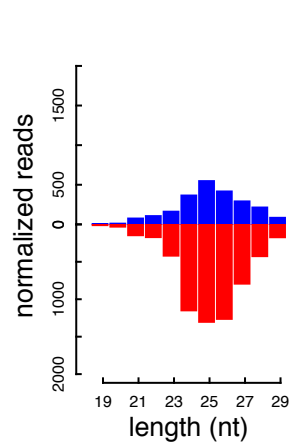
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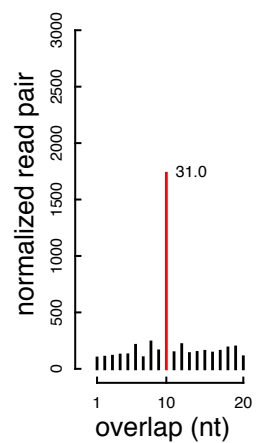
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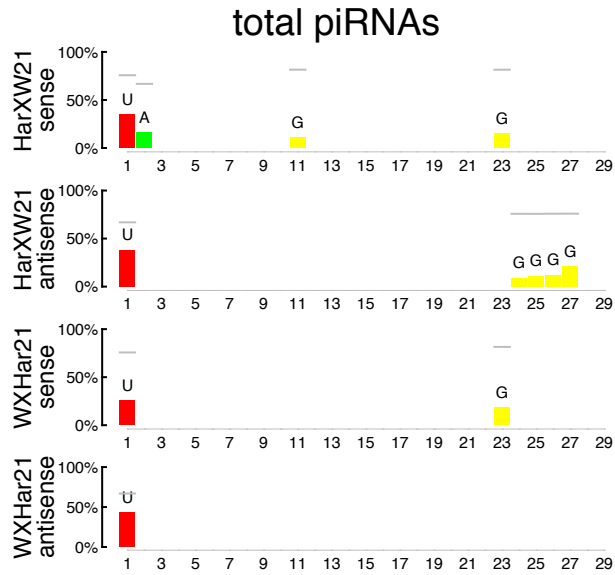


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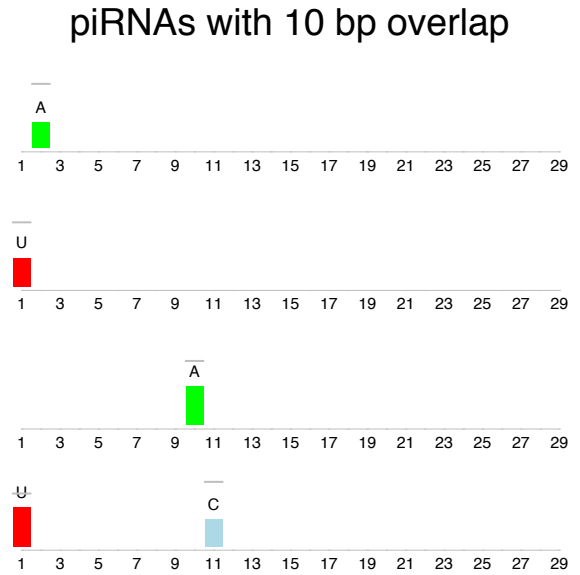


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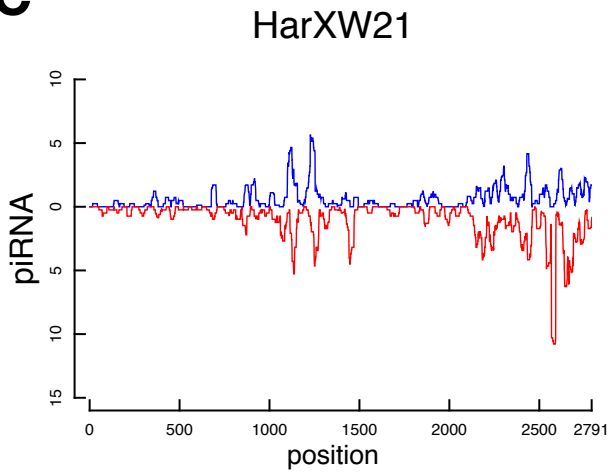
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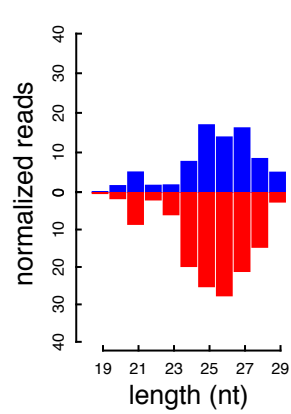
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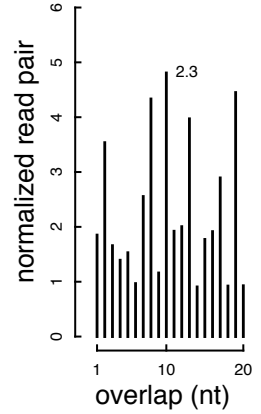
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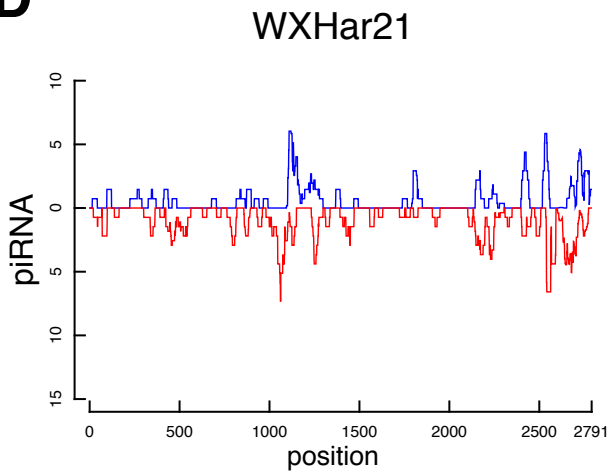
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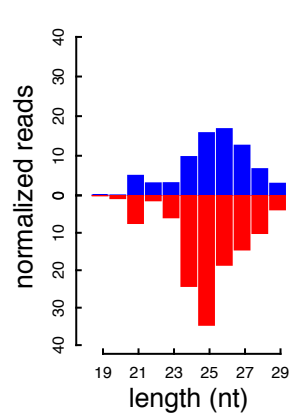
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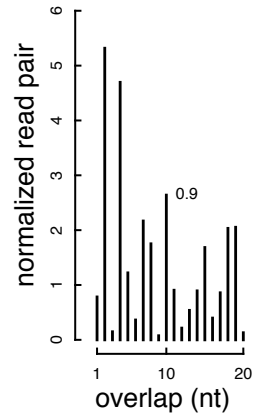
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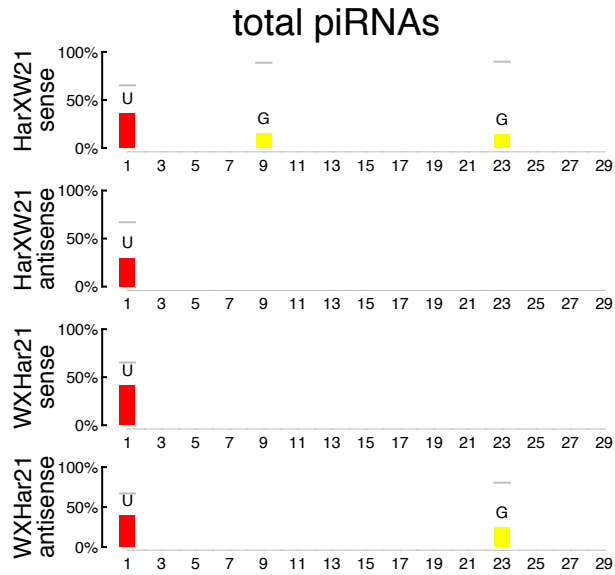


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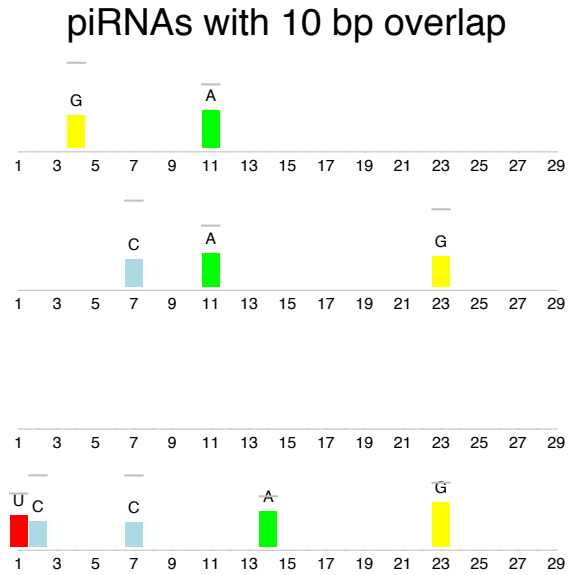


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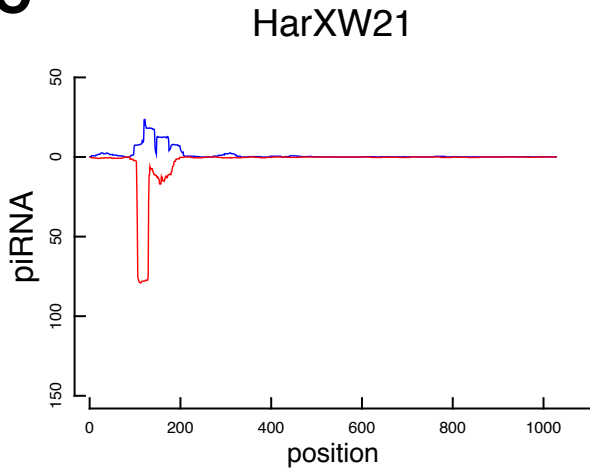
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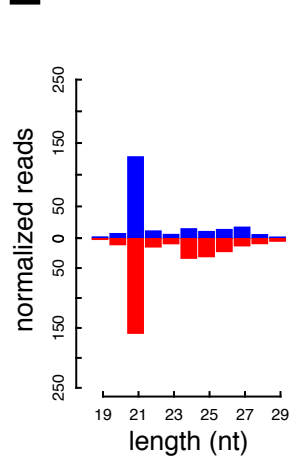
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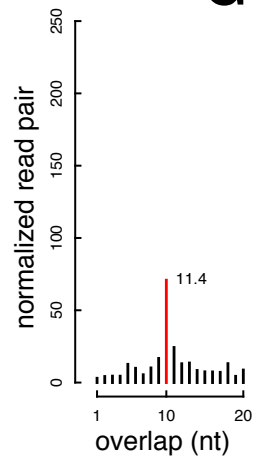
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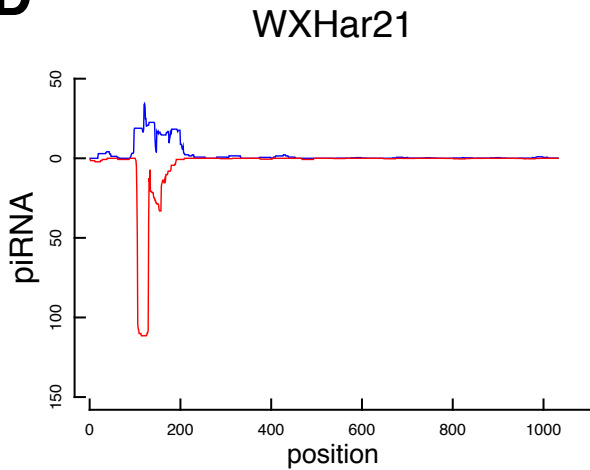
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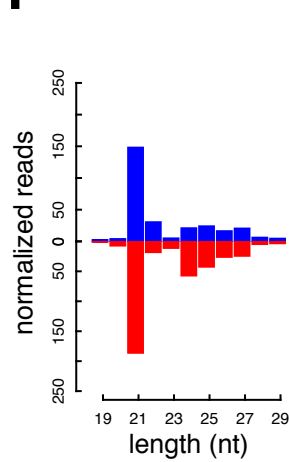
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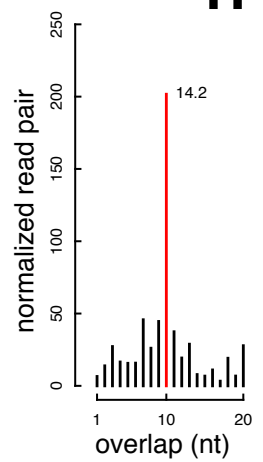
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F



H



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A

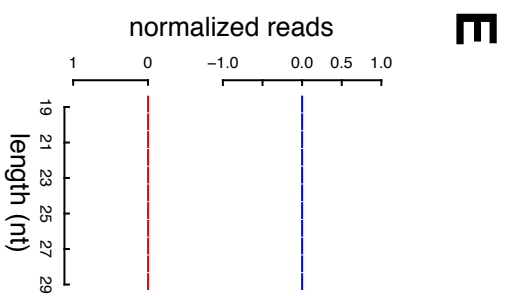
WXHar21 antisense WXHar21 sense HarXW21 antisense HarXW21 sense

total piRNAs

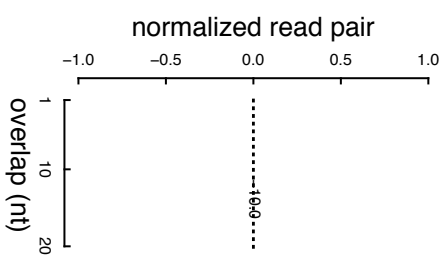
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piRNAs with 10 bp overlap

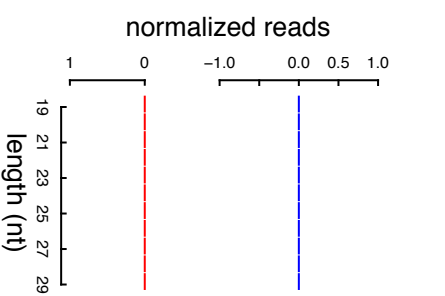
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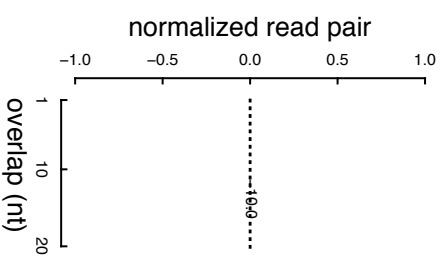
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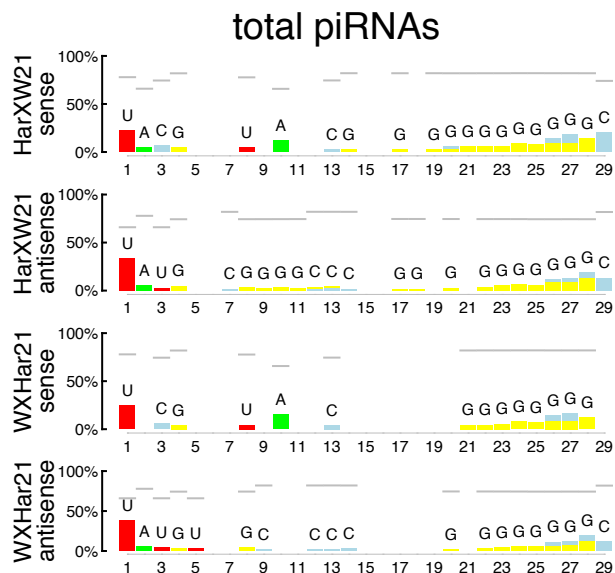


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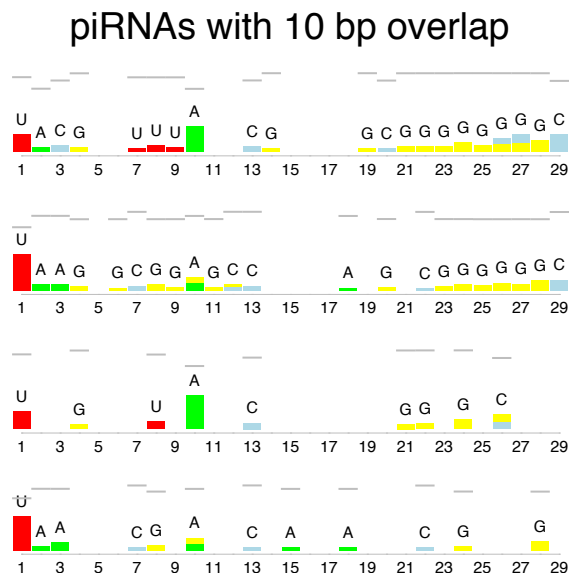


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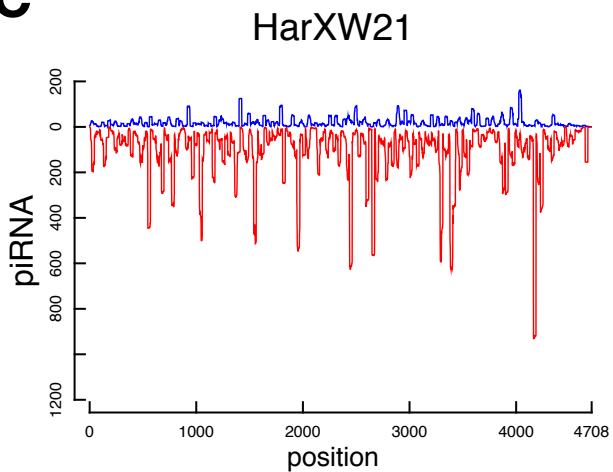
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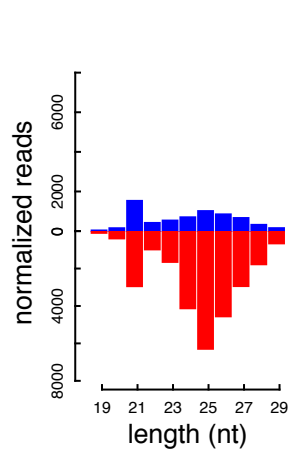
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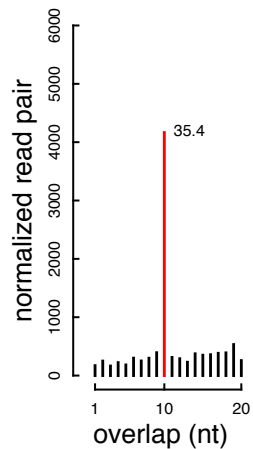
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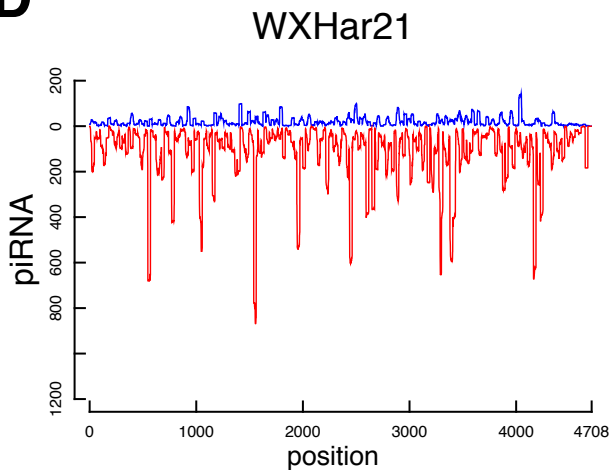
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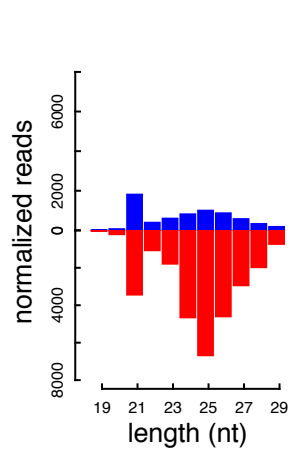
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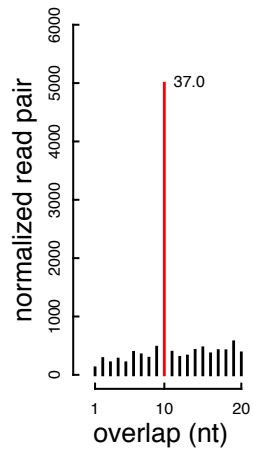
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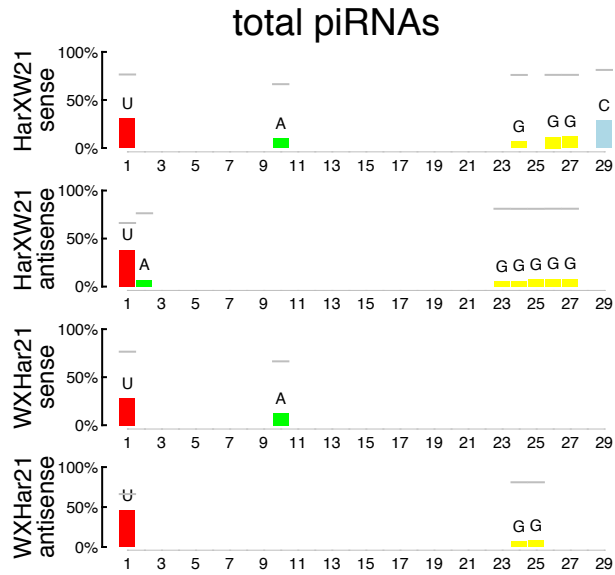
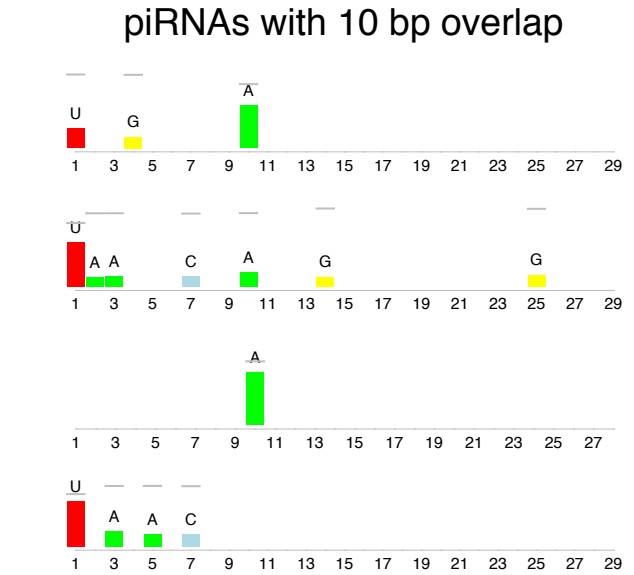
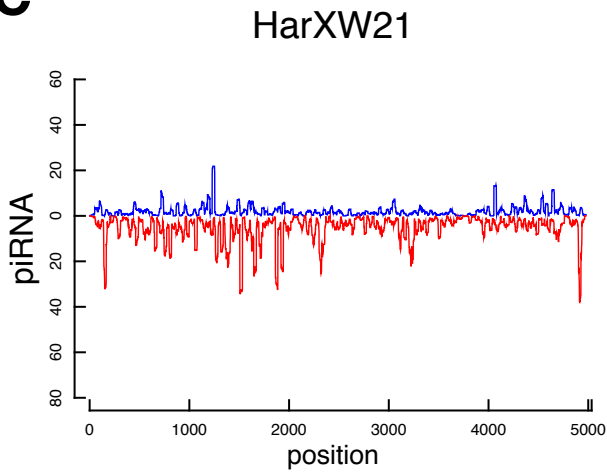
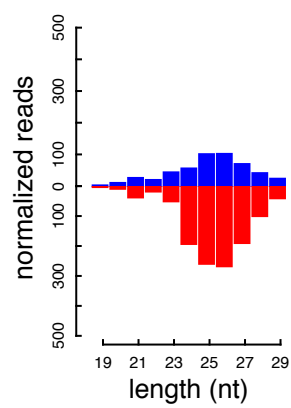
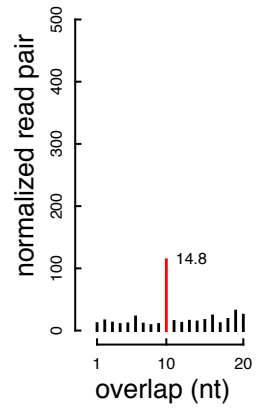
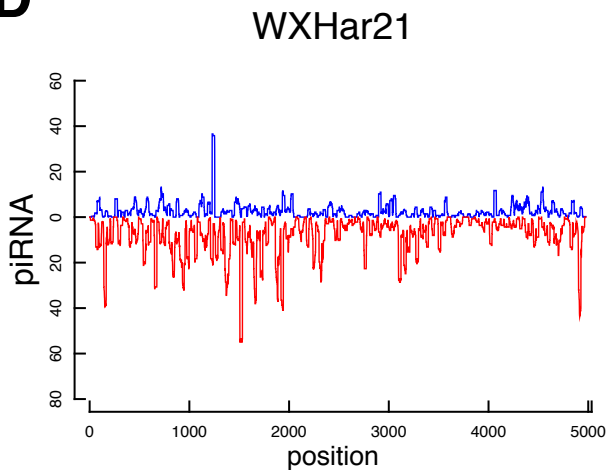
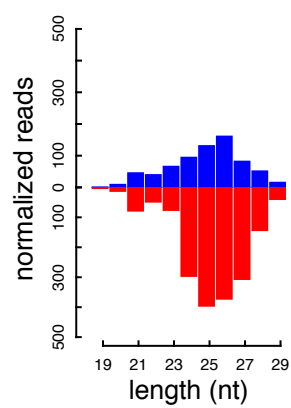
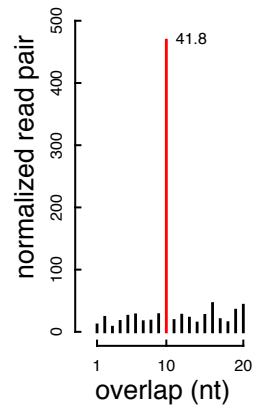
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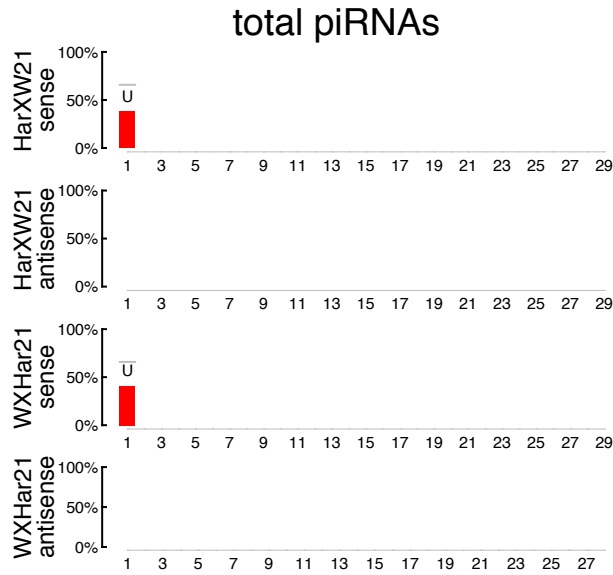


flea

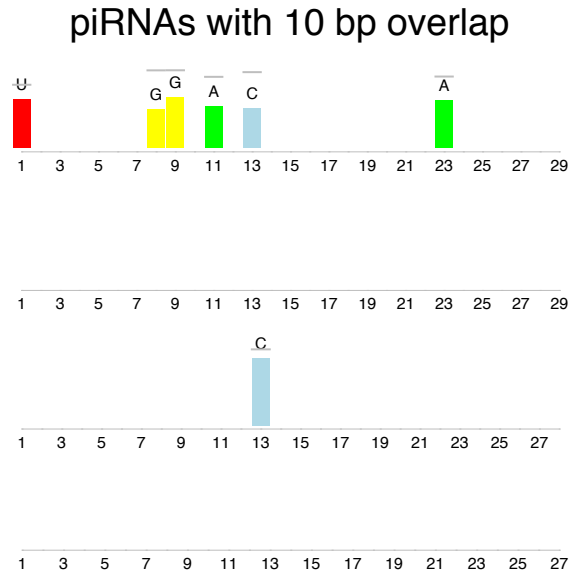
A**B****C****E****G****D****F****H**

frogger

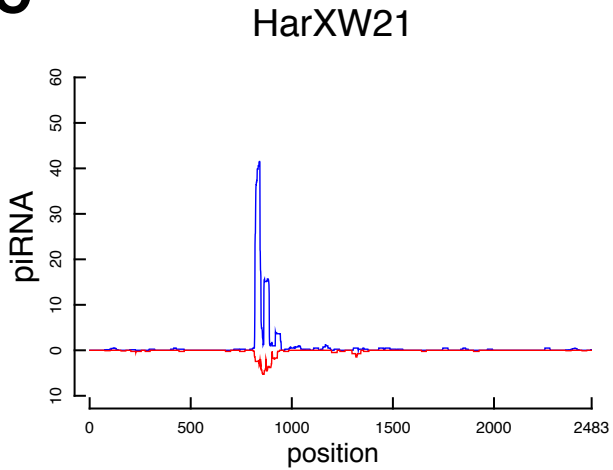
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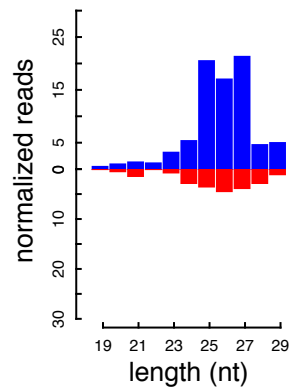
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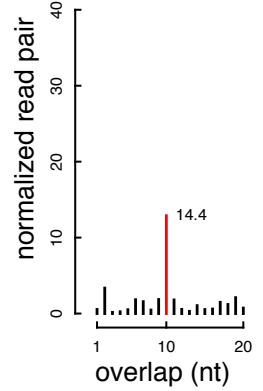
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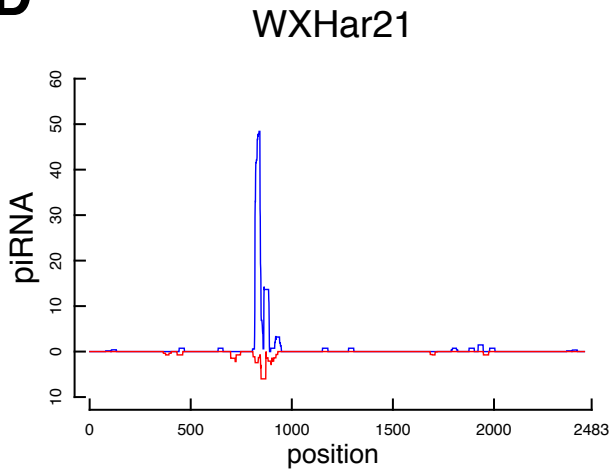
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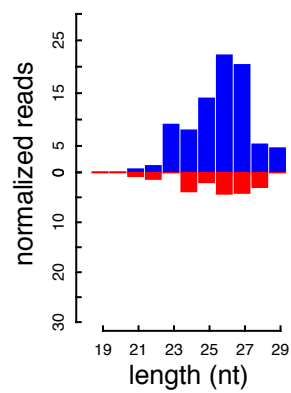
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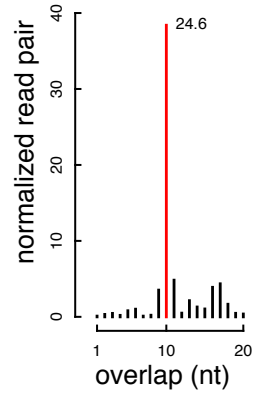
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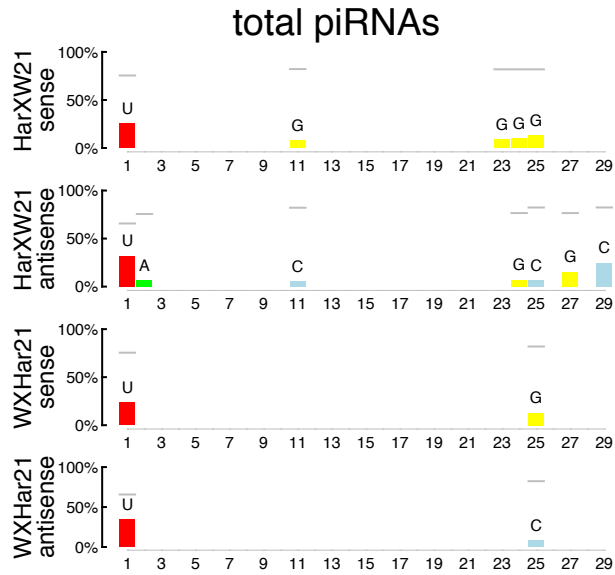
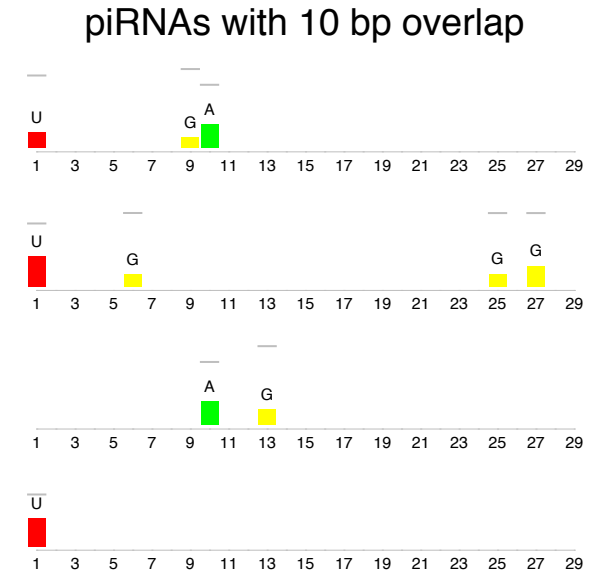
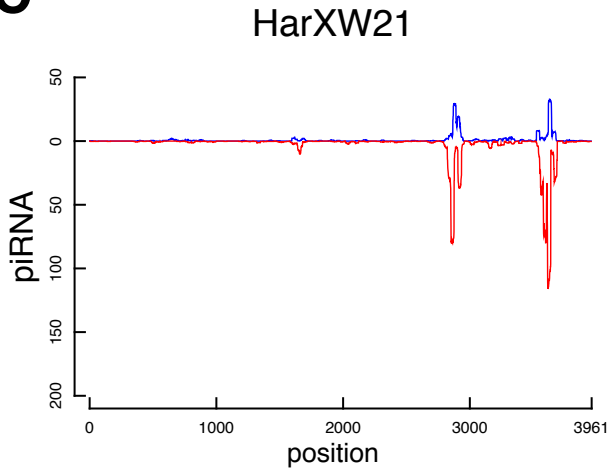
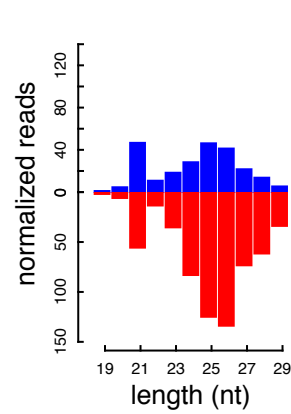
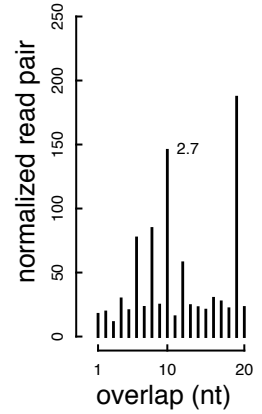
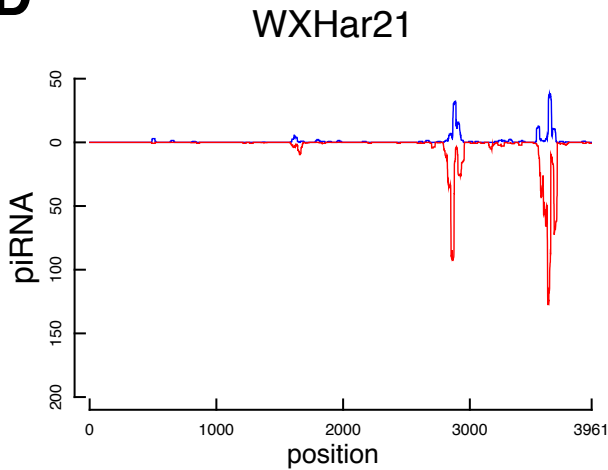
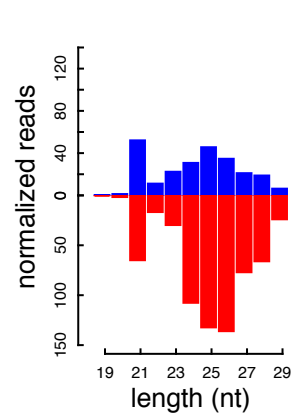
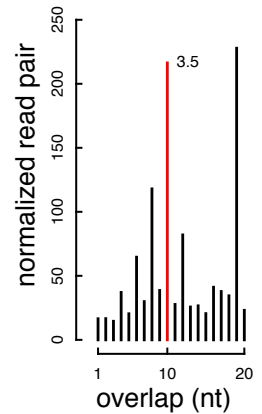
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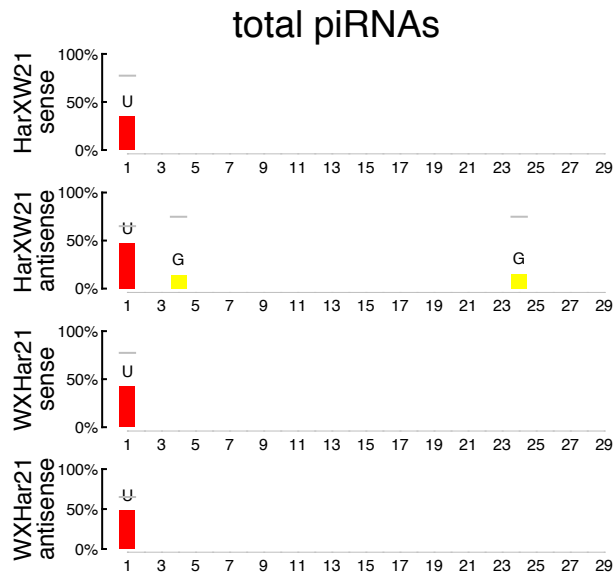
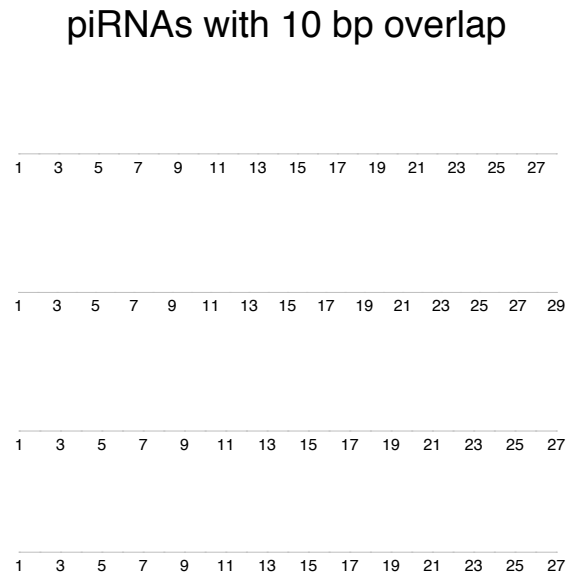
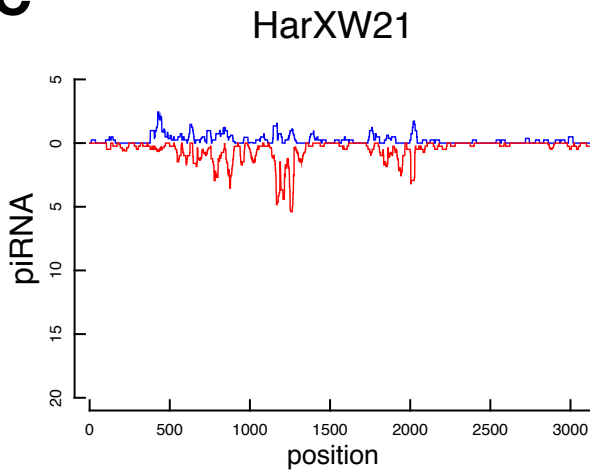
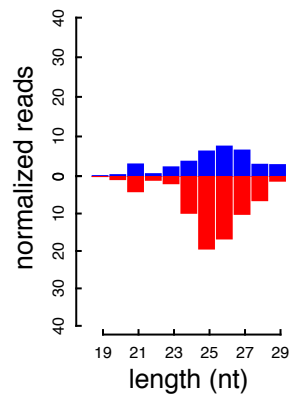
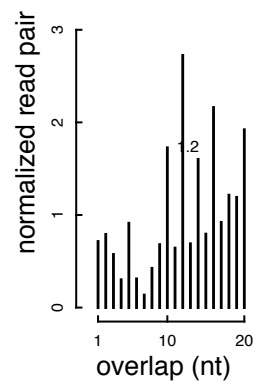
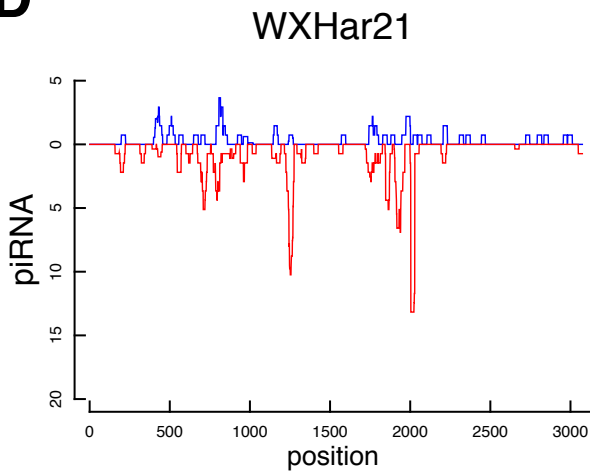
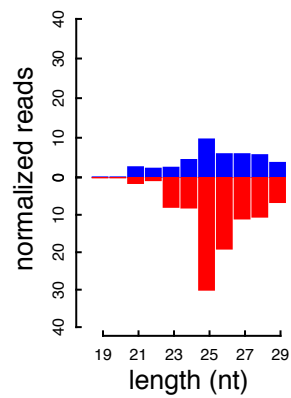
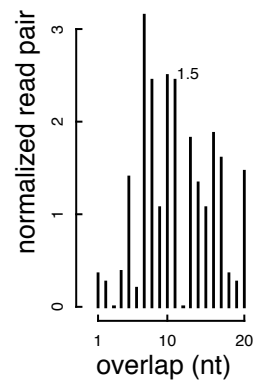
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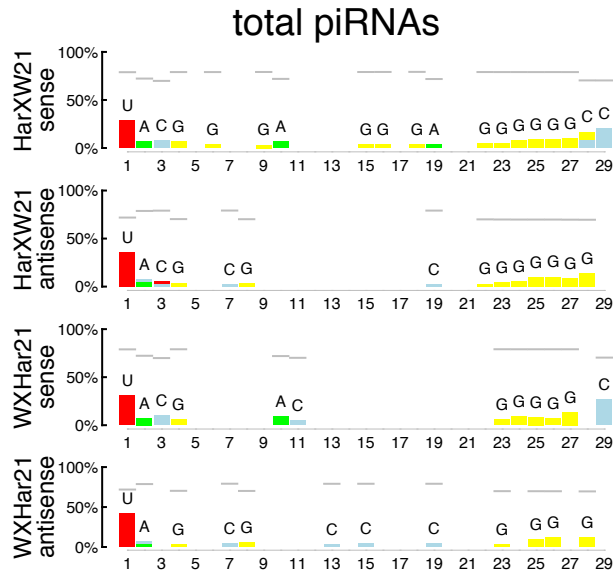
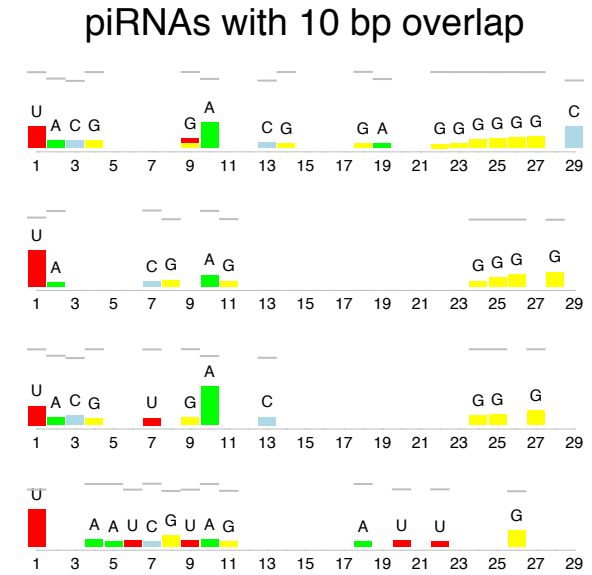
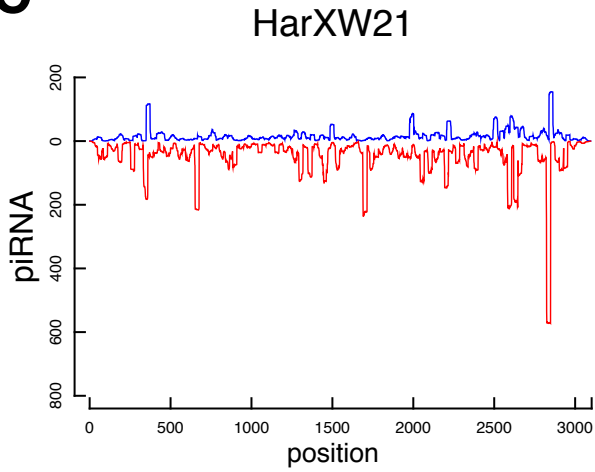
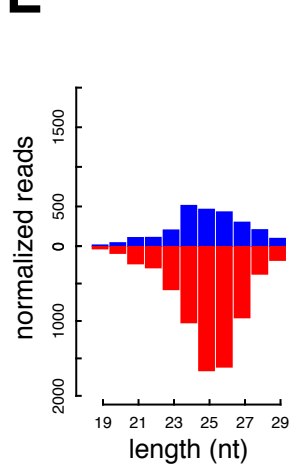
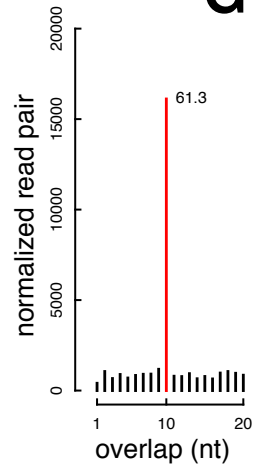
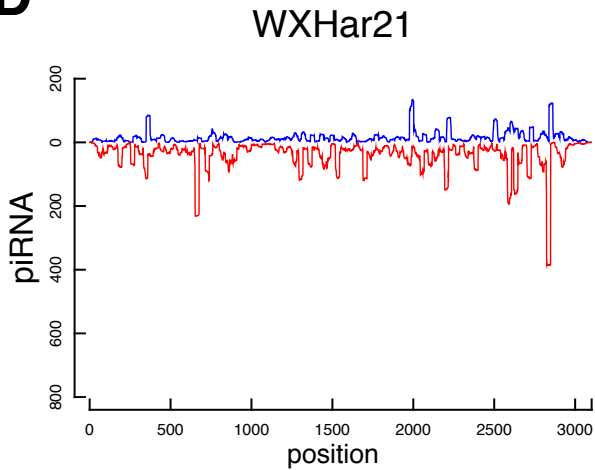
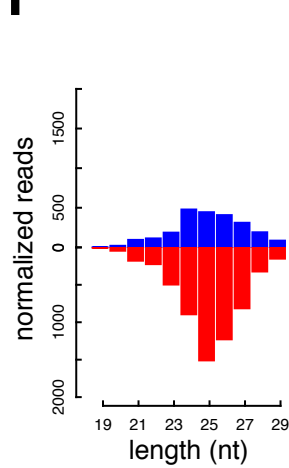
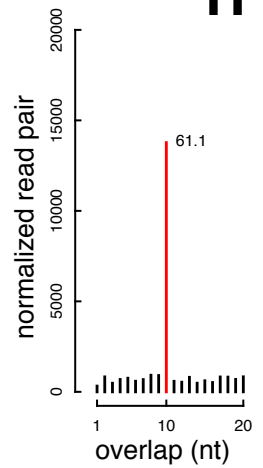
Fw2

A**B****C****E****G****D****F****H**

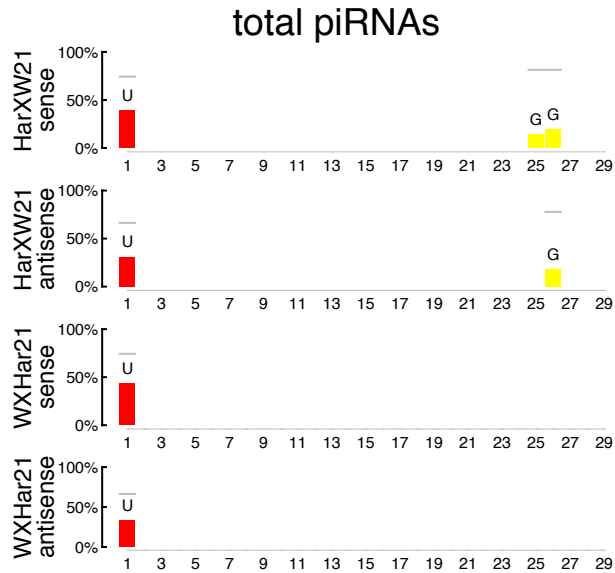
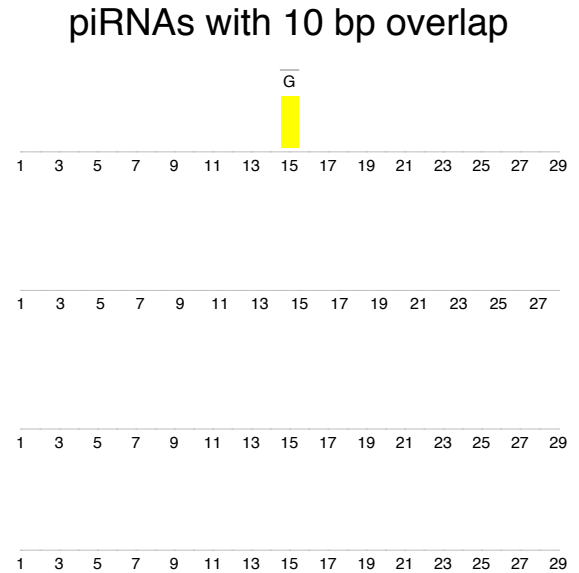
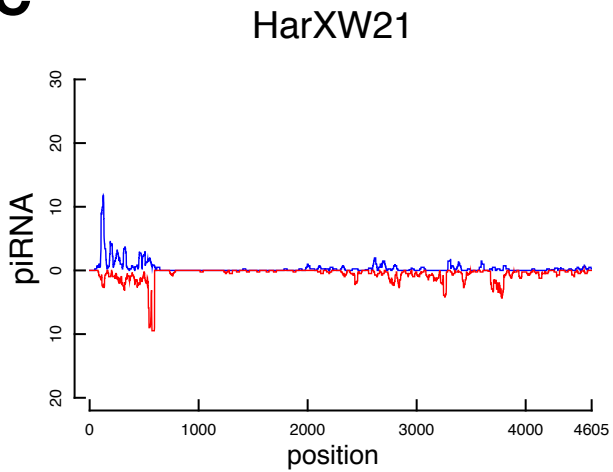
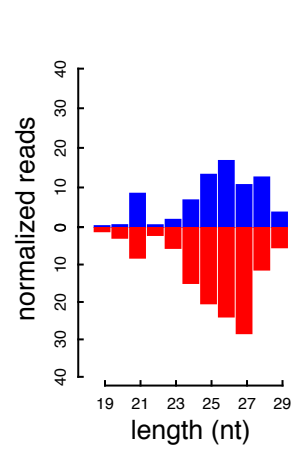
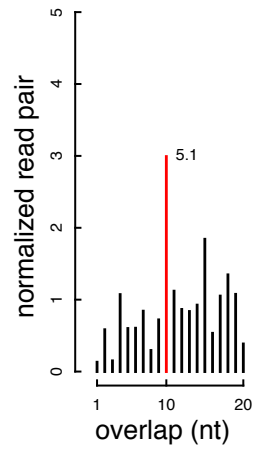
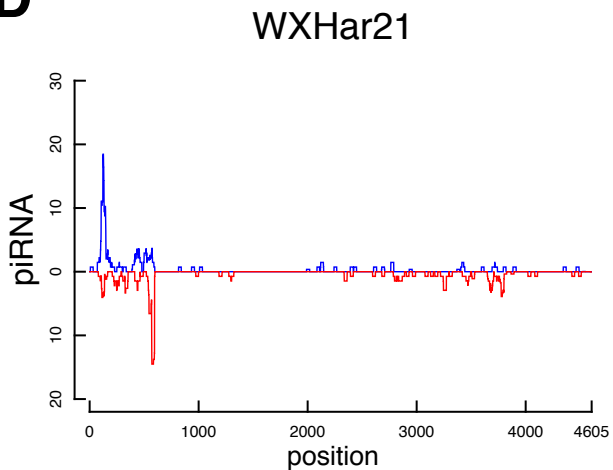
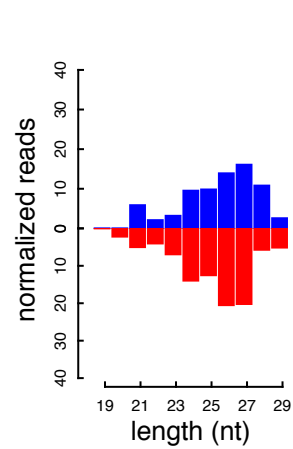
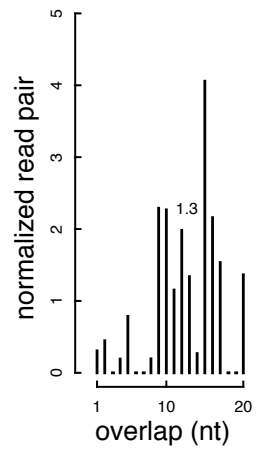
Fw3

A**B****C****E****G****D****F****H**

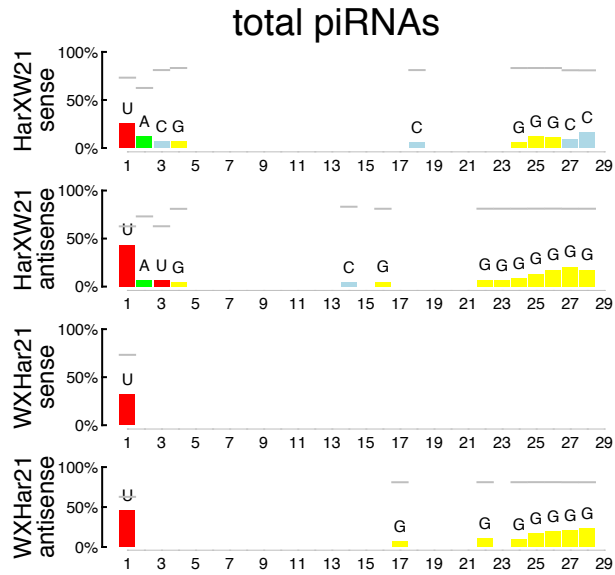
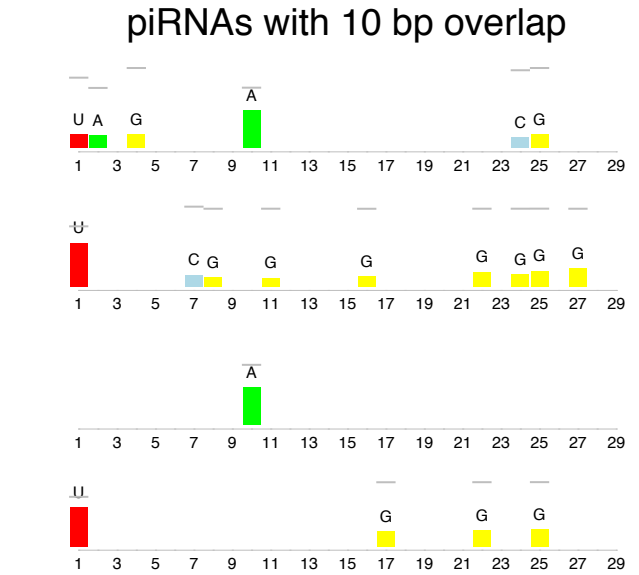
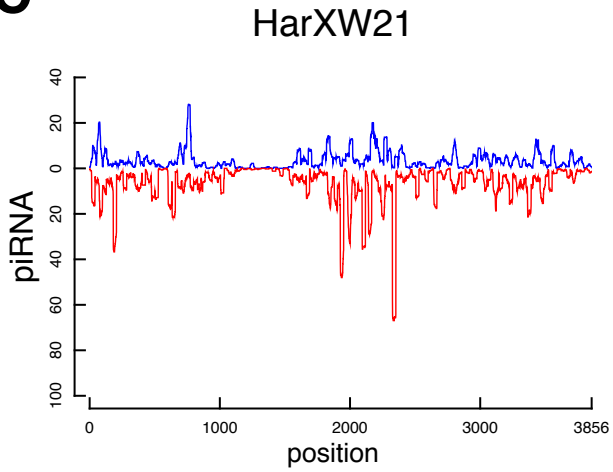
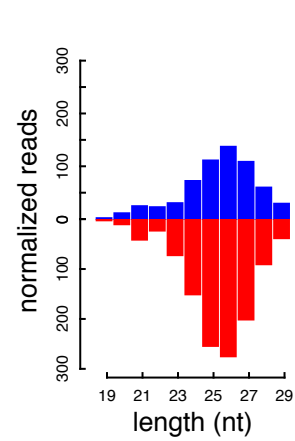
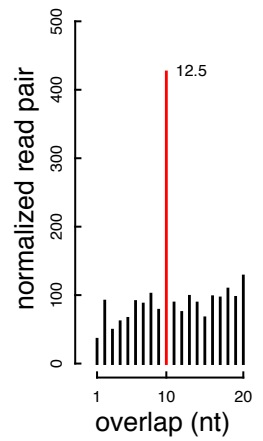
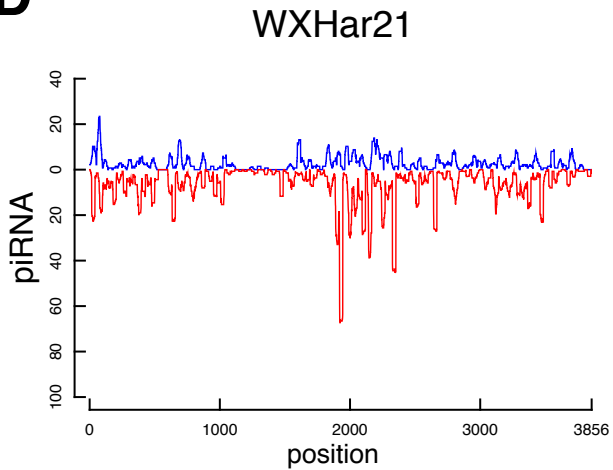
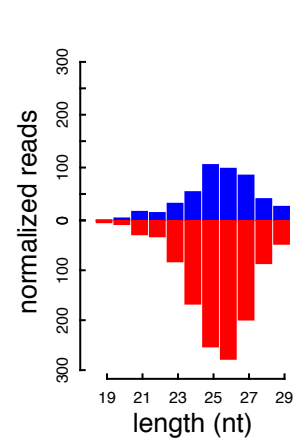
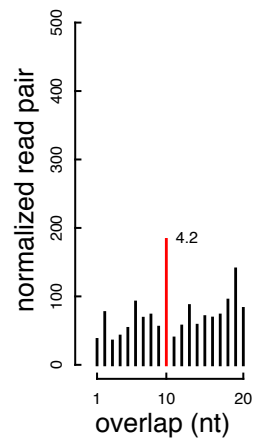
G2

A**B****C****E****G****D****F****H**

G3

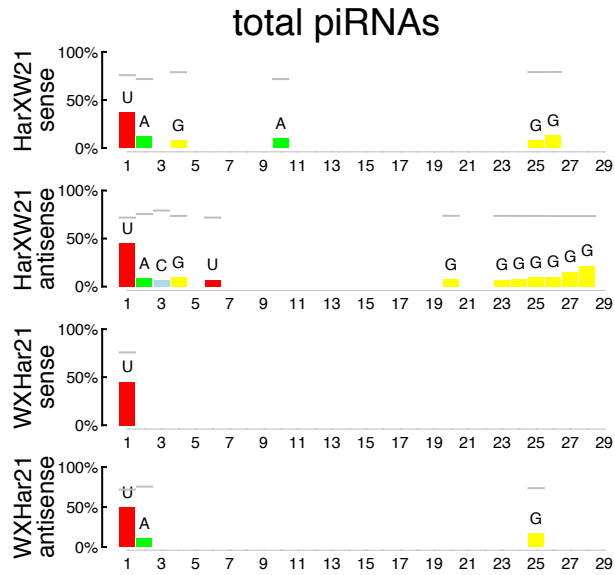
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G4

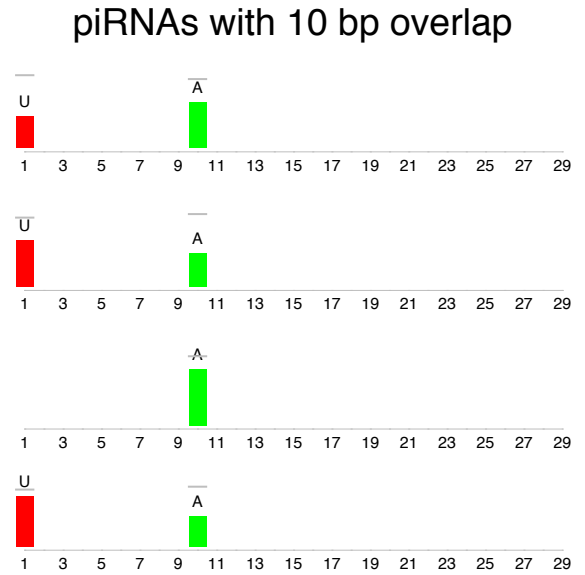
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G5

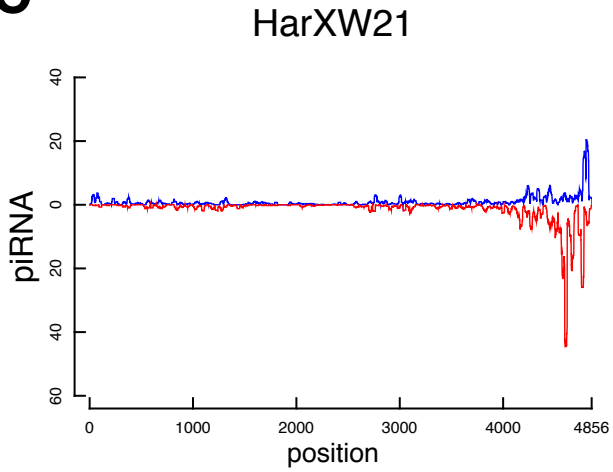
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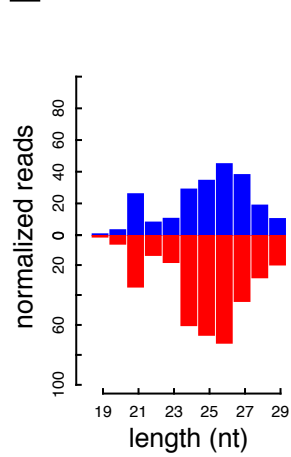
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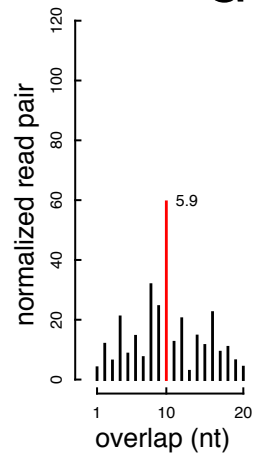
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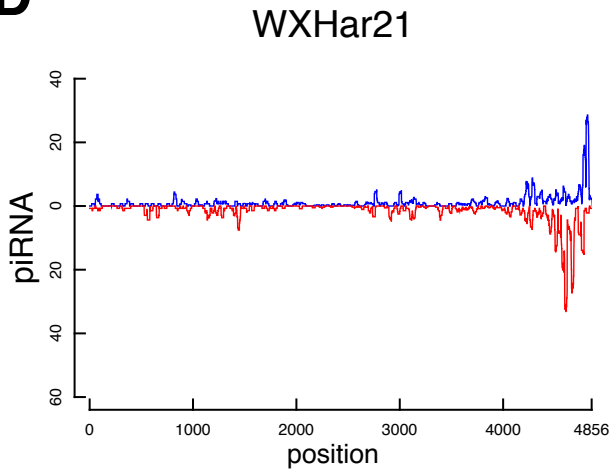
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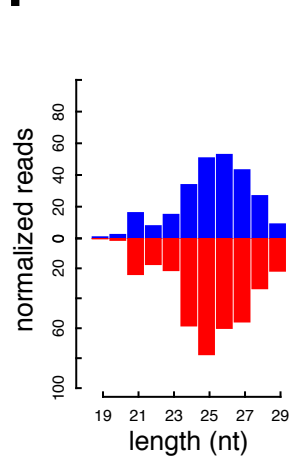
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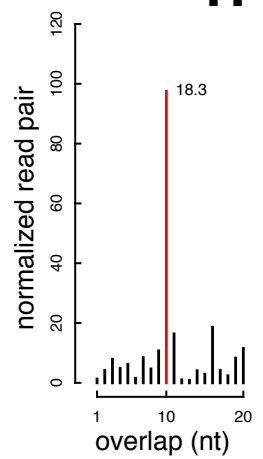
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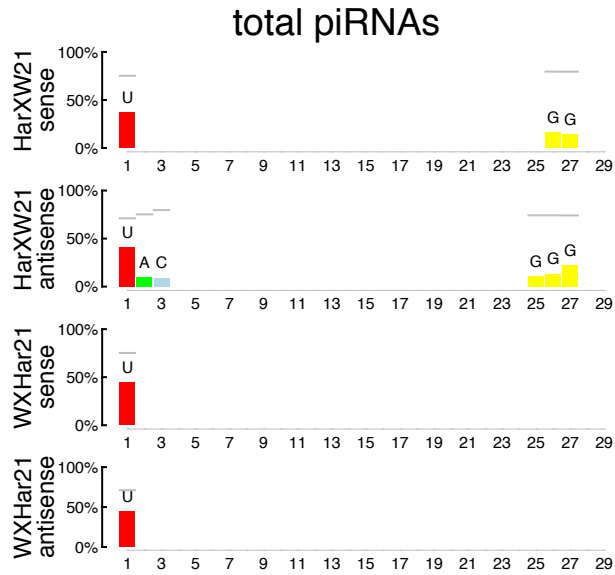
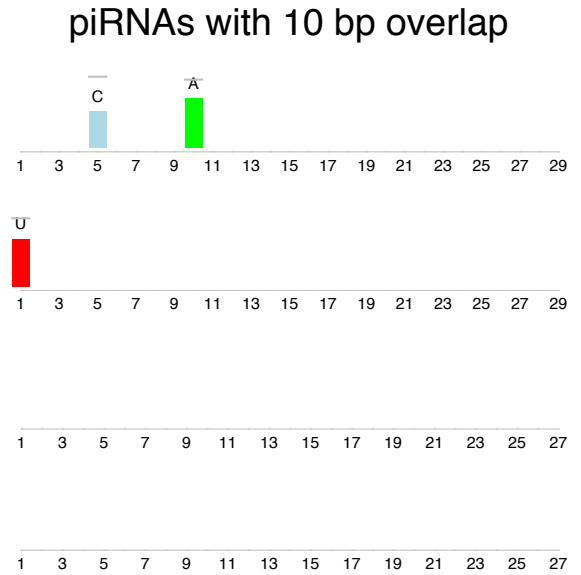
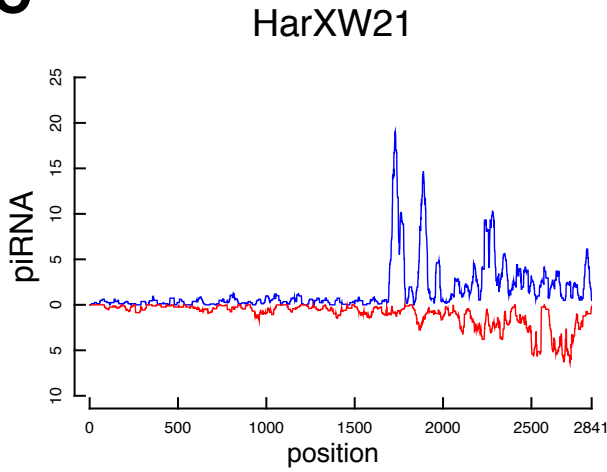
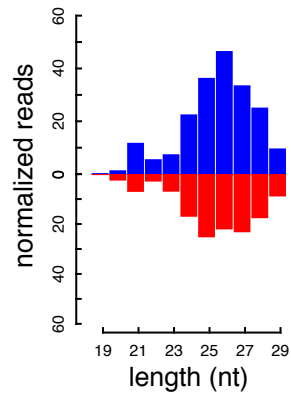
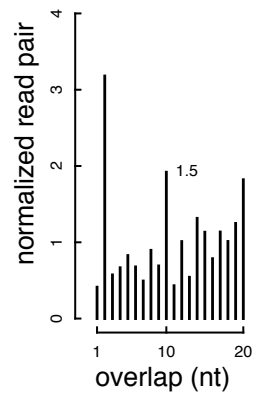
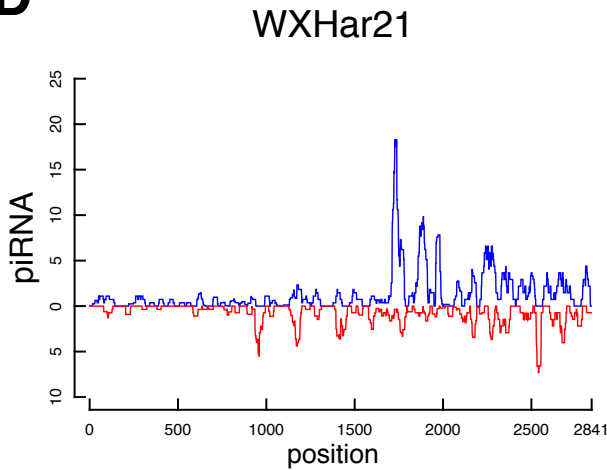
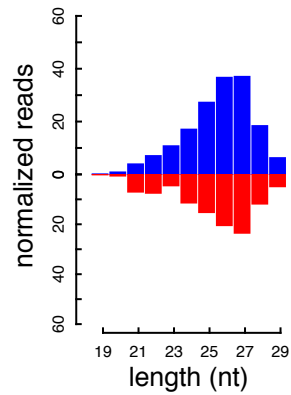
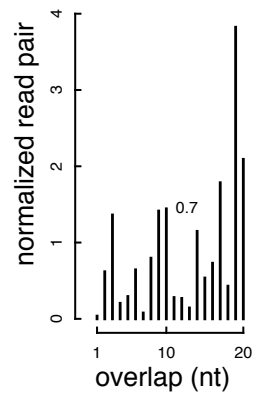
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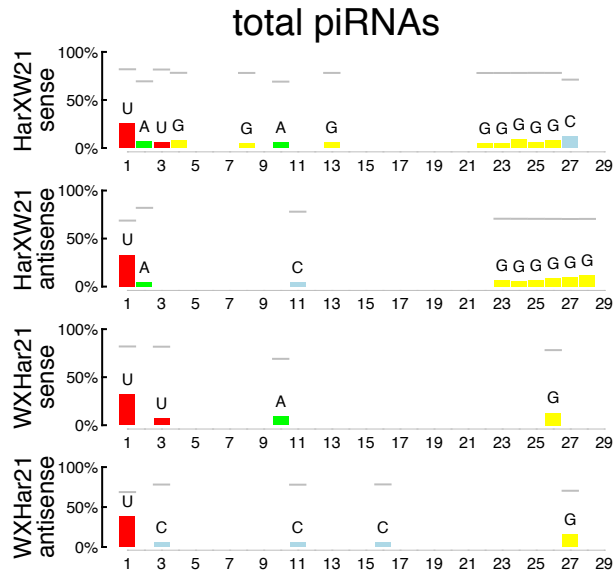
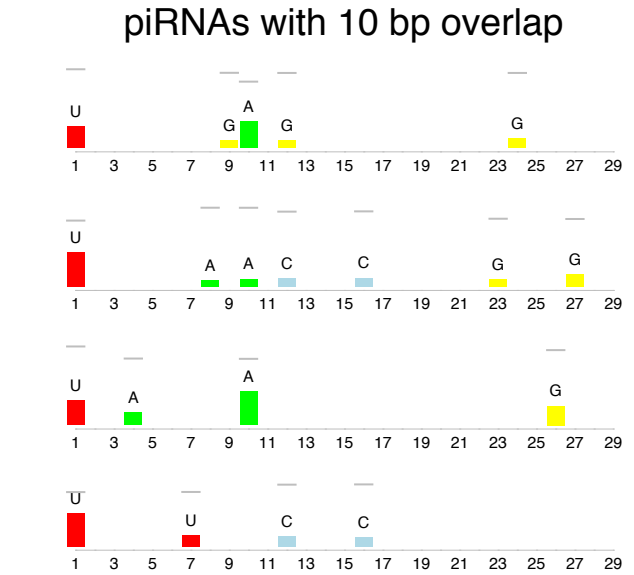
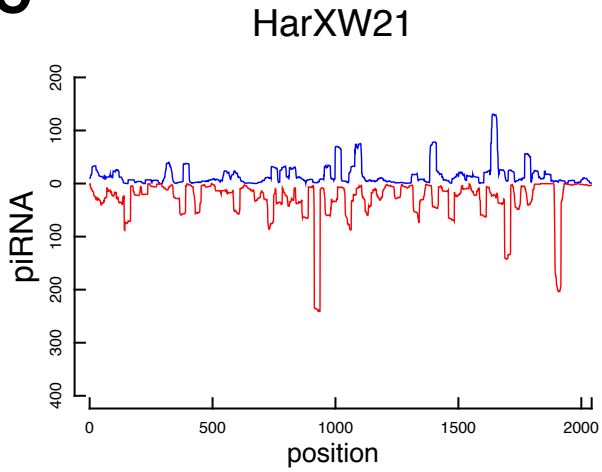
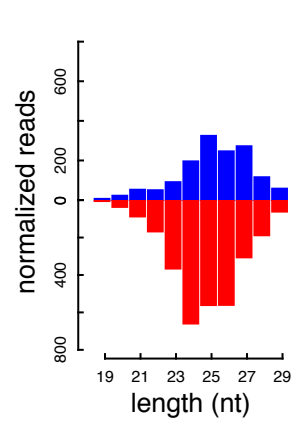
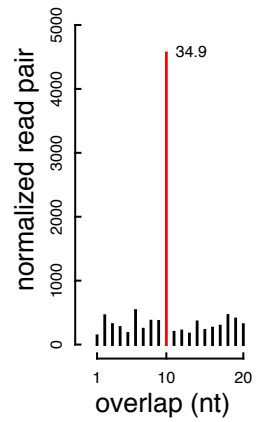
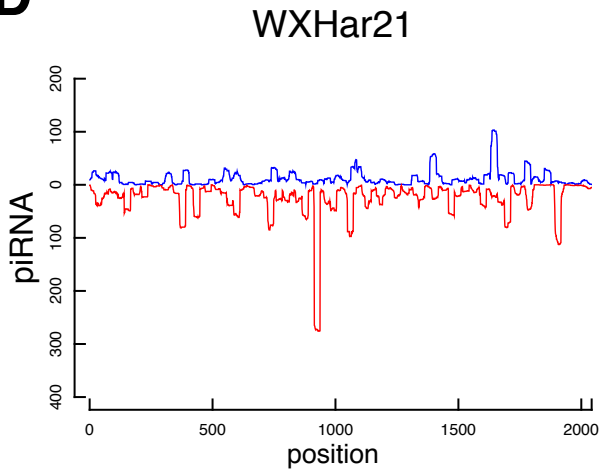
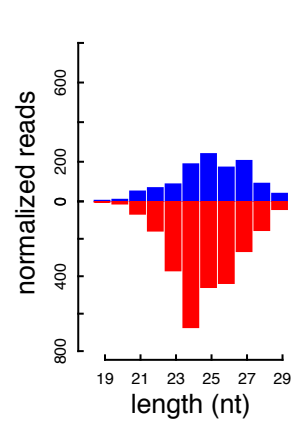
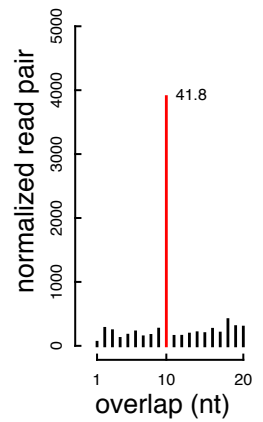
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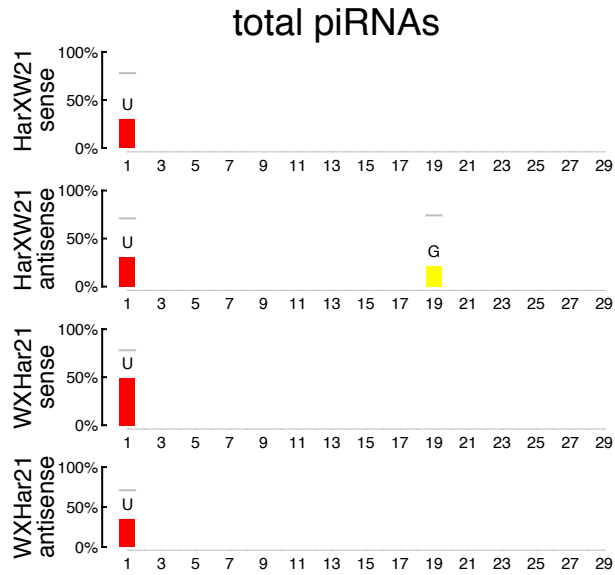
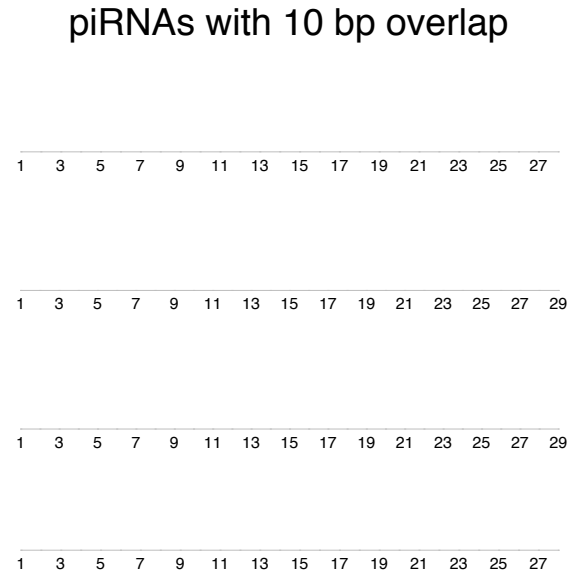
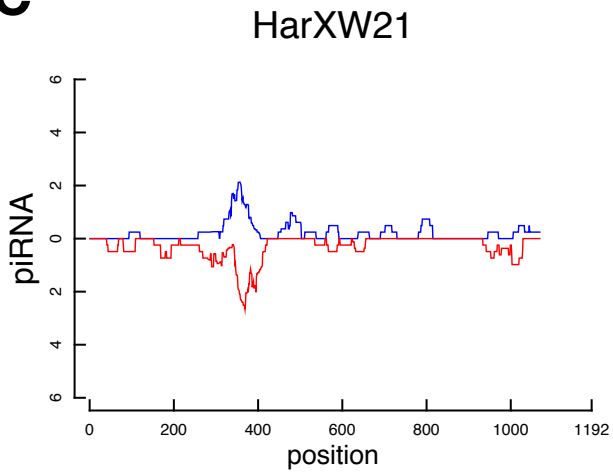
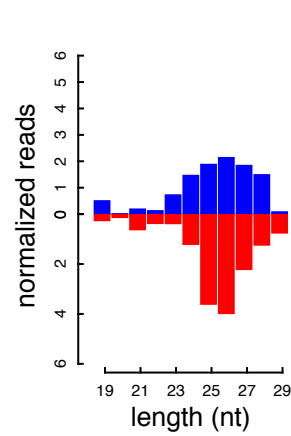
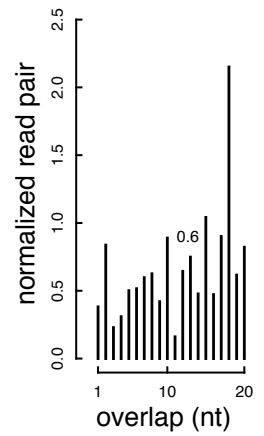
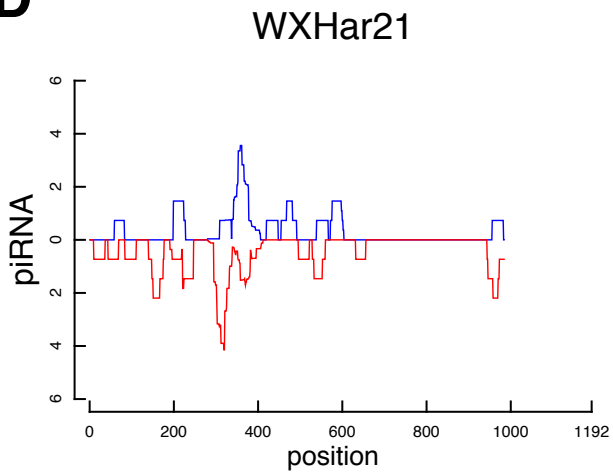
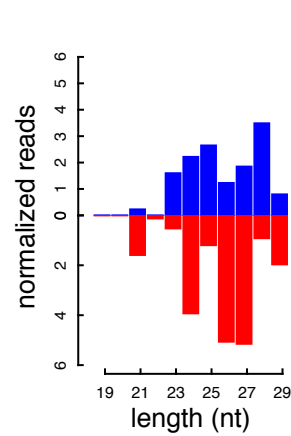
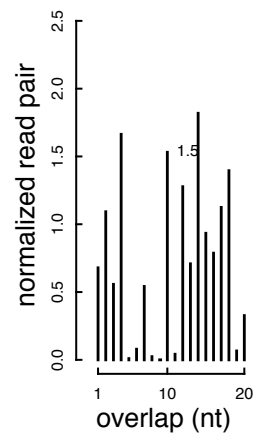
G5A

A**B****C****E****G****D****F****H**

G6

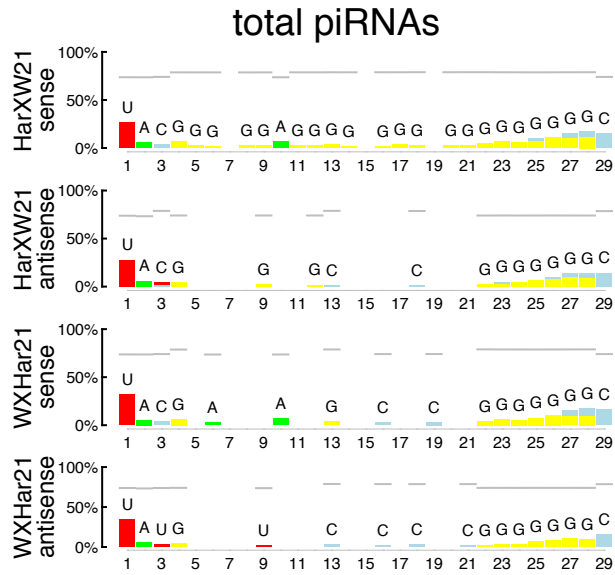
A**B****C****E****G****D****F****H**

G7

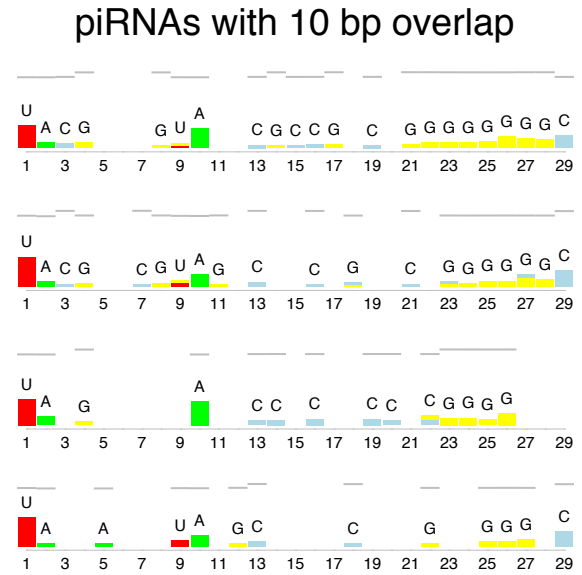
A**B****C****E****G****D****F****H**

GATE

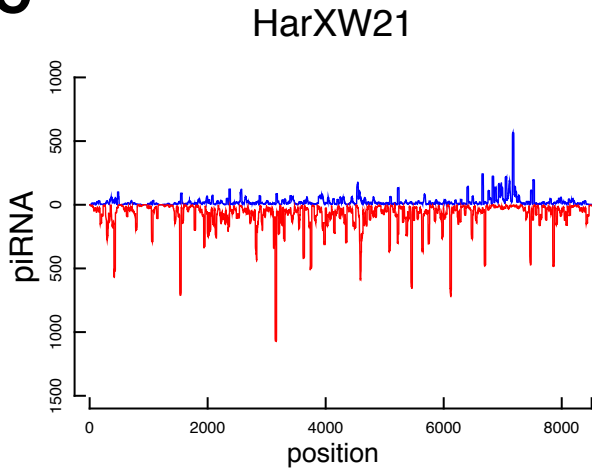
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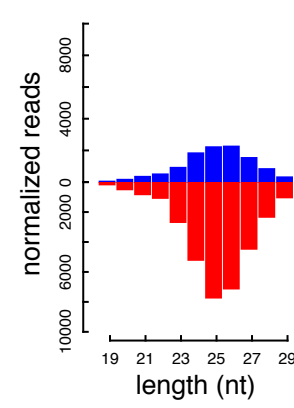
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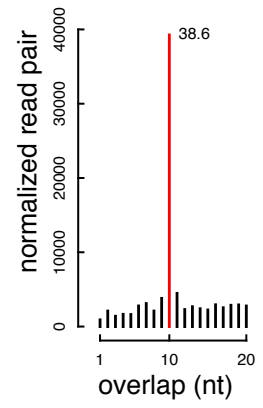
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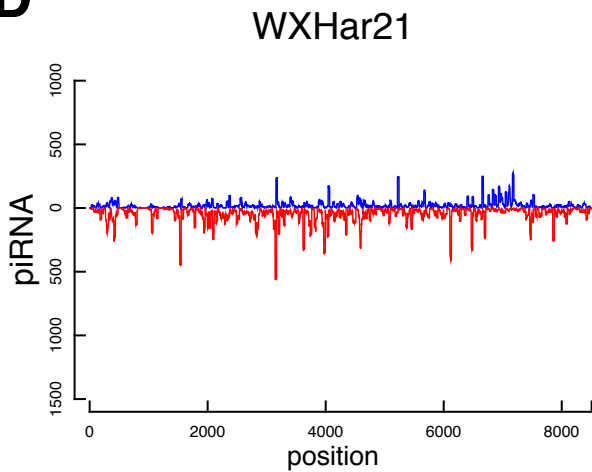
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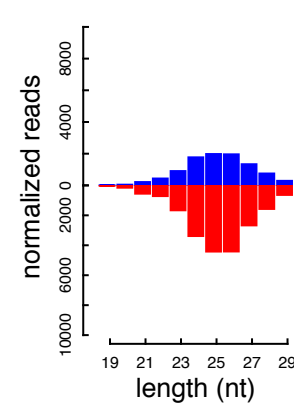
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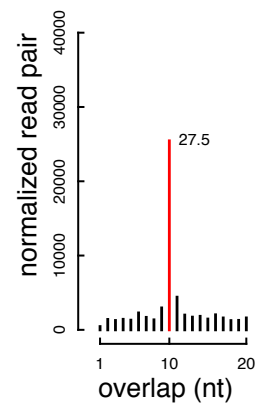
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F

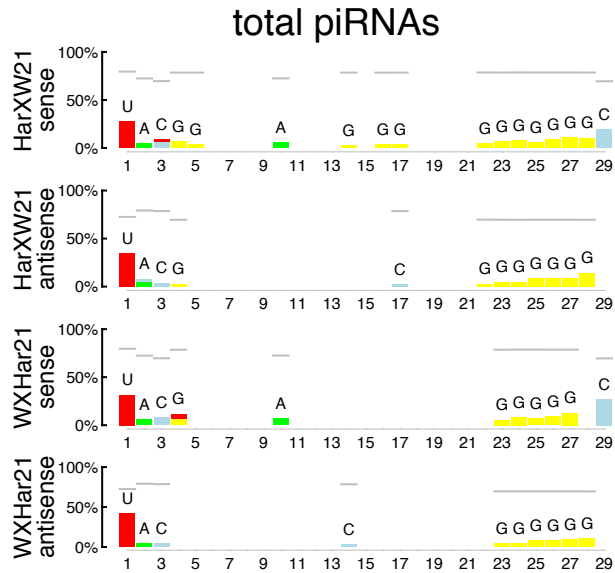


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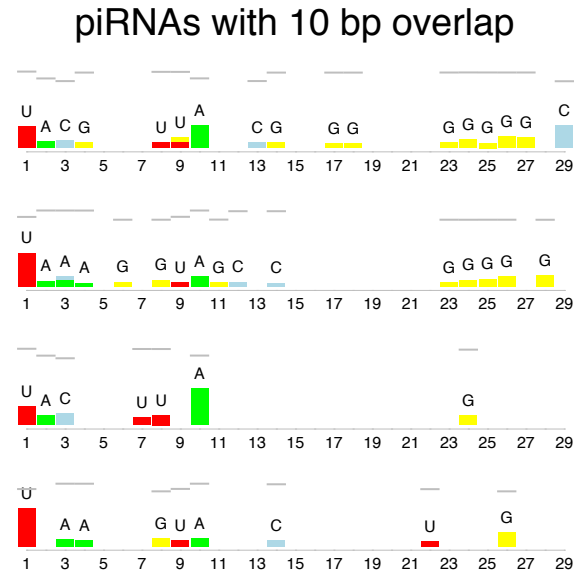


G element

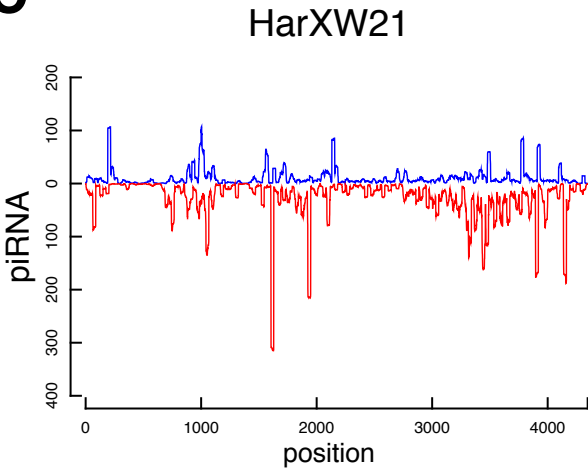
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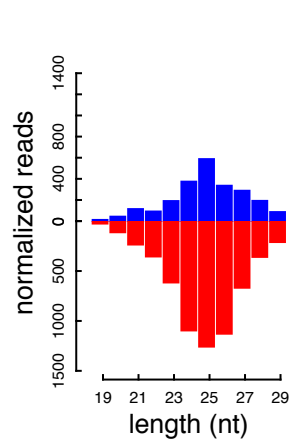
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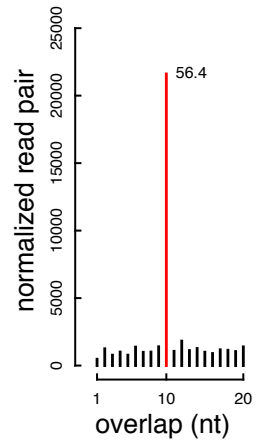
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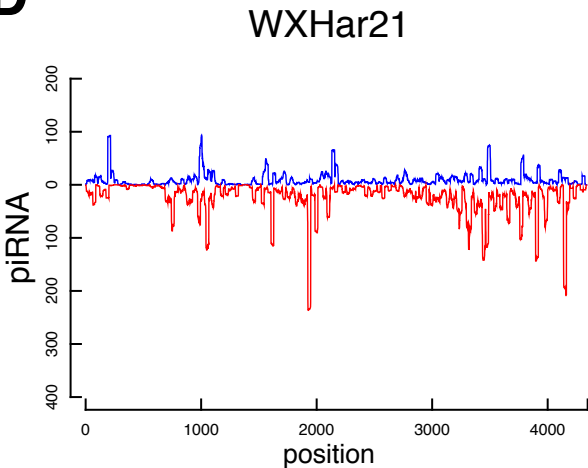
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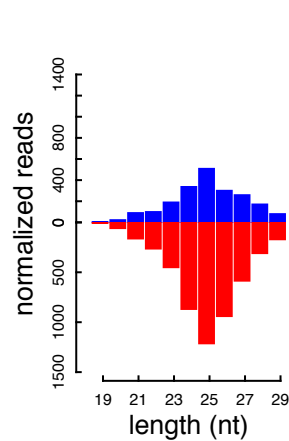
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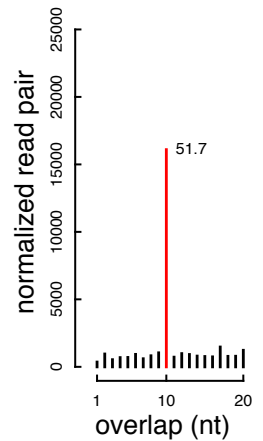
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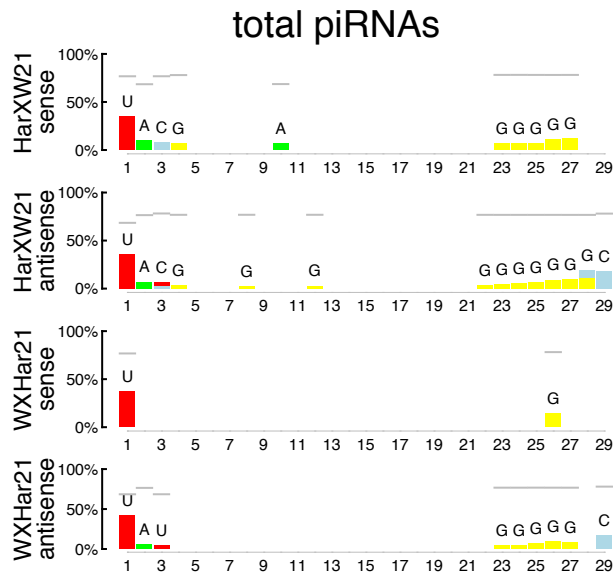
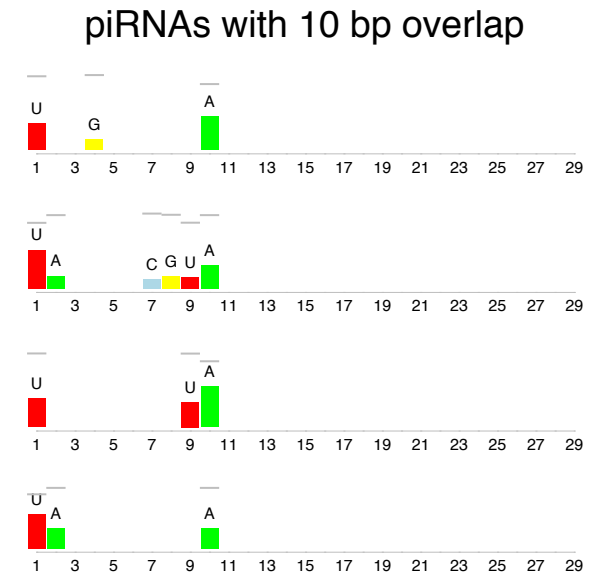
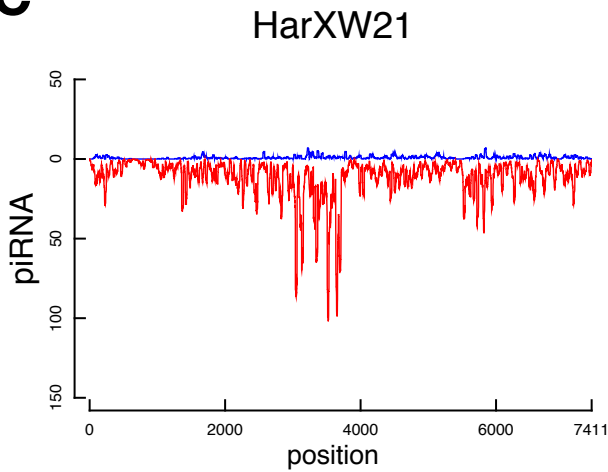
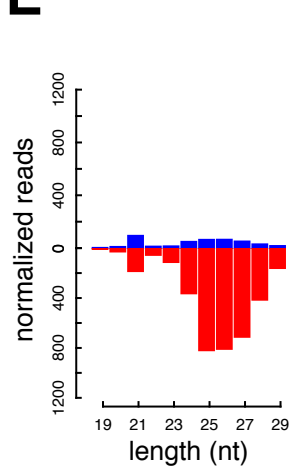
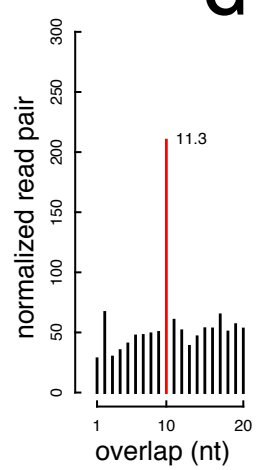
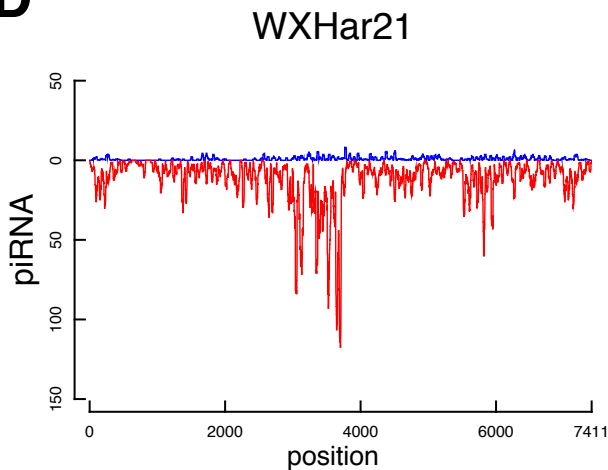
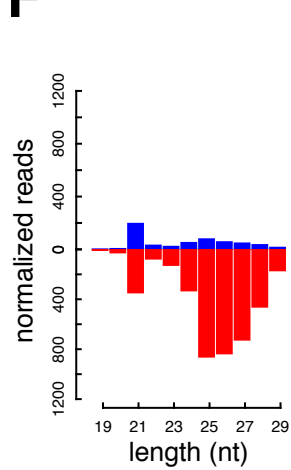
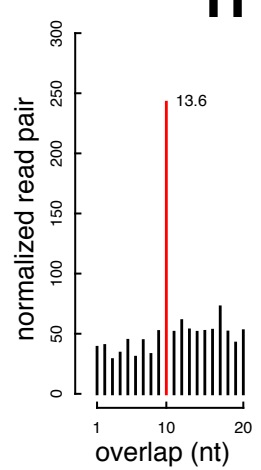
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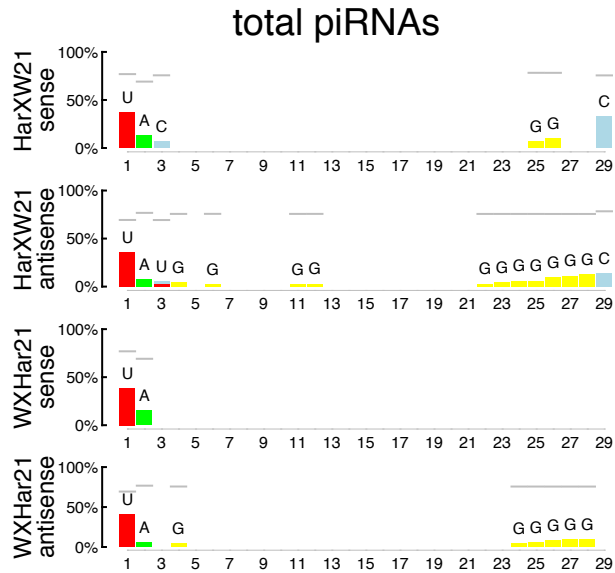
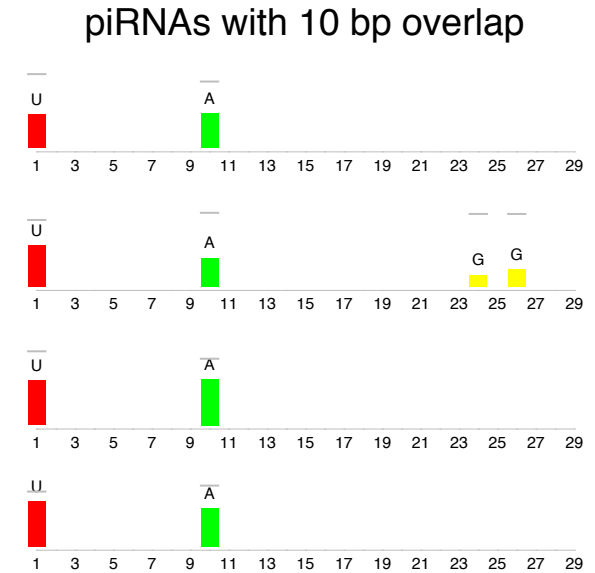
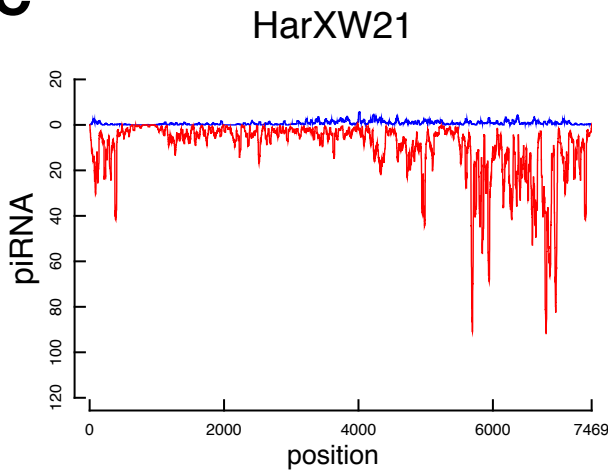
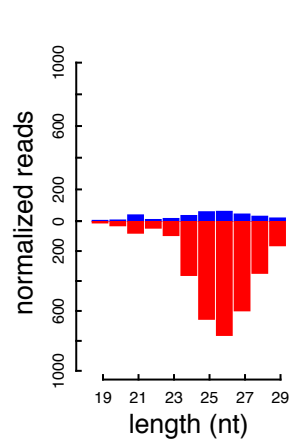
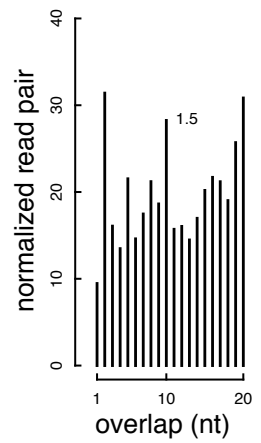
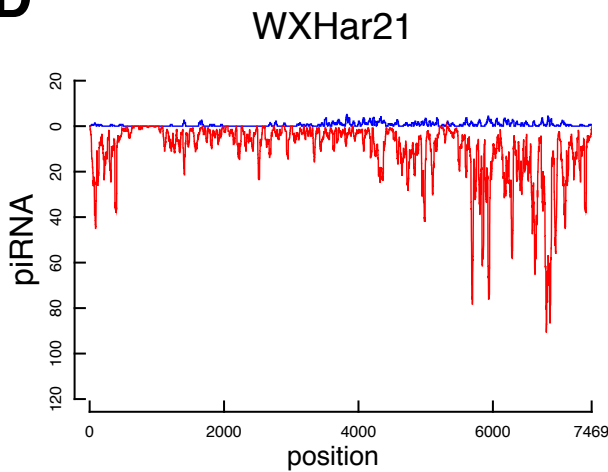
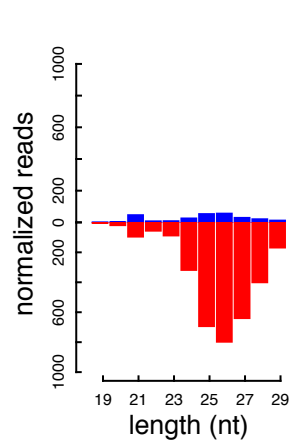
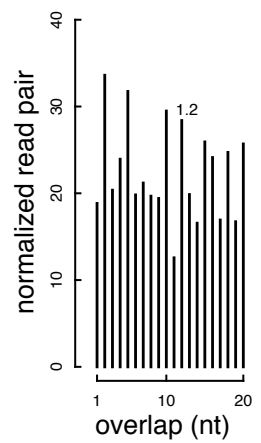
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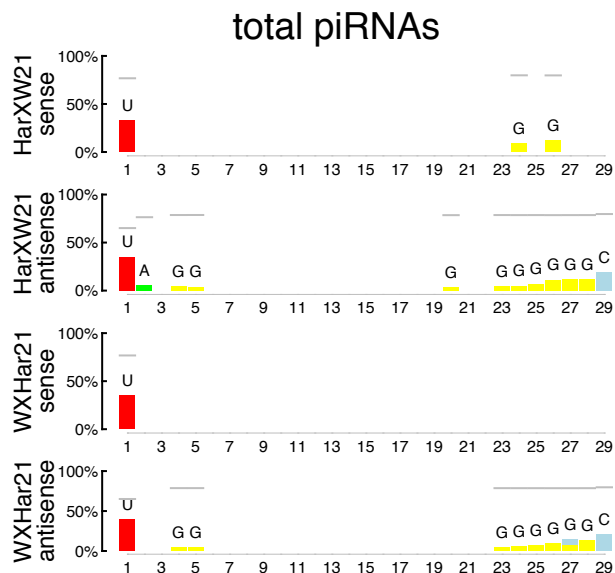
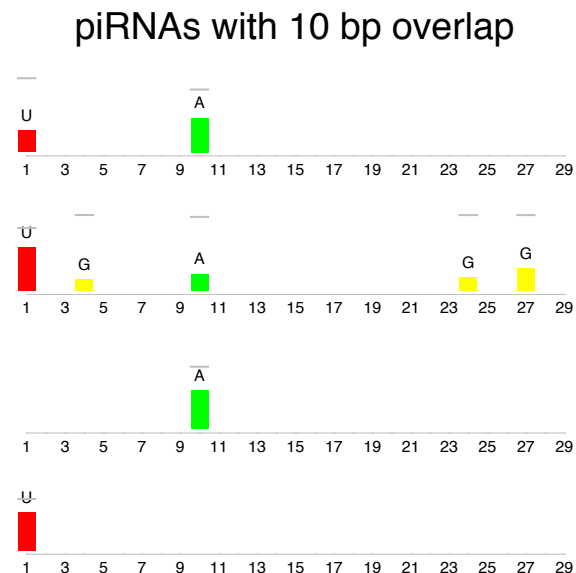
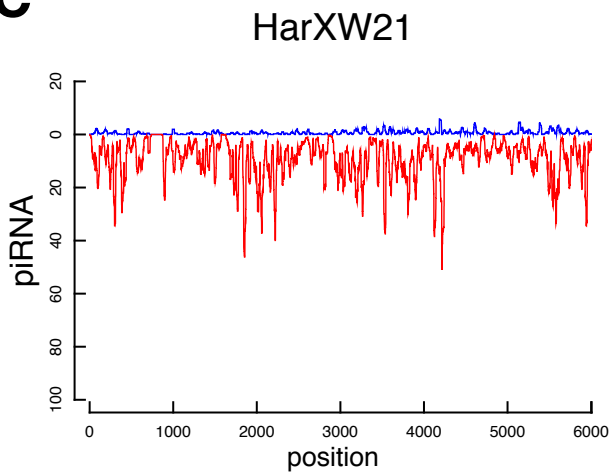
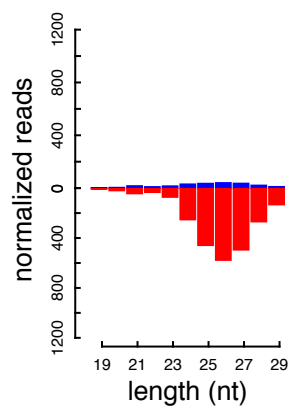
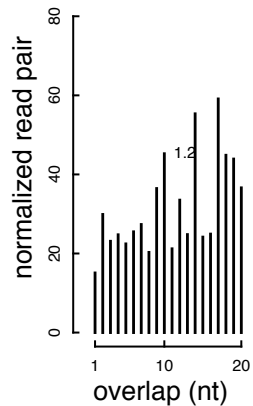
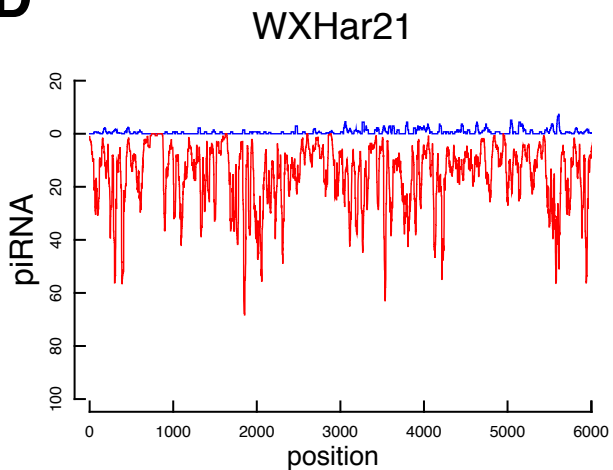
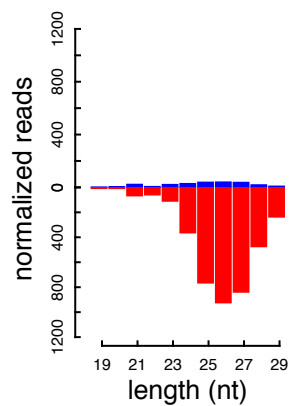
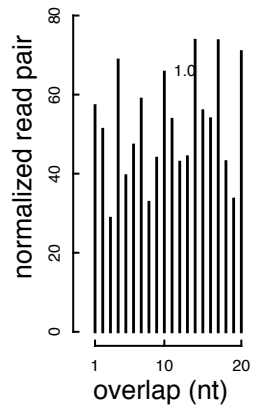
gtwin

A**B****C****E****G****D****F****H**

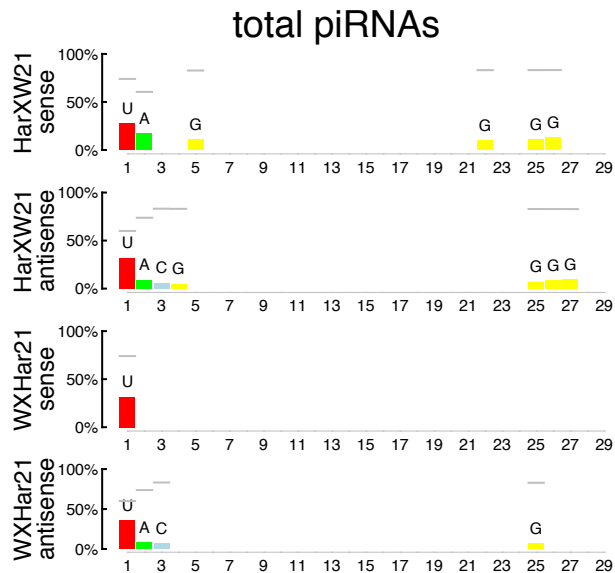
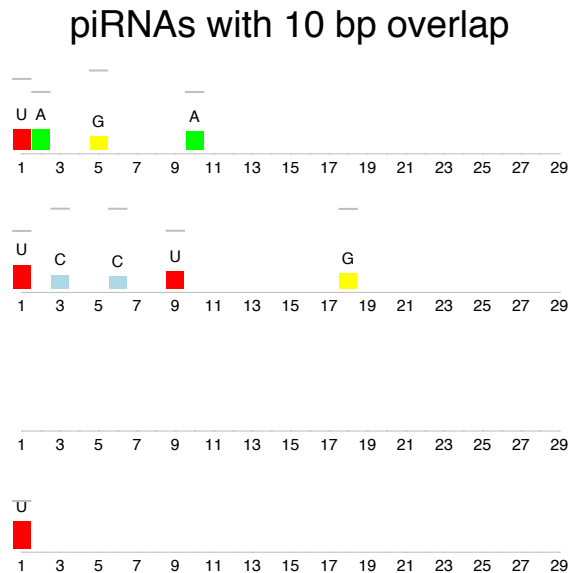
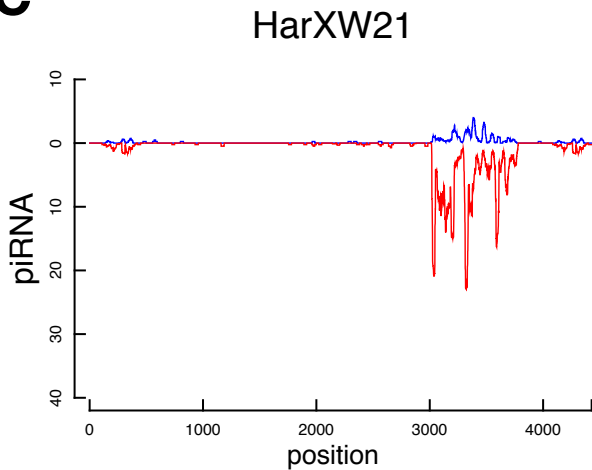
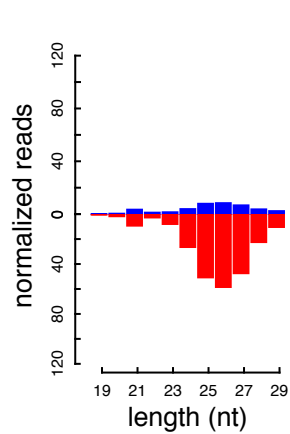
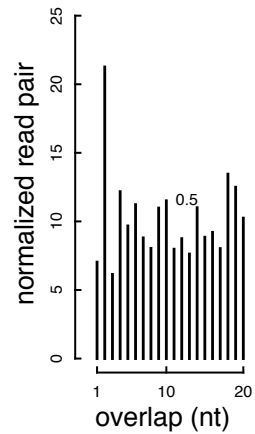
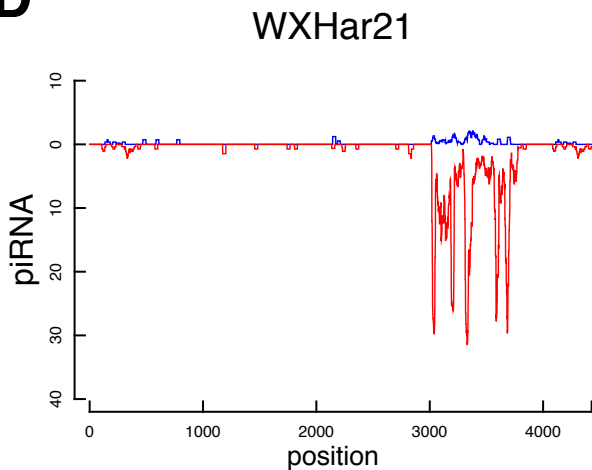
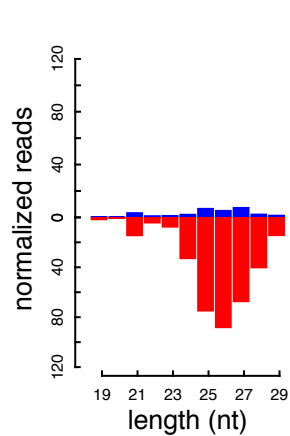
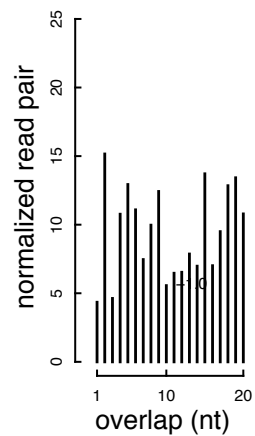
gypsy

A**B****C****E****G****D****F****H**

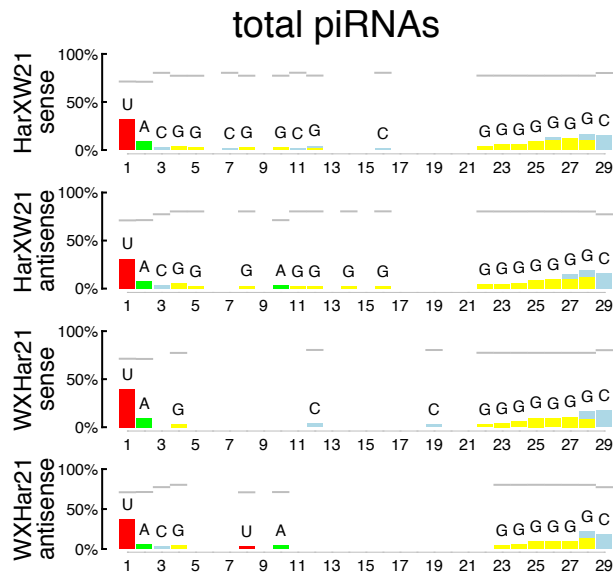
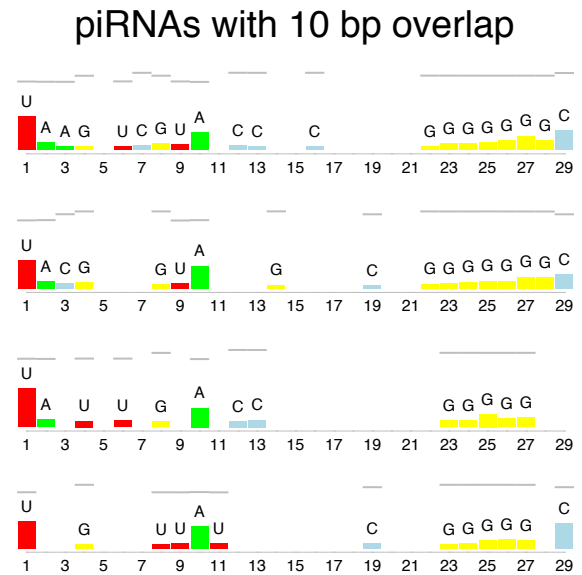
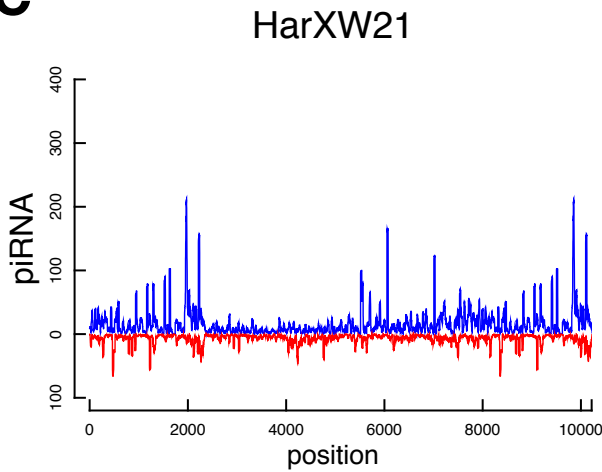
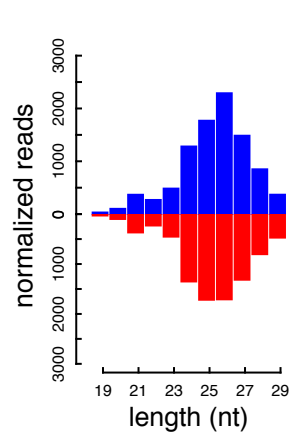
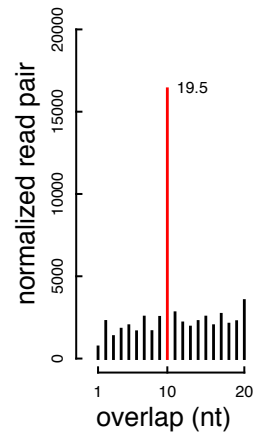
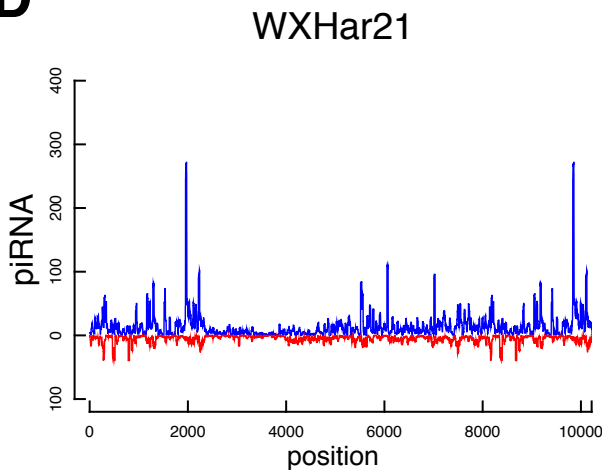
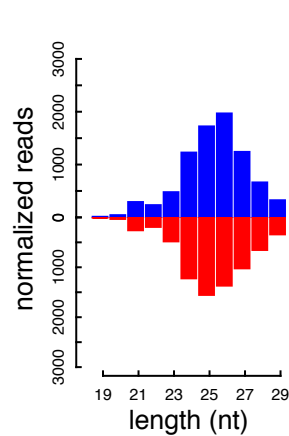
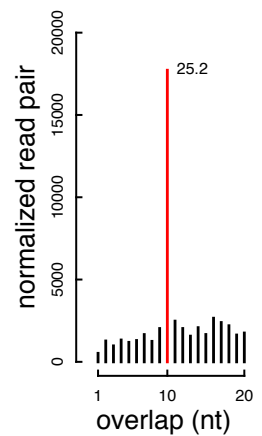
gypsy10

A**B****C****E****G****D****F****H**

gypsy11

A**B****C****E****G****D****F****H**

gypsy12

A**B****C****E****G****D****F****H**

gypsy12#2

A

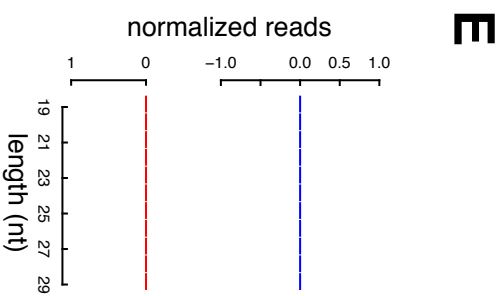
WXHar21 antisense WXHar21 sense HarXW21 antisense HarXW21 sense

total piRNAs

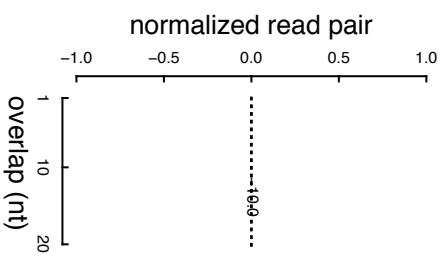
B

piRNAs with 10 bp overlap

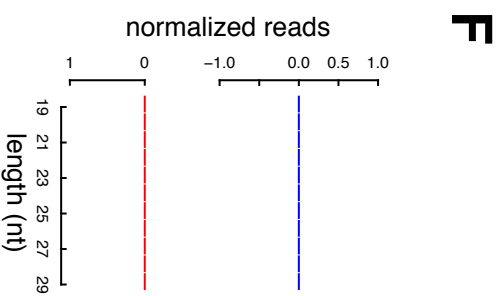
C



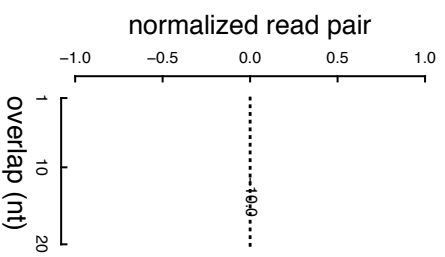
G



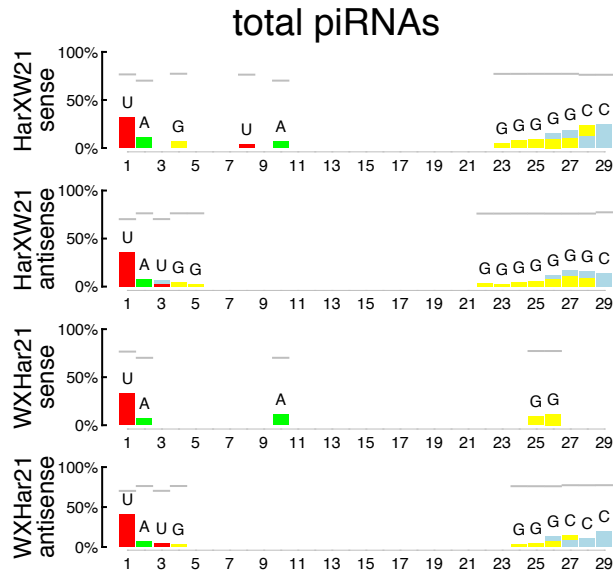
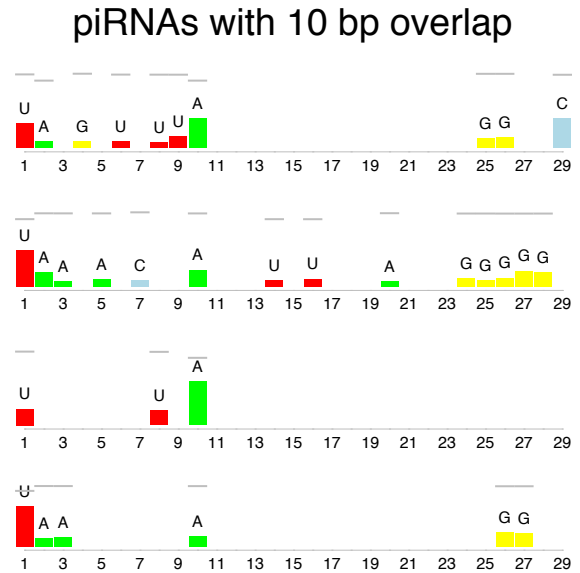
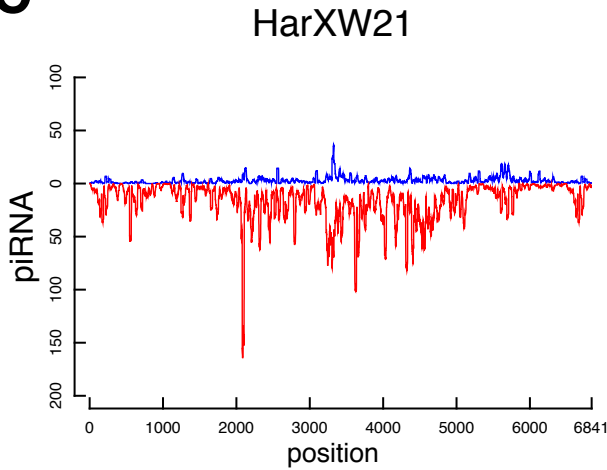
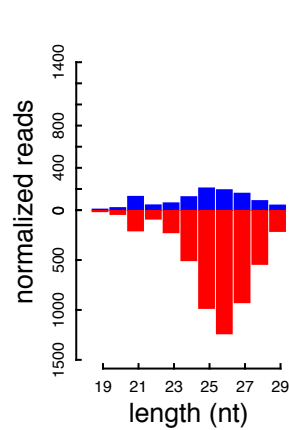
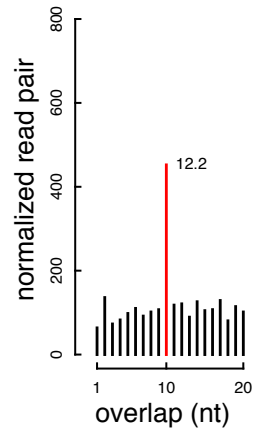
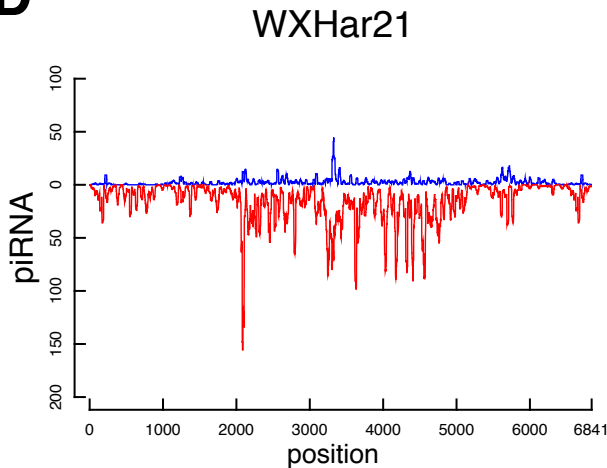
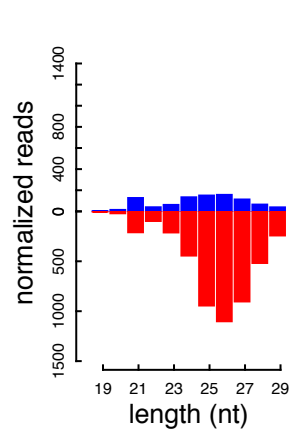
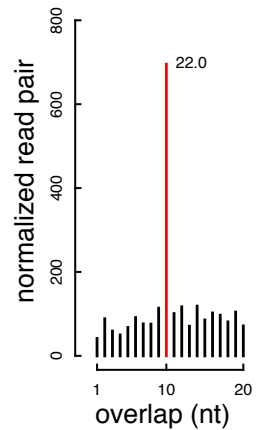
D



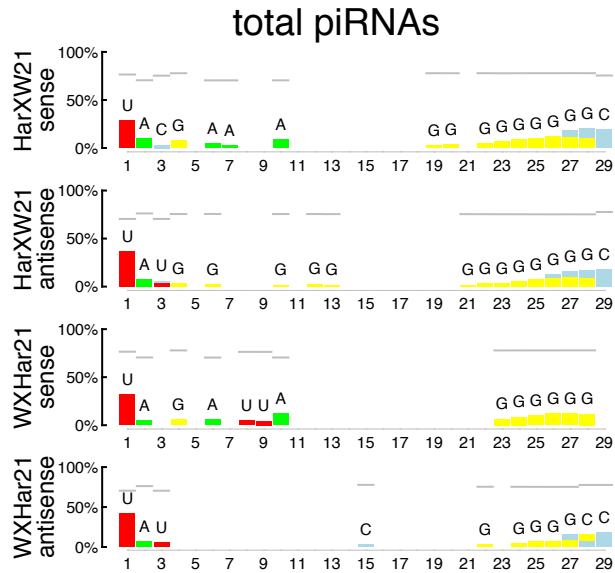
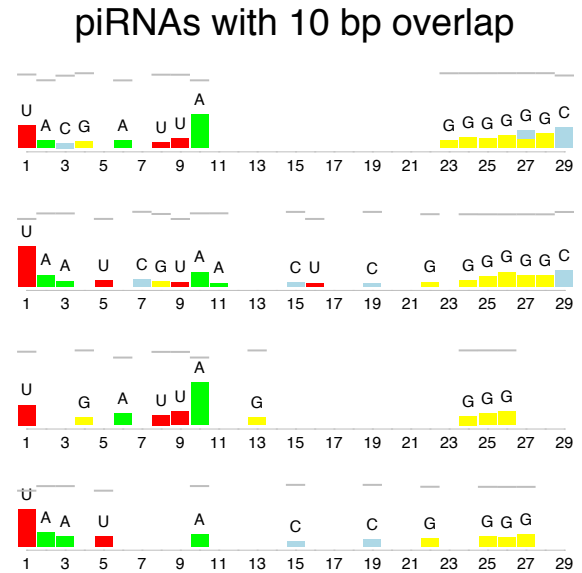
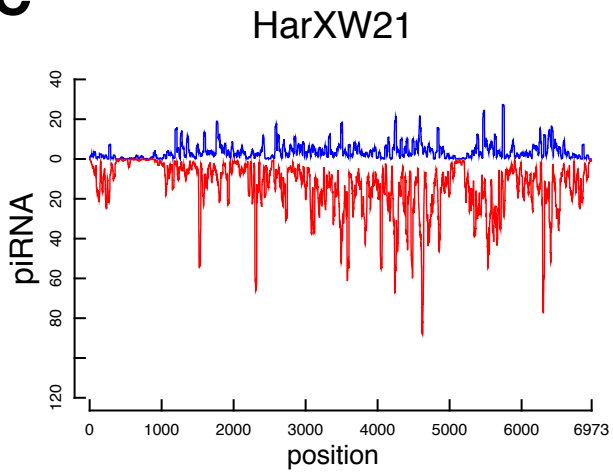
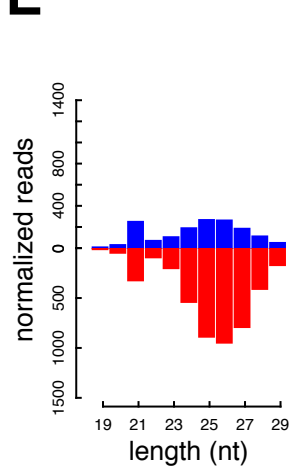
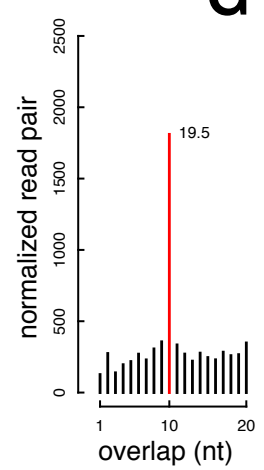
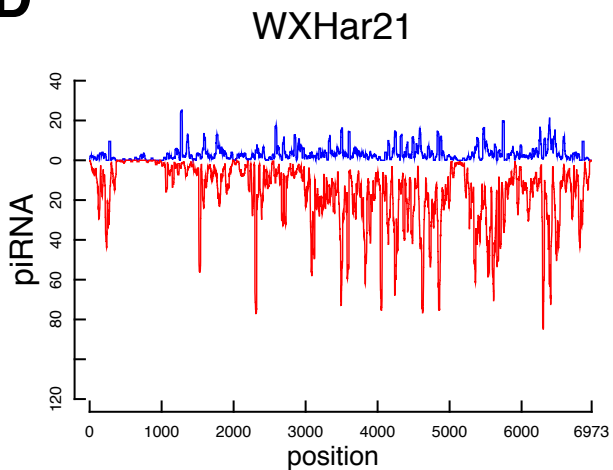
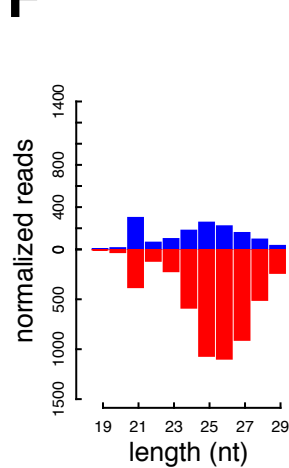
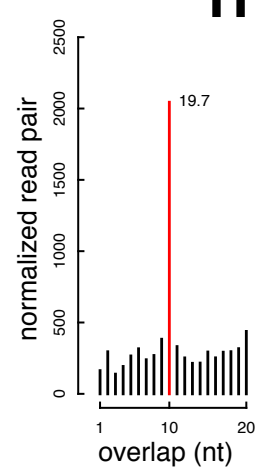
H



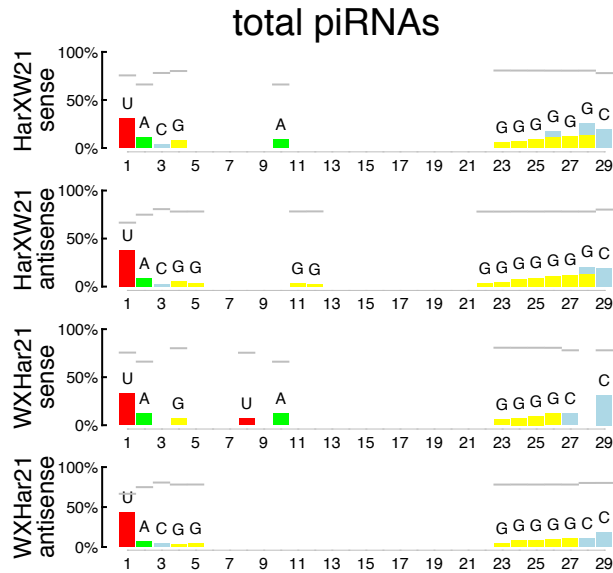
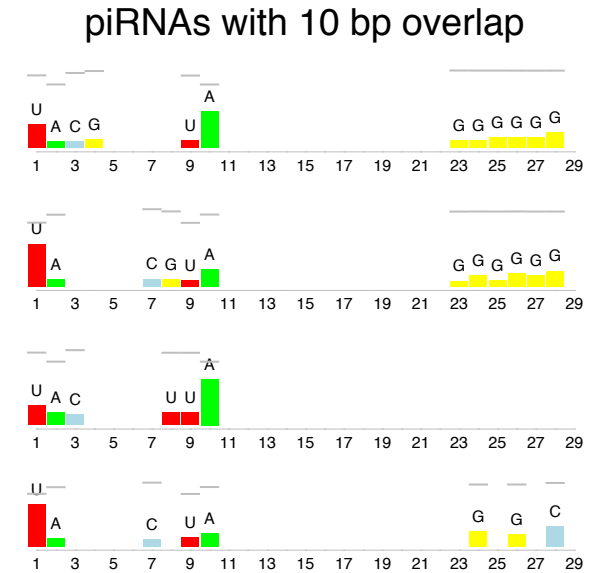
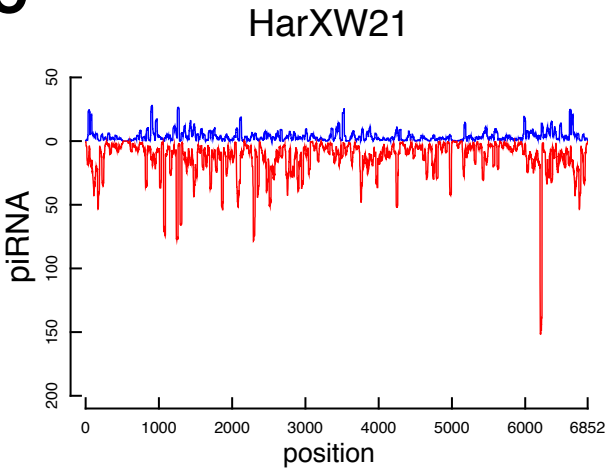
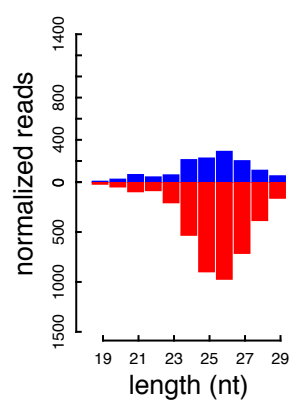
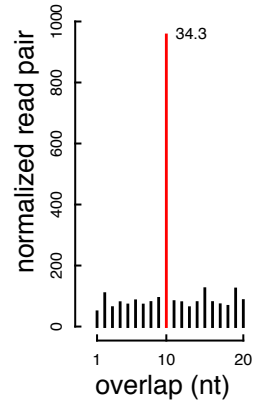
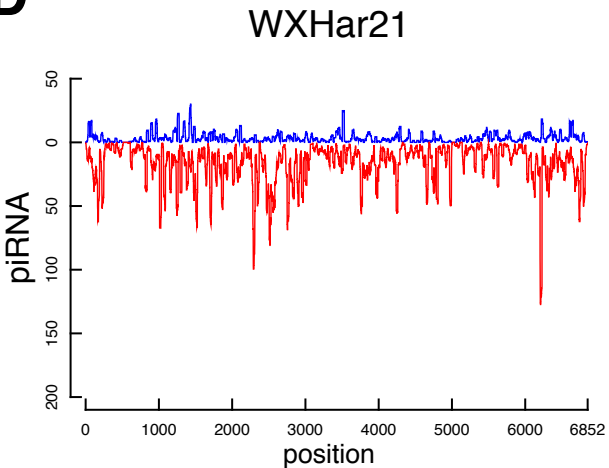
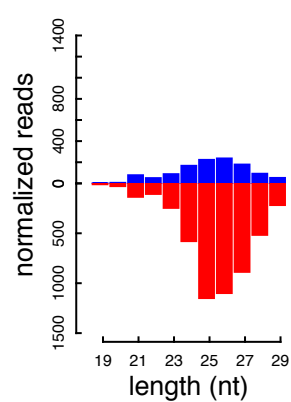
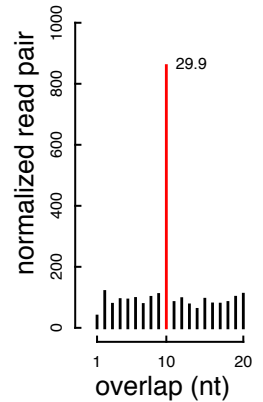
gypsy2

A**B****C****E****G****D****F****H**

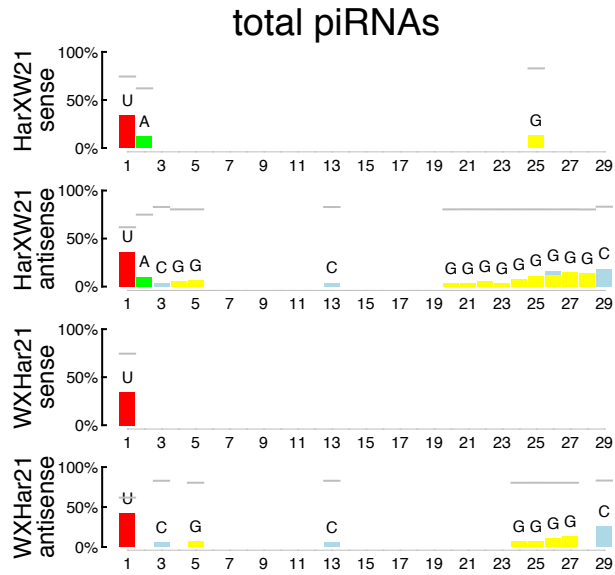
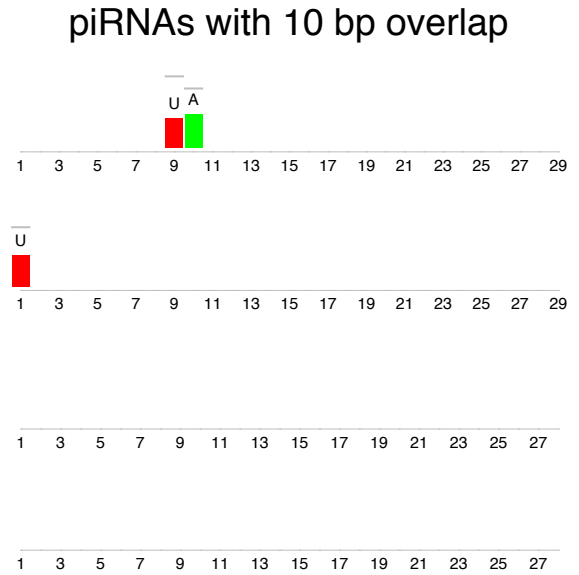
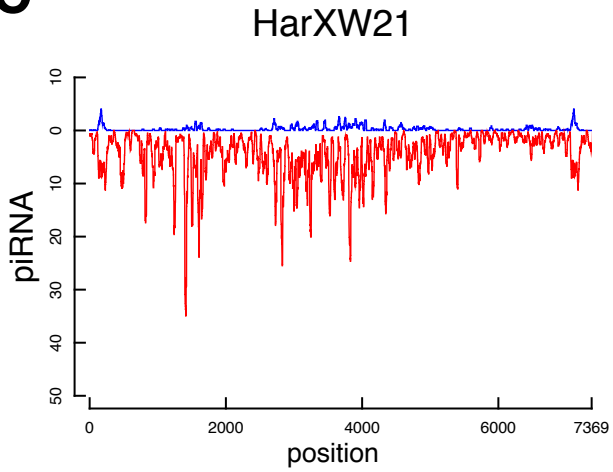
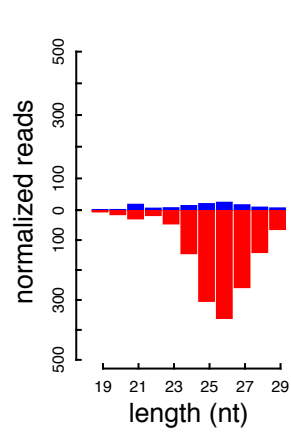
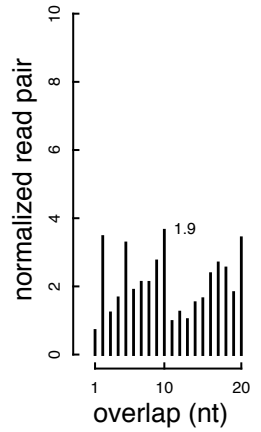
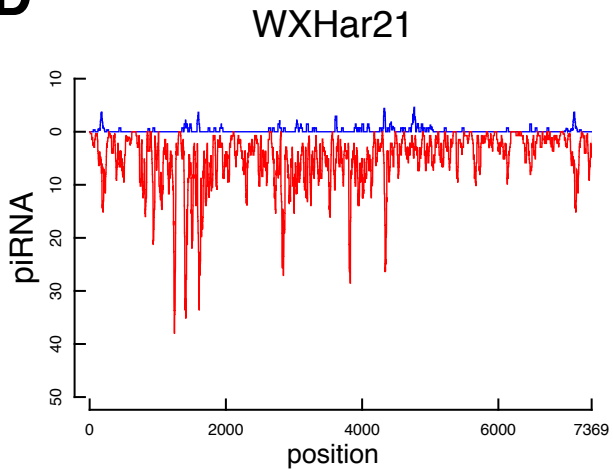
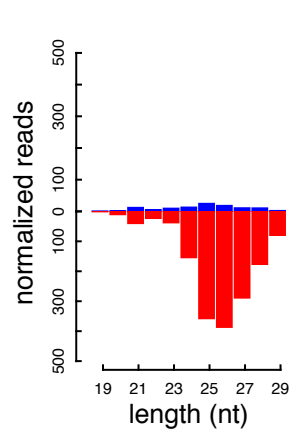
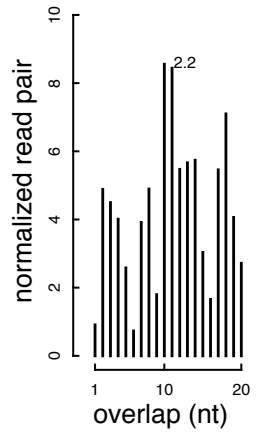
gypsy3

A**B****C****E****G****D****F****H**

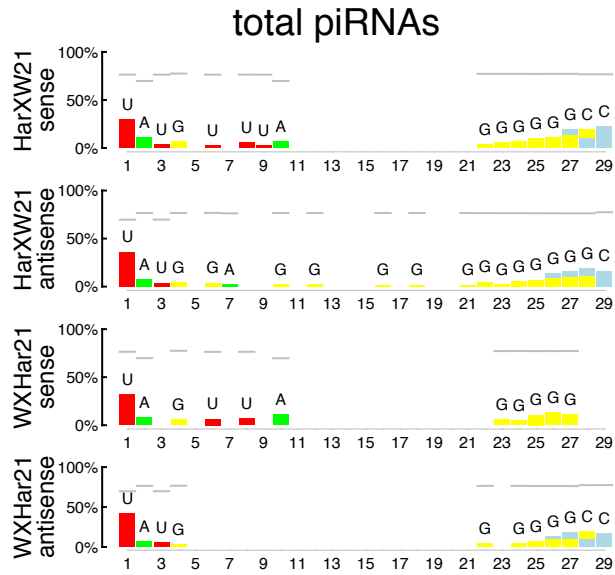
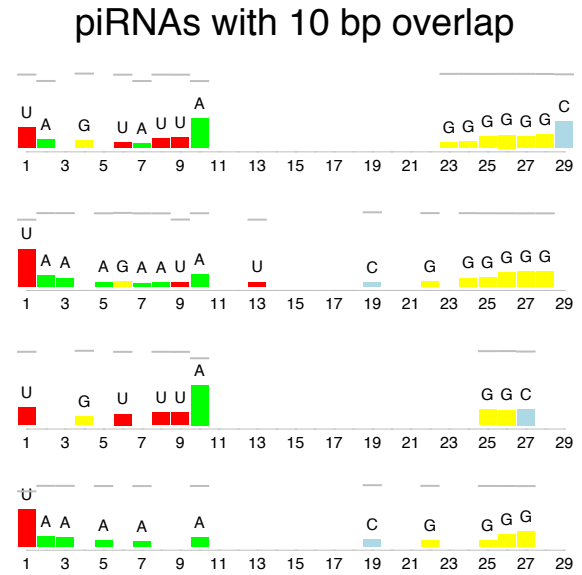
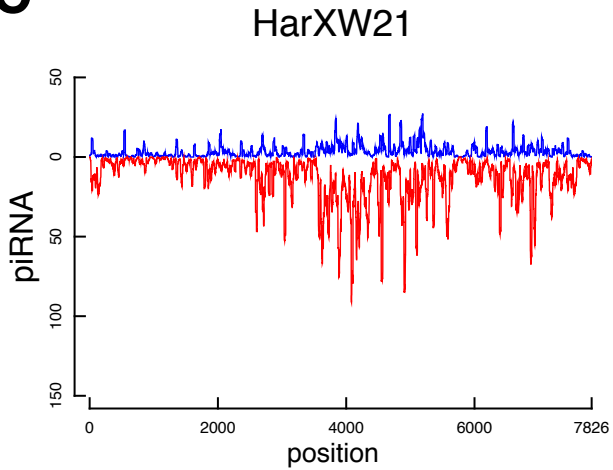
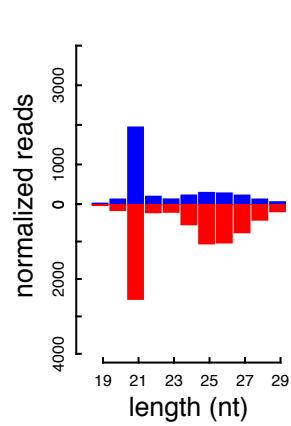
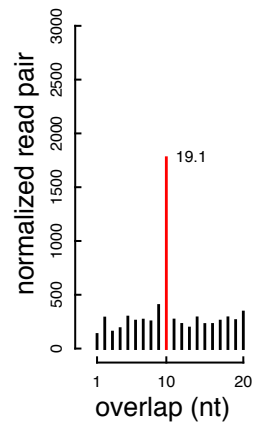
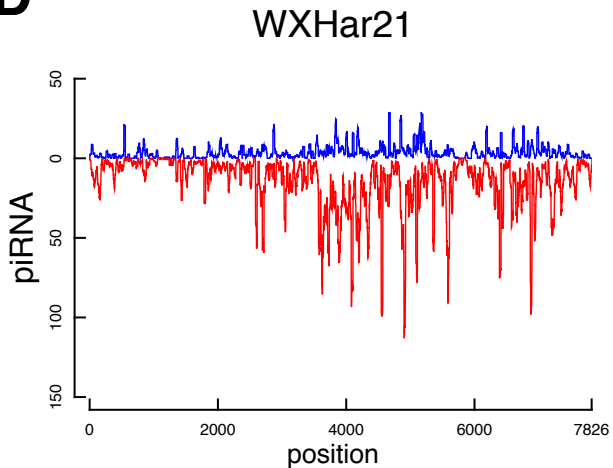
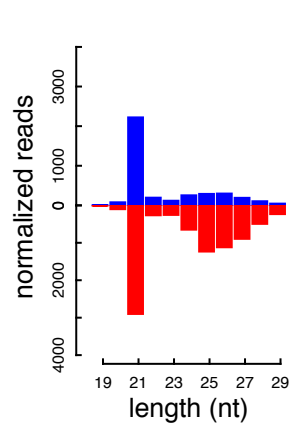
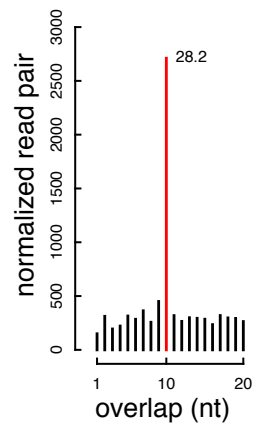
gypsy4

A**B****C****E****G****D****F****H**

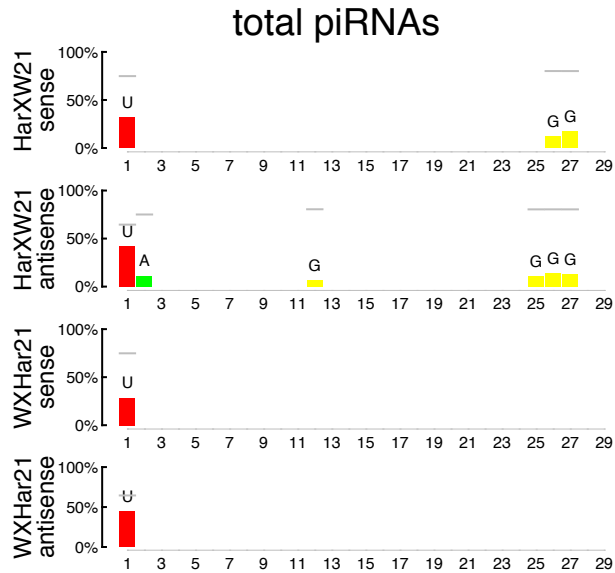
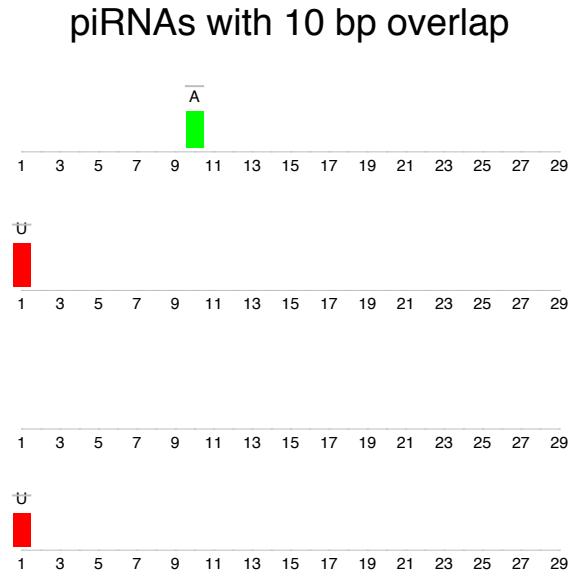
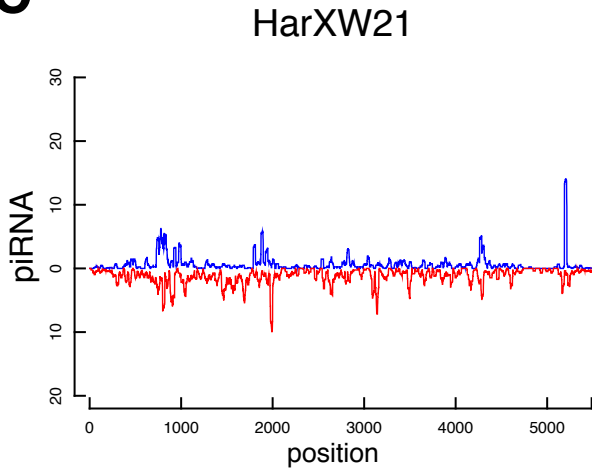
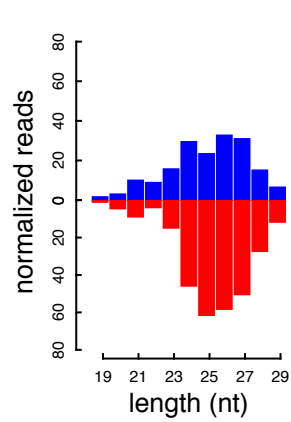
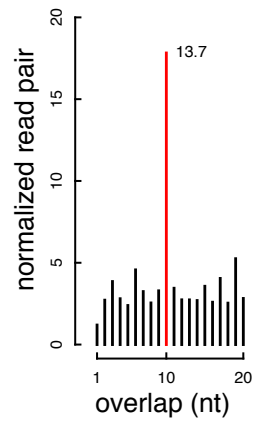
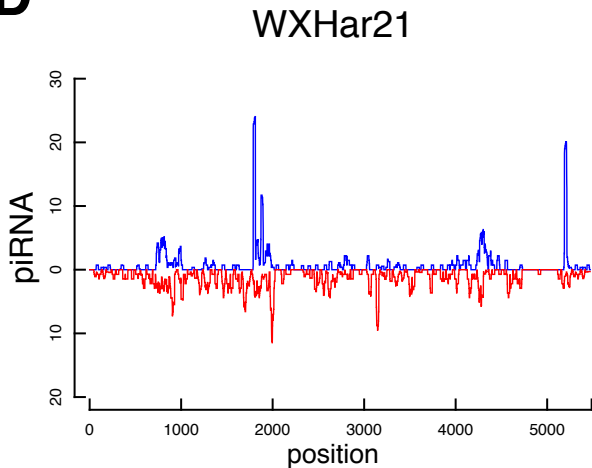
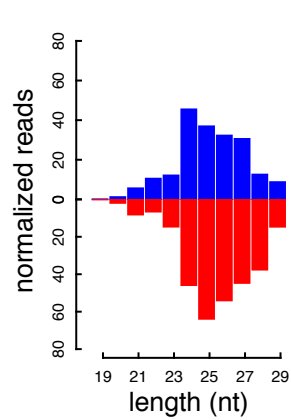
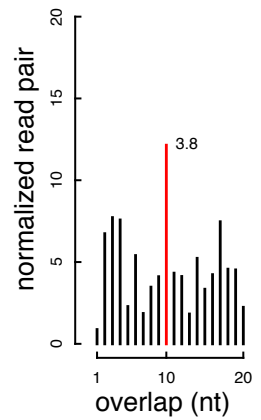
gypsy5

A**B****C****E****G****D****F****H**

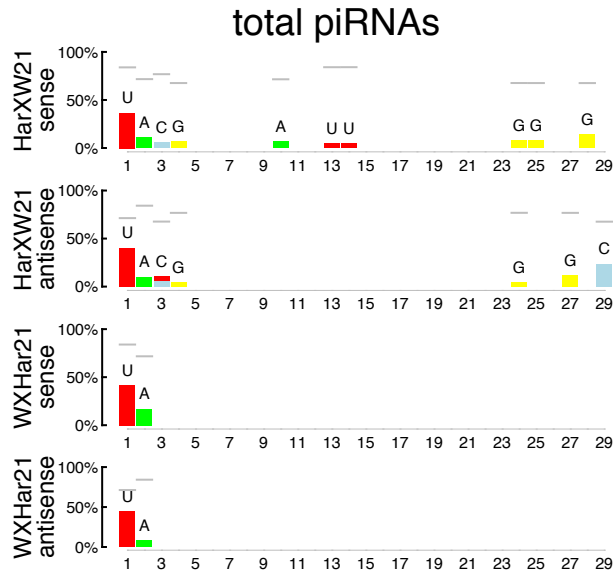
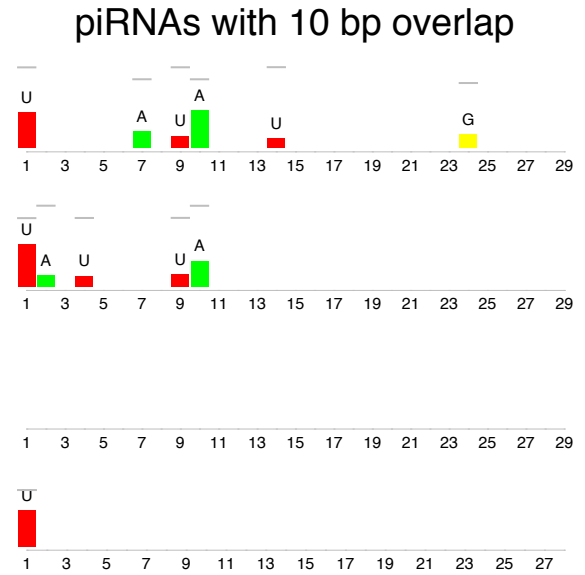
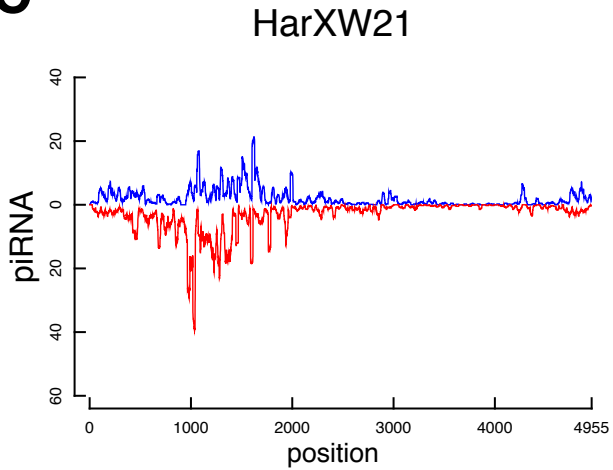
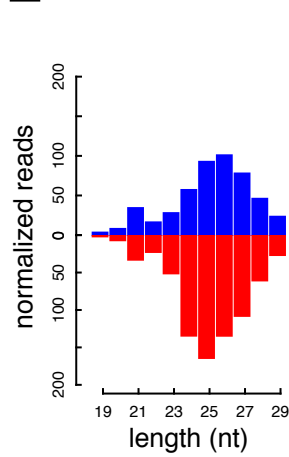
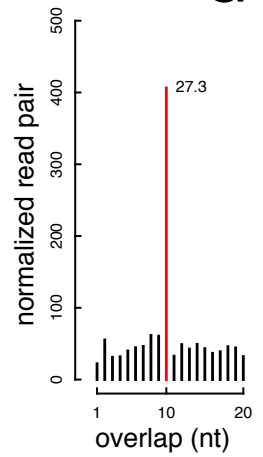
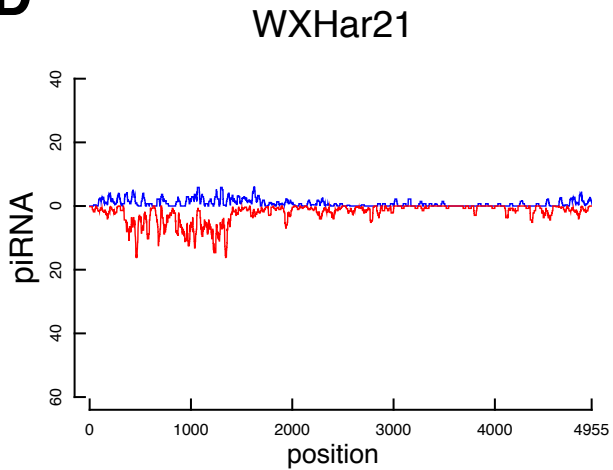
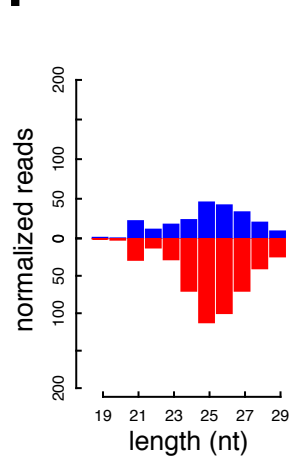
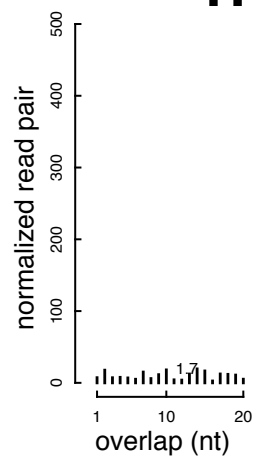
gypsy6

A**B****C****E****G****D****F****H**

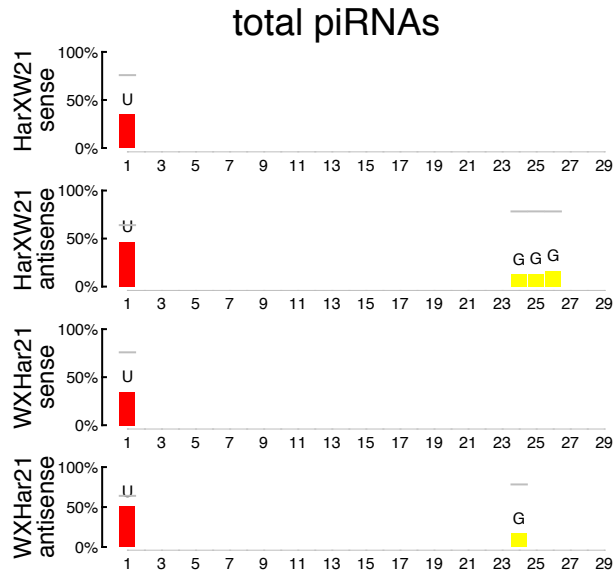
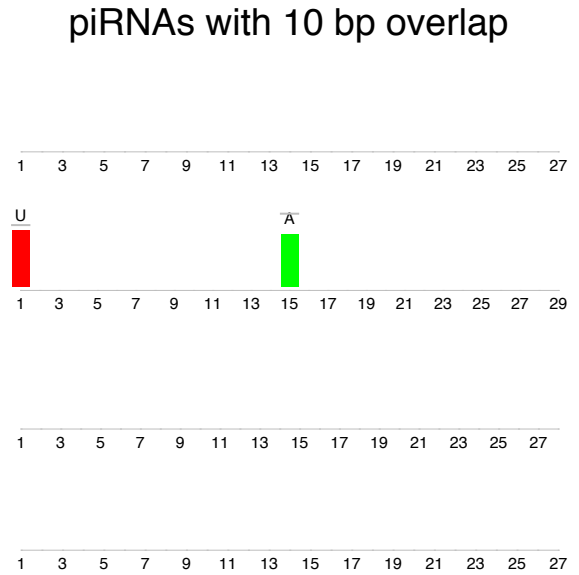
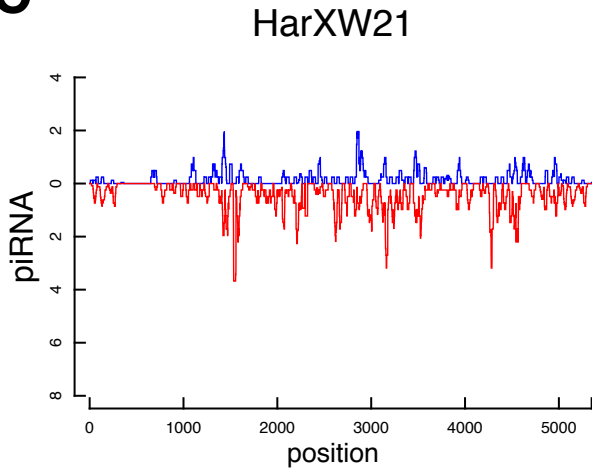
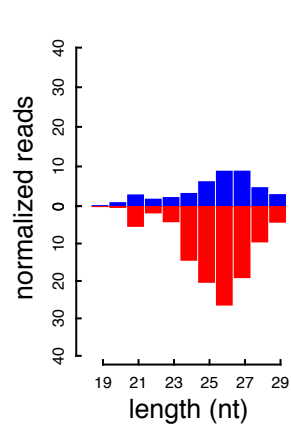
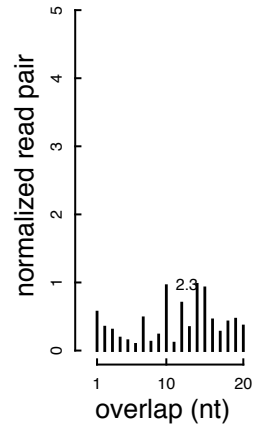
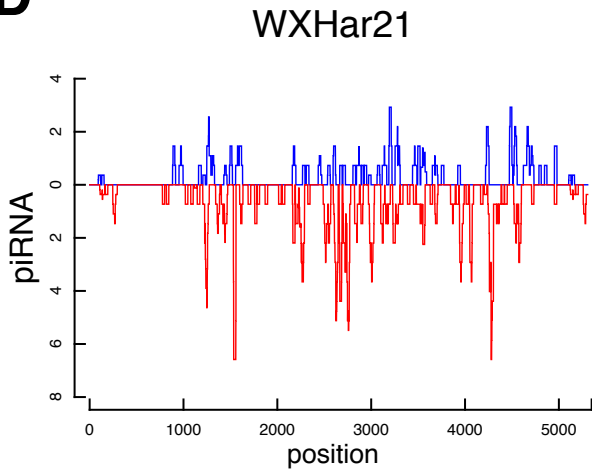
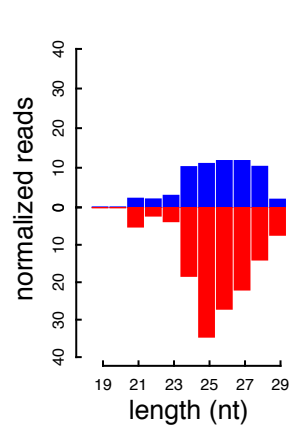
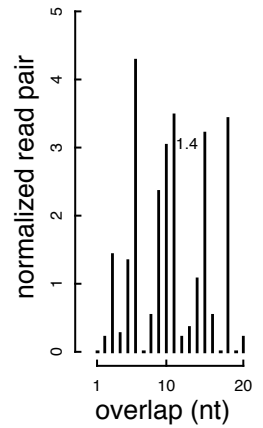
gypsy7

A**B****C****E****G****D****F****H**

gypsy8

A**B****C****E****G****D****F****H**

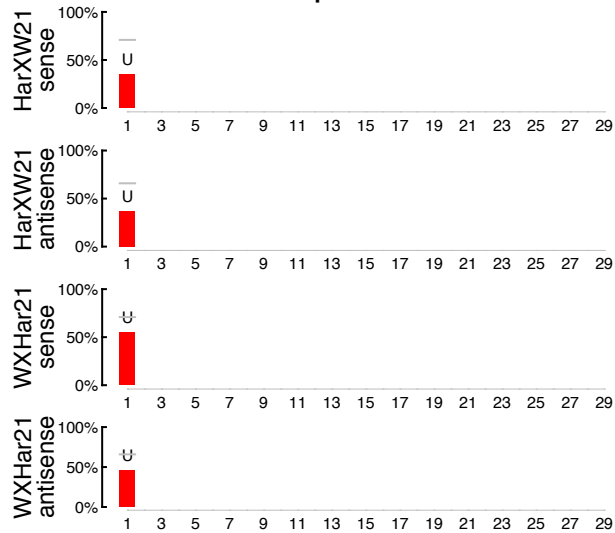
gypsy9

A**B****C****E****G****D****F****H**

HB

A

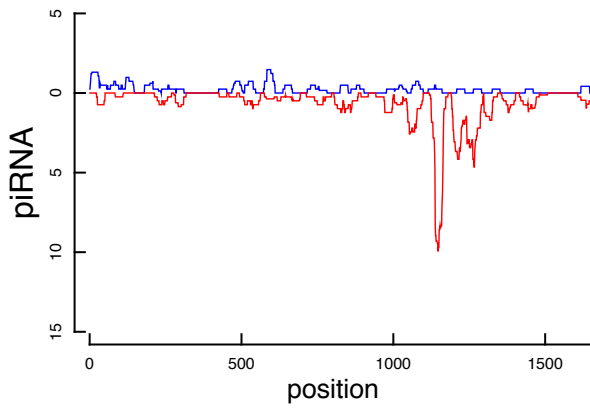
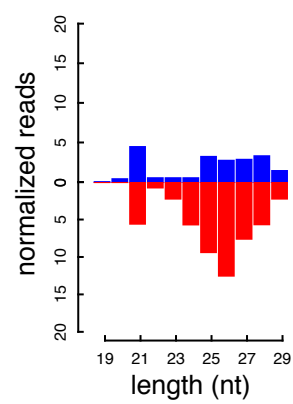
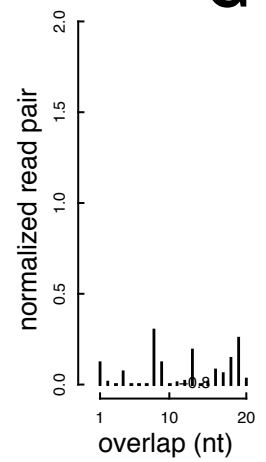
total piRNAs

**B**

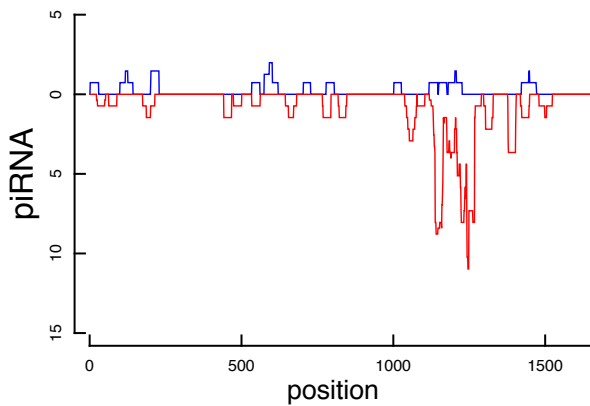
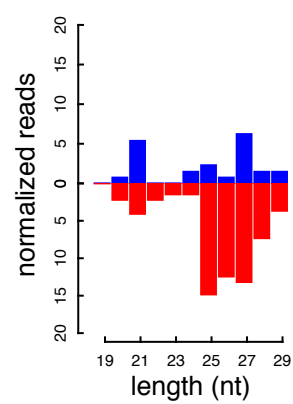
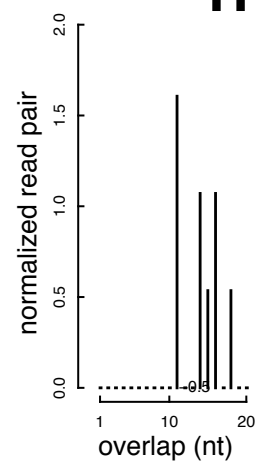
piRNAs with 10 bp overlap

C

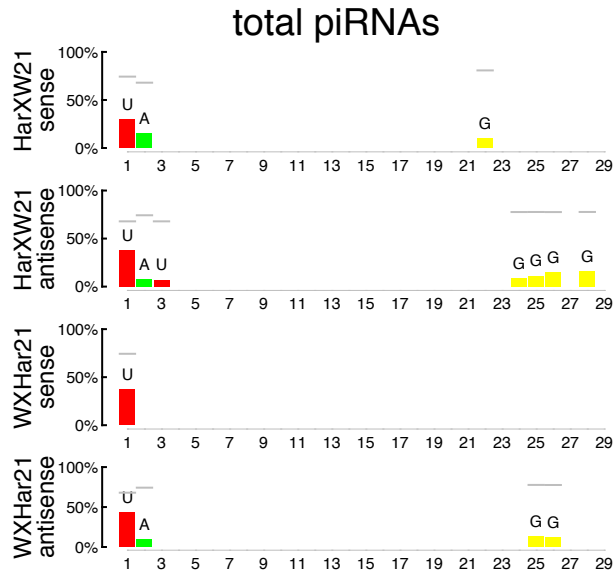
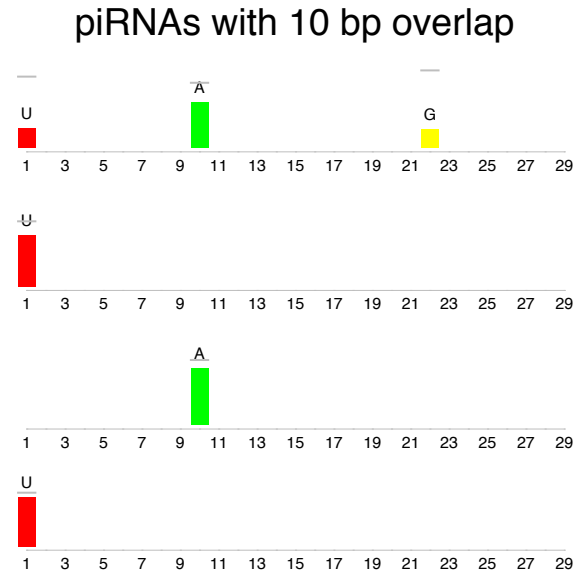
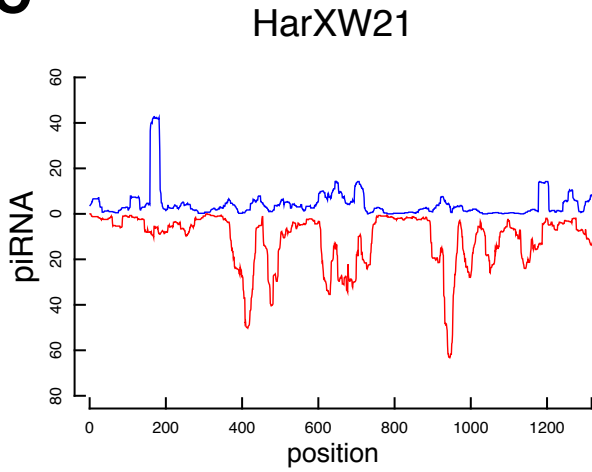
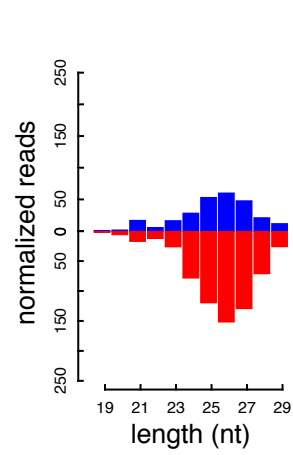
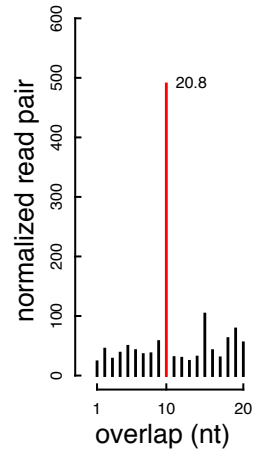
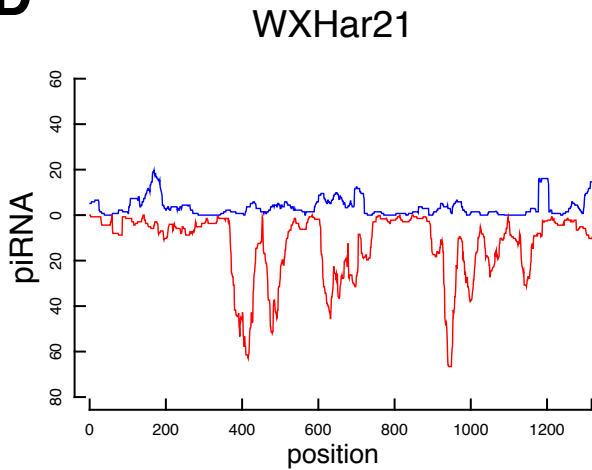
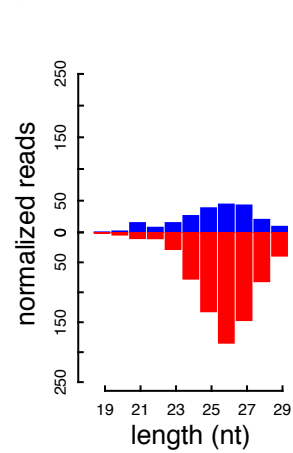
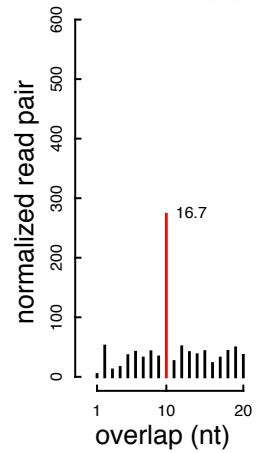
HarXW21

**E****G****D**

WXHar21

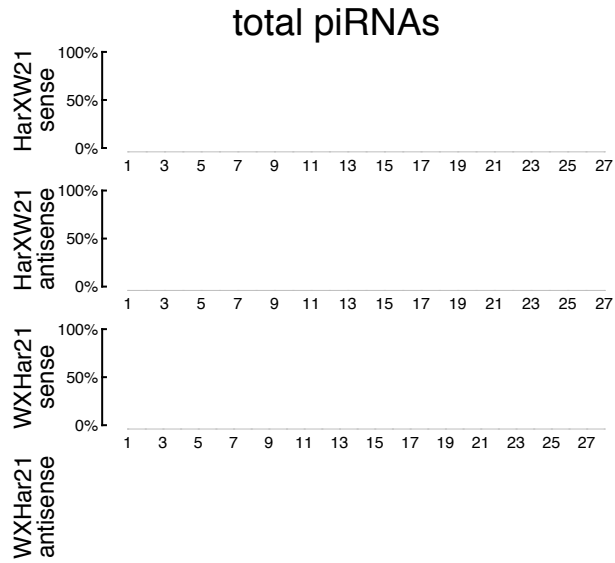
**F****H**

Helena

A**B****C****E****G****D****F****H**

Helitron

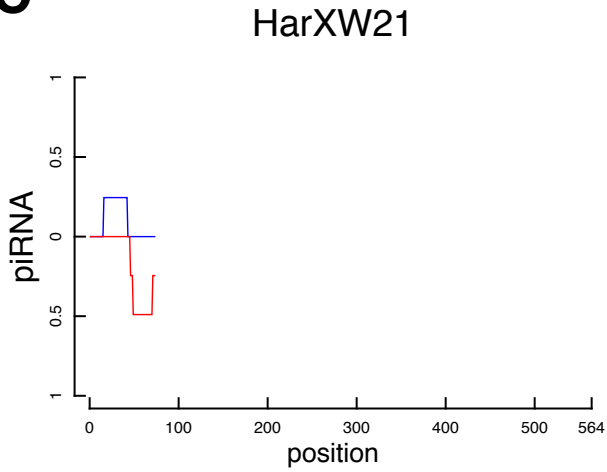
A



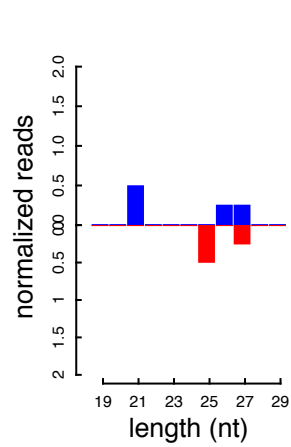
B

piRNAs with 10 bp overlap

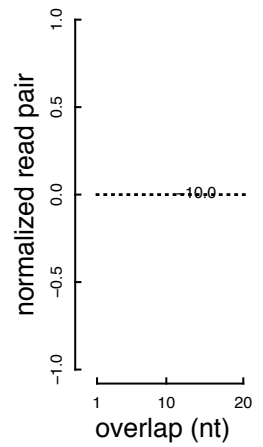
C



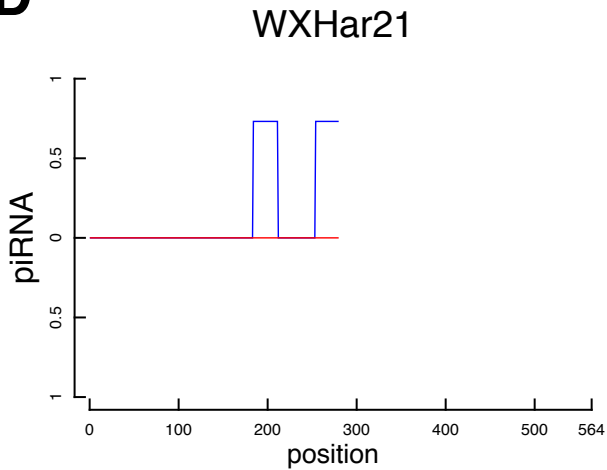
E



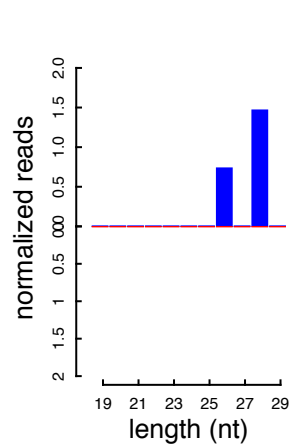
G



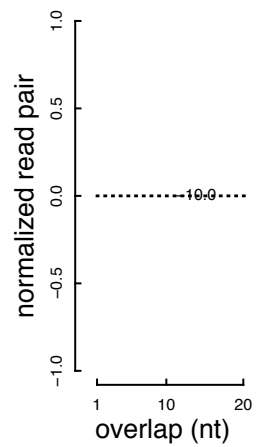
D



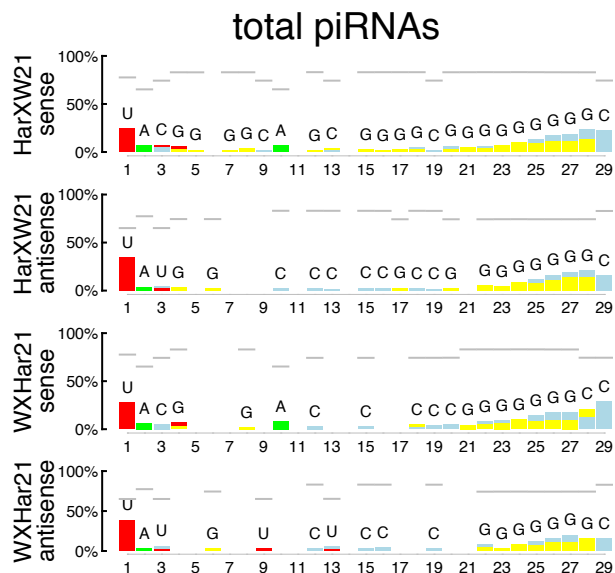
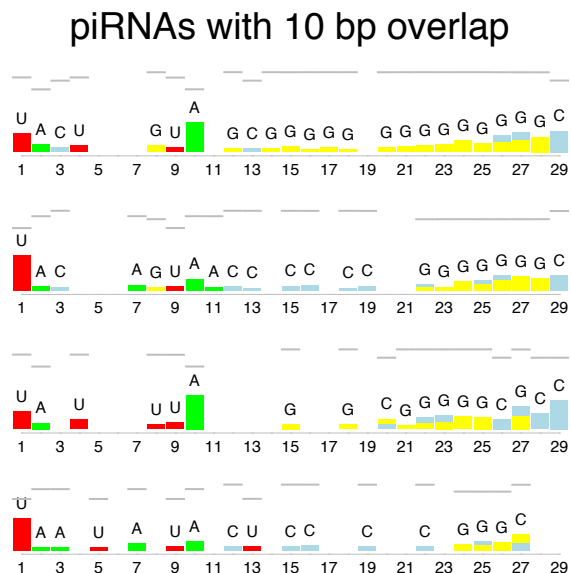
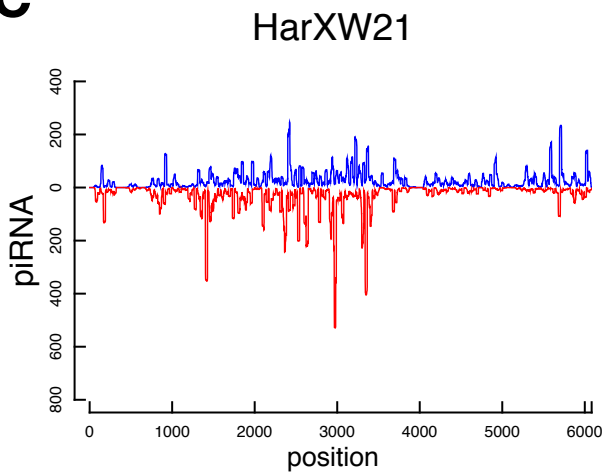
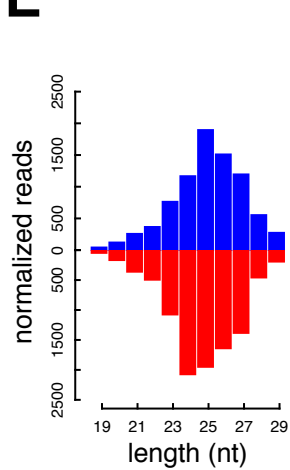
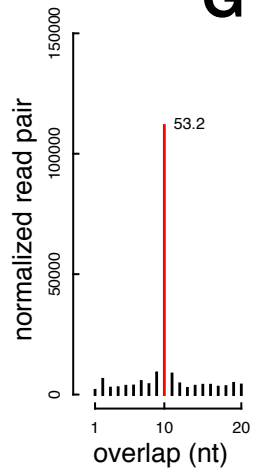
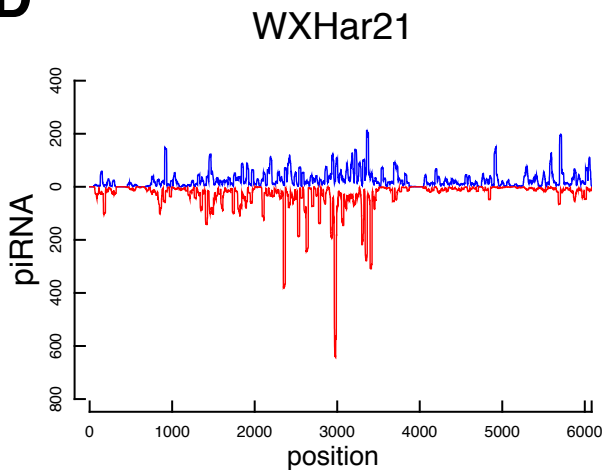
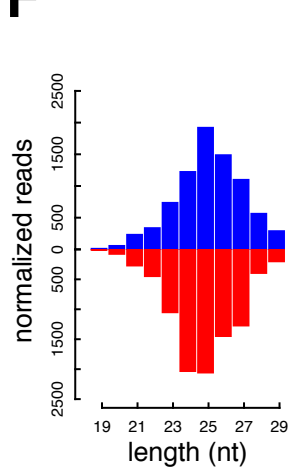
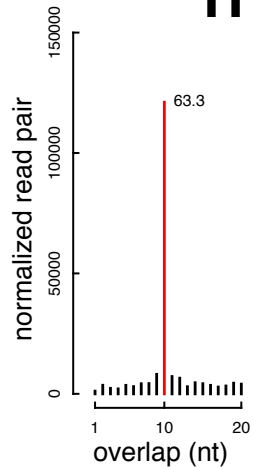
F



H

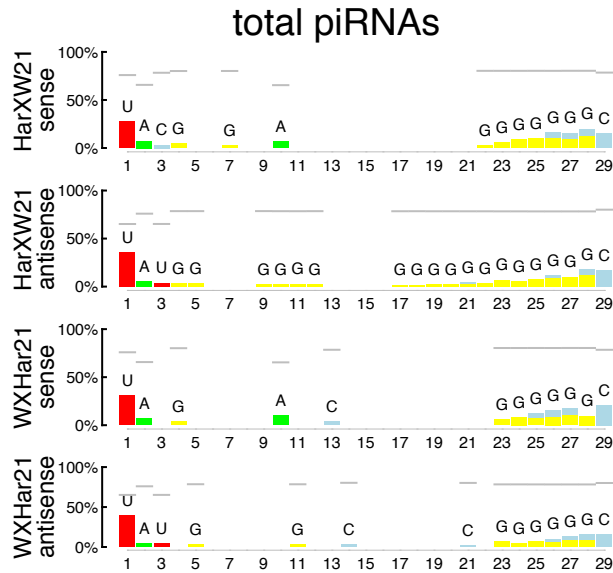


HeT A

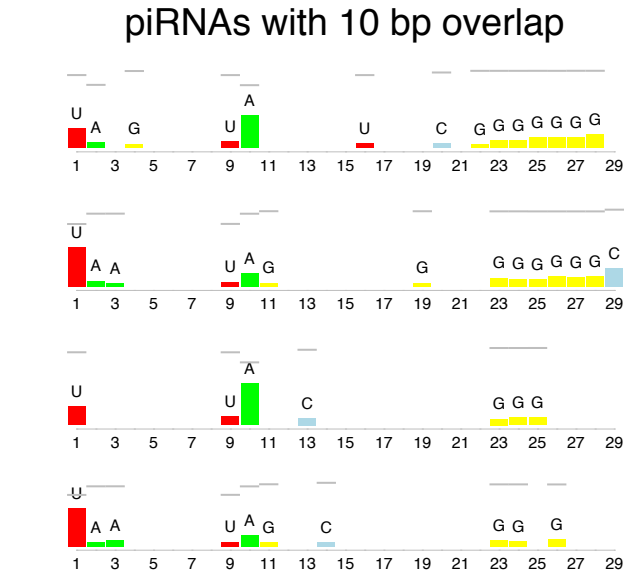
A**B****C****E****G****D****F****H**

HMS Beagle

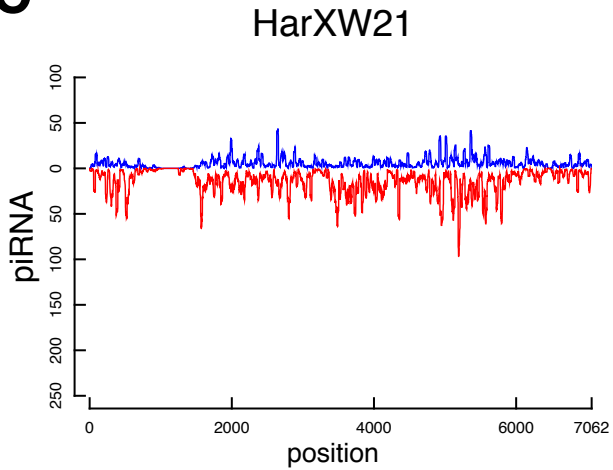
A



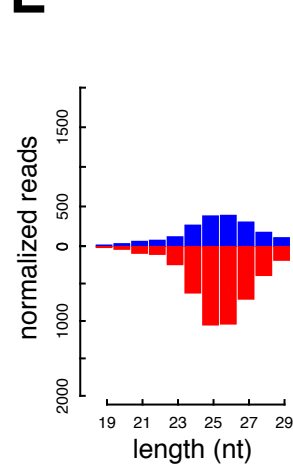
B



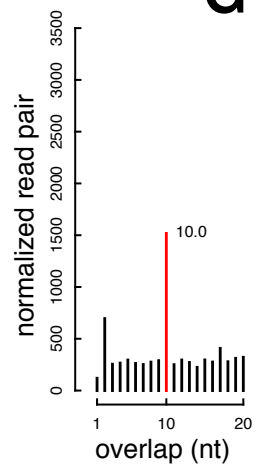
C



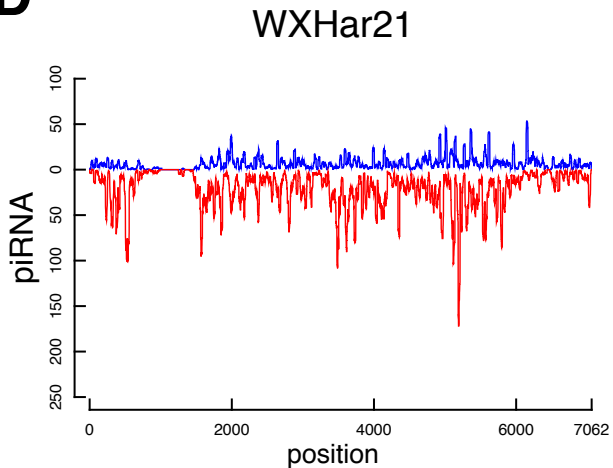
E



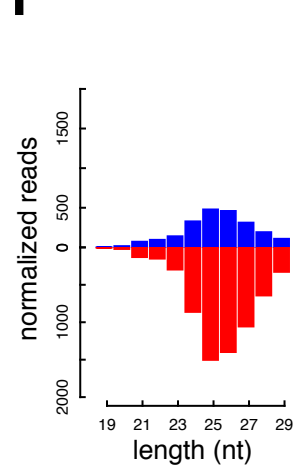
G



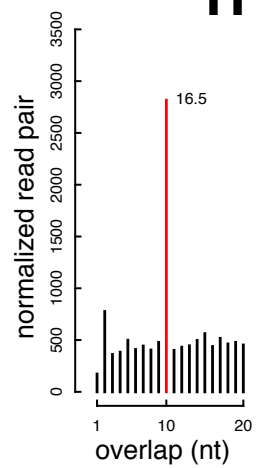
D



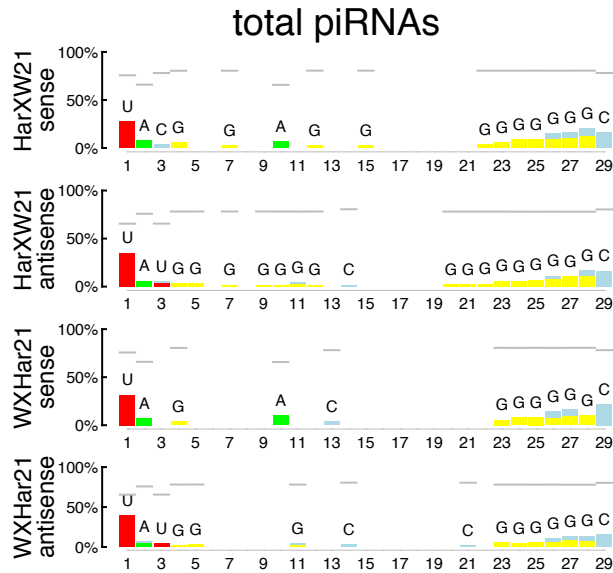
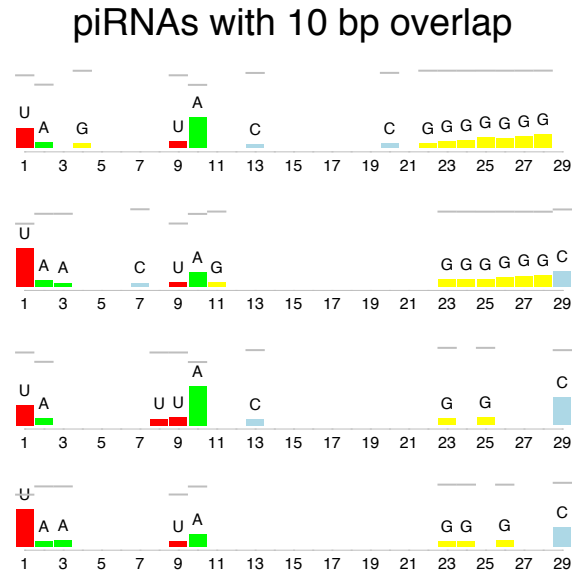
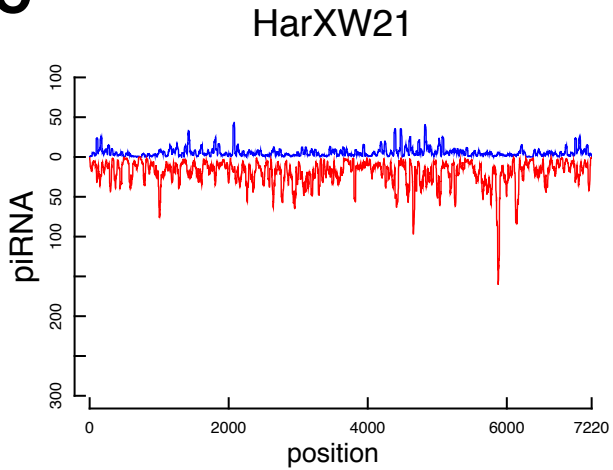
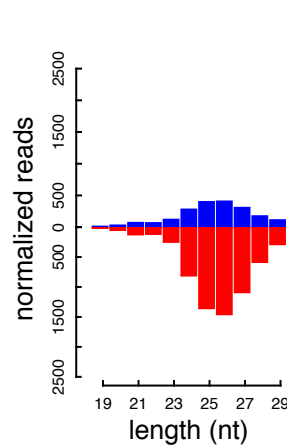
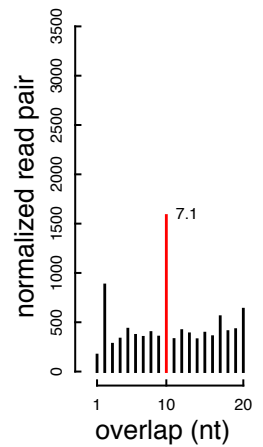
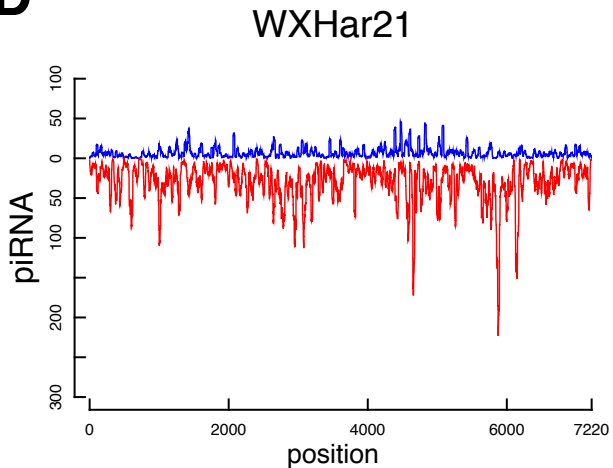
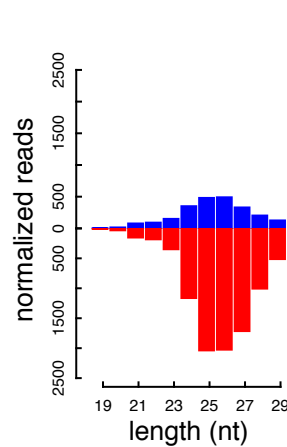
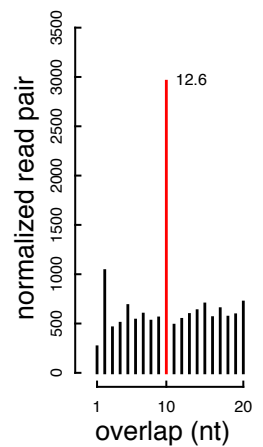
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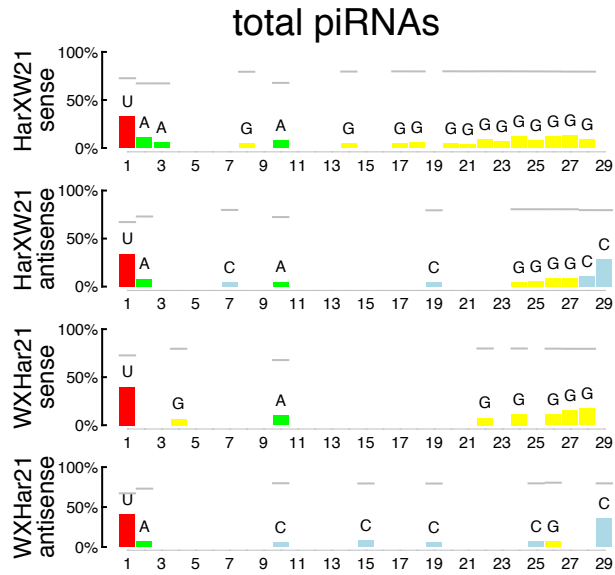
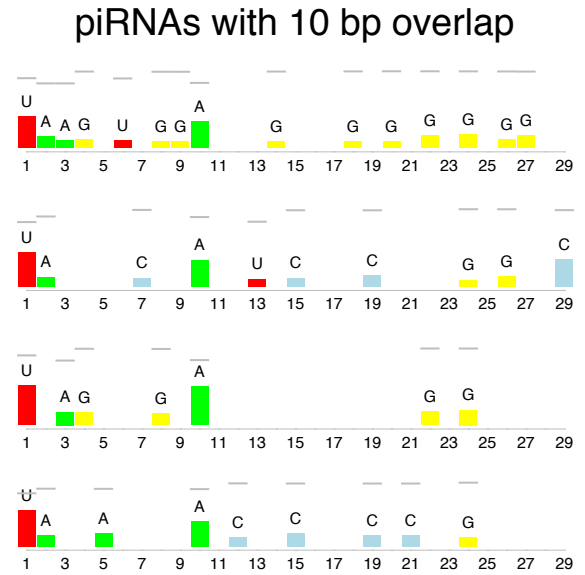
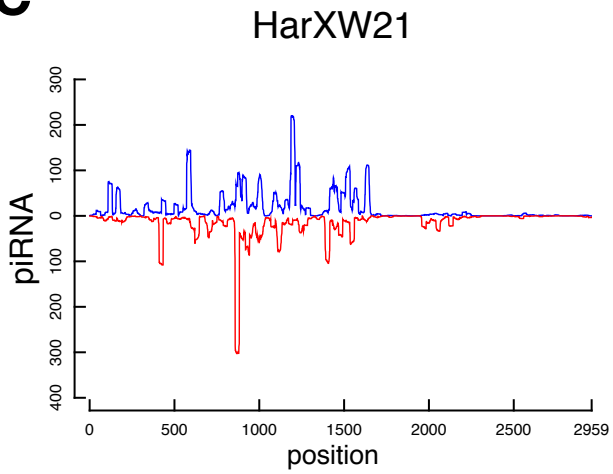
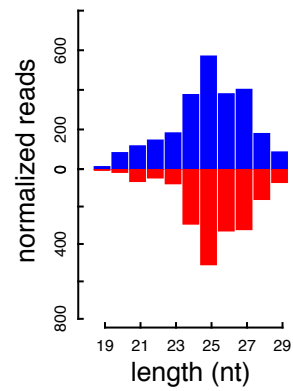
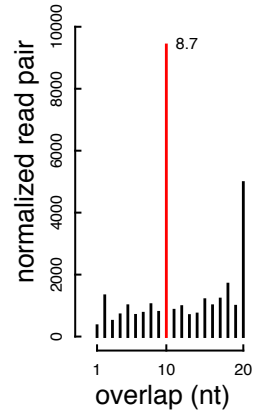
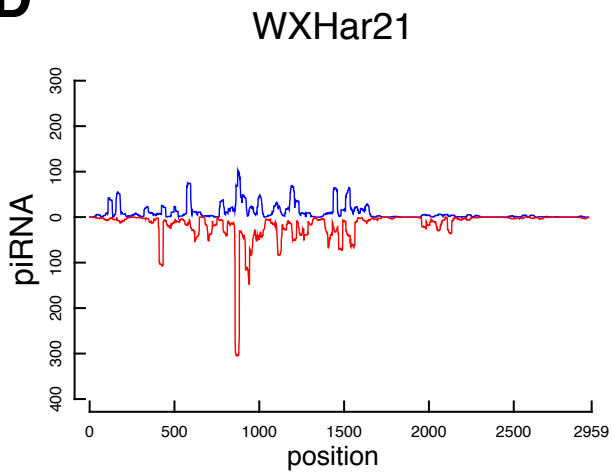
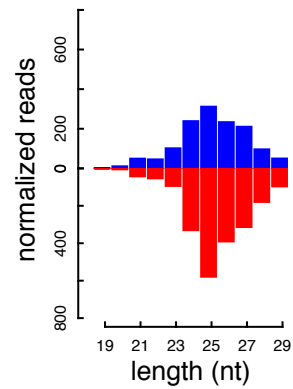
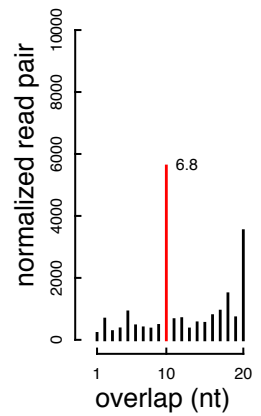
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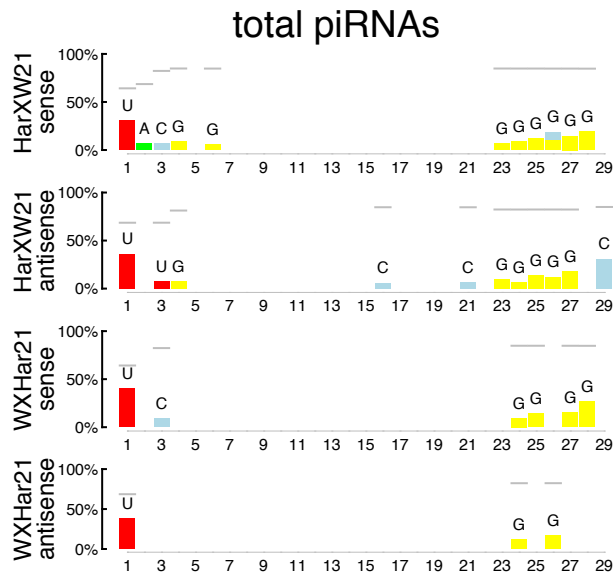
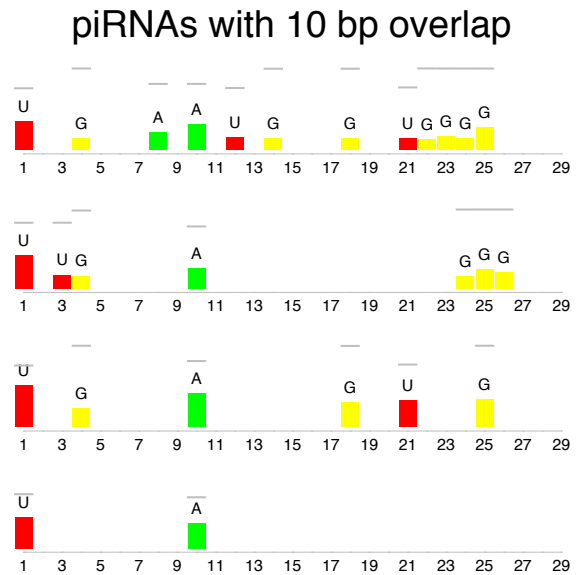
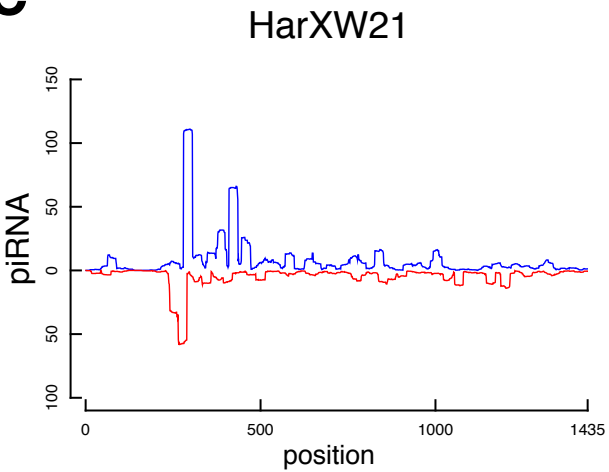
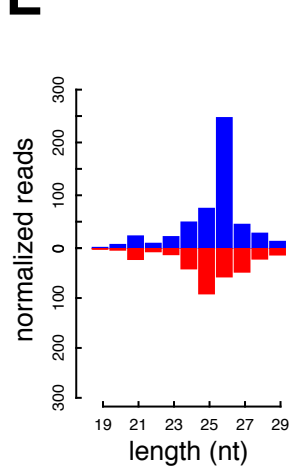
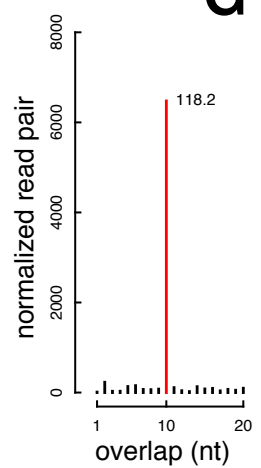
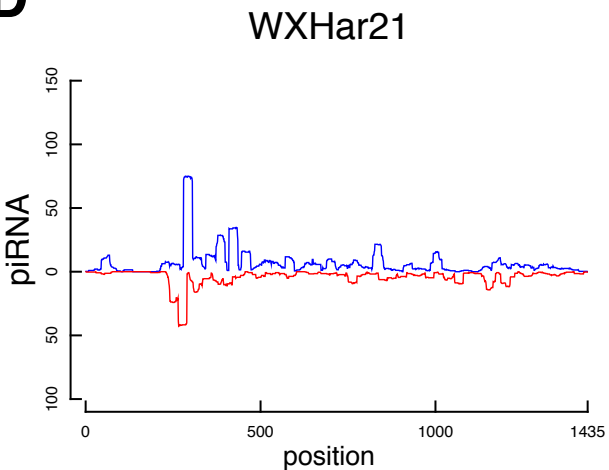
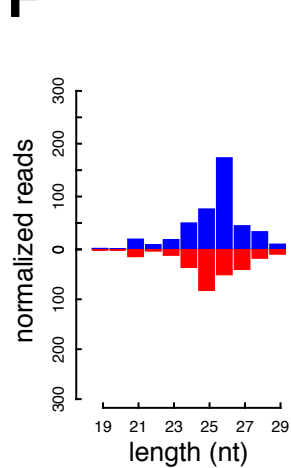
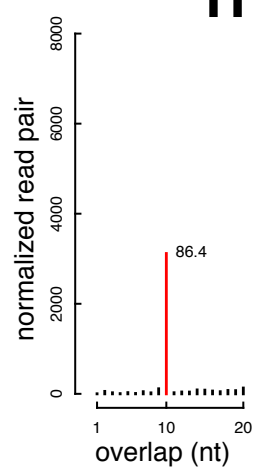
HMS Beagle2

A**B****C****E****G****D****F****H**

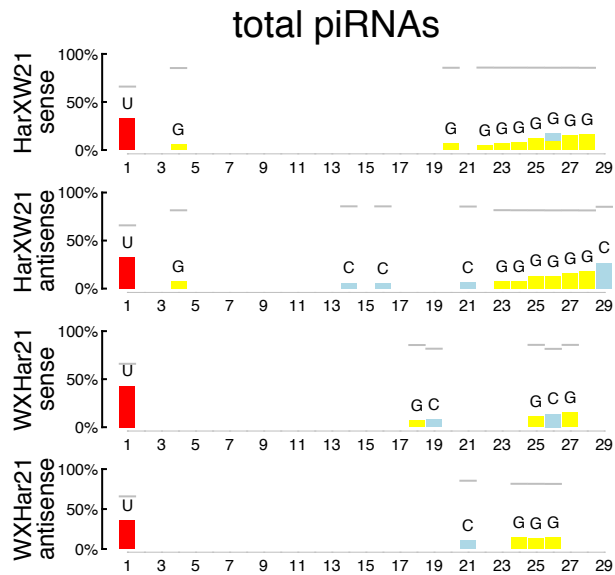
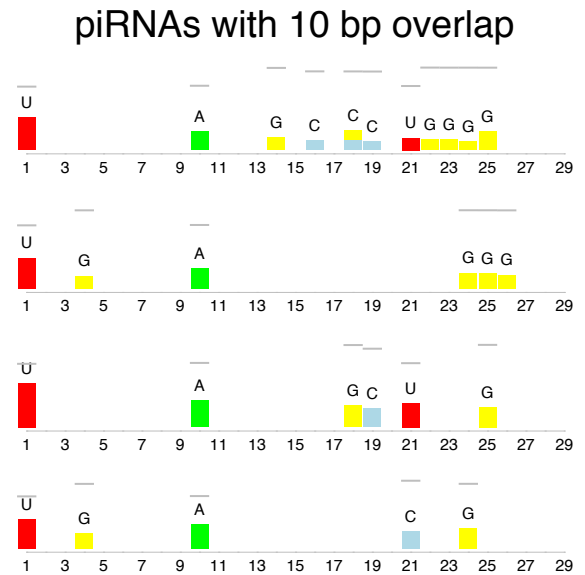
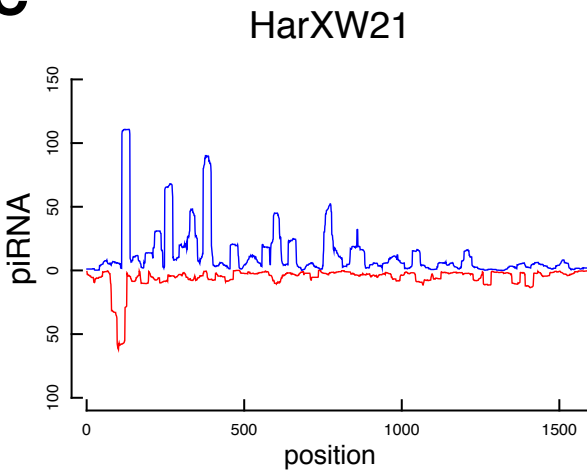
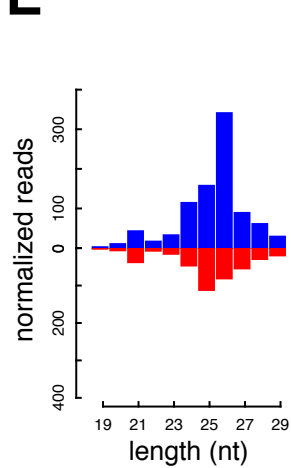
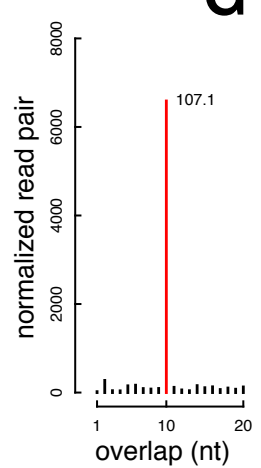
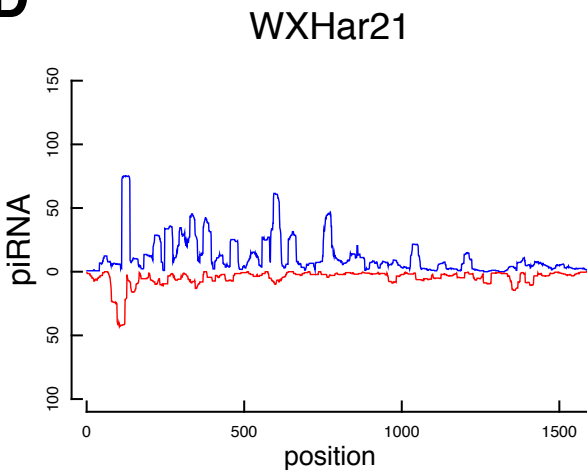
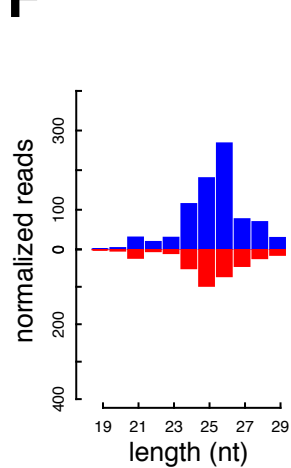
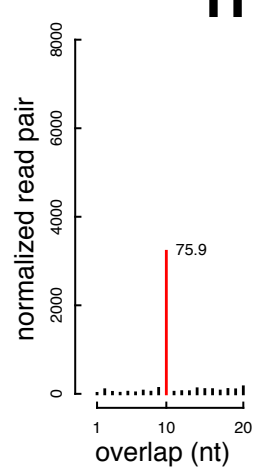
hobo

A**B****C****E****G****D****F****H**

hopper

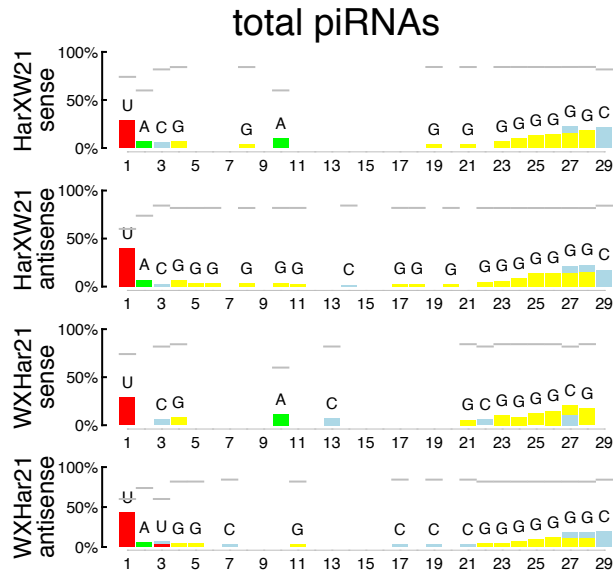
A**B****C****E****G****D****F****H**

hopper2

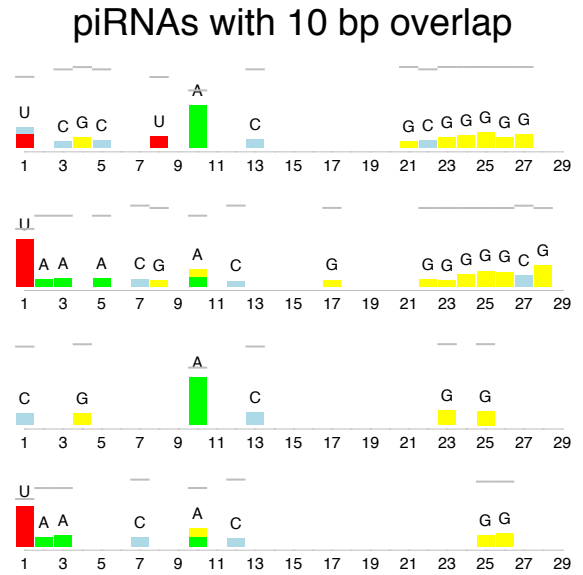
A**B****C****E****G****D****F****H**

Idefix

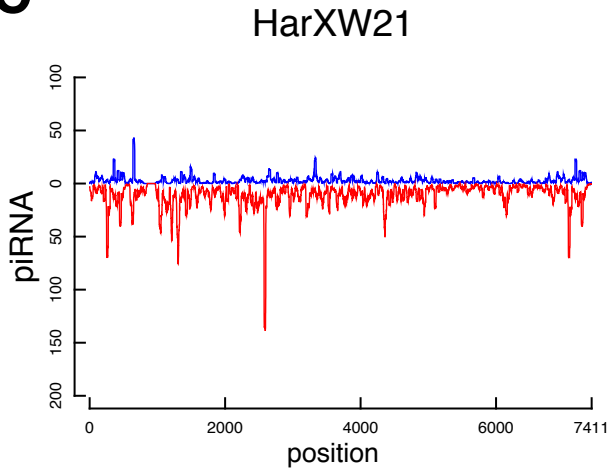
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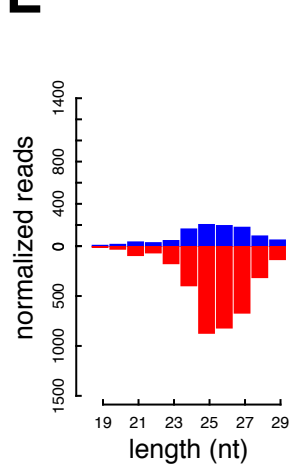
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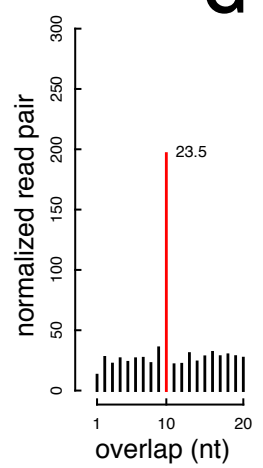
C



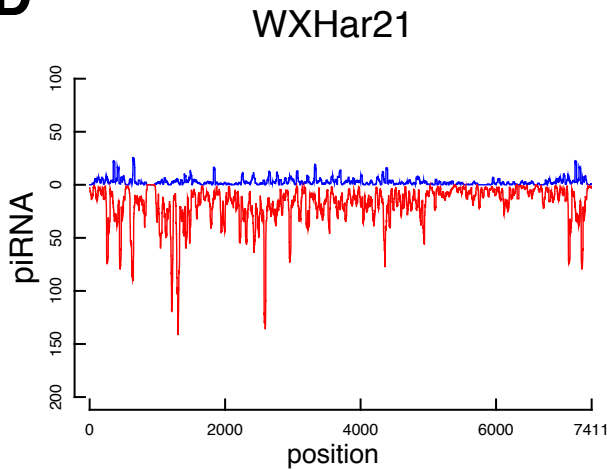
E



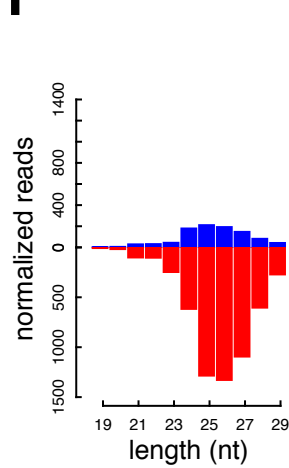
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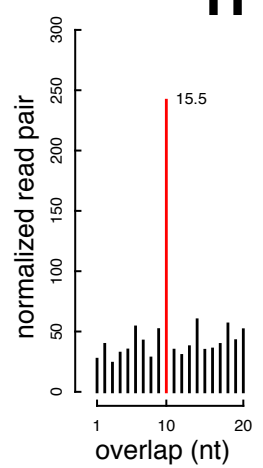
D



F

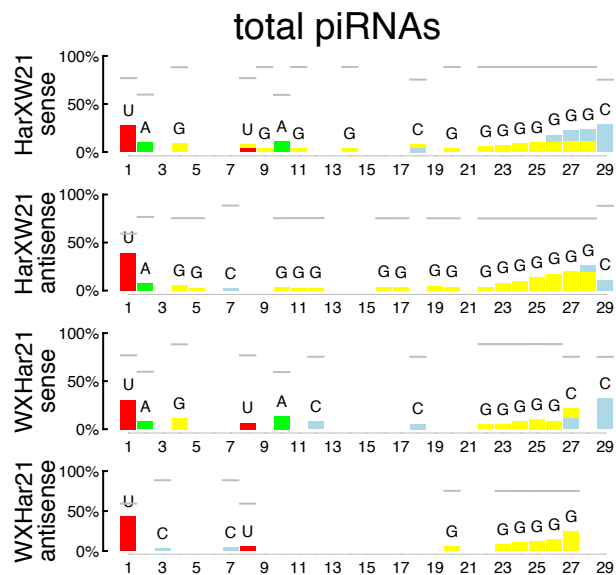


H

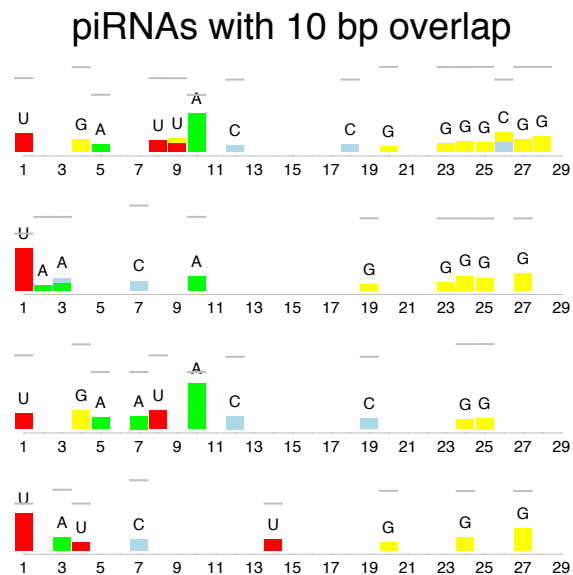


I element

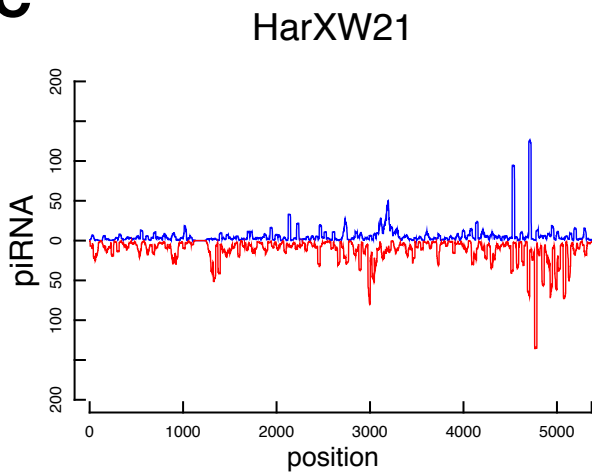
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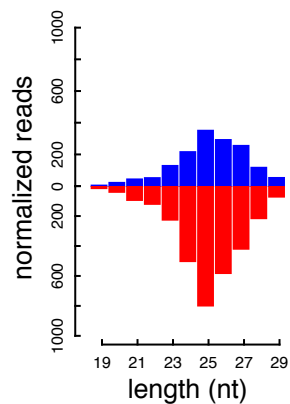
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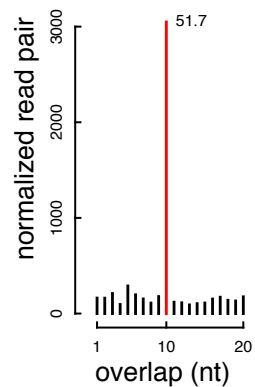
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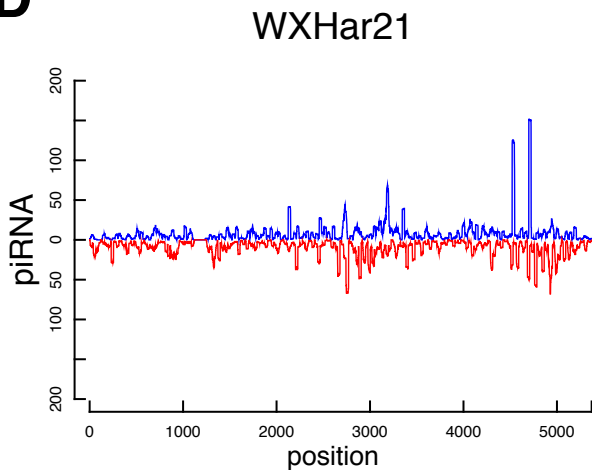
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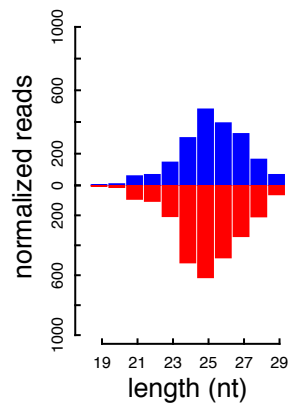
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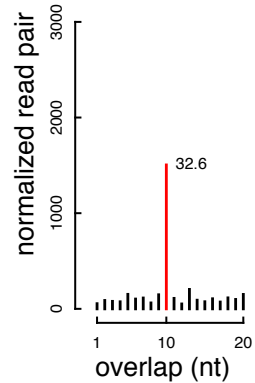
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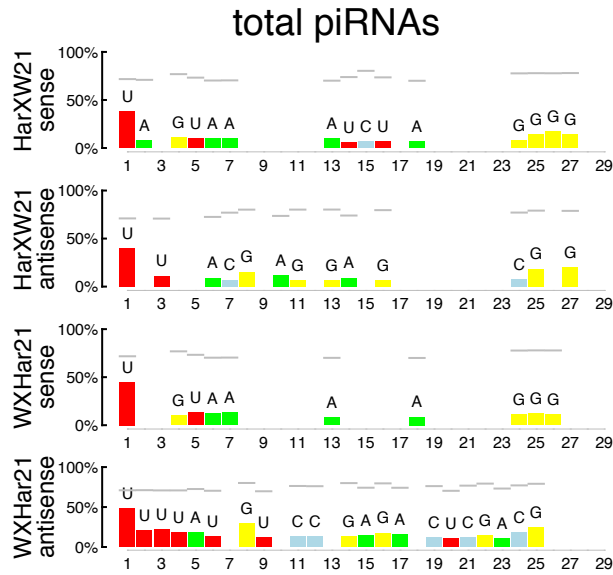
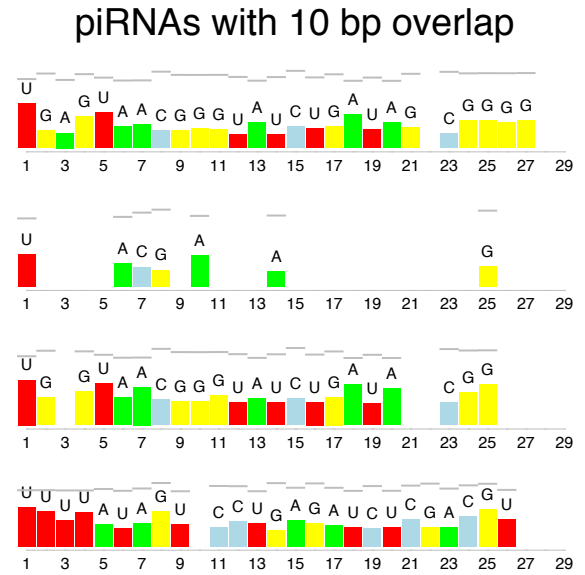
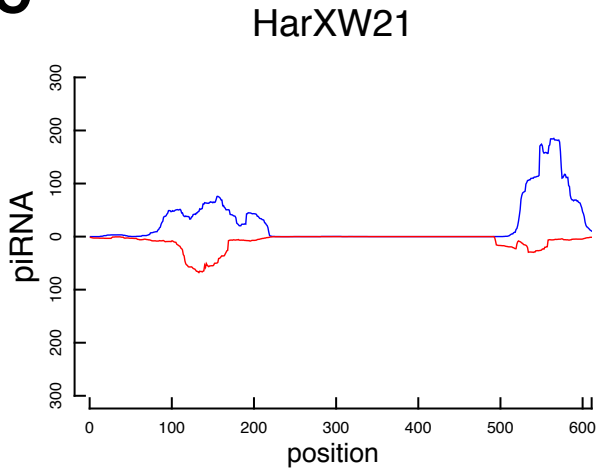
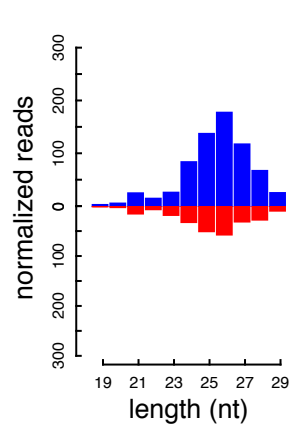
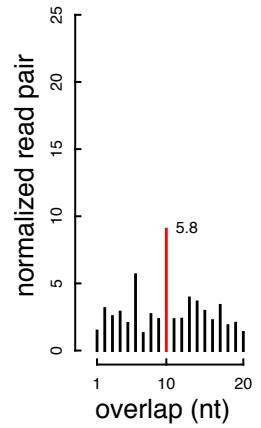
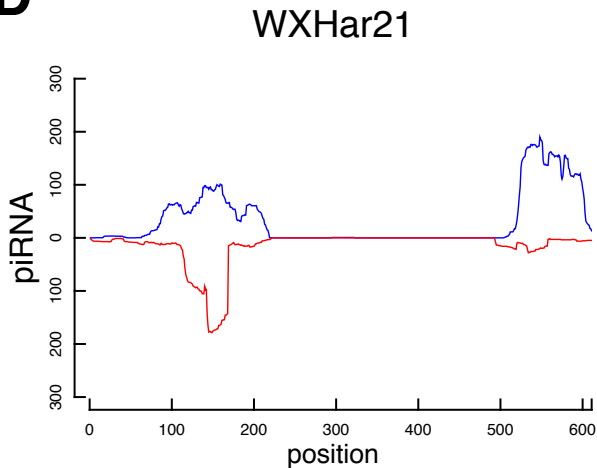
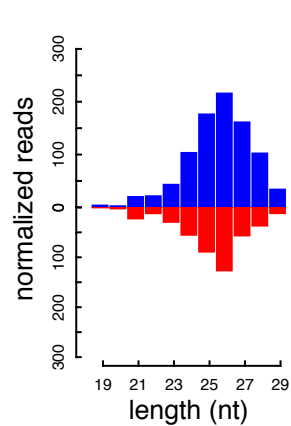
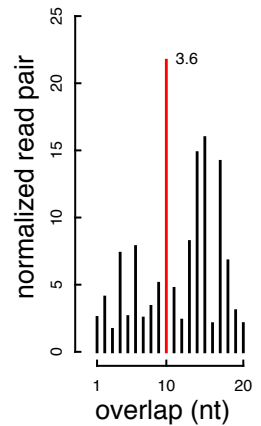
F



H

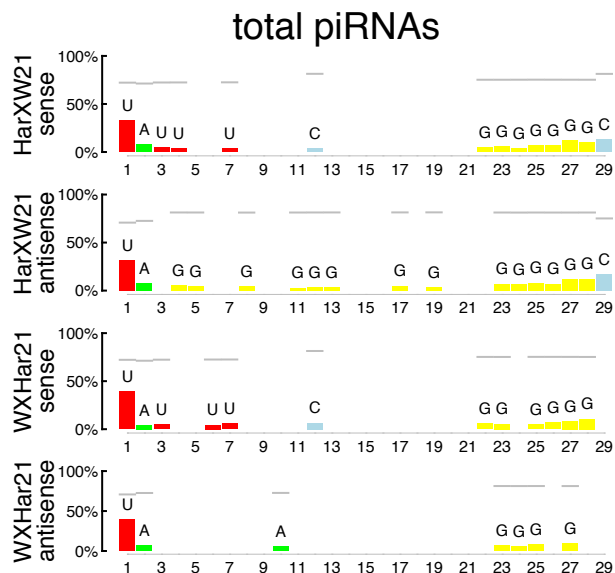


INE 1

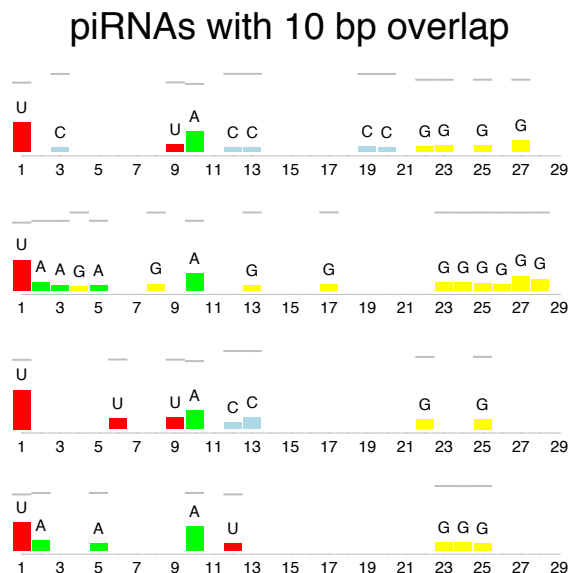
A**B****C****E****G****D****F****H**

invader1

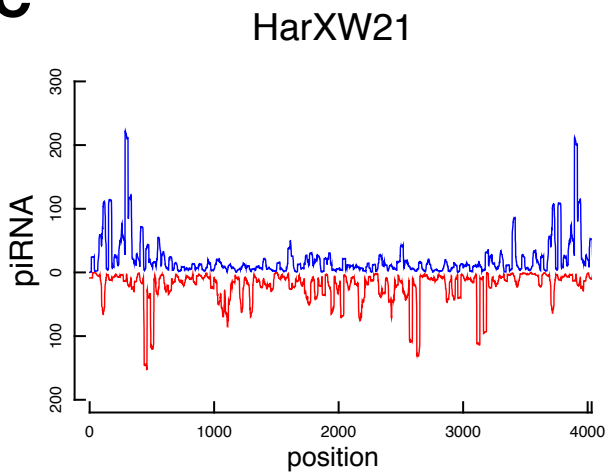
A



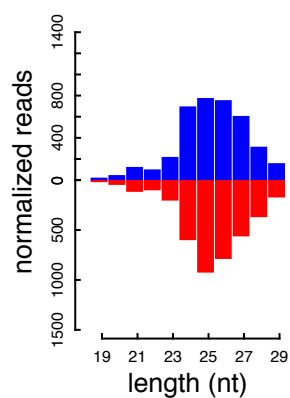
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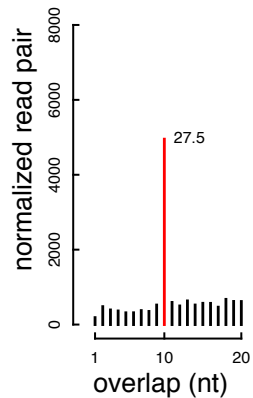
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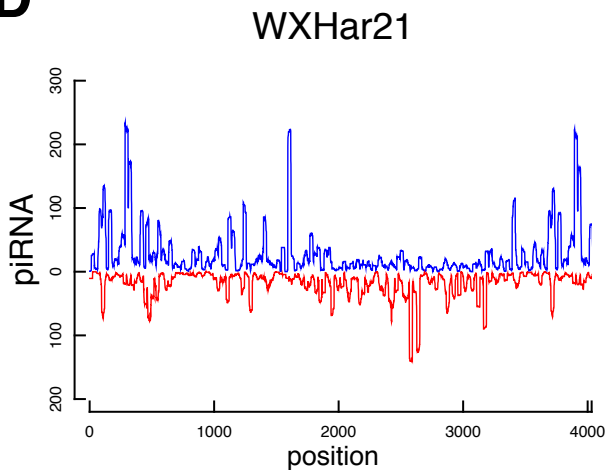
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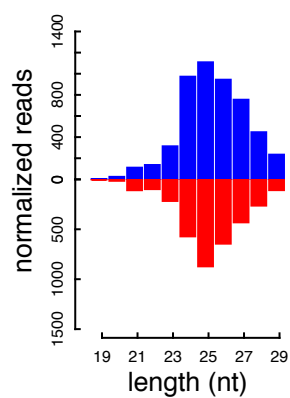
G



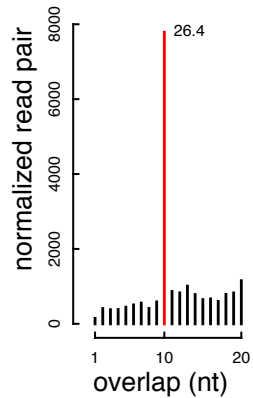
D



F

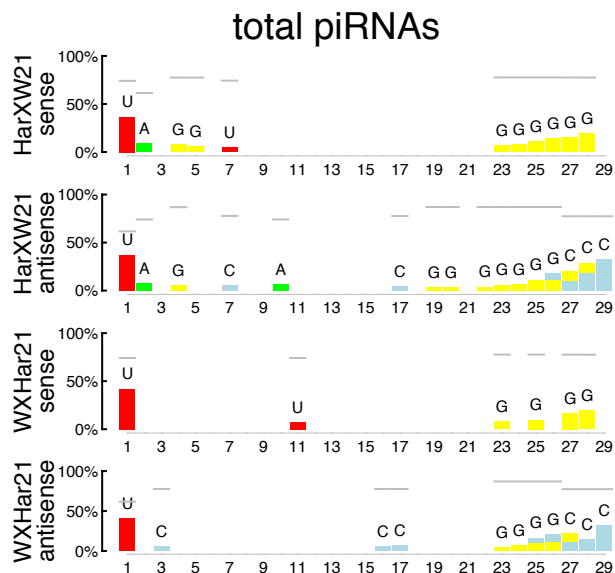


H

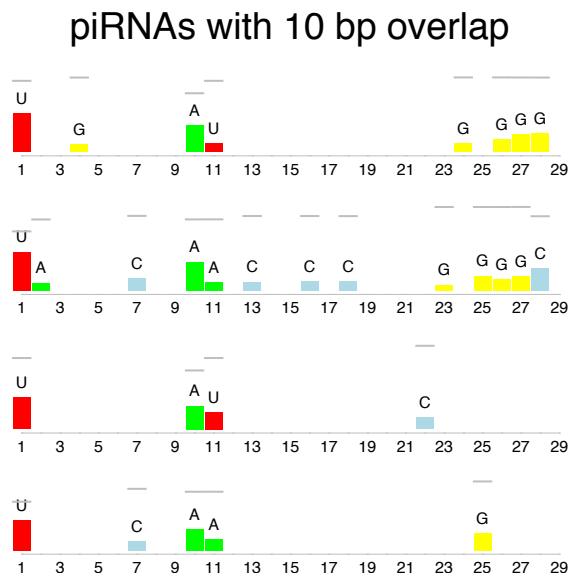


invader2

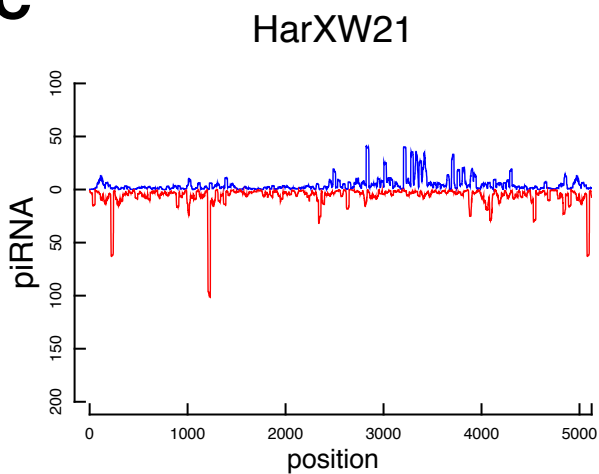
A



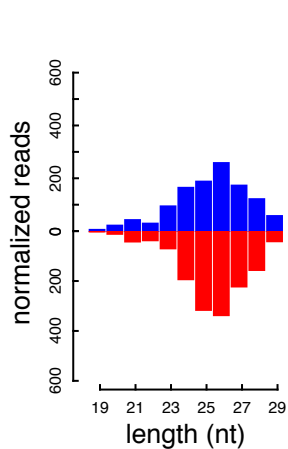
B



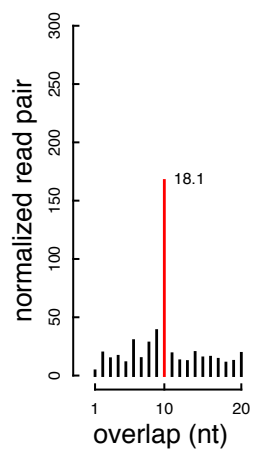
C



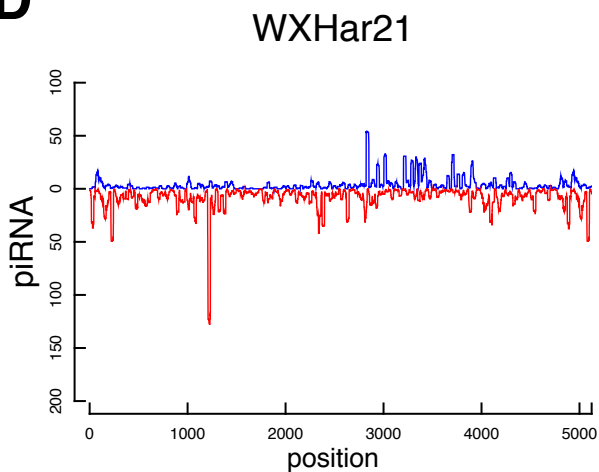
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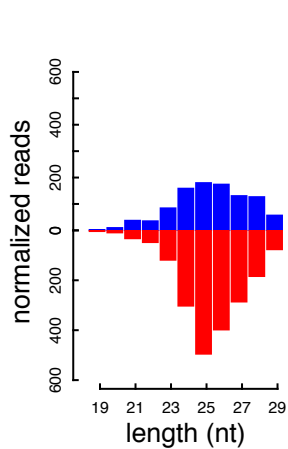
G



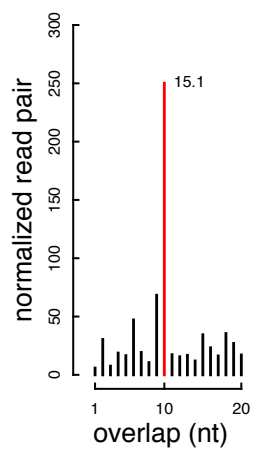
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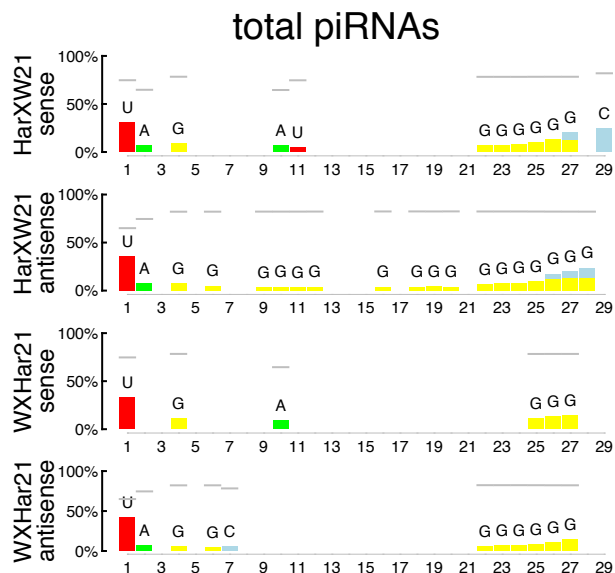
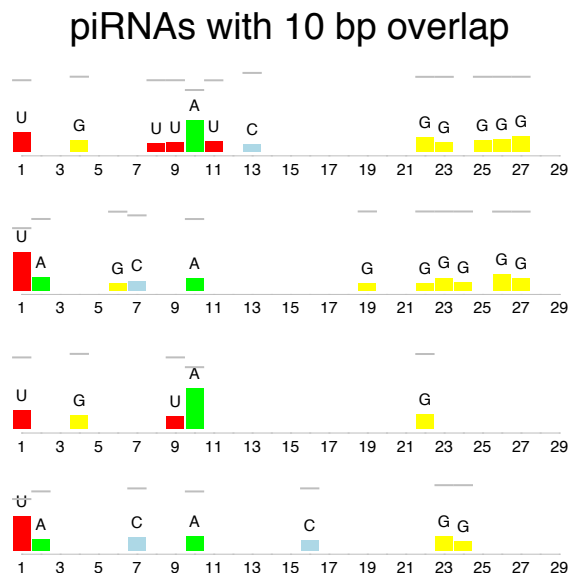
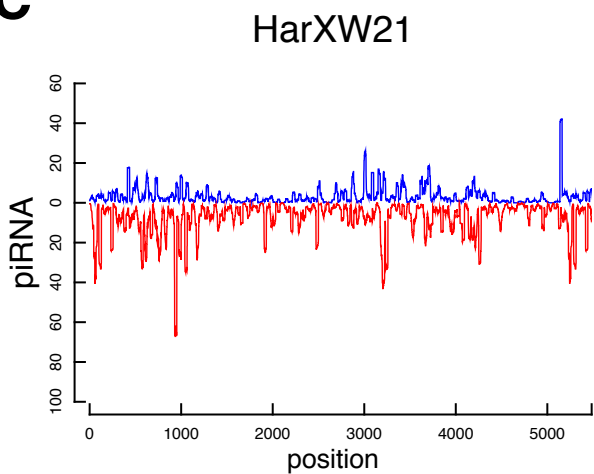
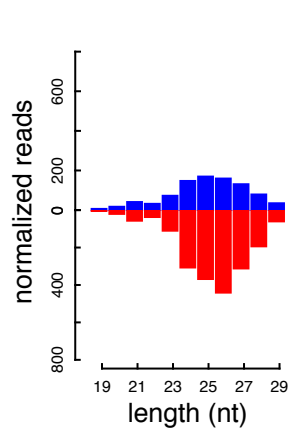
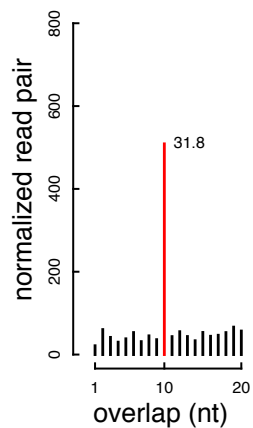
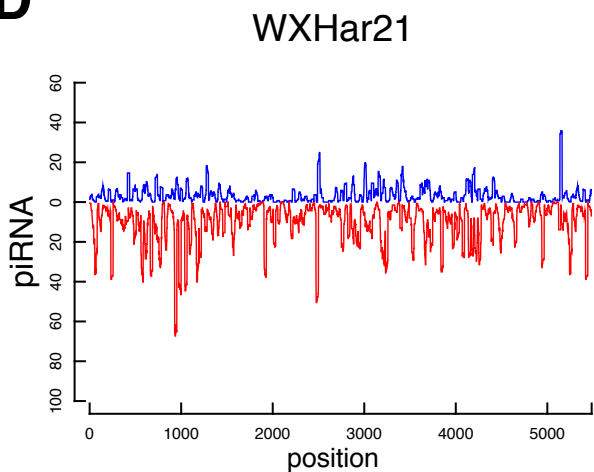
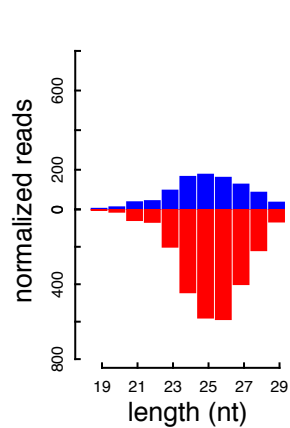
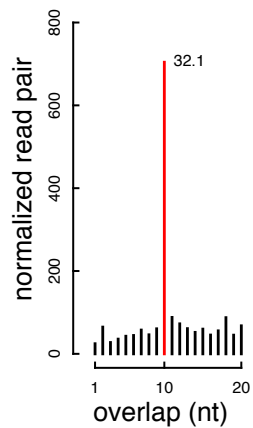
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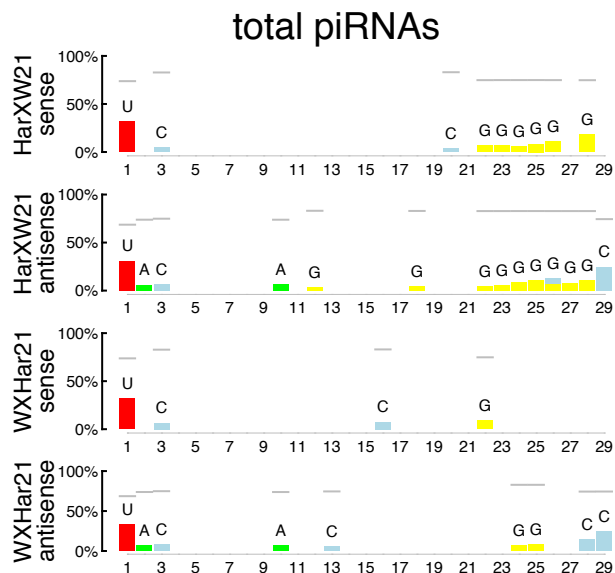
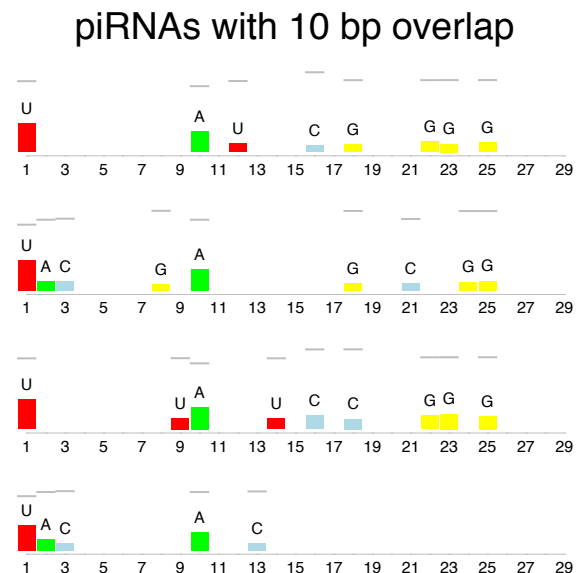
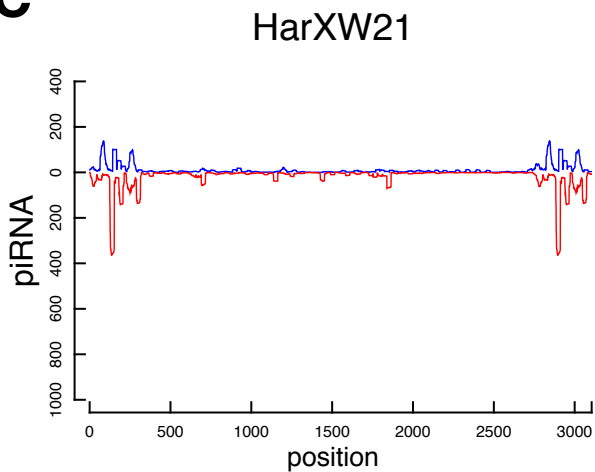
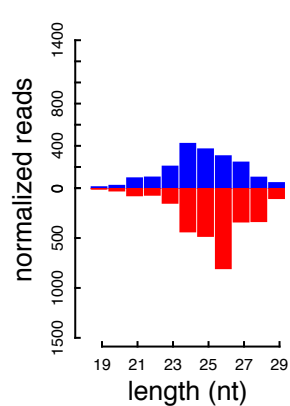
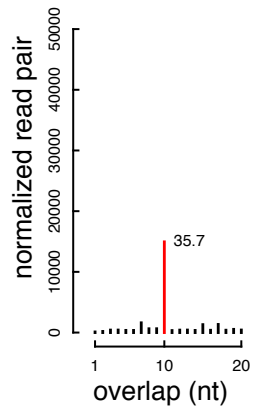
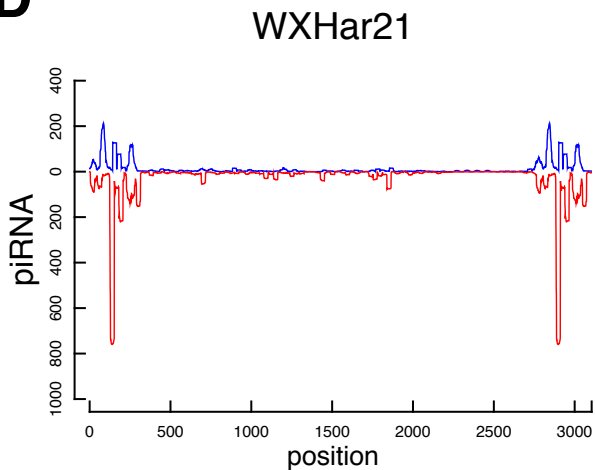
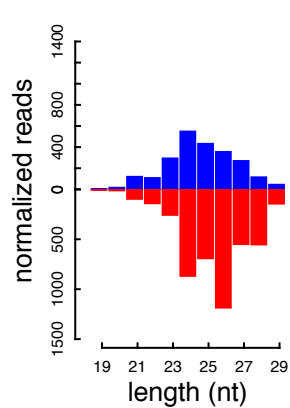
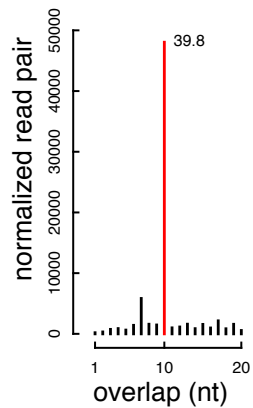
H



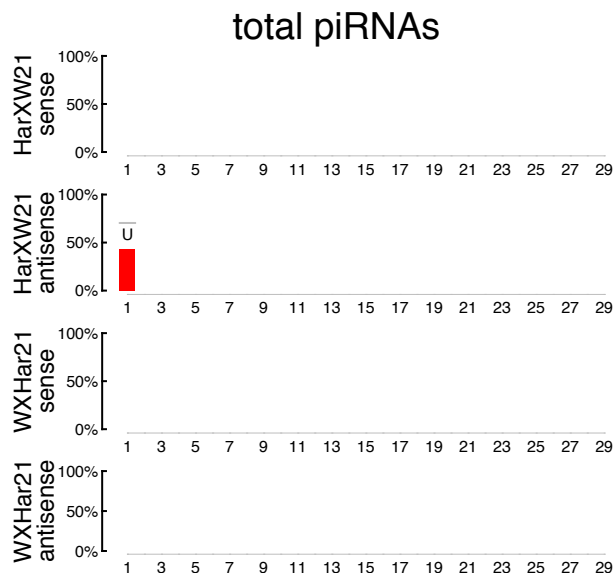
invader3

A**B****C****E****G****D****F****H**

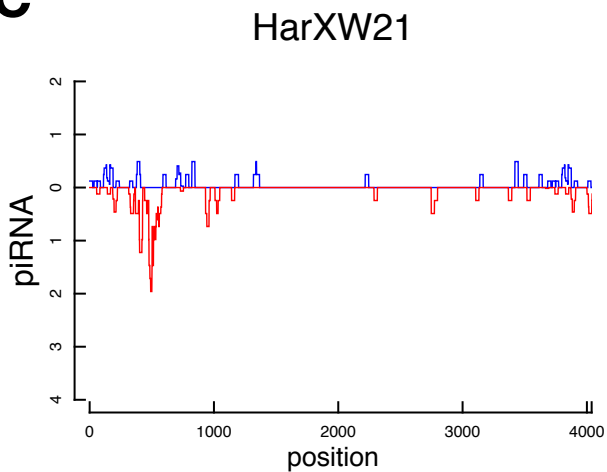
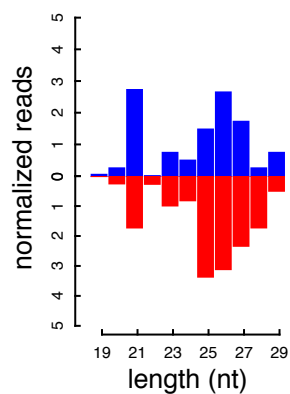
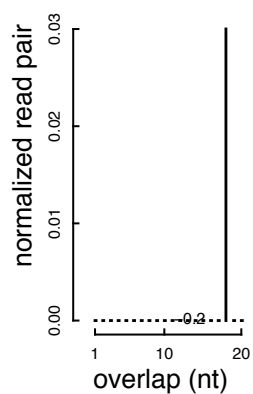
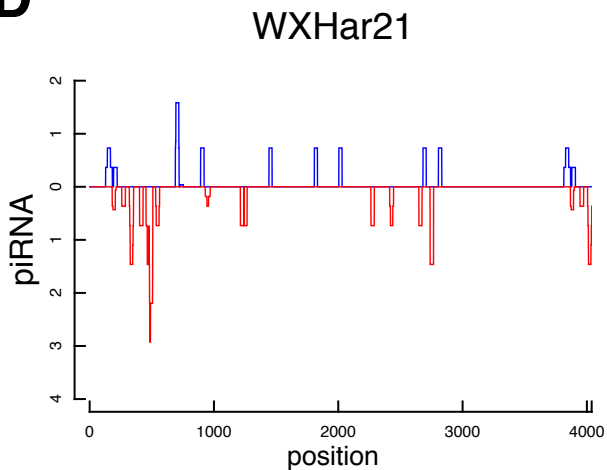
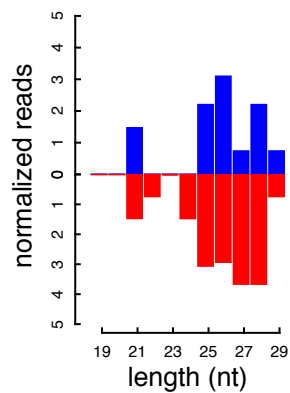
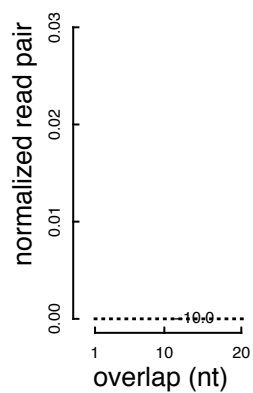
invader4

A**B****C****E****G****D****F****H**

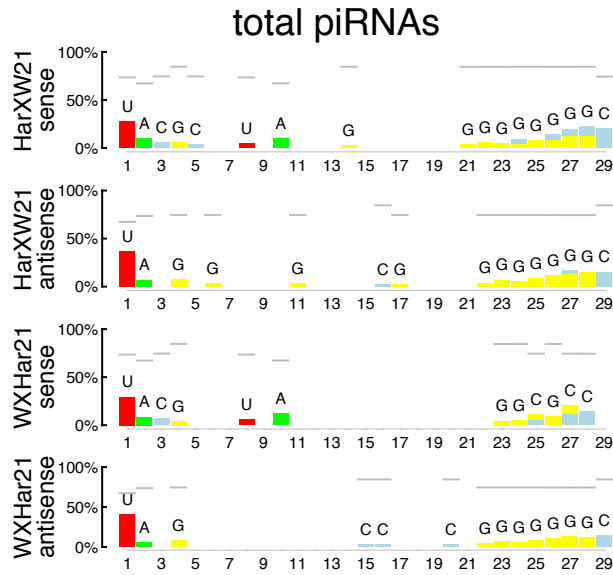
invader5

A**B**

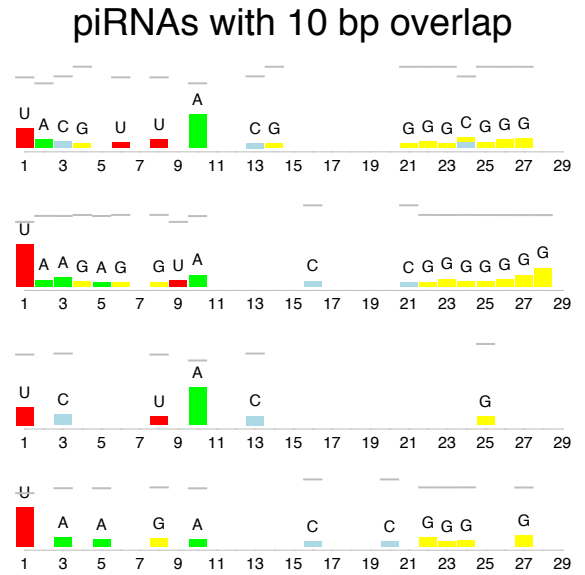
piRNAs with 10 bp overlap

C**E****G****D****F****H**

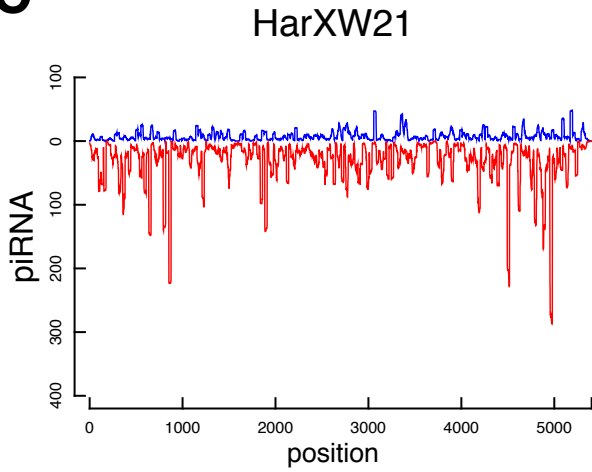
A



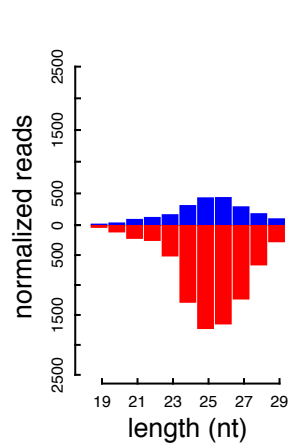
B



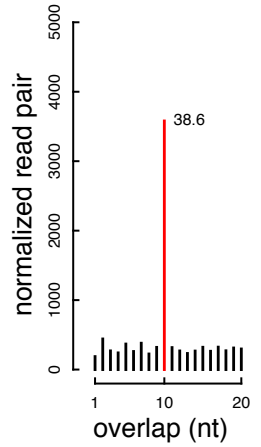
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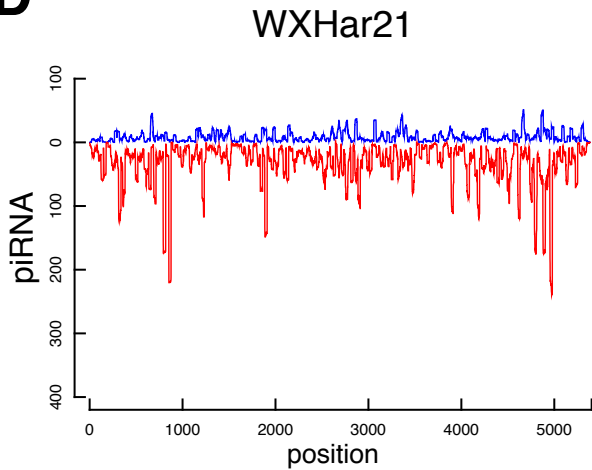
E



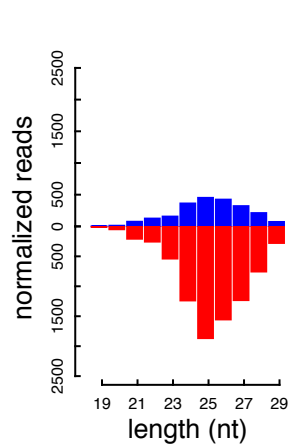
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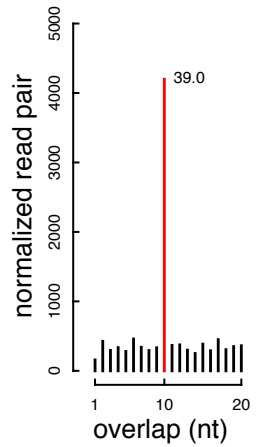
D



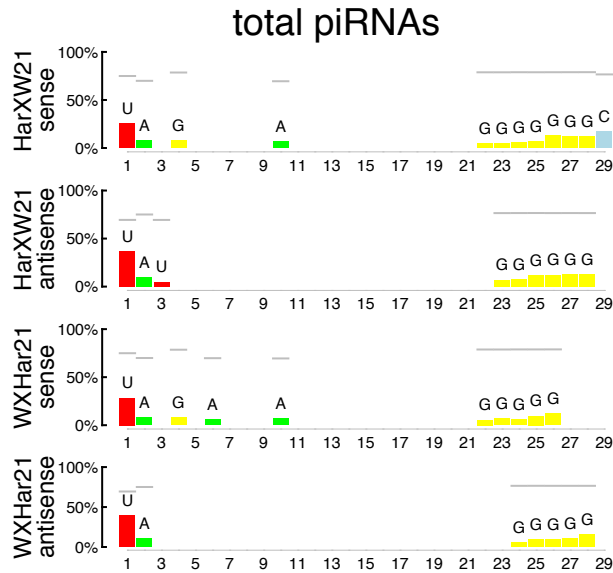
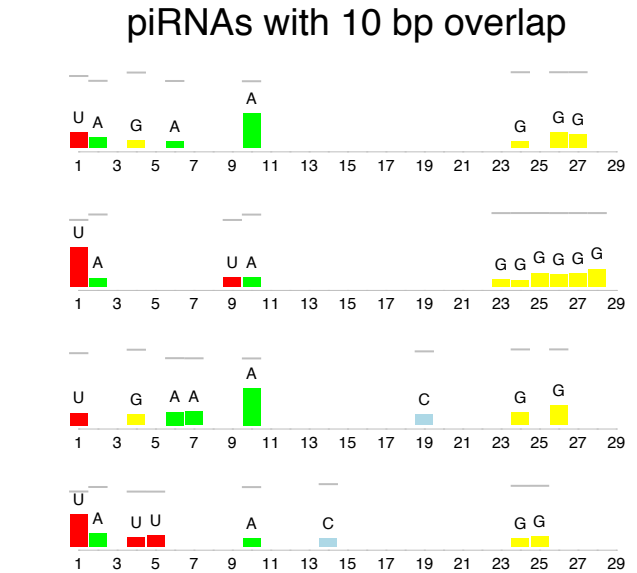
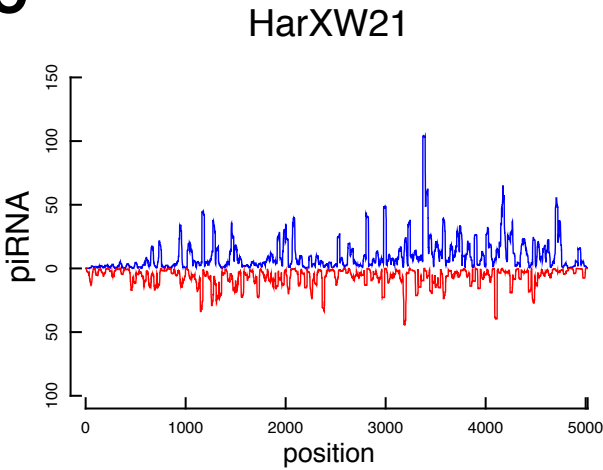
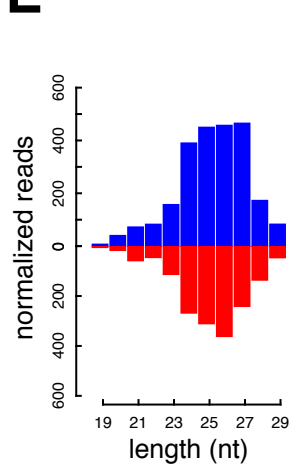
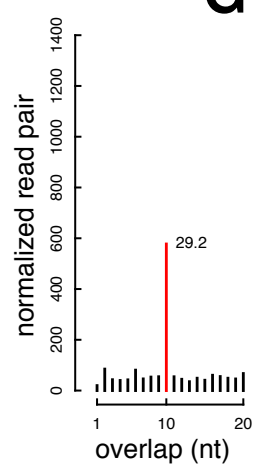
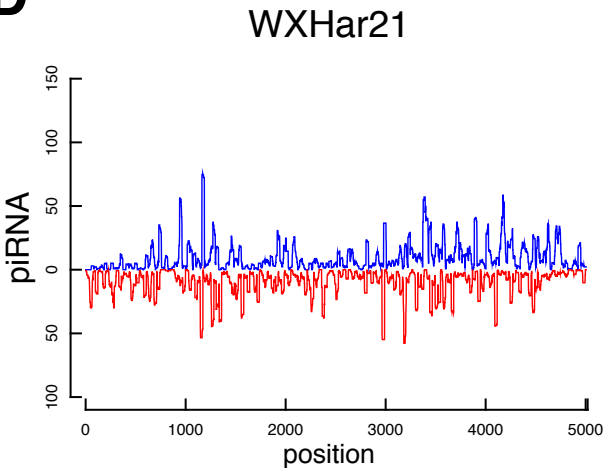
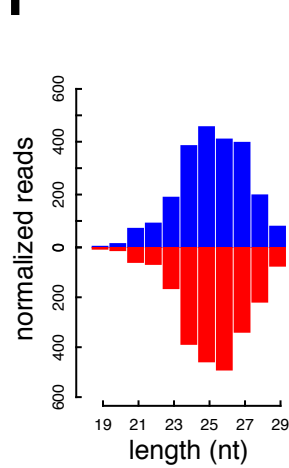
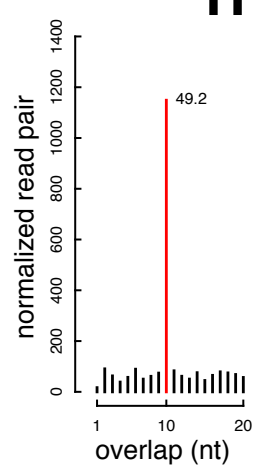
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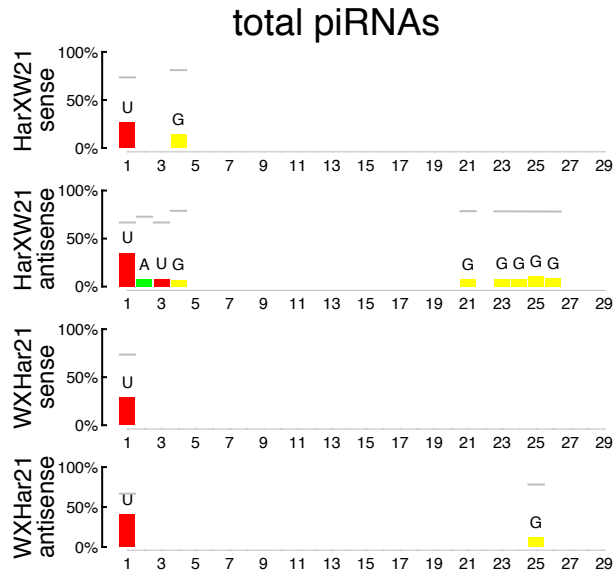
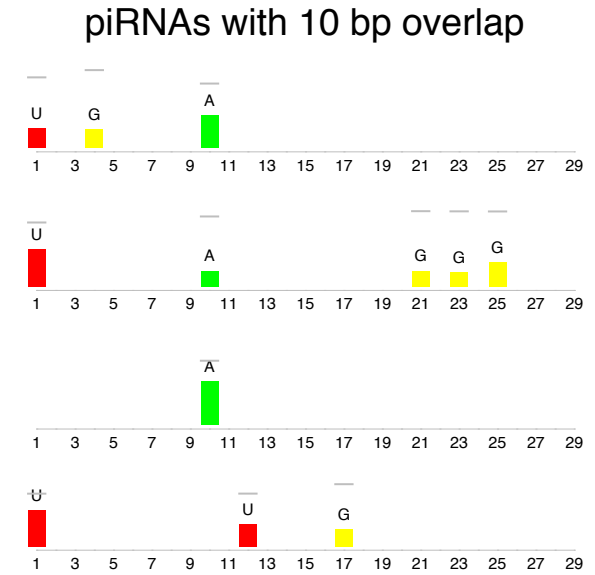
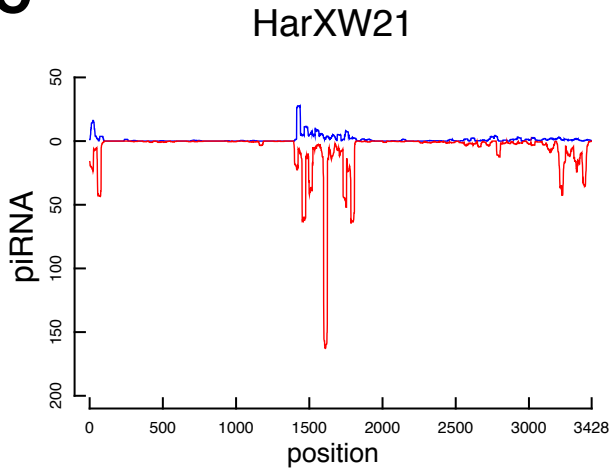
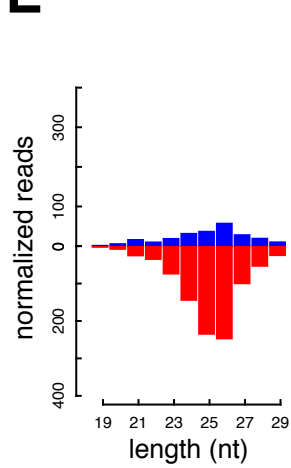
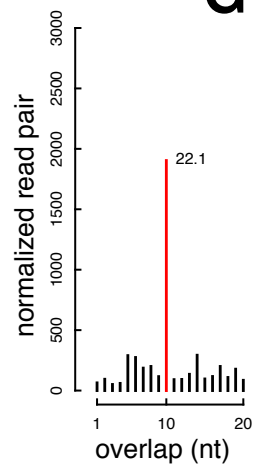
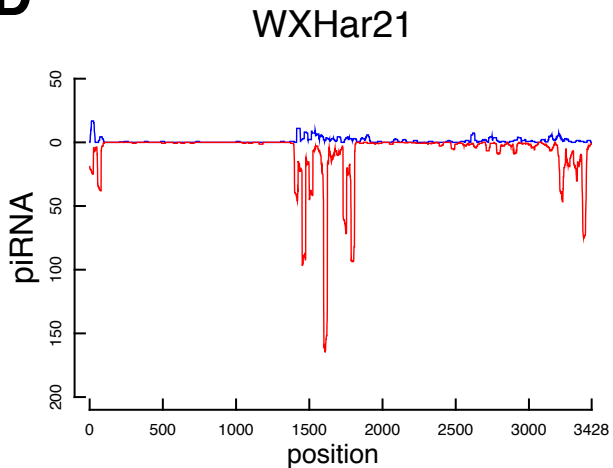
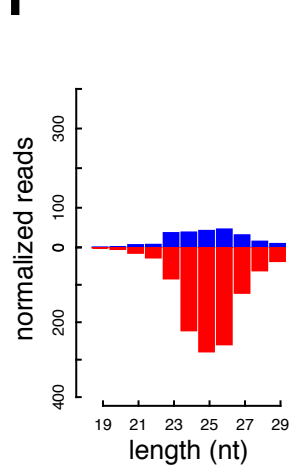
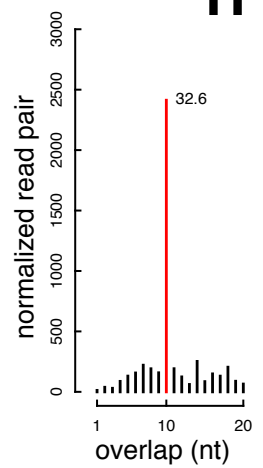
H



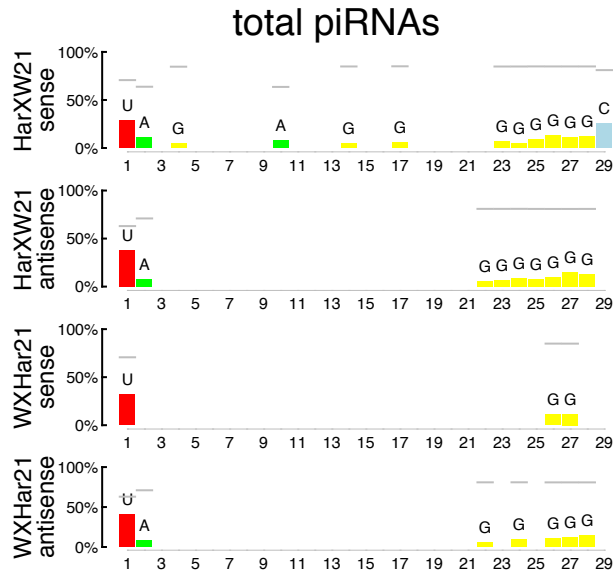
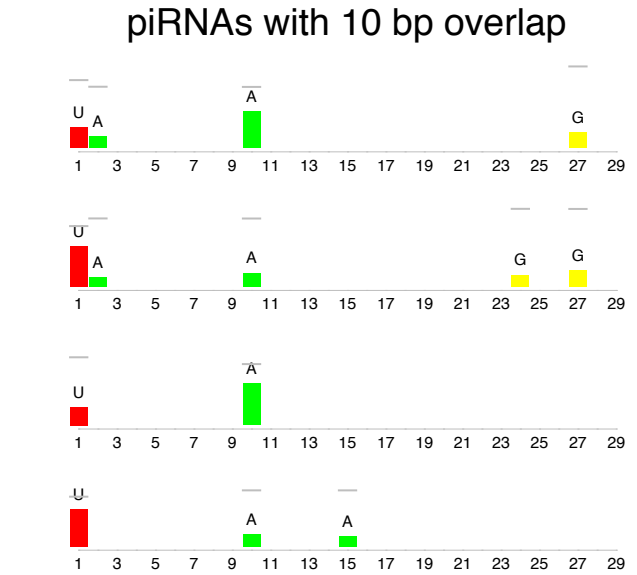
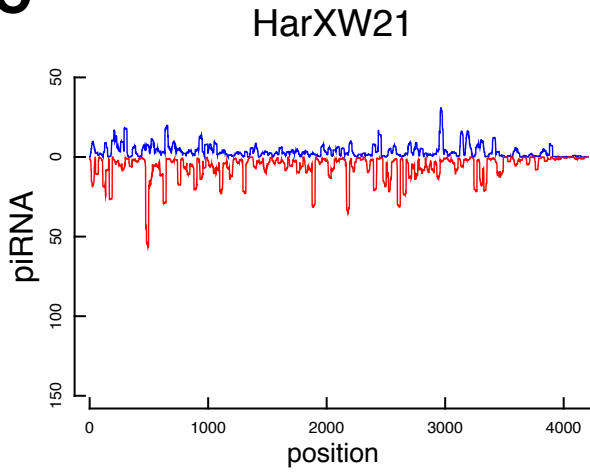
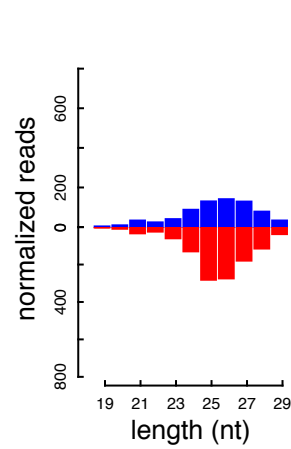
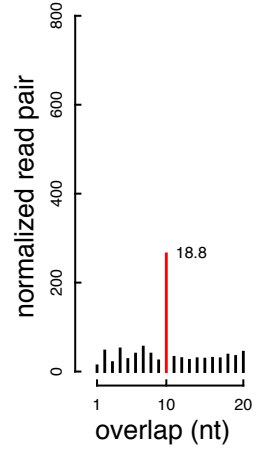
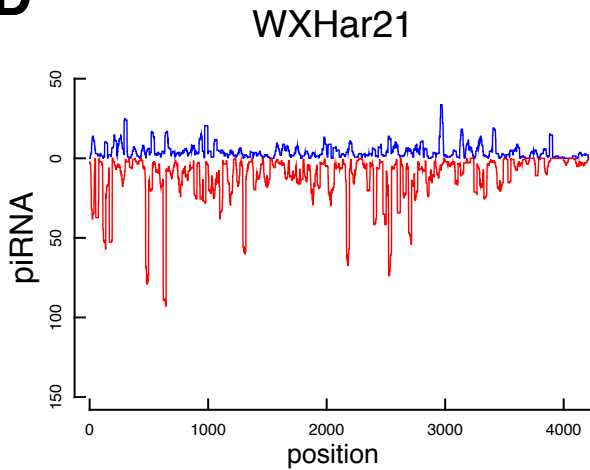
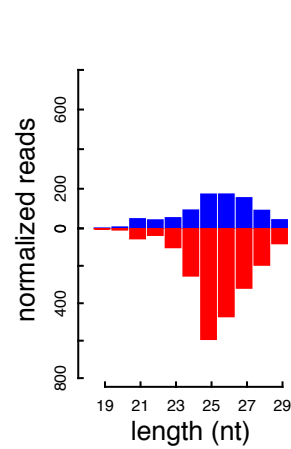
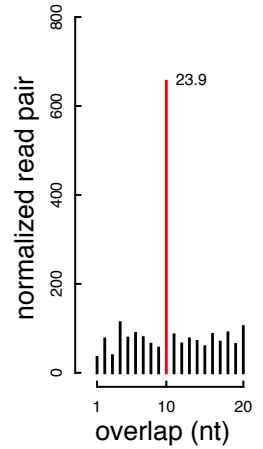
jockey

A**B****C****E****G****D****F****H**

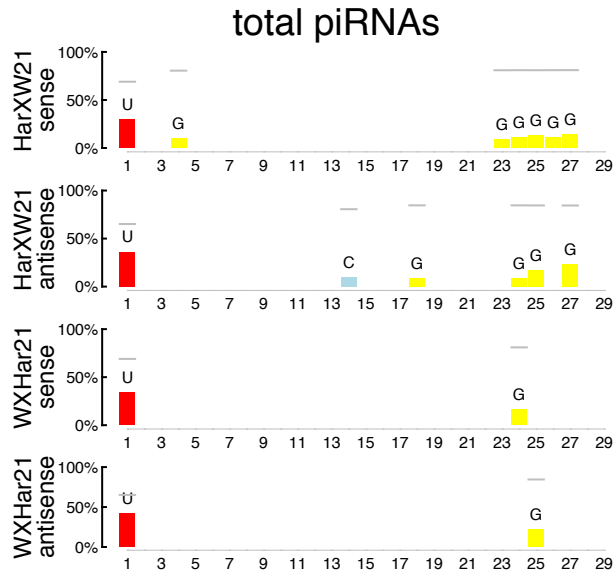
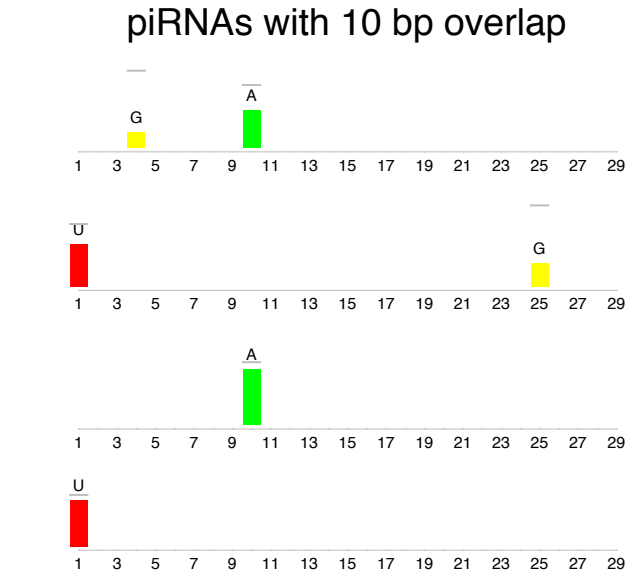
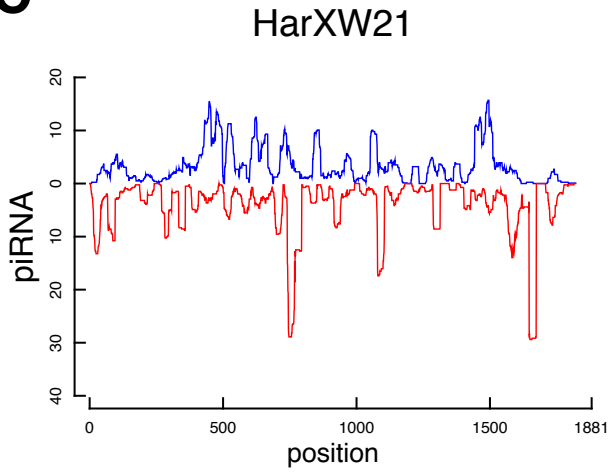
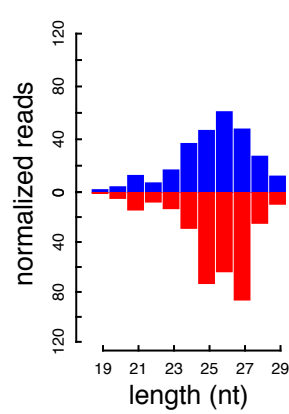
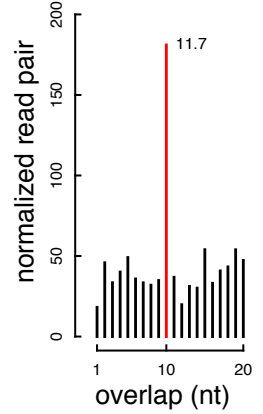
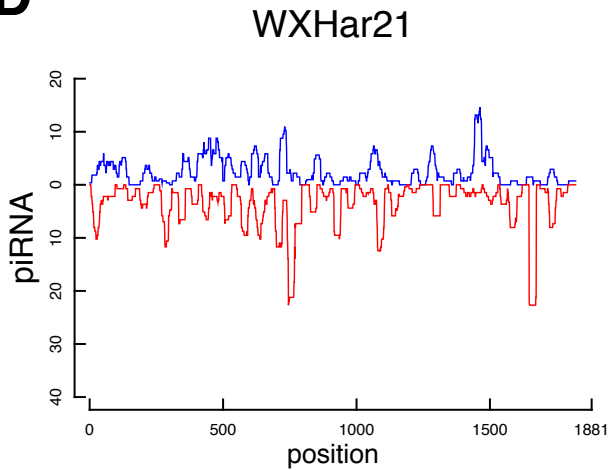
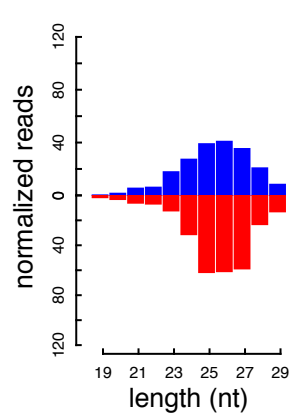
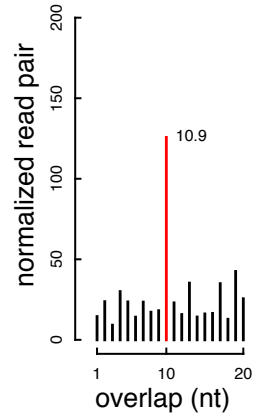
jockey2

A**B****C****E****G****D****F****H**

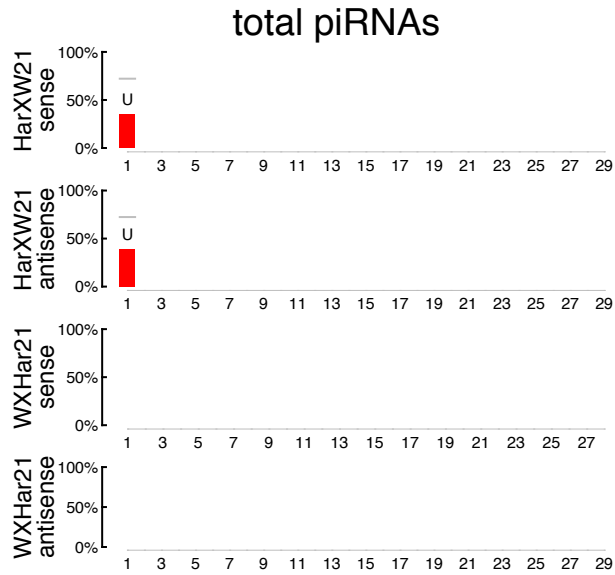
Juan

A**B****C****E****G****D****F****H**

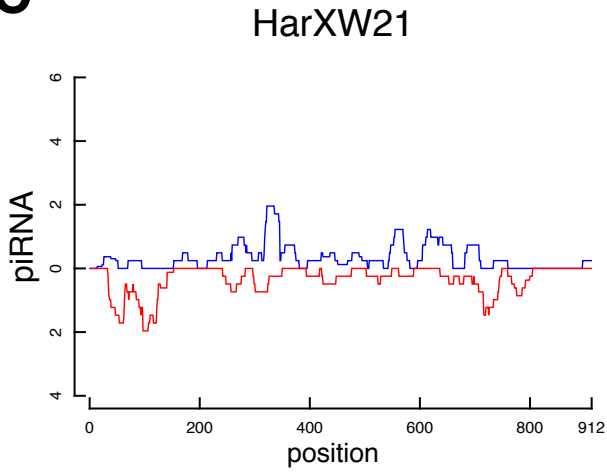
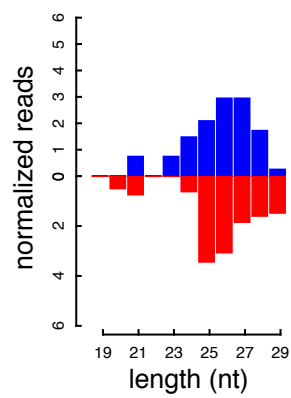
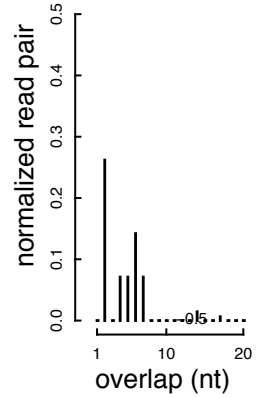
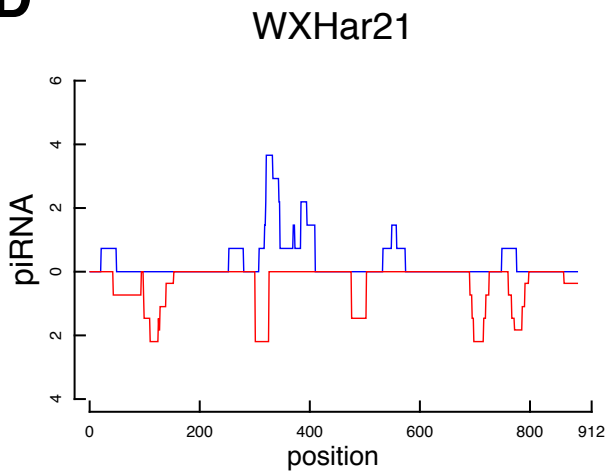
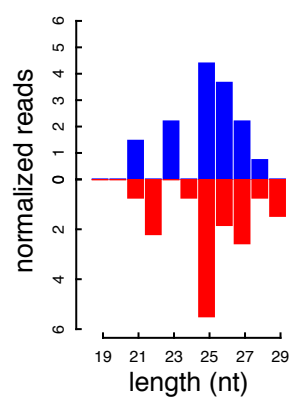
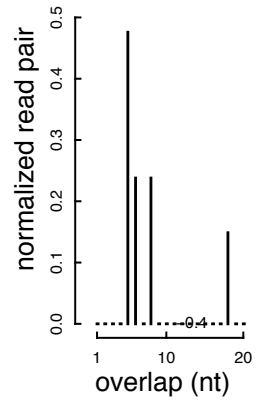
looper1

A**B****C****E****G****D****F****H**

mariner2

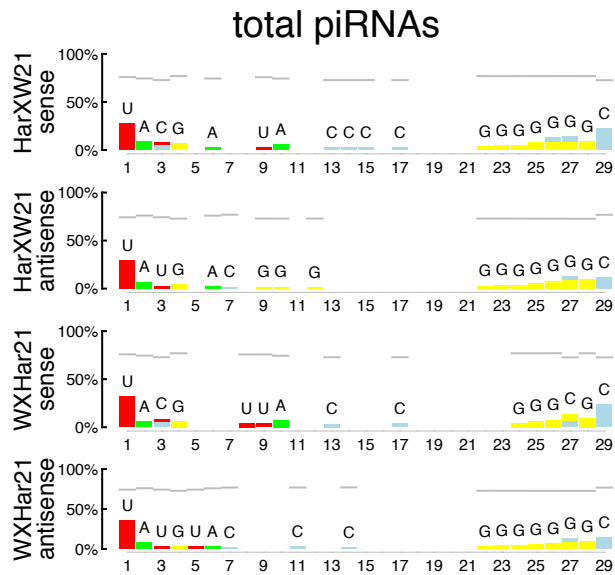
A**B**

piRNAs with 10 bp overlap

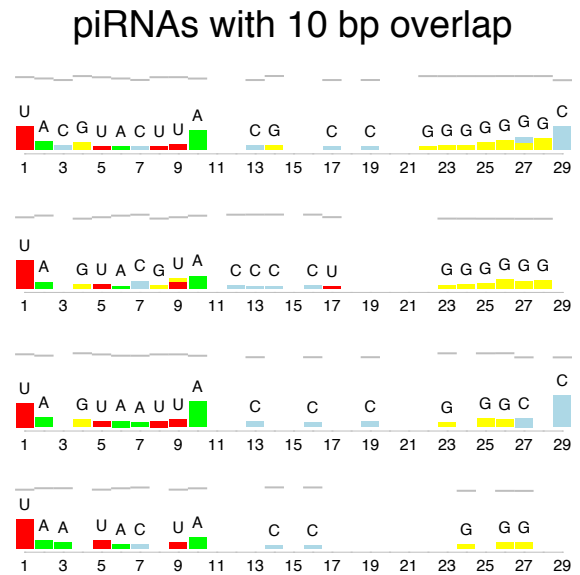
C**E****G****D****F****H**

Max element

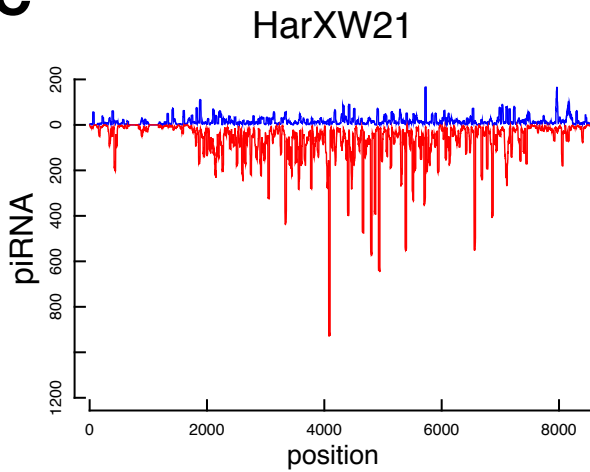
A



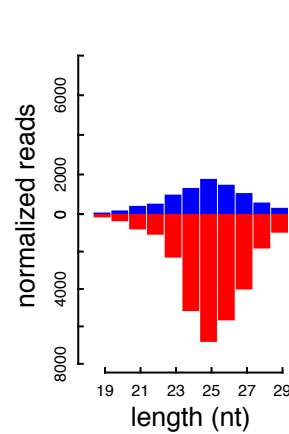
B



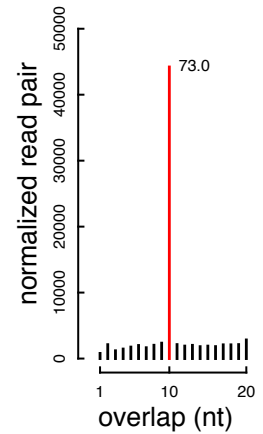
C



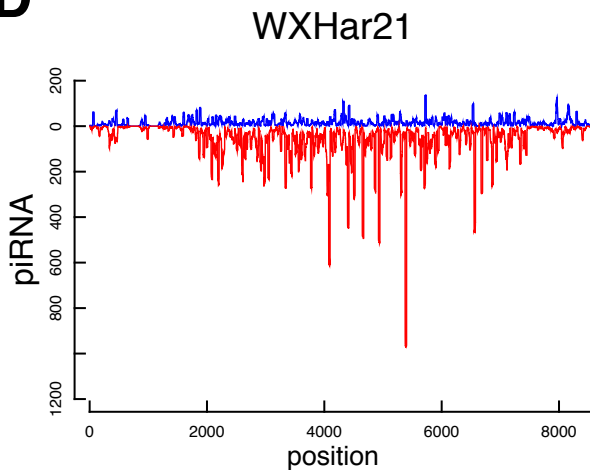
E



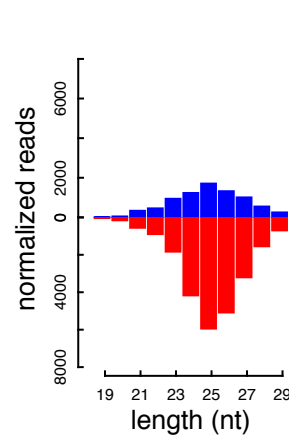
G



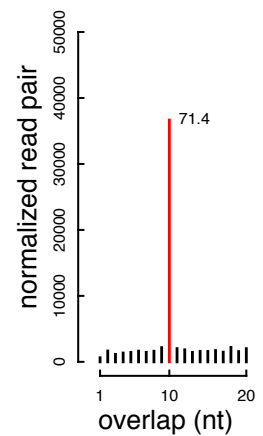
D



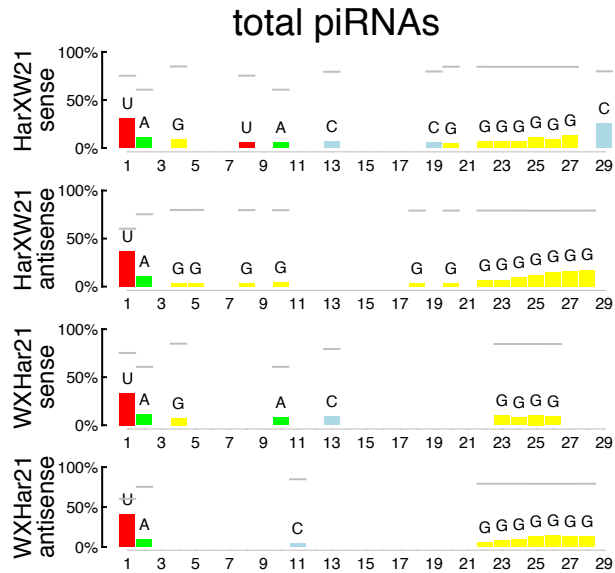
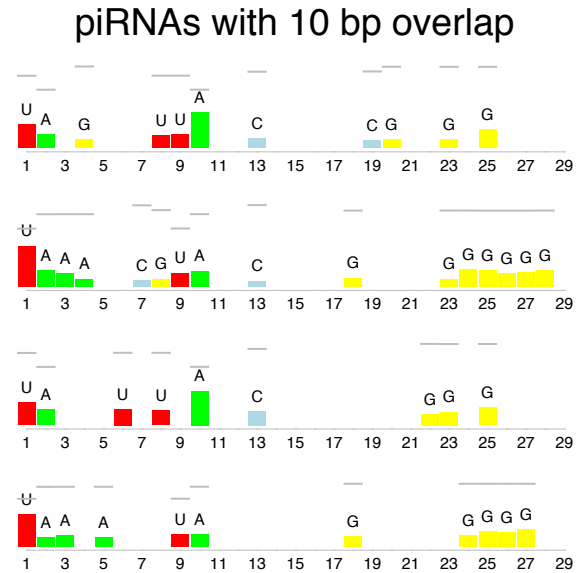
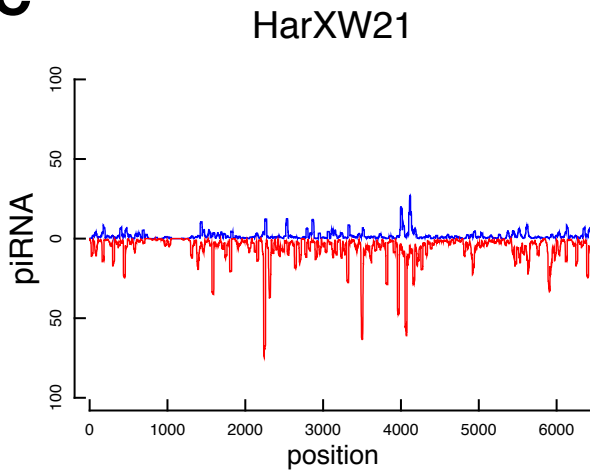
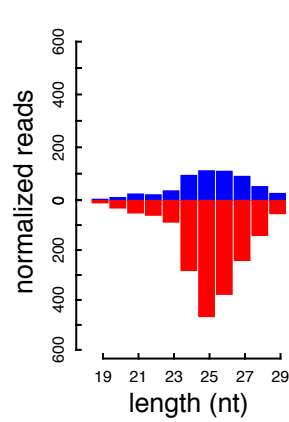
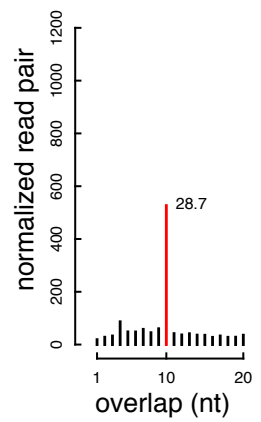
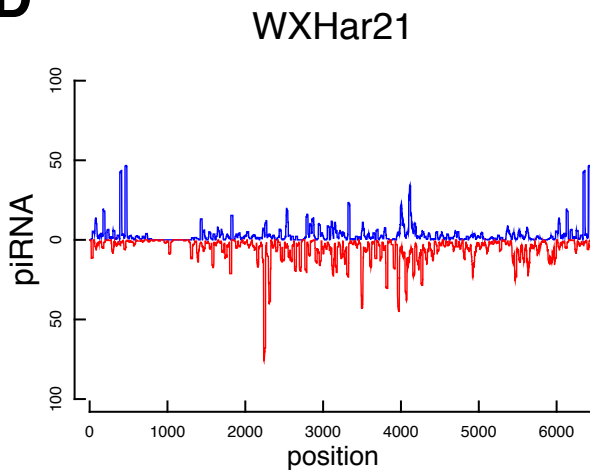
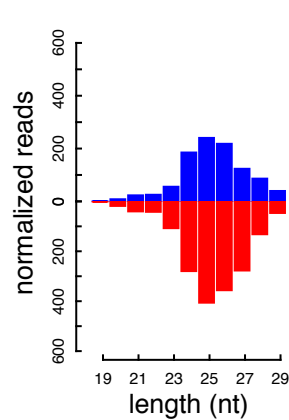
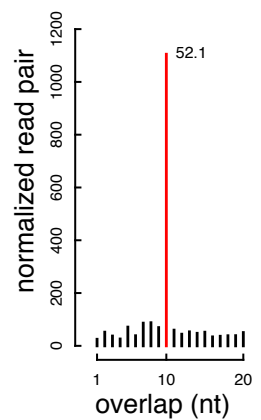
F



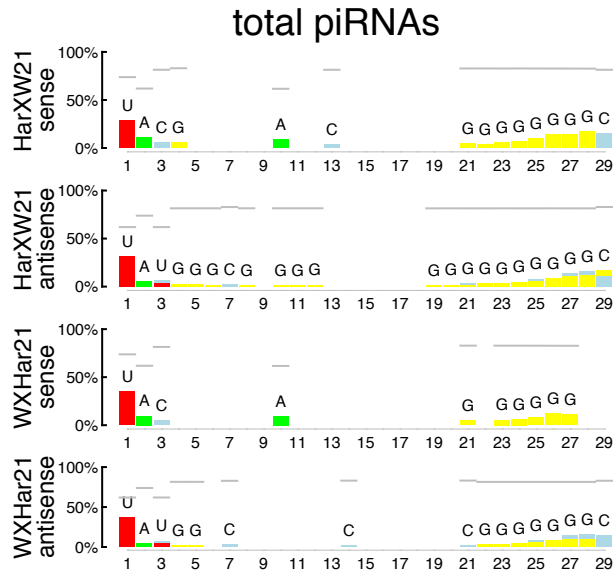
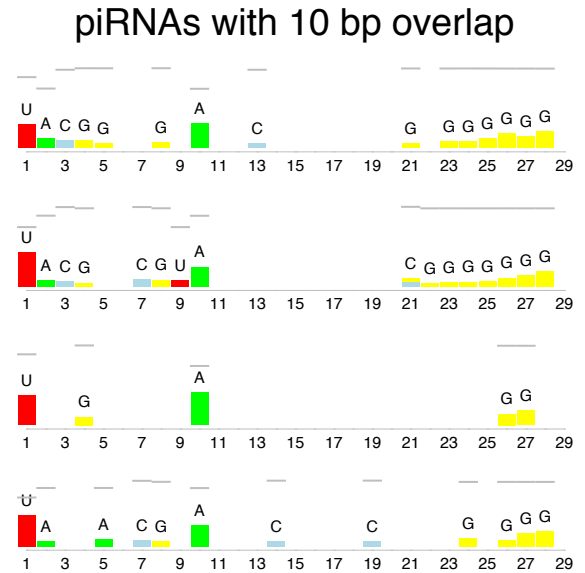
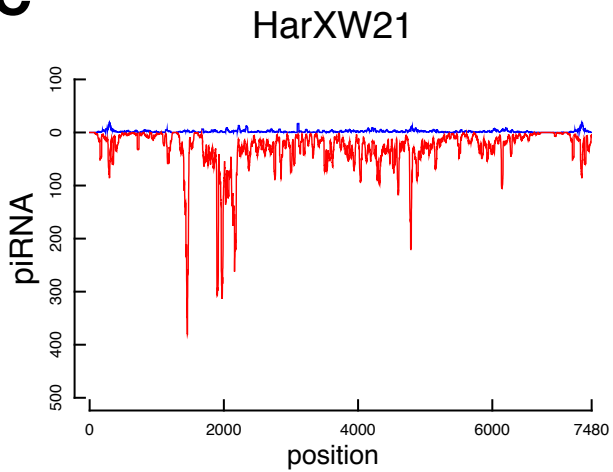
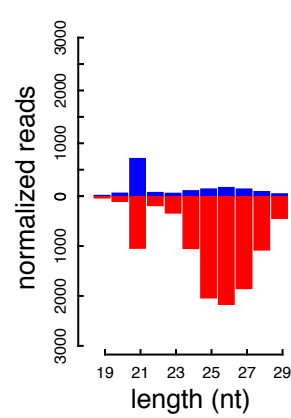
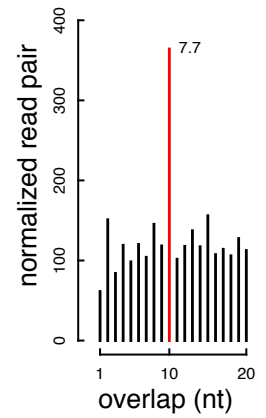
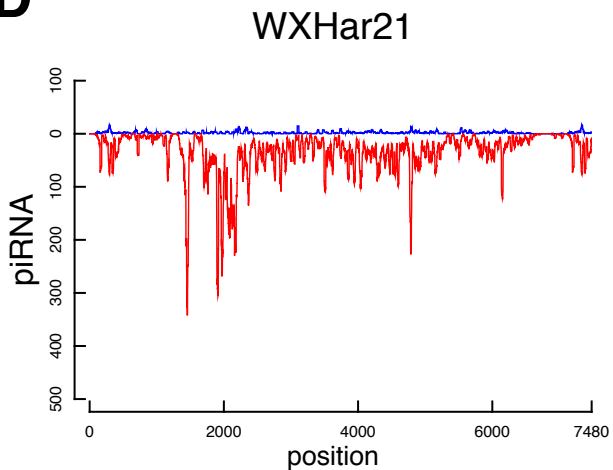
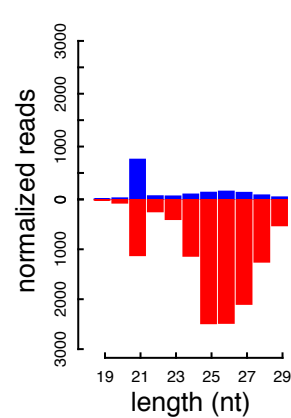
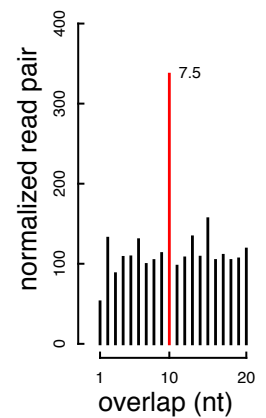
H



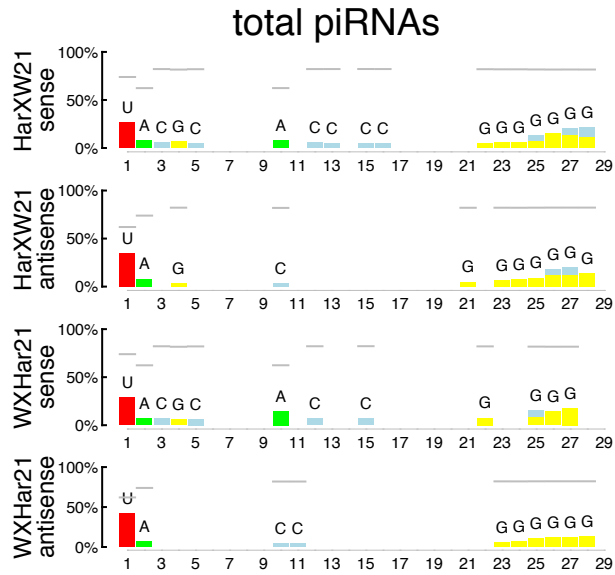
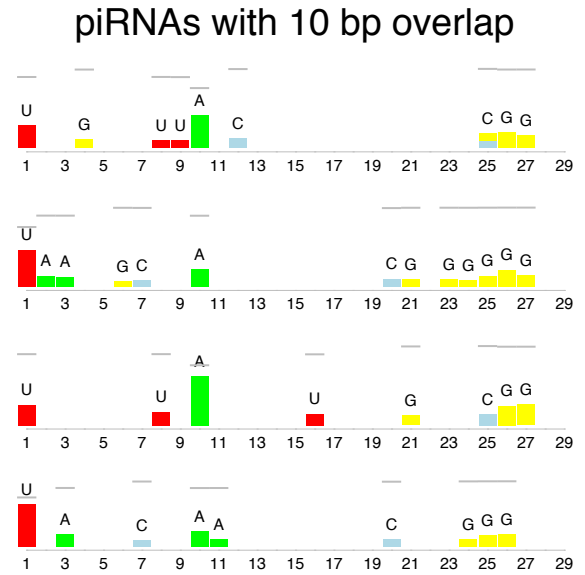
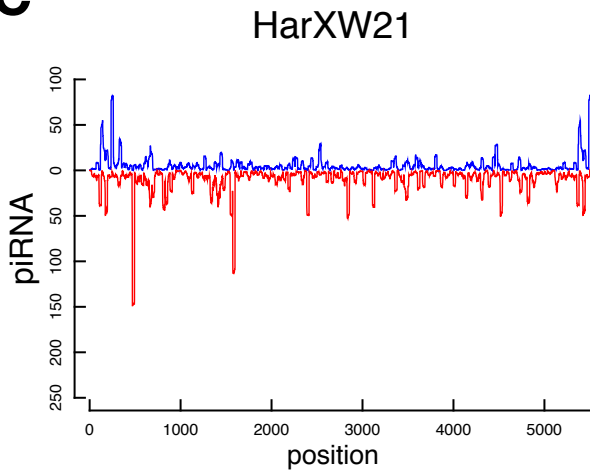
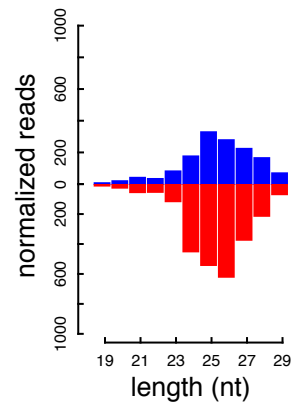
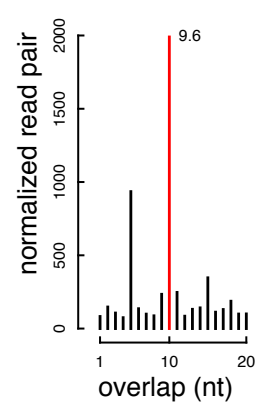
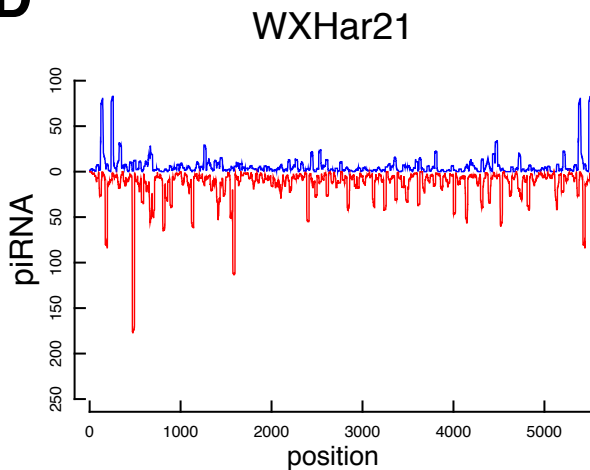
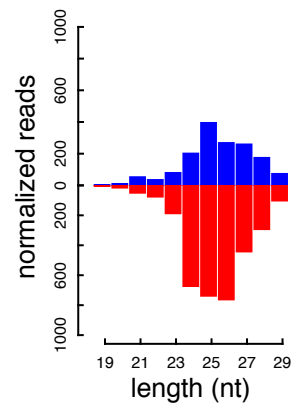
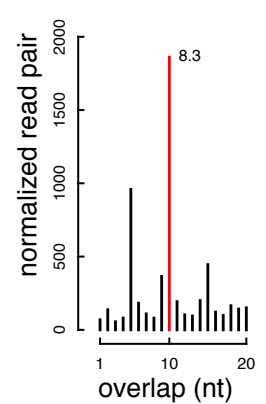
McClintock

A**B****C****E****G****D****F****H**

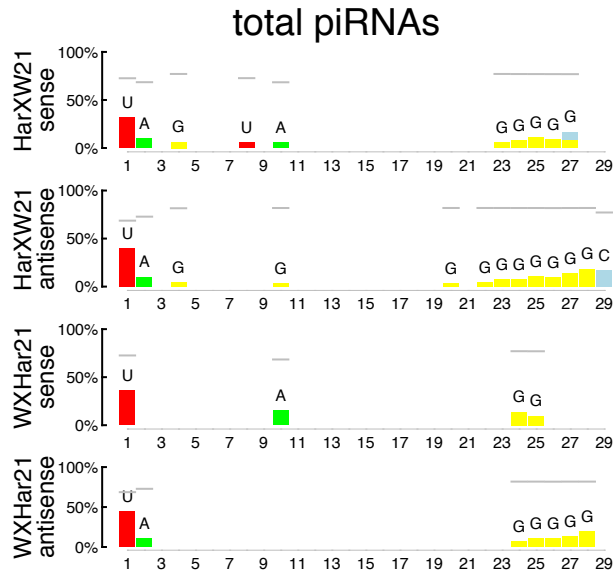
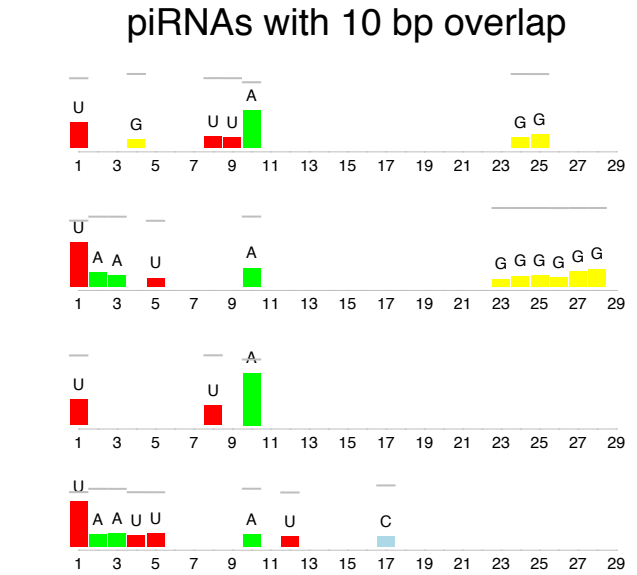
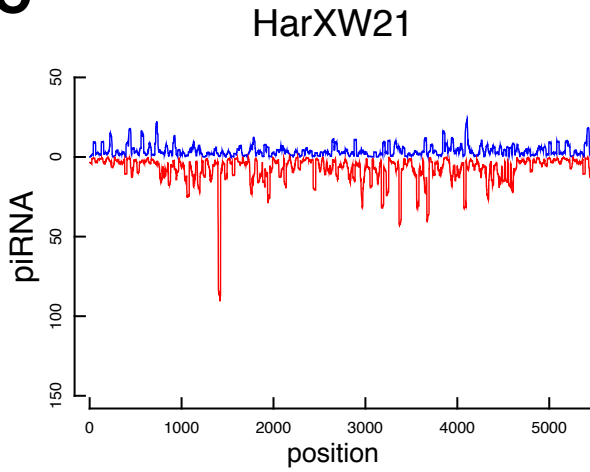
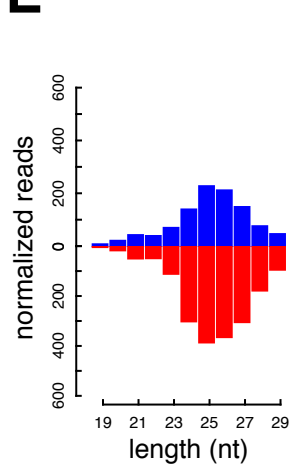
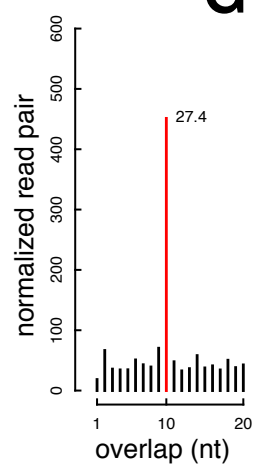
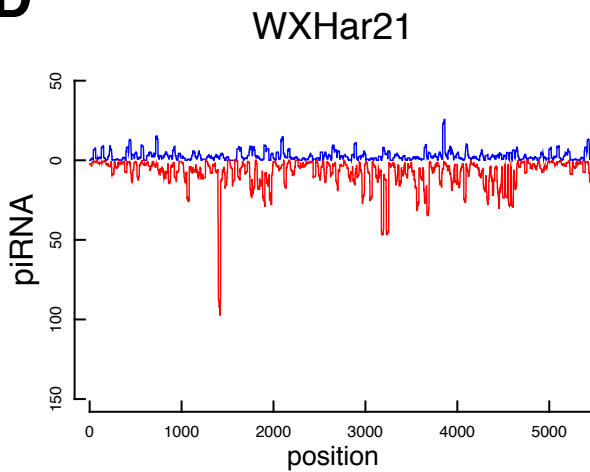
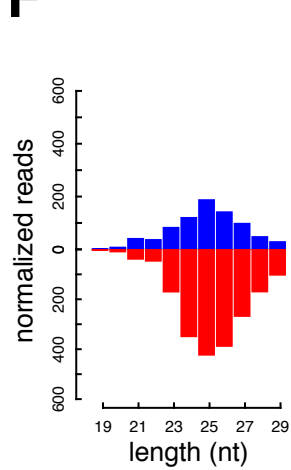
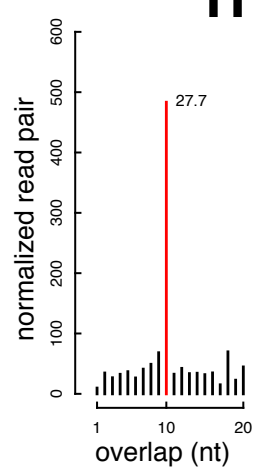
mdg1

A**B****C****E****G****D****F****H**

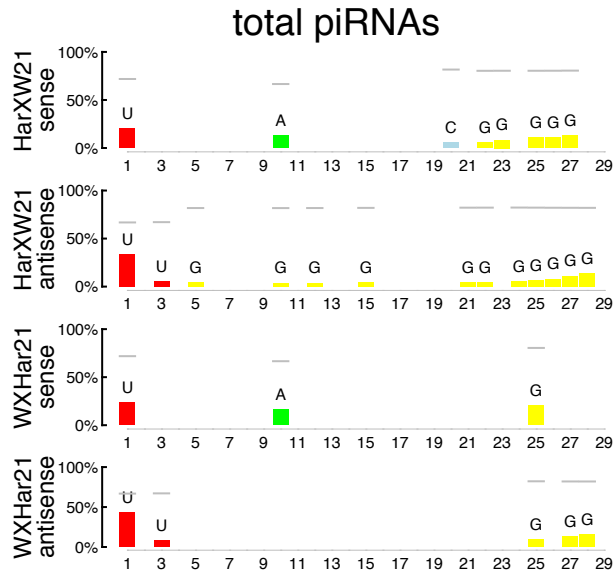
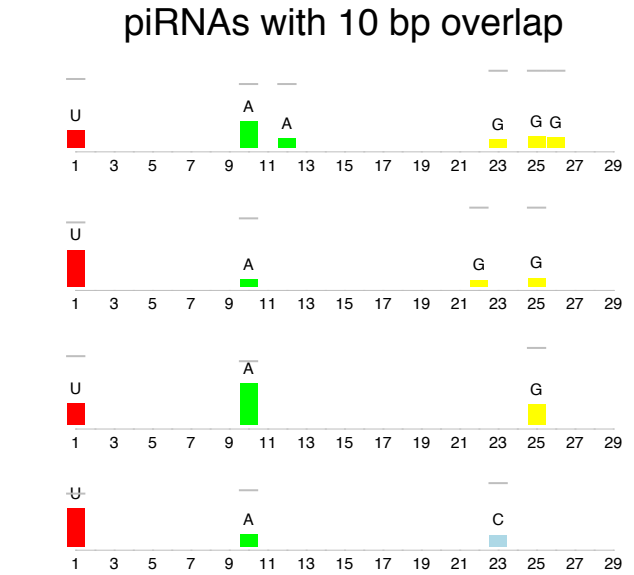
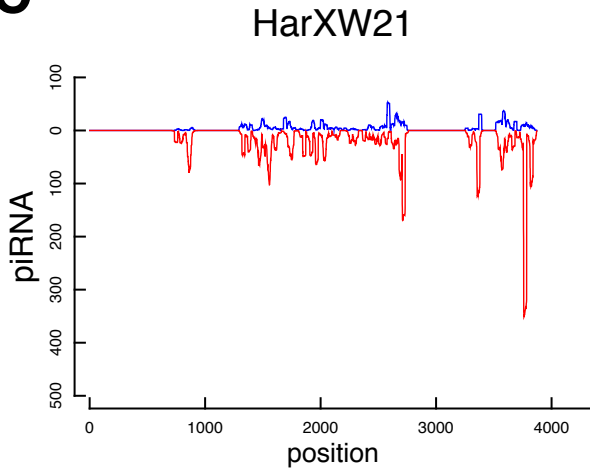
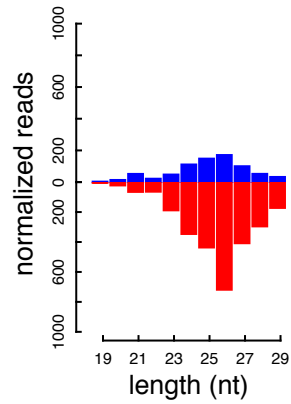
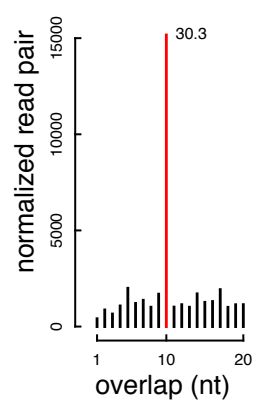
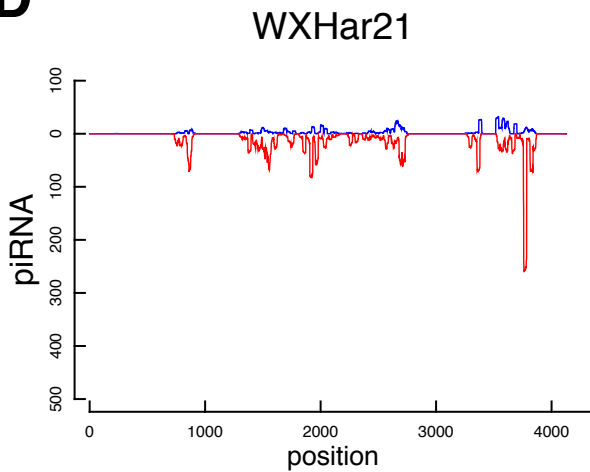
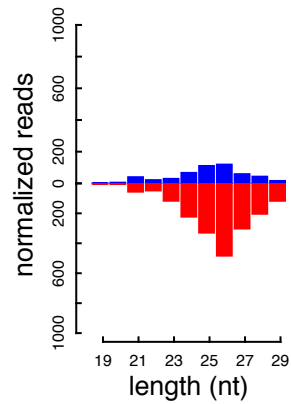
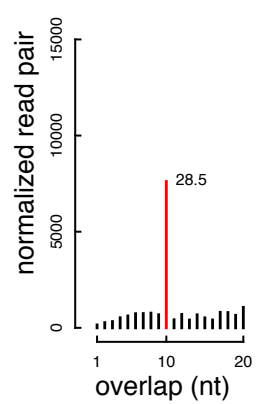
mdg3

A**B****C****E****G****D****F****H**

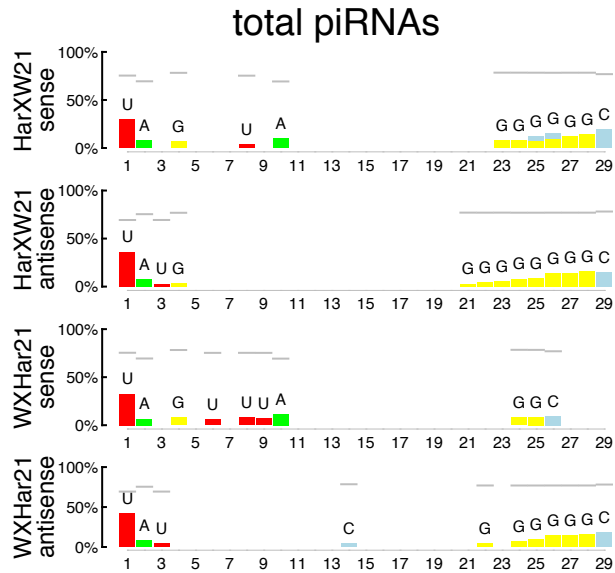
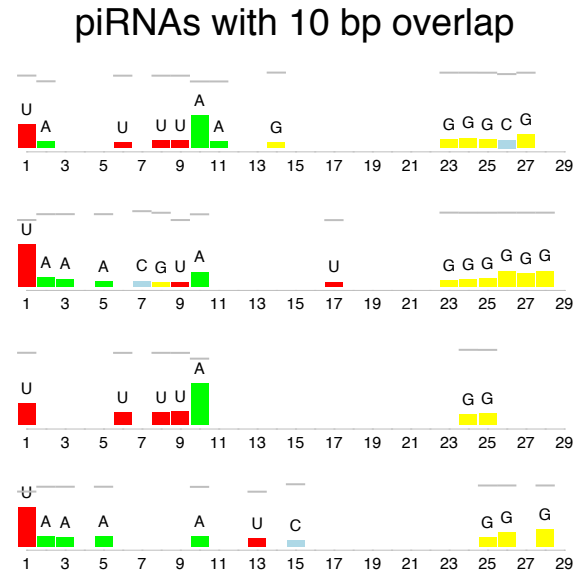
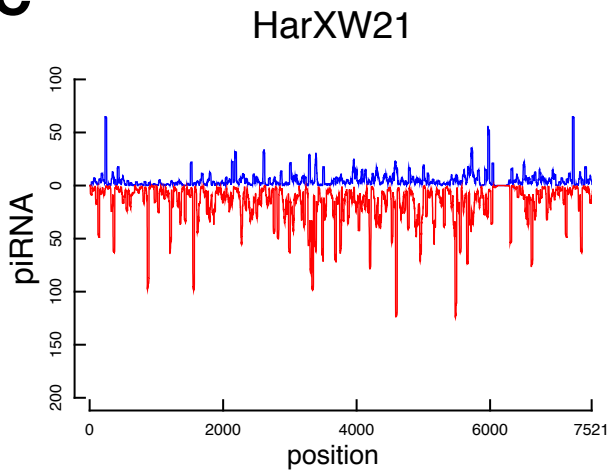
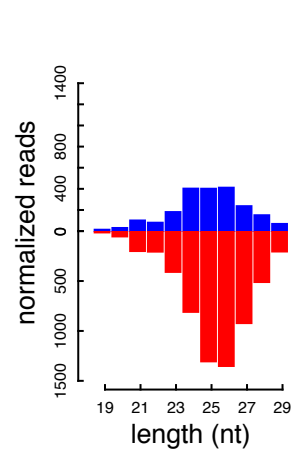
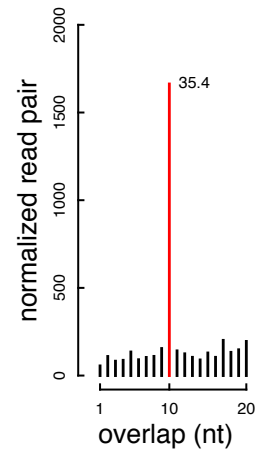
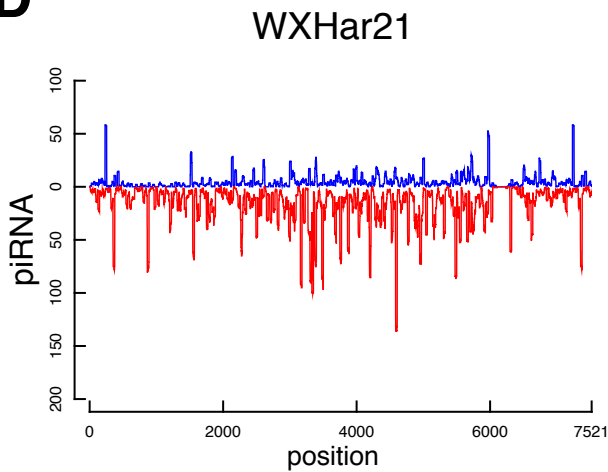
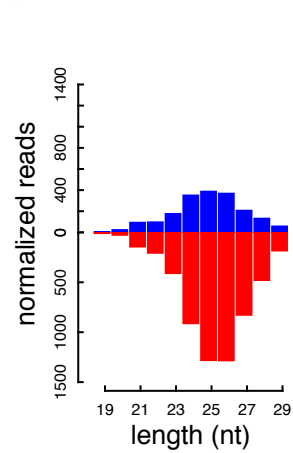
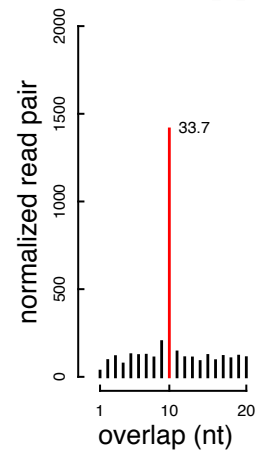
micropia

A**B****C****E****G****D****F****H**

NOF

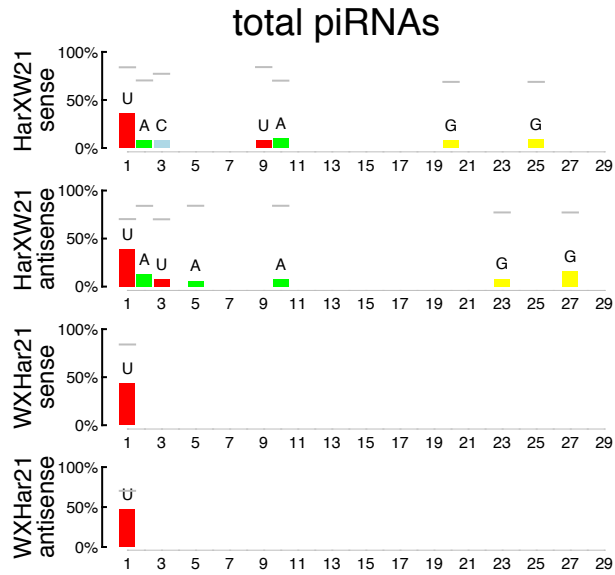
A**B****C****E****G****D****F****H**

opus

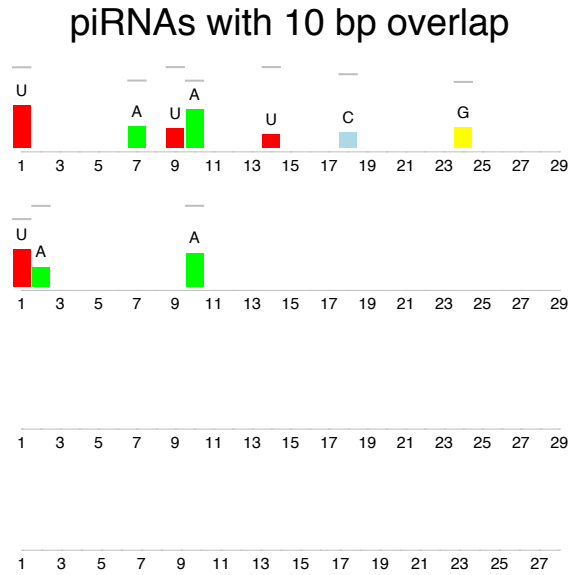
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Osvaldo

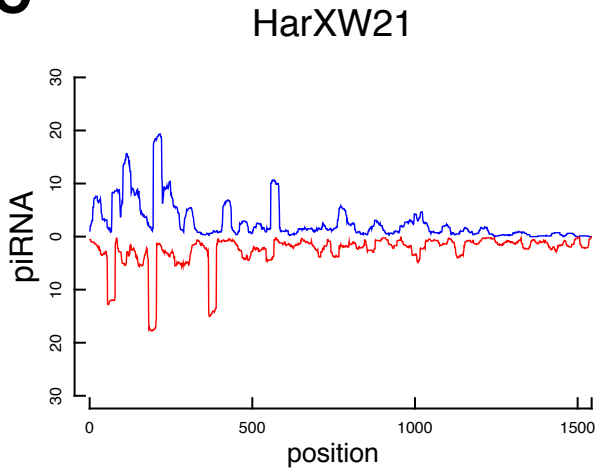
A



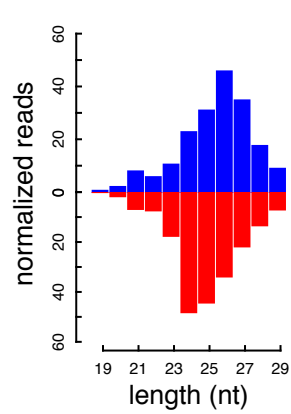
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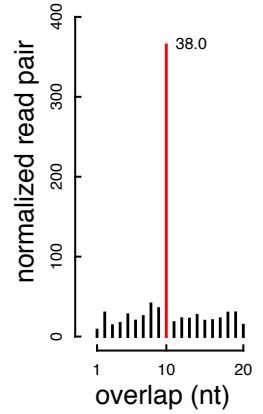
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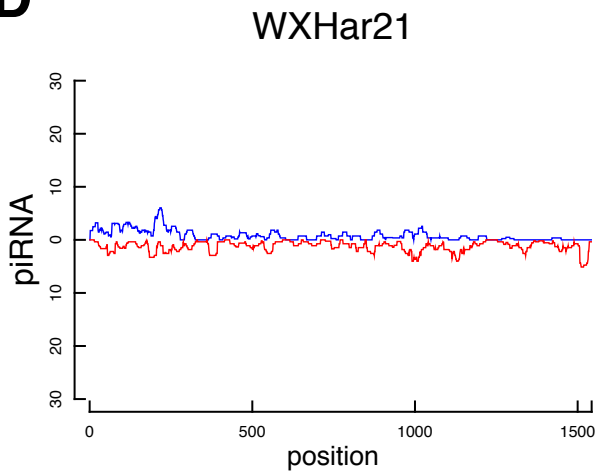
E



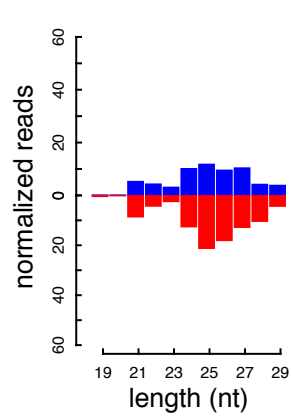
G



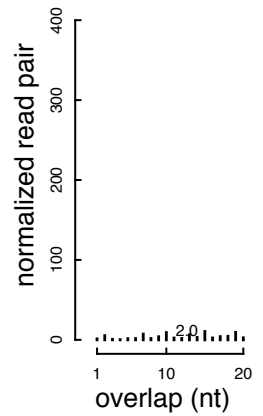
D



F



H



P element

A

WXHar21 antisense WXHar21 sense HarXW21 antisense HarXW21 sense

total piRNAs

B

piRNAs with 10 bp overlap

C

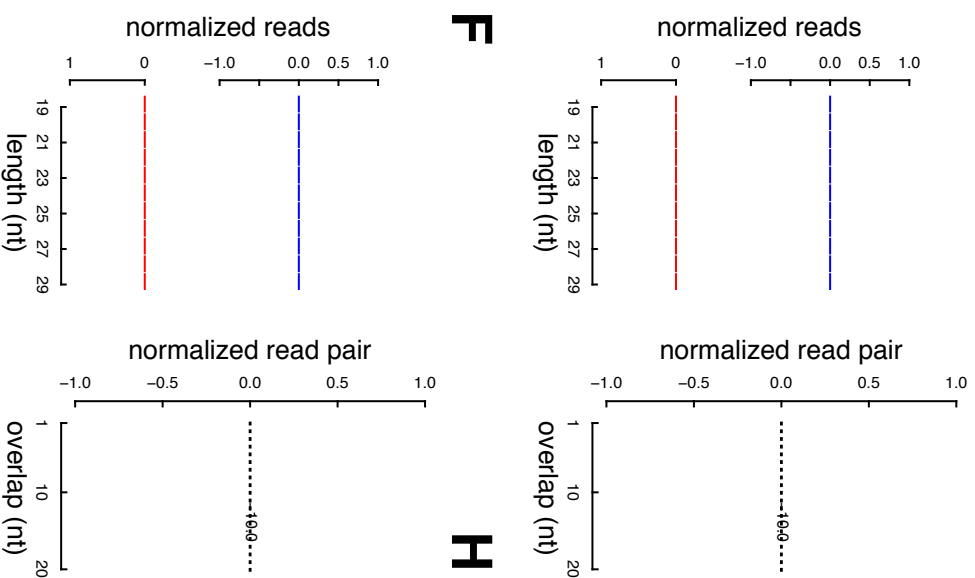
E

G

D

F

H



Penelope

A

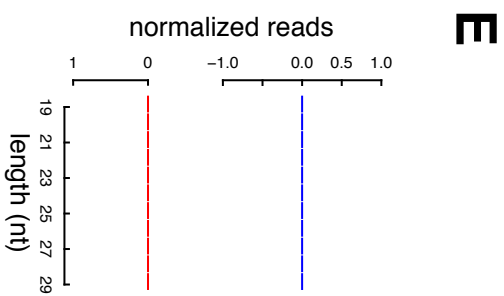
WXHar21 antisense WXHar21 sense HarXW21 antisense HarXW21 sense

total piRNAs

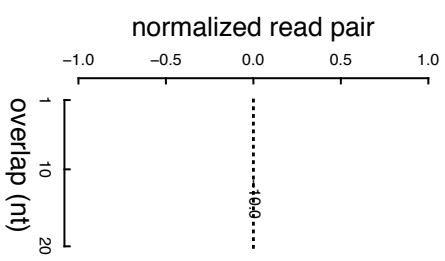
B

piRNAs with 10 bp overlap

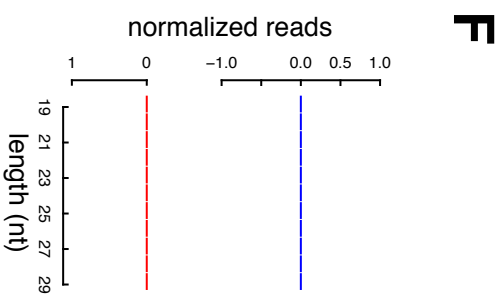
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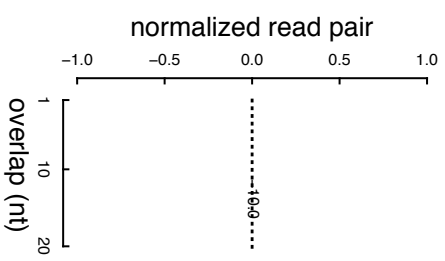
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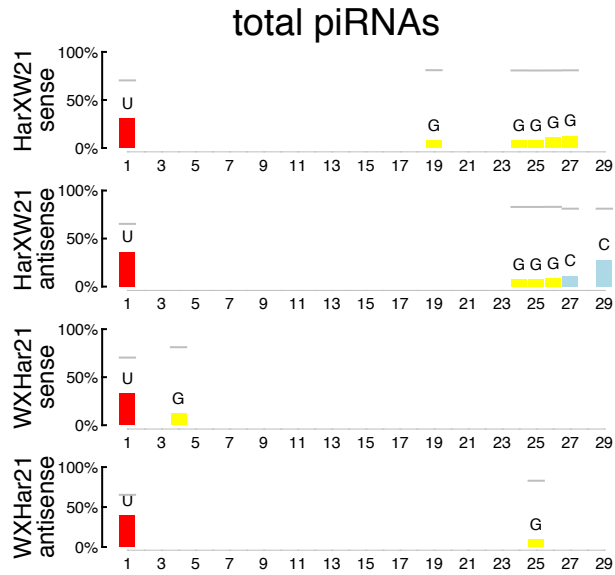
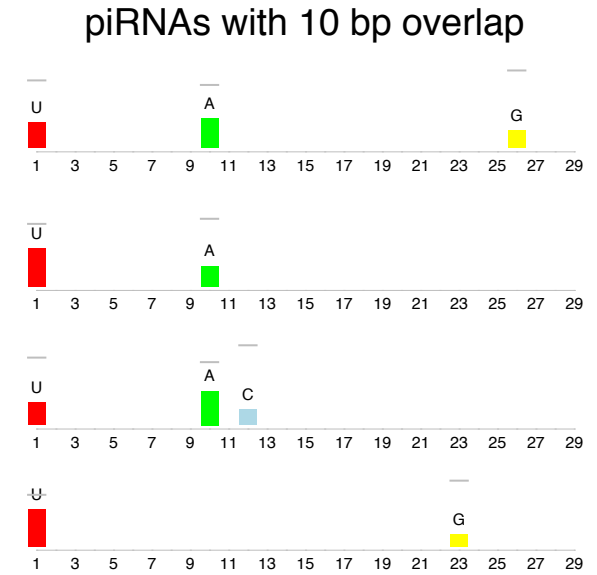
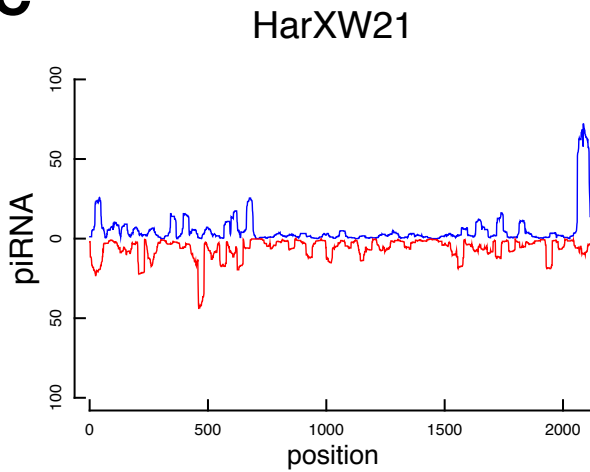
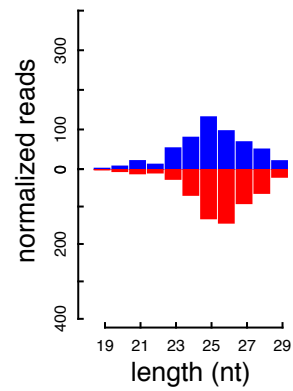
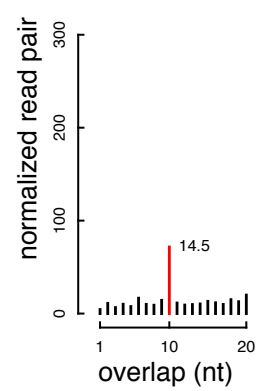
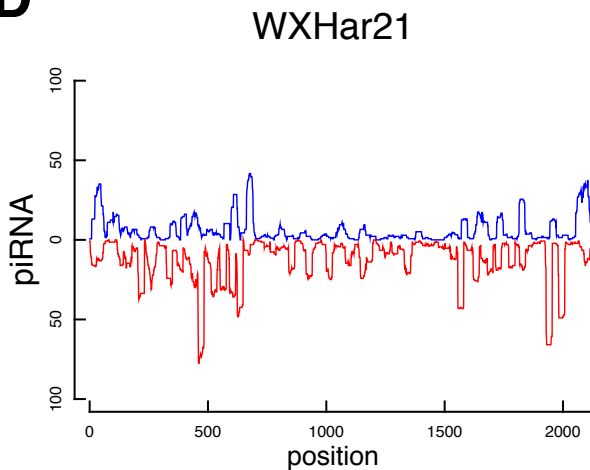
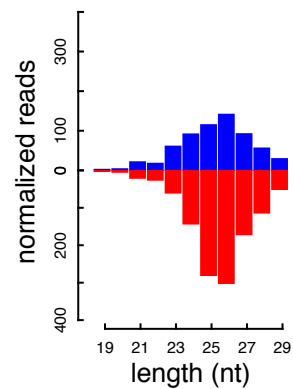
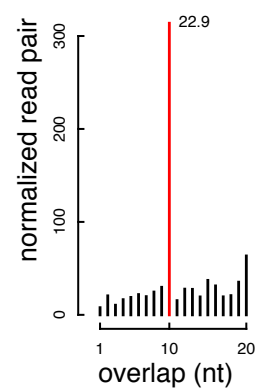
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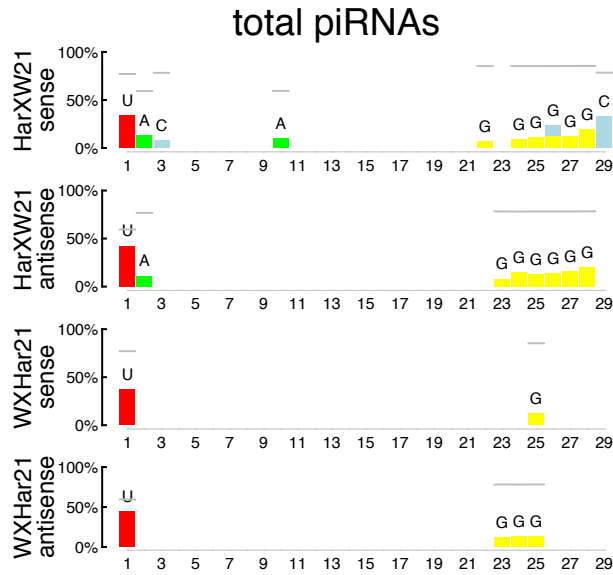
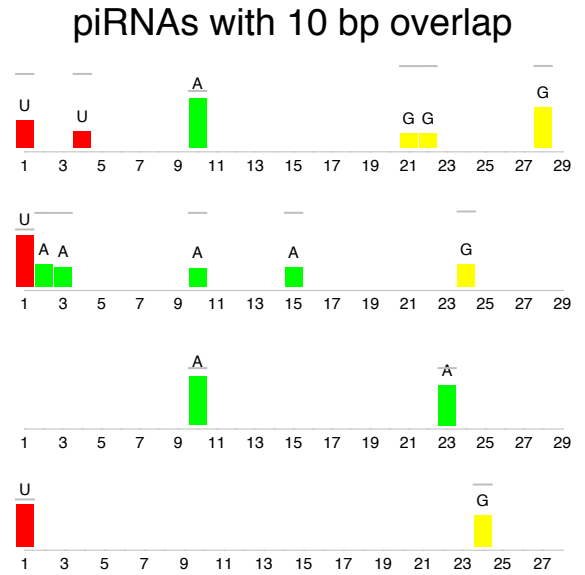
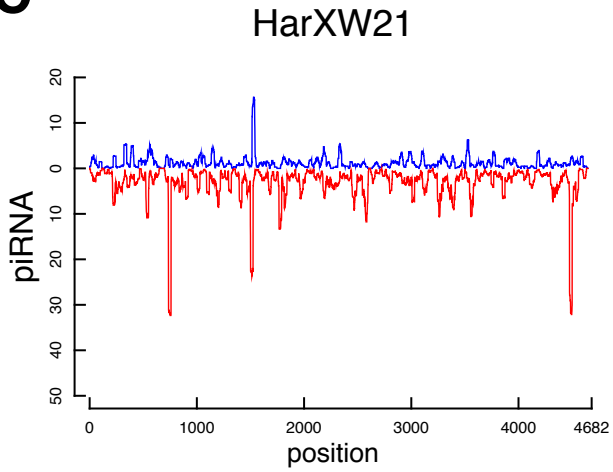
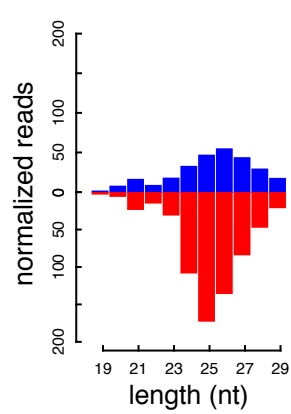
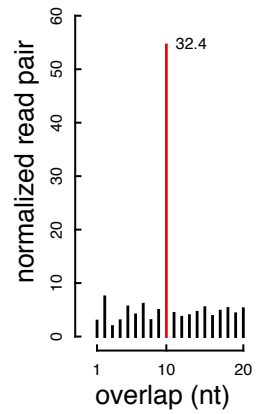
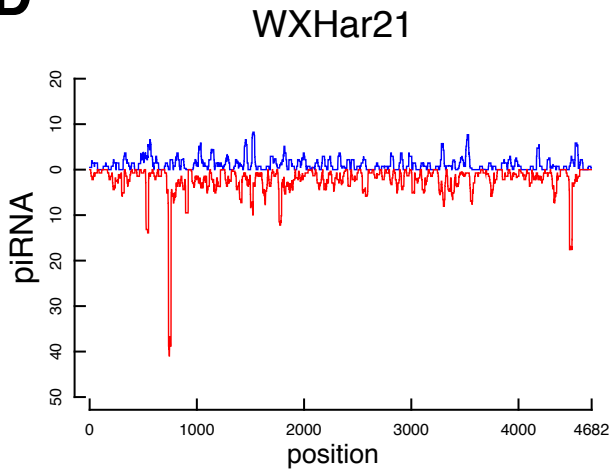
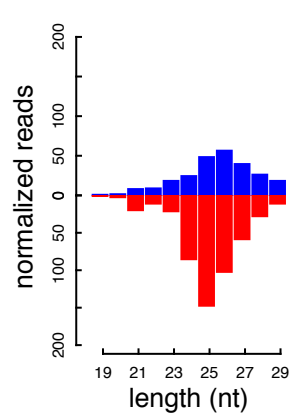
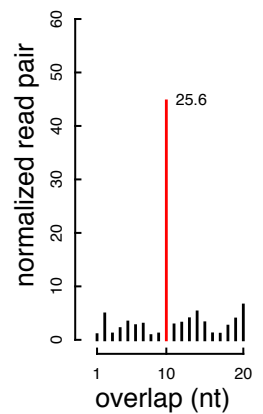
H



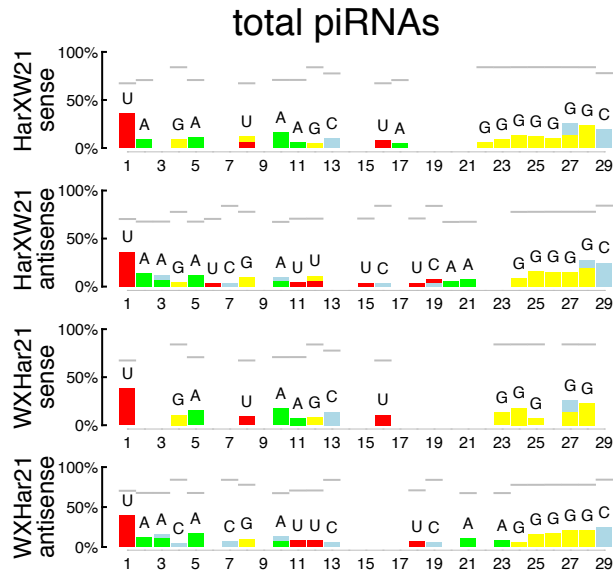
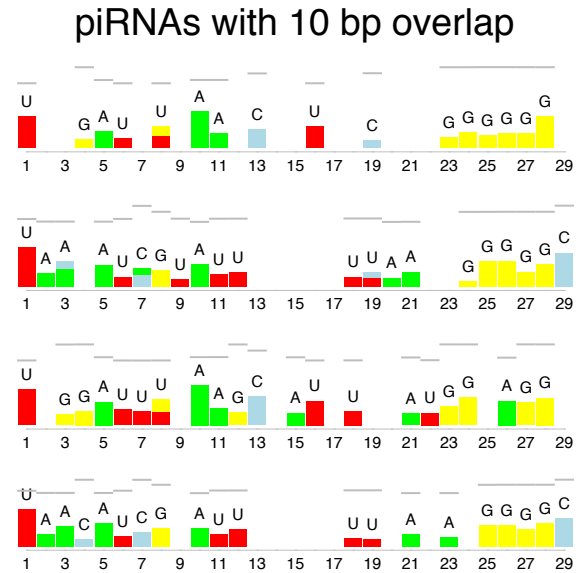
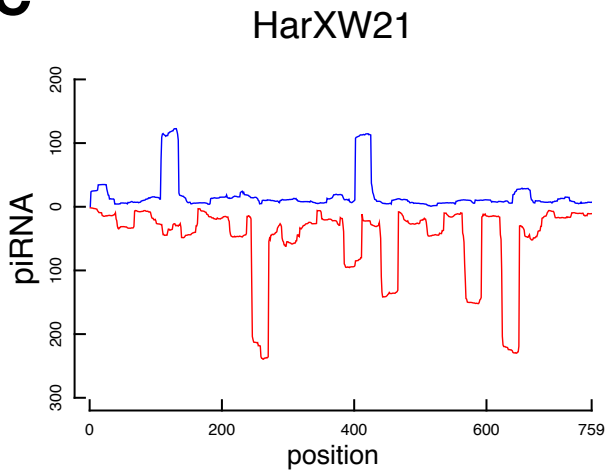
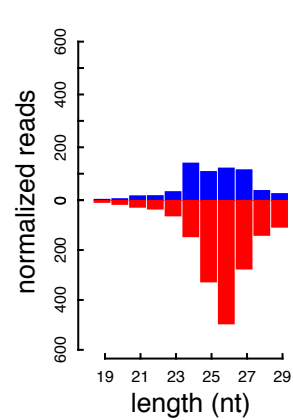
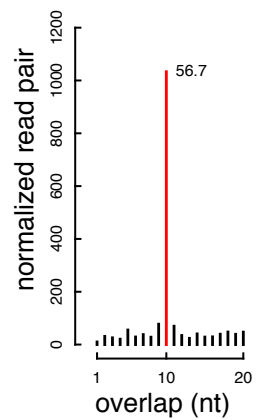
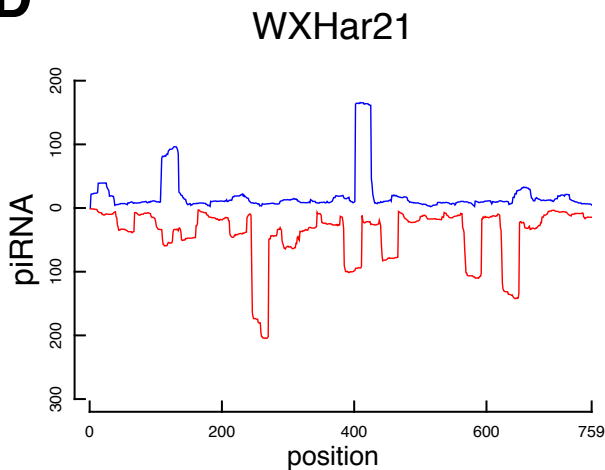
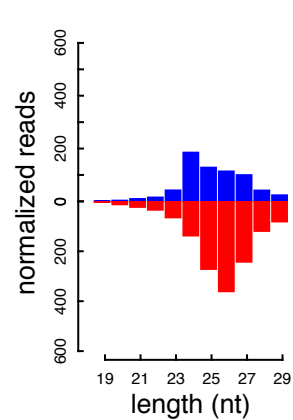
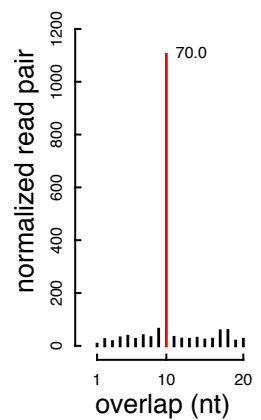
pogo

A**B****C****E****G****D****F****H**

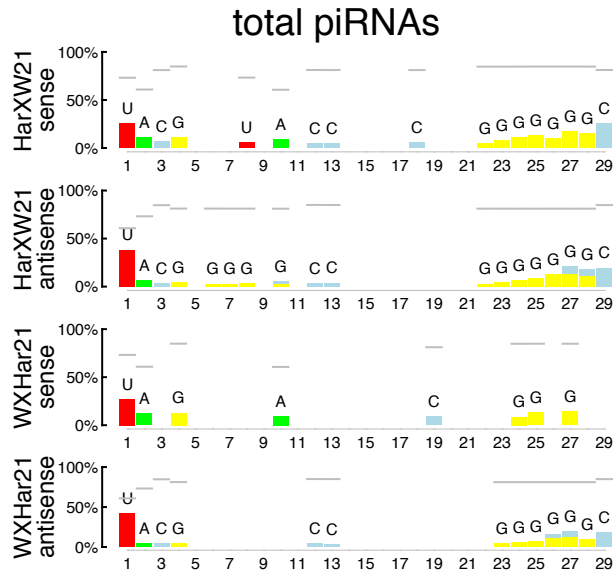
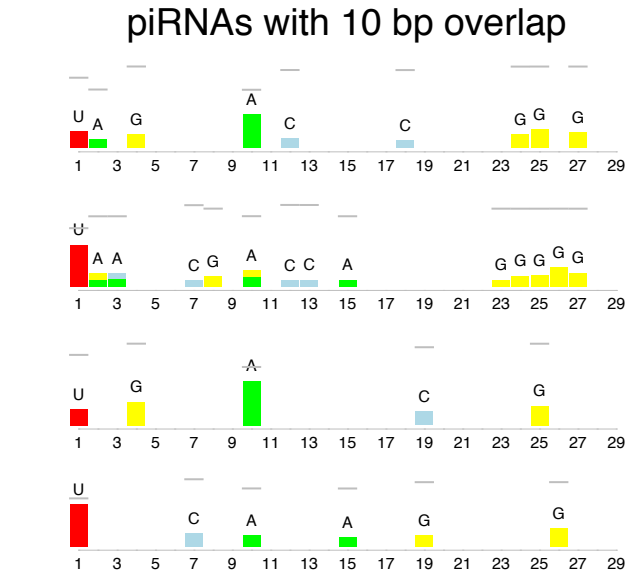
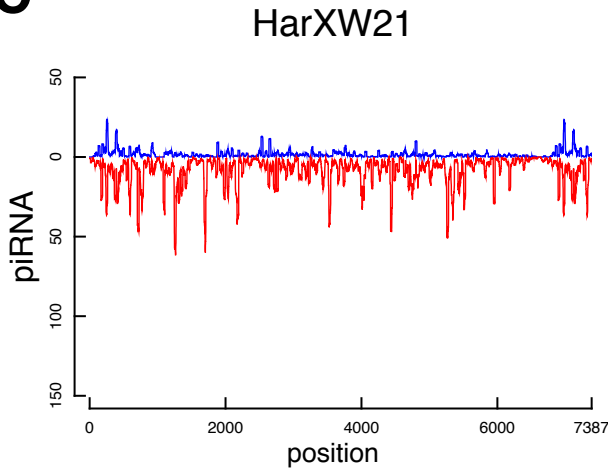
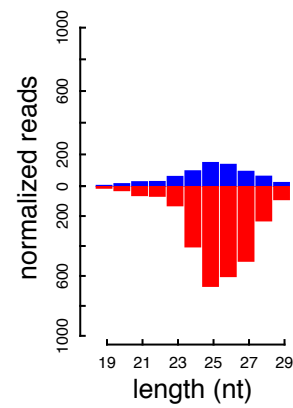
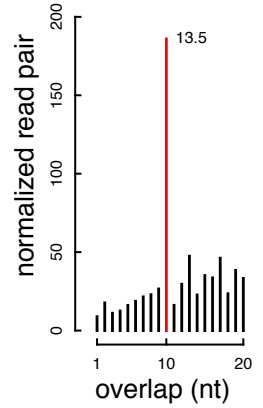
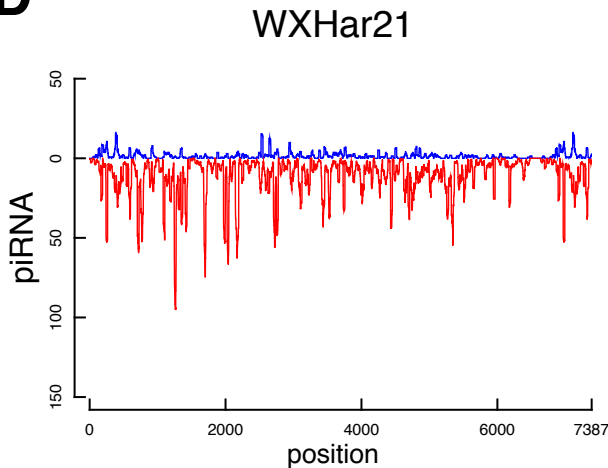
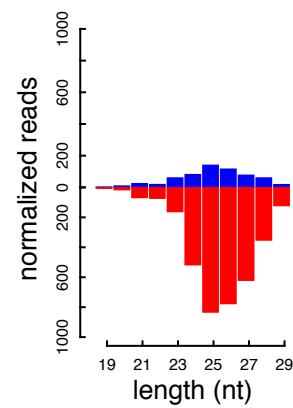
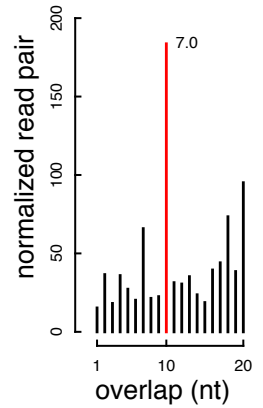
Porto1

A**B****C****E****G****D****F****H**

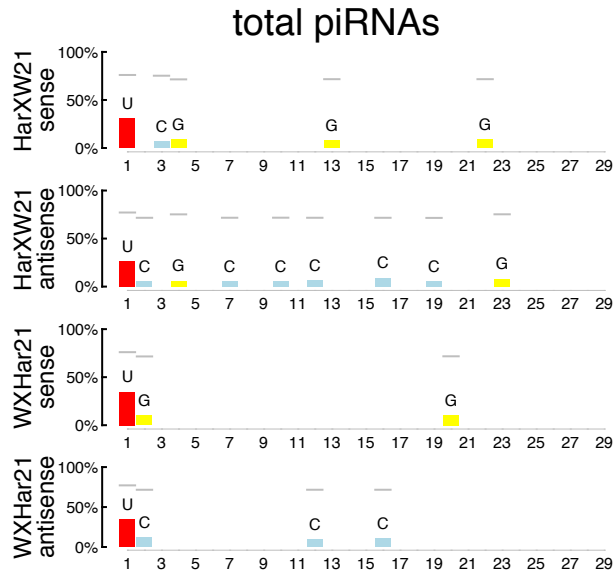
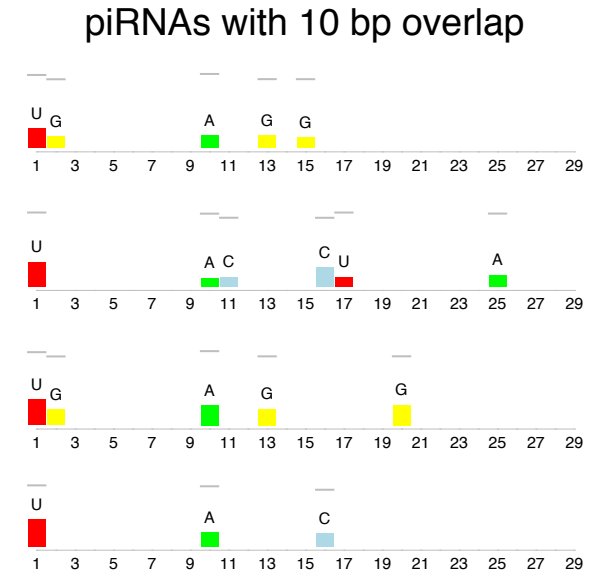
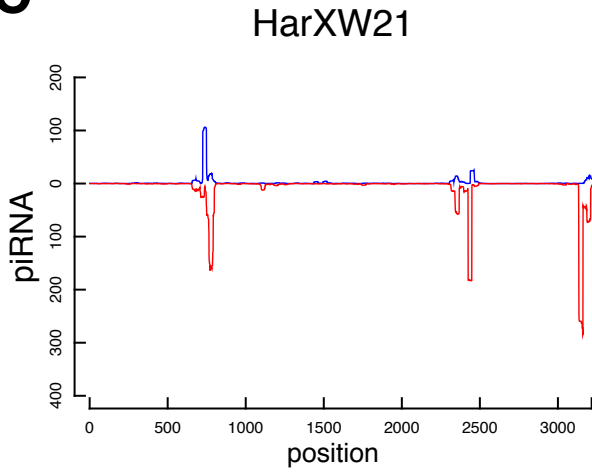
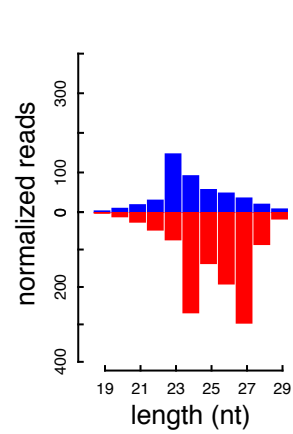
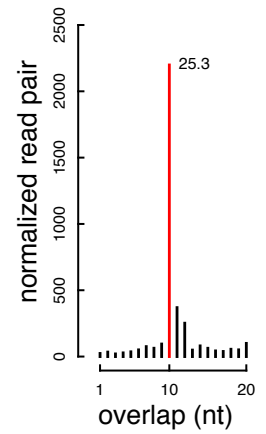
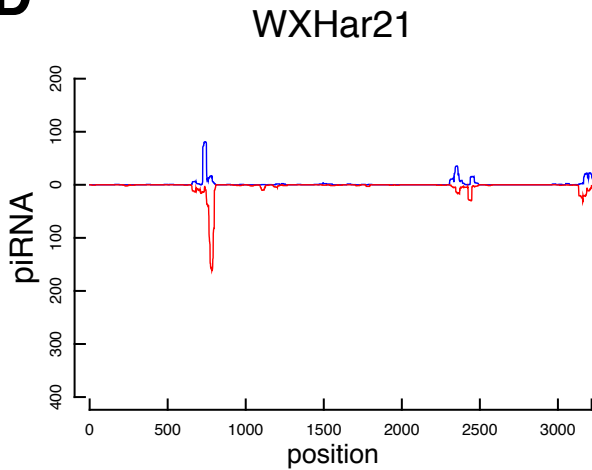
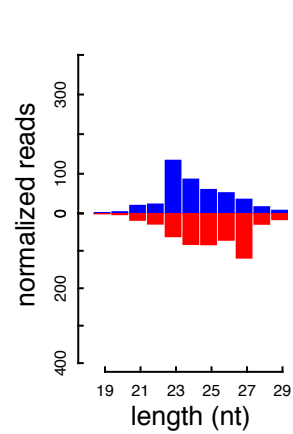
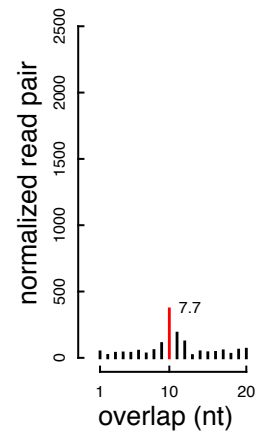
Q element

A**B****C****E****G****D****F****H**

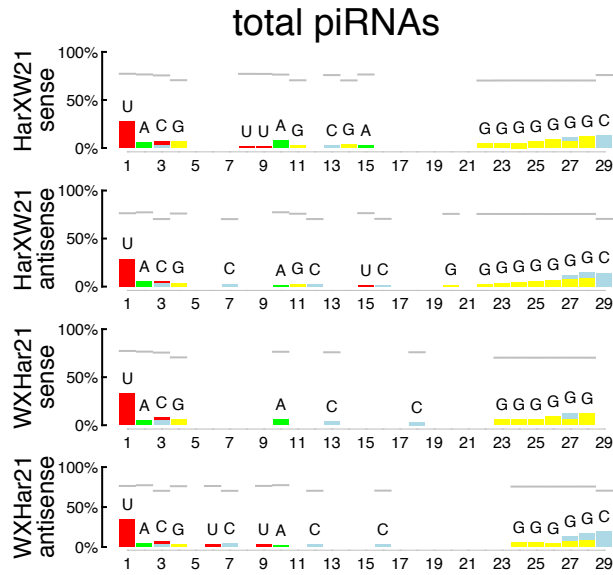
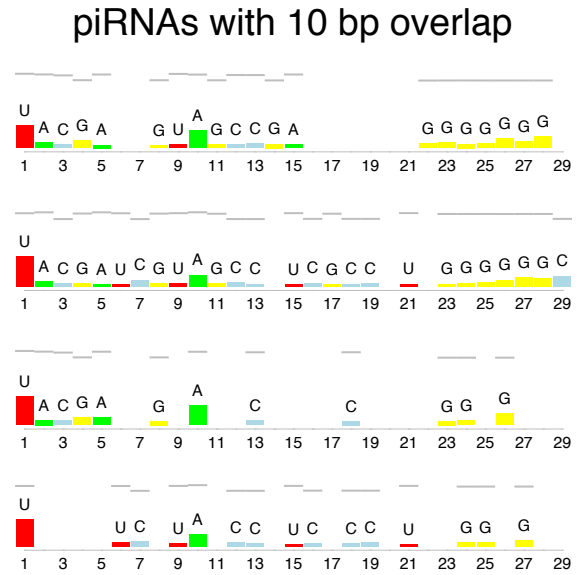
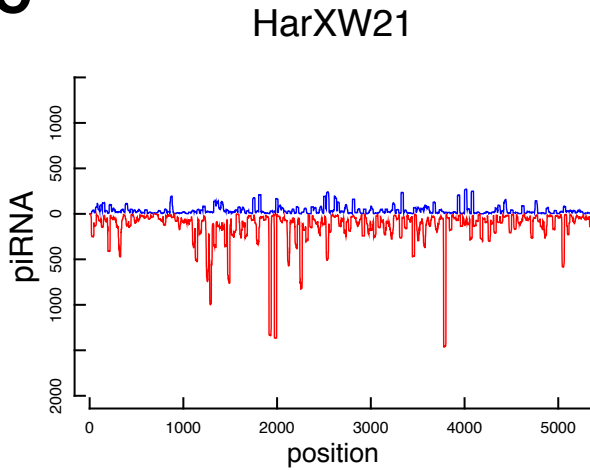
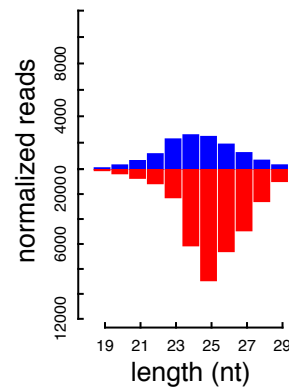
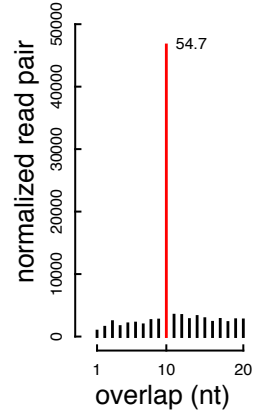
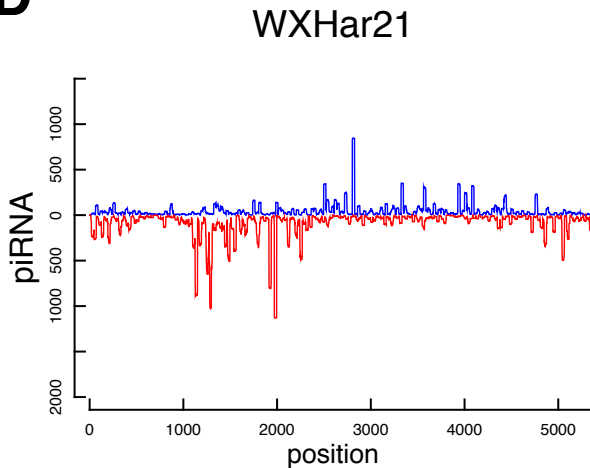
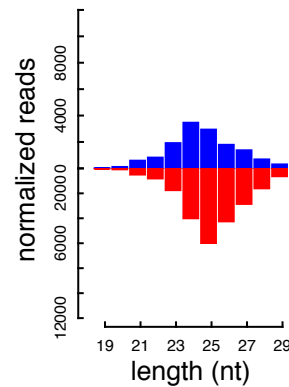
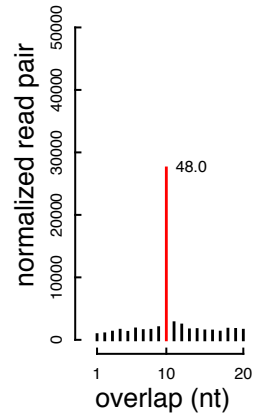
Quasimodo

A**B****C****E****G****D****F****H**

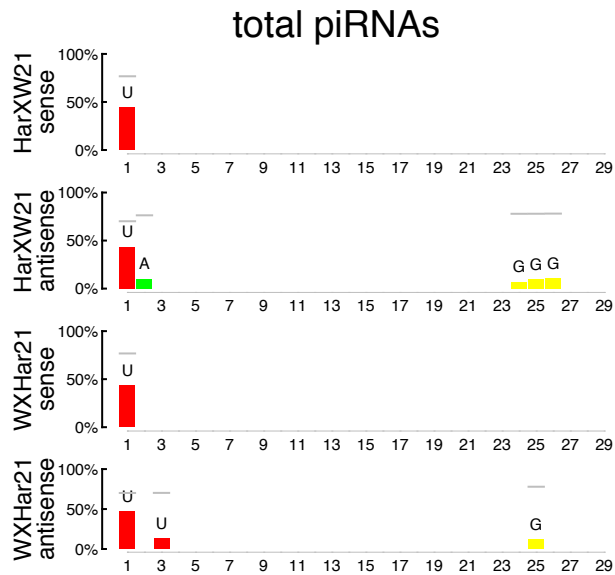
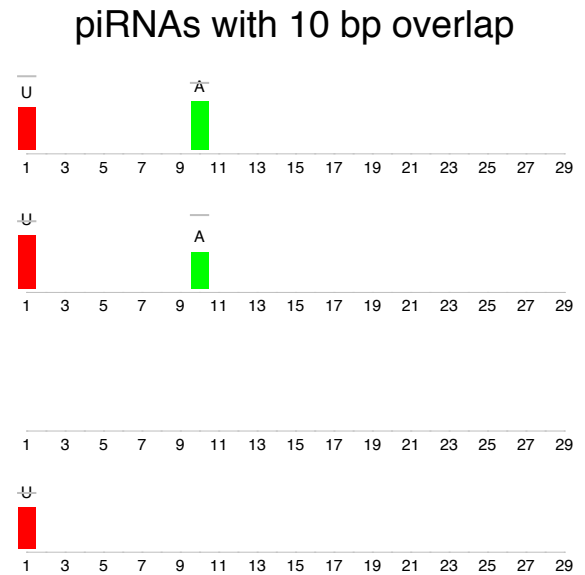
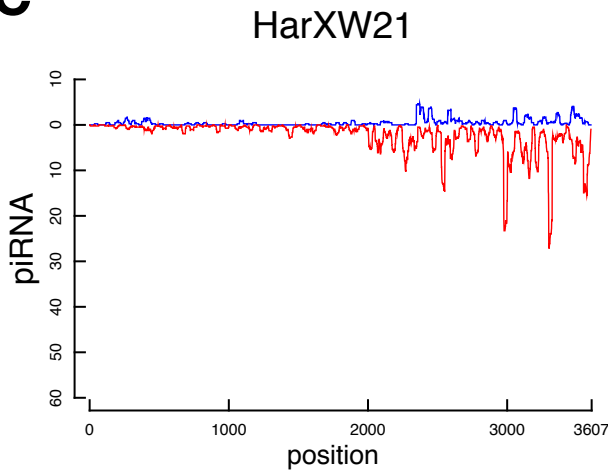
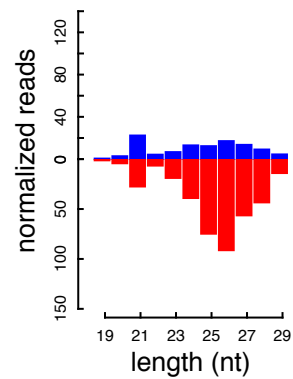
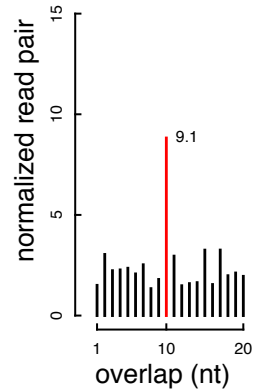
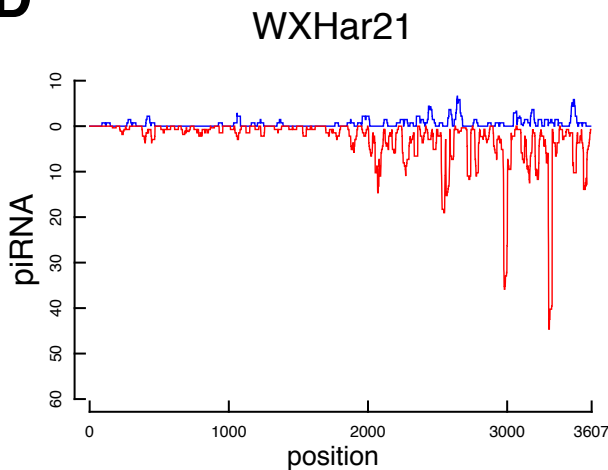
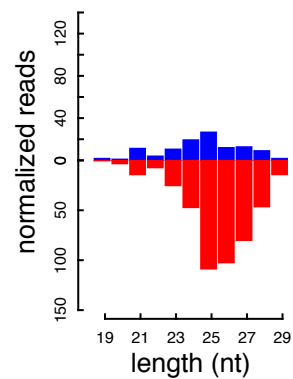
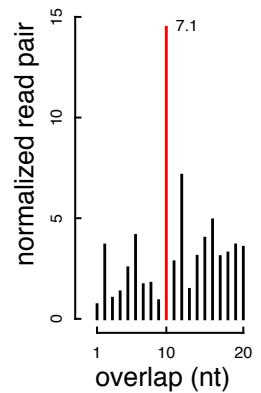
R1 2

A**B****C****E****G****D****F****H**

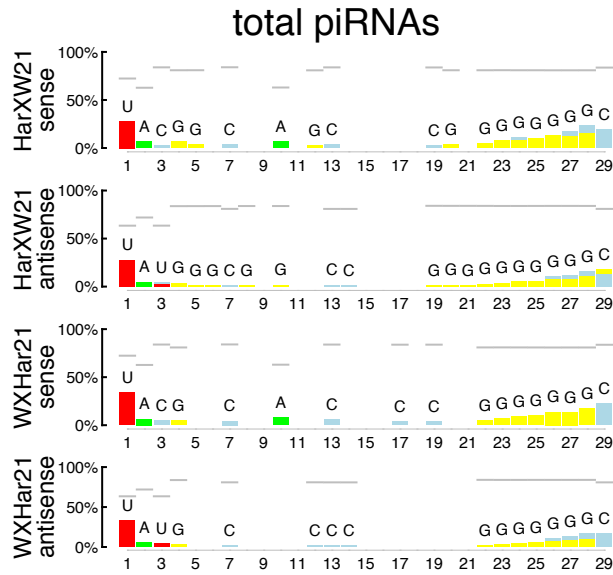
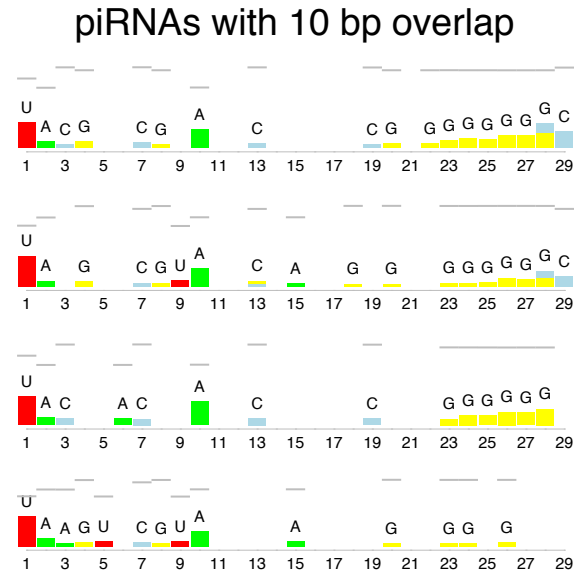
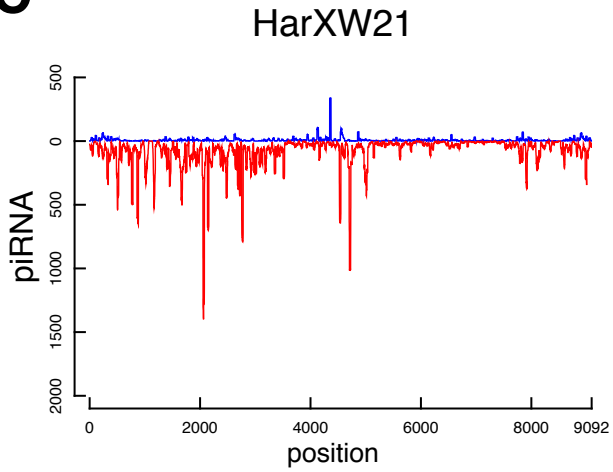
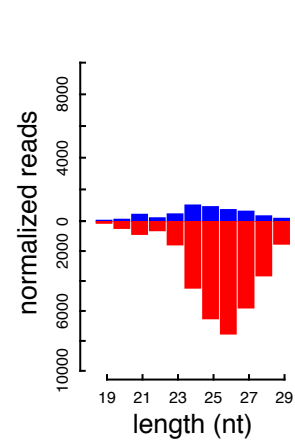
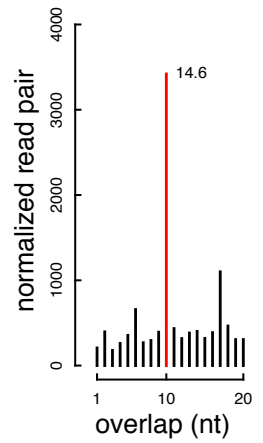
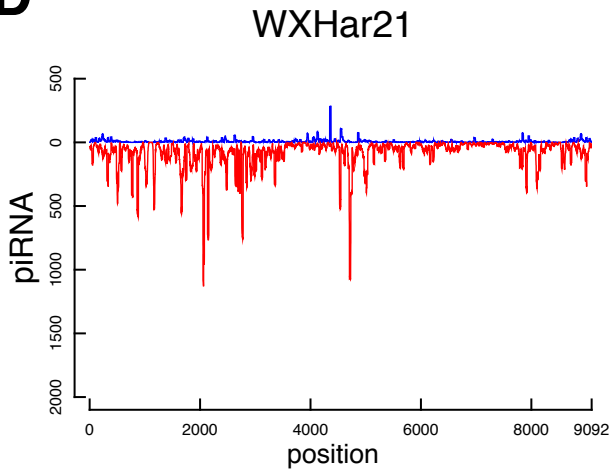
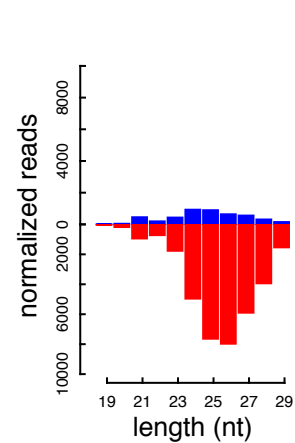
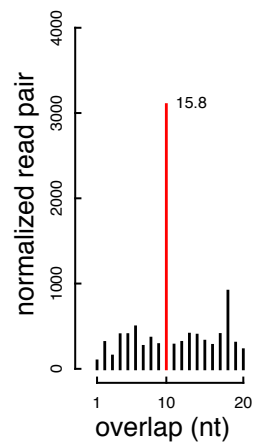
R1A1 element

A**B****C****E****G****D****F****H**

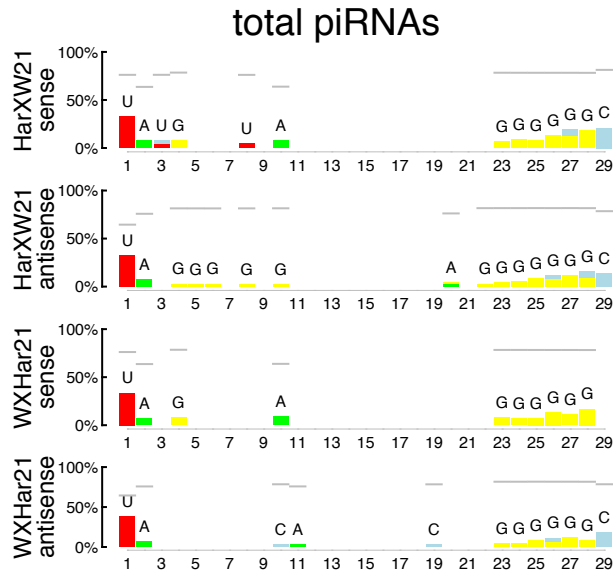
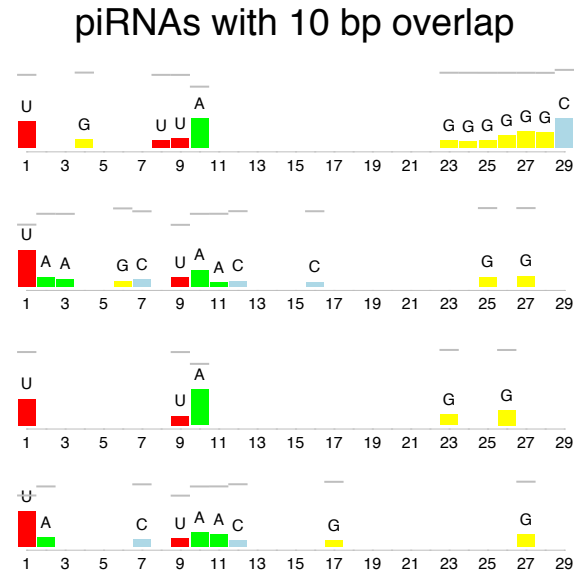
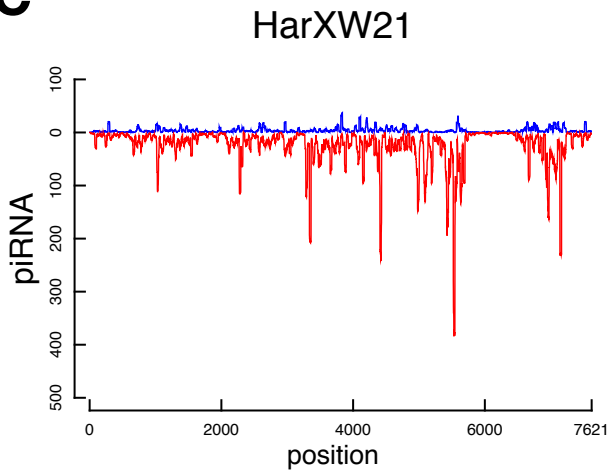
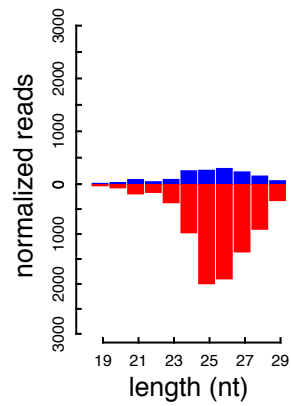
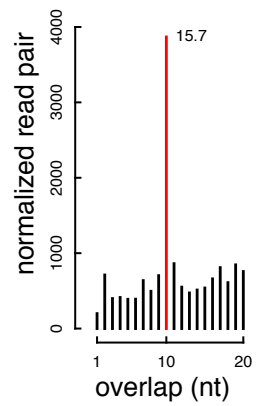
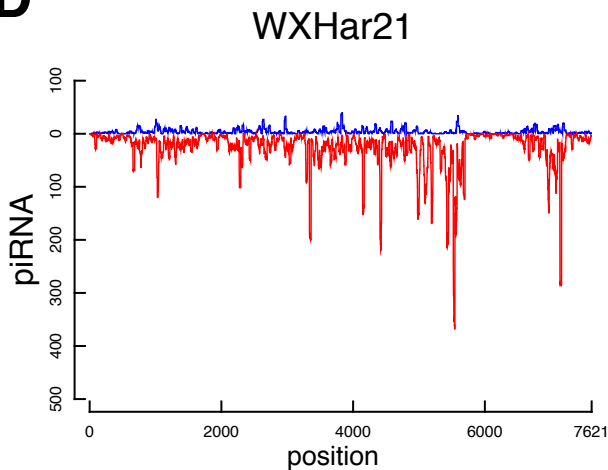
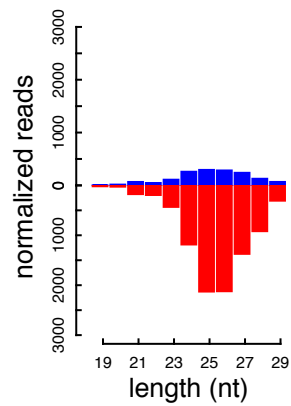
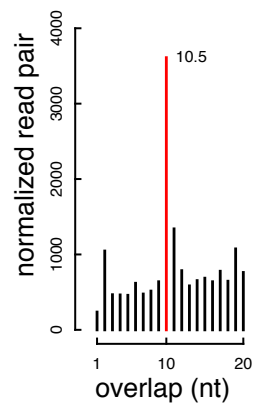
R2 element

A**B****C****E****G****D****F****H**

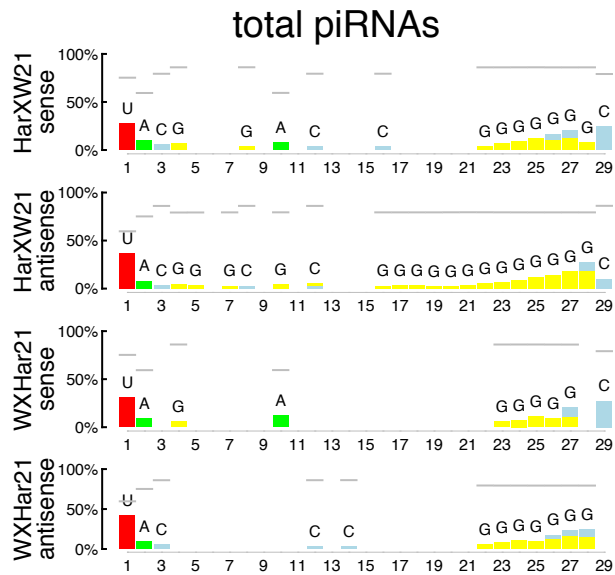
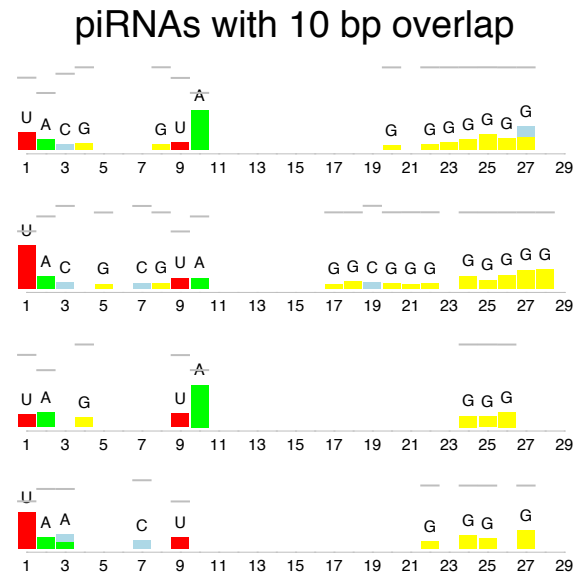
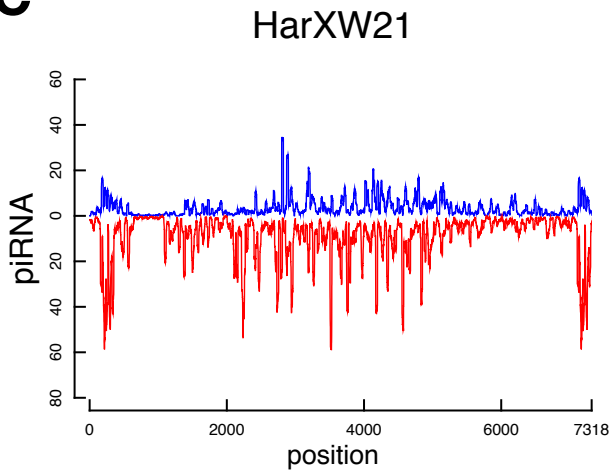
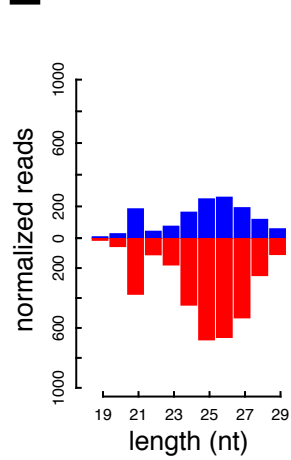
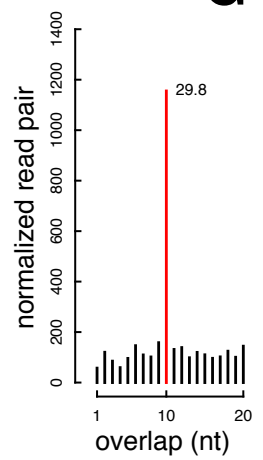
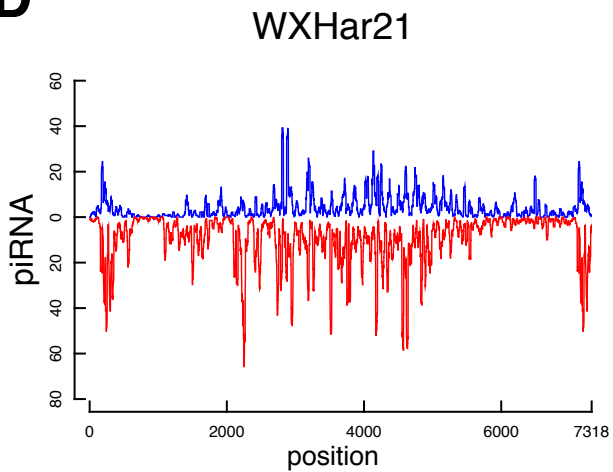
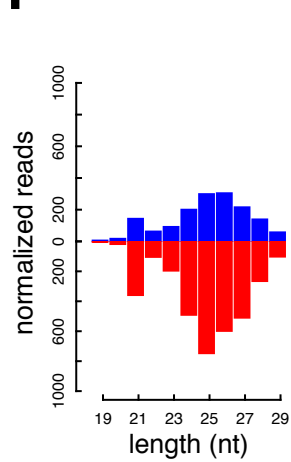
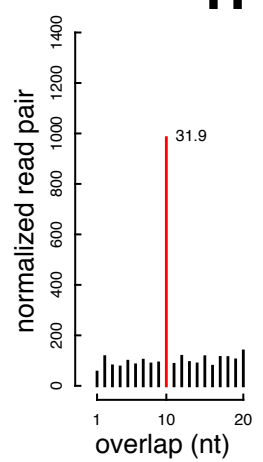
roo

A**B****C****E****G****D****F****H**

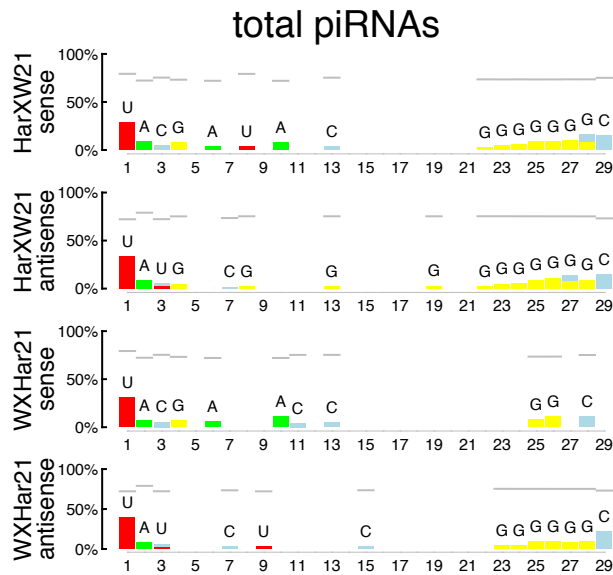
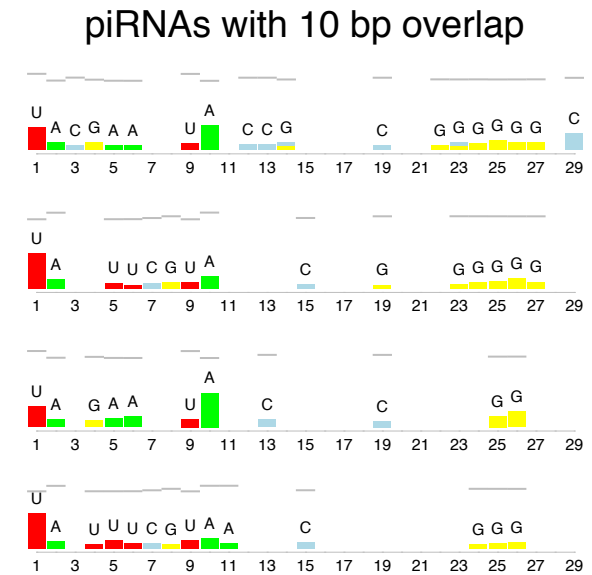
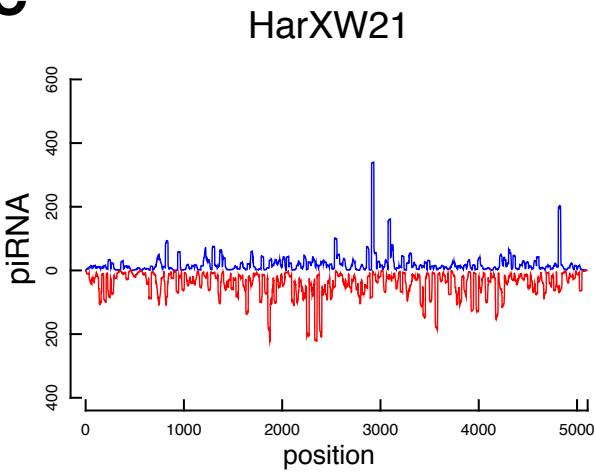
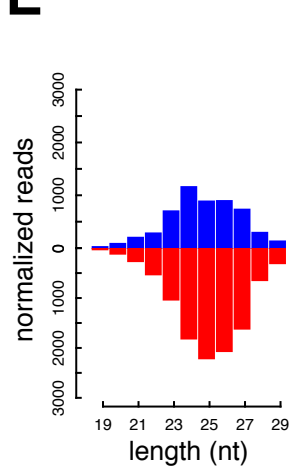
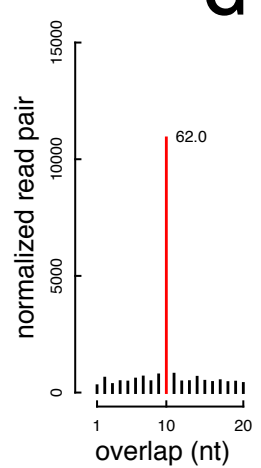
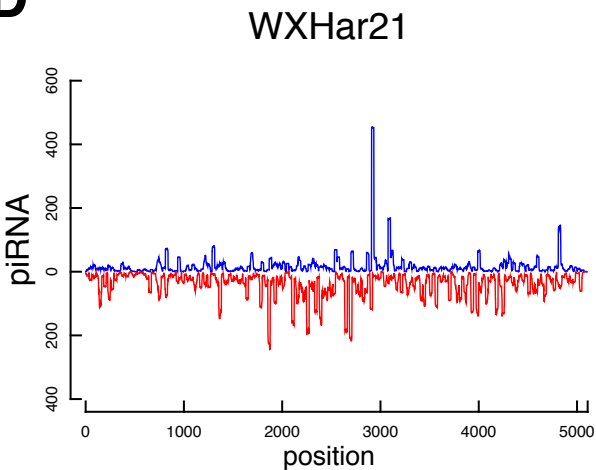
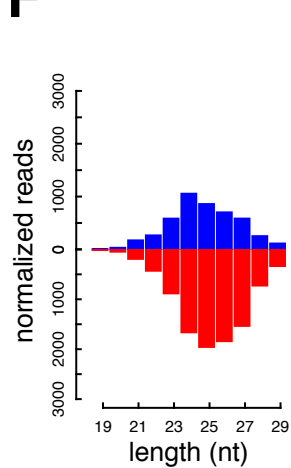
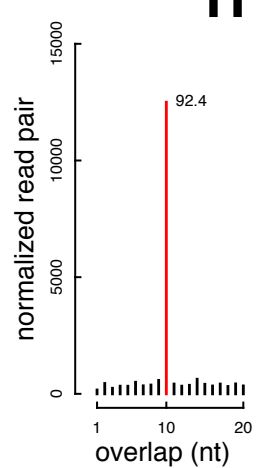
rooA

A**B****C****E****G****D****F****H**

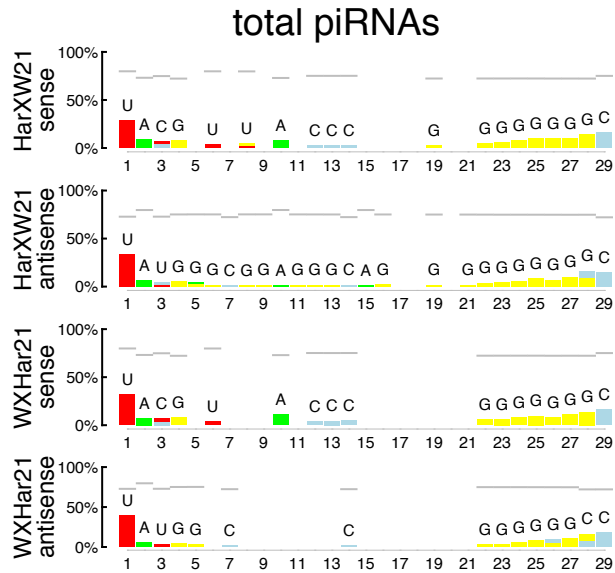
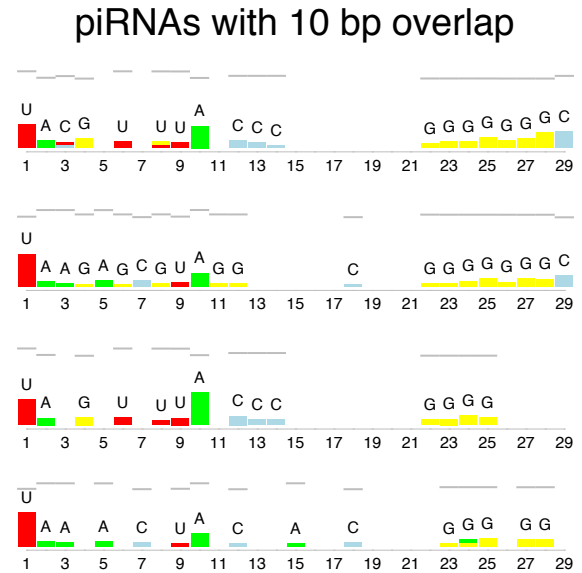
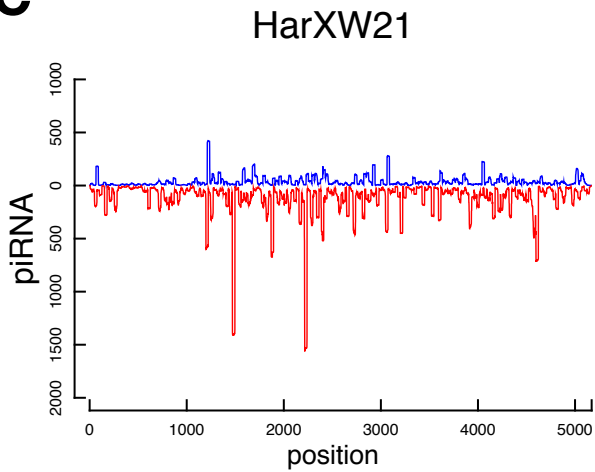
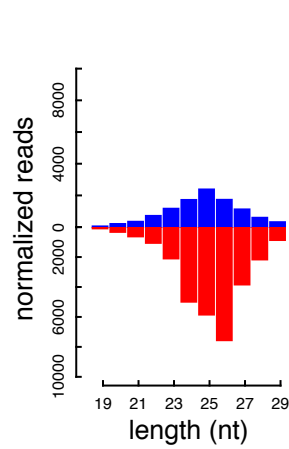
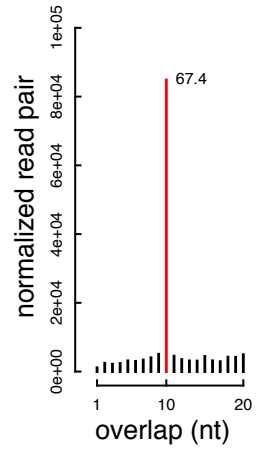
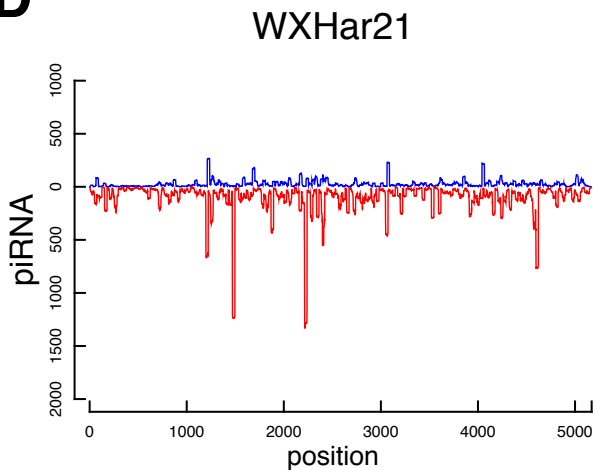
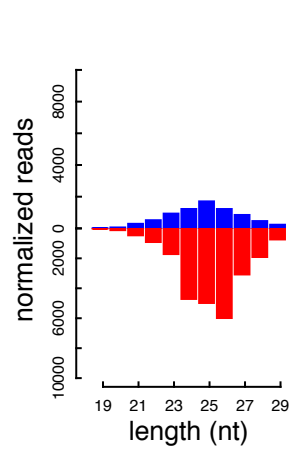
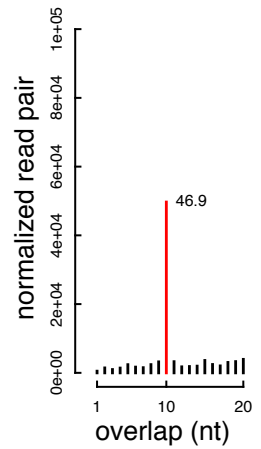
rover

A**B****C****E****G****D****F****H**

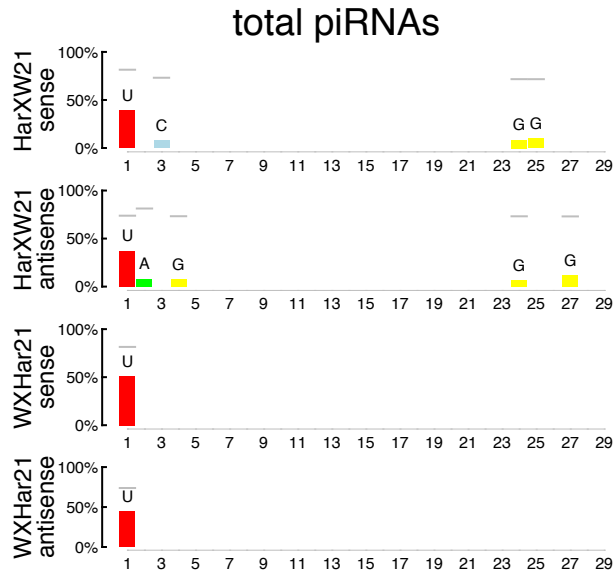
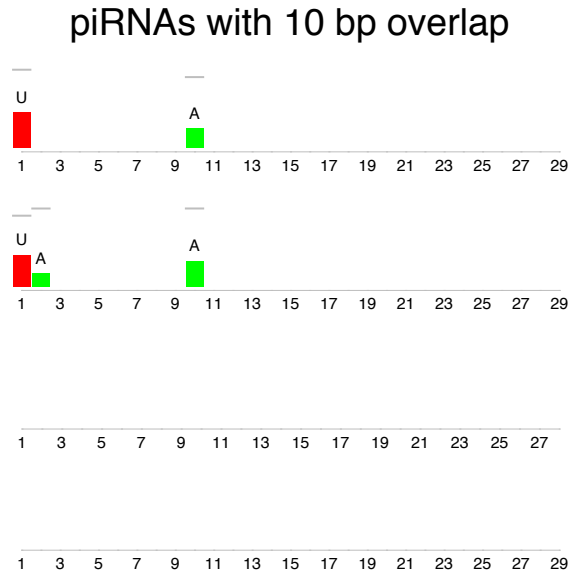
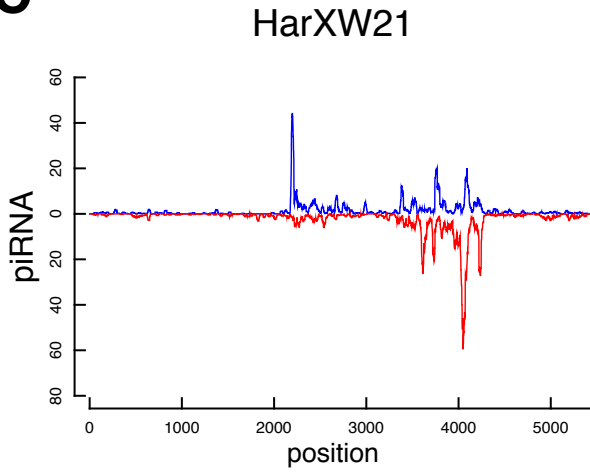
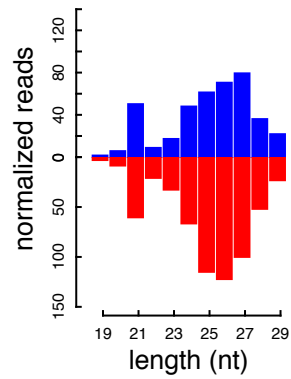
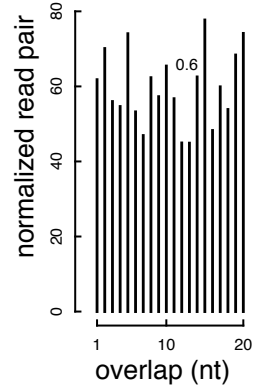
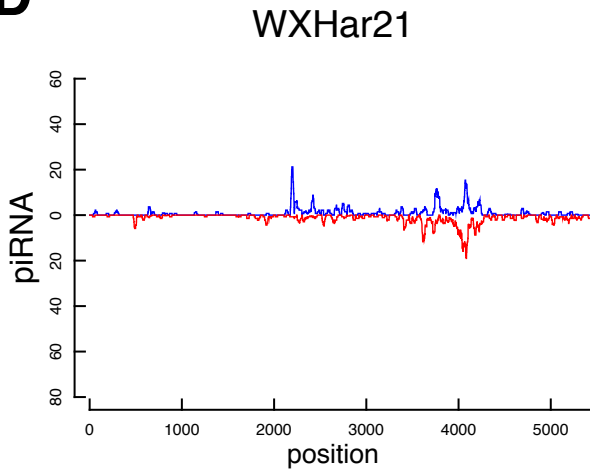
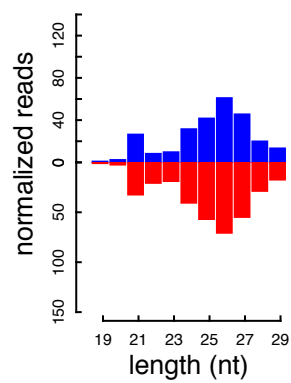
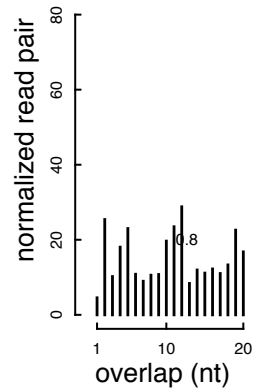
Rt1a

A**B****C****E****G****D****F****H**

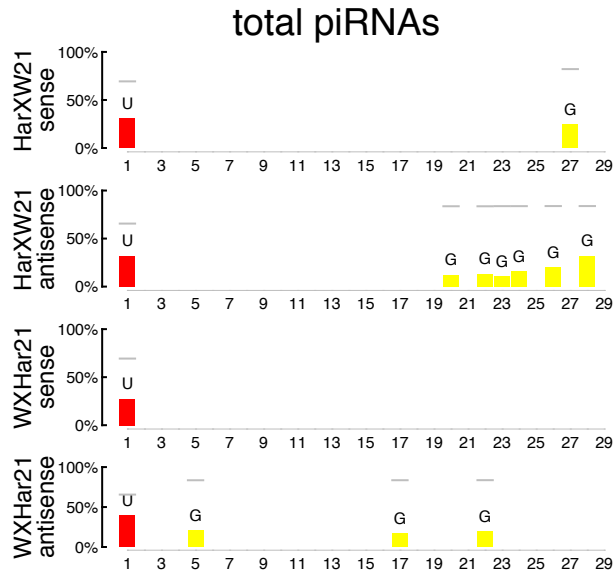
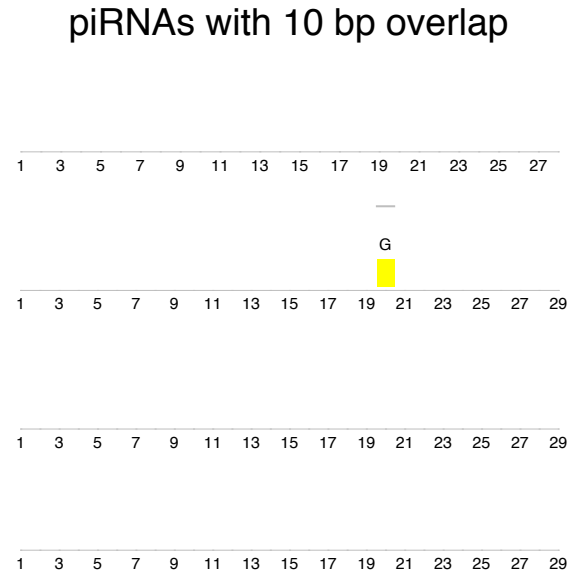
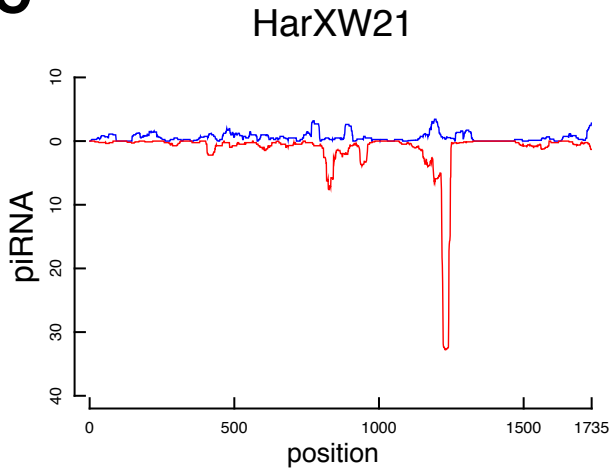
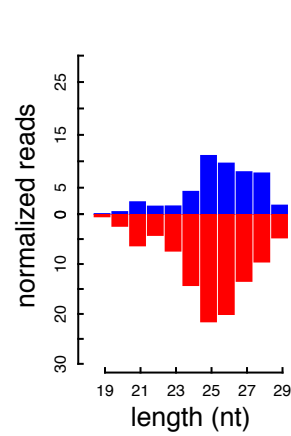
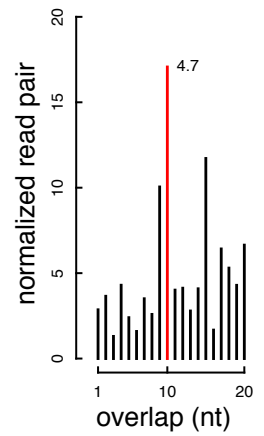
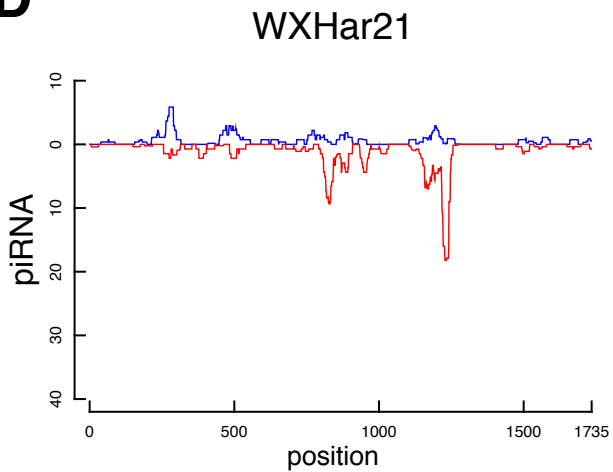
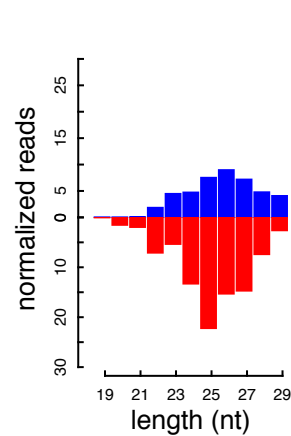
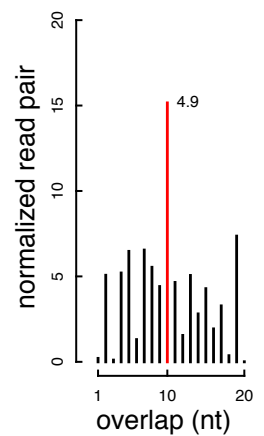
Rt1b

A**B****C****E****G****D****F****H**

Rt1c

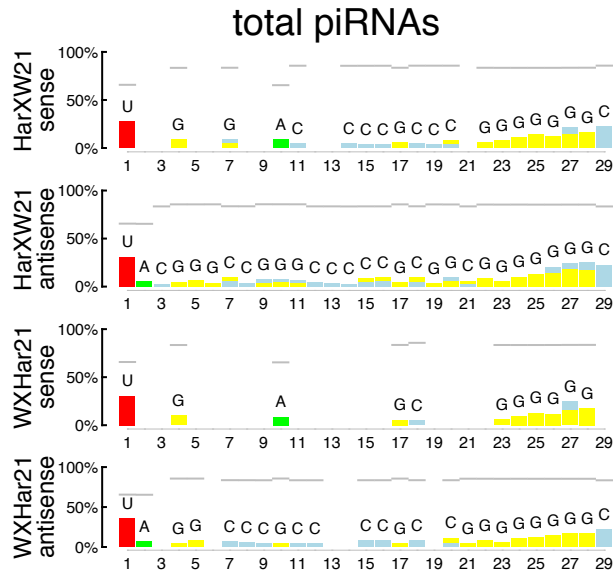
A**B****C****E****G****D****F****H**

S2

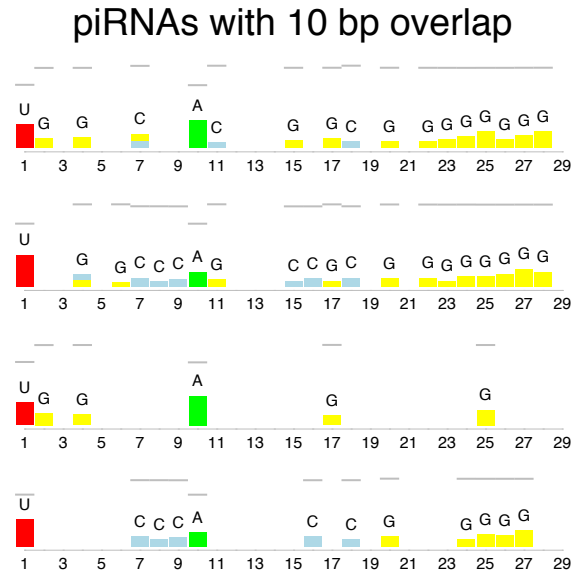
A**B****C****E****G****D****F****H**

S element

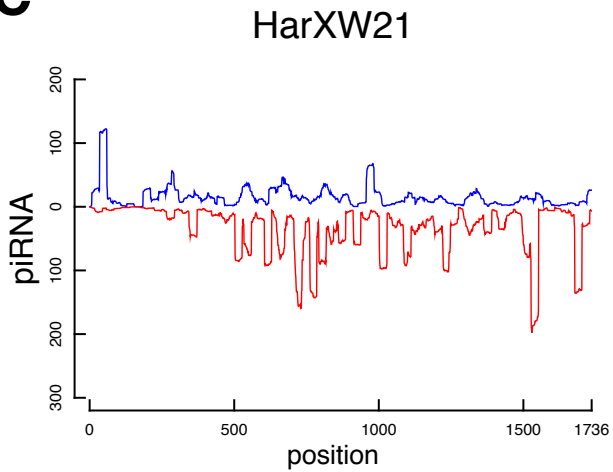
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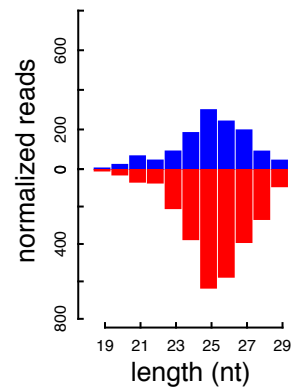
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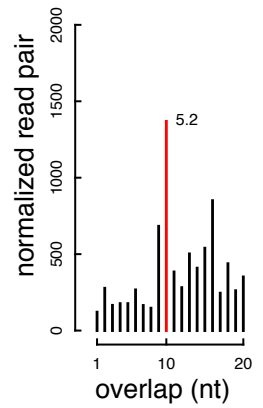
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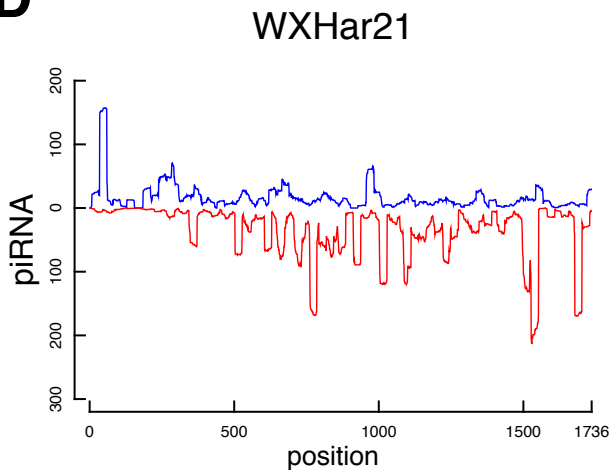
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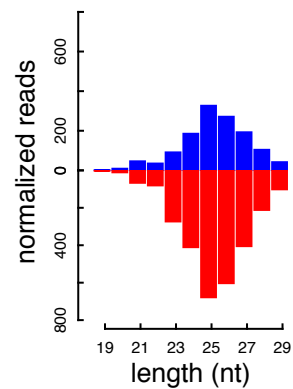
G



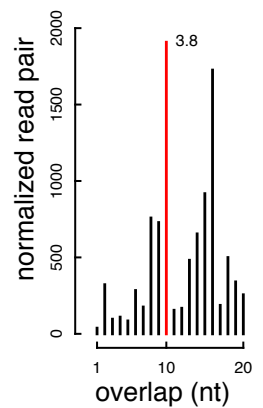
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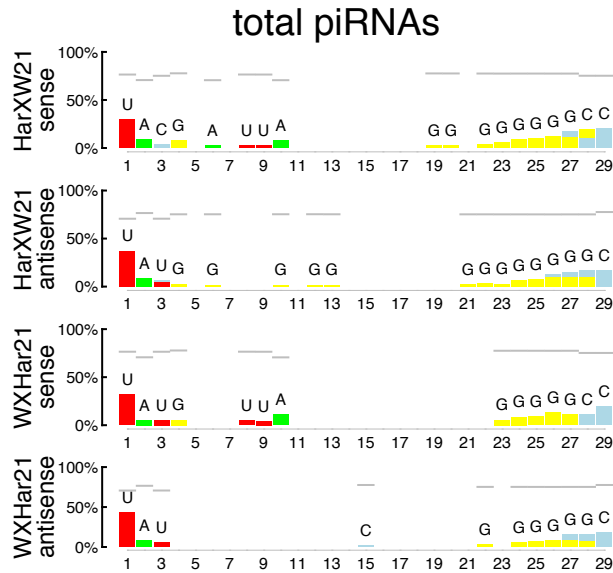
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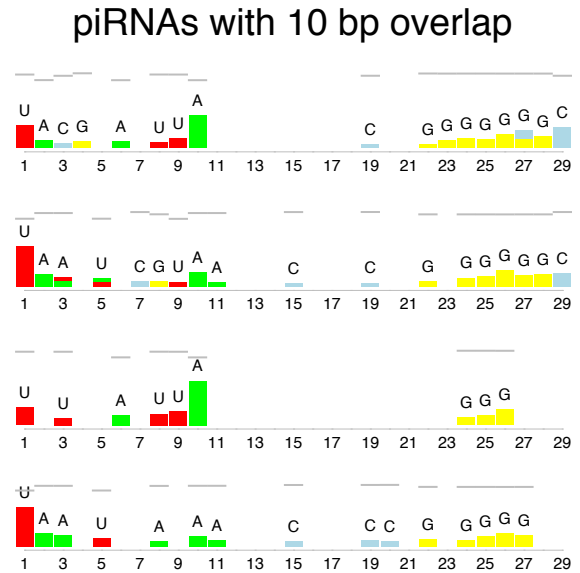
H



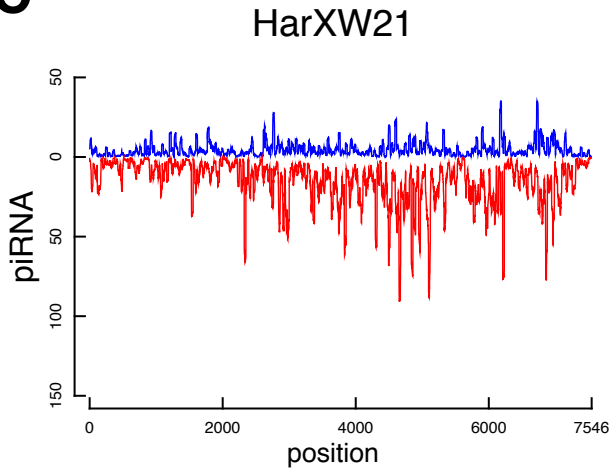
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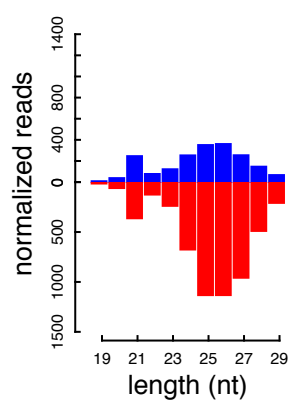
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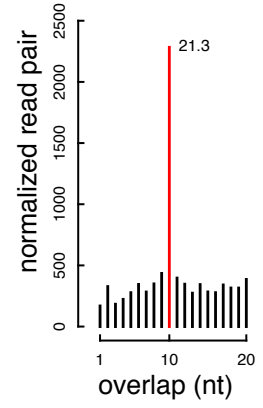
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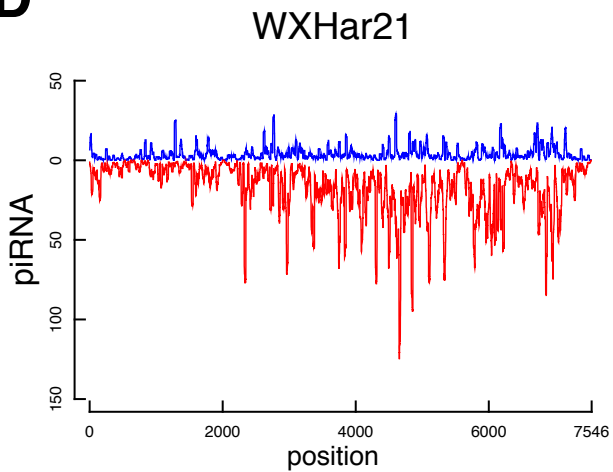
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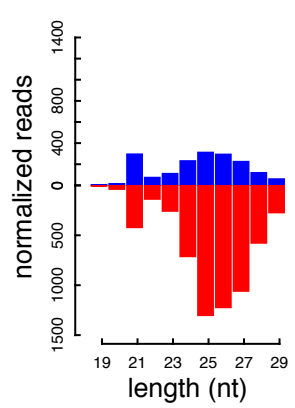
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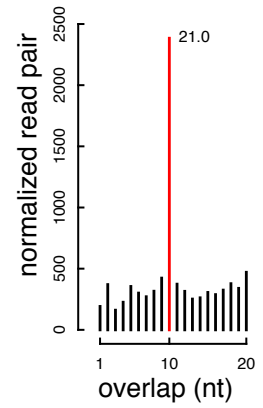
D



F

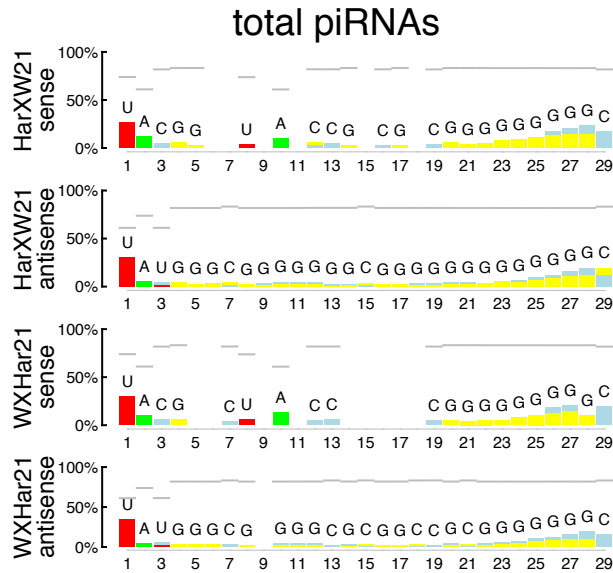


H

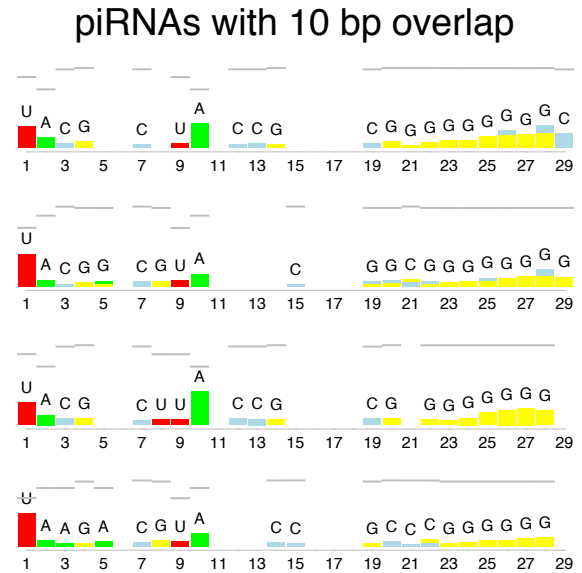


Stalker

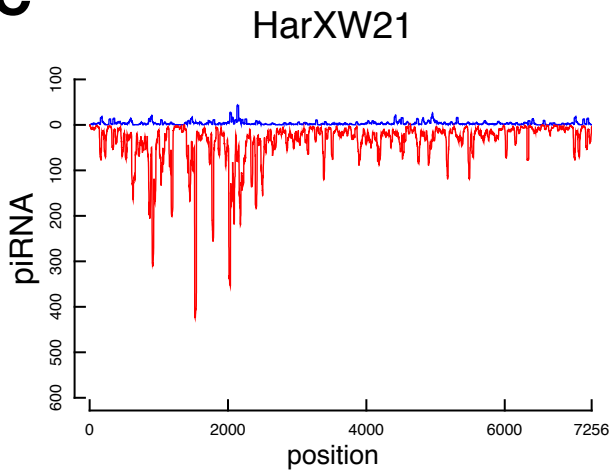
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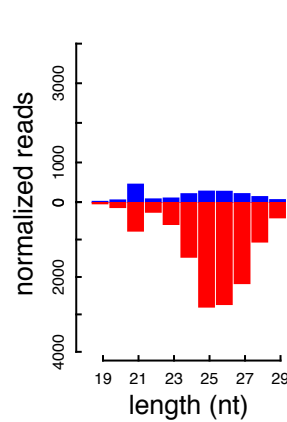
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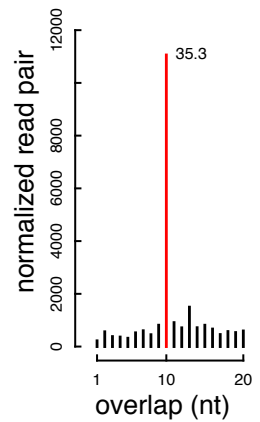
C



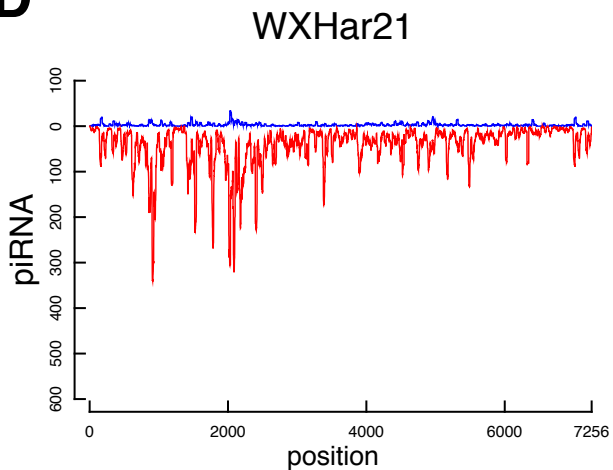
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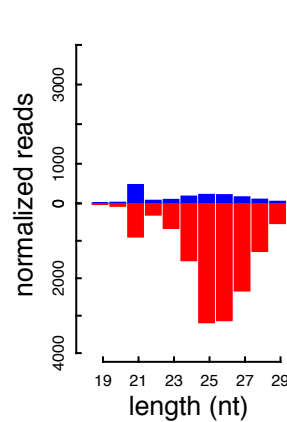
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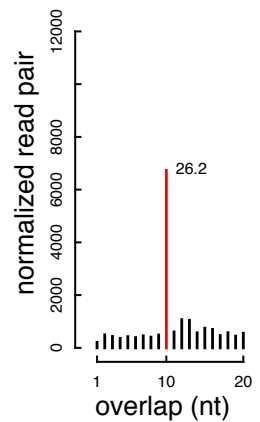
D



F

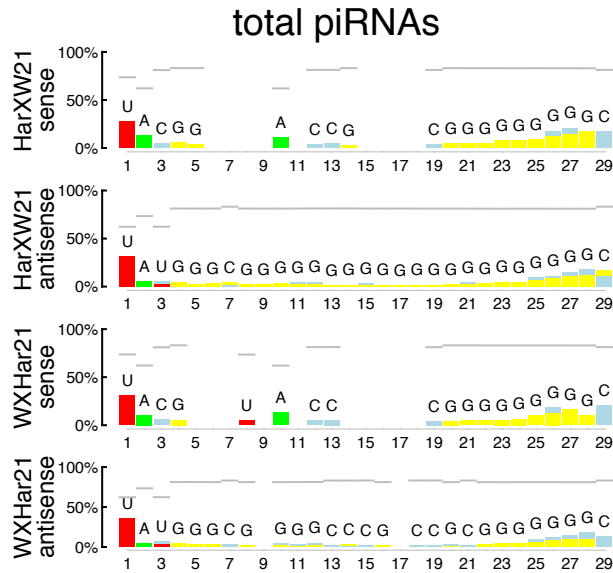


H

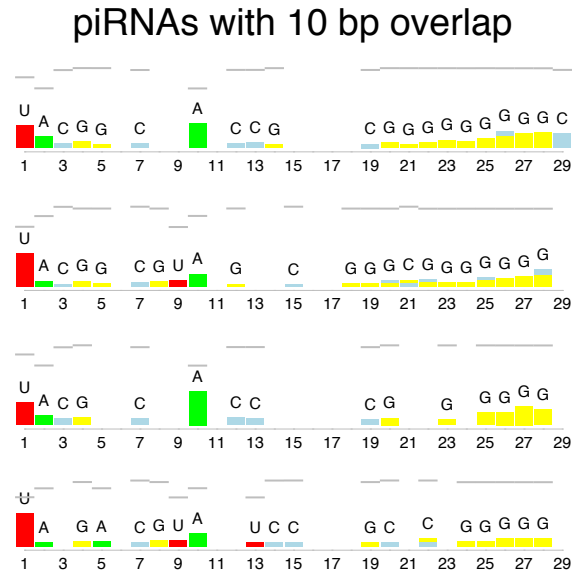


Stalker2

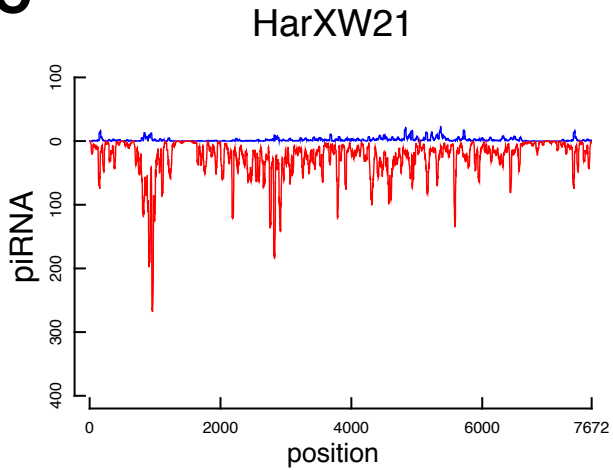
A



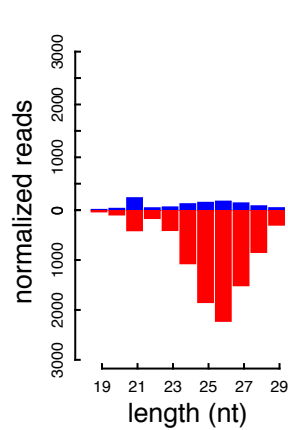
B



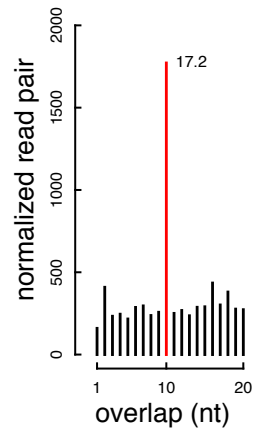
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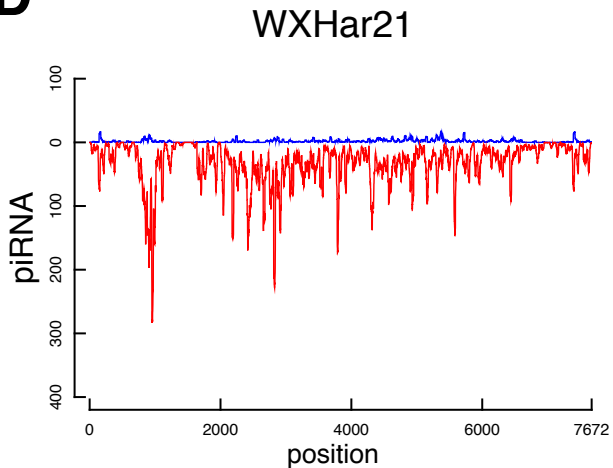
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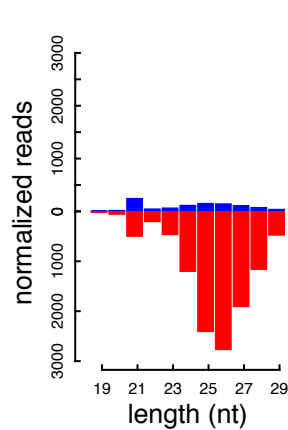
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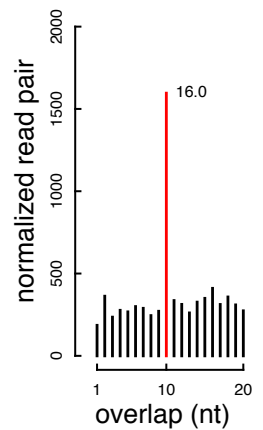
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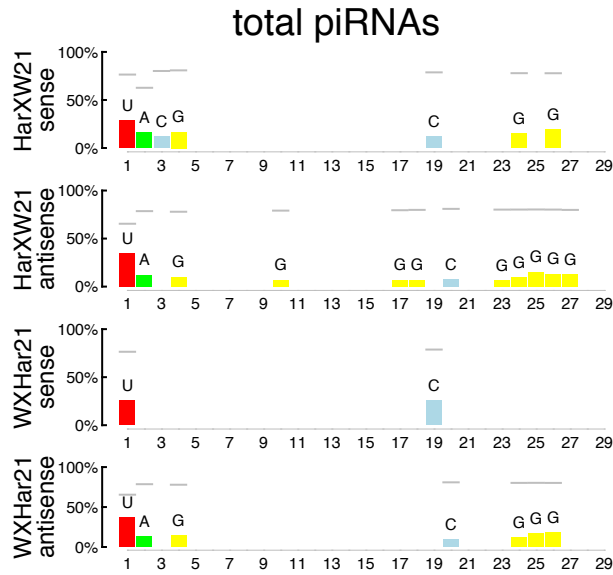
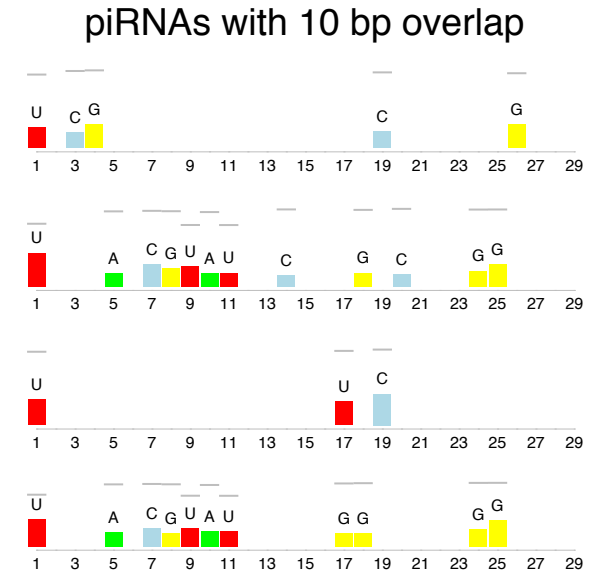
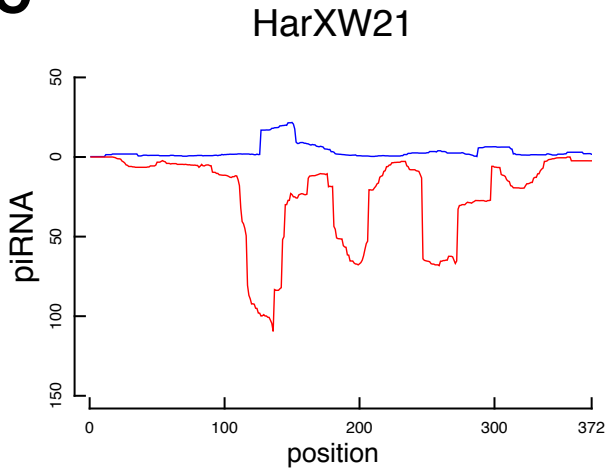
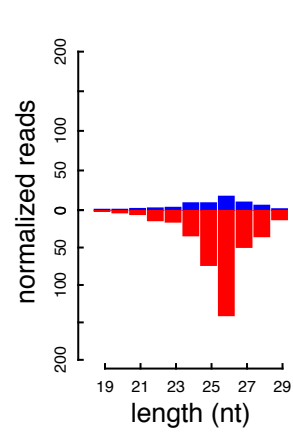
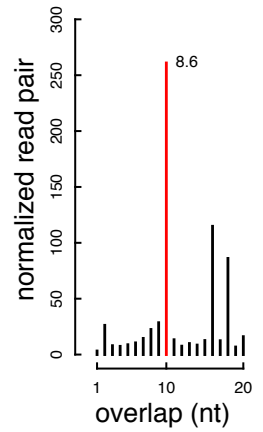
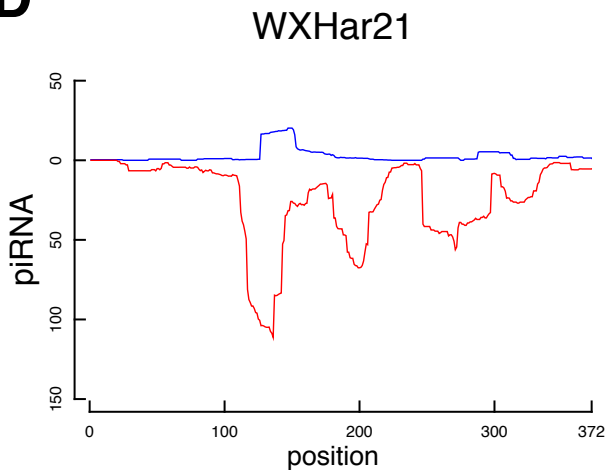
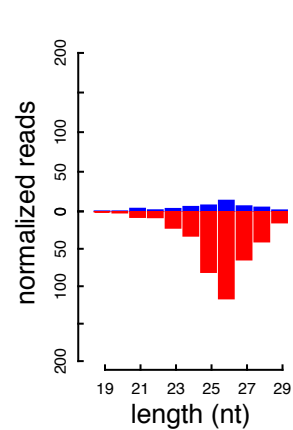
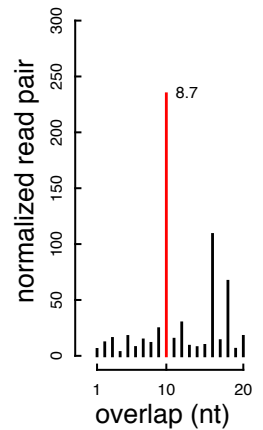
F



H

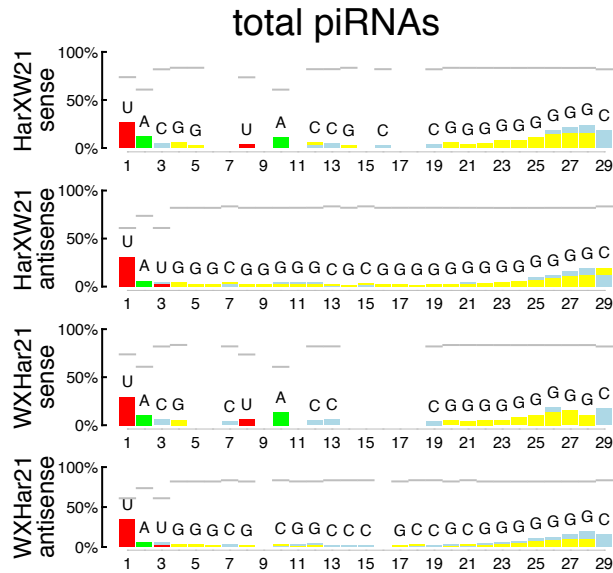


Stalker3

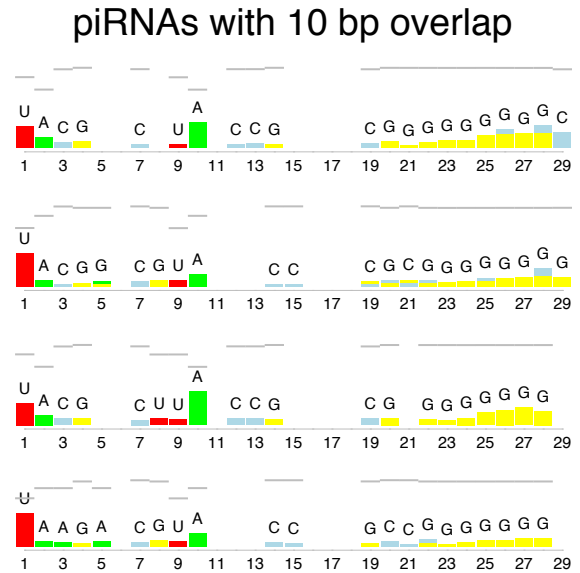
A**B****C****E****G****D****F****H**

Stalker4

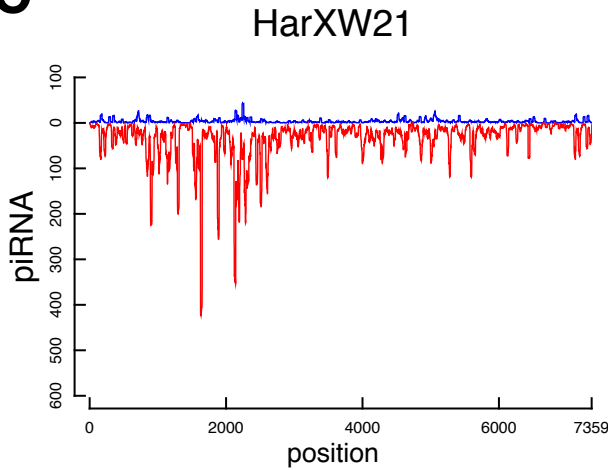
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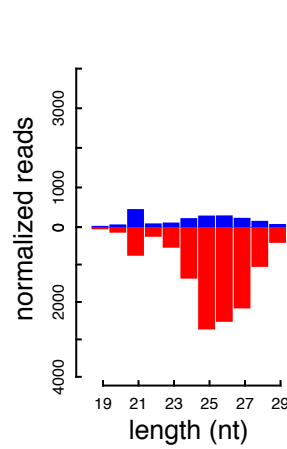
B



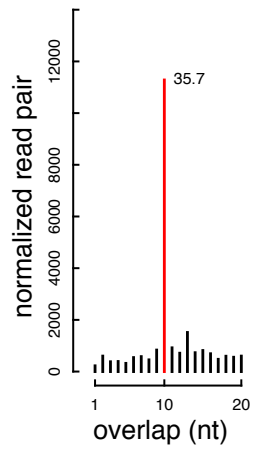
C



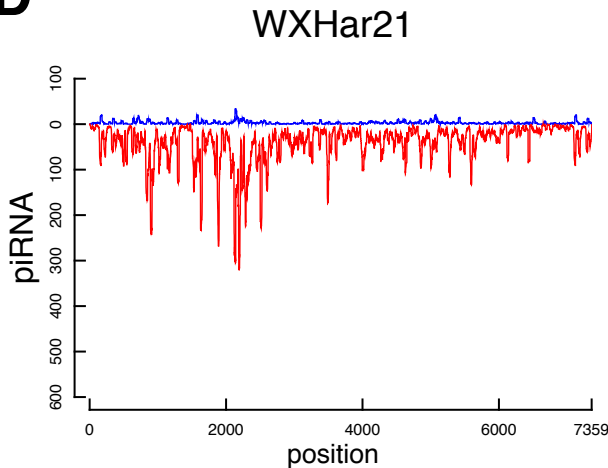
E



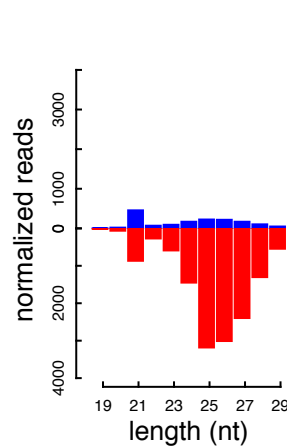
G



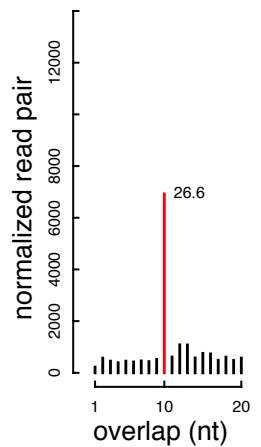
D



F

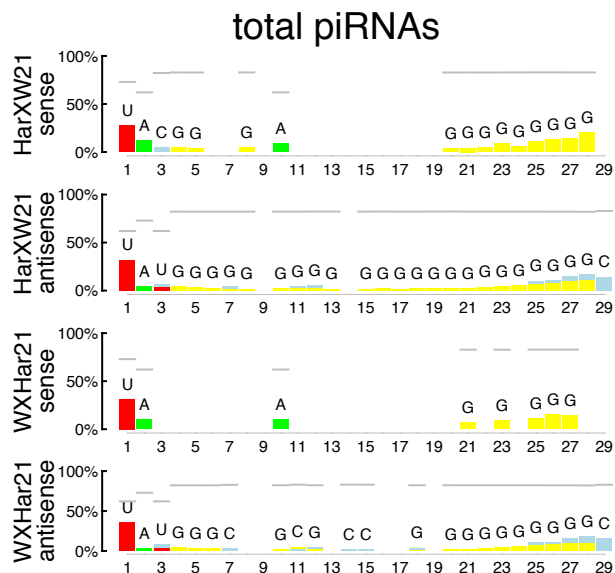


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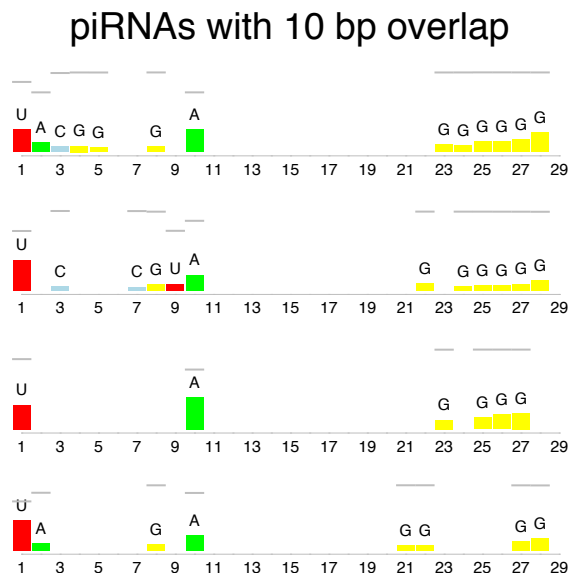


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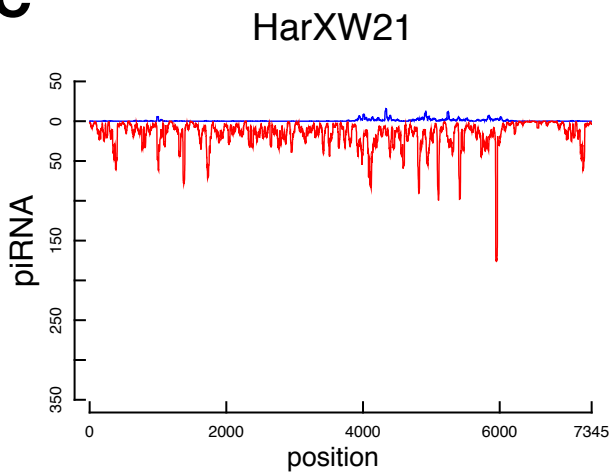
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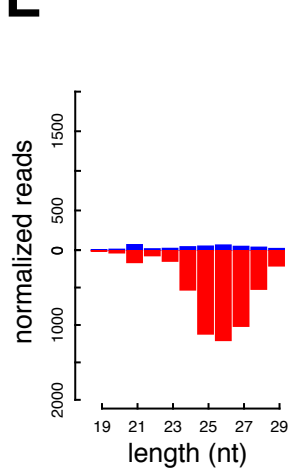
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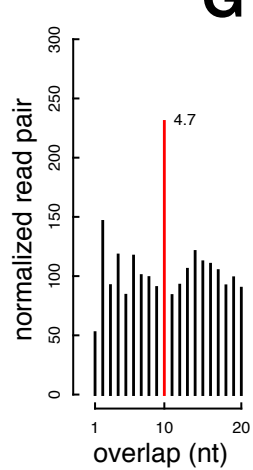
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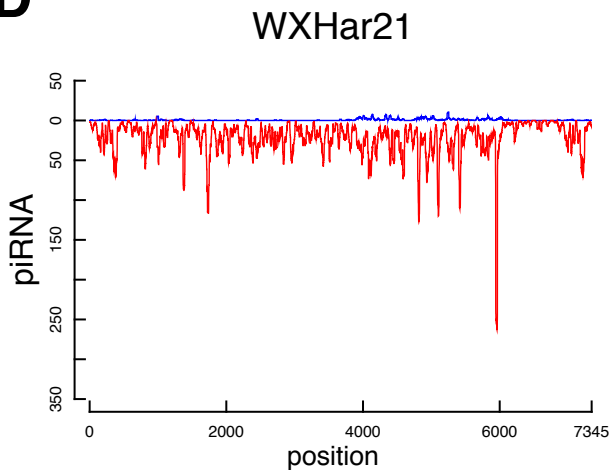
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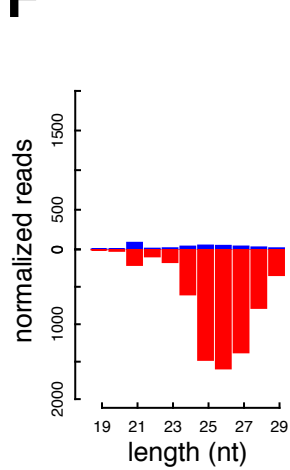
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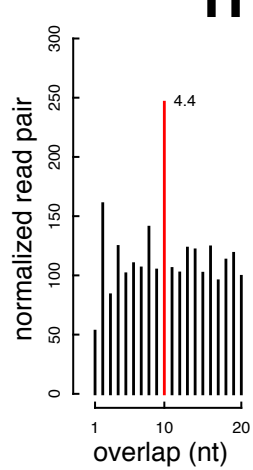
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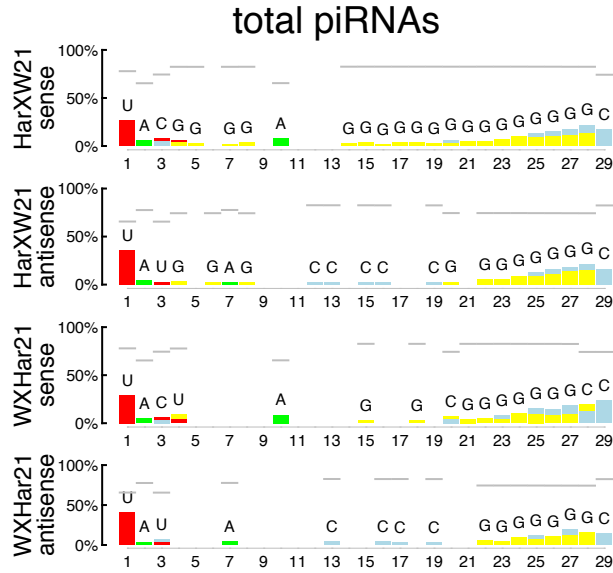


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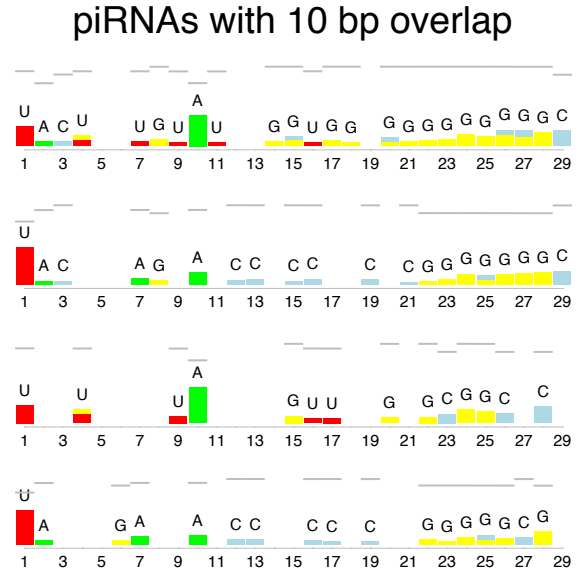


TAHRE

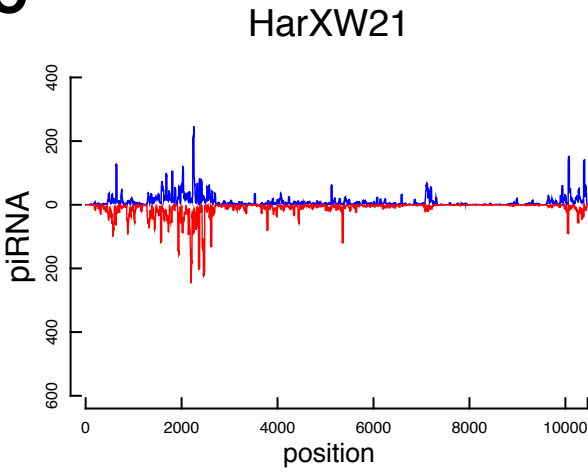
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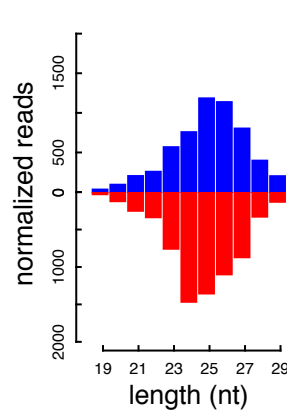
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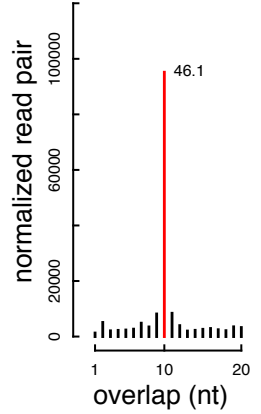
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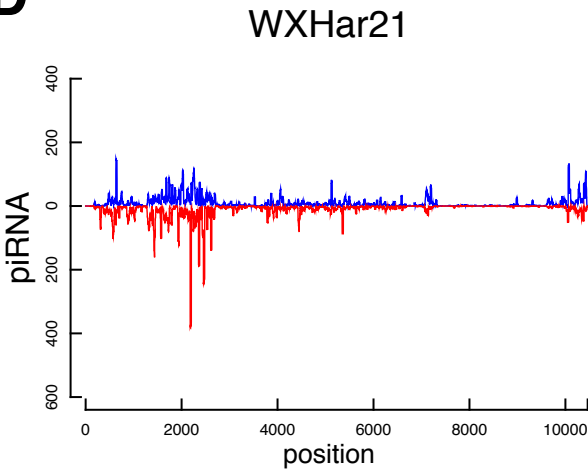
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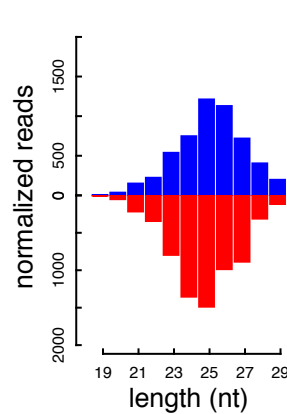
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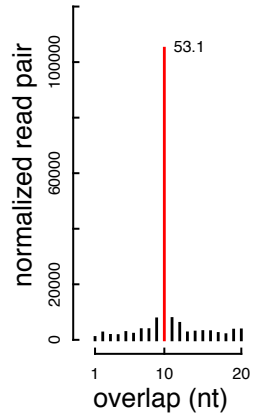
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F

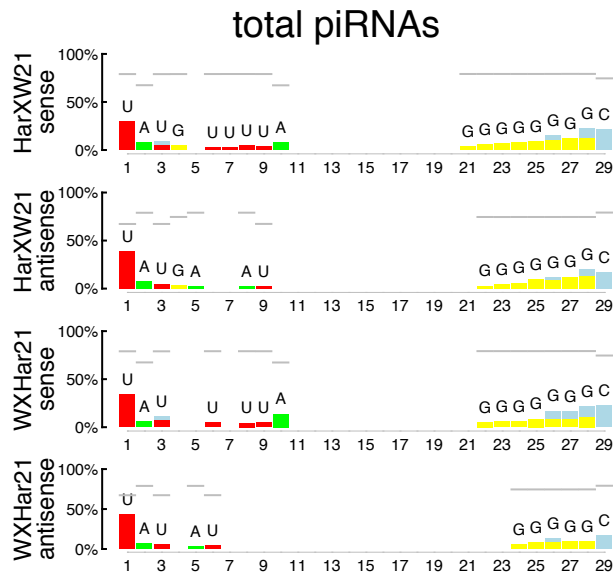


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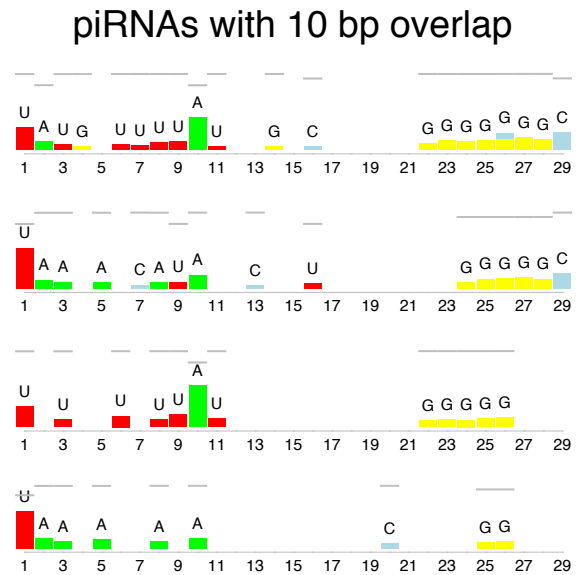


TART C TART B TART A

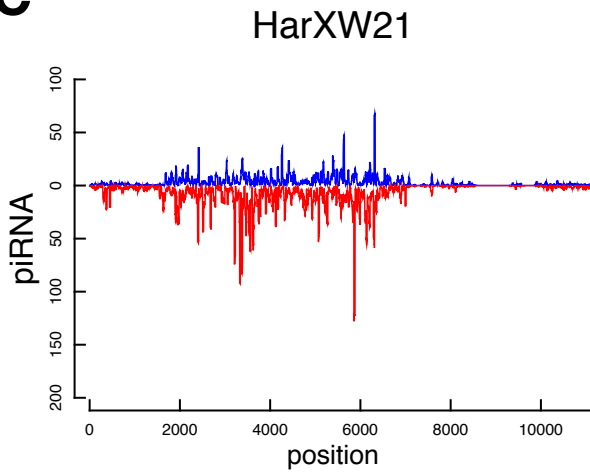
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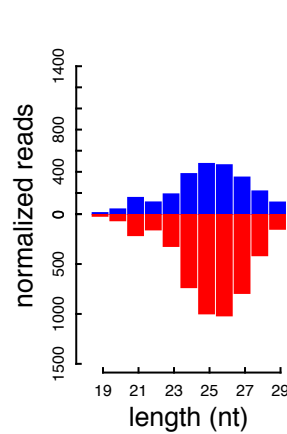
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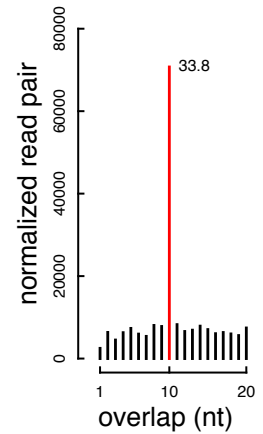
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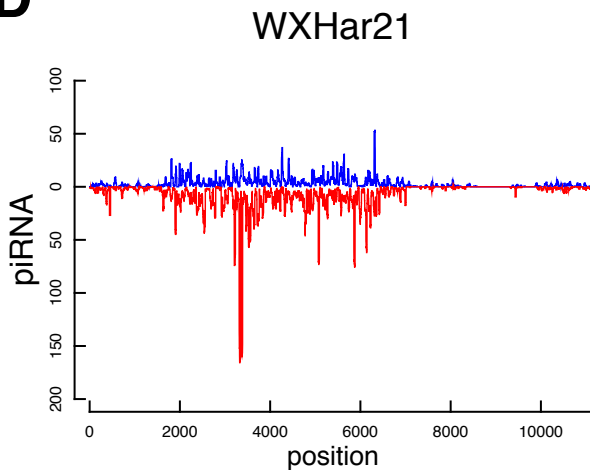
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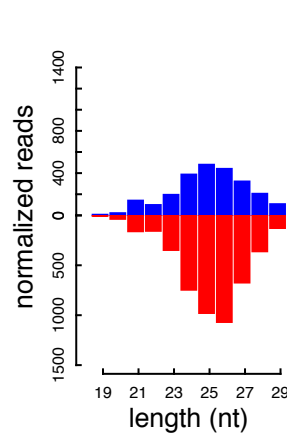
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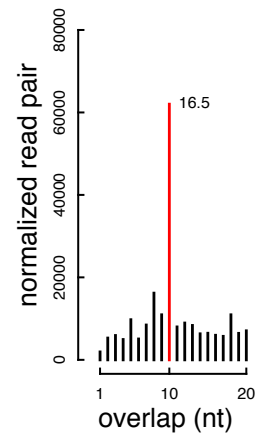
D



F



H



TART C TART B TART A#2

A
total piRNAs

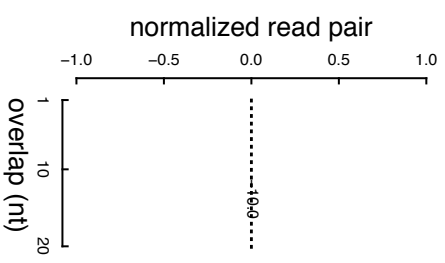
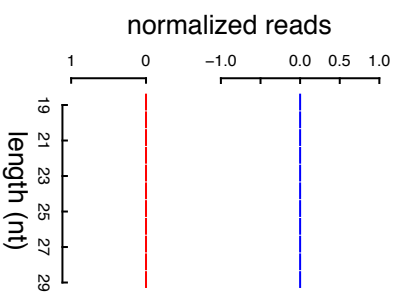
B
piRNAs with 10 bp overlap

HarXW21 sense
HarXW21 antisense
WXHar21 sense
WXHar21 antisense

C

E

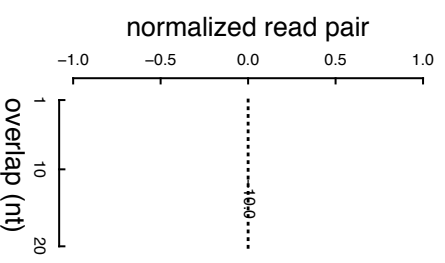
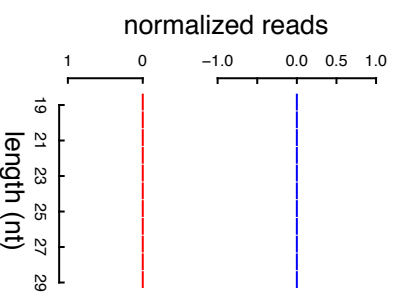
G



D

F

H



TART C TART B TART A#3

A
total piRNAs

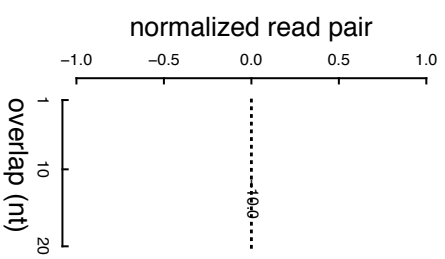
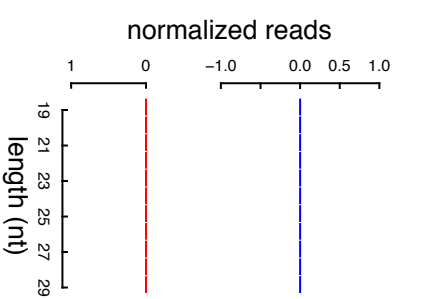
B
piRNAs with 10 bp overlap

HarXW21 sense
HarXW21 antisense
WXHar21 sense
WXHar21 antisense

C

E

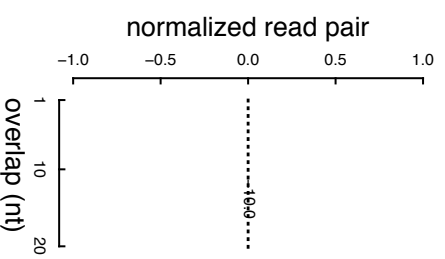
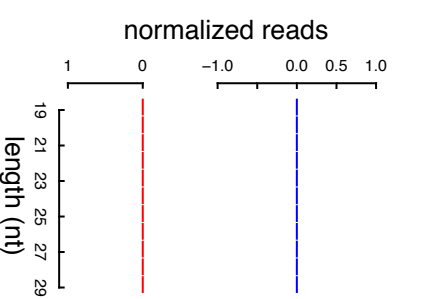
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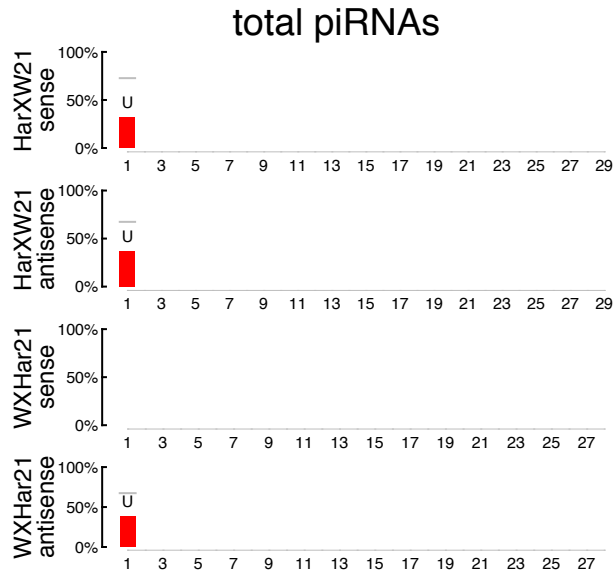
D

F

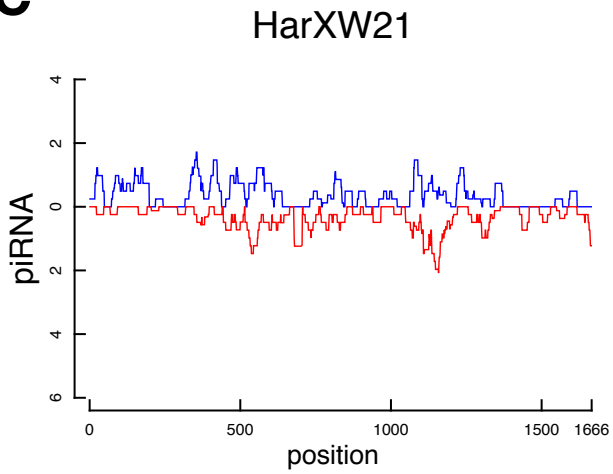
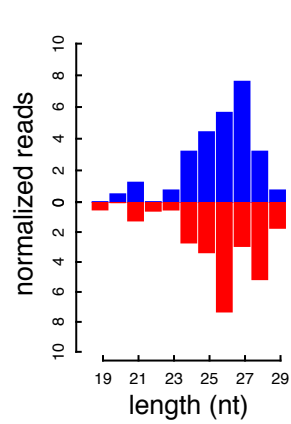
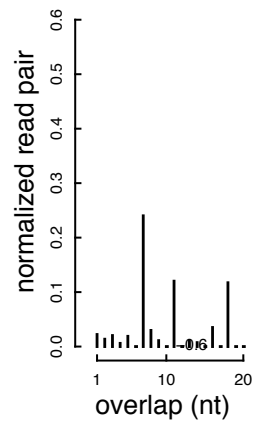
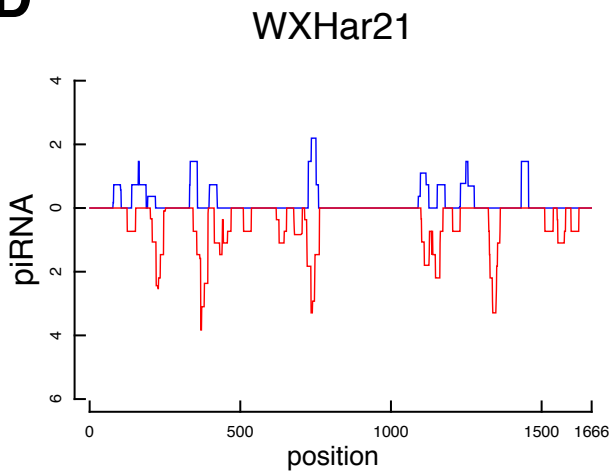
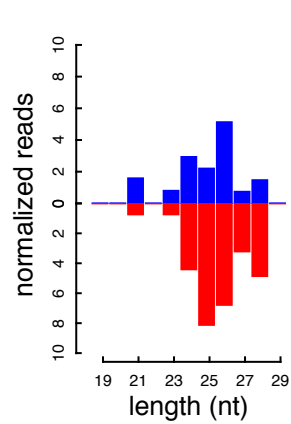
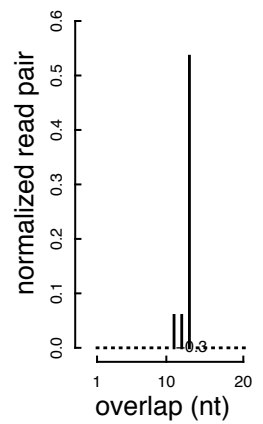
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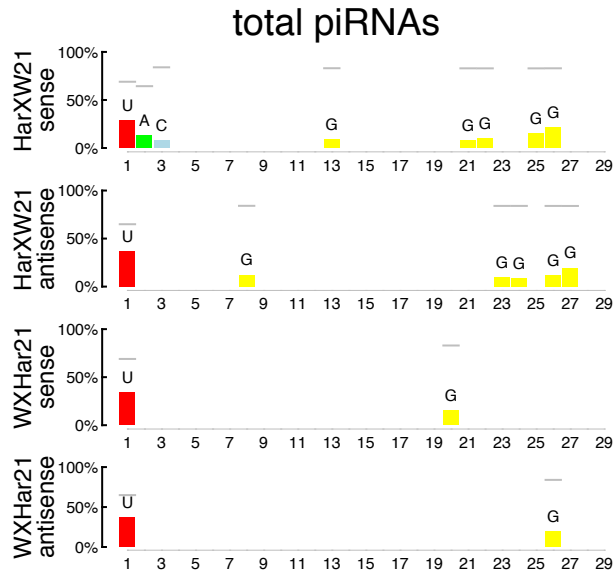
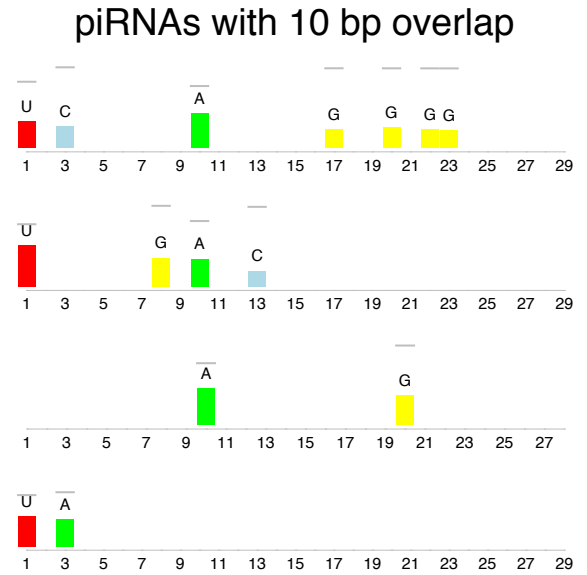
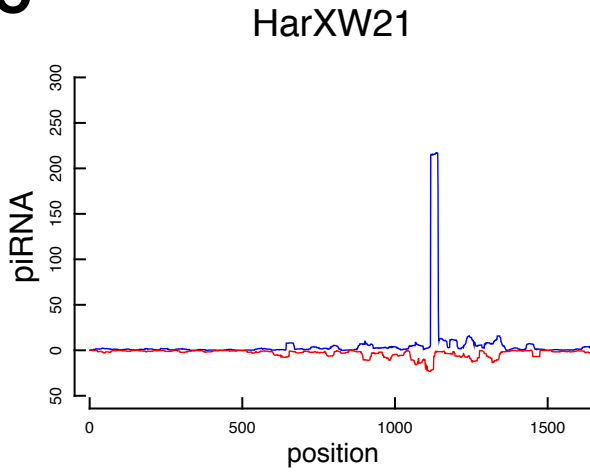
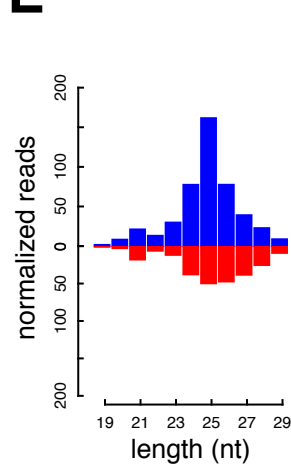
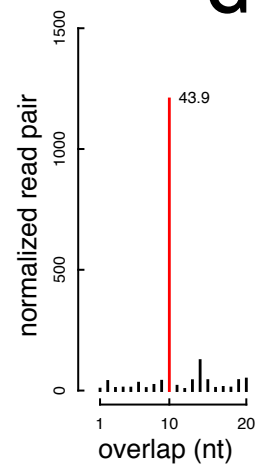
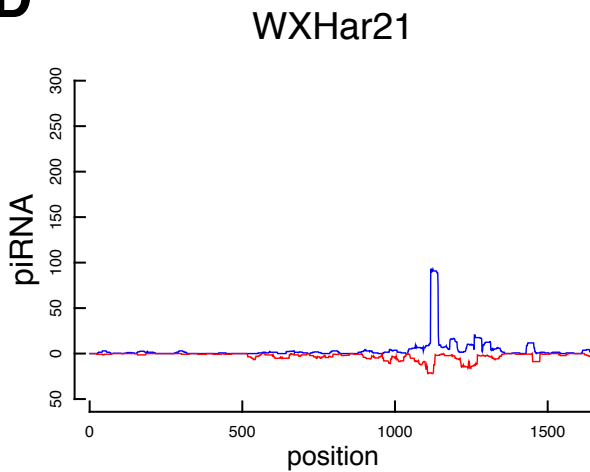
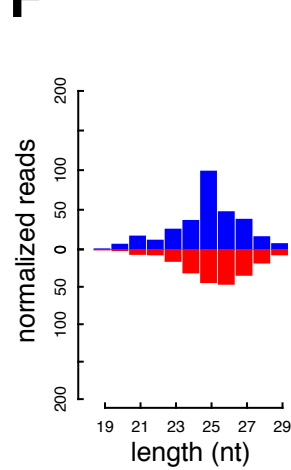
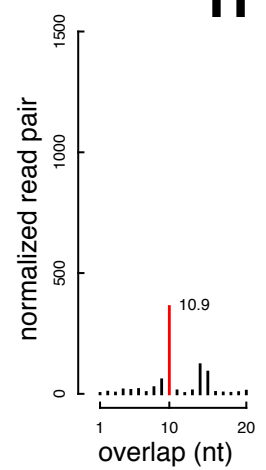
Tc1

A**B**

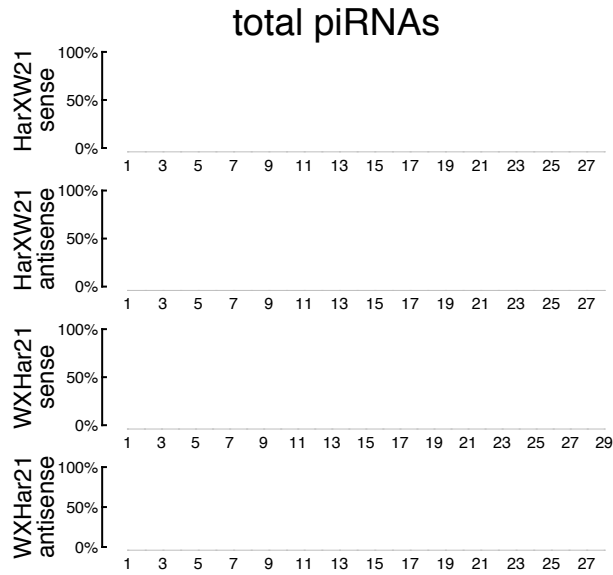
piRNAs with 10 bp overlap

C**E****G****D****F****H**

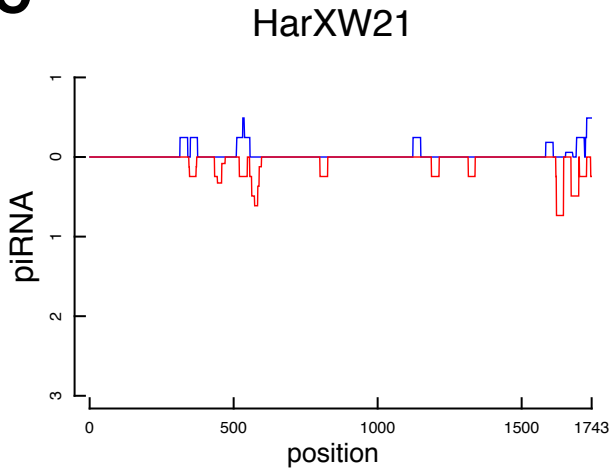
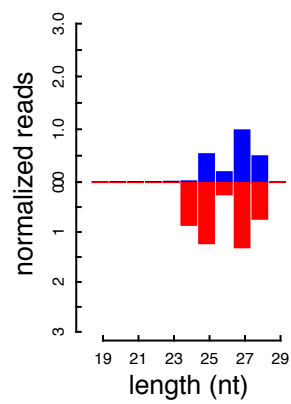
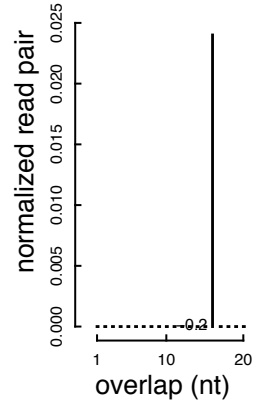
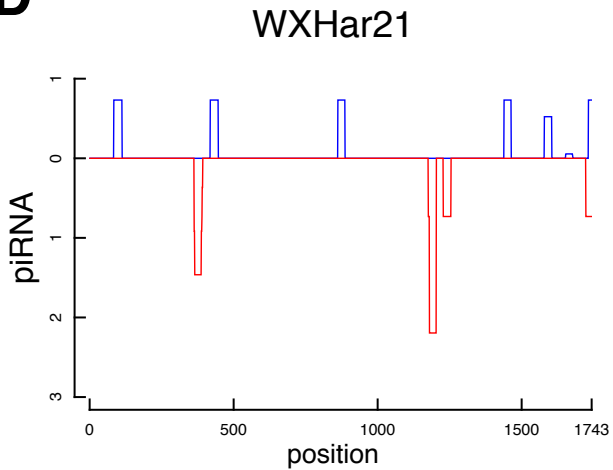
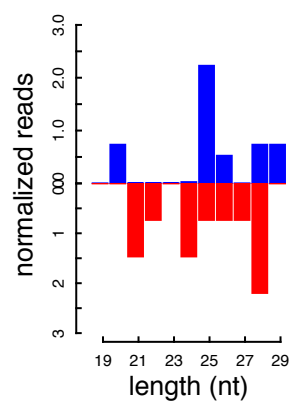
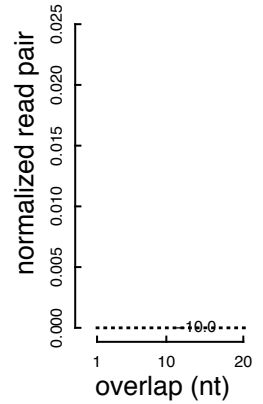
Tc1 2

A**B****C****E****G****D****F****H**

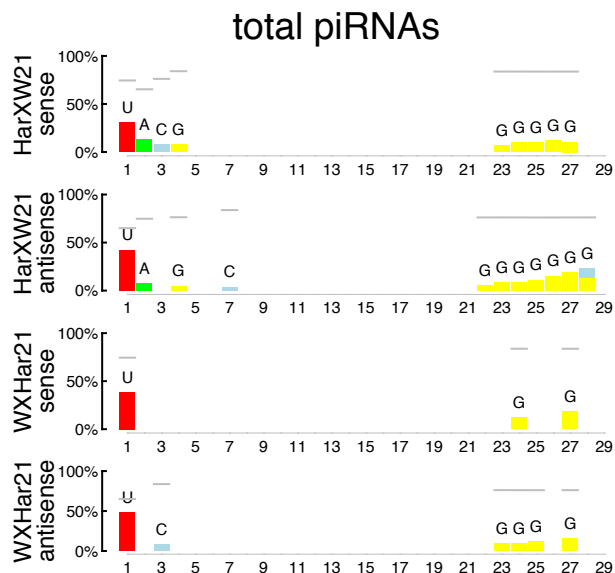
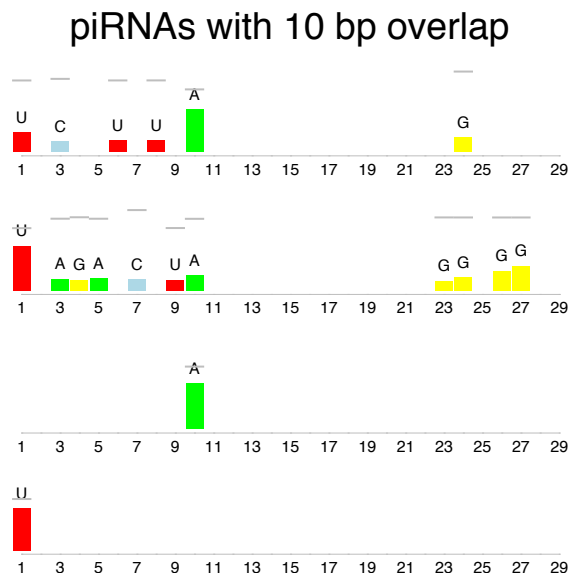
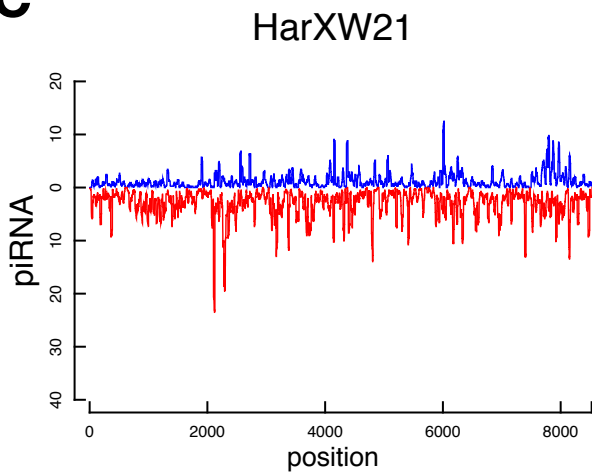
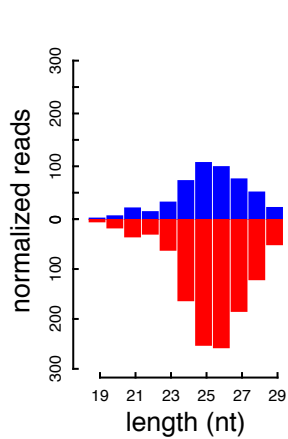
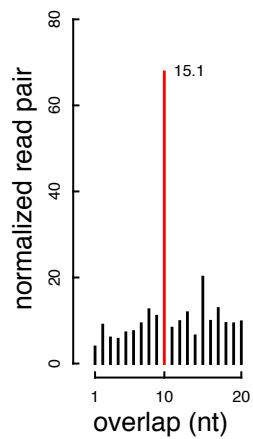
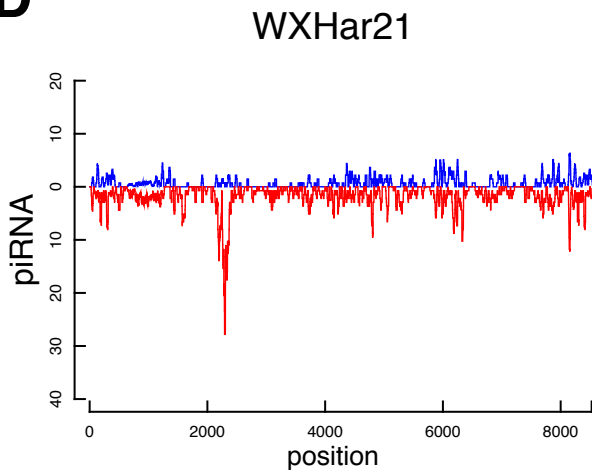
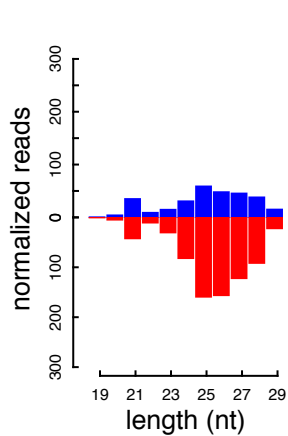
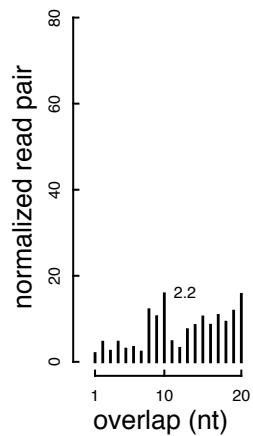
Tc3

A**B**

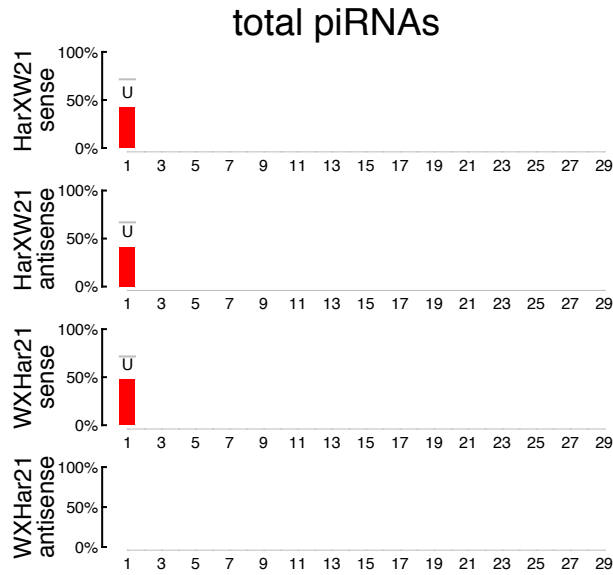
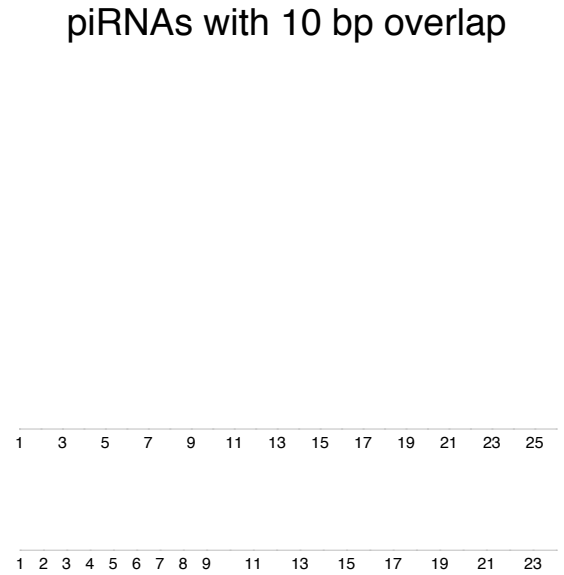
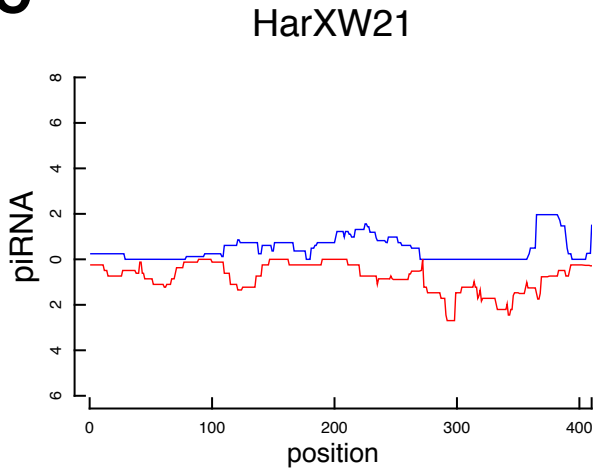
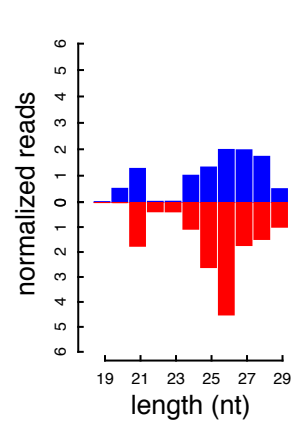
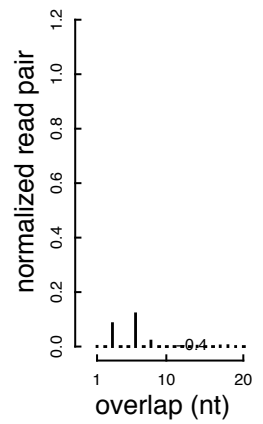
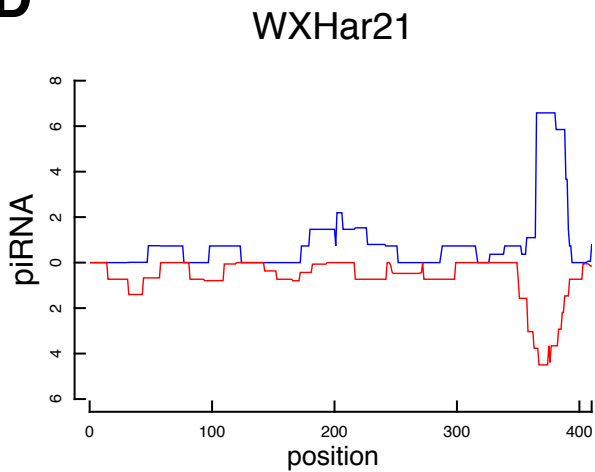
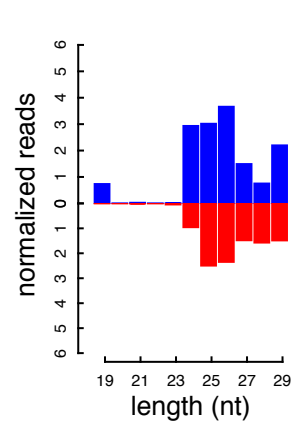
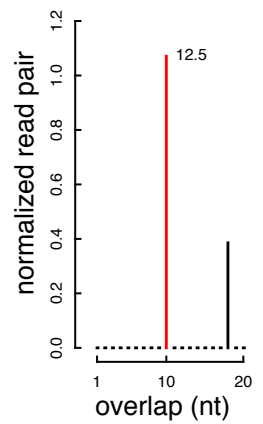
piRNAs with 10 bp overlap

C**E****G****D****F****H**

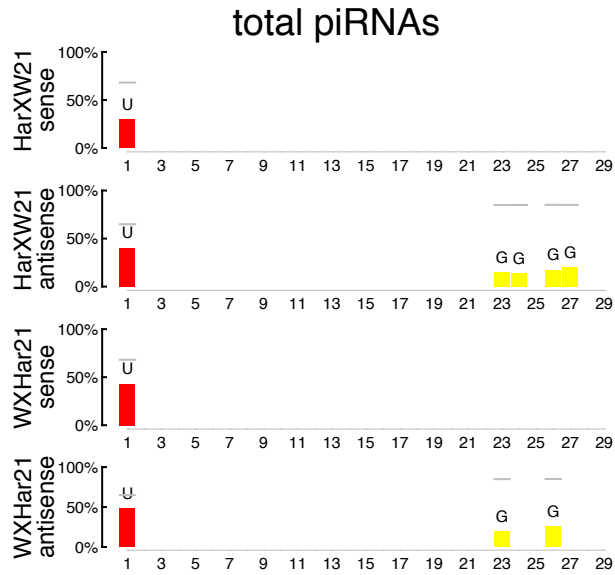
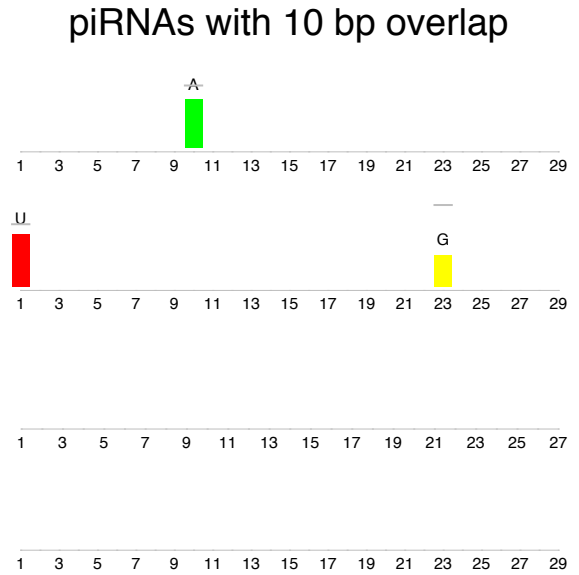
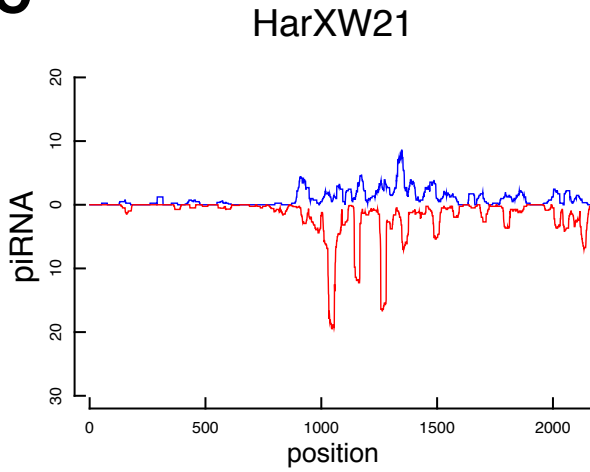
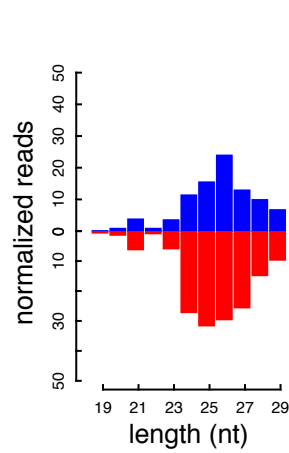
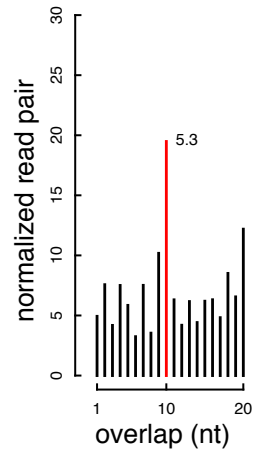
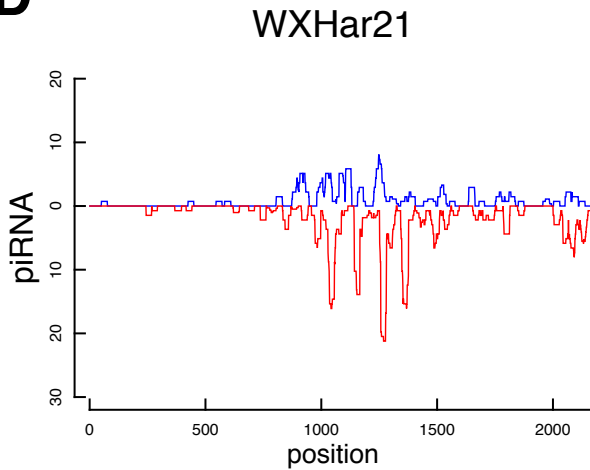
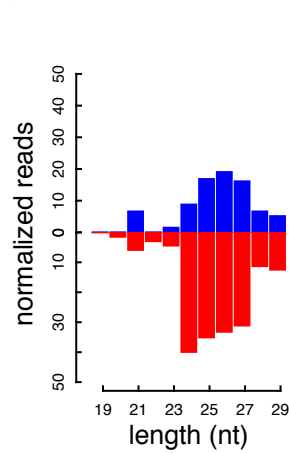
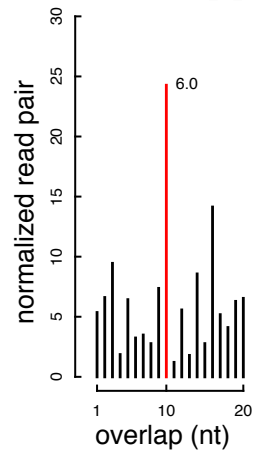
Tirant

A**B****C****E****G****D****F****H**

Tom1

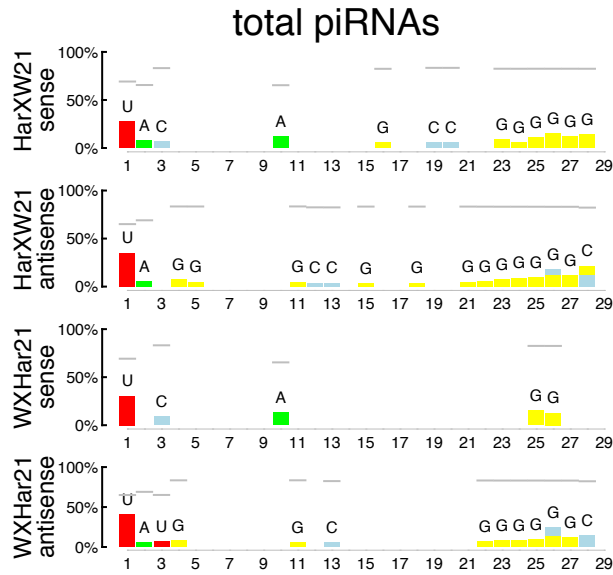
A**B****C****E****G****D****F****H**

transib1

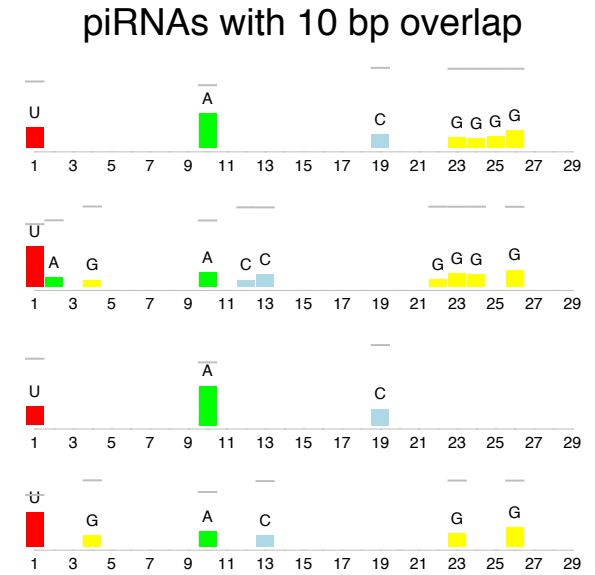
A**B****C****E****G****D****F****H**

transib2

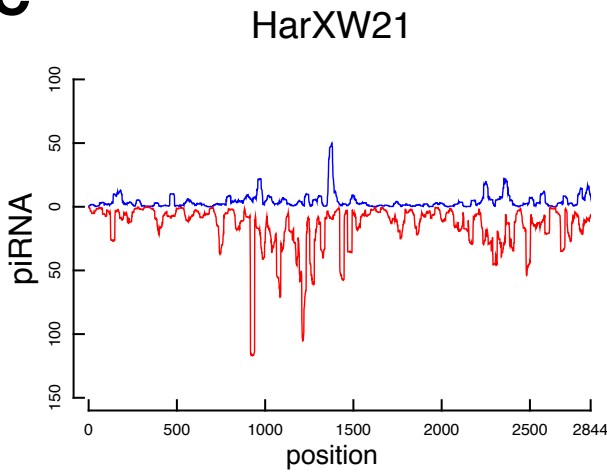
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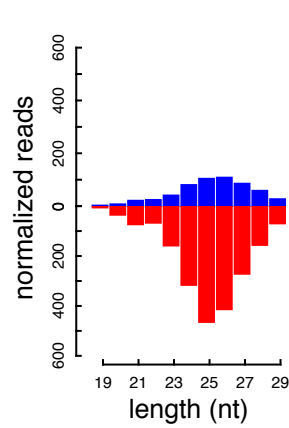
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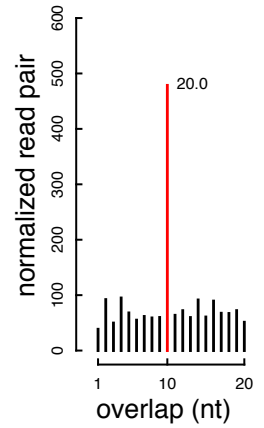
C



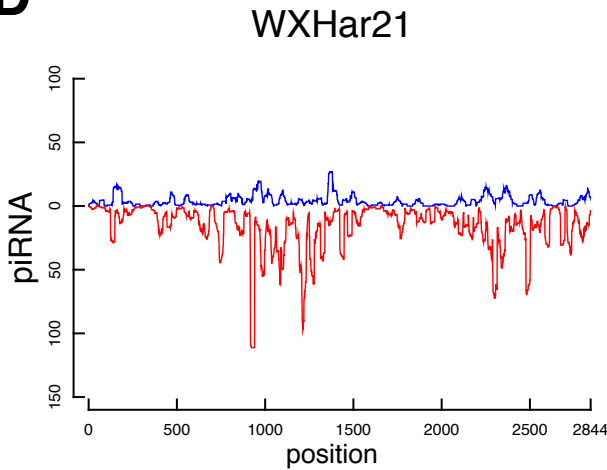
E



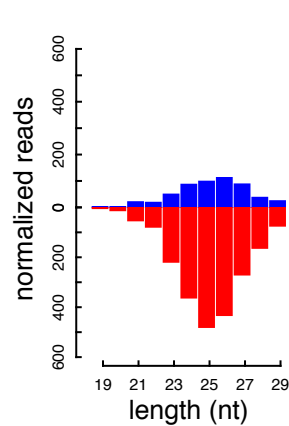
G



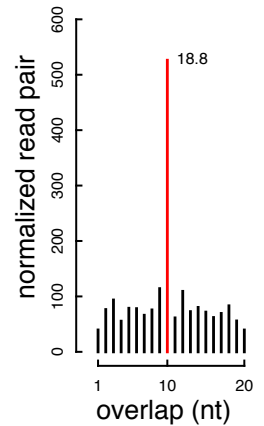
D



F

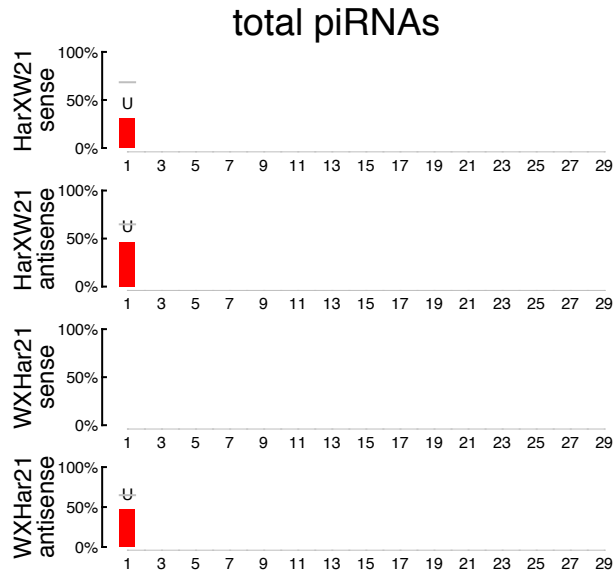


H

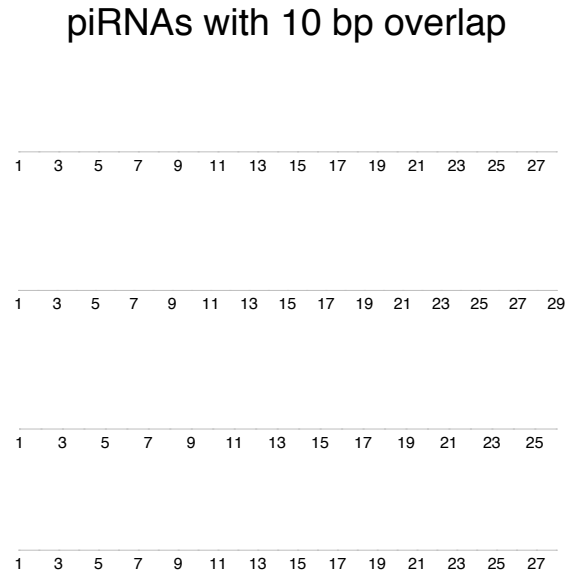


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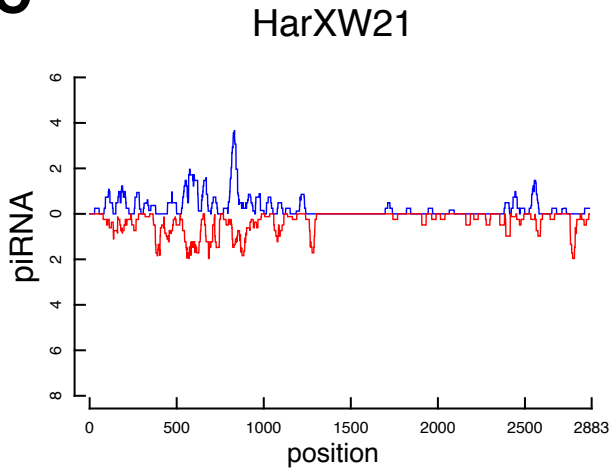
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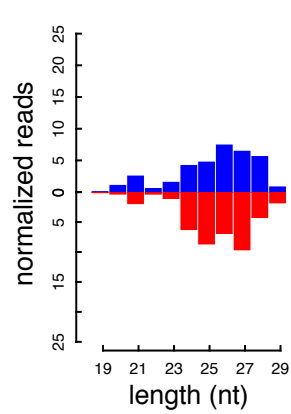
B



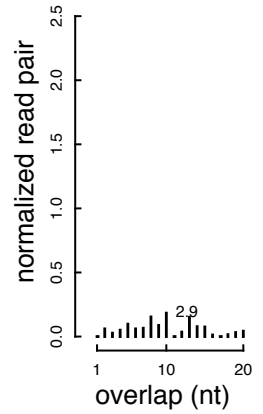
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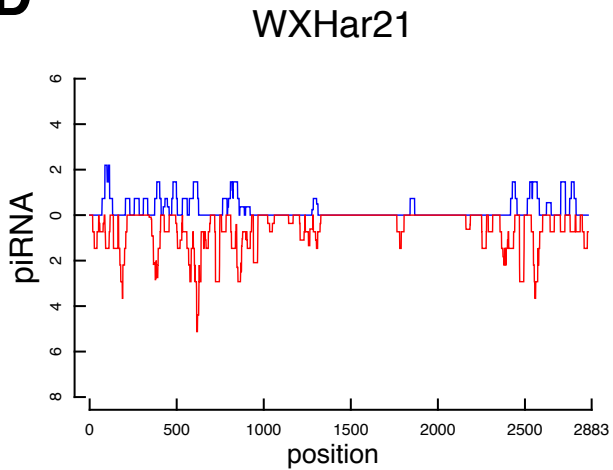
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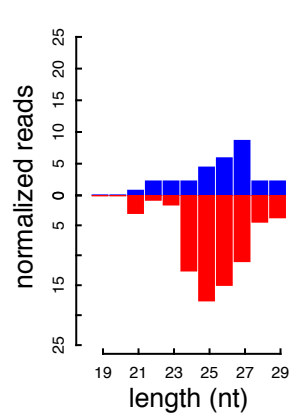
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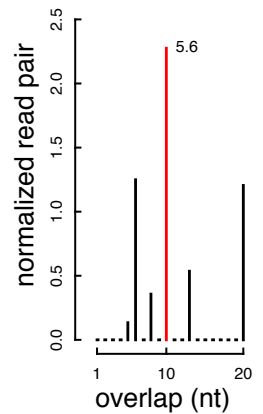
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F

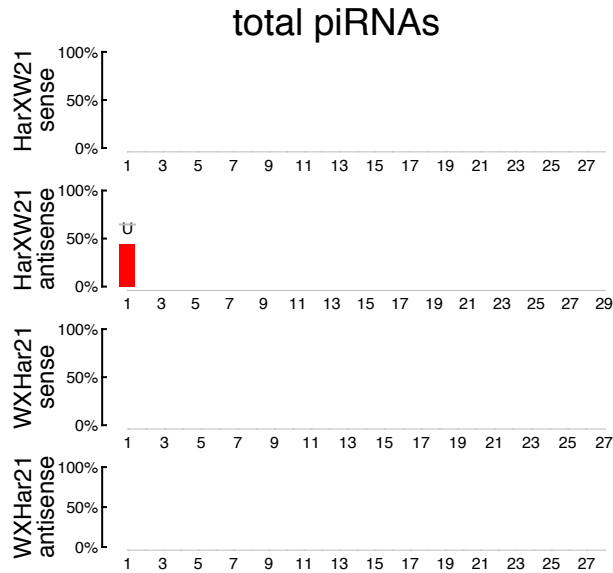


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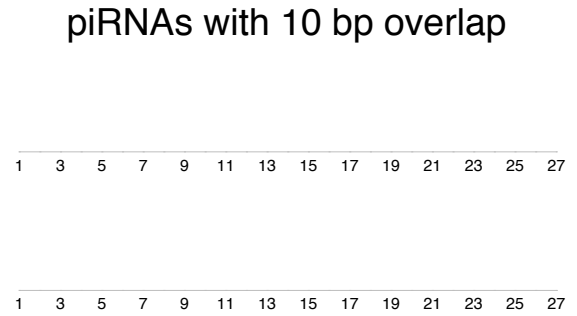


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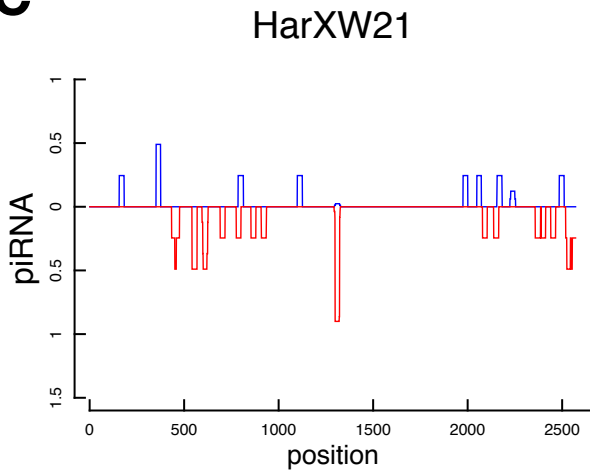
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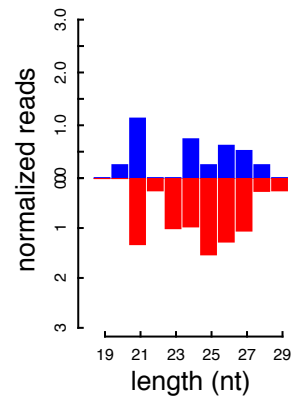
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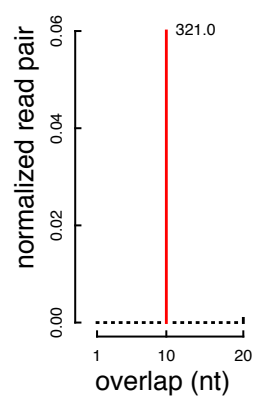
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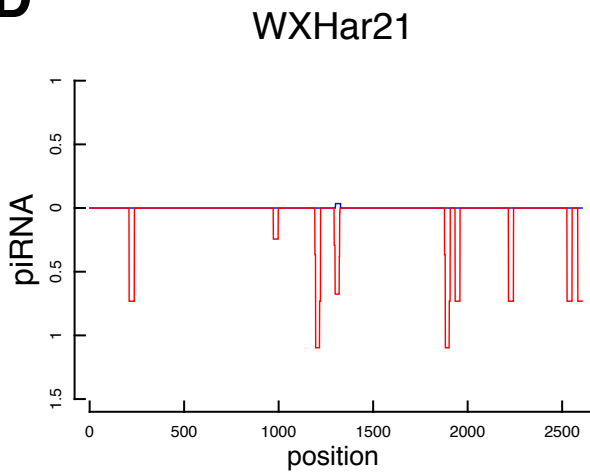
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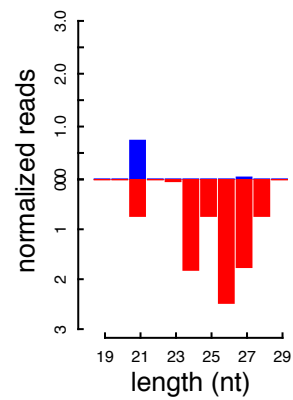
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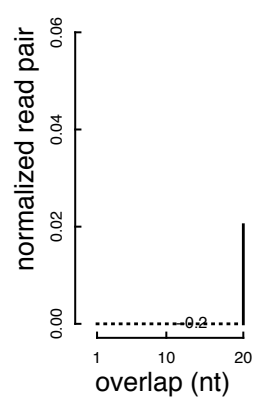
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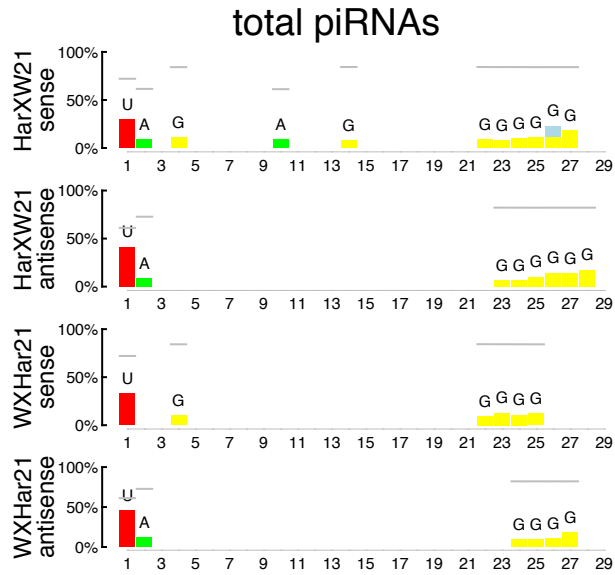
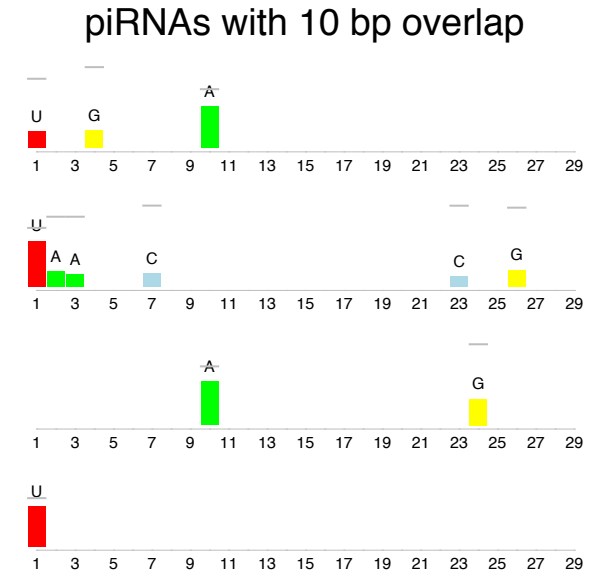
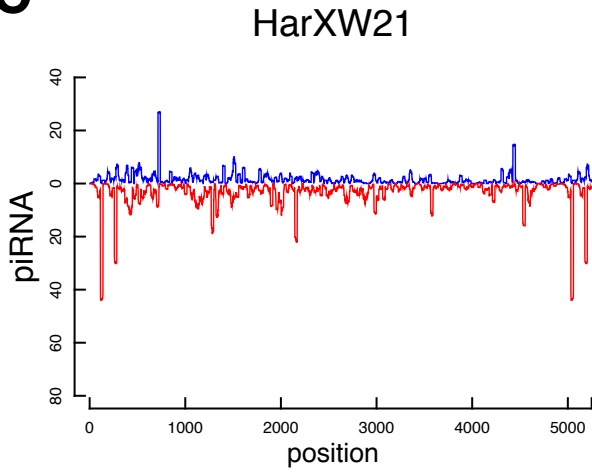
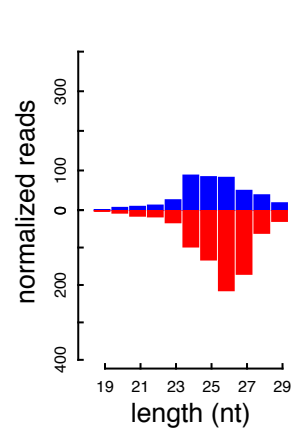
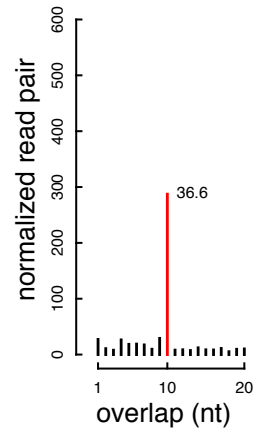
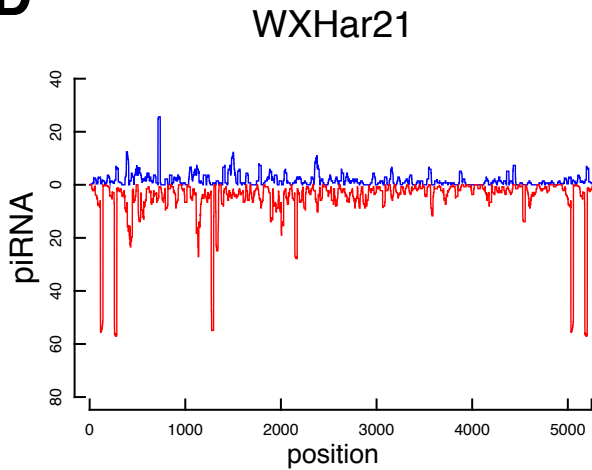
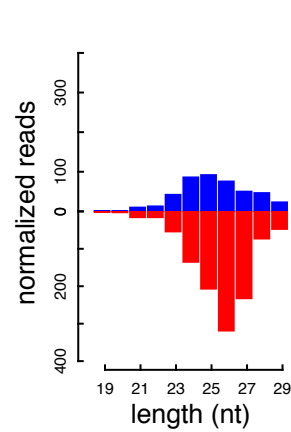
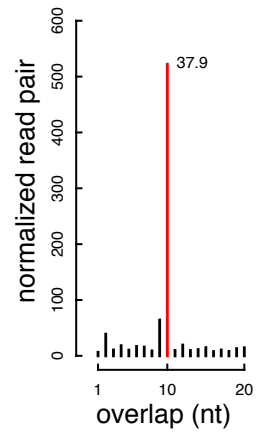
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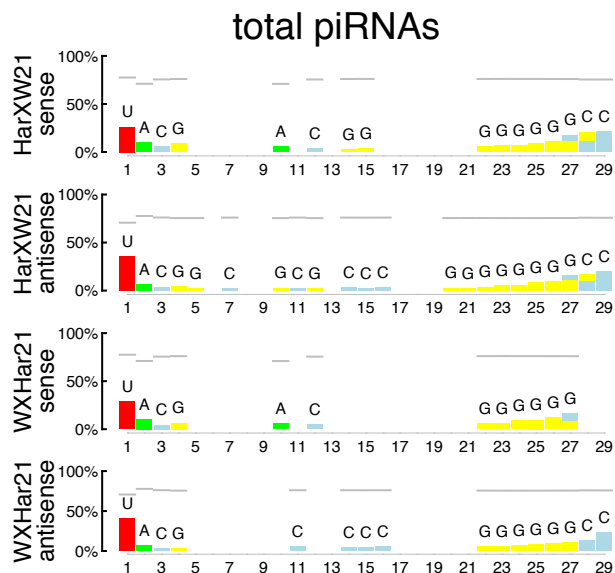
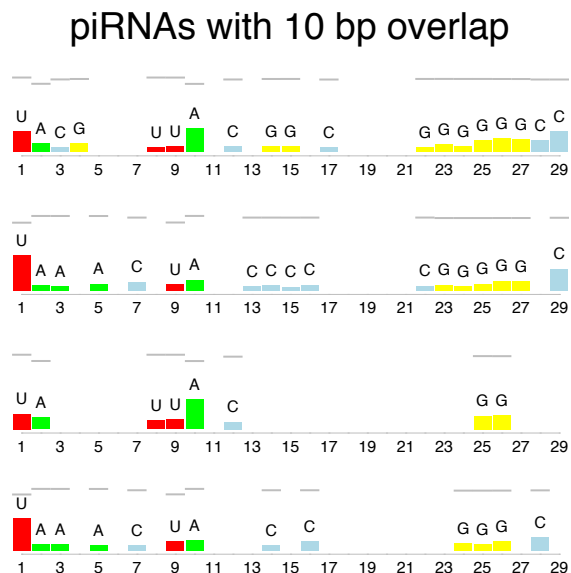
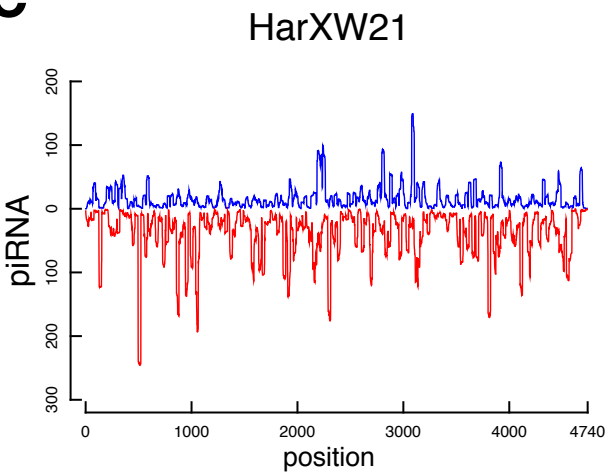
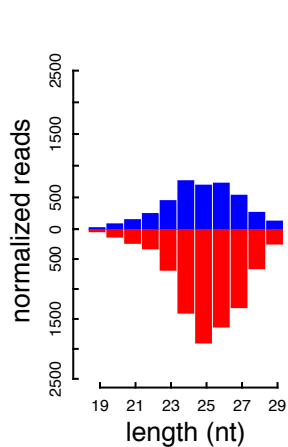
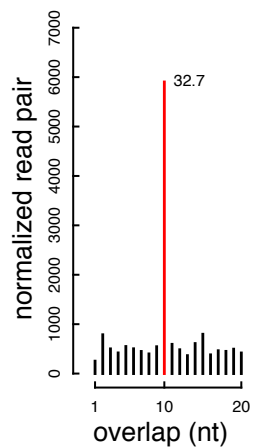
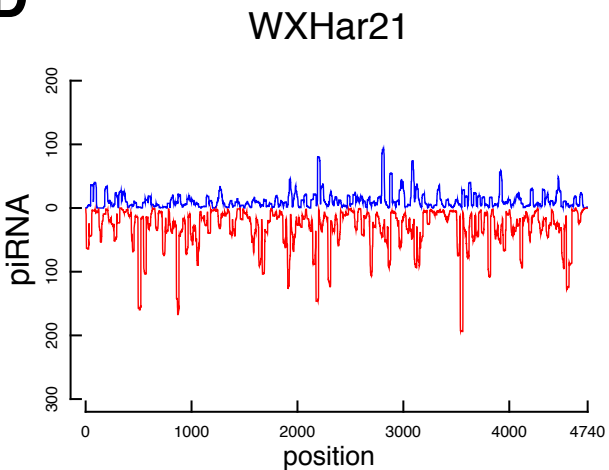
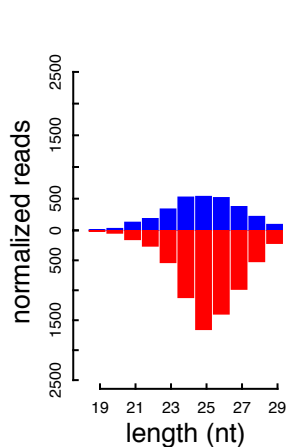
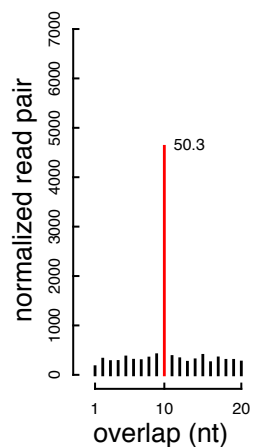
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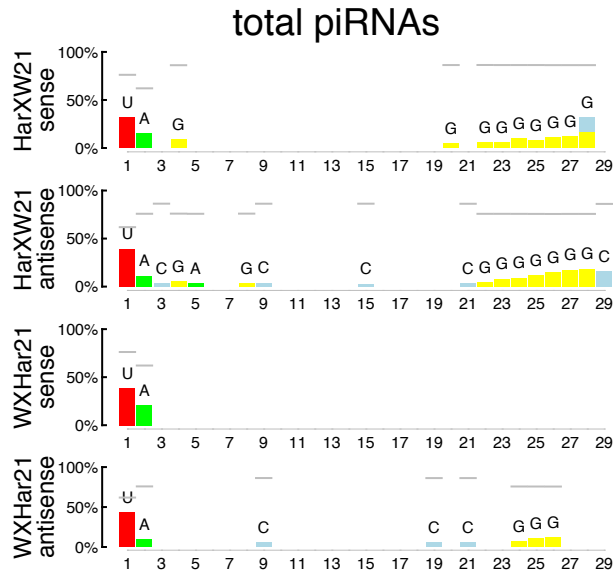
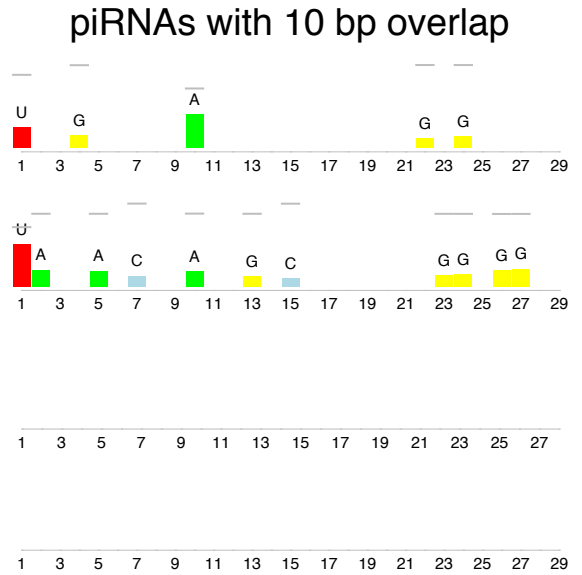
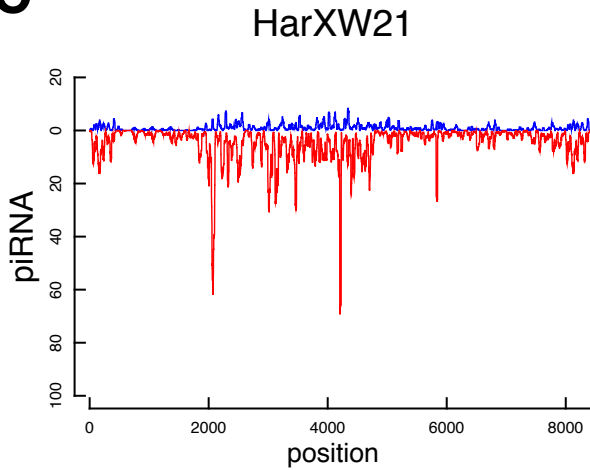
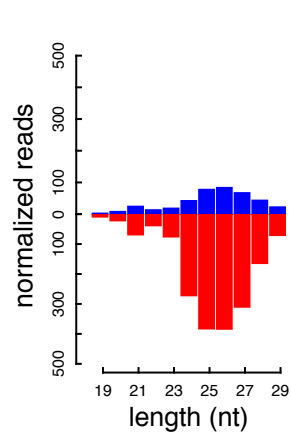
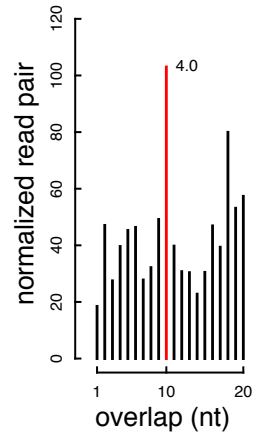
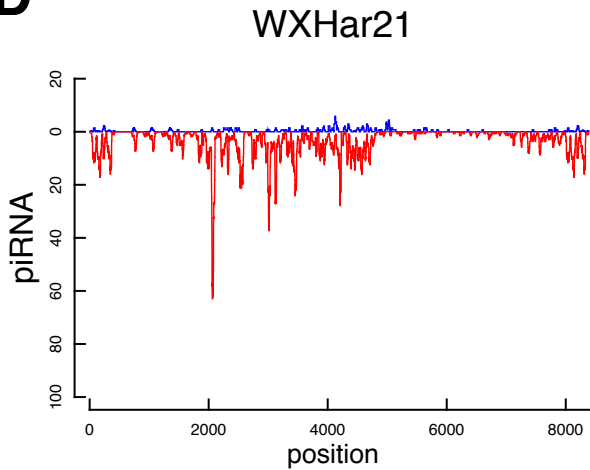
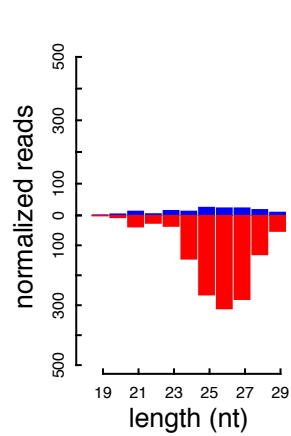
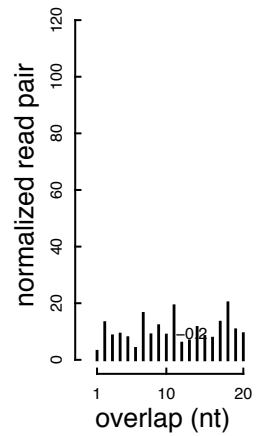
Transpac

A**B****C****E****G****D****F****H**

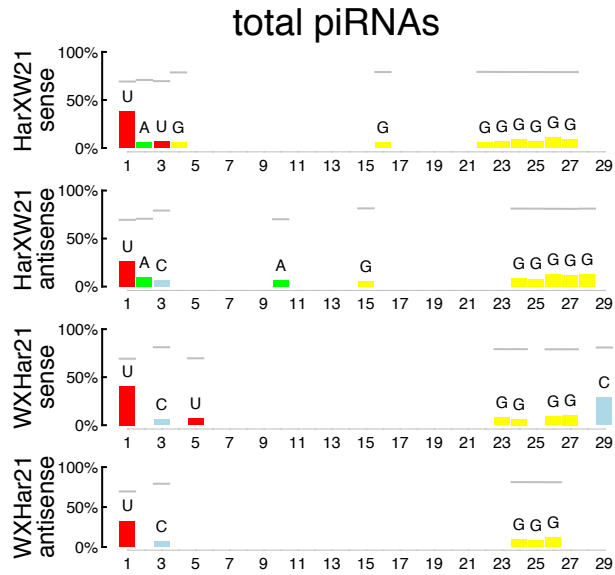
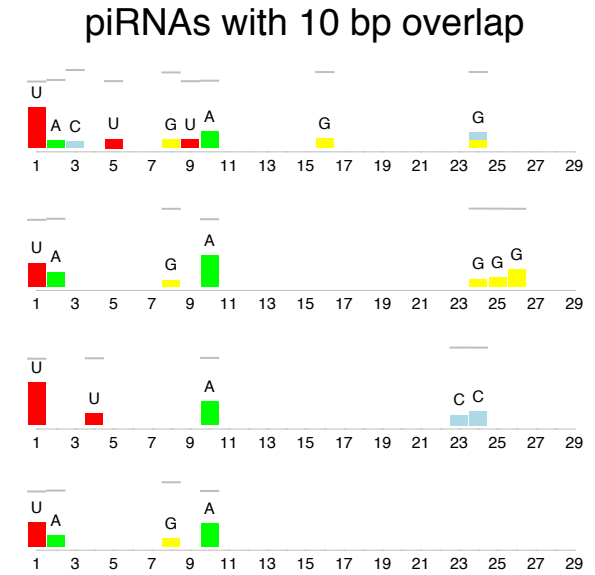
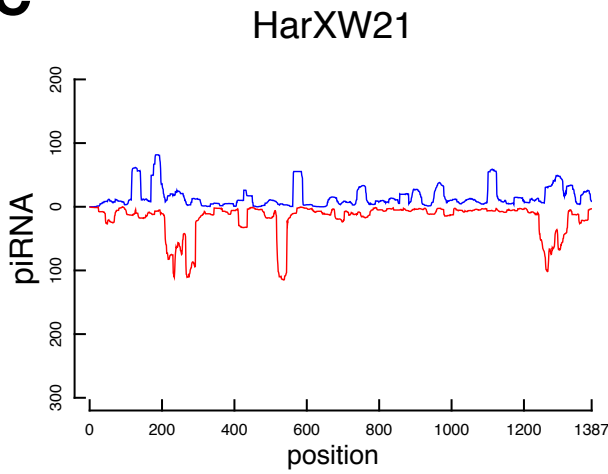
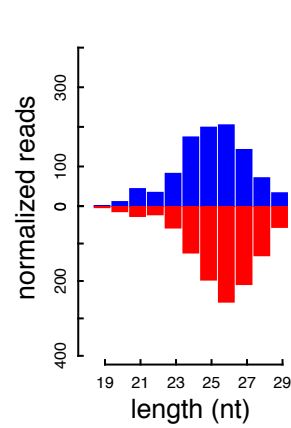
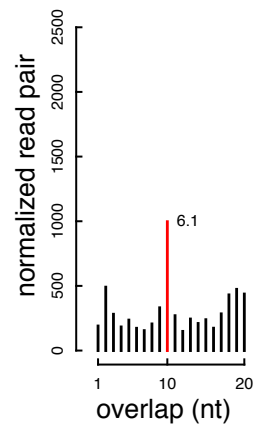
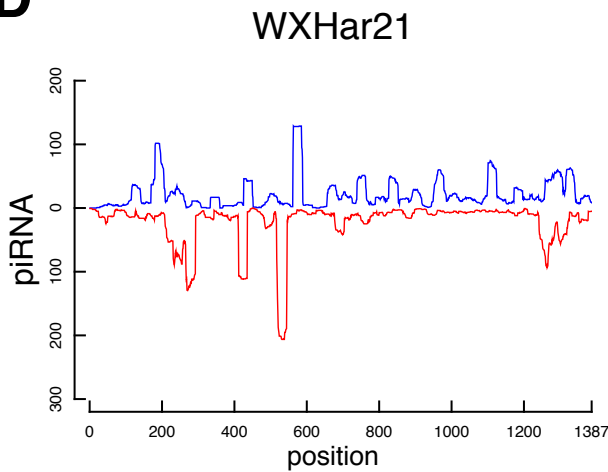
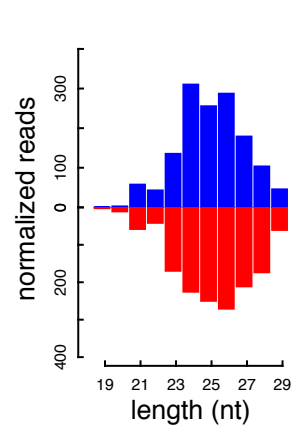
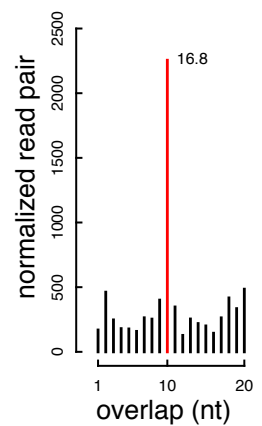
X element

A**B****C****E****G****D****F****H**

ZAM

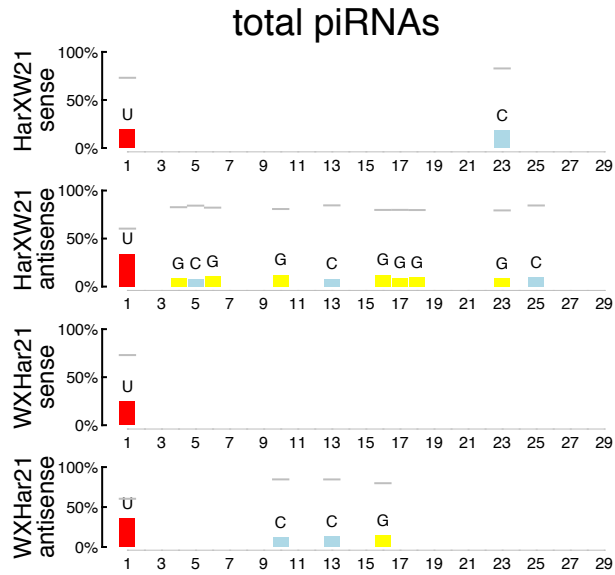
A**B****C****E****G****D****F****H**

mst40

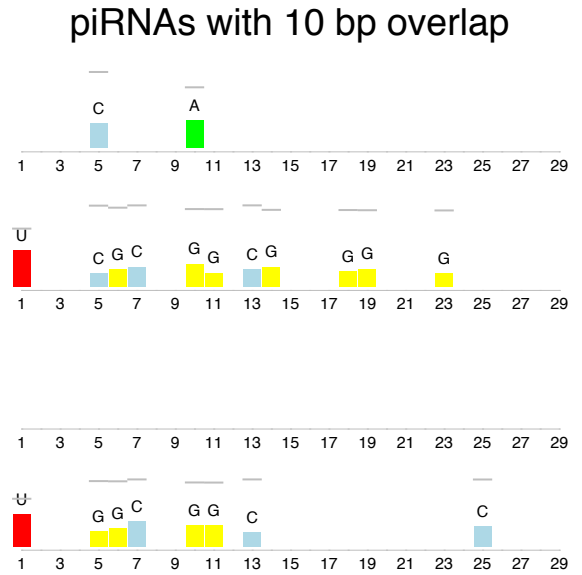
A**B****C****E****G****D****F****H**

suffix

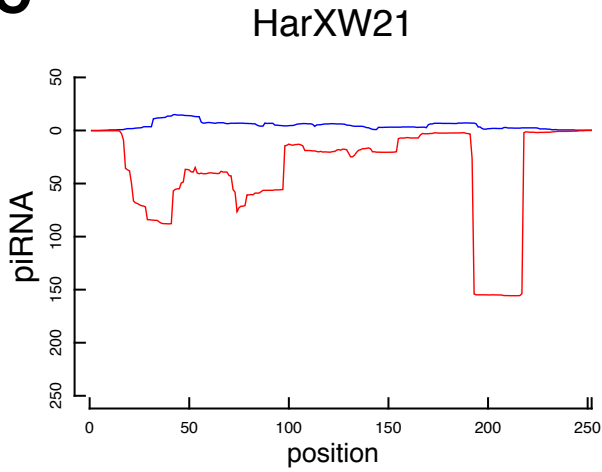
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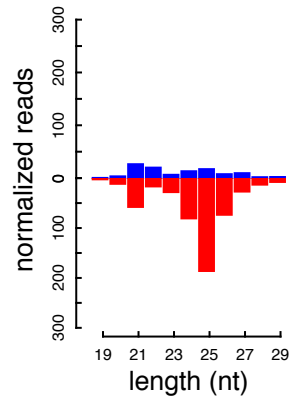
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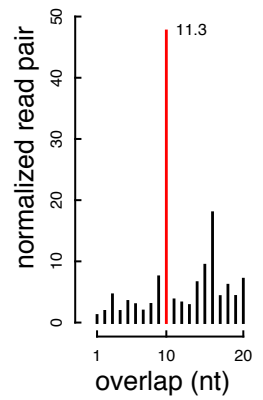
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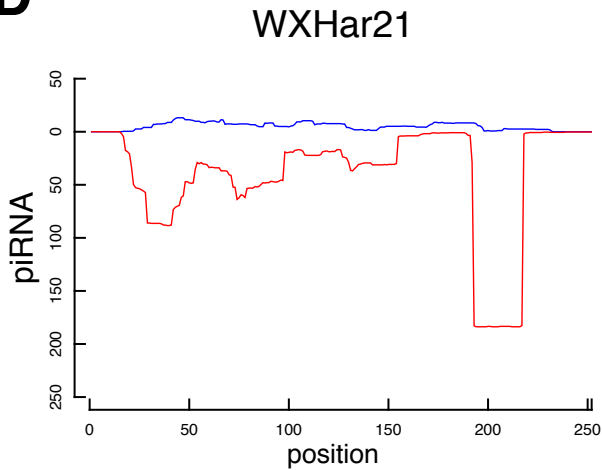
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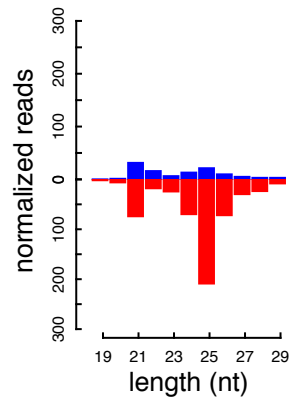
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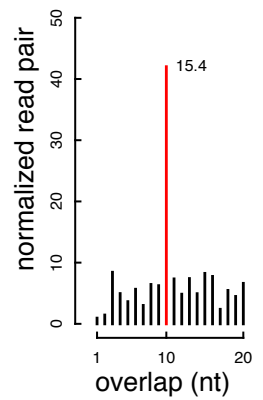
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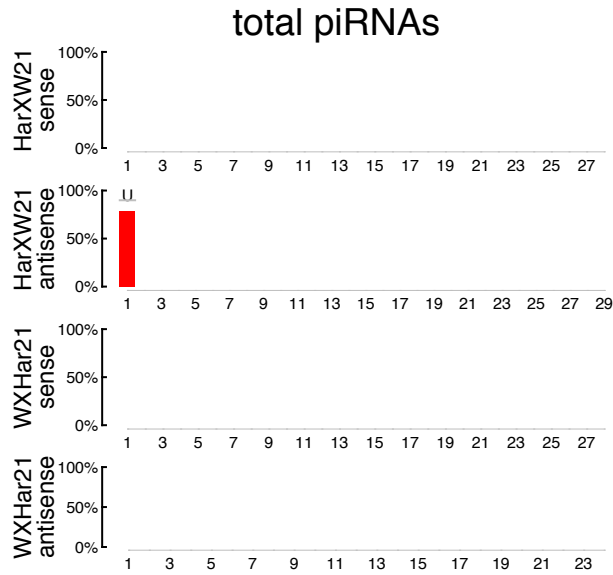
F



H



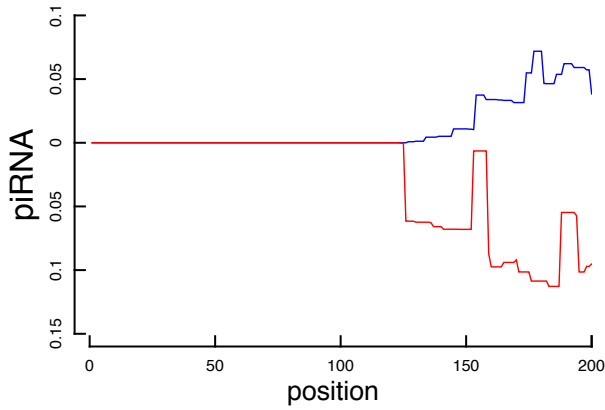
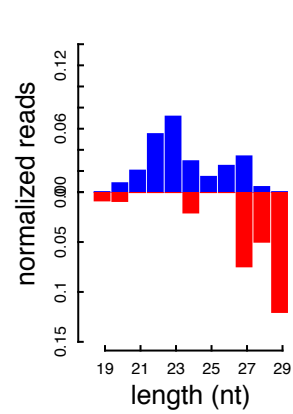
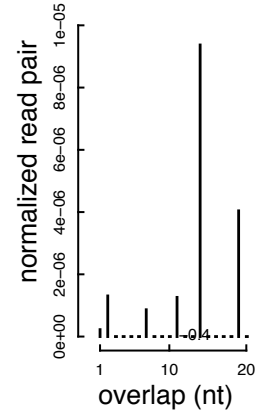
satellite

A**B**

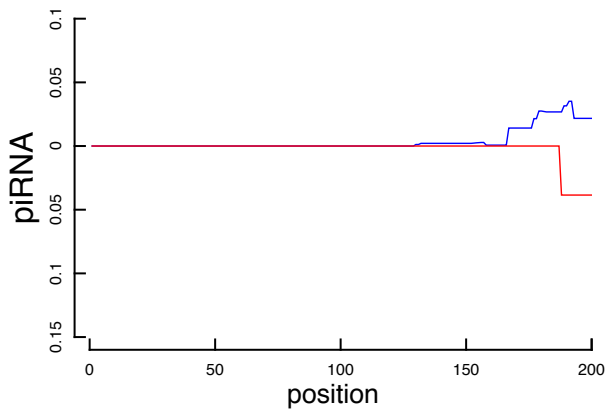
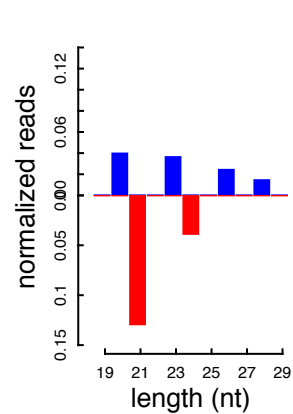
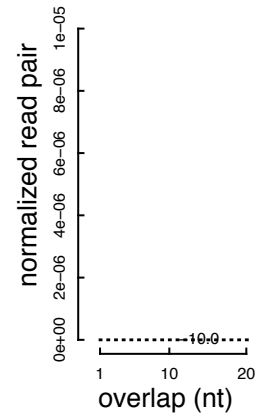
piRNAs with 10 bp overlap

C

HarXW21

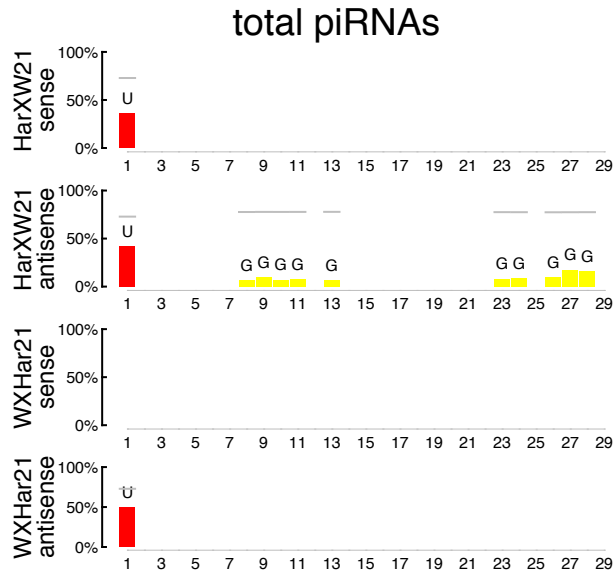
**E****G****D**

WXHar21

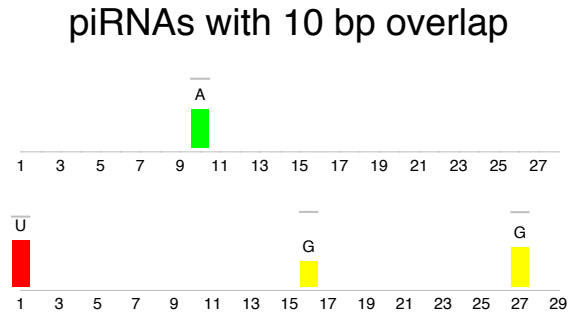
**F****H**

stellate

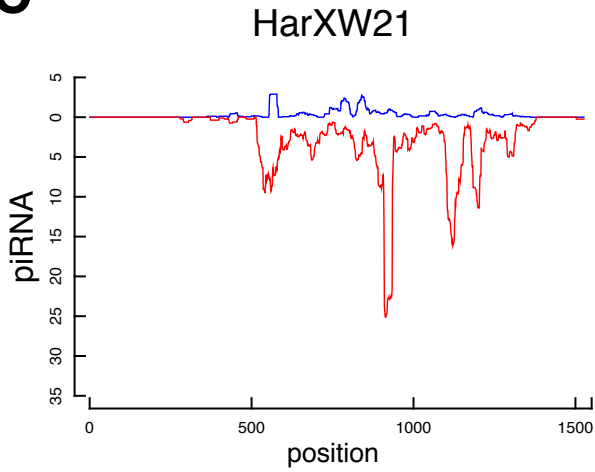
A



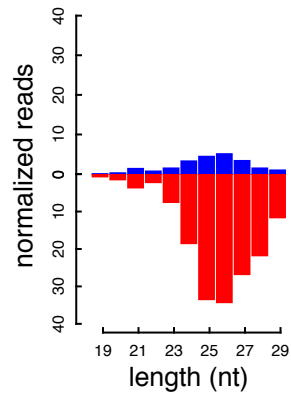
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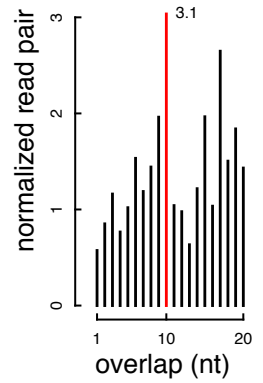
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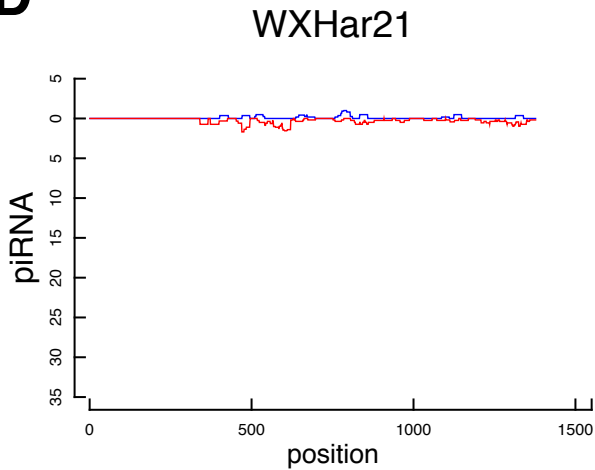
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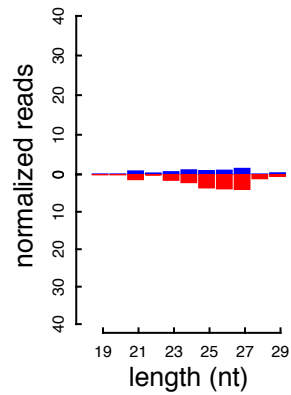
G



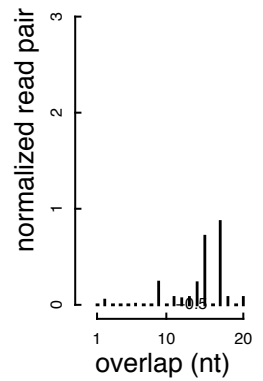
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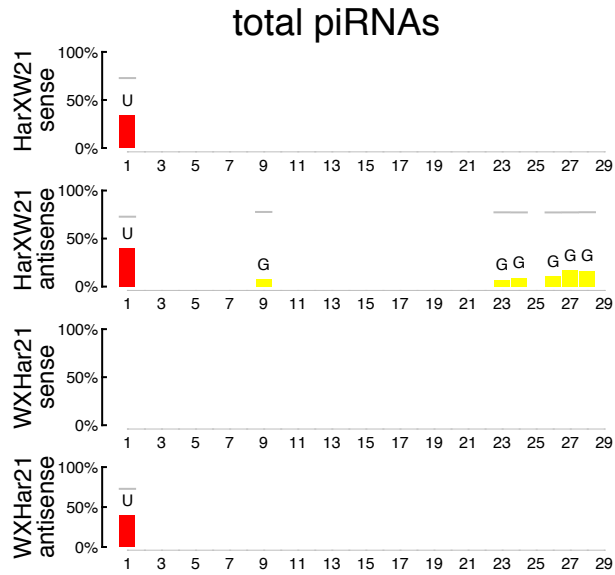
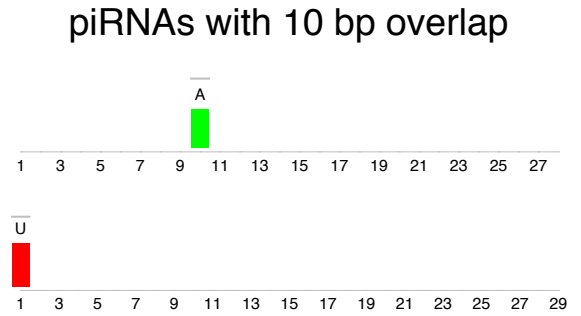
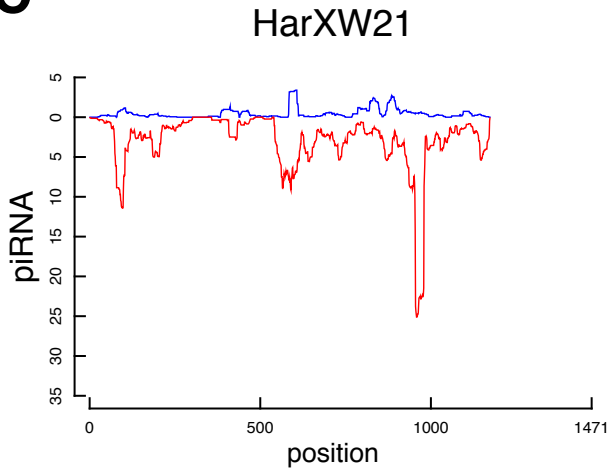
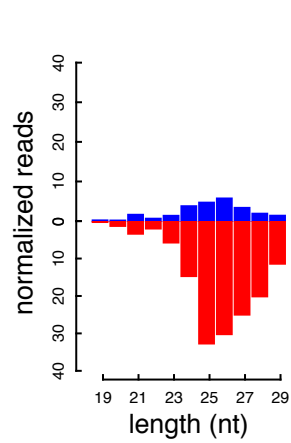
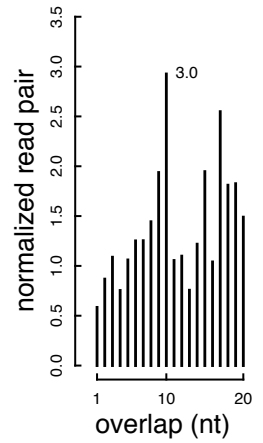
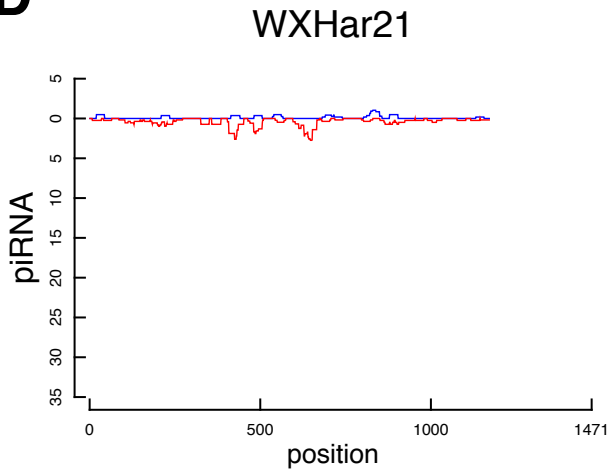
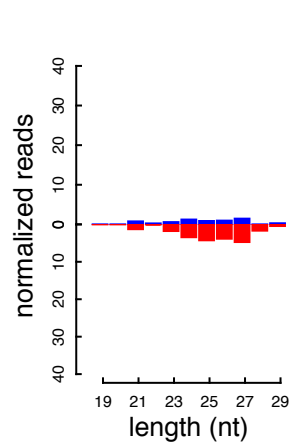
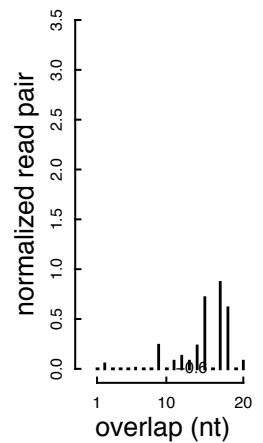
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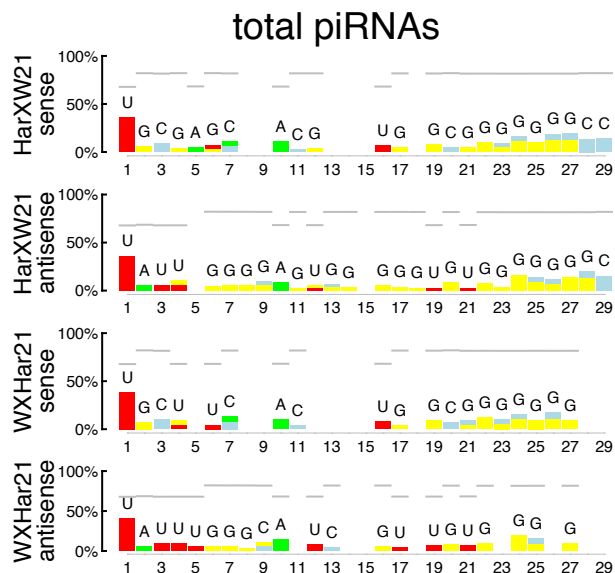
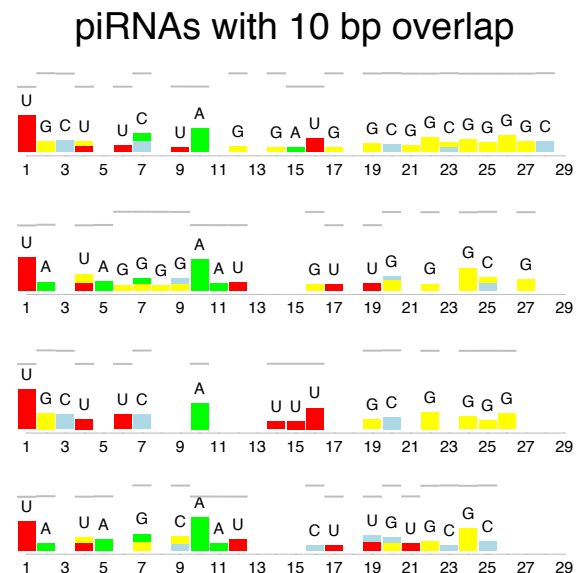
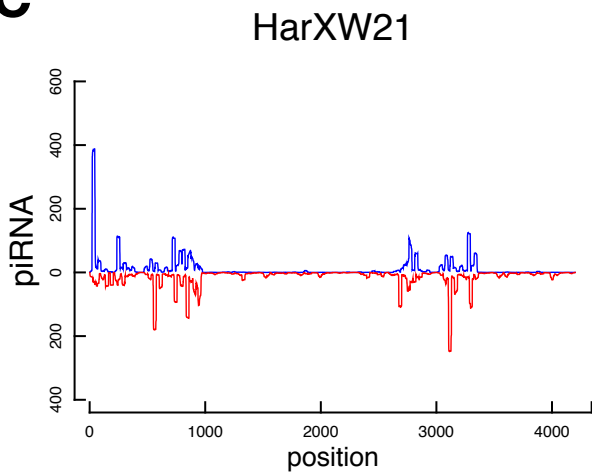
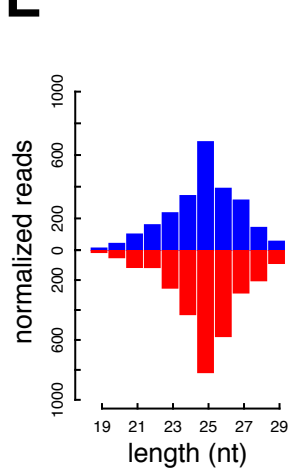
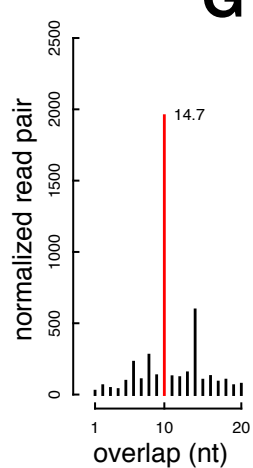
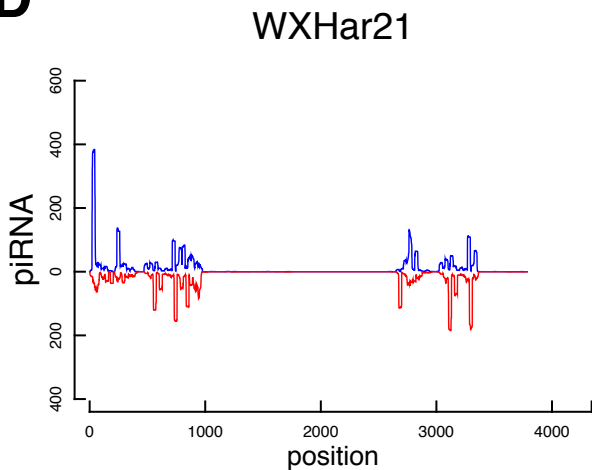
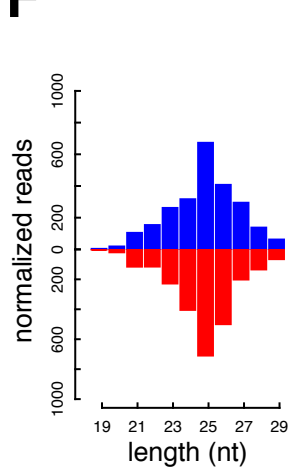
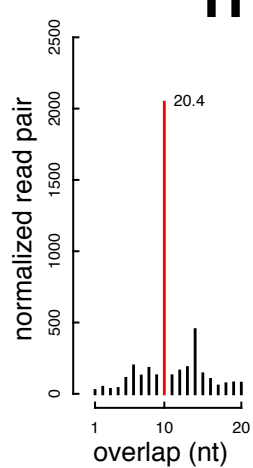
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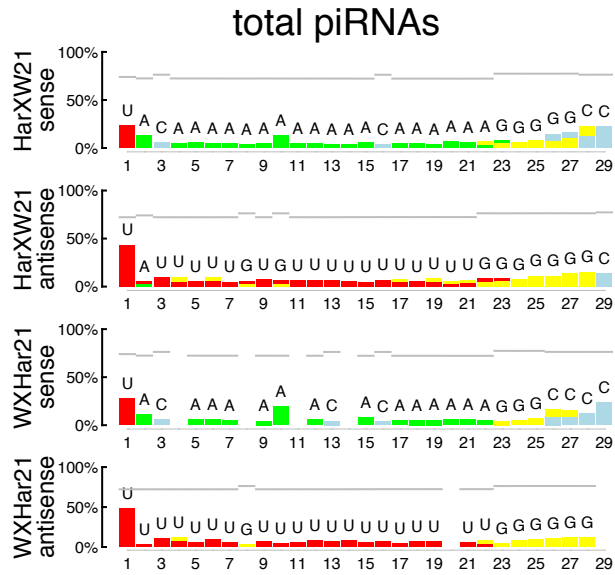
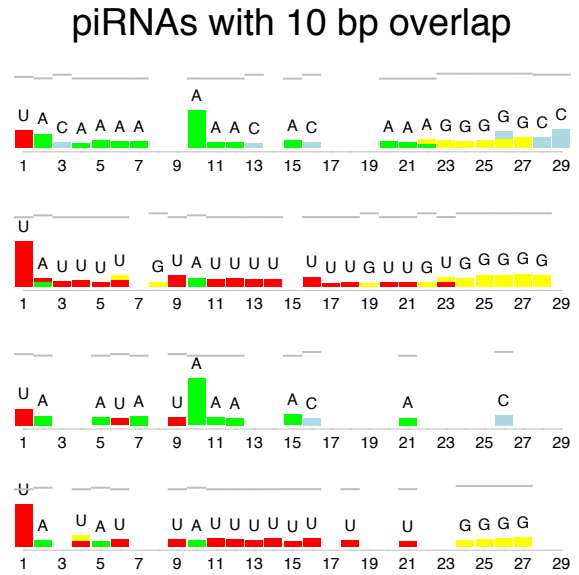
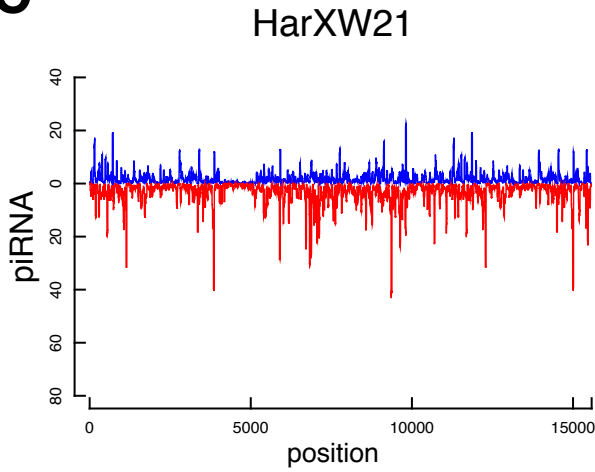
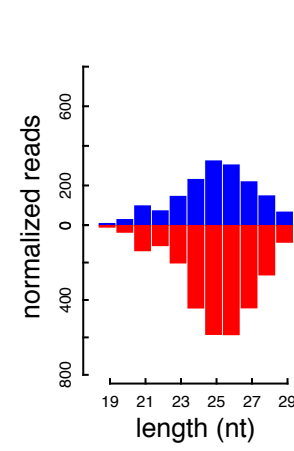
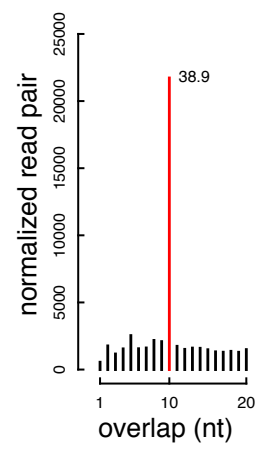
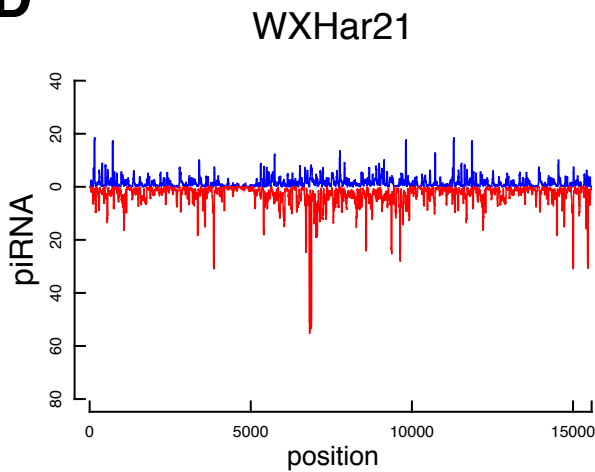
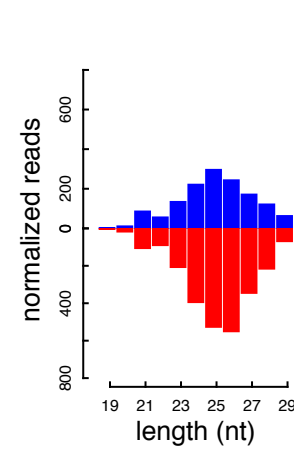
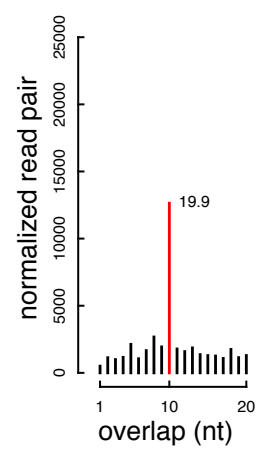
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A**B****C****E****G****D****F****H**

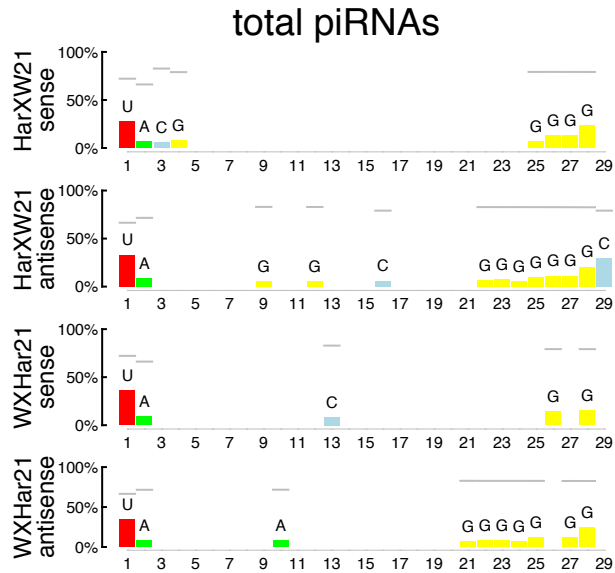
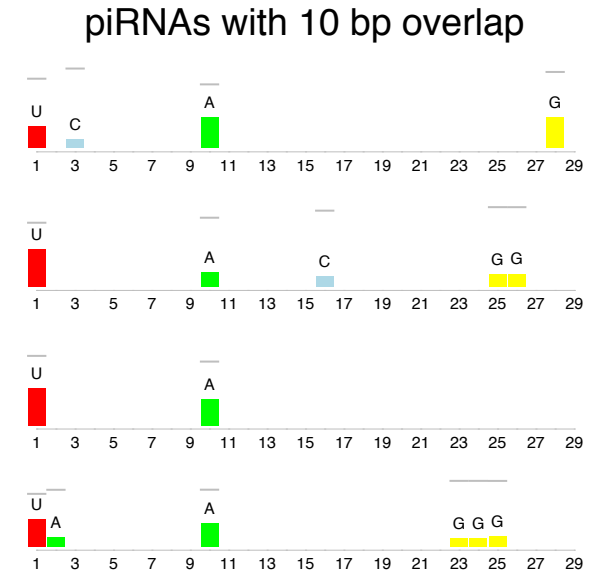
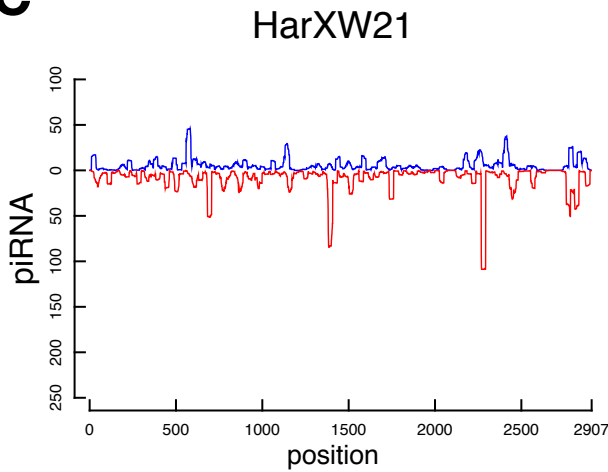
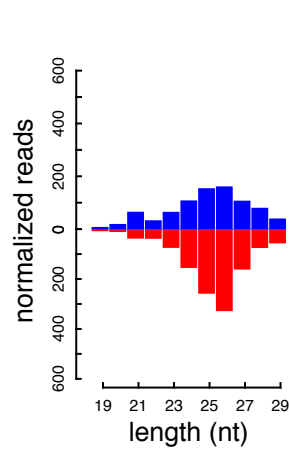
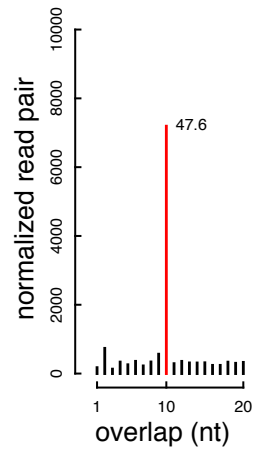
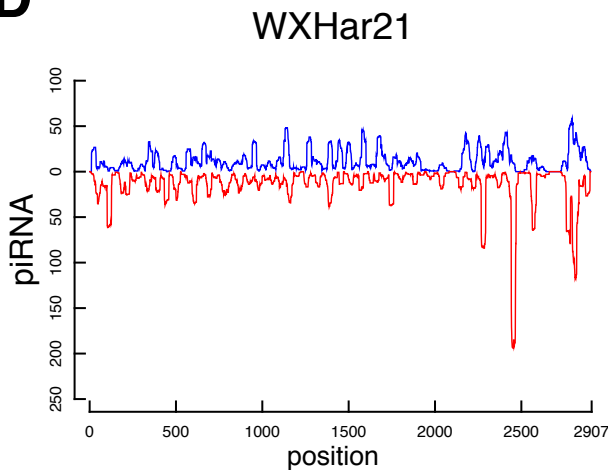
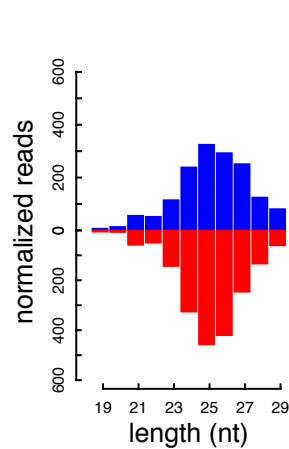
suste

A**B****C****E****G****D****F****H**

TARTA

A**B****C****E****G****D****F****H**

P-element

A**B****C****E****G****D****F****H**