

Supplementary information, Table S2 Representative piRNA:mRNA interactions among MIWI-associated mRNAs and piRNAs

GeneName	AccessionNumber	expression value in RIP-Seq	expression value in NC	Foldchange	FDR
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1.>Grk4	NM_001080743	0.583805	0.00037899	1540.42	0
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alignScore: 165, piRNA readNum: 705783

piRNA: 3'-agtagtgaggTAAGTAGGTAAGTTGTT-5'

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mRNA: 5'-aaagcaagaaAATAATCC-TTCAACAa-3'

alignScore: 170, piRNA readNum: 9685

piRNA 3'-aaGATGAGTCCTCAGT-CTCT-TTGTTGGt-5'

| ||||:| | | |||||

mRNA 5'-ccCCTCAGGGATCCATCCCATAACAACCa-3'

alignScore: 166, piRNA readNum: 8169

piRNA 3'-tggcgggaocggTCACCTCGGTGTGTCAGt-5'

||||| | |||||

mRNA 5'-gacaagtacagaAGTGGATGCTCACAGTCa-3'

alignScore: 166, piRNA readNum: 6299

piRNA 3'-gtGGAGTCTGGACTGGTCAAGAGATCAAt-5'

| | |||| | : | |||||

mRNA 5'-ccCCCCAGAGCTTGT--G-TCTCTAGTTg-3'

alignScore: 167, piRNA readNum: 5772

piRNA 3'-ctTACGGTCTGTTTGTGAGTTGGTAAcT-5'

| | : | | : || | || |||||

mRNA 5'-aaATATCTAATAAA-AATC-ACCAATTGt-3'

2.>Sox6	NM_001025560	0.424049	0.0408208	10.3881	6.87E-05
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alignScore: 165, piRNA readNum: 363666

piRNA 3'-ctGAAGGAAGAGGATAGATAGAGTGTAGGt-5'

| | ||| || | | : |||||

mRNA 5'-agCTACCTGGTCCCAGCTG--GCACATCCa-3'

alignScore: 170, piRNA readNum: 123091

piRNA 3'-ggagagGACCTAGGTGTCAGGTAACAGGt-5'

: | | | : || : | |||||

mRNA 5'-atgacaTTGCAAGCATAGTTC-TTTGTCCc-3'

alignScore: 171, piRNA readNum: 25017

piRNA 3'-aacGGACGGAGT-CCTAGTGATGTACAGAt-5'

:|| ||||| | || | |||||

mRNA 5'-gttTCT-CCTCATGCTTCCCCACATGTCTt-3'

alignScore: 176, piRNA readNum: 18936

piRNA 3'-tgagtccAGGATAGAAAGACGAGGTCAAAGt-5'

|| |||| ||| | :|||

mRNA 5'-tgatttcTCGGATCTCTCTTCCCTCAGTTTt-3'

alignScore: 170, piRNA readNum: 15959

piRNA 3'-aagagTCA-GGTGGAAGGAAAGAGAGTt-5'

:|| ::|:|||| |||||

mRNA 5'-aggagGGTGTGCTTCCAGTCTCTCAGt-3'

3. >Cacna1h NM_021415.7.4058 0.00157424704.48 0

alignScore: 171, piRNA readNum: 185258

piRNA 3'-tctctCCTTAGGTTc-ACAA--GACGGACGTct-5'

|| ||: |:| |||| || |||||

mRNA 5'-gctttGGCATTGAGGTTGTTGGCTCCCTGCAGg-3'

alignScore: 167, piRNA readNum: 43196

piRNA 3'-ggCATAAAGAATCAGTCGGAATGTACAACGt-5'

|| | | | |||| ||| |||||

mRNA 5'-ccGTTCTACAAATTCAG-GTTAAATGTTGCa-3'

alignScore: 165, piRNA readNum: 20089

piRNA 3'-tgTAGTGGAAGTA-ACGTAGTA--A--CGTAGGAt-5'

:|| | ||| | | ||||| | |||||

mRNA 5'-cgGTCTCGTTCCTGTCCATCATCACTGGGATCCTt-3'

alignScore: 165, piRNA readNum: 8169

piRNA 3'-tggCGGGAACGGTCACCTCGGTGTGTCAGt-5'

|||| ||| | || | |||||

mRNA 5'-ctgGCCCATGCAATAAGA-CGTACAGTCCc-3'

alignScore: 170, piRNA readNum: 7257

piRNA 3'-agtTGCTGGACTCGAAAATCGA--AACCGAGt-5'

| |:|:| :|| || || | |||||

mRNA 5'-cacAGGGCTTTGGCATTGAGGTTGTTGGCTCc-3'

4.>Zkscan17 NM_1729419.29515 4.93E-05 188577 0

alignScore: 165, piRNA readNum: 363666

piRNA 3'-ctgaaGGAAGAGGATAGATAGAGTGTAGgt-5'

|| |:||| | : |||||

mRNA 5'-agtggCCATTTCCAAATACAGTCACATCct-3'

alignScore: 171, piRNA readNum: 86514

piRNA 3'-tgTCGGTTCG-TTAGTATAGGTAAGTACTGACct-5'

:||| :|| | :|: |:|:|||||

mRNA 5'-ttGGCCAGGCTCAGTGTGGCTGTGACTGGAc-3'

alignScore: 174, piRNA readNum: 43686

piRNA 3'-cgaGGATGGAACACCG-GGATTGCTACCCct-5'

|| || |||: :|||: |||||

mRNA 5'-cccCCATCCAGTGGTGTCTAGGGATGGGgt-3'

alignScore: 178, piRNA readNum: 22082

piRNA 3'-aaTTGGTA---AAGTAGATGTTGCAGTAGAGt-5'

||||| | ||||| :| | |||||

mRNA 5'-acAACCATCTCTCCATCTTTGCCTTCATCTCc-3'

alignScore: 179, piRNA readNum: 17430

piRNA 3'-tgCAG-ATGAAGATA-CGGTCT-TAAGTTCCct-5'

||| | |||| || | :|| | |||||

mRNA 5'-aaGTCGTCTTC-ATGGGTAGAGATCCAAGGc-3'

5.>Cnot1 NM_001205226 104.041 5.18215 20.0768 0

alignScore: 181, piRNA readNum: 25017

piRNA 3'-aacGGACGGAG-TCCTAGTGATGTACAGAt-5'

|:|:| || || | :| :|||

mRNA 5'-gctCTGTCTCAAGCATAGCAGCATGTCTt-3'

alignScore: 180, piRNA readNum: 8421

piRNA 3'-ttccggTTGGCTT-TAAGATCGAGTGAAGGt-5'

|||:| ||| || |||||

mRNA 5'-ttcataAACTGAAGATTCCTCCTGACTTTCct-3'

alignScore: 169, piRNA readNum: 7557
piRNA 3'-tgtAGGTTGAGGTGAGTCTAAGAGTCCg-5'
|||:|: || ||: |:|||||||
mRNA 5'-cttTCCTAG--CC-CTTTGGTTCTCAGGg-3'

alignScore: 168, piRNA readNum: 6999
piRNA 3'-cccCGTCTTCGGT--ACGGTCG-A-GAGAACAGt-5'
|:| ||||| || :|| | |||||
mRNA 5'-cttGTAACAGGCAGTTGATGGCATGCTCTTGTct-3'

alignScore: 171, piRNA readNum: 4650
piRNA 3'-ggGTAGAACAGGGACATATATATTTATATc-5'
|||:||| |:| |:|||||||
mRNA 5'-atCATTTTGAACCTG----TGTAATATAt-3'

6.>Nploc4 NM_199469 1.50022 0.0523901 28.6356 0

alignScore: 165, piRNA readNum: 59414
piRNA 3'-tgAAGGGA-TCGTTGGAACTTTGGAGTct-5'
|||:||| || |:| |||||
mRNA 5'-atTTCTCCTCAGAAGC-----AAACCTCAGt-3'

alignScore: 175, piRNA readNum: 29015
piRNA 3'-taCCGGATCAGAAG---TGTCAG-TTTCGCAGAGt-5'
| |||:| ||| |:| | :|||||||
mRNA 5'-ctGCCCTGGTATTCCAGATACCCTGAAGCGTCTCc-3'

alignScore: 168, piRNA readNum: 22626
piRNA 3'-tacCGGCAGCAGTAGCAGGTGCTCGAGGgt-5'
| || | | | ||| |||||
mRNA 5'-gcaGAGCAGACCT-GCCCAAGAGCTCCCc-3'

alignScore: 171, piRNA readNum: 20226
piRNA 3'-cgGGTGGTTAGATAGTAGTGGTGAACAt-5'
|:| || ||||| |||||
mRNA 5'-tgCTGCAAAGAATTCATCTCCACTTGTt-3'

alignScore: 172, piRNA readNum: 19151
piRNA 3'-tgGGGAGGAGGACAGGGTGTTCAt-5'
|| :|| ||:| |:| |||||
mRNA 5'-ccCCATTCATCTTTGTCTACAAAGt-3'

alignScore: 168, piRNA readNum: 11643
piRNA 3'-ccAATGAAGGTCGGATGGT-TGAAAAGTct-5'
| |:| | :| | :| |: | :| | | | | |
mRNA 5'-ttTAATTTGTAG-TTATGATGCTTTTCAGg-3'

alignScore: 177, piRNA readNum: 7816
piRNA 3'-cgCGGAAAACGACGGATGATGAAAAGAAAt-5'
| |:| | | | :| :| | | | :| | | | | |
mRNA 5'-tgGCTTTTTCTTTTCT-CTTTTTTTCTTt-3'

alignScore: 178, piRNA readNum: 6081
piRNA 3'-tggtagatGAAAAGAAGGTGAAAAAAGt-5'
:| | | | | |: : | | | | | |
mRNA 5'-tggttggcTTTTCTTTCTCTTTTTTTct-3'

9.>Tcf20 NM_001114140 4.39E-07 9.86E-11 4455.73 0

alignScore: 169, piRNA readNum: 15442
piRNA 3'-ttgGCAGTCAGTG-TTTAGTTCTCTACGGa-5'
:| :| | | :: | | | |: : | | | | | |
mRNA 5'-gggTGGTAGTGGTGAATTGGCAGATGCCc-3'

alignScore: 172, piRNA readNum: 10978
piRNA 3'-tcgGTATTAAGGTACTCAAAAAGAAAGGt-5'
| | | | | | | | | | | | | | | | | |
mRNA 5'-aaaCACAAATAAAT--TTTTTTCTTTCCAg-3'

alignScore: 173, piRNA readNum: 6796
piRNA 3'-acGAGAGGAGGGGTCGAGATGGGAAGGAt-5'
| | | | : | | | | | | :| | | | | |
mRNA 5'-gcCTGCCCATGCCAGCACT-TCCTTCCTa-3'

alignScore: 169, piRNA readNum: 3838
piRNA 3'-tggagggGGT-AGAGTGTGAGG---AACGAAAAt-5'
| | | |:| | | | |:| | | | | | | | | |
mRNA 5'-gagccagCCACTTTAACACTTCTCTATTGCTTTTt-3'

alignScore: 172, piRNA readNum: 2567
piRNA 3'-ctTGTAGTCGACTAAGTAGATGTCTTTGt-5'
| | | |:| | |:| | | | | | | | | | |
mRNA 5'-acAAATAAATTTTTTTCTTTCCAGAAACAc-3'

piRNA 3'-ggaaaGGTGGGATTGAGCTGTATCAGGTct-5'
|| : :||:|||| |:| |||||
mRNA 5'-tgcgcCCCTGTTAGCTC-ATAAAGTCCAGc-3'

alignScore: 169, piRNA readNum: 5817
piRNA 3'-cctcAGAAAGATGTGACGGTCCCAGGGt-5'
||||| : ||| ::|||||
mRNA 5'-accaTCTTTCGGGACT--TGGGGTCCct-3'

alignScore: 168, piRNA readNum: 5715
piRNA 3'-agatgatgaggGACAGTCTACAGGAACct-5'
||| ||| |||||
mRNA 5'-tgtctaggaaaCTGGCAG-TGTCCTTGGt-3'

12.>Cdk13NM_001166655 0.0110379 4.60E-09 2.40E+06 0

alignScore: 167, piRNA readNum: 11512
piRNA 3'-ctATCAGGAGTCTC-TAAGT-A--CATCAAGAAt-5'
|||| |||:| ||||| | | |||||
mRNA 5'-tgTAGT-AGCAGGGCATTCACTGAGGAGTTCTTg-3'

alignScore: 170, piRNA readNum: 4127
piRNA 3'-ggcggGATTCACTTCAGATAACAGGACAGt-5'
:||||| || ||:| |||||
mRNA 5'-cttgaTTAAGTCAA--CTGTCCTCCTGTct-3'

alignScore: 169, piRNA readNum: 3838
piRNA 3'-tggagtCTCATTACGTAACCAAGTCAGTTGt-5'
||| : : | ||| || |||||
mRNA 5'-tagagtGAGAGGAGACTTGATTAAGTCAACT-3'

alignScore: 169, piRNA readNum: 3535
piRNA 3'-caaCA-GGTTTGAAGCCGAGAAAAAAct-5'
|| : :||| ||| : :|||
mRNA 5'-tagGTATTAACCT----TTTTTTTTTGTAG--3'

alignScore: 166, piRNA readNum: 1658
piRNA 3'-agacCCCATAGGAAGAAGTCGTCAAGAAct-5'
||| ||:| | | || |||||
mRNA 5'-agcaGGGCATTC-AC-TGAGGAGTTCTTg-3'

13.>Lpin1NM_001130412 10.6208 5.20E-06 2.04E+06 0

alignScore: 168, piRNA readNum: 189709
piRNA 3'-agaccATACGACAGGGAAAATAGATGTTATt-5'
| | ||| :| |||| |||||
mRNA 5'-tatttTTTTCTG-GTTTCTTATATAACAATAc-3'

alignScore: 174, piRNA readNum: 66821
piRNA 3'-ttcGGGT-AGGGTACAAGAATTT--GGGCTTAGt-5'
| || |: || |||| :|| :|||
mRNA 5'-tgtCACACTCTGATCTTCTAGAATCTCCGAATCa-3'

alignScore: 168, piRNA readNum: 55505
piRNA 3'-ccacctATCACGGT--AGTAGGATGTTACGTa-5'
|| |||| :| :|||
mRNA 5'-agtctcTATAGCCAAGGCTGGTCTACAATGCa-3'

alignScore: 177, piRNA readNum: 39080
piRNA 3'-cggGT-AGGGTACAAGAATTT--GGGCTTAGTt-5'
|| |: || |||| :|| :|||
mRNA 5'-tcaCACTCTGATCTTCTAGAATCTCCGAATCAc-3'

alignScore: 175, piRNA readNum: 20713
piRNA 3'-cggataGTCA-GTTTGGTCTTTCTGTGGGt-5'
:| | :|: ||| |||||
mRNA 5'-gatccgTGGTGTGGCTAGACAGACAGCCCa-3'

14.>Slain2 NM_153567.19E-05 5.45E-11 1.32E+06 0

alignScore: 168, piRNA readNum: 30918
piRNA 3'-tccgAGATGTGAAGTTACGGTTTGTGGGt-5'
|: |: ||: :||| |||||
mRNA 5'-aatgTTGATTATTTGTGCC-AACAGCCCa-3'

alignScore: 169, piRNA readNum: 20226
piRNA 3'-cgGGTGGTTAGATAGTAGTAGGTAACat-5'
||| |: | | |:| |||||
mRNA 5'-tgCCAACAGCCCAGAATTGT-CACTTGTa-3'

alignScore: 179, piRNA readNum: 17518
piRNA 3'-ccAAGAGTACTA-AC-ACGTCATACACAAGAAt-5'

||||| ||||| || ||: || | |||||
mRNA 5'-gtTTCT-ATGATATGATGT-GTCTTTGTTCTTg-3'

alignScore: 178, piRNA readNum: 15802

piRNA 3'-tgacAGGGAACATGAAGTAGTAAGTACGTCA-5'

|| ||||:| | |||||
mRNA 5'-gacaTCAGATGTATTTGGT-AATCATGCAGTc-3'

alignScore: 165, piRNA readNum: 10401

piRNA 3'-tgcggAAACCTTCTCTTATAGTGCATGAt-5'

||| |: || | :|||
mRNA 5'-ctatgTTTAGGGAAGTTTATACAGTACTt-3'

15.>Usp47NM_177249 5.27E-05 6.42E-11 820609 0

alignScore: 173, piRNA readNum: 67564

piRNA 3'-tccttgtcGGTAGGTGTCGT-CTTCAAAGAt-5'

||||:|:| | |||||
mRNA 5'-ccatctgcCCATCTATGGAATAAAGTTTCTc-3'

alignScore: 174, piRNA readNum: 26246

piRNA 3'-ctcCCAGGTT--GAGAGATGACCTGTAAATAt-5'

| |:| | |:|: | | |||||
mRNA 5'-gtaGCTTCAAGATCTTTTCTGTACATTTATt-3'

alignScore: 175, piRNA readNum: 20713

piRNA 3'-cggATAGTCAGTTTGGTCTTTCTGTGCGGt-5'

||:| | :|:|:| |||||
mRNA 5'-aagTATTAAGAACCTTAGGGAGACAGCCCa-3'

alignScore: 166, piRNA readNum: 18936

piRNA 3'-tgaGTCCAGGATAGA-AAGACG---AGGTCAAAGt-5'

||| |: ||| |||| | |||||
mRNA 5'-cagCAGGCCTCTTCTGCTCTGCTAAGTACAGTTTCa-3'

alignScore: 169, piRNA readNum: 7755

piRNA 3'-tgtcggATGGTTGAAAAGTCTCTCCAAGAt-5'

||: :| |:| |||||
mRNA 5'-aggatgTATTTGCTCGTTAATGAGGGTTCTc-3'

16.>Dis3l1 NM_001001295 31.6705 1.14E-09 2.79E+10 0

alignScore: 166, piRNA readNum: 22363
piRNA 3'-taAGGGGTAGGACGAATCGGATGAAAGAA-5'
| |:: |::| ||| |:| |||||
mRNA 5'-tgTACTTTTTTTTCTT-TCTTCCTTCTTc-3'

alignScore: 178, piRNA readNum: 17716
piRNA 3'-cgggACGACGAGAACTCAAGTAAGAAGG-5'
|| ||: |||| ||| |||||
mRNA 5'-taagTGGGTACTTTTTTTCTTCTTCTCct-3'

alignScore: 165, piRNA readNum: 8155
piRNA 3'-agACGGAGTACTGACAAGGGTCCAAAG-5'
| |:::| ::||| :|||
mRNA 5'-ctTTCTTTGTTGTTGTT-GAGGGTTCTc-3'

alignScore: 166, piRNA readNum: 7816
piRNA 3'-cgCGGAAAACGACGGATG-ATGAAAAGAA-5'
|:|:| |: |: ||| |:|||
mRNA 5'-ttGTCTTAAGTGGGTACTTTTTTTCTTt-3'

alignScore: 174, piRNA readNum: 4951
piRNA 3'-tgtGGGTGGAGGAAGGTCGGGAAACAG-5'
::|||: || || || |||||
mRNA 5'-tacTTCCATGTCATTAAG-ACCTTTGTCTt-3'

17.>Fam45a NM_026437 36.2489 0.00131325 27602.4 0

alignScore: 174, piRNA readNum: 81599
piRNA 3'-acGGAG--AGTGTCTCAAGA--ACAGATGAGTg-5'
:||| |:|:: | | || |||||
mRNA 5'-tgTCTCAATTATGCATTCTTATGTCTACTCACA-3'

alignScore: 169, piRNA readNum: 58953
piRNA 3'-tgtaGA-ATAA-ATAATCAGGATG-AACTGAAA-5'
|| |||| |:| :||: | | | |||||
mRNA 5'-ttgcTATATTATGTGGGTTATTCATAGACTTTT-3'

alignScore: 174, piRNA readNum: 47286
piRNA 3'-atACGGAG--AGTGTCTCAAGA--ACAGATGAGt-5'
||:||| |:|:: | | || |||||

mRNA 5'-aaTGTCTCAATTATGCATTCCTTATGTCTACTCa-3'

alignScore: 177, piRNA readNum: 30406

piRNA 3'-ctaTGGGGAAATCAGGTG-TCGTAATTGAt-5'

|::|||| |::|| |::|::|

mRNA 5'-tgcATTCCTTATGTCTACTCACATTAActa-3'

alignScore: 181, piRNA readNum: 13591

piRNA 3'-ggtTTGTGACGTAAAG-TAAAGACAGGAt-5'

|:::| :|||: || |::|::|

mRNA 5'-gacAGTGTTTTAATTTAATTACTGTCCTa-3'

18.>Eif5aNM_001166592 0.0505134 1.53E-10 3.30E+08 0

alignScore: 170, piRNA readNum: 141865

piRNA 3'-tgAGTGGGTTGAGTGAAGATGGAAAAAt-5'

|:::|: |: || || |::|::|

mRNA 5'-tgTGGTTTAGGTTCCCTCT-CCTTTTTTt-3'

alignScore: 168, piRNA readNum: 43686

piRNA 3'-cgAGGATGGAACACCGGGATTGCTACCCct-5'

||:| :|| | |||| |::|::|

mRNA 5'-ccTCTTCTCTCGCAGCCCT---GATGGGg-3'

alignScore: 181, piRNA readNum: 12240

piRNA 3'-tgaGGGTAGGTGGTGGGAGTGAAGACGAGt-5'

|| | || | || | || :||::|::|

mRNA 5'-aggCCCCTCCCCAGC--CAGGTTCTGCTc-3'

alignScore: 186, piRNA readNum: 9804

piRNA 3'-ggGTAGACTGGACAAGGAAAGGCAAAGGt-5'

:||:|||| | ||: ||: |::|::|

mRNA 5'-ttTATTTGACGT-TTTATTTGGTTTTCCt-3'

alignScore: 181, piRNA readNum: 7868

piRNA 3'-taacgGAAGAAACT---TCTAAGGTGAGAGGAt-5'

|| || | |: ||: ||| |::|::|

mRNA 5'-gggtaCTGCTTGTTGTTTGGTTCCCTCTCCTt-3'

19.>Ralgs NM_009058 18.1936 1.07E-07 1.70E+08 0

alignScore: 173, piRNA readNum: 16400
piRNA 3'-atatggGAGTTCAAAATGTGTCGTGCATTTt-5'
|| || |||:|:| |||||
mRNA 5'-agacaaCTGAACATTTGTATAAACGTAAa-3'

alignScore: 178, piRNA readNum: 12240
piRNA 3'-tgagGGTAGGTGGTGGGAG---TGTAAGACGAGt-5'
||| ::||:|:|:| | :| |||||
mRNA 5'-gggaCCACTTGCCGCCTTCGGTGCCTTCTGCTct-3'

alignScore: 188, piRNA readNum: 8735
piRNA 3'-tgGAAGGAGGTGAAGAGAGT-GAAAGAGt-5'
:||||| ||| : |||||
mRNA 5'-ccTTTCTCCAC-ACTCTAGCCTTTCTCa-3'

alignScore: 170, piRNA readNum: 7557
piRNA 3'-tgtAGGGT-TGAGGTGAGTCTAAGAGTCCg-5'
|||| |||:| | |||||
mRNA 5'-tccTCCCACTCTAGCC--TTTCTCAGGc-3'

alignScore: 167, piRNA readNum: 6732
piRNA 3'-tgtggaATAAGGGTCGGAGTTGAAAGTgt-5'
|| ||| ||| |||||
mRNA 5'-ccaggcTACCCCTACTCCACTTTCACc-3'

20.>Ccdc46 NM_145688 75.0975 37.3672 2.00972 5.21E-06

alignScore: 173, piRNA readNum: 22363
piRNA 3'-taaGGGGTAGG-ACG-AATCGGATGAAAGAAt-5'
| :|||| ||| |:|: :|||||
mRNA 5'-atgCATCATCCATGCACTGGTTGGCTTTCTTt-3'

alignScore: 167, piRNA readNum: 4576
piRNA 3'-ttggcactcattagGAAATAGGTCGTCCt-5'
||| |||||
mRNA 5'-ggctgcaccgaggcCTTCATCCAGCAGGt-3'

alignScore: 168, piRNA readNum: 3892
piRNA 3'-tggGGTTGGTTCG---TTATACA-CTATAACAt-5'
:|||: ||:|: || || | |||||

mRNA 5'-tcaTCCAG-CAGGTTTGAAGATCTGGATATTGTAA-3'

alignScore: 174, piRNA readNum: 3221

piRNA 3'-ataGGGTAGGGACA-GACGTCGTGT-5'

:|||| :||| ||| |||||

mRNA 5'-gacTCCATGATTGTACTGGAGCACAG-3'

alignScore: 182, piRNA readNum: 2313

piRNA 3'-agaAGGAATTAGAT--GTACAGGTAGGGTACT-5'

| ||||| ||: |||||: |||||

mRNA 5'-aaaTGCTTAACCTGTTTCATGTTGTTCCCATGt-3'

21.>Rpa1 NM_001164223 0.00013681 5.18E-08 2643.15 0

alignScore: 175, piRNA readNum: 112381

piRNA 3'-tgccgaagatgaGATGTAAAATGTAGTCAA-5'

|| || |||:|||||

mRNA 5'-tacagagcatggCTTCAGTTTGCATCAGTTa-3'

alignScore: 168, piRNA readNum: 75935

piRNA 3'-tgGTAGGAGTACAGATGTTATCAGAACTt-5'

:|||:|:| || || | |||||

mRNA 5'-taTATCTTTGTGGATCCTACTTTCTTTGAc-3'

alignScore: 167, piRNA readNum: 61046

piRNA 3'-tgtcAGGGTGTCTAAAGAAGAC--ACATTTTct-5'

|||:| | ||||| || |||||

mRNA 5'-tggaTCCTAC---TTTCTT-TGACTGTAAAGg-3'

alignScore: 169, piRNA readNum: 48289

piRNA 3'-cggtctggaGTTTTTAGAAGGATGTTTCAGt-5'

||:||||: | : |||||

mRNA 5'-atcttcaaaCAGAAATTATGTCACAAGTCa-3'

alignScore: 175, piRNA readNum: 22363

piRNA 3'-taaggGTag-GACGAATCGGATGAAAGAA-5'

:||| :||: | |||||

mRNA 5'-acagtaTATCTTTGTGGATCCTACTTTCTTt-3'

22.>Emg1 NM_013536 12.3018 6.49302 1.89462 1.33E-15

alignScore: 166, piRNA readNum: 7621
piRNA 3'-cgGGAGATGTC-ATTACCGTGC-TGGTTCTt-5'
|: ||: ||| |||| : :| |||||
mRNA 5'-atCTGCTGGAAGATAATCTTCTGTACCAAGAc-3'

alignScore: 173, piRNA readNum: 7257
piRNA 3'-agTTGCTG-GACTCG-AAAATCG-AAACCGAGt-5'
|| ||| || :|| |||: | |||||
mRNA 5'-ggAAGGACTCTTGGCAGTTTGTCTTTTGGCTCc-3'

alignScore: 173, piRNA readNum: 6081
piRNA 3'-tggtagaTGAAAAGAAGGTGAAAAAAGt-5'
| |||| ||:|:|: |||||
mRNA 5'-tataaagAGTTTTATTTTCGT-TTTTTTt-3'

alignScore: 172, piRNA readNum: 3471
piRNA 3'-tgaaaAGAACGGACA--AGAGGA--GGGATTCTt-5'
|||| | || |||:| |:|||||
mRNA 5'-aggacTCTTGGCAGTTTGTCTTTTGGCTCCTAAGAt-3'

alignScore: 168, piRNA readNum: 2985
piRNA 3'-tggaAGGAGAC--TTCTGGCTGTG-ACCGTCAt-5'
|:||| | |:|| ||| | |||||
mRNA 5'-cctggTTCTCAGACAGGAAGGACTCTTGGCAGt-3'

23.>2310008H09Rik NM_001168219 8.61489 0.00595503 1446.66 0

alignScore: 169, piRNA readNum: 153992
piRNA 3'-tgGGCTGTCAGGAGAAAG---CAA-TCTCTTc-5'
:|:|||||: | || ||| |||||
mRNA 5'-taTTGGCAGTCTGGTATCAAGGTTCAAGAGAAGg-3'

alignScore: 176, piRNA readNum: 112381
piRNA 3'-tgccGAAGATGAGATGTAAG-ATGTAGTCAAt-5'
|||| | ||:|||| | |||||
mRNA 5'-tgttCTTC-AAACTGCATTTCTTGATCAGTTg-3'

alignScore: 166, piRNA readNum: 92488
piRNA 3'-agggagtcaggTGTCTAAAGAAGACACAt-5'
||||: ||: |||||
mRNA 5'-tgtttttcgagACAGGGTTTCTCTGTGt-3'

alignScore: 165, piRNA readNum: 59414
piRNA 3'-tgAAGGGGATCGTTGGAACTTTGGAGTct-5'
|| :| |:| : |||: |||||
mRNA 5'-acTTGATTTGTAG--CTTGGTACCTCAGc-3'

alignScore: 168, piRNA readNum: 51946
piRNA 3'-tgccggCTTAAGT-AAACGTGTCGTAAGAAAt-5'
||| ||| | ||| :| :|||
mRNA 5'-ccacagGAAGTCACTGTGCTTGTAAATTTCTTa-3'

24.>Sfmbt1 NM_001166531 11.665 0.00868339 1343.37 0

alignScore: 165, piRNA readNum: 185258
piRNA 3'-tcTCTCCTTAGGT-TCACAAGACGGACGTct-5'
||: ||:| :: :| |||| |
mRNA 5'-tgAGGAGAGTGTGGAGTTC-ACCTGCAGc-3'

alignScore: 178, piRNA readNum: 71251
piRNA 3'-tgTGACGGTATATGATAGGATTGTGGAAGt-5'
|||:| | |:| |||| |
mRNA 5'-taACTGCT-CACATTTTCTCCACCTTCc-3'

alignScore: 170, piRNA readNum: 57098
piRNA 3'-ggaCTCGGATCAAGGAGT--AAACATTTTAct-5'
|| |:| | |:| || |
mRNA 5'-tagGATCTTACATTGTTACCTTAGTAAATGa-3'

alignScore: 168, piRNA readNum: 48289
piRNA 3'-cggTCTG-GAGTTTT--TAGAAGGA-TGTTcAGt-5'
| || ||| || |:|:| |
mRNA 5'-ctaAAACTCTCATAATGCTTTTTTCTGACAAGTct-3'

alignScore: 165, piRNA readNum: 19537
piRNA 3'-tcACCCACGGTCGAGAAGAAGGATAGACgt-5'
| | | : | |:| | |
mRNA 5'-gaTTGGCTCTGAAATTTTGATCATATCTGct-3'

25.>Snx5 NM_001199188 2.63968 0.00381155 692.548 0

alignScore: 170, piRNA readNum: 15191

piRNA 3'-tgtagTAGACGCACCACGCAGAAATGTAGGt-5'
|||| | | ||: |:|||||||
mRNA 5'-agaagATCT-CAT-ATGCTTTTTACATCCt-3'

alignScore: 167, piRNA readNum: 13126
piRNA 3'-ttGGGAAAGTTATGTGGGTGTAAGTAt-5'
|| | |:|:| | | |:|||||||
mRNA 5'-aaCCATGTTGGTTTAAAAATTTTCATt-3'

alignScore: 166, piRNA readNum: 12509
piRNA 3'-ctcgGTCATAAGG--GAAAAGAAGAAGTCAGGt-5'
:|:|||| | | | ||| | |||||
mRNA 5'-gttaGGTATACCAACATATCTGGCTCAGTCCc-3'

alignScore: 171, piRNA readNum: 11391
piRNA 3'-agaggaacaaTCAAGAGTGAGCAGAAAAt-5'
|| |||||: |:|||||||
mRNA 5'-acaagcaagaAGATCTCATATGTCTTTTt-3'

alignScore: 168, piRNA readNum: 7757
piRNA 3'-atAGGAGTCG--ACCA-A--GTTGTA---GCCGAGTct-5'
||: |||: |||| | ||||| :|||||||
mRNA 5'-gtTCTGCAGTTATGGTATACCAACATATCTGGCTCAGt-3'

26.>Ndufs1 NM_001160038 0.0120338 6.43E-12 1.87E+09 0

alignScore: 168, piRNA readNum: 30406
piRNA 3'-ctATGGGAAAT-CAGGTGTCGTAATTGAt-5'
||: : ||: || | |||||
mRNA 5'-tgTATGTAATTGTGTGCA-AGCATTAACTa-3'

alignScore: 167, piRNA readNum: 19164
piRNA 3'-cgGTGCTCAACATATACGGATATTAGGGt-5'
|| | || | || |:|||||||
mRNA 5'-gaCAGTAAATGGACATTGCTGTAATCCct-3'

alignScore: 166, piRNA readNum: 8702
piRNA 3'-atacgaacaatGGTTGTCTAAGGGAAAAt-5'
|:|||||: |||||
mRNA 5'-----gacatCTAACAGGGACCCTTTTt-3'

alignScore: 168, piRNA readNum: 7305

piRNA 3'-cgggAAGTAAAAGATGGAG-ATTCAGACTt-5'
|| || |:| | | |:|||||
mRNA 5'-taagTTAATGTTTTCCAACATGAGTCTGAa-3'

alignScore: 182, piRNA readNum: 6537
piRNA 3'-atTTGGGAAAGTTATGTGGGT-GTAAAAGt-5'
|||: ||:|||| | |:| |||||
mRNA 5'-ttAACTAGTTTAATAAACTATCATTTCt-3'

27.>Arhgap19 NM_0276670.00210292 3.42E-06 615.569 0

alignScore: 165, piRNA readNum: 83145
piRNA 3'-cgGTAA-ACATGTTTCAGAGTCAGACTCCGAt-5'
:||| | | ||| | :| |:|||||
mRNA 5'-atTATTATTTCCAACCTGGTA-TTTGAGGCTt-3'

alignScore: 171, piRNA readNum: 68120
piRNA 3'-acgTCAGAG--ATCTCGT-ATGGT--AGGTTGAt-5'
:||||: |:|||:| ||::| |||||
mRNA 5'-gtaGGTCTTAGTGGAGTATTATTATTTCCAACtg-3'

alignScore: 183, piRNA readNum: 67564
piRNA 3'-tccttGTCGGTAGGTGTCGTCTCAAAGAt-5'
| |:| ||:||||: |||||
mRNA 5'-tacttCTGCCTCTACAGT-GAAGTTTCTc-3'

alignScore: 166, piRNA readNum: 37996
piRNA 3'-cgtcgaAGACTTAAGTTGAAAGTTCAAGGt-5'
||| | | |:| |||:|||||
mRNA 5'-gtgtgaTCTATAGTGA-TTTTAAGTTCCa-3'

alignScore: 168, piRNA readNum: 33923
piRNA 3'-cgtCAG-AGATCTCGTATGGTA--GGTTGATt-5'
||| |||:| | ||::| |||||
mRNA 5'-agtGTCATCTGGTGGTTATTGTTGCCAACTAt-3'

28.>Acin1 NM_001085472 43.2152 0.0887913486.705 0

alignScore: 179, piRNA readNum: 28394
piRNA 3'-agtccACGACAGGGAA---GAGGCCAAGGTGt-5'

||| |||:| | | :|||
mRNA 5'-tggccTGCAGTCTCTTGCCCGCTGGTCCACT-3'

alignScore: 181, piRNA readNum: 24655
piRNA 3'-tacaccctTCGGTAGACAA-GAGAACAAGT-5'
|||| | | | | :|||

mRNA 5'-cactttatAGCCACCTTTTCCTTTTGTTCa-3'

alignScore: 167, piRNA readNum: 21023
piRNA 3'-ttcGGGAAGAGAAGTCGGGCCGTTAAAAA-5'
|:|: | | : | : | | | | |

mRNA 5'-ccaCCTTTTCCTTTTGT---CAATTTTt-3'

alignScore: 173, piRNA readNum: 8098
piRNA 3'-atGGATCAGGAAAAGGTGTAGGTAGGAt-5'
| | | | : | | | : | | | | | | |

mRNA 5'-gtCCCACGCTCATTTTC-CCTCCATCCTg-3'

alignScore: 178, piRNA readNum: 7797
piRNA 3'-ttGGGAAATGTG-ACGGGAATAGGAAAGAt-5'
|:| | : | | | | | | | | | | |

mRNA 5'-aaCTCTTGAACTTGGCCCTCCTTTCTt-3'

29.>1700029G01Rik NM_001162533 2.33439 0.00669857 348.491 0

alignScore: 168, piRNA readNum: 6533
piRNA 3'-taggGGTCGGTAAAGTAAAGATGTGTGAt-5'
| | | | | | | | | | | | | |

mRNA 5'-tgggCCACCCCGTCCTTGC-ACACAAct-3'

alignScore: 165, piRNA readNum: 1152
piRNA 3'-tgtaGGGGGTGAAAGGGTAGAGTGTGAt-5'
| | | | | | | | | | | | | |

mRNA 5'-tgggCCACCCCGTCCTTGCACACAAct-3'

alignScore: 166, piRNA readNum: 1064
piRNA 3'-gttggtGAAGGTAAGT--AGACAGTTTGAgt-5'
| | | | | | | | | | | | | |

mRNA 5'-cggtcCTTGCACACAActTTGACAACTCc-3'

alignScore: 177, piRNA readNum: 567
piRNA 3'-ctGAAGTCCATTGGAGAT-GTATGAACCGt-5'

|| ||| :|| |||| | |:|||||
mRNA 5'-acCTGGAGG-GACATCTATCCTGCTTGGGc-3'

alignScore: 177, piRNA readNum: 329
piRNA 3'-tgTCGGGAGAACAAGCCACGAGTGTGAAAt-5'
:||| | | || ||| |||||
mRNA 5'-tgGGCCACCCGGTCTTGACACAACCTTg-3'

30.>Spna2NM_001076554 0.000765754 3.35E-06 228.471 0

alignScore: 169, piRNA readNum: 39700
piRNA 3'-ttTGGGGAAGATGATAGTTAGGTGAAGgt-5'
|:| | |:|:|: || :|||||
mRNA 5'-ctATCACCTTTGCTG-CATGTCACCTCCt-3'

alignScore: 175, piRNA readNum: 10978
piRNA 3'-tcggTATTAAGGT-ACTCAAAAAGAAAGgt-5'
|| ||||| ||| || |||||
mRNA 5'-gagaAT-ATTCCAGACAGTGTACTTTCCAg-3'

alignScore: 167, piRNA readNum: 7153
piRNA 3'-tgataGACAGAAGGAGAGAGGTGAGATAg-5'
||| ||| | || |: |||||
mRNA 5'-ctacaCTG-CTTGCCCTGTTATCTCTATct-3'

alignScore: 175, piRNA readNum: 7118
piRNA 3'-tgGGTATAAGGGACGA--GGGAGAGTTTAGgt-5'
:|| | ||:|:| |:| |||||
mRNA 5'-gcTCAGCTCCCTGTTTCTCTCCAAATCCt-3'

alignScore: 178, piRNA readNum: 6304
piRNA 3'-tcGAACGGACAGACAGATGGTCTTTAGGAt-5'
|| |:|||:| ||| || |||||
mRNA 5'-agCTCCCTGTTTCTCTCC-CAAATCCTg-3'

31.>AhnakNM_001039959 4.60822 0.0238479 193.234 0

alignScore: 165, piRNA readNum: 13581
piRNA 3'-ttgGTGTATGTAGGAAT--CTGTGGAAGAA-5'
||| |:| |:: | ||::|||||

mRNA 5'-aaaCACCTGCAGTTAAAGGGATGCCTTCTT-3'

alignScore: 178, piRNA readNum: 8837

piRNA 3'-tggGGAGG--AATTTTGTATGGTAGAACT-5'

||| | |||||: : |:| |||||

mRNA 5'-acaCCTGCAGTTAAAGGGATGCCTTCTTGA-3'

alignScore: 171, piRNA readNum: 8748

piRNA 3'-cgGCGACGAGAGATCATGGTATTTGAT-5'

| | | :|||: ||| |||||

mRNA 5'-gaCTCTCTTCTTACCTACCCAATAACT-3'

alignScore: 165, piRNA readNum: 5059

piRNA 3'-tgacgaaaACGG-AGAGACAGTA-GGAAAACT-5'

|||| |||:| | :| |||||

mRNA 5'-taaagggaTGCCTTCTTTGAGGTGGCTTTTGG-3'

alignScore: 185, piRNA readNum: 4764

piRNA 3'-agGTTCTCTGTCTTATA--GAAGAAAAGCAT-5'

|||| | |:|:| |:| | ||| |||||

mRNA 5'-tgCAAGG-GATGGGATGTGGGCTATTTTCGTA-3'

32.>Caprin1 NM_001111290 19.5233 0.107532 181.558 0

alignScore: 168, piRNA readNum: 185258

piRNA 3'-tctctccTTAG-GTTCACAAGACGGACGT-5'

:| | | | ||| |||||

mRNA 5'-cacttttGGTCACATGTTTCT-CCTGCAGc-3'

alignScore: 168, piRNA readNum: 92488

piRNA 3'-aggggGTCAGGGTGTGTC--TAAAGAAGACACAT-5'

|||| | :| | | |||||

mRNA 5'-gttagCAGTGACTTAGCCATATGTTCTGTGT-3'

alignScore: 167, piRNA readNum: 61393

piRNA 3'-tgtAGAGGTATTGTCTCAGTT--GGTTTAGTCT-5'

| | :| :|| | | | |||||

mRNA 5'-tacTGTGTAAGACAAAGCCAAATTGCAAATCAGg-3'

alignScore: 171, piRNA readNum: 36339

piRNA 3'-ggGGAGGAAAGGTGAG-GTAGAATGTCATA-5'

:|:| | | | :| | |||||

mRNA 5'-aaTCTTTTGTACATGCACAATTCACAGTATg-3'

alignScore: 171, piRNA readNum: 25017

piRNA 3'-aacggacgGAGTCCTAGTGATGTACAGAt-5'

|| | |:|| |||||

mRNA 5'-acaggaaCTGATGGTC-CTACATGTCTc-3'

33.>Cabyr NM_001042418 17.4864 0.107091 163.285 0

alignScore: 173, piRNA readNum: 1559

piRNA 3'-tgATACATGGAGTAGTAAAGTCTGAAGGAt-5'

|:| | |: | || | | |||||

mRNA 5'-caTGGAAGTGTATCAAT--AAACTTCCTg-3'

alignScore: 171, piRNA readNum: 1416

piRNA 3'-ttTGGAGATCGTCAATTCAGTCGTAAa-5'

|: | | | | | : |||||

mRNA 5'---ATGCTGATGCTGTTTGATTGAGCATTc-3'

alignScore: 176, piRNA readNum: 1084

piRNA 3'-tatcGGTGACG---ACACCCGTGT-GTCTTGGAt-5'

|:|||| | | | | |||||

mRNA 5'-gtgaCTACTGCCCATGTCCGCAGAGCAGAACCTt-3'

alignScore: 165, piRNA readNum: 936

piRNA 3'-cggacTGTGG-ACTGTTGA-AGGTACAGt-5'

|: | | | | | | | | | |

mRNA 5'-gcgaaATTACTGTGACTACTGCCCATGTCTc-3'

alignScore: 188, piRNA readNum: 634

piRNA 3'-tggtgACGACGGAGTAAGAGGTAAGTTct-5'

|||||:| | | | | | | |

mRNA 5'-gctgaTGCTGTTTGATTGAGCATTCAAGg-3'

34.>Trim33 NM_053170 1.28409 0.0117806 109 0

alignScore: 166, piRNA readNum: 92488

piRNA 3'-aggaGTCAG-GGTGTCTAAAGAAGACACAt-5'

|| |: :| | | | | | | |

mRNA 5'-caggaCATTATTTCAGAATT-TTCTGTGTa-3'

alignScore: 179, piRNA readNum: 67564
piRNA 3'-tccTTGTCGGTAGGTGTCGTCTTCAAAGat-5'
||| |:||| |: :|||||||
mRNA 5'-tttAACA-CTATCAAT-TTAGAAGTTTCTc-3'

alignScore: 166, piRNA readNum: 38780
piRNA 3'-gaccccATAGGAAGAAGTCGTCAAGAACTt-5'
|| | ||||| |||||
mRNA 5'-atocctTAAATCCTTCA-AAGTTCTTGat-3'

alignScore: 173, piRNA readNum: 27151
piRNA 3'-caGAGGTGA---GAGGTCAATGT-AGGATGat-5'
|||:| | :| :|||:| |||||
mRNA 5'-ctCTCCGCTGGATTAAGAGTTGTAGTCTACTt-3'

alignScore: 166, piRNA readNum: 22082
piRNA 3'-aaTTGGTAAAGTA-GATGTTGCAGTAGAGt-5'
|:| : ||:| :||: || |||||
mRNA 5'-agAGCTTGATCGTGTATTACCTCATCTCc-3'

35.>Ddx19b NM_001190800 29.6969 0.284411 104.415 0

alignScore: 166, piRNA readNum: 185258
piRNA 3'-tctCTCCTTAGGTTC---ACAAGACGGACGTCt-5'
||| |:|:| | | |||||
mRNA 5'-gctGAGTAGTCTGAGGACAGGTGAGCCTGCAGg-3'

alignScore: 166, piRNA readNum: 43686
piRNA 3'-cgagGATGGAACACCGGGATT---GCTACCCct-5'
|:|:| |||:|:|: |||||
mRNA 5'-cagaCTGTCT--TGGCTTTAGAATCCGATGGGgc-3'

alignScore: 174, piRNA readNum: 30406
piRNA 3'-ctaTGGGAAATCAGGTGTCGTAATTGat-5'
||| |:| ||:| |||||
mRNA 5'-aggACCC---TGGTGCACGGAATTAAct-3'

alignScore: 168, piRNA readNum: 25881
piRNA 3'-ttacggtcGATCTTAAG--AA--AACT-GAGTTTgt-5'
:|:||||: || ||| |||||
mRNA 5'-tatttataTTGAATTTTATTCCTTGACCTCAAAct-3'

alignScore: 166, piRNA readNum: 23957
piRNA 3'-actgcGGAG-AGTCAGGTCCGAActGAA-5'
 ||||| |||||:| :|||||||
mRNA 5'-agcatCCTCTTCAGTTC---TTTgACTTg-3'

36.>Prok2NM_015768.6.6032 0.068459696.454 0

alignScore: 178, piRNA readNum: 25017
piRNA 3'-aacGGACGGAGTCCTAGTGATGTACAGAt-5'
 ||| :| ||| :|:|||||||
mRNA 5'-tctCCTTGTGTGGAATATTACATGTCTt-3'

alignScore: 170, piRNA readNum: 16831
piRNA 3'-tgGCGGT-TTAAAACGGAGCTCAGAGTg-5'
 |||:: | | | |||||
mRNA 5'-tcCGCTGCACAATGTCCGTCGAGTCTCAc-3'

alignScore: 176, piRNA readNum: 12170
piRNA 3'-ctgGAAGACGT---GCCCATAGGATGTGAAGGt-5'
 || : ||| :||| |:|||||||
mRNA 5'-ttaCTGTAGCATTGTGGGT-TTCTACACTTCCc-3'

alignScore: 166, piRNA readNum: 11631
piRNA 3'-gtgtagatcGAGACAGTATT-AAGAGTAt-5'
 :|||| |||:: |||||
mRNA 5'-atagaggactTTCTGACATGGCTTCTCATt-3'

alignScore: 177, piRNA readNum: 11391
piRNA 3'-agAGGAACA--ATC-AAGAGTGAGCAGAAAAt-5'
 ||||||| |:| | |:| :|||||||
mRNA 5'-tcTCCTTGTGTGGAATATTACATGTCTTTTt-3'

37.>Akap1NM_001042541 17.4936 0.196753 88.9115 0

alignScore: 176, piRNA readNum: 16509
piRNA 3'-agGCTT-ATGGACAAGTCTCCA-AG--GAGAAAAt-5'
 :|||| ||||| | ||| ||| |: |||||
mRNA 5'-atTGAATTACCT-TGCAGTGGTGTGACTCTTTTa-3'

alignScore: 166, piRNA readNum: 14028
piRNA 3'-gggCAGGCTGTAGGGTAGAT-AGGGTAAGGt-5'
| |: :| || : ||| |||||
mRNA 5'-aagGCCTCTTAGCCAGGCTATTCCATTCCa-3'

alignScore: 165, piRNA readNum: 6930
piRNA 3'-ggtgGAGAAGTCCTAGAAGTT-CAAGAAACt-5'
||| | || ||||:| |||||
mRNA 5'-ttggCTCCTGAGTTGCTTCGGTCTTCTTTGc-3'

alignScore: 167, piRNA readNum: 5977
piRNA 3'-ctaCGG-AGACAGAATCGG-G----TTCGGAGAAt-5'
||| ||| |||||:| | :|||
mRNA 5'-cogGCCAGCTGGCTTAGCTGCAGGAAGCCCTTa-3'

alignScore: 169, piRNA readNum: 4838
piRNA 3'-gtcGACAATTAGAGTTCCAAGAGTCTGAt-5'
|| :|||: ||| |||||
mRNA 5'-ttcCTCCGGTCTCT-AGGAACTCAGACTt-3'

38.>Herc4NM_030114.1.0195 0.016551261.5967 0

alignScore: 174, piRNA readNum: 4179
piRNA 3'-agCAGGTGAT-TCTCAGTTGTTTTCGGGt-5'
||:|||| | :|:|:|||||
mRNA 5'-ttGTTCACTACTGTAAGGATGAAAGCCCAa-3'

alignScore: 166, piRNA readNum: 3014
piRNA 3'-tgaggAGGTGAC-GGTAGGAA-GTAAACAa-5'
|| :|| :||:| |||||
mRNA 5'-cacagTCATTTGATTATTTTCCATTTGTa-3'

alignScore: 170, piRNA readNum: 2832
piRNA 3'-tgAATACCAGGAGAAGAGACAAGAGTCGTGt-5'
| :|| |:||| | || :|||
mRNA 5'-acTCGTGTTTCTCT--TGTGAATTCAGCACa-3'

alignScore: 173, piRNA readNum: 2733
piRNA 3'-ctTGTGGTAGGGAGT--A-ATGTCTTGGTAct-5'
:|:|:| : || | | |||||
mRNA 5'-gtGCATTAATACTAACTGTACAGAACCATGa-3'

alignScore: 176, piRNA readNum: 2710
piRNA 3'-tgtAGTGA CTGTTCTAGTAATCGAGATGACAt-5'
|:| | | |:| | |:|:| | | | | | | |
mRNA 5'-ttcTTACTTATAA-ATTGTT--CACTACTGTa-3'

39.>Lpp NM_001145952 2.32182 0.0603058 38.5008 2.53E-05

alignScore: 169, piRNA readNum: 137306
piRNA 3'-ggaAGACAGAGTGTCTAT--GTTCAAGGCt-5'
| | | | |:| | |:|: | | | | | | | |
mRNA 5'-ccaTCTGCTTACTTGGTGTCCAGTCCGt-3'

alignScore: 170, piRNA readNum: 31469
piRNA 3'-taCGGATCGAAGCCAGTCAAGTTGATAGt-5'
| | | | | |:| | | | | | | | | | | |
mRNA 5'-gaGCCCA-CTTTAGTC--TGCAACTATCc-3'

alignScore: 165, piRNA readNum: 23561
piRNA 3'-ggGGCGTAAGAGGAGTGAGGTAACAGGAt-5'
|:| | | |:| | |:|: | | | | | | | |
mRNA 5'-gcCTGCAGGTGCCTTAAGTC--TTGTCCTg-3'

alignScore: 166, piRNA readNum: 22701
piRNA 3'-ggCACGATTA--AGAACCAACG-GTT-GAACTGAt-5'
| | | |:| | | | | | |:| | | | | | | |
mRNA 5'-ctGAGCAAGTTATCATCGTGGCAGCACCTTGACTa-3'

alignScore: 179, piRNA readNum: 22082
piRNA 3'-aaTTG-GTAAAGTAGA-TG-TTG-CAGTAGAGt-5'
| | | |:| | | | | | | | |:| | | | | | | |
mRNA 5'-aaAACTTAATTCATCTGACTGATAGTCATCTCc-3'

40.>Gtf2a1 NM_175335 2.97828 0.0784784 37.9503 2.05E-12

alignScore: 165, piRNA readNum: 156233
piRNA 3'-tgaCAGGGACAGGAGTTCTCGAGTGCAGAt-5'
| |:| | | | | |:| | | | | | | | | |
mRNA 5'-cgaGTCTGTGTGAGCCCTGGGATGACAGTCTg-3'

alignScore: 175, piRNA readNum: 112381

piRNA 3'-tgCCGAAGATGAGAT-GTA-AAATGTAGTCAA-5'
| |||: | | | | | ||| |||||
mRNA 5'-tgGTCTTTCAGTCAAGCTTCTTTAGATCAGTTC-3'

alignScore: 165, piRNA readNum: 69240
piRNA 3'-cttCCGGT-TCAAGTTCAAGAGTCGATGAt-5'
|||| | | | ||| |||||
mRNA 5'-gccGGCCATAGCT---GTTCGGAGCTACTa-3'

alignScore: 169, piRNA readNum: 29139
piRNA 3'-ttCGA-TAGACTCGTGGACA---CAAGTACAGt-5'
|:| |||| | :|| | | |||||
mRNA 5'-ttGTTGATCTGTGTACATTTTCATTTTCATGTCT-3'

alignScore: 169, piRNA readNum: 25017
piRNA 3'-aacGGACGGA-GTCCTAGTGATGTACAGAt-5'
:|||: | | |||:| |||||
mRNA 5'-tgaTCTGTGTACATTTTCATTTTCATGTCTc-3'

41.>Mast2NM_001042743 3.38335 0.112543 30.0627 5.34E-12

alignScore: 165, piRNA readNum: 1557
piRNA 3'-ttggagtcAGGGTGTCTAAAGAAGACACAt-5'
|||| |:| | ||| |||||
mRNA 5'-tgtttgctTCCCTTACA-TTCACCTGTGTAa-3'

alignScore: 166, piRNA readNum: 1103
piRNA 3'-ggtcaGGATAGGGGACGGTGTATGTAAGt-5'
|:|:|:| | | | |||||
mRNA 5'----caCTTGTTTGCTTCC-CTTACATTCa-3'

alignScore: 167, piRNA readNum: 581
piRNA 3'-tgtGGAGGAAGTTTCTTAAGGAGGACCTt-5'
:| ||| |:| | | |||||
mRNA 5'-catTACCTGTGTAATACACCCTCCTGGAa-3'

alignScore: 170, piRNA readNum: 391
piRNA 3'-ggagtcAGGGTGTCTAAAGAAGACACAtt-5'
|||| |:| | ||| |||||
mRNA 5'-tttgctTCCCTTACA-TTCACCTGTGTAAt-3'

alignScore: 167, piRNA readNum: 341

piRNA 3'-tcgacccAGGAATGACGAGGGAGTAAGTgt-5'
| :||:| | | :| : |||||
mRNA 5'----cactTGTTTGCTTCCCTTACATTCACc-3'

42.>Med1 NM_001080118 4.56283 2.32E-09 1.97E+09 0

alignScore: 176, piRNA readNum: 24655
piRNA 3'-tacaccCTTCGGTAGACAAGAGAACAAGTt-5'
||| |||| | | : |||||
mRNA 5'-gctgccGAAACCATGTGGTTGGTTGTTCAg-3'

alignScore: 167, piRNA readNum: 15442
piRNA 3'-ttggCAGTCAGTGTTTAGTTCTCTACGGa-5'
||:| |||| :| :| |||||
mRNA 5'-gaagGTTGCTCACCTGT-GGGAGATGCCc-3'

alignScore: 167, piRNA readNum: 10791
piRNA 3'-acgaaaacaGTACGAGAATCAGACAAGTct-5'
||||: ||:| |||||
mRNA 5'-tgccgaaacCATGTGGTTGGT-TGTTCAGa-3'

alignScore: 173, piRNA readNum: 9379
piRNA 3'-cagagaTTCGGTAAGTCAAAGACCTAAGACT-5'
|| | : || | |||||
mRNA 5'-ttggagAAACAGGCTGAGTCTGGATTCTGa-3'

alignScore: 166, piRNA readNum: 9115
piRNA 3'-agaaGGTCGACAAGTGTCTGCACTAGGGt-5'
| :| || :::|:|||||
mRNA 5'-tcagCGGGGTGGGGTGGGGCGTGATCCCc-3'

43.>Nipbl NM_201232 1.60211 0.0574017 27.9105 2.01E-11

alignScore: 170, piRNA readNum: 11199
piRNA 3'-gggCGGGCAGTATTGGTTTACGAGATGat-5'
|| | :||: :|:| |||||
mRNA 5'-aaaGCAGTTTGTAGATAGATTCTACTt-3'

alignScore: 168, piRNA readNum: 2073
piRNA 3'-tgtcgaagaGTCCAAATCTGTTTCTAAGAGt-5'

|| ||||: | | |||||
mRNA 5'-aaaacaagCA-GTTTGTAGATAGATTCTct-3'

alignScore: 168, piRNA readNum: 1546
piRNA 3'-tggATAGAGGGATCGGGTTTCATTACGAAt-5'

|:| :|| || :|| |||||
mRNA 5'-aaaTGACTCCAAG--TAATGTAATGCTTa-3'

alignScore: 167, piRNA readNum: 1473
piRNA 3'-acgtggGAAGATCCAC-AGT--AGAGAGTCAGAt-5'

:||:| ||| |:| | | |||||
mRNA 5'--aatgaTTTTTATGTGCTTATGTGTGTCAGTCTa-3'

alignScore: 173, piRNA readNum: 1176
piRNA 3'-cgGTCGGAACCGGATCT-TGTAAGAGATGAAt-5'

||| :||| |||| | |||||
mRNA 5'-agCAG-TTTG---TAGATAGATTCTCTACTt-3'

44.>Tmem194 NM_173732.1.04539 0.0391331 26.7137 0

alignScore: 166, piRNA readNum: 141865
piRNA 3'-tgagtgggttgaGTGGAAGATGGAAAAAAt-5'

:||:|:| :|||
mRNA 5'-ctgttgagataaTACTTTTTTCTTTTTTt-3'

alignScore: 178, piRNA readNum: 13994
piRNA 3'-gtaCACCTTCGGTAGACAA---GAGAACAAGt-5'

||||| |:| ||| | | |||||
mRNA 5'-taaGTGGGATGTCACCTGCTCCCACCCTTGTTCc-3'

alignScore: 179, piRNA readNum: 8735
piRNA 3'-tgGAAGGAGGGTGAAGAGAGTAAAAGAGt-5'

| | ||||| |:| |:| |||||
mRNA 5'-caCCTGCTCCCACCCTTGTTCCTTCTct-3'

alignScore: 170, piRNA readNum: 7412
piRNA 3'-ttACTCGGAGAT-AAGTTC---TC-GGGACAGTGct-5'

| :||| | |||:| || :| |||||
mRNA 5'-caTAGGCCTCAAGTTCAGGTTTCAGATCATGTCACGc-3'

alignScore: 169, piRNA readNum: 5026
piRNA 3'-acaGGGTCTTGGTGAAGAAA---ACAACt-5'

:|||| :::||||| |||||
mRNA 5'-tgcTCCACCCTTGTTCCTTTCTCTGTTGAGa-3'

45.>G3bp2NM_001080794 9.65403 4.69E-10 2.06E+10 0

alignScore: 170, piRNA readNum: 92488
piRNA 3'-agGGAGTCAGGGTGTCTAAAGAAGACACat-5'
 :|: | |: || | | |||||
mRNA 5'-taTCTT-GTTCTTCAGTTAACATCTGTGTt-3'

alignScore: 167, piRNA readNum: 67564
piRNA 3'-tccTTGTCGGTAGGTGTCGCTTCAAAGat-5'
 ||| :| :| :| ||| |||||
mRNA 5'-ttaACAATTCTGTG-AGCAG-AGTTTCTa-3'

alignScore: 167, piRNA readNum: 61393
piRNA 3'-tgtagaggTATTGTCTCAGTTGGTTTAGTCt-5'
 || :|| | | :|||||
mRNA 5'-gtataaaaATTGCAGTATCTTTCAAATCAGt-3'

alignScore: 179, piRNA readNum: 58953
piRNA 3'-tgtagaataaaTAA-TCAG-GATGAACTGAAAat-5'
 || | ||| | | |||||
mRNA 5'-gggagaagtccATTGAGTCTCTAATTGACTTTTc-3'

alignScore: 170, piRNA readNum: 19044
piRNA 3'-ttACGGTCAGTGTATG-AGATAGG-CAGAACGat-5'
 ||| | | ||| | | |||||
mRNA 5'-ggTGCC-TTCTATTACATCATTCCAGTCTTGCTg-3'

46.>Myo1h NM_001164573 0.243695 0.0136539 17.848 0

alignScore: 167, piRNA readNum: 39700
piRNA 3'-ttTGGGAAGATGATAGTTAGGTGAAGGt-5'
 || | | |||: | |:|||||
mRNA 5'-aaACACC-AGTACTGAC-ATTCACTTCct-3'

alignScore: 169, piRNA readNum: 13295
piRNA 3'-ggTTGGAGGTAAGTAGGATAAAGGATAGt-5'
 |: |:| | : :|: |||||

mRNA 5'-ggAATGTTCACTAGGTCTG-TTCCTATC-3'

alignScore: 169, piRNA readNum: 13126

piRNA 3'-ttGGGAAAGTTATGTGGGT-GT---AAAAGTAt-5'

| ||| :|| || |||| :| |||||

mRNA 5'-agCACTTCTAAAACCTCCAGTATGGTTTTTCATa-3'

alignScore: 176, piRNA readNum: 11701

piRNA 3'-ggGTA-GAAGAGTCACTACGAG-TCCGAGGt-5'

||| || | ||| |||| | |||||

mRNA 5'-cgCATGCTGC-CAGGGATGGGCTAGGCTCCg-3'

alignScore: 166, piRNA readNum: 5262

piRNA 3'-tacgGGTGTCTAATTTCAAGTTTGAGACAt-5'

|:::| |:| :|:|||||

mRNA 5'-gtcaCTGTAGGGTGGGCGGCAGACTCTGTa-3'

47.>Aimp2 NM_146165 4.36113 0.296643 14.7016 0

alignScore: 173, piRNA readNum: 10426

piRNA 3'-ccCGTCTT-CCGT---ACGGTCGAGAGAACAGTct-5'

| |||| ||:| | |||| ||| |||||

mRNA 5'-caGAAGAATGGTACGGCTTCCAG-TCTGTTGCAGa-3'

alignScore: 165, piRNA readNum: 4933

piRNA 3'-cccacTCACTAAAGTCCAGTC--GAACAGGt-5'

||| || | |||| :| |||||

mRNA 5'-cttccAGTCTGTTGTGAGAAAGGGACTTGTCCa-3'

alignScore: 171, piRNA readNum: 3782

piRNA 3'-ttcggggaggGTGTC-AAGTTTAGACAACA-5'

:||:| ||| |:|||||

mRNA 5'-agaagaatgTACGGCTTCCAGTCTGTTGTc-3'

alignScore: 174, piRNA readNum: 1011

piRNA 3'-tgtcCTCGTCCCAC---ACCTACCAA---GTCTTCTTt-5'

||||| || || | |||| |||||

mRNA 5'-attcGAGCAGCTTGTCTTGCAGGGTTCAACAGAAGAA-3'

alignScore: 168, piRNA readNum: 1001

piRNA 3'-ctacGGGTACCCGAAT---GCGTCCTCAAGTTGt-5'

:| || ||||: :||||| |||||

alignScore: 168, piRNA readNum: 19862
piRNA 3'-acgTGAAACGTTTCTTAAGGGTCAAAAt-5'
| ||| :||: | | |:| |||||
mRNA 5'-cgtgAGTTT-TAAGCACTCCTTCAGTTTTc-3'

alignScore: 169, piRNA readNum: 13011
piRNA 3'-taCGGGATAAAGGCTGATGGGTTACGt-5'
|||||:| | :||: : |||||
mRNA 5'-caGCCCTGTGT--TGATGGGCAAGTGCa-3'

alignScore: 173, piRNA readNum: 12960
piRNA 3'-cggaATCGGACCCAAAGATGTAGGTTGAGTAt-5'
| | | ||| :| |||||
mRNA 5'-tataTAACCCAGGTT--AGCCTCCAACCTa-3'

50.>Hist1h1t NM_010377 523.913 48.4377 10.8162 0

alignScore: 168, piRNA readNum: 57098
piRNA 3'-ggaCTCGGATCAAGGAGT-AAACATTTACT-5'
|||| | | | :| | |||||
mRNA 5'-taaGAGCC-ACTTACATACTTCTTAAATGg-3'

alignScore: 169, piRNA readNum: 6334
piRNA 3'-gtttggttaaagAAGATTCAGGTCAAAGt-5'
||: ||| |||||
mRNA 5'-----gTTCAAAG-CCAGTTTTCa-3'

alignScore: 173, piRNA readNum: 2347
piRNA 3'-tataTAACGGGAGGTGTATCTTAGGAt-5'
:||| | |:| |:|||||
mRNA 5'-tgtcGTTGAAACCCTAGAGTAGAATCCTa-3'

alignScore: 166, piRNA readNum: 1692
piRNA 3'-aggagtcgttttaaGTCTTGTTCAGt-5'
||||:|||||
mRNA 5'-tttgtggctttacgcCAGAATAAAGTCa-3'

alignScore: 170, piRNA readNum: 990
piRNA 3'-atcAGGAGTCTC--TAAGTACATCAAGAATTt-5'
|:| ||| | |:| || |||||
mRNA 5'-ctcTTTAAAGGCCACTTACATACTTCTTAAa-3'

51.>Epb4.112 NM_001199265 14.5231 4.55E-11 3.19E+11 0

alignScore: 168, piRNA readNum: 75935
piRNA 3'-tgtaggAGTACAGATGTTATC-AGAAACTt-5'
| || |:|: ||| |||||
mRNA 5'-ctacggaTGATTTTAT-ATAGATCTTTGAc-3'

alignScore: 167, piRNA readNum: 23957
piRNA 3'-actgcGGAGAGTCAGGTCCGAACTGAAt-5'
|||: ||||| :|||
mRNA 5'-tttgaCCTTCCAGTCC---TTGACTTt-3'

alignScore: 165, piRNA readNum: 22363
piRNA 3'-taaGGGTAGGACGAATCGGATGAAAGAAt-5'
::||| ||| : || :| |||||
mRNA 5'-agcTTCCAGCCT-TAGAGATTTCTTCTTa-3'

alignScore: 165, piRNA readNum: 21154
piRNA 3'-tcGGAAGGATCAAAGAATGG--GATGTCAAGAc-5'
|:|:|:| | | | | :| |||||
mRNA 5'-ttCTTCTTA--ACCTTCCAGTCCAGTCTt-3'

alignScore: 168, piRNA readNum: 21023
piRNA 3'-ttcgGGAAGAGAAGTCGGGCCGTTAAAAAt-5'
| ||:|:| || :|: | |||||
mRNA 5'-aaagCATTTTTTACA-TCTTGAATTTTc-3'

52.>Reep6 NM_139292 170.866 16.6308 10.2741 0

alignScore: 168, piRNA readNum: 43528
piRNA 3'-tgaGGGT-AGAGA-GAAAGGAA--GGTGTAGAt-5'
|||| | || | |:| |||||
mRNA 5'-ttgCCCAGACACTGCTGGCTTTGCCACATCTg-3'

alignScore: 173, piRNA readNum: 16260
piRNA 3'-tgtgTACCTGACGAGTG-AGATGTGAGTc-5'
|||:| |: | | || |||||
mRNA 5'-acgaATGGGcAGTCCCCGTCCCAGTcAGC-3'

alignScore: 170, piRNA readNum: 13435
piRNA 3'-ccaggctaCATCTGGACCAGAGGTCAGTct-5'
| || | ||| |||||
mRNA 5'-acgaatggGCAGTCCCGTCCCAGTCAGc-3'

alignScore: 172, piRNA readNum: 6251
piRNA 3'-tgtCGGAAGAAGTTCTTCAAGTTCGTCCGt-5'
|| :| ||||| |||||
mRNA 5'-gacGCAGGTCCAAGAA---CAAGCAGGGCc-3'

alignScore: 170, piRNA readNum: 4838
piRNA 3'-gtCGACAATTAGAGTTC-----CAAG-AGTCTGAt-5'
||| ||| |||:| ||| |||||
mRNA 5'-caGCTGATAATGTCCAGGCTCTGACAGTTCTCAGACTc-3'

53.>Dhd1 NM_001042719 20.4848 2.28826 8.95213 0

alignScore: 165, piRNA readNum: 67564
piRNA 3'-tcctTGTCGGTAGGTG---TCGTCTCAAAGAt-5'
|:: :||| ||| :||| |||||
mRNA 5'-tcacATGTTCATACACTGAGGCACCAGTTTCTc-3'

alignScore: 171, piRNA readNum: 60737
piRNA 3'-tgTGCAGATGAAGATACGG---TCTTAAGGt-5'
|| ||| ||||| | | |||||
mRNA 5'-gcACTTCT--TTCTAGGGCTTAAGAATTCCa-3'

alignScore: 172, piRNA readNum: 26689
piRNA 3'-ctTGTGCAGATGAAGATACGG---TCTTAAGGt-5'
:||| ||| ||||| | | |||||
mRNA 5'-caGCACTTCT--TTCTAGGGCTTAAGAATTCCa-3'

alignScore: 169, piRNA readNum: 22310
piRNA 3'-aggtaggGGCTTGGGGTTGATTCAGGAt-5'
:|| ||||| |||||
mRNA 5'-tactgaaTCG-ACCCCAA--AAGTCCTg-3'

alignScore: 170, piRNA readNum: 22002
piRNA 3'-tcgtgcAAACCAAGTCTCTTGAATAAt-5'
||| ||:| | |||||
mRNA 5'-aactatTTTAATTA-AAAGCACTTTATTt-3'

54.>Flrt3 NM_178382 6.10259 0.686517 8.8892 0.000178801

alignScore: 167, piRNA readNum: 13126

piRNA 3'-ttGGGAAAGTTATGTGGGTGTAAGTAt-5'

|:| | | | | | | | | | | | | |

mRNA 5'-agCTTTTGAATTCGACAAATTTTCATa-3'

alignScore: 172, piRNA readNum: 8292

piRNA 3'-cgTGGATGT-GTGTC--AG-TCTTCTTTCCTGt-5'

| | | | | | | | | | | | | | | | | |

mRNA 5'-ccACCGTCAGCAGAGCTTCAAGAATAAAGGACT-3'

alignScore: 173, piRNA readNum: 7681

piRNA 3'-tgTACTTGTGTAAGGAAGATTTGTCGAAc-5'

| | | | | | | | | | | | | | | | | |

mRNA 5'-taATGTA-ACATTTCTTT---ACAGCTTc-3'

alignScore: 168, piRNA readNum: 7262

piRNA 3'-tcgGTG-ATA-GCACTTCAGGCAGAACCAAt-5'

:| | | | | | | | | | | | | | | | | |

mRNA 5'-cagTACATATACTAGAACTGCATCTTGGTTt-3'

alignScore: 167, piRNA readNum: 7191

piRNA 3'-taCGGGGTTTGGAGAAATA-AGGAAAAGATt-5'

|:| | | | | | | | | | | | | | | | | |

mRNA 5'-gaGTCCGAAACAACCCCATGTATTTTCTAg-3'

55.>Ddx4 NM_010029 25.7488 3.10161 8.30175 0

alignScore: 176, piRNA readNum: 24410

piRNA 3'-ccaagaTGGTTG-AGACAGAAGTCTTATATGt-5'

| | | | : | : | | | | | | | | | | | |

mRNA 5'-ggtatgACAAATGTTTGCTTTTATAATATACa-3'

alignScore: 168, piRNA readNum: 5973

piRNA 3'-ctGAACAGGGAGAACCTGAGTCT-AAAGGAAt-5'

:| | | : : | | | | | | | | | | | | | |

mRNA 5'-tgTTTGCTTTTATAATATACAGATTTTCCTTg-3'

alignScore: 174, piRNA readNum: 4873

57.>Myef2 NM_010852 15.248 2.23507 6.82216 1.47E-08

alignScore: 167, piRNA readNum: 185258
piRNA 3'-tcTCTCCTTAGGTTcACA--AGACGGACGTcT-5'
||| | ||| || | :| |||||
mRNA 5'-ttAGATATAGCCATGTCTCCTTTACCTGCAGa-3'

alignScore: 166, piRNA readNum: 60737
piRNA 3'-tgtgcAGATGAAGATACGGTCTTAAGGt-5'
|||| || | | | |||||
mRNA 5'-cttatTCTA-TTATTTCCAATAATTCCAa-3'

alignScore: 171, piRNA readNum: 9804
piRNA 3'-ggGTAGACTGGACAAGGAAAGG-CAAAAGGt-5'
:| | || :| ||: |||| |||||
mRNA 5'-agTAGCAGAGTTTGTCTGTTCCAGTTTCCc-3'

alignScore: 174, piRNA readNum: 6334
piRNA 3'-gtTTGGTTAAAGAAGATTCAGGTCAAAGt-5'
|:| :| ||: ||| : |||||
mRNA 5'-gtAGCAGAGTTTGTCT--GTTCCAGTTTCCc-3'

alignScore: 176, piRNA readNum: 5973
piRNA 3'-ctgaacaGGGAGAACCTGAGTCTAAAGGAAt-5'
:|:| ||| |:|: |||||
mRNA 5'-gcaagagTCTTATTGAATTTGATTTCCCTTg-3'

58.>Ctnna3 NM_177612 7.89259 1.22793 6.42756 0.00485876

alignScore: 174, piRNA readNum: 22363
piRNA 3'-taAGGGGTAGGACGAATCGGATGAAAGAAt-5'
|:|||| :: || | | |||||
mRNA 5'-ttTTCCAATTAGCAT-CCATACTTTCTTt-3'

alignScore: 166, piRNA readNum: 10728
piRNA 3'-taTGGGGGGTTTCAGAATATTAGGGTAAAt-5'
|||:| : | ||| :|: |||||
mRNA 5'-atACCCTCATCCACTCTAGTG--CCCATTTc-3'

alignScore: 167, piRNA readNum: 7222
piRNA 3'-ggGGTGGACTTCGGAGGGGACTAGAACct-5'

60.>Lpgat1 NM_001134829 3.16738 0.500973 6.32246 0.000461771

alignScore: 185, piRNA readNum: 92488
piRNA 3'-agGGAGTCAGGGTGTCTAAAGAAGACACAt-5'
|: ||||:| || || |||||
mRNA 5'-ctCTCCAGTTCAAC--ATGTCTTCTGTGTa-3'

alignScore: 166, piRNA readNum: 62760
piRNA 3'-agTAGGTGGGTAAGTAGGT-AAGTTGTt-5'
||| | || : ||| |||||
mRNA 5'-ctATCC-CACACCTCTCCAGTTCAACAt-3'

alignScore: 170, piRNA readNum: 60737
piRNA 3'-tgtGCAGATGAAGATACGGTCTTAAGGTt-5'
:| | ||:| ||| : |||||
mRNA 5'-cacTGTGGAGTTTTCTGCAGAAATTCAt-3'

alignScore: 171, piRNA readNum: 37996
piRNA 3'-cgTCGAAGACTTAAGTTGA-AAGTTCAAGGt-5'
:| ||||: | || | |||||
mRNA 5'-tgGGC-TCTGAG-ACTACTCTGCAAGTTCCc-3'

alignScore: 180, piRNA readNum: 24655
piRNA 3'-tacACCCTTCGGTAGACAAGAGAACAAGTt-5'
| | ||| ||:||| ||:|||||
mRNA 5'-cttTTGAAAG--ATTTGCCTTTTGTTCAt-3'

61.>Nr6a1 NM_001159548 28.6612 4.54358 6.30807 3.22E-05

alignScore: 168, piRNA readNum: 123091
piRNA 3'-ggAGAGGACCTAGG----TGTCAGGT--AAACAGGt-5'
||| |||| || | || || |||||
mRNA 5'-gtTCT-CTGGCTCCCTTTAAAGGCCATTTTGTCCt-3'

alignScore: 168, piRNA readNum: 51946
piRNA 3'-tgCCGGCTT-AAGTAAACGTGTCGTAAGAAt-5'
| | | ||| | ||| :|||
mRNA 5'-atGTCCAAAGTTCA--GAACATTATTTCTTc-3'

alignScore: 165, piRNA readNum: 32649
piRNA 3'-gggggAAACG-TAAG-TCAAGTCGGTTCCGt-5'
||||| :||| || || |||||

mRNA 5'-cctagTTTGCTGTTCTAGATC-TACCAAGGCc-3'

alignScore: 172, piRNA readNum: 15802

piRNA 3'-tgaCAGGGAACATGAAGTAGTA--AGTACGTcAt-5'

|||| | | || | |: | |||||

mRNA 5'-gccGTCCATCCTCCTCCCTTCTCCTCATGCAGTg-3'

alignScore: 170, piRNA readNum: 13994

piRNA 3'-gtacacCCTTCGGTAGACAAGAGAACAAGt-5'

||| |:| |||| | |||||

mRNA 5'-atgaatGGATGTC-TCTGAGCCCTTGTTc-3'

62.>Lrrc36 NM_001170788 29.5995 4.76451 6.2125 0

alignScore: 168, piRNA readNum: 940

piRNA 3'-taAGTTCAGCGTGACAGAGGACACcT-5'

|||:| || ||||| |||||

mRNA 5'-gcTCAGGGCCG--CTGTC-CCTGTGGt-3'

alignScore: 167, piRNA readNum: 196

piRNA 3'-caCAGGG-TGT--CTCAAGTCTCACAAATGGt-5'

|||| ::| |:| | | |||||

mRNA 5'-ctGTCCCTGTGGTGGGTACTG-GTGTTTACc-3'

alignScore: 165, piRNA readNum: 123

piRNA 3'-taCCGTGACGTCTCCGAGGATCCCCAAAAt-5'

| | |||::| || | || |||||

mRNA 5'-ctGTCCCTGTGGTGGGTACT--GGTGTTa-3'

alignScore: 172, piRNA readNum: 85

piRNA 3'-acaacttaacGGAGGCACTTGCGAGTCCcT-5'

|| | | |:|||||

mRNA 5'-gctccctcgcCCACGGAGGACGCTCAGGGc-3'

alignScore: 188, piRNA readNum: 59

piRNA 3'-tgtggGGATGTGGGTTT-TGTTTCTTTTgT-5'

::||| ||||| |: |||||

mRNA 5'-tggtgTTTACCCCAAAGATTAAGAAAACg-3'

63.>Azin1 NM_001102458 0.000782963 0.000126302 6.19913 5.89E-09

alignScore: 178, piRNA readNum: 141865
piRNA 3'-tgAGTGGGTTGAGTGGAAGATGGAAAAAt-5'
|||:|:|:| |||| | |||||
mRNA 5'-tgTCATCTAGTTGTCCTTGA-CTTTTTTc-3'

alignScore: 166, piRNA readNum: 112381
piRNA 3'-tgCCGAAGATGAGATGTAATGTAGTCAAt-5'
||| | : ||| : : | | : |||||
mRNA 5'-ctGGCT--TGGTCTTTGTGGCATATCAGTTg-3'

alignScore: 174, piRNA readNum: 58953
piRNA 3'-tgtAGAATAAATAATCAGGATGAACTGAAAAt-5'
| | | | | |||| | |||||
mRNA 5'-catTGTCATCTAGTTGTCCT--TGGACTTTTt-3'

alignScore: 165, piRNA readNum: 35587
piRNA 3'-ccaacTCTG-ATGAA--AG-ACGGTC-AAGATTGt-5'
||| | ||| || ||:| | |||||
mRNA 5'-agaggtAGACGTTCTTCATCATGTCTGCTTCTAACc-3'

alignScore: 167, piRNA readNum: 23561
piRNA 3'-ggGGCGTAAG--AGGAGTGAGGT-AACAGGAt-5'
|| || | | : ||| ||:| |||||
mRNA 5'-gaCCCCAGTCCATTGTCA-TCTAGTTGTCCTt-3'

64.>Psap NM_001146120 0.169661 0.0291523 5.81982 0

alignScore: 195, piRNA readNum: 26266
piRNA 3'-ttAGGGGTGAAGT-TTTAGGGATGAACAt-5'
|:||| :|| || ||:| |||||
mRNA 5'--tTCCAGCTGCAGAAGTCACCTACTTGTg-3'

alignScore: 167, piRNA readNum: 22363
piRNA 3'-taaggGTagGACGAATCGGATGAAAGAAAt-5'
|||:| || |||| |||||
mRNA 5'-caggagCATTTT-CTGAGCC--CTTTCTTg-3'

alignScore: 169, piRNA readNum: 12240
piRNA 3'-tgaggGTAGGTGGTGGGA---GTGTAAGACGAGt-5'
|| ||||: || | | |||||
mRNA 5'-gctgaCAGCCACTCCGTGTCCCCTTTCTGCTCg-3'

alignScore: 165, piRNA readNum: 10854
piRNA 3'-agAGGCCAAGATCCAGTCGTCAAAGACAGt-5'
||| | || || |||| |||||
mRNA 5'-tcTCCCTTACT--GT-AGCA-TTTCTGTCa-3'

alignScore: 173, piRNA readNum: 8857
piRNA 3'-agtGGAAGAGACTCTCT-AAT-TGTCGAAGGt-5'
||| | |||:| | |||||
mRNA 5'-tctCCTACCATGAGGGAGCTACCCAGCTTCc-3'

65.>Gnb1 NM_001160017 0.0393815 0.00684902 5.74995 0

alignScore: 176, piRNA readNum: 147401
piRNA 3'-tacGGATAAGCAGATGTACGAAGAGAAAGGt-5'
||| :||| || | || :|||
mRNA 5'-tccCCTCACTGTCCACTTTCTGTTCTTTCCt-3'

alignScore: 172, piRNA readNum: 12820
piRNA 3'-cgtcTCACACGGT-TTGTCGTACCAGTct-5'
|| ||||| :| || |||||
mRNA 5'-tggtAGGATGGCCACGAATGCTTGGTCAGa-3'

alignScore: 172, piRNA readNum: 9431
piRNA 3'-agtCGACAAGAC---AGACAGACAGGTCTCTct-5'
||| || | |:| |:| |||||
mRNA 5'-cctGCTG-TCAGAGATTTTTTCTCCAGAGAg-3'

alignScore: 172, piRNA readNum: 7428
piRNA 3'-gggtAGAGAGGTCCGGA-GACTATAAGACT-5'
|:| |||| : || :|| |||||
mRNA 5'-cggcTTTGTCCATTACTGTTGCTATTCTGc-3'

alignScore: 166, piRNA readNum: 5715
piRNA 3'-agatGATGAGGGACAGTCTACAGGAACc-5'
| |||::|||: | |||||
mRNA 5'-ctgtCCACTTTCTGTT--CTTTCCTTGGg-3'

66.>Prm2 NM_008933 1468.28 262.984 5.58315 0

alignScore: 166, piRNA readNum: 3425
piRNA 3'-tgtGGGAGTAGTATCAGG-TAGTGA CT CGAt-5'
 :|| :||: |||: | | |||||
mRNA 5'-catTCCATGTCGATGTCTGAGCCCTGAGCTg-3'

alignScore: 171, piRNA readNum: 2042
piRNA 3'-tgCAGATGAAGATACGGTCTTAAGGTTCTTt-5'
 ||| | ||| |||| |:| |||||
mRNA 5'-ctGTCCA-TTC--TGCCTGGA-GCCAAGGAag-3'

alignScore: 168, piRNA readNum: 1428
piRNA 3'-ttgggGATGGGTCTAGGGTCTCTt-5'
 ||:| | |: |||||
mRNA 5'-ctgagCTGCCAAGGAGCCACGAGAt-3'

alignScore: 174, piRNA readNum: 1358
piRNA 3'-tcAGTCGAACGTTTGTAGAGTTCTTAGAt-5'
 | |||| |||: | | || |||||
mRNA 5'-ccTGAGCTGCCAAGGAGC-CACGAGATCTg-3'

alignScore: 166, piRNA readNum: 1251
piRNA 3'-gaccggTAGGTTC--GACTCAAGTTTCGGt-5'
 |||:| | |||| | |||||
mRNA 5'-cacgagATCTGAGTACTGAG--CAAAGCCa-3'

67.>Tsc22d1 NM_001177751 0.301798 0.0588858 5.12514 0

alignScore: 170, piRNA readNum: 26266
piRNA 3'-ttaGGGGTGA--AGTTTTAGGGATGAACAt-5'
 :||||| |: | | :| |||||
mRNA 5'-cagTCCCACTGTATTTACCTGTTCTACTTGTc-3'

alignScore: 165, piRNA readNum: 10699
piRNA 3'-ggATTAGGTATGAGGACAAGC--ACTTGTCTt-5'
 |: | | |:| | ||| :| |||||
mRNA 5'-gcTGCTGC-TGCTGCTGTCTGAACTGAACAGAc-3'

alignScore: 183, piRNA readNum: 8908
piRNA 3'-tgACGGAACGAGAGGGTACTC-ATAGATGAt-5'
 || ||||: ||:| ||| |||||
mRNA 5'-tgTGGCTTGTCTCCTCCTAGAGAGATCTACTt-3'

alignScore: 180, piRNA readNum: 8735
piRNA 3'-tggaaGGAGGGTGAAGAGAGTAAAAGAGt-5'
 :| | |:| | :|||:|||||
mRNA 5'-gagacTCACACGCTGTTCTCGCTTTCTCc-3'

alignScore: 172, piRNA readNum: 7741
piRNA 3'-ttCCAGGGTAGAACTAAGA-GTATTAGGGCt-5'
 || || |: | | ||| :|||
mRNA 5'-ttGGCCAGTTAGTCACTCTGTGTAATCCCGg-3'

68.>Eif4g1 NM_145941 1.17521 0.231107 5.08513 6.00E-08

alignScore: 172, piRNA readNum: 3721
piRNA 3'-tgCGGGCTAC-CA-TACACAAAGATGTCACCGAt-5'
 |: |||| | | | | | | |||||
mRNA 5'-taGTGCGATGTGTCTTGAGCTAATAAAGTGGCTg-3'

alignScore: 166, piRNA readNum: 2175
piRNA 3'-agGTGGA-AGTCAAGGATCCAG-AAAAGACTt-5'
 :| | | | :| |||| | : |||||
mRNA 5'-ccTGCCTCTAGGGTCCTTTTTATTTTCTGAa-3'

alignScore: 167, piRNA readNum: 2110
piRNA 3'-aggtaggATCAGGGTCGGGACGACGt-5'
 || | | || |||||
mRNA 5'-cagccCCT-GCACCACCCCTGCTGc-3'

alignScore: 166, piRNA readNum: 2009
piRNA 3'-atacCAG-GAGAAGAGACAAGAGTCGTGTCTt-5'
 || | ||| || | :|||
mRNA 5'-aagtGTCTCTCTCCTCCCCCAGGGCACAGAg-3'

alignScore: 167, piRNA readNum: 1070
piRNA 3'-agtcaGAGAGGAGTTGGGA--GTTACAGAt-5'
 | ||| |: | | |||||
mRNA 5'-cccccCCCTCCAGGATGCTGCCAAGTGTCTc-3'

69.>Ost4 NM_024460 54.1071 10.8777 4.97413 0

alignScore: 165, piRNA readNum: 31989

piRNA 3'-gggggttGGAGGTAAGT--AGGATAAAGGAt-5'
::|||| || |:|||||||
mRNA 5'-ctggattTTTCCAAACAACCTTTTATTCCTc-3'

alignScore: 165, piRNA readNum: 25078
piRNA 3'-ggtagaacaGGGACATATATTTATATCt-5'
||| ||| | |||||
mRNA 5'-tactccctcCCCCAATACAAAATATAGa-3'

alignScore: 167, piRNA readNum: 12401
piRNA 3'-ggGAGGACAAACCAGGGAC-GTAGGAATTGt-5'
|:| ||| || | |||||
mRNA 5'-aaCTTTTATTCCTCAAAGTCTTCCTTAACc-3'

alignScore: 169, piRNA readNum: 7850
piRNA 3'-cgTGACGGTATCTGAGTCTCACAGAAGGa-5'
||| :|| ||| | |||||
mRNA 5'-caACTTTTATTCCTCAA--GTCTTCCTt-3'

alignScore: 175, piRNA readNum: 3388
piRNA 3'-cgATCCCAAACGGGGTAAACAAGATGAGt-5'
|||| |||:| || |||||
mRNA 5'-taTAGGGGCTGCTTTC--TT-TTCTACTCc-3'

70.>Ep400 NM_029337 32.2873 6.63236 4.86815 2.09E-08

alignScore: 181, piRNA readNum: 67564
piRNA 3'-tccTTGTGGTAGGTGTCGTC---T-TCAAAGAt-5'
|:| ||| |:| ||| | |||||
mRNA 5'-gacAGTGGCAATCCATGGCAGTGCACAGTTTCTc-3'

alignScore: 168, piRNA readNum: 32864
piRNA 3'-tgTCCGAAAGACGTCATAAACAG--TCAGAGAt-5'
|| | ||| ||| | || |||||
mRNA 5'-gtAGTCCTTCAGCAGGAGAGATCCAAGTCTCTt-3'

alignScore: 178, piRNA readNum: 19777
piRNA 3'-cgAGG-GAGACGAGGACCAGGTGAATTTc-5'
||| |||| ||| |: |||||
mRNA 5'-ccTCCACTCTGGTCCT-CTCT-CTTAAAGt-3'

alignScore: 168, piRNA readNum: 10727

piRNA 3'-ggTTTACACACGATAGTAGAGGTAAAATGt-5'
||:| ||||:| | : | |||||
mRNA 5'-gtAAGTTTGTGTT-TAGAC-ACATTTTACT-3'

alignScore: 177, piRNA readNum: 9602
piRNA 3'-cgTTC-ATA-CTTCAAGAAT--ATAGA-CATAGACT-5'
||| | | ||:|||| | | | | |||||
mRNA 5'-ggAAGCTTTGGAGGTTCTAGGTACCTGGTATCTGg-3'

71.>Tuba3b NM_009449 1710.43 352.01 4.85904 0

alignScore: 178, piRNA readNum: 2602
piRNA 3'-caCGACTG-AGGTAGATGGAATGGAAGGt-5'
||||:| ||:| | ::| |||||
mRNA 5'-tgGCTGGCGGCCGTCCATTTACACCTTCCc-3'

alignScore: 171, piRNA readNum: 1335
piRNA 3'-agACAGA--GAAGAAAGGTAAAGTTGGAAGGt-5'
|| | | | ||||| |||||
mRNA 5'-tcTGGCTGGCGGCCGTCCATTTACACCTTCCc-3'

alignScore: 167, piRNA readNum: 747
piRNA 3'-acagTATAAGAAGAGAATTCGTCTCAAAGAt-5'
||| | ||: ||| | :| |||||
mRNA 5'-aaggATA-TGTTTACTT-ATTAAGTTTCTa-3'

alignScore: 167, piRNA readNum: 289
piRNA 3'-tgagtaCACCGGTCAG--AGATG-GGAAGGGt-5'
| |||| ||| |:||| |||||
mRNA 5'-tggctgGCGGCC-GTCCATTTACACCTTCCc-3'

alignScore: 168, piRNA readNum: 277
piRNA 3'-tggcACCAATG-GTGAGGTAGGAGATTTAt-5'
|| |||| |:| | ::|||
mRNA 5'-gataTGTTTACTTATTAAGTTTCTAAATg-3'

72.>Cdk12 NM_177270 0.625111 0.129605 4.8232 8.18E-10

alignScore: 175, piRNA readNum: 141865
piRNA 3'-tgAGTGGGTTGA-----GTGGAAGATGGAAAAAt-5'

|:| ||||| |:|:|:| :|:|:|:|
mRNA 5'-caTTAGCCAATAATGGGATCTTTTTCTTTTTTa-3'

alignScore: 165, piRNA readNum: 68064
piRNA 3'-ctgGGGAAATGGGT---TGTTTGTAATAACt-5'

 |:| |||: | || | :|:|:|:|
mRNA 5'-aggCTTTCTACTAAAATACCACTATTTATTGt-3'

alignScore: 170, piRNA readNum: 61046
piRNA 3'-tgTCAGGGTGTCTAAAGAAGACACATTTt-5'

 ||:|:| | :| | |: || |:|:|:|:|
mRNA 5'-ctAGTTTCAGGGCTGTTCTC-ATGTAAGg-3'

alignScore: 169, piRNA readNum: 19677
piRNA 3'-tggGAGACCGTC-TCAAGAACAG-AAGATGAt-5'

 || || ||| ||| | | | |:|:|:|:|
mRNA 5'-tcaCTGTGTCAGTAGTAATAGGCTTTCTACTa-3'

alignScore: 182, piRNA readNum: 12120
piRNA 3'-caAGATATGGTAGTGAGG-GATAAATAACt-5'

 |:| |||:| | :| || |:|:|:|:|:|
mRNA 5'-gcTTTCTACTAAAATACCACTATTTATTGt-3'

73.>Rp1391 NM_026594 349.178 74.1738 4.70757 0

alignScore: 166, piRNA readNum: 141865
piRNA 3'-tgagTGGGTGAGTGGAAGATGGAAAAAAt-5'

 |:| || |:| || | :|:|:|:|
mRNA 5'-gacaATTGAAATTAGATTATTTCTTTTTTc-3'

alignScore: 175, piRNA readNum: 92488
piRNA 3'-agGGAGTCAGGG---TGTCTAAAGAAGACACAt-5'

 |:|: ||:| | | ||| |:|:|:|:|:|
mRNA 5'-acCTTTTGTTCGAAAAAATTGCTTCTGTGTt-3'

alignScore: 188, piRNA readNum: 8872
piRNA 3'-ggTGGTAGAATCAAAGAGATGTAAGATTTt-5'

 || ||||| || ||| :| |:|:|:|:|
mRNA 5'-tcACGATCTCCTTCCTCGGCCTTCTAAAt-3'

alignScore: 174, piRNA readNum: 7850
piRNA 3'-cgTGACGGTA-TCTGAGT-CTCACAGAAGGAa-5'

||||| | | ||||| || |||||
mRNA 5'-agACTGCCCTAAACTCACGA---TCTTCCTt-3'

alignScore: 176, piRNA readNum: 7802
piRNA 3'-acAAGGAAAGGCA--AAA--GGT-AGGTAAGTct-5'
||:|||||:| | | : | |:|||||
mRNA 5'-gtTTTCTTTCTGTGCTTTAGTGAGTTCATTcAGc-3'

74.>Rnf138 NM_019706 44.6311 9.79585 4.55612 5.80E-14

alignScore: 168, piRNA readNum: 86422
piRNA 3'-gtagggtagagGTGTTTCAAGTGGTAAAt-5'
||:| | | |||||
mRNA 5'-ttaaggagaagaCATGAAG-TCACCATTTt-3'

alignScore: 166, piRNA readNum: 42388
piRNA 3'-aggaagACACAGG--ACAAGAGATCGt-5'
| | | | | |||||
mRNA 5'-gcgtgaTGTTTACTGTGTTCTCTAGCa-3'

alignScore: 168, piRNA readNum: 21154
piRNA 3'-toggaaGGA-TCAAAGAATGGGATGTCAAGAc-5'
| | | | | |: ||: | |||||
mRNA 5'-tgtaagCCTAAATGTTATATACCACAGTTCTt-3'

alignScore: 170, piRNA readNum: 13011
piRNA 3'-tacGGGATAAAGGGCTGATGG--GTTcACGt-5'
: |: |: ||: : | | | |||||
mRNA 5'-acaTCTCTGCCTCCTTGCAACCTACAAGTGCc-3'

alignScore: 167, piRNA readNum: 11602
piRNA 3'-ttoggttcaAGT--GAGTGTcGT-CTCAATCTt-5'
| | | : |||||: | |||||
mRNA 5'-gctgatacaTCAGTTTCACAGTACCAGTTAGAA-3'

75.>Zfp217 NM_001033299 3.63352 0.797557 4.55581 0.000714053

alignScore: 177, piRNA readNum: 30406
piRNA 3'-ctATGGGAAATCAGGTGTCGTAATTGAt-5'
||: : | | | | |||:|||||

mRNA 5'-agTATGCCTT-GTCATCAGTATTAACt-3'

alignScore: 183, piRNA readNum: 25078

piRNA 3'-ggTAGAACAG-GGACATATATATTTATATct-5'

|| || |: : |||: ||:|||||||

mRNA 5'-ttATGTTATTATATGTGGATGTAATATAGa-3'

alignScore: 165, piRNA readNum: 22002

piRNA 3'-tcGTGCAAACCA-AGTC-TCTCT-TGAAATAAt-5'

:|| | | |||| ||| | :|||||

mRNA 5'-gaTACTTAAGTTGTCAGTAGACATGCTTTATTt-3'

alignScore: 170, piRNA readNum: 21154

piRNA 3'-tcggaAGGATCAAAGAATGGGATGTCAAGAc-5'

||: ||| |||:| |||||

mRNA 5'-tgataTCTGAGT---TTATTCAACAGTTCTt-3'

alignScore: 167, piRNA readNum: 11363

piRNA 3'-ctcgacaaAGACATGAACCCAGGAAAAAGt-5'

|:|| ||| | |||||

mRNA 5'-aagataaaTTGCACT--GCTCCTTTTCTt-3'

76.>1700016H13Rik NM_001163550 571.038 127.919 4.46406 0

alignScore: 169, piRNA readNum: 4556

piRNA 3'-tagTACGACAT-TCCAAA-GACGCAGGTACct-5'

| |||| | |||| | || |||||

mRNA 5'-ttgAAGCTGAACCTGTTTCCGGCATCCATGGa-3'

alignScore: 175, piRNA readNum: 3998

piRNA 3'-ttcaCAAGGAC-A--CGAG-ACGGTAAACACAGt-5'

|||||| | ||| ||: |||||

mRNA 5'-ccagGTTCTGCTACACTCTTGTCTTTGTGTCc-3'

alignScore: 169, piRNA readNum: 3738

piRNA 3'-tcTATTTCCGAGG--C-AGTAGTATGTGAGAt-5'

| |:|||| || | || | |||||

mRNA 5'-tgACAGAGCCCCAGGTTCTGCTACACTCTt-3'

alignScore: 166, piRNA readNum: 2579

piRNA 3'-tgaacttGTACGGAA-ATAGGAGATGTCGTt-5'

:| |:| |:| |||||

mRNA 5'-acactctTGTTCTTTGTGCCATACAGCAg-3'

alignScore: 167, piRNA readNum: 1876

piRNA 3'-agGGACGAGTAACAGGATATTGTATGTct-5'

|:|:| | | | | | | |

mRNA 5'-ctCTTGTTCTTTG---TGTGCCATACAGc-3'

77.>Prss53 NM_001081268 0.882296 0.199801 4.41587 0

alignScore: 170, piRNA readNum: 35187

piRNA 3'-tgtGAGAGATGGATACTCAAGGTAAGTCAGt-5'

| | | | | : | | | | | | | |

mRNA 5'-cctCTCCCTGCCTGCCCATCC-TTCAGTCa-3'

alignScore: 172, piRNA readNum: 9976

piRNA 3'-tagaaGAGGAAAGATAGACAA-GGTCGGGt-5'

| | | | | | | | : | | | | | | | |

mRNA 5'-ctcccCTCCGGTCTTGTGGTCCCAGCCc-3'

alignScore: 172, piRNA readNum: 5997

piRNA 3'-gtacgCCGTCGATGTCTTG--CCTCAAGAGAt-5'

| | | | | | | | : | | | | | | | |

mRNA 5'-tcacaGGCAGCTTTGCGACCCAGTGGTCTCTc-3'

alignScore: 172, piRNA readNum: 5732

piRNA 3'-tgtaggatGTTTCTTTGGGGT-CAGTTGTt-5'

| | : | | | : | | | | | | | |

mRNA 5'-cagaaacgcCAGACAACCTCCACGTC AACa-3'

alignScore: 166, piRNA readNum: 4894

piRNA 3'-agtcCTCTTTCGAAATCAGATG-ACGACGA-5'

| | | : | | | | | | : | | | | | | | |

mRNA 5'-tgtaGAGGAATCCT--CTCTGCTTGCTGCTg-3'

78.>Ahi1 NM_001177776 0.0117937 0.00267821 4.40358 0

alignScore: 177, piRNA readNum: 11602

piRNA 3'-ttcgGTTCAAGTGAG-TGTCGTCTCAATCTt-5'

| | | | | | | | | | : : | : | | | | | | | |

mRNA 5'-ccaaCAAGGTCAGACTATGGTAAAGTTAGa-3'

alignScore: 165, piRNA readNum: 10311
piRNA 3'-ggGAGGTA--GAGAC-AGAACTA--GCAAGACAGt-5'
||| :| ||||| |||| | : |||||
mRNA 5'-agCTCAGTCACTCTGAACCTGCTTCTCTTCTGTc-3'

alignScore: 170, piRNA readNum: 7222
piRNA 3'-gggGTGGACTTCGGAGGGGACTAGAACct-5'
:| ||| || ||||:| |||||
mRNA 5'-ataTAGCTG-AGACTCCTC-CATCTTGGt-3'

alignScore: 167, piRNA readNum: 7003
piRNA 3'-tgcggagtGGAGAGAGTTGGTCTGGTAAAGt-5'
::|||: ||: |||||
mRNA 5'-atccttggTTTTCTTCACTCATCCATTTc-3'

alignScore: 176, piRNA readNum: 6910
piRNA 3'-tgTGGAGT---AGTCCTGTGATGACGGTAATGt-5'
::|:|:| |||| |:| | |||||
mRNA 5'-atGTCTTAGTTTCAGAATAACAGTGCCATTACc-3'

79.>Cox8c NM_001039049 1716.56 398.364 4.30902 0

alignScore: 172, piRNA readNum: 7276
piRNA 3'-agaGTAAGGGAC-GAGTAA-CAGGATATTGt-5'
| | |:||| | :|| |||||
mRNA 5'-gaaCCTCCTCTGACGAGTTAGTCTATAACt-3'

alignScore: 174, piRNA readNum: 5032
piRNA 3'-tgGATAGGTTTGGACTCGATAAGATGTGt-5'
||| | :||| | |:|||
mRNA 5'-tcCTAT-AACTGTCTGTGATGTTCTACAct-3'

alignScore: 167, piRNA readNum: 2814
piRNA 3'-ttgggagaggacCTGTTTGT-TTAGACGt-5'
|||:|||| |||||
mRNA 5'-tgcacatcatggacGACGAACATAATCTGc-3'

alignScore: 177, piRNA readNum: 2412
piRNA 3'-ttttcacACGGAGACTCTCAGGATGTGAAt-5'
||:|| ||| ||:|||||
mRNA 5'-cctataacTGCTGTGA-TGTTCTACACTTc-3'

alignScore: 166, piRNA readNum: 4550
piRNA 3'-ggGAAGA--CCGTCCAGTAATC---AGAGGAGAA-5'
||| | || | | |||:| | |||||
mRNA 5'-ctCTTGTGAGGAAAGGCATTGGCTTTATCCTCTT-3'

alignScore: 180, piRNA readNum: 4528
piRNA 3'-ggGAAAGAGGTGA-AC-AACAGTGAATCGGAt-5'
|| ||:|:| || ||||| |||||
mRNA 5'-atCTGCCTTATTGTGTTGTCA-TTAGCCTg-3'

alignScore: 168, piRNA readNum: 3892
piRNA 3'-tgggggttgTTCGTTATAC-ACTATAACAt-5'
| ||| | || |:|||||
mRNA 5'-gaaaattgaATGCATTTTGTGGTATTGTAt-3'

alignScore: 174, piRNA readNum: 3622
piRNA 3'-aaGACG-GT-CAAGATTGTATAACACTTACAt-5'
:||| || || :||:| | |||||
mRNA 5'-taTTGCACATGTCTTAATGAAGTTGAATGT-3'

82.>BC051142 NM_001163855 20.06 4.82446 4.15798 9.10E-15

alignScore: 183, piRNA readNum: 43528
piRNA 3'-tgaGGGGTAGAGAGAAAGGAAGGTGTAGAt-5'
|::||| | | ||| |||||
mRNA 5'-tgcCTTTATCACACCTCCCTGCCACATCT-3'

alignScore: 174, piRNA readNum: 7838
piRNA 3'-ggACTTTATGGAGAT-GGTTATAGAt-5'
| |||:|:|:| | : |||||
mRNA 5'-aaTAAAATGTCTTTAGTAAATATCTa-3'

alignScore: 173, piRNA readNum: 7585
piRNA 3'-ctTCTCCTTTGGCAGGTTTCGTTCTTTTct-5'
||| |||| || | ||| |||||
mRNA 5'-agAGAAGAAA-CG--C-AAGAAAGAAAAGa-3'

alignScore: 177, piRNA readNum: 6537
piRNA 3'-atTTGGGAAAGTTATGTGGGTGTAAGt-5'
||:| | || | |||:|: |||||
mRNA 5'-ccAATCC-CTCTAGACATCTTCATTTTct-3'

alignScore: 177, piRNA readNum: 5018
piRNA 3'-ggtaGGAGATGG-ATGGA--GACGGTGTAt-5'
|||:|:| | || | |||||
mRNA 5'-gttgCCTTTATCACACCTCCCTGCCACAt-3'

83.>Hnrnpm NM_001109913 0.428662 0.103424 4.14471 2.35E-07

alignScore: 172, piRNA readNum: 10811
piRNA 3'-gtaACAGAGGGTA-TATGTCT-GTCAAGGAt-5'
|| ||:| | || | | |||||
mRNA 5'-ataTGACTTTGATAATAAATACCAGTTCCTg-3'

alignScore: 165, piRNA readNum: 7392
piRNA 3'-tgGGGTGCAAGGATAGTAAGGAACTCTAt-5'
:|:|: | |:|: | | |||||
mRNA 5'-gtTCCATTTGACTGTT-TGCATTGAGATt-3'

alignScore: 166, piRNA readNum: 4384
piRNA 3'-ggctGAG-ACAG-TGGAAGGGCTAAACAAt-5'
:| | |: || | |:|: | |||||
mRNA 5'-ttttTTCTTGTTAACCATTTTAATTTGTTg-3'

alignScore: 175, piRNA readNum: 3402
piRNA 3'-aggtgGTTGACCAGAAACAGTTGTAGTTt-5'
||:| | || | |: |||||
mRNA 5'-----gCAGTT-GCCTTTTTTAAACATCAAt-3'

alignScore: 170, piRNA readNum: 1770
piRNA 3'-gtaggtgGTTGACCAGAAACAGTTGTAGTt-5'
||:| | || | |: |||||
mRNA 5'-----gCAGTT-GCCTTTTTTAAACATCAa-3'

84.>Ddx6 NM_001110826 0.939354 0.228606 4.10905 0.00067239

alignScore: 166, piRNA readNum: 275500
piRNA 3'-ggATTC-CAAGAGAACG-ACAAAC--TAAGATGAt-5'
|| | | |:| |: |||| | |||||
mRNA 5'-ttTATGTGGACTTTGGTGAGTTTGAATTCTACTt-3'

alignScore: 168, piRNA readNum: 25017

piRNA 3'-aacggACGGAGTCCTAGTGATGTACAGAt-5'
||:| ||| :| |||||
mRNA 5'-ggatgTGTTACAGTGTATGTACATGTCTa-3'

alignScore: 170, piRNA readNum: 20226
piRNA 3'-cggGTGGTTAGATAGTAGTAGGTGAACAt-5'
||:| ||| |:| |||||
mRNA 5'-agaCATAGACCTTTTTTGTCCACTTGTt-3'

alignScore: 172, piRNA readNum: 19777
piRNA 3'-cgAGGGAG-ACGAGGAC-CA-GGTGAATTTct-5'
| | | ||| :||| || || |||||
mRNA 5'-ggTGCCACATGCCTCTGAGTCCCTCTAAAGc-3'

alignScore: 173, piRNA readNum: 19677
piRNA 3'-tggGAGACCGTCTCAAGAACA-GAAGATGA-5'
||:|||: |||| |||| |||||
mRNA 5'-ggaCTTTGGT-GAGT--TTGTAATTCTACTt-3'

85.>Ldhc NM_013580 3329.32 858.503 3.87805 0

alignScore: 166, piRNA readNum: 141865
piRNA 3'-tgaGTGGGTTGAGTGGA---AGATGGAAAAAAt-5'
:| || ||| :|| || |||||
mRNA 5'-taaTGCCAAAGGCATCTCCCTCCCCCTTTTTTt-3'

alignScore: 173, piRNA readNum: 104304
piRNA 3'-ggGTTGAGTGTGTTGTAGTTGTCTACGGt-5'
|| ||: |:| |:| :|||
mRNA 5'-gcCACCTT-CGACCGTGTGACAGATGCCt-3'

alignScore: 166, piRNA readNum: 16831
piRNA 3'-tgCGGTTTAAAAACGGAG-CTCAGAGTgt-5'
| | ||||| | |:|||
mRNA 5'-ctCCCCCTTTTTTGTGAGACAGGGTCTCAct-3'

alignScore: 169, piRNA readNum: 5277
piRNA 3'-ttagTGCC-TCAGGTGA-C-GA--GTCACATAAt-5'
|||| | ||:| || || |||||
mRNA 5'-tcaaACGGAAATCTGCTAGCCTCCCAGTGTATTa-3'

alignScore: 173, piRNA readNum: 1031

piRNA 3'-agGGTTGAGTGTGGTTGAGTTTGTCTACGg-5'
||| ||: |:| |:| :|||||||
mRNA 5'-cgCCACCTT-CGACCGTGTGACAGATGcc-3'

86.>Gpx4 NM_008162 1372.03 355.417 3.86034 0

alignScore: 166, piRNA readNum: 57098
piRNA 3'-ggACTCGGATC-AAGGAGTAAAC--ATTTTACT-5'
| | |||:| | |||::| | |||||
mRNA 5'-ctTCACCCTGGCTGCCTTGTGGGAATAAAATGt-3'

alignScore: 170, piRNA readNum: 14921
piRNA 3'-ttcggcaCAAGTCATC-TATATCGGGACCCt-5'
|| ||| :| |:|:|||||||
mRNA 5'-gaggaagGTCCAGAGGCCTGTGGCCCTGGGc-3'

alignScore: 169, piRNA readNum: 3163
piRNA 3'-tgacaacaGTAAGACCGTCTTG-CAGGACTt-5'
| | ||||:|:|:| |||||
mRNA 5'-aaaaccagCCTGCTGGTGGGGCAGTCTGAg-3'

alignScore: 178, piRNA readNum: 1508
piRNA 3'-ttCCATG-GTACGGTCAGATATACTTTTgt-5'
|| || |||| :|||: |||||
mRNA 5'-ccGGCACTCATGAAGGTCTGCCTGAAAACc-3'

alignScore: 165, piRNA readNum: 645
piRNA 3'-gggtaaaAGACTGGGAATATAAGGAAGGt-5'
| ||||| |: | |||||
mRNA 5'-cctgcccTGTGACCCTGGA-GCCTTCCAc-3'

87.>Acat3 NM_153151 7.99171 2.07751 3.84677 0

alignScore: 166, piRNA readNum: 43490
piRNA 3'-tgTCGTGGTAGGGGTGTC-ATTAGTTAGGt-5'
:|::: ||::: ||| | |||||
mRNA 5'-tgGGTGAATTTTATCAGATCATCAATCCg-3'

alignScore: 165, piRNA readNum: 9409
piRNA 3'-atGGTGGATGAA-GGT-GTGTCTCAAAGGt-5'

|::|:|:|||| ::: | |: :|||||||
mRNA 5'-ccCTGCTTGCTTGTGTCTCGTGGTTTCCCa-3'

alignScore: 169, piRNA readNum: 5510
piRNA 3'-tgagACGGAT--CGA-GTCACTAGGTTTTGACAt-5'

||:|||| | | || | ||:|||||||
mRNA 5'-agggtGTCTACGGATACAATATTCTGAAACTGTa-3'

alignScore: 170, piRNA readNum: 5402
piRNA 3'-cgACACTGGTCAGA-TGTAATC--TCGGGATGt-5'

|| || | | || | || || |||||
mRNA 5'-gcTGAGAGCTGCCTAAAATGAGAAAGCCCTACc-3'

alignScore: 167, piRNA readNum: 5160
piRNA 3'-tgtGGAAGAAA---AAATCAA-GAGGGTTGTGGGt-5'

|:| |||| | |:||| |:| |||||
mRNA 5'-gctCTTCACTTAACTATGGTTGGTCAAACACCCc-3'

88.>Ccdc136 NM_001201378 0.0159682 0.00418794 3.8129 0

alignScore: 170, piRNA readNum: 3967
piRNA 3'-tgGGTGAAGTGACAGTGTGTAGGAAAct-5'

|||| | |: | || | |: |||||
mRNA 5'-acCCACCT-ATGTTTCTCCATCTCCTTTGc-3'

alignScore: 171, piRNA readNum: 2510
piRNA 3'-ggGCGTTACTTCCATCCAAGGCAGGTAGAg-5'

| |||| | || |||:| |||||
mRNA 5'-agCCCAACCCACCTATGTTTC-TCCATCTc-3'

alignScore: 176, piRNA readNum: 1888
piRNA 3'-tgGATTGCGATGGAGGAAAAG-GGTAGAGt-5'

| ||| | |||| : |||| |||||
mRNA 5'-ccCCAAC-CCACCTATGTTTCTCCATCTCc-3'

alignScore: 167, piRNA readNum: 1454
piRNA 3'-gtACTGTTAGTGTGACAAGTGT-CTCTGTA-5'

| | :||| || |:||| |||||
mRNA 5'-atTAAATGTCAGCCTAATTACACGAGACATt-3'

alignScore: 183, piRNA readNum: 1395
piRNA 3'-ggaGTCGATTGAGGATGTCTGGGAAACGt-5'

|| ||| ||:| || | :|||
mRNA 5'-accCACCTATGTTTCTCCATCTCCTTTGc-3'

89.>Kif2c NM_134471 95.3898 25.1969 3.78578 2.79E-09

alignScore: 168, piRNA readNum: 185258
piRNA 3'-tctctccttAGGTTAC-AAGACGGAGCT-5'
||| : || |||
mRNA 5'-ttgtccgctTCCTGCTGCCTCTGCCTGCAGt-3'

alignScore: 169, piRNA readNum: 15694
piRNA 3'-tggtaaAGT--TAGGATGA--ACAACGTTTGGAGt-5'
||| ||| || | || |||
mRNA 5'-cctggcTCAGCATCC-ACTGCTGGTGGAAACCTCg-3'

alignScore: 175, piRNA readNum: 12049
piRNA 3'-ggtcAGGAGATG-GGACGGT--TTTCCCc-5'
||| || | || | :|||
mRNA 5'-tgctTCCTCTTCTCCTCCCATGGAAGGGGg-3'

alignScore: 175, piRNA readNum: 11512
piRNA 3'-ctaTCAGGAGTCTAAGTACATCAAGAAt-5'
|| ||| || | || | |||
mRNA 5'-tgaAG-CCTAAGAAAGTCA-CTAGTTCTTg-3'

alignScore: 169, piRNA readNum: 5977
piRNA 3'-ctacggAGACAGA--ATCGGT--TCGGAGAAt-5'
|||:| || | |||
mRNA 5'-taaagaTCTGTTTGATATCACACTAGCCTCTTc-3'

90.>Psmb6 NM_008946 267.348 71.3395 3.74755 0

alignScore: 177, piRNA readNum: 23957
piRNA 3'-acTGCGGAGAGTCAGGTCC--GAACTGAAt-5'
||:| || || | |||
mRNA 5'-agACGTTTCTGTGTGAAGTTCTTGACTTc-3'

alignScore: 170, piRNA readNum: 3425
piRNA 3'-tgTGGGAGTA-GTATCAGGTA--GTGACTCGAt-5'
|:| || | |:| |:| |||

mRNA 5'-ccATTGTCTTGCGTAAACTATTGCACTGAGCTc-3'

alignScore: 173, piRNA readNum: 2995

piRNA 3'-ttgcTGGCTGCTGC--CGCTGGGTTGTCAAAt-5'

||||||| | || | : |||||||

mRNA 5'-ccatACCGACGCAGAAAGCTAATAAACAGTTTg-3'

alignScore: 172, piRNA readNum: 2200

piRNA 3'-ggTGAA-GTTTTAGGGGAT-GAA--CATTTGAt-5'

||| | ||| || :|: ||| |||||||

mRNA 5'-caACTTGCCAAAACCATTGTCTTGCGTAAACTa-3'

alignScore: 169, piRNA readNum: 1681

piRNA 3'-ctTATTTCTGAACAAAAAGTC--C--CAAGAAAAt-5'

:||:| | ||| ||| | |||||||

mRNA 5'-agGTAAGGA-AGGTTTATCAGTGCCTGTTCTTTTt-3'

91.>Gm4871 NM_001101463 590.379 159.804 3.69439 0

alignScore: 173, piRNA readNum: 2484

piRNA 3'-cttTGGGCT-GTCAGGAG-AAAGCAATCTCTt-5'

|||: | | | :||| | |:|||||||

mRNA 5'-cccACCTAAGCTGATCTCATATTGTTAGAGAt-3'

alignScore: 186, piRNA readNum: 2109

piRNA 3'-tgGGGTTGGTTTCGTTATACACTATAACAt-5'

||||| |:||||| : || | |||||||

mRNA 5'-ttCCCCACCTAAGCTG-ATCTCATATTGTt-3'

alignScore: 168, piRNA readNum: 1964

piRNA 3'-cttTGGGCT-GTCAGGAG-AAAGCAATCTCTt-5'

|||: | | | :||| | |:|||||||

mRNA 5'-cccACCTAAGCTGATCTCATATTGTTAGAGa-3'

alignScore: 167, piRNA readNum: 1666

piRNA 3'-tggatagTTTATGAAACATGTTAAGGTGGt-5'

||||: | || |:|||||||

mRNA 5'--ttaggaAAATGATCTGCTGAGTCCACCc-3'

alignScore: 165, piRNA readNum: 1417

piRNA 3'-aggtctaaAAGGTAGGAGAGTCCAAGGGt-5'

|||| | | :||| |||

mRNA 5'-ctgctgagTCCACCCAGCTGGGTCCc-3'

92.>1700018F24Rik NM_027069 610.067 165.858 3.67825 0

alignScore: 176, piRNA readNum: 598
piRNA 3'-tgtgacgTACTTTAAAGGGTGAAGTGAAt-5'
||| ||| ::|||
mRNA 5'-aataaaaATG-AATTGTTACTCATCTT-3'

alignScore: 175, piRNA readNum: 594
piRNA 3'-aggaAGTCGA-GTAGGT-ACAACAAGGGt-5'
| ||:| || |||: ||| |||
mRNA 5'-ctacTGAGTCCACCCAGCTGTGGTCCCa-3'

alignScore: 166, piRNA readNum: 567
piRNA 3'-taaCGGGGTGAAGTTAGGGCCAAGGt-5'
|::||| |||: : :|||
mRNA 5'-tgaGTTCCAC--CCAGCTGTGGTCCc-3'

alignScore: 169, piRNA readNum: 557
piRNA 3'-tgTGTCTCGG--GAGACGATCGTCAAGGGt-5'
|| |||: | | | ||| |:|
mRNA 5'-ctACTGAGTCCACCCAGCT-GTGGTCCCa-3'

alignScore: 170, piRNA readNum: 447
piRNA 3'-aggacttcCCGTGAAATAGAAGACTCAAGt-5'
|| | | ||| |||
mRNA 5'-----ttaGGAAAATGATCTACTGAGTTCc-3'

93.>Kif20a NM_009004 6.75729 1.85622 3.64035 1.29E-09

alignScore: 169, piRNA readNum: 24141
piRNA 3'-ttGTTCTGG--TCTGTTAG-GGTTGTGTACc-5'
:::|::: |||| | ||| |||
mRNA 5'-aaTGGGATTAAGACATGCACCACCACATGGc-3'

alignScore: 172, piRNA readNum: 8627
piRNA 3'-acgGAACAAT-GGTTGTCTAAGGAAAATt-5'
|| ||| |:|:| | |:|
mRNA 5'-cagCTGCTTAGCTGATA-AGTCTCTTTAAg-3'

alignScore: 167, piRNA readNum: 7945
piRNA 3'-gagACA-GGGAACATGAAGTAGTAAGTACGt-5'
||| :||||| ||: |: |||||
mRNA 5'-ctaTGTAATCTTGT--TTTTTTTTTCATGCa-3'

alignScore: 173, piRNA readNum: 7214
piRNA 3'-tcGGACGAAGGAAAAG-GTCATACTAGATt-5'
|: || |||| | ||| |||||
mRNA 5'-ggCTAGC-TCCTAACACAGAATGATCTATa-3'

alignScore: 172, piRNA readNum: 6360
piRNA 3'-ctgcTGCTGTCGGTCTCTCCGAACt-5'
|:|:| || |||||
mRNA 5'-ttaaATGATACCC---AAGAGGCTTGg-3'

94.>Tubb2c NM_146116 461.635 127.13 3.6312 0

alignScore: 168, piRNA readNum: 13591
piRNA 3'-ggTTTGTG-ACGTTA-AAGTAAA-GACAGGAt-5'
|: ||: | || | ||||| |||||
mRNA 5'-ctAGCCATGTCCACTGTGCATTTGCTGTCTGc-3'

alignScore: 190, piRNA readNum: 7340
piRNA 3'-cgGTTACAGAGTAAAAGAACAGGACACAGt-5'
| | ||: |||| | |||||
mRNA 5'-gtCCACTGTGCATTTGC-TGTCCTGTGTc-3'

alignScore: 176, piRNA readNum: 3028
piRNA 3'-caGGGACGTAGG-AATTGTAAGGACAGACT-5'
|:| |:|:| || ||| |||||
mRNA 5'-aaCTCTTTATTCATTCACA-GCCTGTCTGc-3'

alignScore: 178, piRNA readNum: 2802
piRNA 3'-ccCGGAATAGGGAAGCACAGGAACGACAGt-5'
||| |:||| | ||| :|||
mRNA 5'-taGCCATGTCCACT-GTGCATTTGCTGTc-3'

alignScore: 166, piRNA readNum: 2199
piRNA 3'-ttCGTGAATAGTTGGAAGT-AGTGTCGGAg-5'
| ||| |:| |||||
mRNA 5'-gtGAACTCTTA---TTCATTCACAGCCTg-3'

95.>Fyttd1 NM_001159349 6.6123 1.82611 3.62098 4.00E-08

alignScore: 168, piRNA readNum: 153992
piRNA 3'-tgggCTGTCAGGA-GAAAGCAATCTCTTct-5'
|| |||| |||| | |||||
mRNA 5'-aaaaGAGCTTCCTCCTTTCTGAAGAGAAGg-3'

alignScore: 175, piRNA readNum: 104304
piRNA 3'-ggGTTGAGTGTGTTGTAGTTGTCTACGGt-5'
:|: |||: |||: ||: |||||
mRNA 5'-caTAGGTCATAAATTACAGTGAGATGCCa-3'

alignScore: 166, piRNA readNum: 61046
piRNA 3'-tgtCAGGGT----GTCTAAGAAGACACATTTct-5'
||::|| || | |:|:| |||||
mRNA 5'-tatGTTTCATATTCAAAGTTTTTTTTGTAAAGc-3'

alignScore: 176, piRNA readNum: 38780
piRNA 3'-gaccCAT-AGGAAGAAGTCGTCAAGAAct-5'
||| || | ||| |||||
mRNA 5'-tgattGTAGTCATCCTTGTTTCAGTTCTTGAa-3'

alignScore: 165, piRNA readNum: 34425
piRNA 3'-tggACGCACCTACCTAGA-TC--ACGAGTCAGt-5'
||| ||| | || || |||||
mRNA 5'-ctgTGCCGAGATAGTGCTGAGATTGCTCAGTCa-3'

96.>Kif17 NM_010623 51.6606 14.3397 3.60263 1.75E-08

alignScore: 169, piRNA readNum: 19537
piRNA 3'-tcacccacGGTCGA-GAAGAAGGATAGACgt-5'
||||| | | |||||
mRNA 5'-----tCCAGCTGCCTGCTGCTATCTGct-3'

alignScore: 166, piRNA readNum: 14921
piRNA 3'-ttcggcacaagTCATCTA-TATCGGGACCCt-5'
|| :||| |||||
mRNA 5'-ccccaagccaAGGGGATCTTAGCCCTGGGa-3'

alignScore: 179, piRNA readNum: 13073
piRNA 3'-ggaaaGGTGGG-ATTGAGCTGT-ATCAGGTct-5'
|:|||| |:|| ||| |||||
mRNA 5'-ctagcCTACCCTTGGCTGGACAGCAGTCCAGa-3'

alignScore: 184, piRNA readNum: 9002
piRNA 3'-tgaaaGGTGGG-ATTGAGCTGT-ATCAGGTCTt-5'
|:|||| |:|| ||| |||||
mRNA 5'-ctagcCTACCCTTGGCTGGACAGCAGTCCAGAg-3'

alignScore: 166, piRNA readNum: 7773
piRNA 3'-tgacGGGCCGACGAGTGAGTATAGGTCTct-5'
|:|||| || || :|||||
mRNA 5'-taccCTTGGCTGGACA-GCA-GTCCAGAGa-3'

97.>Unc93a NM_199252 2.85085 0.795937 3.58175 0

alignScore: 167, piRNA readNum: 47286
piRNA 3'-atacggAGAGTGTCTCAAG---AACAGATGAGt-5'
|:| ||| | || || |||||
mRNA 5'-cctcgaTTTAACAAATTTCTAGTTTTCTACTCa-3'

alignScore: 171, piRNA readNum: 35187
piRNA 3'-tgtgagagaTGGATACTCAAGG--TAAGTCAGt-5'
|| |||| || :|||||
mRNA 5'-agggccaggACC-ATGAGCTCCGGGTTCAGTcc-3'

alignScore: 168, piRNA readNum: 24141
piRNA 3'-ttGT-TCTG-GTCTGT-TAGGGTTGTGTACct-5'
|| | || ||| | | |||||
mRNA 5'-caCACACACACACACACCACTACACATGGa-3'

alignScore: 170, piRNA readNum: 23220
piRNA 3'-acgaaATGGTTATGATAGGGTAAAATGt-5'
||||:||||: | | |||||
mRNA 5'-gtgaaTACCTAATATCA--CAAATTTTACa-3'

alignScore: 168, piRNA readNum: 20089
piRNA 3'-tgTAGTG-GAAGTAACG-TAGTAACGTAGGAt-5'
||:|: | || ||| ||:|: |||||
mRNA 5'-tcATTATAGTCCAGTGCTATTG-TGCATCCTt-3'

98.>Cox4i1 NM_009941 366.699 102.854 3.56524 0

alignScore: 171, piRNA readNum: 8203
piRNA 3'-taCGTAGAGGCTTTCGTGAGTCATAGGt-5'
||| |:|:|||| : | |||||
mRNA 5'-cgGCAT-GCTGGAAGC-TGCCGTATCCAa-3'

alignScore: 176, piRNA readNum: 4350
piRNA 3'-taCGTAGAGGCTTTCGTGAGTCATAGTTt-5'
||| |:|:|||| : | |||||
mRNA 5'-cgGCAT-GCTGGAAGC-TGCCGTATCCAAt-3'

alignScore: 171, piRNA readNum: 1013
piRNA 3'-caTCGAAAGGATCGAGTGGTAGGTACGAt-5'
||| | || | |: :|||
mRNA 5'-gaAGCTGCCGTATCCAATGGTCCATGCTa-3'

alignScore: 165, piRNA readNum: 446
piRNA 3'-cgGACAAGGGTAGAGAGAGGAGTGAGt-5'
| | ||| | ||| |||||
mRNA 5'-gcCGGCTCCC-TGCCTC-CCTCACTCc-3'

alignScore: 165, piRNA readNum: 440
piRNA 3'-ttGATGAAT-AAGGAT-TACGGAGTGAGGGt-5'
||:| : | |||: | |||||
mRNA 5'-gcCTGCCGGCTCCCTGCCCTCCCTCACTCCct-3'

99.>2-Sep NM_001159717 1.98883 0.559824 3.5526 8.98E-06

alignScore: 170, piRNA readNum: 75935
piRNA 3'-tggtagGAGTACAGA-TGTT-ATCAGAAACTt-5'
|| || || ||| || |||||
mRNA 5'-gcctgaCTAATCACTGACAAGTACTCTTTGAt-3'

alignScore: 171, piRNA readNum: 35587
piRNA 3'-ccaAACTCTGATGAAAGACG--GTCAAGATTGt-5'
||| || ||| | || || |||||
mRNA 5'-ggaTTGTGAGGTCTTGCAGCCACAATTCTAACc-3'

alignScore: 175, piRNA readNum: 26266

piRNA 3'-ttAGGGGGTGAAGTTTTA--GGGGATGAACat-5'
||:::|||| :||:| |:| |||||
mRNA 5'-gcTCTTTCACCTAAGAAGTAACTGTACTTGTa-3'

alignScore: 166, piRNA readNum: 13456
piRNA 3'-cttaccaaGAGAGGTCATAGACGATTGTct-5'
:|:| | | |:|||||||
mRNA 5'-cccttcagTTTTACTGCTTTTGCTAACAGa-3'

alignScore: 166, piRNA readNum: 12509
piRNA 3'-ctCGGTCATAAGGGAAAAGAAGAAGTCAGGt-5'
|| :| |||: | || | |||||
mRNA 5'-agGCAGGGATTTACGTT--TAATTCAGTCCa-3'

100.>Ehmt2 NM_145830 17.7492 5.12504 3.46323 2.07E-09

alignScore: 175, piRNA readNum: 92488
piRNA 3'-agGGAGTCAGGGTGTCTAAAGAAGACACat-5'
|||| | || :| |||| |||||
mRNA 5'-ggCCTCTG-CCAGCTGATT--TTCTGTGTt-3'

alignScore: 171, piRNA readNum: 2170
piRNA 3'-tgactaGTCGTGCATCAAAGAC-CAAGAGTt-5'
|||| :| | ||||| |||||
mRNA 5'-ctctgcCAGC-TG-ATTTTCTGTGTTCTCAa-3'

alignScore: 172, piRNA readNum: 2090
piRNA 3'-gagccccACGTTTGAAGGAGAGGTAGTct-5'
| ||:| | :|||||||
mRNA 5'-actgcccTTCAGACAT-TTCTCCATCAGa-3'

alignScore: 166, piRNA readNum: 1984
piRNA 3'-ccCAGTAGG-AGTCGA-TCCAGTACACAAGat-5'
| | ||: |||| | |: |||||
mRNA 5'-tgGGCCTCTGCCAGCTGATTTTCTGTGTTCTc-3'

alignScore: 165, piRNA readNum: 1564
piRNA 3'-ccatGGTACAGTTCAGAGGTCGTGACTct-5'
:|| | | :| ||:| |||||
mRNA 5'-gactTCAGGGCTGGCCTTCCCCACTGAGc-3'

101.>Ndufa9 NM_025358 199.941 57.8761 3.45464 0

alignScore: 175, piRNA readNum: 9431
piRNA 3'-agTCGACAAGACAG-ACAGACAGGTCTCTct-5'
|| || ||| || || ||| :|||
mRNA 5'-caAG-TG-TCTTTCTTACTGATCAGAGAg-3'

alignScore: 167, piRNA readNum: 2697
piRNA 3'-ccccgaCTTGGGACAGAAGAGTCTTACAGt-5'
|:|::| ||| | |:| |||
mRNA 5'-atocgaGGATTCGGTC-TATTGCAAGTGTct-3'

alignScore: 168, piRNA readNum: 2235
piRNA 3'-aggAGGTTCC----CCAGG-GAC--ACGCAGAAAGAc-5'
|||:| | |||: | | |:|
mRNA 5'-ataTCGAGGATTCGGTCTATTGCAAGTGTCTTct-3'

alignScore: 166, piRNA readNum: 1818
piRNA 3'-tgaaggtcGGATGGTTGAAAAGTCTCTCCc-5'
::| ::| | | |||
mRNA 5'-caagtgtcTTTCTTACTGATCAGAGAGGa-3'

alignScore: 177, piRNA readNum: 1449
piRNA 3'-tacAGGTAAGGGAACGTGGAC-GAAAGAAt-5'
|:|: ||: ||| | |||
mRNA 5'-ggaTTCGGTCTATTGCAAGTGTCTTCTTg-3'

102.>Tuba3a NM_009446 693.678 206.204 3.36404 0

alignScore: 176, piRNA readNum: 26246
piRNA 3'-ctCCCAGGTTGAGAGATGACCTGTAATAt-5'
|||:| | :| | |||
mRNA 5'-atGGGTCTGGCTGGCGCGTCCATTTATg-3'

alignScore: 166, piRNA readNum: 1096
piRNA 3'-cgaaCGGGCAGGAAGGAGAGTAGAAGGgt-5'
| ||| | |:|
mRNA 5'-tggcGGCCGTCAT--TTATGTCTCCc-3'

alignScore: 169, piRNA readNum: 406
piRNA 3'-gtGAC--ACCACAGGTACAGGTGAAATACAt-5'

||| ||| | || ||||| |||||
mRNA 5'-gtCTGGCTGGCGGCC--GTCCA-TTTATGTc-3'

alignScore: 172, piRNA readNum: 366
piRNA 3'-tgGAGTGA--GTCGAGACGTCTGTACAGAAGGt-5'

|| :|| |:|| | || :|||||||
mRNA 5'-gtCTGGCTGGCGGCCGTCCATTTATGTCTTCCc-3'

alignScore: 179, piRNA readNum: 355
piRNA 3'-ggactgaAGACCCAGTG-TGGAAGGTAATAt-5'

||||| | :| :|| |||||
mRNA 5'-gcatgggTCTGGCTGGCGGCCGTCCATTTATg-3'

103.>4930571K23Rik NM_001145759 151.313 45.2987 3.34034 1.07E-12

alignScore: 166, piRNA readNum: 26434
piRNA 3'-cgatGGTAAGAGGGT---CCAGATAAGGTCTGAt-5'

|| ||: |:|| |||| : |||||
mRNA 5'-cagcCCTTTTGCTCAGATGGTCAGAACCAGACTc-3'

alignScore: 166, piRNA readNum: 25459
piRNA 3'-tggttgaGACAGAAG---TC-TTATATGTAGTTGa-5'

||||||| || ||: |||||
mRNA 5'-gtgggagCTGTCTTCTATAGCCATGACCATCAACa-3'

alignScore: 176, piRNA readNum: 20713
piRNA 3'-cggaTAGTCAGTTTGGTCTTTCTGTGGGt-5'

||||| ||:|||| :|||||||
mRNA 5'-agaaATCAG--AAGCCAG--GGACAGCCct-3'

alignScore: 172, piRNA readNum: 18606
piRNA 3'-atgacacgagTACAAGTCTCTTTGAAGAt-5'

:||| :||| |:|||||
mRNA 5'-ccagggtaaaGTGTCTAGAAAGAACTTCTg-3'

alignScore: 166, piRNA readNum: 7276
piRNA 3'-agagtaaGGGACGAGTAACAGGATATTGt-5'

||||| :: | :|||||
mRNA 5'-ataaggaCCCTGCATGGGATCTATAACc-3'

104.>Gtsf1 NM_028797 627.496 189.141 3.31761 0

alignScore: 165, piRNA readNum: 1324
piRNA 3'-acAAGGG-GACGGAAACAAAAAAGAAAAAt-5'
|||: || | | | |||||
mRNA 5'-taTTCCTGCTACC-AAGGGTCTTCTTTTt-3'

alignScore: 166, piRNA readNum: 1091
piRNA 3'-aggGGGT-AGTCCGAAGGT--CAAGAAGt-5'
|::| || ||| ||| |||||
mRNA 5'-ttgCTTATTCTGCTACCAAGGGTCTTCT-3'

alignScore: 172, piRNA readNum: 1076
piRNA 3'-tgtgGGTGGT--GAGGA-CGGAAGGAGAATt-5'
|:|||| |::| ::||:|||||
mRNA 5'-cctgCTACCAAGGGTCTTCTTTTTTCTTTAt-3'

alignScore: 167, piRNA readNum: 1058
piRNA 3'-gtgtattagagTGTACGAACGGATAAGGAt-5'
| | ||||:|||||
mRNA 5'-cagactgtggaAGACTCTTGCTTATTCCTg-3'

alignScore: 173, piRNA readNum: 932
piRNA 3'-caaGGTATGCAAACGAAGTAGAAAAGAg-5'
|:| | | | ||| |:|||||
mRNA 5'-ctgCTACCAAGGGTCTTC-TTTTTTCTCt-3'

105.>Tnp2 NM_013694 616.117 185.978 3.31285 0

alignScore: 165, piRNA readNum: 9115
piRNA 3'-agaAGGT-CGACAAGTGTC--TGCCTAGGGt-5'
||| | |||| : | |: |||||
mRNA 5'-cacTCCAGGATGTTCTGTGTCCATTTGATCCCa-3'

alignScore: 173, piRNA readNum: 3725
piRNA 3'-gggGAGAGGACCT--AGGTGTCAGGTAAACa-5'
| ||| || | || | |||||
mRNA 5'--cgCACTCCAGGATGTTCTGTGTCCATTTGa-3'

alignScore: 170, piRNA readNum: 3033
piRNA 3'-ttcGGGAGAGGACCT--AGGTGTCAGGTAAAc-5'
| | ||| || | || | |||||

mRNA 5'-----CGCACTCCAGGATGTTCCCTGTGTCCATTTg-3'

alignScore: 173, piRNA readNum: 2487

piRNA 3'-aaggtggtAGTACTCAAGTAGA-TAGGGTTt-5'

|| || || |||:| |||||

mRNA 5'-caggatgtTCCTGTGTCCATTTGATCCCAAa-3'

alignScore: 189, piRNA readNum: 2220

piRNA 3'-tggCTTGGACAG-GACAGAGTTAAAGATAt-5'

|||| |||| ||| |||||

mRNA 5'-cagGAACATGTCAGTGCAGCAATTTCTATg-3'

106.>Gpi1 NM_008155 84.2198 25.8378 3.25956 1.49E-07

alignScore: 168, piRNA readNum: 20713

piRNA 3'-cggatagtCAGTTTGGTCTTTCTGTGGGt-5'

|| |:|: ||: |||||

mRNA 5'-gagtccttGTGAGACT-GAGTGACAGCCct-3'

alignScore: 168, piRNA readNum: 10728

piRNA 3'-taTGGGGG-GTTTCAGAATATTAGGGTAAAt-5'

||::|| | | ||: ||: |||||

mRNA 5'-ctACTTTCACCATGTTAATTAGGCCATTTg-3'

alignScore: 169, piRNA readNum: 9598

piRNA 3'-caCCCTTCG-GT-AGACAAGAGA-AC--AAGTTCct-5'

||||:| | | | | | | | |||||

mRNA 5'-ttGGGAGGCACAGGAGGTCTATCTGAATCAAGGc-3'

alignScore: 167, piRNA readNum: 8169

piRNA 3'-tggcggGAACGGTCACCT--CGGTGTGTCAGt-5'

|||| :|||: | : |||||

mRNA 5'-tctttaCTTGGTGGTGGGCTGGTCCACAGTct-3'

alignScore: 174, piRNA readNum: 7464

piRNA 3'-ggGACTAGTACAGGTATCA-AGGACTGGAt-5'

:|| | |:||| |||: | |:|||

mRNA 5'-ctTTGA-CGTGT-CATGTTGTTCTGACCTg-3'

107.>Tuba8 NM_017379 223.964 69.0081 3.24547 0

108.>Odf1 NM_008757 651.916 201.748 3.23134 0

alignScore: 170, piRNA readNum: 13843
piRNA 3'-gggaaacAGAA-ACGCAAA-CGCAAGGGAAGGt-5'
|||| || ||| ||| |||||
mRNA 5'-aggcagcTCTTCAGCATTCTCGTCCCCTTCCc-3'

alignScore: 166, piRNA readNum: 4793
piRNA 3'-tgaCGA-AGGGAGTACGGGTAAAGGAAGGt-5'
||| |:| ||| |:| | |||||
mRNA 5'-gcaGCTCTTCAGCATTCTCGTCCCCTTCCc-3'

alignScore: 165, piRNA readNum: 2118
piRNA 3'-tatggaGTTTGTGCAG-GGTAGTAAAGAt-5'
||:| || |:| |||||
mRNA 5'-tccagcCAGGCAGCTCTTCAGCATTCTc-3'

alignScore: 169, piRNA readNum: 1758
piRNA 3'-ggTAGTCCGAAGGTTCAAGAAGTCGGTCct-5'
| ||| || ||| || |||||
mRNA 5'-ttAGCAGAAGTC--AGTACTCCAGCCAGGc-3'

alignScore: 166, piRNA readNum: 1636
piRNA 3'-tgaCGGGTA-TAGACGATAGTA--GGAAGGGTct-5'
||:| | | | :| ||:| |||||
mRNA 5'-gcaGCTCTTCAGCATTCTCGTCCCCTTCCAGa-3'

109.>Pgam2 NM_018870 392.748 123.189 3.18817 0

110.>Cox7a2 NM_009945 497.617 156.895 3.17166 0

alignScore: 173, piRNA readNum: 68064
piRNA 3'-ctGGGAAATGGGTTGTTTGTAAATAAct-5'
|:| |||: |:| ||: |||||
mRNA 5'-ctCTTCTTTG-GGGATCAATATTTATTGa-3'

alignScore: 167, piRNA readNum: 18936

piRNA 3'-tgAGTCCAGGAT-AGAA-AG-ACGAGGTCAAAGt-5'
||| ||| | |||| | || |:|||||||
mRNA 5'-cgTCA--TCCCAGTCTTCACGTGGTTCAGTTTCa-3'

alignScore: 170, piRNA readNum: 4718
piRNA 3'-gtGGCGAT--TTGTCAGATTAGAAAATTGGT-5'
|:||||: ||:| |||| |||||||
mRNA 5'-aaCTGCTGCCAATAAAGCAATCCTTAACCA-3'

alignScore: 167, piRNA readNum: 3791
piRNA 3'-tgTGGTTGTCACTAGAGAGAAGAAAAGTg-5'
||| : |:| |||| |||||||
mRNA 5'-taACCATT--TTGTGTCTC-CCTTTTCACT-3'

alignScore: 169, piRNA readNum: 3259
piRNA 3'-aggtAGGTCAGTCTG-ACTGTGATTTAAGGt-5'
||| |: || ||| | |||||||
mRNA 5'-tgtcTCCCTTTTCACTTGAGAATAAATTCCT-3'

111.>Rp123 NM_022891 167.287 53.3915 3.13321 3.71E-13

alignScore: 177, piRNA readNum: 19164
piRNA 3'-cggTGC-TCAACATATACGGATATTAGGGt-5'
:|| :|| ||: | |||| |||||||
mRNA 5'-cggGCGTGGTGGTGCACGCCTTAATCCCa-3'

alignScore: 166, piRNA readNum: 10978
piRNA 3'-tcGGTATT--AAGGTA CTCAAAA--GAAAGGt-5'
:|||:| || || | || || |||||||
mRNA 5'-ctTCATGACCTTGCAACTTCTTCACTTTCCAg-3'

alignScore: 171, piRNA readNum: 8421
piRNA 3'-ttccGGTTGGCTTTAAGATCGAGTGAAGGt-5'
|: :| ||| |||| |||||||||
mRNA 5'-tgacCTTGCAACTTCT---TCACTTTCCa-3'

alignScore: 194, piRNA readNum: 5314
piRNA 3'-ggtagTACCACCAAGTACAAAAATTAGGGt-5'
|:||||||| || | |||||||||
mRNA 5'-ccgggCGTGGTGGTGCACGCCTTAATCCCa-3'

alignScore: 168, piRNA readNum: 5239

piRNA 3'-tgGGGACGAGAACATGTTAGAGAGAAGTg-5'
 :| || |||| | || || |||||
mRNA 5'-ctTCATGACCTTGCAGAA-CT-TCTTCACT-3'

112.>Ppfibp1 NM_001170433 0.0589333 0.0188513 3.12622 2.92E-05

alignScore: 178, piRNA readNum: 67564
piRNA 3'-tccTTGTC-GGTAGGTGTCGTCTTCAAAGAt-5'
 |||| | |::|| | |||||
mRNA 5'-acaAACAGAACCTTTACATCTTAAGTTTCTt-3'

alignScore: 165, piRNA readNum: 11701
piRNA 3'-gggtAGAAGAGTCACT--ACGAGTCCGAGGt-5'
 || | |:: | | | |:: |||||
mRNA 5'-aaatTCTACTTGATAAACTTCTTTGGCTCCCa-3'

alignScore: 169, piRNA readNum: 10728
piRNA 3'-tatggGGGGTTTC-AGAATATTAGGTAAt-5'
 ::|::|| | | | |::|||
mRNA 5'-gctgaTTCCTGAAGATACCAGAGTCCCATTTt-3'

alignScore: 185, piRNA readNum: 8872
piRNA 3'-ggTGGTAGAATCAAAGAGATGT--AAGATTTt-5'
 |::| |||| | |::| | | | |||||
mRNA 5'-tcACTGTCTTA-TTTTTATATATTTTTCTAAAt-3'

alignScore: 173, piRNA readNum: 7560
piRNA 3'-ctcAGT-TTGA-ACAAGT--AGTCCTAAGGACGg-5'
 || | |:: | |||| | | |||| |||||
mRNA 5'-aacTCATCATTATGTTGAACAAAGAGTCCCTGCCt-3'

113.>2610318N02Rik NM_183287 93.3983 30.1714 3.09559 6.81E-08

alignScore: 172, piRNA readNum: 336
piRNA 3'-cgcCAGGTA-GGGGT--AGAGGTGTTCAAGt-5'
 | |||| |||| | | |::|||
mRNA 5'-acaGACCATGCCCCAGGACTGAATAAAGTTCa-3'

alignScore: 169, piRNA readNum: 293
piRNA 3'-tgtgtgtggGACGAAGTTAGAGTAGGACct-5'

||| | || :|||||||
mRNA 5'-gccccaggaCTGAATAAAGTTCATCCTGGt-3'

alignScore: 166, piRNA readNum: 286
piRNA 3'-tgtGTGTGTTGGGTTGTTGAGTAGGAt-5'

| || :||: || |:|||||||
mRNA 5'-tgcCCCAGGACTGAATAAAGTTCATCCTg-3'

alignScore: 179, piRNA readNum: 244
piRNA 3'-cagaaTCTTGTA-GGGGTCAGTACTTATa-5'

||| ||| ||||| |||||
mRNA 5'-ccaacAGACCATGCCCCAGGACTGAATAAa-3'

alignScore: 166, piRNA readNum: 141
piRNA 3'-ttaCTTGTAAGTTAAGTCGGACCAct-5'

|:| | || |:| |||||
mRNA 5'-ccaGGACTGAATAAAGTTCATCCTGGTg-3'

114.>Zfp574 NM_001168506 30.944 10.0129 3.09041 0.00178012

alignScore: 168, piRNA readNum: 75935
piRNA 3'-tgGTAGGAGTACAGATGT--TATC-AGAAACTt-5'

|| ||| | ||||: : ||:| |||||
mRNA 5'-ggCAGCCTGA-GTCTGGGGCATGGATCTTTGAa-3'

alignScore: 187, piRNA readNum: 32649
piRNA 3'-ggGGGAAAC-GTAAGTCAAAGTCGGGTTCCGt-5'

|:| || :| ||||| |||||
mRNA 5'-gaCTCGGTGATGGTCAGTTCAACCCAAGGCa-3'

alignScore: 174, piRNA readNum: 26246
piRNA 3'-ctcccaggTTGAGAGATGACCTGTAATAt-5'

|| || |:|||||||
mRNA 5'-agtcaataAAGACTGAATTGGACATTTATg-3'

alignScore: 165, piRNA readNum: 20021
piRNA 3'-tgtcgtaaGGGATTCTCACAGTTTCCGGGt-5'

||| | :|| |:| |||||
mRNA 5'-----ctggCCCCACTGGTG-CTGAAGGCCct-3'

alignScore: 169, piRNA readNum: 13073
piRNA 3'-ggaaaggtgggaTTGAGCTGT--ATCAGGTct-5'

||||:|:| | |||||
mRNA 5'-caccccagatagAACTTGGCAGGTAGTCCAGt-3'

115.>Dync1i2 NM_001198875 32.8751 10.7023 3.07178 0.000255945

alignScore: 169, piRNA readNum: 8726
piRNA 3'-tggacGGACGAGTCACGAAGGTTTGAACAt-5'
:| | :| : | |||:::|||||
mRNA 5'-attatTCTTTTGGATTCTTTTGAACCTGTa-3'

alignScore: 165, piRNA readNum: 6999
piRNA 3'-atGGGTATGAT-AGGGGTAAAATGTCTa-5'
:::||||| : | | | |||||
mRNA 5'-ttTTTAATACAGCTGACAACTTTACAGAA-3'

alignScore: 174, piRNA readNum: 6541
piRNA 3'-aggggGGAGGTG-GGTC-TTGTAAAGAGGA-5'
|||||::: ||| ::::| |||||
mRNA 5'-acataCCTCCGTGTCAGTGGTGTCTCCTCg-3'

alignScore: 168, piRNA readNum: 6018
piRNA 3'-aactCA-CGGA--GACAAGTCCCAAGTACAAt-5'
|| ||| |||| | |||||
mRNA 5'-tgccGTCGCCTACCTGTTGTAAGTTTCATGTTg-3'

alignScore: 186, piRNA readNum: 5452
piRNA 3'-tacATTTCCG-TGTTGACTAGTTTTACGTct-5'
|| |||: ||||| ||:|||||
mRNA 5'-taaTACAGCTGACAACTTTACAGAATGCAGc-3'

116.>Dbp15 NM_021294 486.648 159.14 3.05799 0

alignScore: 166, piRNA readNum: 270
piRNA 3'-cggGAGGTG-TTAAGGTTT--CAAAGTTCTAAGt-5'
||||| :| :| | ||:|||||
mRNA 5'-tggCTCCACTGGTAGGGGACGGGTTTAAGATTCc-3'

alignScore: 172, piRNA readNum: 240
piRNA 3'-caaCGTCAAA-AGTCAGTG-ACATTCATCGt-5'
|| ||| ||| ||| | |||||

mRNA 5'--gaGCATTTTGGCAGACACAAGGAAGTAGCa-3'

alignScore: 167, piRNA readNum: 235

piRNA 3'-ggCTACTGATTAAGTATTTG-AT-AC TTTCCt-5'

||| ||:| | ||| | |||||

mRNA 5'-aaGATTCCTGATGGCTGAAACACACTGAAAGGg-3'

alignScore: 167, piRNA readNum: 116

piRNA 3'-tagaTCGTT-TTTGGTGGAAAGTTTGACGt-5'

| ||| ||:| | ||| |||||

mRNA 5'-aacACCAATAAATCA--TTC-AAACTGC--3'

alignScore: 172, piRNA readNum: 114

piRNA 3'-cgGTCGATGATC--TCTTCTTAGTCAGGTGACT-5'

||| || || || || || : |||||

mRNA 5'-ggCAGACACAAGGAAGTAGCATGGCTCCACTGg-3'

117.>Kif9 NM_010628 55.4629 18.1812 3.05056 1.51E-14

alignScore: 168, piRNA readNum: 6252

piRNA 3'-tgtttCGTGC GGAGATGG--TAGGTCTCTTt-5'

||| ||: ||| | |||||

mRNA 5'-cagctGCAAGCTGGGACCAACCCAGAGAaCa-3'

alignScore: 178, piRNA readNum: 4598

piRNA 3'-tcTCCTGCATCGACCGAGGTAAAGTGTCTa-5'

|||| || ||||| |||||

mRNA 5'-aaAGGAC-ACCCTTGCTCCTCTTACAGAa-3'

alignScore: 167, piRNA readNum: 3901

piRNA 3'-ctaAGAGT--TTGTCAGAAC--C--ATCATCGAGAt-5'

|||| ||:| ||| | || |||||

mRNA 5'----TTCATCAATAG-CTTGAAGACCAGCAGCTCTAg-3'

alignScore: 172, piRNA readNum: 2139

piRNA 3'-tgGTAC--GATTCGATATCGG-GATGTCGACGt-5'

||| | :||:| ||| || |||||

mRNA 5'-caCATGCCCAGAGTTCCAGCCACT-CAGCTGCa-3'

alignScore: 167, piRNA readNum: 2121

piRNA 3'-agGAAGGTTTCGGTGT-CTAGT--AAGGTCGt-5'

|| |:| || |||| | || |||||

mRNA 5'-agCTGCTAAA-CCACATGCCAGAGTTCCAGCc-3'

118.>Cdk13 NM_027118 0.451591 0.149842 3.01378 0.00425724

alignScore: 165, piRNA readNum: 22626

piRNA 3'-taccgcGACAGTAGCAGGTGCTCGAGGGt-5'

|| |:|| || || |||||

mRNA 5'-gaccaaCTTTTAT-GTAAACAAGCTCCCc-3'

alignScore: 178, piRNA readNum: 18936

piRNA 3'-tgAGTCCAGGATAGAAAGACGAGGTCAAAGt-5'

|| || |:|| | ||| |||||

mRNA 5'-ttTCTGG--CTGTCATACTGACCCAGTTTct-3'

alignScore: 170, piRNA readNum: 15441

piRNA 3'-ttggaacCCCCTCGATGTTAG-GGAATAAAt-5'

|| |:|: :||| | |||||

mRNA 5'-cacagaaGGAGGGTGGCAAACACCTTATTTt-3'

alignScore: 176, piRNA readNum: 11926

piRNA 3'-cggTGAGTACCAGACAAGA--TGAAATCGAGAt-5'

|:|||| | ||||| | |||||

mRNA 5'-taaATTCATG--CTGTTCTTAAACTAGCTCTa-3'

alignScore: 167, piRNA readNum: 10685

piRNA 3'-ggACTTTTGTGTCAGTCGGATGAAGGAAAGt-5'

|||:|: |:|| |:| |||||

mRNA 5'-aaTGAGAAT-TTTAGAGTGC-TCCTTTct-3'

119.>Cyp4 NM_173412 118.592 39.4937 3.00281 0

alignScore: 175, piRNA readNum: 5239

piRNA 3'-tgGGGACGAGAAC-ATGTTAGAGAGAAGTgt-5'

|: || || || || |: | |||||

mRNA 5'-agCTGTGGTCCTGTAAAGCCACTCTTCACc-3'

alignScore: 165, piRNA readNum: 2564

piRNA 3'-acGGTACAAGGTAC-ATCTC--TGAGAAGt-5'

|: || || || || || |||||

mRNA 5'-agCTGTGGTCC-TGTAAAGCCACTCTTCa-3'

alignScore: 178, piRNA readNum: 1310
piRNA 3'-aacATAACGTGACAATAT-GCAGAGAAGTgt-5'
|:| |: ||||| | | |||||
mRNA 5'-agcTGTGGTCCTGTAAAGCCACTCTTCACc-3'

alignScore: 168, piRNA readNum: 297
piRNA 3'-cggacacACCCAAAATCGAGAT-GTTTCGGTgt-5'
|| | |: |: ||: |||||
mRNA 5'-tgggagcTGAGCTGTGGTCCTGTAAAGCCACT-3'

alignScore: 170, piRNA readNum: 273
piRNA 3'-ttgGGAAATCCTCAGGGTGTCTTCTGGgt-5'
|:| | |: || || || |||||
mRNA 5'---aCTCCGAATGGGT-CAAAGAAAGACCCa-3'

120.>Ppp2r5c NM_001081457 0.235681 0.0793503 2.97013 5.74E-08

alignScore: 170, piRNA readNum: 705783
piRNA 3'-agTAGGTGGGTAAGTAGGTAAGTTGTTt-5'
| ::|| || | |||| |||||
mRNA 5'-ctACTTACACA-TGATCC-TTCAACAa-3'

alignScore: 165, piRNA readNum: 62760
piRNA 3'-agTAGGTGGGTAAGTAGGTAAGTTGTTt-5'
| ::|| || | |||| |||||
mRNA 5'-ctACTTACACA-TGATCC-TTCAACAa-3'

alignScore: 172, piRNA readNum: 61393
piRNA 3'-tgtagAGGTATTGTCTCAGTTGTTTAGTct-5'
|||: |: | |||: :: |||||
mRNA 5'-agggatCCGTGAAAAAGTT-GTAAATCAGa-3'

alignScore: 165, piRNA readNum: 26434
piRNA 3'-cgATGGTAAGAGGGTCCAGATAAGGTCTGAt-5'
|| | || ::| |||:| |||||
mRNA 5'-gtTAAGACACTGTTGATTCTGTACCAGACTg-3'

alignScore: 165, piRNA readNum: 24141
piRNA 3'-ttGTTCTGGT-CTGTTAGGGTT--GTGTACct-5'
|:| |:|: |:||| :| || |||||
mRNA 5'-acCGATGCTGTGGCAAATCAAACGCACATGGt-3'

121.>Ubl7 NM_027086 189.054 63.9439 2.95656 7.24E-11

alignScore: 169, piRNA readNum: 599
piRNA 3'-tgtatcATACTGTATCAGGTAACAAAGGGg-5'
|:| | :| | :| | | | | | | |
mRNA 5'-agcactTGTGAAGTTGCTTCTAGATTCCCa-3'

alignScore: 168, piRNA readNum: 593
piRNA 3'-ctcaGTCCG-ACATCTAGAACAGTTTCAACGt-5'
| | | | | | | | :| | | | | | | |
mRNA 5'-gttcCTGGCAAGAAGCACTTGT-GAAGTTGct-3'

alignScore: 172, piRNA readNum: 388
piRNA 3'-tacggaGATTTTGATCGGGTTCGTTCTTct-5'
| :| :| | :| | :| | | | | | | |
mRNA 5'-aaattgCAGAGGCTGTTCTGCAAGAAGc-3'

alignScore: 165, piRNA readNum: 286
piRNA 3'-ggGATACGGAACAATGGTTGTCTAAGGGa-5'
| | | | :| | | | :| | | | | | | | | |
mRNA 5'-caCT-TGTGAAGTTGCTTCTAGATTCCc-3'

alignScore: 181, piRNA readNum: 239
piRNA 3'-taCGTGACCGTTACAGGTGAGATCTAAt-5'
| | | | | :| :| | | :| | | | | | | | | |
mRNA 5'-aaGCACTTGTGAAGTTGC-TTCTAGATTc-3'

122.>Hagh NM_024284 92.8801 31.5739 2.94167 2.54E-12

alignScore: 170, piRNA readNum: 11643
piRNA 3'-ccaATGAAGTCCGATGGTTGAAAAGTct-5'
| | | | :| | :| | | | | | | | | | | | | |
mRNA 5'-tgcTAATGCAGGACAGTCTACTTTTCAGt-3'

alignScore: 174, piRNA readNum: 4804
piRNA 3'-agAAGAATATGTCTAGAATGTCATTCTct-5'
| | | | | :| | | | | | | | | | | | | | | |
mRNA 5'-tgTTCTAATGCATAT-TTA---TAAGAGa-3'

alignScore: 165, piRNA readNum: 2189
piRNA 3'-tggctgCCGTCACAGTGTGGACCCTGTct-5'
 | | | | | | | | : | | | | | | | |
mRNA 5'-----GGCACACCCACG-CTGGGACAGg-3'

alignScore: 174, piRNA readNum: 1975
piRNA 3'-agAGAGGGAACAACACTGATAGGTCTCGGGt-5'
 | | | | : | | | | | : | | | | | | | |
mRNA 5'-agTCTACTTTT-CAGTTAATTCAGAGCCct-3'

alignScore: 171, piRNA readNum: 1476
piRNA 3'-tggggACGGT-GTATGTAAG--TAGGTATAAAAt-5'
 | | : : | | | | : : | | | | | | | | | |
mRNA 5'-gcttgTGTTATCAAATGTTCTAATGCATATTTa-3'

123.>ltgae NM_008399 5.24323 1.79811 2.91597 0

alignScore: 167, piRNA readNum: 10718
piRNA 3'-tgGCTATTAGATCCGAGC-GGTCTCAGAATAt-5'
 : | | | : | | | | | | | | | | | | | |
mRNA 5'-ttTGATGA-CT--GATAGACCAAAGTCTTATt-3'

alignScore: 168, piRNA readNum: 7868
piRNA 3'-taACGGAAGAAAACCTTCTAAG-GTGAGAGGAt-5'
 | | | | | | | | : : | | : | | | | | | |
mRNA 5'-gaTGCCCCCTATCGGGGCCCTTACTCTCCTt-3'

alignScore: 174, piRNA readNum: 4012
piRNA 3'-ctCGGTA--CAAGATGG--AATTCTCTGTTTct-5'
 | | | | | | | | : : : | : | | | | | | | |
mRNA 5'-ttGCCATGCGTTTTGATGACTGATAGACCAAAGt-3'

alignScore: 170, piRNA readNum: 3859
piRNA 3'-ggGGAAGAAAGGCTGGAGTAATGAGAGt-5'
 | | | | | | | | : | | | | | | | |
mRNA 5'-tgCCCCCTATCGGGGCCCTTACTCTCc-3'

alignScore: 165, piRNA readNum: 3454
piRNA 3'-ggTAGGGT-CGACGTAGGATG--TT-TGTAATt-5'
 | | : : | | | | : : | | | | : | | | | | | |
mRNA 5'-gaAACTTAGGATGTGTGCTATTAATACATTTAc-3'

124.>4921517D21Rik NM_026338 81.0205 27.8572 2.90842 1.17E-06

alignScore: 178, piRNA readNum: 13011
piRNA 3'-tacGGGATAAAGGG-CTGATGGGTTACGt-5'
||||:| ||| ||| | |||||
mRNA 5'-tttGCCTGTTGCCCTGACGA--CAAGTGCa-3'

alignScore: 166, piRNA readNum: 2533
piRNA 3'-aggagaaGAAGTAGAAG-AAAAAGGTCAGt-5'
||| |:| || || | |||||
mRNA 5'-agaacccCTTGTTGTCATTGTCTCCAGTc-3'

alignScore: 169, piRNA readNum: 1199
piRNA 3'-agaGGGTACCAAACCTCGGAGAAAGGTCAGt-5'
||| ||| ||| :| | |||||
mRNA 5'-aacCCCTTGG-TTGTATTGTCTCCAGTc-3'

alignScore: 171, piRNA readNum: 915
piRNA 3'-agggACGAGTTCCTGATGTCAGAGGGACCGt-5'
| ||||| || || |||||
mRNA 5'-tcaaTACTCAAGAACCTCATGAGCCCTGGCa-3'

alignScore: 167, piRNA readNum: 894
piRNA 3'-ttGGAAAC-ACAGTCGACGACACTGGTCAGAt-5'
||| | ||||| :||| |||||
mRNA 5'-ccCCTTGGTTGTCA----TTGTCTCCAGTc-3'

125.>Irgc1 NM_199013 154.934 53.3572 2.90371 1.87E-11

alignScore: 184, piRNA readNum: 704
piRNA 3'-acGGTGTATACGGGTGTGTGGTCg-5'
||| | |||:| | |||||
mRNA 5'-ccCCACCTCCGCCTACCCACCAGCc-3'

alignScore: 169, piRNA readNum: 243
piRNA 3'-ggGTGCGGAAGTAAACCGAGTTGTCGGTTc-5'
| | ||| |: | | || |||||
mRNA 5'-tcCCCACCTCCGCCTACCCACCAGCCAAGc-3'

alignScore: 167, piRNA readNum: 241

piRNA 3'-cgacGAGGAACGAAGAGGGC-GAGTGGGt-5'
 ||| | | :|| |||
mRNA 5'-gcccCTCCTCCACCTCGCCTCACCCa-3'

alignScore: 167, piRNA readNum: 67

piRNA 3'-tggagTGTATGTGGGCCGGGGAGGAt-5'
 ||: | :|| |||
mRNA 5'-----aACGCA-GCCCTGCCCTCCTc-3'

126. >Pnp1a2 NM_025802 0.0163391 0.00563584 2.89914 1.48E-09

alignScore: 171, piRNA readNum: 22363
piRNA 3'-taaggGTAGGACGAATCG-GATGAAAGAAt-5'
 | |: |||:| | |||
mRNA 5'-ccagaaCTTTGTGCTTGCTCCTCTTCTTg-3'

alignScore: 167, piRNA readNum: 13456
piRNA 3'-cttACCAAGAGAGGTCATAGACGATTGTct-5'
 || | || | || | |||
mRNA 5'-aacTGG-TGTCT-CAGTA--GCTAACAGt-3'

alignScore: 197, piRNA readNum: 11643
piRNA 3'-ccAATGAAGTCCGATGGTTGAAAAGTct-5'
 ||| || | || | ||| |||
mRNA 5'-ccTTAC-TCCTGCCACCACCTTTTCAGt-3'

alignScore: 173, piRNA readNum: 9066
piRNA 3'-ggaTGAAACGGTCAA--GT--GTTGAGGTTct-5'
 || | ||| :| | || |||
mRNA 5'-cccACATCGCCGGCTACCAGCCAAGCTCCAAGt-3'

alignScore: 172, piRNA readNum: 7257
piRNA 3'-agttGCTGACTCGAAAATCGAAACCGAGt-5'
 :| || | ||| || |||
mRNA 5'-atctTGCCAGAACCTTTGTGC-TTGCTCc-3'

127. >Eef1d NM_029663 93.4562 32.2523 2.89766 2.74E-08

alignScore: 165, piRNA readNum: 185258
piRNA 3'-tctcTCCTTAGGTTACAAGACGGAGTct-5'

: || || || | |||||
mRNA 5'-ctctGGGCATGCA--T-ATCTGCCTGCAGt-3'

alignScore: 165, piRNA readNum: 175119

piRNA 3'-cgaCAGGGAAGAGGCCAAGGTGTACCTt-5'

 | :| ||| | | |||||
mRNA 5'-gggGCTCATTCCCAGCAACCACATGGAa-3'

alignScore: 166, piRNA readNum: 123091

piRNA 3'-ggAGAGGACCTAGGTGTCAGGTAACAGGt-5'

 ||| :| |:||| |||
mRNA 5'-aaTCTATTAGGTCCA-----CATTTGTCCa-3'

alignScore: 168, piRNA readNum: 7069

piRNA 3'-tcACAA-AGACGTCTGTCTCTGTC-GGGTCAGAt-5'

 ||| || |: :| | :|| |||||
mRNA 5'-gcTGTTGTACCGTGTACACCTAGACCCAGTCTa-3'

alignScore: 165, piRNA readNum: 5239

piRNA 3'-tgGGGACGAGAACATGTTAGAGAGAAGTgt-5'

 ||| | ||| ||| || |||||
mRNA 5'-gaCCCAG-TCT--AACACTC-CTCTTCACa-3'

128.>Rps3 NM_012052 48.1483 16.6322 2.89488 0.000186026

alignScore: 168, piRNA readNum: 22838

piRNA 3'-gtgTTTACG-GTGACAAGT-GCTCAACTAAt-5'

 ||:|: || ||| | :|||
mRNA 5'-ataAAGTGTGCAACCTTCATCTGGTTGATTa-3'

alignScore: 166, piRNA readNum: 6610

piRNA 3'-ctGTAGAGACCTGACGAGTT---GAAAGAGt-5'

 | | ||| ||||| |||
mRNA 5'-agCCTGGCTGG--TGCTCAAAGGCTTCTCt-3'

alignScore: 181, piRNA readNum: 6081

piRNA 3'-tggtAATGAAAAGAAGGTGAAAAAAGt-5'

 || :|||:|: : |||||
mRNA 5'-tcttgCTTTTTTTTTTTTTTTTTTTTCT-3'

alignScore: 165, piRNA readNum: 5444

piRNA 3'-tgTCAGGTTCTGGATGTTACTT---TCTTTAGt-5'

|| || |:|: :| |||| |||||
mRNA 5'-gtAGACC-AGGCTGGCCTGAACTCAGAAATCc-3'

alignScore: 172, piRNA readNum: 4766
piRNA 3'-cgtaccGGCTGTCTCAGAGACGGAGTc-5'
|:| | | |||||

mRNA 5'-tgtagccCTGGCTG-GCCTCTGCCTCAGg-3'

129.>Rnf216 NM_080561 0.691553 0.244678 2.82638 0.000590228

alignScore: 168, piRNA readNum: 363666
piRNA 3'-ctgaaggaaGAG-GATAGATAGAGTGTAGGt-5'
||| || | :|||

mRNA 5'-ctaggttgaCTCAGTACCGTCTCACATCct-3'

alignScore: 169, piRNA readNum: 123091
piRNA 3'-ggaGAGGACCTAGGT---GTCAGGTAACAGGt-5'
||||| |||| ||| |: |||||

mRNA 5'-cccCTCCTG--TCCAGACCAGGCT-TTTGTCct-3'

alignScore: 168, piRNA readNum: 58953
piRNA 3'-tgtagaATAAATAATCAGGATGAACTGAAAAt-5'
|:| | || | : |||||

mRNA 5'-aaagacTGTATCATA-TGTAACCTGACTTTTg-3'

alignScore: 192, piRNA readNum: 53510
piRNA 3'-cggTcccATACACAGACTCATAGGCACAAGt-5'
|| |||: |||||

mRNA 5'-agTacctAACTGTTAGAGTATCCGTGTTct-3'

alignScore: 167, piRNA readNum: 36642
piRNA 3'-tgTCGGGAGGGAAGAATGACTATTTAGGTc-5'
|| :|| || |||| : |||||

mRNA 5'-ctAG-TCTGCCATCTTAGCAGCCAATCCAGt-3'

130.>Fam178b NM_027957 54.5344 19.3973 2.81144 2.01E-09

alignScore: 167, piRNA readNum: 7755
piRNA 3'-tgTCGGATG--GTTGAAAAGTCTCT-CCCAAGAt-5'
|| |||| | || || || |||||

mRNA 5'-gtAGACTACTGCCACCACCCAGCGAGGGTCTt-3'

alignScore: 167, piRNA readNum: 6181

piRNA 3'-gtgcgaataAAGGGAAGAGAAAGGTTAGAt-5'

|| || |||| | |||||

mRNA 5'-tcccacaccTTGCCCTCTC-TGCCATCTt-3'

alignScore: 180, piRNA readNum: 5892

piRNA 3'-ggGGAGAGGACCTAGGTGTCAGGTAACAgt-5'

|| ||:| | | :|:| |||||

mRNA 5'-tgCCCATCTTGAATATGAGGTTTATTGTg-3'

alignScore: 172, piRNA readNum: 2291

piRNA 3'-gtacTCCAGAAACGAGGTAGACAAGACCCt-5'

|||| | |||: ||||| |||||

mRNA 5'-gcacAGGTGT---CTCT-TCTGTTCTGGGc-3'

alignScore: 171, piRNA readNum: 2066

piRNA 3'-taGGGACT-GAAAGTGAATTAGCTCGAGGGt-5'

||||| | | | | |: |||||

mRNA 5'-gtCCCTGACCATCCCCACCCTTGAAGCTCCCc-3'

131.>Oaz3 NM_016901 409.715 145.843 2.80929 0

alignScore: 170, piRNA readNum: 15694

piRNA 3'-tgGTA-AAGTTAG-GA---TGAACAACGTTTGGAGt-5'

||| ||| ||| || | |||| |||||

mRNA 5'-aaCATGTTCCATCTCTGTGAGGGGTTGGAAACCTCa-3'

alignScore: 169, piRNA readNum: 13126

piRNA 3'-ttGGGAAAGTTATGTGGGTGTAAGTAt-5'

||:| |: || | |||: |||||

mRNA 5'-ctCCTTATTCTTA-AACCATTTTTTCATt-3'

alignScore: 168, piRNA readNum: 10728

piRNA 3'-tatggGGGGTTT--CAGAATA-TTAGGGTAAAt-5'

::||:| | |:| | | |||||

mRNA 5'-ccttaTTCCTAAACCATTTTTTCATCCATTa-3'

alignScore: 176, piRNA readNum: 7701

piRNA 3'-ggttGAGACGGGA---GTATAAGGA--TGGTAAAt-5'

||: |||:| | ||||| |||||

mRNA 5'-ctccCTTGGCCTTCTCCTTATTCCTAAACCATTTt-3'

alignScore: 175, piRNA readNum: 6081

piRNA 3'-tgGTAGATGAA-AAGAAGGTGTAAGGAAAGt-5'

| ||| ||| ||| | || |||||

mRNA 5'-gcCTTCTCCTTATTCCTAAACCATTTTTTCa-3'

132.>Trafd1 NM_001163470 94.2481 33.6534 2.80055 0.000444193

alignScore: 169, piRNA readNum: 61393

piRNA 3'-tgTAGA-GGTATTGTCTCAGTTGG---TTTAGTct-5'

| || |||| :| ||| ||:| |||||

mRNA 5'-cgAGCTGCCATTGTTGAG-CAGCCTTGAAATCAGc-3'

alignScore: 167, piRNA readNum: 31989

piRNA 3'-gggggttgGAGGTAAGTAGGATAAAGGAt-5'

:||:| |:| |||||

mRNA 5'-ttttactgTTCTAATTGT-CTATTTCTt-3'

alignScore: 172, piRNA readNum: 22280

piRNA 3'-tggttgAGACGATGGGATTTTTGGGTATTt-5'

||||: |||| :|||

mRNA 5'-tgagtgTCTGTGGCCCTCCTGGCCATAAg-3'

alignScore: 166, piRNA readNum: 8149

piRNA 3'-agTGGAAAAAGATGGGGATC--TAAACAAt-5'

| :||| ||| :| :| |||||

mRNA 5'-gtAATTTTCTAGTTATGGCCATTTTGTg-3'

alignScore: 176, piRNA readNum: 7945

piRNA 3'-gagacaggaACATGAAGTAGTAAGTACGt-5'

||||| | |:| |||||

mRNA 5'-tgatgaggaaTGACTGCTTTGTTTCATGct-3'

133.>Gsg1 NM_001080553 363.905 131.383 2.7698 0

alignScore: 167, piRNA readNum: 8891

piRNA 3'-gggCAGTATTG-GTTTAC-GAGA-TGATAGTt-5'

||| || | :|:| | || |||||

mRNA 5'-taaGTCCTACCATAGGTGCTCGCTCACTATCAa-3'

alignScore: 165, piRNA readNum: 3998
piRNA 3'-ttcacAAGGACACGAGACGGTAAACACAGt-5'
||: ||| :|:| | :| |||||
mRNA 5'-tgacaTTGTGT-TTTTGATA-TTGTGTct-3'

135.>Tek2 NM_011902 178.614 65.5158 2.72627 3.82E-12

alignScore: 165, piRNA readNum: 1346
piRNA 3'-tatggaCAGATCTCCC-AAGGTGTCTAACT-5'
| || ||||| |||||
mRNA 5'-tttggcGGCT-GAGGGAAGACACAAGATTGg-3'

alignScore: 172, piRNA readNum: 115
piRNA 3'-tgaGACACGGAAGATGTCTATCGGTGTTCT-5'
|| || | ||: |: | |||||
mRNA 5'---gCTTTGGCGGCTGAGGGAAGACACAAGAt-3'

alignScore: 168, piRNA readNum: 52
piRNA 3'-cgggaaGATTCTTCGGATGTCTTCTGTgt-5'
|| |: |||: | :|||
mRNA 5'-----gCTTTGGCGGCTGAGGGAAGACACa-3'

136.>Spag9 NM_001025429 2.20202 0.81234 2.71071 0.0173643

alignScore: 167, piRNA readNum: 83145
piRNA 3'-cggtaAACATGTTCCAGAGTCAGACTCCGAt-5'
|| ||::||: :| | |||||
mRNA 5'-ccgggTTATATGGGTATA-TATGAGGCTa-3'

alignScore: 167, piRNA readNum: 75935
piRNA 3'-tgTAGGAGTACAGATGTTATC--AGAAACTt-5'
: |: | || :||:| | |||||
mRNA 5'-tgTGTTACCCTGGTTATAATTGTTTCTTTGAa-3'

alignScore: 168, piRNA readNum: 68064
piRNA 3'-ctggGAAAATGGGTTGT-----TTGTAATAACT-5'
|:| | | :| | |||||
mRNA 5'-aataCTTTTAAAAAGCATTATTAACATTTATTGg-3'

alignScore: 165, piRNA readNum: 64297
piRNA 3'-tctactaccaGGGTCAGAAGATGTTGTTc-5'
|||| || |:||||||
mRNA 5'-ccatttottaCCCA--CTGCTGCAAGCAa-3'

alignScore: 172, piRNA readNum: 26434
piRNA 3'-cgaTGGTAAGAGGGTCCAGATAAGGTCTGAt-5'
||:|||| | ||| || |||||
mRNA 5'-atgACTATTACCAAGGACTCGACCAGACTa-3'

137.>Diablo NM_023232 181.356 67.5282 2.68563 2.94E-12

alignScore: 165, piRNA readNum: 185258
piRNA 3'-tcTCTC-CTTAGGTTCAcAA---GAC-GGACGTc-5'
|||| |: :||| || ||| |||||
mRNA 5'-tgAGAGTGAGAGTGAGTCTTCAGGCTGTCCTGCAGc-3'

alignScore: 173, piRNA readNum: 13581
piRNA 3'-ttgGTGTATGTAGGA-ATCTGTGGAAGAA-5'
||:|||| |:| | :| |||||
mRNA 5'-taaCACGTACTTCTTGTGTTGTTCTTCTTt-3'

alignScore: 173, piRNA readNum: 12741
piRNA 3'-tgGAAGACTGTGGTCG-AGGTG---A--TGTAGAGt-5'
| |||| ||||| |||| | |||||
mRNA 5'-ctCATCTGTCACCAGCGCCACATGGTCCACATCTCc-3'

alignScore: 166, piRNA readNum: 11701
piRNA 3'-gggtagaaGAGTCACTACGAGTCCGAGGGt-5'
| | | |:| || |||||
mRNA 5'-gctgggggCCCTGGGGTCTAAGGCTCCct-3'

alignScore: 168, piRNA readNum: 10028
piRNA 3'-tgttgCTGGACTCGAAAATCGAAACCGAGTt-5'
| :|| |||| | :|| |||||
mRNA 5'-gcctgGTTCTTAGCTCTGGGC-GTGGCTCAg-3'

138.>Pkd212 NM_001163004 13.2241 4.95977 2.66627 4.55E-06

alignScore: 166, piRNA readNum: 9256
piRNA 3'-cggagaTGGTA-GGTCTCTGTAGGACAct-5'
| ||| ||| |||||
mRNA 5'-acaagaAGCATACCACTACACATCCTGTGa-3'

alignScore: 165, piRNA readNum: 4562
piRNA 3'-tgaGATTGGGAGA--TGTTGGTA---TTCGGTTTt-5'
| :|:: ||| | |:||| |||||
mRNA 5'-tagCAGATTATCTGAAAAGCCATGCAAAGCCAAAc-3'

alignScore: 170, piRNA readNum: 2470
piRNA 3'-tgGAGA-GGGTATGAAGTTGTC-ACGAGACt-5'
| | | ||| || : |:| |||||
mRNA 5'-acCACTACACATCCTGTGAGCGGCTGCTCTGa-3'

alignScore: 170, piRNA readNum: 1855
piRNA 3'-tgtcGTTTTTGGTCTTGGCAGATGTAGGAt-5'
|||:| | | | | |||||
mRNA 5'-acgaCAAGAAGCATACCACTACACATCCTg-3'

alignScore: 166, piRNA readNum: 752
piRNA 3'-ttgTGCACAGTGTGATATAGTCAGATCGt-5'
|| || | :||: | :|||
mRNA 5'-taaACCTGGAAGCTGCAGTGGTCTAGCc-3'

139.>Psmc3 NM_008948 439.638 167.802 2.61998 0

alignScore: 166, piRNA readNum: 2286
piRNA 3'-ggTTTCAAACGGTAGGTGTGACAAAAGt-5'
||||| : || | : |||||
mRNA 5'-ctAAAGTTGATAATAAAAAGGTGTTTTc-3'

alignScore: 166, piRNA readNum: 1544
piRNA 3'-aggcacGAACGGAAAGAAGAATCAGACTCt-5'
|| |:| | | |:|||
mRNA 5'-acacctCTAGTCTGTCCGC-TGGTCTGAGg-3'

alignScore: 165, piRNA readNum: 422
piRNA 3'-gatcgggaagagtcaaCACAAAAGACAAt-5'
|||||||
mRNA 5'-aagttgataataaaagGTGTTTTCTGTTc-3'

alignScore: 168, piRNA readNum: 323
piRNA 3'-acgaagaaACTACTTTCAAGTAAAAGACat-5'
| || |||| | :|||||||
mRNA 5'-aaagttgaTAATAAAAGGT-GTTTTCTGTt-3'

alignScore: 176, piRNA readNum: 299
piRNA 3'-tgaCTTGTG----TAAGG-AGGAGACCAGACTct-5'
|:|||| | ||: ||| |||||
mRNA 5'---gGGACACCTCTAGTCTGTCCGCTGGTCTGAGg-3'

140.>Zpbp NM_001185153 0.748136 0.286231 2.61375 4.70E-05

alignScore: 169, piRNA readNum: 705783
piRNA 3'-agTAGGTGGGTAAGT-AGGTAAGTTGTTt-5'
:|::|| || || |:|||||||
mRNA 5'-caGTTTACACAGGCAGACTGTTCAACAAa-3'

alignScore: 173, piRNA readNum: 38780
piRNA 3'-gacccCATAGGAAGAAGTCGTCAAGAACTt-5'
|| |||| || :| | |||||
mRNA 5'-ccccaGTCTCCTCCTCTAAAACCTTCTGAa-3'

alignScore: 165, piRNA readNum: 22626
piRNA 3'-tacCG-CGACAGTAGCAGGTGCTCGAGGGt-5'
|| |||| : : |::: |||||
mRNA 5'-tcaGCAGCTGTAGCTTTTTGTAAGCTCCCa-3'

alignScore: 166, piRNA readNum: 12655
piRNA 3'-cggccTTGCCAAGGAAAGAAGTGTGACGGAt-5'
:|:| ||||| | |||||
mRNA 5'-caccaGATGACTCCTTTGT---CACTGCCTt-3'

alignScore: 166, piRNA readNum: 9570
piRNA 3'-cgGATAGACAGTATATAAG-TGAAATCGGt-5'
:|| || || | | :|:|||||
mRNA 5'-gaTTATGTGACATCACTGCTGTTTTAGCCa-3'

141.>1700015F17Rik NM_001200025 462.767 177.148 2.61232 0

alignScore: 165, piRNA readNum: 12730

piRNA 3'-cggaggTCACTAAACAAGT-GTCTTAAGGAt-5'
| ||| ||| || || |||||
mRNA 5'-tttgagAATGA-TTGAACATCAAATTCCTt-3'

alignScore: 173, piRNA readNum: 3375
piRNA 3'-cgGACGGTGAAGTCCACAAAT-CT-CGGATGTt-5'
|| |||| || | || | || |||||
mRNA 5'--gCTCCCAC-TGTGATTTAATGATGCCTACAa-3'

alignScore: 166, piRNA readNum: 3259
piRNA 3'-agGTAGGTCACTCTGAC-TGT-GATTTAAGGt-5'
| |: || |: || || | |||||
mRNA 5'-caCTTTGAGAATGATTGAACATCAAATTCCTt-3'

alignScore: 174, piRNA readNum: 3068
piRNA 3'-tgacaggaaGACAGTGACACCAGAGAAGTct-5'
|||| |||| || |||||
mRNA 5'-----cCTGTAAGTGGT-TCTTCAGa-3'

alignScore: 195, piRNA readNum: 895
piRNA 3'-atTTTGCTAGTTTTTCGTTTGAAGGAAAt-5'
: ||: ||: || | |||| |||||
mRNA 5'-gaGAATGATTGAACATCAAATTCCTTTa-3'

142. >Ace NM_207624 17.2518 6.64836 2.5949 7.27E-05

alignScore: 166, piRNA readNum: 13456
piRNA 3'-cttaccAAGAGAGGTCATAGACGATTGTct-5'
||| | |||| | | |||||
mRNA 5'-caacctTCCACCAGCCT-TCCTAACAGc-3'

alignScore: 166, piRNA readNum: 8890
piRNA 3'-actttaTGGAGA---TGGTT--ATAGATTGTCGGt-5'
|||:| |||: | |||||
mRNA 5'-cccacaACCTTCCACCAGCCTTCCTAACAGCCc-3'

alignScore: 165, piRNA readNum: 8098
piRNA 3'-atggatcaGGGAAAAGGTAGGTAGGAt-5'
|||| || || |||||
mRNA 5'-aacacatcCCTCAGCCTCAGCCATCCTt-3'

alignScore: 165, piRNA readNum: 6644

piRNA 3'-tgTCGGAACAGGGATAAGCGAA--GTCAGAA-5'
| | | | | | | : | | | | | | | |
mRNA 5'-cgACCCTT-TACTGGTTGTCTTCGCAGTCTTc-3'

alignScore: 169, piRNA readNum: 4835
piRNA 3'-tgtGGTTCATG-CGGGTAAGGTAAGAGACT-5'
| | | : | | | | | | | | | | | | | |
mRNA 5'-cccCCAGGCCAGGCC---CCATTCTCTGg-3'

143. >Pom12112 NM_001162929 15.065 5.86125 2.57027 0

alignScore: 179, piRNA readNum: 11255
piRNA 3'-cacaGTAGGTGGGTAAGTAGGTAAGTTGt-5'
| | | : | | | | | | | | | | | | | |
mRNA 5'-tacaCACCTTTCTATT-ATCTATTCAACT-3'

alignScore: 167, piRNA readNum: 2487
piRNA 3'-agaggaccaGGTAACA-AAGAGATAAGTTt-5'
| | | | | | | | | | | | | | | | | |
mRNA 5'-gaatacacaCCTTTCTATTATCTATTCAAc-3'

alignScore: 170, piRNA readNum: 2136
piRNA 3'-cggaTCGTGGAAGGGGCCAAGGCTTAGGGt-5'
| | | | | | | | | | | | | | | | | |
mRNA 5'-gcggAGCAGAGACCACTTTTTGGAATCCct-3'

alignScore: 168, piRNA readNum: 1559
piRNA 3'-tgatACATGGAGTAGTAAAGTCTGAAGGAt-5'
| | : | | | | | | | | | | | | | |
mRNA 5'-caccTTTCTATTATCTATTCA-ACTTCCTt-3'

alignScore: 165, piRNA readNum: 1053
piRNA 3'-tggACG-AACAGGGTTTAT--AAGAGTTCAGAt-5'
| | : | | | | | | | | | | | | | | | |
mRNA 5'-tcaTGTGTATCTTGAATAGGTGGACAAGTCTa-3'

144. >Tek1 NM_011569 262.787 102.261 2.56977 6.66E-16

alignScore: 166, piRNA readNum: 118
piRNA 3'-tggtTTGTTTGTGTTTATCTGTTt-5'

| :||| : ||| :|||
mRNA 5'-ccttATTAAGTGCATC--GTAAGACAAg-3'

alignScore: 175, piRNA readNum: 71
piRNA 3'-tcCCTCGAAGAGT-ACGGGAGTCTTTGACGt-5'
||| :||| |||:| |||
mRNA 5'-taGGAGCCATTGAGCCTTATTAAGTGCa-3'

alignScore: 170, piRNA readNum: 63
piRNA 3'-ttTCTGTTGTAAGT---GTATCAGTTGACGt-5'
||: |: |||:| ||| |||
mRNA 5'---TAGG-AGCCATTGAGCCTTATTAAGTGCAt-3'

alignScore: 171, piRNA readNum: 61
piRNA 3'-tttTCGTCGGAGTAAGT--GGTAATTTGt-5'
|| ||| ||| :| |:|||
mRNA 5'---TAGGAGC--CATTGAGCCTTATTAAGt-3'

145.>Mex3d NM_198615 91.5436 35.6624 2.56695 1.79E-06

alignScore: 170, piRNA readNum: 36339
piRNA 3'-ggGGAGGAAAGGTGAGGTAGAATGTCATAt-5'
||| |||: : || | |||
mRNA 5'-cgCCTCCGTTCT-TGACAAGTGACAGTAt-3'

alignScore: 166, piRNA readNum: 32471
piRNA 3'-tgtcGTGAAAGGTGAGTAGATTCTGAGt-5'
:::| :| :| :|||
mRNA 5'-gtttTGTTTGTGTTTAAATTAAGACTCAg-3'

alignScore: 171, piRNA readNum: 15958
piRNA 3'-tagGCACAGGACTGATGTTACACAAAACAt-5'
| |||:| |:|:| |||
mRNA 5'-taaCTGTTTT-ATTGTGGT-TGTTTTGTt-3'

alignScore: 169, piRNA readNum: 7161
piRNA 3'-gtacCAGAAGTTGATCAGGCTTTTGTt-5'
||:| |:|:| :|||
mRNA 5'-ccccGTTCCGGGTGATCTTAAACAAa-3'

alignScore: 166, piRNA readNum: 6002
piRNA 3'-atgtaGTTGGTTGTGC-TTAAAGAGt-5'

|||: ||| |:| |||||
mRNA 5'-ggtgCAATAAAC-CGAAAAATCTCt-3'

146.>Ubq1nl NM_198624 223.608 87.2265 2.56353 8.84E-14

alignScore: 169, piRNA readNum: 22310
piRNA 3'-agGTAGGGGCT-TGGGGTTGA-----TTCAGGA-5'
| |:|:| |:::| ||||| |||||
mRNA 5'-acCTTTCCTGATGTTTCCAACCTGGGAGAAGTCCTg-3'

alignScore: 168, piRNA readNum: 4491
piRNA 3'-tggAGAGACTAGAGTCGG-----TAGACAGTTt-5'
|| |||:| |::|: |||||
mRNA 5'-tagcTCACTGGTCATGGCTGGAAGATCTGTCAAt-3'

alignScore: 168, piRNA readNum: 2653
piRNA 3'-tgcGACAACGAGAGTAACGAGTCTCTTCAt-5'
|| | |:| | | | :|||
mRNA 5'-ttcCTGATGTTTCCA--ACTGGGAGAAGTc-3'

alignScore: 174, piRNA readNum: 2468
piRNA 3'-tgtgGGATTCCGGACGGACTAGTA-GGAAAGGt-5'
|| | | ||||| || | |||||
mRNA 5'-accacCTCA-CCTGCCT-TTCCTACCTTTCc-3'

alignScore: 176, piRNA readNum: 2400
piRNA 3'-acgGTAAGACTGGTTAGAGATTGACCCt-5'
| ||| |||: |:| |||||
mRNA 5'-ctaCCTTTCCTGAT--GTTTCCAACCTGGGa-3'

147.>Dnajc19 NM_026332 3.93185 1.53498 2.5615 0

alignScore: 167, piRNA readNum: 1812
piRNA 3'-tcccACTCATAGATACTTGACGTACAAGTTt-5'
| |||:| | | |: | |||||
mRNA 5'-taaaTCAGTGTCTTGGTATATTTTGTCAAa-3'

alignScore: 165, piRNA readNum: 1695
piRNA 3'-acagggGTAGAATCAAGTA----AAGTTTGAt-5'
::|||:| | | | |||||

mRNA 5'-aaatcagTGCTTGGTATATTTTGTCAAACt-3'

alignScore: 168, piRNA readNum: 1297

piRNA 3'-ttggggggTGGAGGAGCATAAAATTCAGGt-5'

|:| | | | | | | | | | |

mRNA 5'-----agtaATCTGAT-GAATTTTAAGTCCa-3'

alignScore: 168, piRNA readNum: 1186

piRNA 3'-ttACGGGTCAGACTGGAGAAT-GGT-CTTTTAAt-5'

| | | | | | | | | | | | | |

mRNA 5'-aaTGCC---TCAGAGCTATAACCCATGAAAATTg-3'

alignScore: 170, piRNA readNum: 856

piRNA 3'-aggaGACCACTATAATGTGG- TTGAATTt-5'

:| | | | | | | | : : | | | | | |

mRNA 5'-tgctTTGGT-ATATTTTGTCAAACCTAAg-3'

148.>Tcp11 NM_001085555 64.7553 25.5317 2.53627 2.03E-13

alignScore: 166, piRNA readNum: 3221

piRNA 3'-ataGGGTAGGGACAGAC-GTCGTGTg-5'

| | | | | | | | | | | | | |

mRNA 5'-tgcCCACCCCCACAGCCAGCACAc-3'

alignScore: 165, piRNA readNum: 1564

piRNA 3'-ccatGGTACAGTTCAGAGGTCGTGACTCt-5'

| | | | | | | | :| | | | | | | |

mRNA 5'-atctCCCTGGGATGACATCACCCTGAGc-3'

alignScore: 170, piRNA readNum: 935

piRNA 3'-tgttGCGGGTTCACGTATGTCTGTCGTGTt-5'

:| | | | | | | | | | | | | |

mRNA 5'-cctcTGCCCCACCCCCACAGCCAGCACAc-3'

alignScore: 166, piRNA readNum: 467

piRNA 3'-agTGA CT CG--GTAAGGGAGGAGACGt-5'

| | | | | | | | | | :| | | | | | | |

mRNA 5'-ccACTGAGCAGCAGGGTCCCCTCTGCc-3'

alignScore: 168, piRNA readNum: 410

piRNA 3'-tggaCACGTAGAGGTATAGGA--GTAGTGGt-5'

| | | | | | | | | : | | | | | | | |

mRNA 5'-gaaaGCGCATCTCCCTGGGATGACATCACCa-3'

149.>4933411K16Rik NM_025752 249.481 98.4758 2.53342 5.77E-15

alignScore: 165, piRNA readNum: 6371
piRNA 3'-aacACAGAGAG---GTAGAGTGTCAAAGAGt-5'
|| ||||| ||| | |||||
mRNA 5'-ggcTGGCTCTCATACATAGGCCTGTTTTCTc-3'

alignScore: 170, piRNA readNum: 3259
piRNA 3'-aggtaggtcagTCTGACTG-TGATTTAAGGt-5'
||||| | || |||||
mRNA 5'-gtcagggtaagAGACTGCCAACCAAATTCc-3'

alignScore: 168, piRNA readNum: 2451
piRNA 3'-aaGGAG-ACGTCTCAGTTCGAAAAGAGAA-5'
:||| | || | | |||||
mRNA 5'-gcTCTCATACATAGGCCTG-TTTTCTCTTc-3'

alignScore: 166, piRNA readNum: 2447
piRNA 3'-tggaagaggaaGAAGGAGTCAGGTTTCc-5'
||| ||| |||||
mRNA 5'-aaaggacgcagCTTCAACAGCCCAAAGGc-3'

alignScore: 177, piRNA readNum: 2373
piRNA 3'-ttgcatGATG-ATCAGTCTCCAGTCTCTGAt-5'
||| :||| ||| |||||
mRNA 5'-ggaaacCTACGCGGTCAG-GGTAAGAGACTg-3'

150.>Actg2 NM_009610 255.011 100.672 2.53309 2.89E-15

alignScore: 173, piRNA readNum: 15857
piRNA 3'-tgtGACGGTATATGATAGGATTGTGGAAGT-5'
| |||| | |: || ||| |||||
mRNA 5'-cacCAGCCACAGATCAT--TAAACCTTCAa-3'

alignScore: 165, piRNA readNum: 2875
piRNA 3'-tgcggtAAACATCTCGGAGTCACTGACGAt-5'
| || :|| || || |||||
mRNA 5'-ggoccttcTCTGGGATCCCCACAAGACTGCTg-3'

alignScore: 181, piRNA readNum: 2736
piRNA 3'-taCGGTATATGATAGGATTGTGGAAGTTc-5'
|||| | |: || ||| |||||
mRNA 5'-caGCCACAGATCAT--TAAACCTTCAAGc-3'

alignScore: 168, piRNA readNum: 2618
piRNA 3'-agacGGTTTACGACAGGTGATTTTGGAt-5'
|||: | | :||:|||||
mRNA 5'-gtcaCCAGCCACAGATCATTAAACCTt-3'

alignScore: 165, piRNA readNum: 833
piRNA 3'-tacgcAGGTACCTAGGTG-AATGAGACGACAt-5'
||: ||||| | | |||||
mRNA 5'-ccttcTCTGGGGATCCCCACAAGACTGCTGTc-3'

151.>ldh1 NM_001111320 7.97666 3.15195 2.53071 1.12E-06

alignScore: 166, piRNA readNum: 11631
piRNA 3'-gtgGTAGATCGAGACAGTAT-TAAGATAt-5'
|| :|| |||||: |||||
mRNA 5'-tcaCAATTA--ACTGTCATGTTTTCTCATg-3'

alignScore: 166, piRNA readNum: 11363
piRNA 3'-ctcgACAAA-GACATGAACCCAGGAAAAAGt-5'
|||| | || :|| | :|||||
mRNA 5'-tataTGTTTACAGTCTTT--TTTCTTTTTCa-3'

alignScore: 171, piRNA readNum: 9066
piRNA 3'-ggATGAAACGGTTCAAGTGT--CGAGGTTc-5'
|| | |||| ||| || |||||
mRNA 5'-tgTAAATGACCAAAATCAGAAGTGCTCCAAGg-3'

alignScore: 173, piRNA readNum: 7621
piRNA 3'-caCGACAGATCCGACTTCGT-TTGATGTCA-5'
||| | ||| |||| | |:|||||
mRNA 5'-gtGCT-CCAAGGGTGAACAATAGCTACAGTa-3'

alignScore: 169, piRNA readNum: 6624
piRNA 3'-ttGGTAGGAGTACAGATGTTA-TCAGAAACt-5'
| | ||| : | :|| ||| |||||
mRNA 5'-gtCAAACCT-GGGCTTAGAATGAGTCTTTGc-3'

152. >Ubr5 NM_001112721 58.7943 23.2528 2.52848 0.000518297

alignScore: 165, piRNA readNum: 141865
piRNA 3'-tgagtgggtTGAGTGAAGATGGAAAAAt-5'
 ::|: | |:| | |||||
mRNA 5'-atggtctgtGTTTTCATTTAGCTTTTTTa-3'

alignScore: 167, piRNA readNum: 23220
piRNA 3'-acGAAATGGGTTAT-GATAGGGTAAAATGt-5'
 :| | : : |:| | | : : |||||
mRNA 5'-ttTTTTTTAAGTATCTGTACATTTACT-3'

alignScore: 166, piRNA readNum: 13126
piRNA 3'-ttgggaAAGTTATGT-GGGTGTAAAAGTAt-5'
 || |:| |: : |: : : |||||
mRNA 5'-aaaaaTTAAGTATGTTCTGTGTTTCATt-3'

alignScore: 168, piRNA readNum: 9375
piRNA 3'-agGTAGGTAAGTCTGTGATTTGATGAAt-5'
 ::|:| | | | :| | |||||
mRNA 5'-aaTGTTCTTGAGCAGCTTAACACTTt-3'

alignScore: 167, piRNA readNum: 5880
piRNA 3'-tgtaaaaCAATGGATAAGA--TAAGTCGAGATt-5'
 |||:| | | | |||||
mRNA 5'-agtgtggGTTATTTTCAGCTACATTGAGCTCTAg-3'

153. >Scmh1 NM_013883 13.0683 5.1711 2.52718 0.000455348

alignScore: 165, piRNA readNum: 141865
piRNA 3'-tgaGTGGGTTGAGTG-GAAG-ATGAAAAAAAt-5'
 | |: |||: |: | | |||||
mRNA 5'-agaCTCTGAACCTTATGGTCAGACCTTTTTTa-3'

alignScore: 171, piRNA readNum: 59414
piRNA 3'-tgaagGGGATCGT--TGGGAAct-TTGAGTct-5'
 ||:| |:| : |:| | | : |||||
mRNA 5'-aggcaCCTTAGTAGGGCTCTGGGTGACCTCAGg-3'

alignScore: 170, piRNA readNum: 20021
piRNA 3'-tgtCGTAAGGATTCTCACAGGTTTCCGGGt-5'
|| ||||:| | : |||||
mRNA 5'-gacGCCAGCCCTAGGA-CCTTGAAAGGCCt-3'

alignScore: 173, piRNA readNum: 18241
piRNA 3'-tgAGT-ACGGGTAA--AGGGAAGG-TGCAAACt-5'
|:| |||: || | : |||: :|||
mRNA 5'-tcTTATTGCTAATTTATTGCTTCTGGGTTTGGa-3'

alignScore: 166, piRNA readNum: 11701
piRNA 3'-ggGTAGAAGAGTCACTACGAGTCCGAGGt-5'
| | ||:| | ||| |||||
mRNA 5'-ctCTTCCCCTTAG-CCTGCTGTGGCTCCCa-3'

154.>2610027L16Rik NM_026403 95.3153 37.8911 2.51551 1.56E-06

alignScore: 166, piRNA readNum: 83145
piRNA 3'-cggtaaacATGTTTCAGAGTCAGACTCCGAt-5'
|::|: |:||| :|||
mRNA 5'-ccatagaaTGTAGCTTTCACGTTGAGGCTg-3'

alignScore: 166, piRNA readNum: 22310
piRNA 3'-agGTAGGGGCTTG-GGGTTGATTCAGGAt-5'
|:|||:| |:| |: :| |||||
mRNA 5'-gtCGTCCTCCAGCAGCTGGAAGAAGTCCTc-3'

alignScore: 166, piRNA readNum: 11801
piRNA 3'-cgGA-ATCGGACCCA----AAGATGTAGGTTGAGt-5'
|| |: ||| || ||:| : |||||
mRNA 5'-gtCTCTGACCTGAGTACTCTTTTAGGGCCAACtCc-3'

alignScore: 177, piRNA readNum: 11631
piRNA 3'-gtgGTAGATCGAGACAGTAT-TAAGAGTAt-5'
||| ||||| : | |||||
mRNA 5'-caaCATCCCACTCTGTGGGACATTCTCATc-3'

alignScore: 173, piRNA readNum: 7262
piRNA 3'-tcGGTGATAGCACTTCAGGCAGAACCAAt-5'
|::| | |:||| | |||||
mRNA 5'-atCTGTTAGGATGGAGTCAG-CTTGGTTa-3'

155.>Hnrnpul1 NM_178089 20.8185 8.34791 2.49386 4.44E-16

alignScore: 185, piRNA readNum: 147401
piRNA 3'-taCGGATAAGCAGATGTACGAAGAGAAAGGt-5'
|:| | | | |:| | | | | | | | | |
mRNA 5'-atGTCTTTTCCTGTGCAT-CTT-TCTTTCCc-3'

alignScore: 167, piRNA readNum: 21035
piRNA 3'-agTAGGTAGGGAAGAGGTAACGAATTGTAt-5'
:| | | | |:| | | | | | | | | |
mRNA 5'-ctGTGCAT-CTTTCTT--TCCCTTAACATc-3'

alignScore: 169, piRNA readNum: 4896
piRNA 3'-tgAAGGA-A-GAGGATAGATAG--AGTGTAGGTt-5'
| | | | | | |:| | | | | | | | | |
mRNA 5'-ttTTCCTGTGCATCTTTCTTTCCCTTAACATCCAt-3'

alignScore: 166, piRNA readNum: 3560
piRNA 3'-cacgGGACAGAAACCAGTCCAAGGTAGAAAt-5'
| | | | | | | | | | | | | | | |
mRNA 5'-tgaaCATGTCTTT--TCCTG-TGCATCTTTc-3'

alignScore: 173, piRNA readNum: 3468
piRNA 3'-taCGCAAGGGAAGGTAACAGGATGTGTGt-5'
| | | | |:| | | | | | | | | |
mRNA 5'-gaGCTTTCTCTTGAAAAGT-TTACACACt-3'

156.>Ccnb2 NM_007630 179.848 72.1244 2.49358 5.53E-11

alignScore: 172, piRNA readNum: 15694
piRNA 3'-tgGTAAAGTTAGGATGAA--CAACGTTTGGAGt-5'
:| | | |:| |: |:| | | | | | | | | | |
mRNA 5'-tgTATTTTATTCTAGTTTACATCACAAACCTCt-3'

alignScore: 171, piRNA readNum: 8899
piRNA 3'-cagggGTTAGTTTGGGAAGATGATAGt-5'
| | |:| |: |:| | | | | | | | | | |
mRNA 5'-taaagCTATTGATTTTCTTATACTATCc-3'

alignScore: 176, piRNA readNum: 8277

158.>Oxr1 NM_001130166 0.00127151 0.000518956 2.45013 0.00398792

alignScore: 167, piRNA readNum: 156233
piRNA 3'-tgACAGGGACAGGAGTTCCTCGAGTGCAGAt-5'
||| : ||| ||| ||| |||||
mRNA 5'-atTGGCATAGACCACA--GCGCACACAGTCTg-3'

alignScore: 170, piRNA readNum: 64245
piRNA 3'-ccCGTC-AGTCAGACCGTCAA-GTAAGAAAGt-5'
|:| | :| || ||| || :|||
mRNA 5'-agGTAGAATAAACTAGCAATTGTATTCTTTt-3'

alignScore: 174, piRNA readNum: 61046
piRNA 3'-tgtcaggGTGTCTAA--AGAAGACACATTTt-5'
||: ||| || |||||
mRNA 5'-gaaacggCATCGTTTCCTCGTCTGTGTAAGc-3'

alignScore: 169, piRNA readNum: 28394
piRNA 3'-agtcCACGACAGGGAAGAGGCCAAGGTGt-5'
||||| ||| | |||||
mRNA 5'-cattGTGCTGAAAATTCAGCTGTTCCACa-3'

alignScore: 172, piRNA readNum: 24655
piRNA 3'-tacacccttcggtaGACAAGAGAACAAGt-5'
| |||||
mRNA 5'-gatacactgttttaCAGTTCTCTTGTTCAG-3'

159.>Prm1 NM_013637 4502.86 1855.26 2.42708 0

alignScore: 165, piRNA readNum: 1594
piRNA 3'-tgtgtcgGCGGTC-CAAGTTGAGTCTGAAGTc-5'
||: || ||: || |||||
mRNA 5'-actcctgCGTGAGAATTTTAC-CAGACTTCAa-3'

alignScore: 169, piRNA readNum: 1508
piRNA 3'-ttCCATGGTACGGT---CAGATAT----ACTTTTt-5'
|| || ||||| ||| ||| |||||
mRNA 5'-aaGGAACAATGCCACCTGTCAATAAATGTTGAAAACt-3'

alignScore: 173, piRNA readNum: 870
piRNA 3'-gtggGTGTTAGTTCGATATTTTGTACGt-5'

|| :| | |||| :|||
mRNA 5'-aaaaCAGGAGCCTGCTAAGGAACAATGCc-3'

alignScore: 167, piRNA readNum: 842
piRNA 3'-tacggggGTACAGTTTAGTGTAGAACTTt-5'

||| | : |||
mRNA 5'-tcaagagCATCTC--GCCACATCTTGAAa-3'

alignScore: 168, piRNA readNum: 731
piRNA 3'-cggggTGTTA-GAAGTACAAGTTATTTAt-5'

|||| | | || |||
mRNA 5'-taaggaACAATGCCACCTG-TCAATAAATg-3'

160.>Aif1 NM_019467 392.098 162.869 2.40744 0

alignScore: 175, piRNA readNum: 4822
piRNA 3'-tgTGGTATCGTCCTTTGTCACCTTGTGTCAGt-5'

|| : ||| | :| | | |||
mRNA 5'-tgACAGCAGCATGGAAAAAGA-AACAGTCg-3'

alignScore: 174, piRNA readNum: 574
piRNA 3'-gtcgatCTCTGCGAACGACAGATGTCGTct-5'

||| : ||| ||| : |||
mRNA 5'-ctgagtGAGGAGCTT-CTGATGACAGCAGc-3'

alignScore: 179, piRNA readNum: 560
piRNA 3'-atagacacTTCTTTAGTCA-CGTTGCTt-5'

||||| ||| | : |||
mRNA 5'-atggaaaaAAGAAA-CAGTCGTGAGCCAGAg-3'

alignScore: 169, piRNA readNum: 438
piRNA 3'-caacccaacgGAACATGTTCTTTTGTGTCAGt-5'

| || | || | : |||
mRNA 5'-gatgacagcagCATGGAAAAAGAAACAGTCg-3'

alignScore: 170, piRNA readNum: 437
piRNA 3'-acgtACTCG-TTTTGTAGACTTTACTGTct-5'

||| : | :| ||| |||
mRNA 5'-gggcTGAGTGAGGAGCTTCTG--ATGACAGc-3'

161.>Efcab6 NM_001161628 38.4272 16.1118 2.38503 1.28E-12

alignScore: 169, piRNA readNum: 7557
piRNA 3'-tgtaGGGTTGAGGT-GAG-TCTAAGAGTCCg-5'
||| || ||| | | ||| |||||
mRNA 5'-cttaCCCTAC-CCATCACGAGACTCTCAGGa-3'

alignScore: 170, piRNA readNum: 5110
piRNA 3'-tgacGTGACACGTAG--TGCTAGATGTTAGTAc-5'
|:||| || | :|| ||| |||||
mRNA 5'-cggcCGCTG-GCCTCGGGCGCTCT-CAATCATt-3'

alignScore: 170, piRNA readNum: 3235
piRNA 3'-tggcgAGTGTTT---CCGTCCCGGTGTCCGAGGt-5'
|||:|: ||| : |:|||||
mRNA 5'-acccaTCACGAGACTCTCAGGATACGCAGGCTCct-3'

alignScore: 170, piRNA readNum: 2646
piRNA 3'-ttaTTTTCGGTAGTTATAATCA-GGGTt-5'
|::| ||||: :| || |||||
mRNA 5'-cagATGGGGCATCAGGGTCTGTCCCAAGAc-3'

alignScore: 179, piRNA readNum: 2189
piRNA 3'-tggctgCCGTCACAGTGTGGACCCTGTct-5'
|||:| | :|||:|||||
mRNA 5'-catccaGGCGGAGCAGCACTTGGGACAGa-3'

162.>Txnrd3 NM_001178059 0.0068976 0.00290129 2.37743 0

alignScore: 176, piRNA readNum: 22701
piRNA 3'-ggCACGATTA-AGAACCAACGGTTGAAGTg-5'
| | | | |:| |||: :|||||
mRNA 5'-aaGAGATTATCTTTCAGTTGTGGACTTGACTg-3'

alignScore: 172, piRNA readNum: 10673
piRNA 3'-gcCCTCGGTAGGAATTTAGGAT---AGATCAGt-5'
|||||||:| ||| | |||||
mRNA 5'-gtGGAGCCATTCT--CCTCCCAGCCTCTAGTct-3'

alignScore: 166, piRNA readNum: 5037
piRNA 3'-gggaGGT--TCG-AGTCGTC--ATGTCTCAGAGt-5'
||| ||| ||||| | ::|||||

mRNA 5'-aggaCCAGCAGCAGCAGCAGCATCTGGAGTCTCa-3'

alignScore: 176, piRNA readNum: 4658

piRNA 3'-ttgTGGATGACTGTC--AGAGTTGAGTTCg-5'

||||:|||| | | | :|:|||||||

mRNA 5'-ataACCTGCTGTCAGAAGCCTGACTCAAGc-3'

alignScore: 168, piRNA readNum: 3260

piRNA 3'-ttTGGGTGTGTTTGTGTCAGGATGTAGACct-5'

||| :|| |:||| | :|||||||

mRNA 5'-ggACCAGCAGCAGCAG--CAGCATCTGGa-3'

163.>Uqrcrc1 NM_025407 218.151 92.0227 2.37062 3.81E-12

alignScore: 167, piRNA readNum: 10349

piRNA 3'-ctcGGAAGACCCTAGAAGTAAACAGGAt-5'

||| :|| || || :| |||||

mRNA 5'-agcCCTATTGAGAACT--GTGTTGTCCTt-3'

alignScore: 172, piRNA readNum: 8425

piRNA 3'-ccACG-GTCGGAGTAGGTTGTCTCAATGGt-5'

||| ||||: :| ||:| |||||

mRNA 5'-gcTGCTCAGCTGTGTGCAGC-CAGTTACcc-3'

alignScore: 171, piRNA readNum: 8328

piRNA 3'-agaacCGGAGATCGTACAAGACACAACAGt-5'

||| ||| :| | |||||

mRNA 5'-ataaaGCC-CTATTGAGAACTGTGTTGTCc-3'

alignScore: 183, piRNA readNum: 4708

piRNA 3'-tgTGTGTAGGA--AGGTGATACATGTCGGTct-5'

|| | | || || :||:||||:|||||

mRNA 5'-ccACTCCTGCTGCTCAGCTGTGTGCAGCCAGt-3'

alignScore: 168, piRNA readNum: 1697

piRNA 3'-ggGGTAAAAGACTGGGAATATAAGGAAGgt-5'

|| | || || |: |:| |||||

mRNA 5'-agCCCTATTGAGAACTGTGTTGTCCTTCCt-3'

164.>Ppp1cc NM_013636 177.432 75.243 2.35812 4.50E-10

alignScore: 169, piRNA readNum: 67564
piRNA 3'-tccttgctcGGTAGG-TGTCGTCTTCAAAGAt-5'
 || ||| | ||| |||||
mRNA 5'-ctgtgattCCTTCCTAAAGCCAAAGTTTCTg-3'

alignScore: 179, piRNA readNum: 16311
piRNA 3'-ttGGGTGGTA-GAATCAAAGAGATGTAAGAt-5'
 || |: || ||| ||| |||||
mRNA 5'-gaCCGATAATGCTTTCTTTGGCTACATTCTt-3'

alignScore: 168, piRNA readNum: 7307
piRNA 3'-acgaCAGTTA-AGGGACTTATATCAAGGGt-5'
 ||:||| | || :|| |||||
mRNA 5'-ggaaGTTAATGACACTTTGTACAGTCCCa-3'

alignScore: 179, piRNA readNum: 6936
piRNA 3'-tgtaaacGGGAGGTGTTAAGGTTTCAAAGt-5'
 :||||: | || |||||
mRNA 5'-tctgtgatTCCTTCCTAAAGCCAAAGTTTCT-3'

alignScore: 172, piRNA readNum: 6897
piRNA 3'-agACGGGT---ATAGACGAT-AGT-AGGAAGGGt-5'
 ||||| ||||| : || |||||
mRNA 5'-ccTGCCAGACTATCTGAAGCACACTCCTTCCCa-3'

165.>Act17b NM_025271 263.234 115.031 2.28837 1.29E-13

alignScore: 169, piRNA readNum: 569
piRNA 3'-tgGGAGGTGCAACGGAGAGA-AAGGAAATGt-5'
 |||: : ||| |||| | |||||
mRNA 5'-ccCCTCT-TTGGGCCACTCTATACCTTTAGa-3'

alignScore: 165, piRNA readNum: 377
piRNA 3'-ccGGGATTCGGACTAAA-CCTAGTTTCAAAt-5'
 ||:| | | |||| | || |||||
mRNA 5'-taCCTTTA-CAGAATTTTCGCATAAAAGTTTt-3'

alignScore: 170, piRNA readNum: 255
piRNA 3'-ggTCGAAG-GT-TGAATGACTAGTTTCAAAt-5'
 | |||: || | || | || |||||
mRNA 5'-atACCTTTACAGAATTTTCGCATAAAAGTTTt-3'

alignScore: 167, piRNA readNum: 254
piRNA 3'-tgTGGTGGGCGTGTGTAGTTTCGACct-5'
 :| : || ||||| :|| |||||
mRNA 5'-ggGCAGGCCCCACAG-GCA--AAAGCTGGa-3'

alignScore: 165, piRNA readNum: 161
piRNA 3'-gaACGCACAGGTTCTAGGAACGTATTTt-5'
 | | | | | ||| :| |||||
mRNA 5'-taTACCTTTAC-AGAATTCGCATAAAAg-3'

166.>Tcp10a NM_009340 37.0991 16.3776 2.26523 2.76E-05

alignScore: 170, piRNA readNum: 7222
piRNA 3'-ggggTGG-ACTTCGGAGGGGACTAGAACct-5'
 ||| || |||| | | | |||||
mRNA 5'-agagACCATGTAGCCACCAC-CATCTTGGg-3'

alignScore: 166, piRNA readNum: 4933
piRNA 3'-cccACTCATACTAAAGTCCAGTCGAACAGgt-5'
 ||: |||: ||| || : |||||
mRNA 5'-tccTGGACATGGCTTC-TGTGGCCTTGTCa-3'

alignScore: 173, piRNA readNum: 4736
piRNA 3'-aggaaGTAC-GGGAATGGTTGATCAAGt-5'
 |:| | | |:| |:| |||||
mRNA 5'-agcaaCGTGACCACTGCCAGCTAGTTCc-3'

alignScore: 171, piRNA readNum: 3235
piRNA 3'-tggcgaGTGTTCCGTCCCGGTGTCGAGgt-5'
 | |||:| |||| | :| |||||
mRNA 5'-aacagaCTCAAGGCCAGG--CAGTAGGCTCCa-3'

alignScore: 166, piRNA readNum: 2945
piRNA 3'-cggatGAACTTAGATGTCTTCTCTCTGTa-5'
 | | | | |: :||| | |||||
mRNA 5'-gatccCCTGCACATGAGGAGTAAAGAGACA-3'

167.>2210404007Rik NM_001099917 744.97 329.937 2.25792 0

alignScore: 165, piRNA readNum: 6626

piRNA 3'-tgTAGGTTTCGTTTCAGGTAGATCAACGTct-5'
||||| || || || |||||
mRNA 5'-tcATCCACACA---CC-TCAAGTTGCAGc-3'

alignScore: 173, piRNA readNum: 3915
piRNA 3'-tgGGGAAAGGAGACTTCTGGCT-GTGACCGt-5'
| | |||| || | ||: | |||||
mRNA 5'-ccCACCTTCCCTG-ACACTCACCACTGGCc-3'

alignScore: 172, piRNA readNum: 3027
piRNA 3'-cctaAGACGACTCAAGTTGTATGACAGGAt-5'
|| |||:| |:| | |||||
mRNA 5'-ggtgTCATCTGGGTCTGA-AACTGTCCTc-3'

alignScore: 170, piRNA readNum: 2602
piRNA 3'-cacgaCTGAGGTA-GA-TGGAAATGGAAGGt-5'
| ||||| || || | |||||
mRNA 5'-ctatgGCCTCCATACTCACCCACCTTCCc-3'

alignScore: 169, piRNA readNum: 1862
piRNA 3'-ctACTCCA-TGGACGTTACAGTCTTGACAGt-5'
||: || |:||| |:| | | |||||
mRNA 5'-acTGGTGCATCTG-GGTCTGAAAACCTGTCc-3'

168.>Rnf113a2 NM_025525 9.19886 4.08058 2.2543 8.90E-07

alignScore: 169, piRNA readNum: 5911
piRNA 3'-taGGTGTGACAGTAAGACAG-GTCTTTATGt-5'
||| ||| ||| | ||: |||||
mRNA 5'-aaCCAAAGCAATCA--CAGTTGAAGAAATAct-3'

alignScore: 168, piRNA readNum: 3765
piRNA 3'-cgGGAAGTAAAAGATGGAGAT-TCAGACTTAt-5'
:|| | ||| || || || |||||
mRNA 5'-acTCTCCTGTTTATAGCTATATTTTCTGAATc-3'

alignScore: 170, piRNA readNum: 2679
piRNA 3'-agacGGTCCACATGCTCTTGAT-CTTTAGAGt-5'
:| ||| | | ||:| |||||
mRNA 5'-ttacTTAGATGTCCATAATTGTCAAATCTCa-3'

alignScore: 166, piRNA readNum: 2517

piRNA 3'-tggtCATAAGTTTTTCA---GGTCTCTTGAGAt-5'
| | |||| | ||| :| |||||
mRNA 5'-agatGGAATCAATACAGTTAACTTAAAGAACTCTc-3'

alignScore: 169, piRNA readNum: 2175
piRNA 3'-aggtGGAAGTCAAGGATC--CAGAAAAGACTt-5'
:| | |||: ||| | |||||
mRNA 5'-gaacTCTCCTGTTTATAGCTATATTTTCTGAa-3'

169.>Ldhal6b NM_175349 366.236 162.875 2.24857 0

alignScore: 172, piRNA readNum: 4460
piRNA 3'-agACTCACGTGTAGAGGT-TCAAAGACct-5'
||| | :| |:| || |||||
mRNA 5'-ggTGACTTTGCTTTTTCACAG-TTTCTGGg-3'

alignScore: 166, piRNA readNum: 3683
piRNA 3'-agGACCCTACATCTGTAGAAGGTGTCAAAt-5'
|||| | :| |:| |||||
mRNA 5'-ggCTGGG-TGACTTTGCTTTTTCACAGTTt-3'

alignScore: 170, piRNA readNum: 2958
piRNA 3'-tacGGTGT-CGCTCTTGTGAAGGAAAAGt-5'
||| | | :|: || |||||
mRNA 5'-catCCAGAGGCTGGGTGACTTTGCTTTTTCa-3'

alignScore: 168, piRNA readNum: 2573
piRNA 3'-ctatAGTCGACAAGACAGACAGA-C--AGGTCTc-5'
|:| | | |||| || | | |||||
mRNA 5'-ttgtTAGGTCTCCTGT-TGTGTAGCATCCAGAGg-3'

alignScore: 173, piRNA readNum: 2291
piRNA 3'-gtACTC-CAGAAACGAGGTA--GAC-AAGACCCt-5'
||:| | |||||:| | | |||||
mRNA 5'-gcTGGGTGACTTTGCTTTTTCACAGTTTCTGGGt-3'

170.>Rnf38 NM_175201 35.599 15.847 2.24642 0.000704519

alignScore: 167, piRNA readNum: 275500
piRNA 3'-ggattccaagAGAAC-GACAAACT-AAGATGAt-5'

||||| || |||: |||||
mRNA 5'-gtcctgtaagTCTTGCCTCCTTGGCTTCTACTa-3'

alignScore: 171, piRNA readNum: 141865
piRNA 3'-tgAGTGGGTTGAGT-GGAAGATGGAAAAAt-5'
|: |:|:|:|:| | :||| |:|||||
mRNA 5'-ccTTTCTCAGTAGATTTTTCTTTCTTTTta-3'

alignScore: 172, piRNA readNum: 92488
piRNA 3'-agGGAGTCAGGGTGTCTAAAGAAGACACAt-5'
:|||| | | | | :|||||
mRNA 5'-ggTTTCAGGAGAACTGTTGTTTCTGTGTg-3'

alignScore: 169, piRNA readNum: 86514
piRNA 3'-tgtCGGGT-CGT-TAGTATAGGTACTGACCTt-5'
|| | || | | :|: | |||||
mRNA 5'-actGCCAAGGCACACTGTGCTCACACTGGAa-3'

alignScore: 166, piRNA readNum: 61393
piRNA 3'-tgtAGAGGTATTGTCTCAG----TTG-GTTTAGTct-5'
|:|: | ||:|: || || |:|||||
mRNA 5'-attTTTTAAAATAGGTTCAATTGAACATAAATCAGa-3'

171.>8430427H17Rik NM_001134300 7.67922 3.42273 2.2436 0.00151107

alignScore: 167, piRNA readNum: 705783
piRNA 3'-agtAGGTGGGTAAGTAGGTAAGTTGTTt-5'
|: :|| || | |||||
mRNA 5'-tttTTTTTCCTCTCA-CCACTCAACAAa-3'

alignScore: 168, piRNA readNum: 58653
piRNA 3'-agGTAGGTAGTCTCAGGTTCTTGATGAt-5'
|:|: |: | || | |||||
mRNA 5'-atCGTTGGTGAAGTGC-AGAACTACTt-3'

alignScore: 165, piRNA readNum: 30406
piRNA 3'-ctaTGGGGAATCA--GGTGTCTGTAATTGAt-5'
||:| | :| :|:| | |||||
mRNA 5'-atgACTCCACAGGTGGTTATAGGATTAActa-3'

alignScore: 167, piRNA readNum: 22002
piRNA 3'-tcgtgcaaaccAAGTCTCTTTGAAATAAt-5'

||:| ||: :|||||||
 mRNA 5'-tggcaccaactTTTAAAGGTGACTTTATTa-3'

 alignScore: 165, piRNA readNum: 15857
 piRNA 3'-tgTGACGGTATATGATAGGATTGTGGAAGTt-5'
 :| ||| || | | || |||||
 mRNA 5'-ccGTTTCCACCTAAAAACAAAACCTTCAc-3'

172.>Cct5 NM_007637 258.553 115.411 2.24028 5.80E-13

alignScore: 165, piRNA readNum: 505
 piRNA 3'-tgttTGGGATAGATTTG---ACGGCACAGACAt-5'
 ||: |: ||||: | :|||||||
 mRNA 5'-taccACTGTGACTAAATAAAGGGTGTGTCTGTt-3'

alignScore: 177, piRNA readNum: 162
 piRNA 3'-acAGGGTGA--GG-GACAGAGATATTTCCa-5'
 | |||:| || ||| || |||||
 mRNA 5'-tgTACCATTTACCACTGTGACTAAATAAAGGg-3'

alignScore: 186, piRNA readNum: 79
 piRNA 3'-tgTAGTAAGGGGAGATTCATTGGTTTATTTt-5'
 | ||||: || || ||:|:|||||||
 mRNA 5'-gtACCATTTACCACT--GTGACTAAATAAAg-3'

alignScore: 177, piRNA readNum: 53
 piRNA 3'-cgGCCAT-GTAAGTTG-AACTCTG-TTTATTTt-5'
 | ||| ||||:| | || ||| |||||
 mRNA 5'--aCTGTACCATTTACCACTGTGACTAAATAAAg-3'

173.>Hk1 NM_001146100 0.0290017 0.0129736 2.23544 0

alignScore: 174, piRNA readNum: 19044
 piRNA 3'-ttacggtcagTGTATGAGATAGGCAGAACGAt-5'
 |||| :| | ||| |||||
 mRNA 5'-tgtgggaaaACATCTTGTCTCCATCTTGCTa-3'

alignScore: 167, piRNA readNum: 13106
 piRNA 3'-agACGAATATGTTGTGA--CAAGTGACAGGc-5'
 ||: | |: ||| || |||||

mRNA 5'-gaTGTATCAATGCCACTGAGTTGTCTGTCCGt-3'

alignScore: 173, piRNA readNum: 10728

piRNA 3'-tatgGGGGGTTTCAGAATATTAGGGTAAAt-5'

||| ||: || | |: |||||

mRNA 5'-tgcaCCCGCCGAG-CCTGCCATCCCATTg-3'

alignScore: 168, piRNA readNum: 4708

piRNA 3'-tgtGTGTAGGAAGGTG-ATACATGTCGGTct-5'

|||:| || ||:| : || |||||

mRNA 5'-accCACGT-CTACCGCAGGCGTCCAGCCAGg-3'

alignScore: 168, piRNA readNum: 3124

piRNA 3'-ttcctgtaGTTCCGTAT-ATAGTATGTCAGAt-5'

| |||| | |||:| |||||

mRNA 5'-agccagtcCTAGCCACATTATTG-ACAGTCTt-3'

174.>At13 NM_001163505 48.7791 21.8482 2.23264 0.00258089

alignScore: 175, piRNA readNum: 25078

piRNA 3'-ggTAGAACAGGGACATATATA----TTTATATct-5'

||:||||:| ||| :| | :|||||

mRNA 5'-ctATTTGTTTGTGTAAGTTTTTGAATATAGt-3'

alignScore: 178, piRNA readNum: 15811

piRNA 3'-ggAAGCACACAAAGCTGTCTAAAGGTCAGt-5'

||| ||| | : ||:| |||||

mRNA 5'-ctTTCTTGT-TAGTAACGGCTTCCAGTCa-3'

alignScore: 166, piRNA readNum: 14921

piRNA 3'-ttcggCA-CAAGTCATCTATATCGGGACCCt-5'

|| | |: || | |:| |||||

mRNA 5'-ctgaaGTGGCTTTGT-GCTGTGGCCCTGGGa-3'

alignScore: 165, piRNA readNum: 14015

piRNA 3'-cgGAAAAGGATG-----TCGTCTT---GATGAGTCat-5'

:||||| | || ||| |||||

mRNA 5'-ttTTTTTCTCCATCGAAGAAGAAAGTGTACTCAGTc-3'

alignScore: 174, piRNA readNum: 13591

piRNA 3'-ggTTTGTG-ACGTTAAAGTAAAGACAGGAt-5'

|:|::| ||::| |||||

mRNA 5'-atAGATGCTTGTGA---CATTTCTGTCCTc-3'

175.>Rfc4 NM_145480 18.832 8.46077 2.2258 1.43E-10

alignScore: 171, piRNA readNum: 1205

piRNA 3'-tgatcagaggGAAGAAGTGAAGGAAAAt-5'

|||| || || |||||

mRNA 5'-----aggCTTCATCTCTCCCTTTTg-3'

alignScore: 167, piRNA readNum: 909

piRNA 3'-ctgcaTCAA-GA-ACAGGTTTTCCGTGTCTGGTt-5'

|||| || | :||| ||| |||||

mRNA 5'-aaaccAGTTACTATAAATAAATGGC-CAGACCAc-3'

alignScore: 167, piRNA readNum: 543

piRNA 3'-ggaggaggacattaAGAGAAGGAAAACt-5'

|||| |||||

mRNA 5'-----aggcttcaTCTCTCCCTTTTg-3'

alignScore: 166, piRNA readNum: 178

piRNA 3'-gtgGAAAAGATGGGGATCTAAAACATAt-5'

||| ||| :||| |||||

mRNA 5'-aggCTTCATCTCTCCC-----TTTTGTATg-3'

alignScore: 173, piRNA readNum: 152

piRNA 3'-tgGGGAGGGAGAGGTGGTACT---GTCAATGt-5'

:|:|||| ||:: :||| |||||

mRNA 5'-caTCTCTCCC-CTTTTGTATGAAACCAGTTACT-3'

176.>Fam166a NM_026624 84.0917 37.8084 2.22415 0

alignScore: 167, piRNA readNum: 11084

piRNA 3'-ggCGAGTTGAGGTCGAAAGAGATGTTCAt-5'

|||: | | | ||| |||||

mRNA 5'-ttGCTTAATGGTGGTATCTGTACAAGTg-3'

alignScore: 167, piRNA readNum: 2335

piRNA 3'-caACATTCATGTGTGTCGTTCTAAGTGTg-5'

|||:| |: |:| || || |||||

mRNA 5'-gcTGTGAATGAATAAAG--AG-TTCACACT-3'

178.>Fxr1 NM_001113188 15.3263 6.94388 2.20717 3.19E-09

alignScore: 172, piRNA readNum: 21154
piRNA 3'-tcggaaggaTCAAAGAATGGGATGTCAAGAc-5'
|| ||| | :|||
mRNA 5'-ctgaaggaAG-TTCCTAGTTTACAGTTCTt-3'

alignScore: 166, piRNA readNum: 6053
piRNA 3'-agaggAACAAATCAAGAGTGAGCAGAAAAt-5'
|| ||||: || | |||||
mRNA 5'-ggaagTTCCTAGTTTACAGT--TCTTTTAc-3'

alignScore: 165, piRNA readNum: 4650
piRNA 3'-ggGTAGAACAG-GGA-CATAT-ATATTTATATc-5'
:| :|| | || | |: || |||||
mRNA 5'-caTACTTTGACACCTACTGTGTTAAAAATATAt-3'

alignScore: 166, piRNA readNum: 1999
piRNA 3'-tggTCTTATTTAGGTTTGATGACGAACAt-5'
| | | | :| | | |||||
mRNA 5'-ttttACATTACAGTTACAATAGTGCTTGTa-3'

alignScore: 170, piRNA readNum: 1226
piRNA 3'-atTTCTGAACAAAAAGTCCCAAGAAATGt-5'
||| :| | ||:| |||||
mRNA 5'-ggAAG-TTCCTAGTTTACAGTTCTTTTACa-3'

179.>Spag16 NM_029160 41.7635 19.0107 2.19684 0.00195791

alignScore: 169, piRNA readNum: 2885
piRNA 3'-atgtaaggATTTGTAGTTTAGCTGGTAt-5'
|:|:| :| || |||||
mRNA 5'-agctttgggTGAATAATATATGGACCATAc-3'

alignScore: 175, piRNA readNum: 1745
piRNA 3'-cgTGTAGAGACAAAGTCAT-TCAGAAACCCt-5'
| | | |:|||:| | | |||||
mRNA 5'-taAAATATTTGTTTTAAACAAGCTTTGGGt-3'

alignScore: 170, piRNA readNum: 807

piRNA 3'-tgcggggtaagAAGGGAAATT-GGAATTTTt-5'
 ||||| ||| |||||
mRNA 5'-atgcaaaggcaTCCCTCTAAGGCTTAAAAa-3'

alignScore: 174, piRNA readNum: 717
piRNA 3'-acgACAGATCATGAATCTTCATGAACAAAAt-5'
 || | | || | | | | : |||||
mRNA 5'-aaaTGACCAATAAATA-AAATATTTGTTTTa-3'

alignScore: 174, piRNA readNum: 309
piRNA 3'-cgaccggaagcTA-GAACCAAATTTGTTCt-5'
 || : ||| |||||
mRNA 5'-caataaataaaATATTTGTTTTAAACAAGc-3'

180. >Ggnbp1 NM_027544 210.576 96.028 2.19286 1.81E-10

alignScore: 167, piRNA readNum: 5977
piRNA 3'-ctacGGAGACAGAATCGGGTTCGGAGAAt-5'
 || | ||| | : || : : |||||
mRNA 5'-gggaCCCCAGTC-TGGCGTGTGCCTCTTc-3'

alignScore: 168, piRNA readNum: 3350
piRNA 3'-ctcacAGAGTACGGTTTACG-GACTCAGGGt-5'
 ||| : : | || ||| | |||||
mRNA 5'-cctctTCTTGGGACACATGCAAGGAGTCCc-3'

alignScore: 165, piRNA readNum: 1702
piRNA 3'-atcGGAACGAAGAGTC--AGAAC-TCTACTGct-5'
 || | | ||| | | | |||||
mRNA 5'-tgtCCCTACCGTCAGACTCCTGCAGATGACGt-3'

alignScore: 173, piRNA readNum: 1010
piRNA 3'-taTCG-GTAATGGATGGAGAGATCTGAGGAt-5'
 : || | | ||||| | | |||||
mRNA 5'-ctGGCACTGTCCCTACCGTC-AGACTCCTg-3'

alignScore: 166, piRNA readNum: 800
piRNA 3'-gtACGGA-AATGACAGTCAG-AAG-TCCTCAGGt-5'
 |||| | | : || | | | |||||
mRNA 5'-tgTGCCTCTTCTTGGGACACATGCAAGGAGTCCc-3'

181.>Gorasp2 NM_027352 118.809 54.751 2.16999 2.11E-06

alignScore: 169, piRNA readNum: 12092
piRNA 3'-ctcaCGTATAATA-GTGAAGA-CGTCCAAGTAt-5'
|||| | | | |||| | |||||
mRNA 5'-ccagGCATCTACTGCCGTTCTGGGAGGTTcATc-3'

alignScore: 166, piRNA readNum: 8908
piRNA 3'-tgACGGAACGAGAGGGTACTCATAGATGAt-5'
|| |||| | | ||| :| |||||
mRNA 5'-ggTGGCTTG--CTGCCA--GGCATCTACTg-3'

alignScore: 166, piRNA readNum: 4894
piRNA 3'-agtccTCTTCG-AAATCAGATGACGACGAt-5'
||| | | ||| || :|||
mRNA 5'-tattcAGACACCATTTTGT-AGCTGCTGCTg-3'

alignScore: 168, piRNA readNum: 4608
piRNA 3'-tgtCAGATGTAATCTCG-GGATGTTGGAGTg-5'
||:|:| ||| | | || |||||
mRNA 5'-gtcGTTTGCA--AGAACACAGACCACCTCAct-3'

alignScore: 165, piRNA readNum: 4384
piRNA 3'-agGCAGGGGT-TCTTAAG-----TTTTGATGCGt-5'
:||||: :| | |||| :|||
mRNA 5'-ggTGTCTGTACATAATTCTAAGGGAAACTACGCa-3'

182.>Bbs9 NM_181316 50.3905 23.2531 2.16704 0.0020532

alignScore: 172, piRNA readNum: 6081
piRNA 3'-tggtagATGAAAAGAAGGTGAAAAAAGt-5'
|| |||| | | |||||
mRNA 5'-gtaaaaTAATTCATAGCCATTTTTTTTc-3'

alignScore: 166, piRNA readNum: 5321
piRNA 3'-tcaagagggaagACCACCGA--GCAATCAGTg-5'
|||| ||| | |||||
mRNA 5'-ttccaagaaaaTGGTTGCTGCCTTTAGTCACa-3'

alignScore: 172, piRNA readNum: 1895
piRNA 3'-ttGACAG-TTGTAGAATGAGACGGTAGGGt-5'

||||| :||| :|::|| |||||
mRNA 5'-ccCTGTCTGGACACTGTGTTC--CCATCCCg-3'

alignScore: 168, piRNA readNum: 1725
piRNA 3'-ccCACTGTCTGGTAGAATATCATTCTGTt-5'
|| |||| || | | |||||
mRNA 5'-atGTCACAGACAGGTCAGCTGAAAGACAAg-3'

alignScore: 171, piRNA readNum: 1379
piRNA 3'-tgtagttgGTTGTGTCTTTAAGAGTCTACt-5'
:|:||||:| || |||||
mRNA 5'-agactttaTAATACAGGGA-TC-CAGATGTa-3'

183.>Actr10 NM_019785 63.6978 29.4495 2.16295 0.000536017

alignScore: 192, piRNA readNum: 25078
piRNA 3'-ggTAGAACAGGGACATATATTTATATCt-5'
|| |||| :| ||| |||||
mRNA 5'-atATGTTGATTTATATCAATAAATATAGt-3'

alignScore: 165, piRNA readNum: 23220
piRNA 3'-acgAAATGGGTTATGA----TAGGGG--TAAATGt-5'
| |:| |:|:| | |||| |||||
mRNA 5'-taaTCTGCCGAGTATTAGAAACCCCTAATTTTACT-3'

alignScore: 165, piRNA readNum: 22310
piRNA 3'-aggtAGGGGCTGGGGGTTGATTCAGGAt-5'
|:| |:| || |:| |||||
mRNA 5'-tgatTCGAGGAACCAAATCAAGTCCTc-3'

alignScore: 180, piRNA readNum: 16311
piRNA 3'-ttGGGTGG-TAGAATCAAAGAGATGTAAGAt-5'
|:|||| |||| ||| |:| |||||
mRNA 5'-acCTCACCAATCT--GTTATTTACATTCTa-3'

alignScore: 170, piRNA readNum: 14791
piRNA 3'-aggaGGGTTA-ACATCAGGTC--AGGAGGt-5'
:::| | ||||| ||| |||||
mRNA 5'-ttagTTTATTATGTAGTGCAGTTTCCTCCAg-3'

184.>Pvr13 NM_021497 12.3458 5.7395 2.15102 9.33E-10

alignScore: 175, piRNA readNum: 4999
piRNA 3'-cgGTCCCGGTC-AAGATGTAAGTGAACGt-5'
||| ||:| | |||| | |||||
mRNA 5'-acCAGAGCTAGCTTCTAAA--CACCTTGCc-3'

alignScore: 169, piRNA readNum: 4075
piRNA 3'-cgAGGAATATGGGTTAGGGT-CGGTAAAt-5'
|::||| | ||||:| |||||
mRNA 5'-atTTTTTAAA---AATCCTATGCCATTg-3'

alignScore: 165, piRNA readNum: 3967
piRNA 3'-tgggtgaagtGGACAGTGTGTAGGAAAct-5'
|:||||:| |||||
mRNA 5'-ttttcaaagcCTTGTCATG--ATCCTTTGt-3'

alignScore: 165, piRNA readNum: 3911
piRNA 3'-ggTGATGGTTGAGACGGGAGTATAAGGAt-5'
|:| ::|| | |::| :|||
mRNA 5'-tgATTCTTAAC-ATGTTCAAGTATTCTc-3'

alignScore: 173, piRNA readNum: 1692
piRNA 3'-tgtGGATATG-GAGGTGTGCAACAACAct-5'
:|| | | ::| || | |||||
mRNA 5'-gctTCTAAACACCTTGCCAGCTGTTGTGg-3'

185.>Mterfd1 NM_025547 10.6462 4.96447 2.14448 1.59E-07

alignScore: 172, piRNA readNum: 4650
piRNA 3'-gggtagAACAGGGACATATATTTATAt-5'
|| |: || |:| |||||
mRNA 5'-----TTTTTGATGAATGTTTAAATATa-3'

alignScore: 166, piRNA readNum: 1018
piRNA 3'-ccacCGTAGAAG----ACCTTCAGAGTCCAAAGt-5'
|:|:|: | | |:| | |||||
mRNA 5'-aaatGTATTTTTAAATAAATGTTTCTGGTTTCAa-3'

alignScore: 167, piRNA readNum: 783
piRNA 3'-tgggtagAACAGGGACATATATTTATAt-5'
|| |: || |:| |||||
mRNA 5'-----TTTTTGATGAATGTTTAAATATa-3'

alignScore: 166, piRNA readNum: 565
piRNA 3'-ggacCAGACAAGTTTGCAGATAAAGACct-5'
|| | ||:|| | :|||||
mRNA 5'-aaatGTATTTTTAAATAAATGTTTCTGGt-3'

alignScore: 171, piRNA readNum: 506
piRNA 3'-ggGAAGTTATGTATGGTTGTCAAAGTTt-5'
:|| ||| |::: :|||
mRNA 5'-ttTTTAAATAAATGTTTCTGGTTTCAAt-3'

186.>Atp5b NM_016774 307.127 144.601 2.12396 8.08E-14

alignScore: 176, piRNA readNum: 7681
piRNA 3'-tgtACTTGTGTAAGGAAGA-TTTGTCGAAc-5'
|| :|:: || ||| |||
mRNA 5'-gtcTGTTTATG-TTGCTTCTGAAACAGCTTa-3'

alignScore: 173, piRNA readNum: 5973
piRNA 3'-ctGAACAGGGAGAACCTGAGTCTAAAGGAAt-5'
| | || | | :|||:|||||
mRNA 5'-tcCATATCAAGCGAGAGCTCAGGTTTCCTTc-3'

alignScore: 168, piRNA readNum: 4113
piRNA 3'-acTGTAGACTCTCCCTAG-GATGTATAGTt-5'
:|| || | ||| || |||
mRNA 5'-caGCA-CTGCAACTGATCTCTCCATATCAa-3'

alignScore: 178, piRNA readNum: 2647
piRNA 3'-ggTTGTGACATA-GTGGATAG-GAATACAGAt-5'
||:| ||| :|| || :|||||
mRNA 5'-tcAATAAAGTATATACCCCTCATTATGTCTg-3'

alignScore: 165, piRNA readNum: 2422
piRNA 3'-tgtagaaaAGAGTAAACTCTCGGGGTAAAt-5'
|| || | | |:| |||
mRNA 5'-aattgagcTCACAGTGGTGGG-CCACATTTa-3'

187.>Spata20 NM_144827 368.89 174.091 2.11895 2.22E-16

alignScore: 167, piRNA readNum: 69240

piRNA 3'-ctTCCGGTTCAAGTTCAAGAGTCGATGAt-5'
|||:| | | : :|||
mRNA 5'-agAGGCTAATACCAAACCTATAGCTACTc-3'

alignScore: 180, piRNA readNum: 32471
piRNA 3'-tgTCGTGAAAGGTGAGTAGATTCTGAGTt-5'
| | |:| | | | | :|||
mRNA 5'-gcAGAATTTTCCAACCTGACCAGAGACTCAg-3'

alignScore: 168, piRNA readNum: 16452
piRNA 3'-tgaaGATGATGACTTGGTGTATGTAGGAAt-5'
| | | : | | |:||| | |||
mRNA 5'-ctgcCTCCAGGTG-ATCACAGCCATCCTTg-3'

alignScore: 166, piRNA readNum: 11701
piRNA 3'-gggtagaAGAGTCACTACGAGT-CCGAGGGt-5'
| | | | | | |: | |||
mRNA 5'-caggtgaTCACAGCCATCCTTGCGGCTCCc-3'

alignScore: 179, piRNA readNum: 4322
piRNA 3'-tgtAGGGTTGAGGTGAGTCTAAGAGTCCGt-5'
|:||||| | | ||| | |||
mRNA 5'-attTTCCAACCT-GAC-CAGAGACTCAGGCc-3'

188. >RspH1 NM_025290 330.061 156.431 2.10995 1.44E-14

alignScore: 174, piRNA readNum: 4491
piRNA 3'-tggaagaGACTAGAGTCCGTAGACAGTTt-5'
|||:| | | | |||
mRNA 5'-gctagggCTGGTATCCACCACCTGTCAAt-3'

alignScore: 174, piRNA readNum: 4245
piRNA 3'-aaGGGAAAGAGTGTGGCGG--GAACAAAAt-5'
|:| | | | |:|:|:|: | |||
mRNA 5'-atCTCTCTCTTAGCTGTTAAGTTGTTTTt-3'

alignScore: 191, piRNA readNum: 2512
piRNA 3'-tcTTTGAACGGAATCCAGTAT-GTCAGTCGt-5'
|:| | ||||| | | | |||||
mRNA 5'-ccAGGCGTGCCTTAGTTAACACCAGTCAGCt-3'

alignScore: 176, piRNA readNum: 1673

piRNA 3'-agGGGGCCGAGTGTATTAGTTAGAGGt-5'
::| | | : | | | | | : | | | | | | | |
mRNA 5'-ttTTTCGGTTAACAAAA--TAAATCTCCa-3'

alignScore: 165, piRNA readNum: 1610
piRNA 3'-agcGGACAGAGTAT-GTCGTCAACAATA-5'
: | | | | | | | | | : | | | | | | | | | |
mRNA 5'-atcTCTCTCTTAGCTGTTAAGTTGTTTt-3'

189.>Tmem151b NM_001013749 0.000361241 0.000171397 2.10763 0.00373158

alignScore: 167, piRNA readNum: 123091
piRNA 3'-ggagaGGACCTAGGTGTCAGGTAACAGGt-5'
| | | | : | | | | | | | | | | | | | | | |
mRNA 5'-acagcCCCGGGCACCAG-CCCTTTGTCCt-3'

alignScore: 168, piRNA readNum: 60737
piRNA 3'-tgtgcagatGAAGATACGGTCTTAAGGt-5'
: | | | | : | : | | | | | | | | | | | | | | | |
mRNA 5'-actgtggccTTTCTGTCATGGAATCCa-3'

alignScore: 171, piRNA readNum: 26689
piRNA 3'-ctTGTGCAGATGAAGATACGGT--CTTAAGGt-5'
| | | | : : | | : | | | | | | | | | | | | | | | | |
mRNA 5'-tcACACTGTGGCCTTTCTGTCATGGAATCCa-3'

alignScore: 165, piRNA readNum: 22002
piRNA 3'-tcgtgCAAACCAAGTCTCTTTGAAATAA-5'
| | | | | | : | : | | | | | | | | | | | | | | | | | | |
mRNA 5'-ctttgGTTTCTTTCTTGGTAGCTTTATTg-3'

alignScore: 168, piRNA readNum: 19044
piRNA 3'-ttacGGTCAGTGTATGAGATAGGCAGAACGAt-5'
| | | | | | : : | | | | | | | | | | | | | | | | | | | | | |
mRNA 5'-ccatCCAATCTTGCTCCCTCTGCTTCTTGCTt-3'

190.>Gm5617 NM_001004191 1469.13 698.934 2.10196 0

alignScore: 165, piRNA readNum: 820
piRNA 3'-tgtAGTCGACTAAGTAGATGTCTTTGTTct-5'

|| || | |:| || :| |||||
mRNA 5'-gccTCCCTCACTTAGCT-TACAAACAAGg-3'

alignScore: 169, piRNA readNum: 448
piRNA 3'-gtcGGGTGTCTCAGTCGA---TTTG-TCCGGAGt-5'
:| | | |:||| ||| |||||
mRNA 5'-gccTCCCTCACTTAGCTTACAAACAAGGCCTct-3'

alignScore: 168, piRNA readNum: 309
piRNA 3'-cgacCGGAAGCTA--GAACCAAAT-TTTGTTct-5'
||| | | || | ||| |||||
mRNA 5'-gaatGCCTCCCTCACTTAGCTTACAAACAAGg-3'

alignScore: 166, piRNA readNum: 127
piRNA 3'-taCGGAGG--TGTTCTGGTGTGAGGTTTTt-5'
||:| | ||||:| | |||||
mRNA 5'-taGCTTACAAACAAGGCC---TCTCCAAAa-3'

alignScore: 172, piRNA readNum: 76
piRNA 3'-agtGGGAGGAGTAGGTTG--TTTTGTTct-5'
|:| ||||| ::|:| | |||||
mRNA 5'-tgcCTCCCTCACTTAGCTTACAAACAAGg-3'

191.>Rrm1 NM_009103 89.0022 42.5513 2.09164 7.51E-05

alignScore: 176, piRNA readNum: 363666
piRNA 3'-ctgaaGGAAGAGGATAGATAG-AGTGTAGgt-5'
::||| | |: || |||||
mRNA 5'-gggcaTTTTCTCCCTTATGTCATCACATCct-3'

alignScore: 166, piRNA readNum: 141865
piRNA 3'-tgAGTGGGTGAGTGAAGATGGAAAAAAt-5'
|| |: | |||:| | |||||
mRNA 5'-tcTCCCTTATGTCATC-ACATCCTTTTTTt-3'

alignScore: 173, piRNA readNum: 13126
piRNA 3'-ttgGAAAGTTATGTGGGTGAAAAGTAt-5'
||| :| |||:| | |||||
mRNA 5'-ataCCTTATA--ACACTCG-ATTTTCATa-3'

alignScore: 165, piRNA readNum: 11199
piRNA 3'-gggcGGGCAGTATTGGTTA---C-GAGATGAt-5'

:|| |||| ||||| | |||||
mRNA 5'-acatTCCATCAT-TCCAAATAGAGACTCTACTc-3'

alignScore: 169, piRNA readNum: 10019

piRNA 3'-agaCGATGGATGAAGGTT-TGACAAAGt-5'

|| | | |||| ||: |||||
mRNA 5'-ggaGCCA-CGACTTACAGTACTGTTTc-3'

192.>Gorasp1 NM_028976 7.67893 3.67669 2.08854 8.49E-13

alignScore: 180, piRNA readNum: 180488

piRNA 3'-ttaCGGTAGTCTTCCGA-TCGAGATGCTCTCct-5'

||| |:| |||| || ||| |||||
mRNA 5'-ggaGCCTTTA-CAGGCTCAG-TCTCCGAGAGGa-3'

alignScore: 179, piRNA readNum: 86422

piRNA 3'-gtAGGG-GTAGAGGTGTTCAAGTGGTAAAt-5'

|||: || |:|||::: | |||||
mRNA 5'-tcTCCTGCAGCTTCAGGGCTGGACCATTg-3'

alignScore: 171, piRNA readNum: 21154

piRNA 3'-tcggAAGGATCAAAGAATGGGATGTCAAGAc-5'

| | || |||| || |||||
mRNA 5'-gaggTACAAAGGAGCTTACTACTCCAGTTCTt-3'

alignScore: 169, piRNA readNum: 20021

piRNA 3'-tgtcgtAAGGATTCTC-ACAGTTTCCGGGt-5'

|||: |||| || |||||
mRNA 5'-gttcttcTCCTGAAGAGCTG-GAAAAGGCCc-3'

alignScore: 166, piRNA readNum: 19862

piRNA 3'-acGGTGA AAA-CGTTTC--TTAAGGGTCAAAAt-5'

|| |||| ||: | :| | :|||
mRNA 5'-tgCCCCTTTGGCGTTGCAGACTGTCCAGTTTTc-3'

193.>Calm2 NM_007589 369.166 177.004 2.08564 8.88E-16

alignScore: 174, piRNA readNum: 23561

piRNA 3'-ggGCGTAAGAGGAGTGA-GGTAACAGGAt-5'

||:| | |:| | |||||
mRNA 5'-acgcttcCATCTGTGGGCTCACCTGTCCCa-3'

alignScore: 177, piRNA readNum: 604
piRNA 3'-acgaAGGTTTGAACATG-TTGTCTTGTtGAt-5'
|||:| | | |:| |||||
mRNA 5'-cagcTCCAGGCTGACCGAATAAAACAa-3'

195.>Lrrc50 NM_026648 321.736 156.807 2.0518 1.23E-13

alignScore: 172, piRNA readNum: 35187
piRNA 3'-tgTGAGAGATGGATAC---TCAAGTAAGTCAGt-5'
:| | : :| | :| | || |:| |||||
mRNA 5'-ctGCTCATGGCCAGTGGACAGGTTTATTCAGTCc-3'

alignScore: 169, piRNA readNum: 12240
piRNA 3'-tgAGGGTAGGTGGTGGGAGTGAAGACGAGt-5'
||: ||:| | | | |||||
mRNA 5'-caTCTGCTCTGCCACATAACCATCTGCTCa-3'

alignScore: 175, piRNA readNum: 10492
piRNA 3'-tgGTCAGATGTAATCTCGGGAT-GTTGGAGt-5'
|| | ||| | :| | | |||||
mRNA 5'-acCAATGTACACTGTGGCACAATCAACCTCc-3'

alignScore: 168, piRNA readNum: 7859
piRNA 3'-cctggAGTGTT-CAGAAGATGATGACTTGGt-5'
||| |: ||| : |||||
mRNA 5'-cagagTCAAAGCGTCAATGCCTACTGAACCc-3'

alignScore: 173, piRNA readNum: 6999
piRNA 3'-atGGGTTATG-----ATAGGGTAAAATGTCTa-5'
|||| | | ||||| |||||
mRNA 5'-taCCCAACACGTCGGTATCCCCTGGTTACAGAc-3'

196.>Pdzk1 NM_001146001 70.5859 34.7998 2.02834 0.00231074

alignScore: 185, piRNA readNum: 104304
piRNA 3'-ggGTTGAGTGTtTGTAGTTTGTCTACGGt-5'
| | |:| |:| |||||:|||||
mRNA 5'-tgCTAATTA-AAGAATCAAGCAGATGCCT-3'

alignScore: 167, piRNA readNum: 71251
piRNA 3'-tgTGACGGTATATGATAGGA-TTGTGGAAGt-5'
| | :| | | | ||| |||||
mRNA 5'-tgAGTATTAATAAAAAACCTCAACACCTTCc-3'

alignScore: 181, piRNA readNum: 15442
piRNA 3'-ttGGCAGTCAGTGT-TTAGTTC-TCTACGGa-5'
|:| :| |:| | ||||| |||||
mRNA 5'-cgCTGCTAATTAAGAATCAAGCAGATGCCt-3'

alignScore: 182, piRNA readNum: 8800
piRNA 3'-ctcGGAAGGTGCTCAGTATAAAAGTg-5'
:||||| | ||||| |||||
mRNA 5'-gtaTCTTCCA-A-AGTGCAACTTTTCAc-3'

alignScore: 169, piRNA readNum: 8735
piRNA 3'-tggAAGGAGG--TGAAGAGAGTAAAGAGt-5'
||| : | || |:| :| |||||
mRNA 5'-ttgTTCATACAAACATTCATGCTTCTCa-3'

197.>Lrriq4 NM_026668 9.672 4.78477 2.02141 1.16E-08

alignScore: 172, piRNA readNum: 10340
piRNA 3'-tcGACAGTAAGACAGGTCTTTATGTTGGTt-5'
|||| | | ||| ||| |||||
mRNA 5'-ccCTGTC-TAGGGGCCATAAA-ACAACCAc-3'

alignScore: 171, piRNA readNum: 9685
piRNA 3'-aaGATGAGTTCCTCAGTCTTTTTGTTGGt-5'
||: || |||:| | | |||||
mRNA 5'-ccCTG-TCTAGGGGCC--ATAAAACAACCa-3'

alignScore: 180, piRNA readNum: 6236
piRNA 3'-gtgtggtcggATGTTTACAGAATAAAATGt-5'
|| ||: |||||
mRNA 5'-tttgaataaTAAAAGAGTCTTATTTACTt-3'

alignScore: 166, piRNA readNum: 1914
piRNA 3'-gacgactcaggTAAATTACAACAAACATa-5'
| |||| | |||||
mRNA 5'-attaaccatgaAATTAAGGCTGTTTGTAA-3'

alignScore: 165, piRNA readNum: 1243
piRNA 3'-acggAC-TGTAATTGCACTTGATGTCTCGTt-5'
 || | || ||| | : : |||||
mRNA 5'-ttaaTGAAAATAAAGATTGCTAACAGAGCAg-3'

198.>Ak8 NM_001033874 153.76 76.2159 2.01743 5.44E-07

alignScore: 173, piRNA readNum: 30716
piRNA 3'-acagGGGTACGACGGA-TTGAGAGTAGTct-5'
 ||| ||| ||| ||| :|||
mRNA 5'-aaagCCCCTGC--CCTCAACCTTCATCAGa-3'

alignScore: 167, piRNA readNum: 6249
piRNA 3'-tgGTAGTT--AGGGAGTCTTCTTAAGGTCGGt-5'
 | |||| |:| |||| |
mRNA 5'-gcCCTCAACCTTCATCAGACCCATCCAGCCa-3'

alignScore: 168, piRNA readNum: 578
piRNA 3'-tggcaGGTTTC-GTTCTTTTCTGGACGGGt-5'
 |:| || | ||| |||
mRNA 5'-aagccCTGAAGACATTCAAAGCCCTGCCct-3'

alignScore: 169, piRNA readNum: 383
piRNA 3'-agtGGGA-AGGAGATGGG--AGTCTGGGt-5'
 ||| ||| ||| : |||
mRNA 5'-agcCCCTGCCCTCAACCTTCATCAGACCCc-3'

alignScore: 166, piRNA readNum: 305
piRNA 3'-catAGACACTTCTTTAGT-CACGTTCGGt-5'
 | |||| ||| : || | |||
mRNA 5'-----TATGTG-CGAAGCCAGGAGCAAGCCc-3'

199.>Cox6c NM_053071 1399.29 695.383 2.01226 0

alignScore: 170, piRNA readNum: 4800
piRNA 3'-ggggCTCTACGAAAGAAGGAATTATTTGa-5'
 | : || ||||| :| |||
mRNA 5'-ctaaGGAATAGTTTCTTTC--AATAACa-3'

alignScore: 171, piRNA readNum: 1228

piRNA 3'-ggTATCGAAGTACG--TCATTCTCAAAGAAAt-5'
||| | :| | | | |||||
mRNA 5'-gaATATGTGTGGGCTAAGGAATAGTTTCTTTc-3'

alignScore: 174, piRNA readNum: 1137
piRNA 3'-ggGCTACT-GATTAAGTATTTGATACTTt-5'
:| ||| |: | | :|||
mRNA 5'-atTGCTGACCTGCGCTCCTGAACCTATGAAa-3'

alignScore: 171, piRNA readNum: 962
piRNA 3'-tgTGACATAACGTGGGTGAGGACTGGAt-5'
:| | | | :| | | | |
mRNA 5'-gcGCTCCAAAGAAGTTCATTGCTGACCTg-3'

alignScore: 171, piRNA readNum: 868
piRNA 3'-gtcGGA-GTAAGG-TTGGTAATTTGTACT-5'
|| | : || | : | | | | |
mRNA 5'-tgaCCTGCGCTCCTGAACCTATGAAACATGa-3'

200.>Cnot4 NM_001164411 2.33228 3.83E-07 6.10E+06 0

alignScore: 166, piRNA readNum: 58653
piRNA 3'-aggtagGTAGTCTCAGTTCTTGATGAt-5'
|| | | :| | | | |
mRNA 5'-cagtgGAGCAAAGAATGGGAACCTACTg-3'

alignScore: 174, piRNA readNum: 51946
piRNA 3'-tgcCGGCTTAAGTA--AACG-TGTCGTAAAGAAAt-5'
|: || |:| ||| | |:| | | | | |
mRNA 5'-agcGTGGACCTCGTAGTTGCTAAAGTATTTCTTc-3'

alignScore: 167, piRNA readNum: 31342
piRNA 3'-tgGGTAAA-ACCCATTGGAAGAGATGGAAGTt-5'
:| | | | | | | | | | | | | | |
mRNA 5'-gtTTATTTGTATGGTATTC-CAGCTACCTTCAa-3'

alignScore: 168, piRNA readNum: 28530
piRNA 3'-tggTGAGGAGTTGACAGATGAGGCTGAACGt-5'
|:|: | | | | :| | | | | | | | |
mRNA 5'-aaaATTTGTCCAAAGATTTTCAGACTTGCT-3'

alignScore: 167, piRNA readNum: 25078

piRNA 3'-ggTAGAACAGGGACATAT--ATATTTATATCt-5'
||||| |:| ||| | | |||||
mRNA 5'-gcATCTTACTACTGGGATACTTTTAAATATAGa-3'

201. >Psmd8 NM_026545 216.686 107.95 2.00728 3.33E-09

alignScore: 167, piRNA readNum: 57098
piRNA 3'-ggACTCGGATCAAG--GAGTAAACATTTTACt-5'
||:| |:| |:| | |||| |||||
mRNA 5'-gtTGGCCGTGGATTAAATAATTTTAAAATGa-3'

alignScore: 167, piRNA readNum: 7701
piRNA 3'-ggTTGAGACGGGAGTATAAGGATGGTAAAt-5'
:||:| |:| |:| | |||||
mRNA 5'-ctGACTTTGTC--TATG-GGCTACCATTTg-3'

alignScore: 176, piRNA readNum: 3452
piRNA 3'-agaTTGGCACTCATTAGGAAATAGGTCgt-5'
:||:| |:| | |:| | |||||
mRNA 5'-ccaGACTGAGGG-ACTCTTCTATCCAGCt-3'

alignScore: 176, piRNA readNum: 2707
piRNA 3'-atggTAAAAGTTGCTCAATGGGTCAAt-5'
| ||| |:| | ||| |||||
mRNA 5'-tgggAGTTTGGGAAGCGTTTCCAGTTg-3'

alignScore: 171, piRNA readNum: 2565
piRNA 3'-gtGGA-TAAGTTGTCAGAAA---TACTCTGTAt-5'
|| | : |:| |:| | |||||
mRNA 5'-ggCCGTGGATTAAATAATTTTAAAATGAGACATg-3'

202. >C|pb NM_009191 51.6681 26.1501 1.97583 0.00454574

alignScore: 174, piRNA readNum: 147401
piRNA 3'-taCGGATAAGCAGATGTACGA-AGAGAAAGGt-5'
|:| ||| ||||| ||| |||||
mRNA 5'-taGTTTAT---TCTACA-GCTACCTCTTCCc-3'

alignScore: 169, piRNA readNum: 83145
piRNA 3'-cggtaaaCATGTT--CAGAG-TCAGACTCCGAt-5'

||| :| ||| | |||:|||||
mRNA 5'-ggttgagGTAGGATTGTCACAAGTTTGAGGCTa-3'

alignScore: 175, piRNA readNum: 22280
piRNA 3'-tgGTTGAGACGATGGGATT-TTTGGTATTt-5'
|||:| | : : ||||: | |||||
mRNA 5'-agCAATCCATGGGCCTAGCATACCCATAAa-3'

alignScore: 175, piRNA readNum: 20027
piRNA 3'-ggTTGAGACGATGGGATT-TTTGGTATTTt-5'
||:| | : : ||||: | |||||
mRNA 5'-gcAATCCATGGGCCTAGCATACCCATAAAg-3'

alignScore: 165, piRNA readNum: 13471
piRNA 3'-gaCGTGGTAGATCGA-GACAGTATTAAGAGt-5'
|:|:| ||| :| || |: : |||||
mRNA 5'-ctGTATCCTCTTTTACT-TTGAAATTCTct-3'

203.>Pdzd9 NM_001040137 0.0386574 0.0196887 1.96343 7.15E-10

alignScore: 176, piRNA readNum: 28530
piRNA 3'-tgGTGAGGAGTTGACAGATGAG-GCTGAACGt-5'
| :||:| ||| | :||| |||||
mRNA 5'-agCCTTCTTCCACTAGCAGCTCGGGACTTGct-3'

alignScore: 168, piRNA readNum: 10728
piRNA 3'-tatgggGGGGTTTCAGAATAT-TAGGGTAAAt-5'
|::: | |:||| | |||||
mRNA 5'-atagaaCTTTTATTTTAAACATCCCATTTt-3'

alignScore: 184, piRNA readNum: 9804
piRNA 3'-ggGTAGACTGGACAAGGAAAGGCAAAGGt-5'
|||:| | |:||| | |||||
mRNA 5'-aaCATTGTCTTGTAAAGTACCGTTTCTc-3'

alignScore: 170, piRNA readNum: 8796
piRNA 3'-tgGTAGACGAAAGGAAAGACA--GGTATCTt-5'
:|:| |:| | |||| |||||
mRNA 5'--gTATTGGTTTGCAAATCTGTGGCCATAGa-3'

alignScore: 171, piRNA readNum: 6439
piRNA 3'-ggaGACGTCAGTCGTTGGG-C-TTGTGAACGt-5'

|||: |||| |:||| | | |||||
mRNA 5'-gacCTGTTCTCAG-AGCCCAGCATCACTTGcT-3'

204. >Ddx25 NM_013932 519.83 264.779 1.96326 0

alignScore: 169, piRNA readNum: 4491
piRNA 3'-tggAAGAGACTA-GAGTCGGTAGACAGTTt-5'
||:|||| || |:| || | |||||
mRNA 5'-taaTTTTCT-ATGTTGAGAC-TCTGTCAAg-3'

alignScore: 173, piRNA readNum: 1978
piRNA 3'-ctacggaATTGCAGTACT-TCAGAAGTgT-5'
||||:| |||| | |||||
mRNA 5'-taaaaaTAAATGCCATGACTCTCTTCAcC-3'

alignScore: 169, piRNA readNum: 1862
piRNA 3'-ctACTCCATG-GAC-GTTACAGTCTTGACAGt-5'
|||| || ||| ||| || | |||||
mRNA 5'-gtTGAG--ACTCTGTCAAGGTGA-AACTGTCa-3'

alignScore: 169, piRNA readNum: 1028
piRNA 3'-cgtaaagatAAACATGACAGCCTCGAGACAGt-5'
||| || |||:| : |||||
mRNA 5'-gaagataatTTTCTA-TGTTGAGACTCTGTCa-3'

alignScore: 167, piRNA readNum: 888
piRNA 3'-ttaCGGAGGATGTCGTCCTCTATTGACAGTt-5'
| |||: || ||| || |||||
mRNA 5'-tgaGACTCTGTCA--AGGTGA-AACTGTCAc-3'

205. >Pfkp NM_019703 60.0793 30.6028 1.9632 0.00140363

alignScore: 177, piRNA readNum: 32649
piRNA 3'-ggGGGAA--A-CGTAAGTCAAGTCG--GGTCCGt-5'
|||| | |:|| ||| |||| |
mRNA 5'-ccCCCTTAGTCGTATACAGCACAGCTGCCAAGGcT-3'

alignScore: 168, piRNA readNum: 15802
piRNA 3'-tgACAGGGAACATGAAGTAGTAAGTACGTCAt-5'
||| |||:| || || |||||
mRNA 5'-caTGTC---TGTGCACCA-AATGCATGCAGTg-3'

alignScore: 166, piRNA readNum: 8800
piRNA 3'-ctcgggaaggtGTCTCAGC-TATAAAAGTgt-5'
|||:|||| : :|||||||
mRNA 5'-caaaagcagcCAGGGTGCTGGGTTTTCACc-3'

alignScore: 167, piRNA readNum: 8203
piRNA 3'-ctCCG--TCATACAGAC--AGACAGGTCCTCAGgt-5'
||| || || ||| ||| : |||||
mRNA 5'-caGGCAAAGCATCCCTGCCTCTTGTAAGGAGTCCg-3'

alignScore: 166, piRNA readNum: 8098
piRNA 3'-atGGATCAGGGAAAAGGT-GTAGGTAGGAt-5'
|||:| : || |||| : |||||
mRNA 5'-gaCCTGGAATGTTCTCCAGGGACCATCCTt-3'

206.>Myst2 NM_001195003 33.9424 17.2953 1.96252 0.0144512

alignScore: 165, piRNA readNum: 83145
piRNA 3'-cggtaaACATGTTTCAGAGTCAGACTCCGAt-5'
|| ||:| ||| || |||||
mRNA 5'-gttgccTGGACGGATCT--GTATGAGGCTc-3'

alignScore: 165, piRNA readNum: 69514
piRNA 3'-tgTCGGGAGGGAAGA-ATGA-CTATTTACGTct-5'
|| ||| |:| || | | |: |||||
mRNA 5'-caAGGCCT-CTTACTGGAGTCGGAAAATGCAGt-3'

alignScore: 167, piRNA readNum: 64245
piRNA 3'-cccgtcaGTCAGACCGTCAAGTAAGAAAGt-5'
:|:| | | |||||
mRNA 5'-agttcccTGGTGTTTCTGCTCATTCTTTCc-3'

alignScore: 165, piRNA readNum: 35587
piRNA 3'-ccaaacTCTGATGAAAGACGGTCAAGATTgt-5'
:|:| :|| | |:| |||||
mRNA 5'-accaaaaGGGCCCTTTCCAGTTACTTCTAACa-3'

alignScore: 168, piRNA readNum: 32864
piRNA 3'-tgtccGAAAGACGTCATAAAC-AG-TCAGAGAt-5'
||| ||| :||| || |||||
mRNA 5'-ttgatCTTAGACCAGGGTTTGCTCAAGTCTCTg-3'

207.>Gstm5 NM_010360 337.659 172.476 1.95772 7.09E-13

alignScore: 165, piRNA readNum: 13591
piRNA 3'-ggtttGTGAC-GTTAAAGTAA--A-GACAGGAt-5'
||||| ||:| |:| | |||||
mRNA 5'-tagctCACTGTCAGTCTTGTTCATCCTGCCTg-3'

alignScore: 168, piRNA readNum: 6779
piRNA 3'-aggcAGTAGTATGTGAGATAGGGGTAGGAt-5'
||| ::| || ||| ::|||
mRNA 5'-tagcTCACTGT-CAGTCTTGTTCATCCTg-3'

alignScore: 169, piRNA readNum: 4576
piRNA 3'-agacGAGAAAGGTAGTACACCCAGGACTct-5'
||: ||||| | |||||
mRNA 5'-cagtCTGTTCATCCT----GTCCTGAGg-3'

alignScore: 168, piRNA readNum: 3941
piRNA 3'-atGACGCGACGAAATTAGG-AAGACAGGAt-5'
||: | |: ||: || | |||||
mRNA 5'-caCTGT-CAGTCTTGTTCATCCTGCCTg-3'

alignScore: 169, piRNA readNum: 2235
piRNA 3'-agGAGTTCCCCAG-GGACACGCAGAAAGAc-5'
| || | || ||| || |||||
mRNA 5'-gcCCCCACTCTGTCTCCTCTGC-TCTTTCTa-3'

208.>Hils1 NM_018792 315.809 161.326 1.95758 6.28E-13

alignScore: 170, piRNA readNum: 126
piRNA 3'-tgTCAGTTGGACTAGGTTGTCTGAACGGTt-5'
:||||: | |: :: |||:|||||
mRNA 5'-caGGTCAGGC-GGGGTGCCAGGCTTGCCAc-3'

alignScore: 165, piRNA readNum: 53
piRNA 3'-ctCCGTACGAGTTG-AGTCCCCCGGTGGTTct-5'
| || || ::| ||| |||||
mRNA 5'-agGTCAGGCGGGGTGCCAGGCTTGCCACCAAGt-3'

209.>Ubap2l NM_028475 5.049 2.5873 1.95146 0.00298106

alignScore: 166, piRNA readNum: 86514
piRNA 3'-tgTCGGGTCGTTAGTATAGGTAAGTACTGACCTt-5'
| :| :| ||| ||:|||||||
mRNA 5'-ggATTTCCTTATACAT-TCTGTGACTGGAa-3'

alignScore: 172, piRNA readNum: 17932
piRNA 3'-aggaaatCGGAACGAAGAGTCAGAACTCt-5'
||| ||||| |||||
mRNA 5'-gagatctGCC-TGCTTCTACCTCTTGAGt-3'

alignScore: 176, piRNA readNum: 12655
piRNA 3'-cgGCCTTGCCAAGGAAAGAAG---TGTGACGGAt-5'
:| || ||| ||||| | |||||
mRNA 5'-acTGCAAATCTTCATTTCTTCTAGAACTGCCTc-3'

alignScore: 180, piRNA readNum: 11512
piRNA 3'-ctatcAGGAGTCTCTAAGTA-CATCAAGAAt-5'
||:|:|:|:| :|| |||||
mRNA 5'-ttttcTCTTTGGAGGAGTATAGTAGTTCTTg-3'

alignScore: 168, piRNA readNum: 11363
piRNA 3'-ctcgacaaagacatGAACCCAGGAAAAAGt-5'
||||| :|||||
mRNA 5'-cggcagaactcaatCTTGGGTCTTTTTTc-3'

210.>Ybx2 NM_016875 350.218 179.479 1.9513 3.28E-13

alignScore: 169, piRNA readNum: 141865
piRNA 3'-tgaGTGGGTTGAG--TGGAAGATG-GAAAAAAt-5'
||| : ||: :|:|:| | |||||
mRNA 5'-aagCACCAGCCTTTGGCTTTTTTCTTTTTTt-3'

alignScore: 167, piRNA readNum: 17716
piRNA 3'-cgGGACGACGAGAACTCAAGTAAGAAGGt-5'
||| || || || |||: |||||
mRNA 5'-taCCTCCTCCTGATT--GTTT-TTCTTCCc-3'

alignScore: 168, piRNA readNum: 10486
piRNA 3'-ggAAGACACAGGACAAGAGATCGTAt-5'

||:| | ||| | | |||||
mRNA 5'-ctTTTTTTTCCTCTCCCTAGCATg-3'

alignScore: 166, piRNA readNum: 7816
piRNA 3'-cgCGGGAA---ACGACGGATGATGAAAAGAA-5'

||:| | | || |: |:|:|||||
mRNA 5'-caGCTCATACTCCTCCTGATTGTTTTTCTTc-3'

alignScore: 174, piRNA readNum: 6461
piRNA 3'-aggGTGTCATGGGTAGAGGAGTAACAAAa-5'

| || ||||: |||| |||||
mRNA 5'-cagCTCA-TACCT-CCTCCTGATTGTTTt-3'

211.>BC100451 NM_021440 212.942 109.137 1.95114 2.66E-12

alignScore: 165, piRNA readNum: 527
piRNA 3'-agataCCGGGAGGTAACCGTCGATGTAGgt-5'

| ||| || || :| |||||
mRNA 5'-aagcaGACCCACCCATGATAAATACATCCc-3'

alignScore: 171, piRNA readNum: 238
piRNA 3'-tcTGTGGTGGGT-CTGGCGAAGTAGGGat-5'

|| ||||| ||: | |||||
mRNA 5'-agAC-CCACCCATGATAAATACATCCctg-3'

alignScore: 165, piRNA readNum: 213
piRNA 3'-gtcTAGT-TGAGTGAGT--TATAATTGTAGGGt-5'

| || | || | || || |||||
mRNA 5'---aAGCAGACCCACCCATGATAAATACATCCct-3'

alignScore: 166, piRNA readNum: 151
piRNA 3'-ataAAGTACACATT-CTTACAAGACGGACgt-5'

| ||| |:| |: || |:|||||
mRNA 5'-aaaTACATCCCTGATGGCTGCTTTGCCTGCa-3'

alignScore: 166, piRNA readNum: 106
piRNA 3'-taTTGGTATTCGAGAAGACACAGGACGTgt-5'

| || |:| || || || |||||
mRNA 5'-acATCCCTGATGGCTGCTTTG-CCTGCACc-3'

212.>Tcea2 NM_009326 735.911 377.892 1.94741 0

alignScore: 171, piRNA readNum: 56525
piRNA 3'-ttCCCCTAGAAACACGGACAGATGTTACAA-5'
|| | | ||| ||| |:|||||
mRNA 5'-atGGCTAACACTGT-CCTTCTGCAATGTTc-3'

alignScore: 165, piRNA readNum: 9976
piRNA 3'-tagaagagggaaagataGACAAGGTCGGGt-5'
|||||||
mRNA 5'-cctgaaggtggcacgccCTGTTCCAGCCa-3'

alignScore: 166, piRNA readNum: 6796
piRNA 3'-acGAGAGG-AGGGGTCGAGATGGAAGGAt-5'
|| || | |:| | ||:|||||
mRNA 5'-ccCTGGCCATGGCTAACACTGCCTTCTg-3'

alignScore: 172, piRNA readNum: 6748
piRNA 3'-ctcaggAGAGGGACTGTTTCATGTCTGAAGAt-5'
| |:|:|:|:|:| |||||
mRNA 5'-ctgcaaTGTCTTGGTGGACACAGCTTCTc-3'

alignScore: 165, piRNA readNum: 4394
piRNA 3'-tgaCGGGTTGATGGC-TTT----ACGGGAGAAAt-5'
|||| | |: | | |||||
mRNA 5'-ccaGCCACCTGGTGTGCACTTTTGCCTCTTAc-3'

213.>Tdrd1 NM_001002240 39.0245 20.0507 1.94629 0.00279891

alignScore: 165, piRNA readNum: 24655
piRNA 3'-tacaccCTTCGGTAGACA-AGAGAACAAGT-5'
||| ::| ||| | |:|||||
mRNA 5'-gagaaaGAA-TTGTGTGTGTTTTGTTCa-3'

alignScore: 177, piRNA readNum: 19164
piRNA 3'-cgGTGCTCAACATATACGGATATTAGGGt-5'
|:| || |: | ||:|||||
mRNA 5'-ggCGCG-GTGGTGCACACCTGTAATCCCa-3'

alignScore: 167, piRNA readNum: 13177
piRNA 3'-caTCGGAGAATCAAGTAAGTGT---TACGAGAt-5'
|:| || ||| ||||| | |||||
mRNA 5'-ctAGTCT-GTAG-CCATTGACTTATGCTCTa-3'

alignScore: 170, piRNA readNum: 11422
piRNA 3'-tgcCCGTTGTG-GATGACTGTCAG-AGTTGAGt-5'
||:|||| : ||| |||| || |||||
mRNA 5'-tgtGGTAACCTAATAC-GACA-TCATCAACTCa-3'

alignScore: 170, piRNA readNum: 11191
piRNA 3'-agGAGTACGT---GTCGAAGGAGACTAAGTct-5'
|||| || ||:| : |||||
mRNA 5'-gtCTCAGACAGTTAAGTTTGCCTGATTCAg-3'

214.>Lrrc46 NM_027026 313.157 161.01 1.94495 6.89E-12

alignScore: 165, piRNA readNum: 4014
piRNA 3'-atcGTCCTAGACCAAGTAA--CCACAGAGAt-5'
|||| |:| | | |||||
mRNA 5'-cctCAGGCTTTGCCCAATAAAGTGTCTCTg-3'

alignScore: 166, piRNA readNum: 1070
piRNA 3'-agTCAGAGA-GGAGTTGGGAGTTCACAGAt-5'
|| ||:| || || | |||||
mRNA 5'-tcAGGCTTTGCCCAA---TAAAGTGTCTc-3'

alignScore: 165, piRNA readNum: 889
piRNA 3'-tcgatettaGTTGACGTGTACAAAACGGGt-5'
|| || | || | |||||
mRNA 5'-tgcacgcgcCACCTCCTCAGGCTTTGCCc-3'

alignScore: 168, piRNA readNum: 288
piRNA 3'-ccCGGAGGGTGAAT--AAGATGTGAGAGT--ACAGAGAA-5'
||| ||: || | |:| || | |||||
mRNA 5'-gcGCCACCTCCTCAGGCTTTGCCCAATAAAGTGTCTCTg-3'

alignScore: 170, piRNA readNum: 105
piRNA 3'-tgagataAGGGGACGAAA-GATGTTATTTc-5'
||:| |||| | |||||
mRNA 5'-cgccaccTCCTCAGGCTTTGCCCAATAAAg-3'

215.>Dctn4 NM_026302 106.304 54.962 1.93414 7.17E-05

alignScore: 167, piRNA readNum: 189709

piRNA 3'-agACCATACGACAGGGAAA-ATA-GATGTTATt-5'
|| || |:: || | :|||||
mRNA 5'-caTGAAATTCTATTTGTTTCAATATTACAATAc-3'

alignScore: 167, piRNA readNum: 141865
piRNA 3'-tgaGTGGGTTGAGTGAAGATGGAAAAAt-5'
:| ::| || |: ||:|||||
mRNA 5'-gcaTAGTTACCTGTCTGCCTGCCTTTTTTt-3'

alignScore: 167, piRNA readNum: 22280
piRNA 3'-tggTTGAGACGATGGGATTTTTGGGTATTt-5'
|| || |::||: || |||||
mRNA 5'-agaAAAAGTGATTTTCTGTAATCCCATAAa-3'

alignScore: 172, piRNA readNum: 20027
piRNA 3'-ggTTGAGACGATGGGATTTTTGGGTATTt-5'
|| || |::||: || |||||
mRNA 5'-gaAAAAGTGATTTTCTGTAATCCCATAAAg-3'

alignScore: 179, piRNA readNum: 19537
piRNA 3'-tcaCCCCACGGTCGAGA---AGAAGGATAGACgt-5'
|||| | |||:| | || | |||||
mRNA 5'-caaGGGGAGACAGTTATGTATCTCACTATCTGCc-3'

216.>Aqp11 NM_175105 574.76 297.309 1.93321 0

alignScore: 168, piRNA readNum: 8735
piRNA 3'-tggaaGGAGGGTGAAGAGAGTGAAGAGt-5'
|||||:|||| :|||||
mRNA 5'-ggacgCCTCCTGCTC---AGCTTTCTCt-3'

alignScore: 175, piRNA readNum: 6610
piRNA 3'-ctgTAGAGACCT-----GACG-AGTTGAAAGAGt-5'
| ||||| ||| |||:|||||
mRNA 5'-ccaAACTCTGGACGCCTCTGCTTCAGCTTTCTc-3'

alignScore: 168, piRNA readNum: 5345
piRNA 3'-tgTGGGAAGATT---CCCAGTCCGATGTGGAAGTc-5'
|||| | || || | || | |||||
mRNA 5'-gcACCCTCCAACTCTGGAC-GCCTCCTGCTTCAGc-3'

alignScore: 171, piRNA readNum: 4418

piRNA 3'-ggtcagTGAGAAAGATGAAAT--AAAGAGAct-5'
|| | | |:| | | |||||
mRNA 5'-ctctggACGCCTCCTGCTTCAGCTTCTCTGt-3'

alignScore: 168, piRNA readNum: 4361
piRNA 3'-ttTGGGCAGGCTGTAGGGTAGATAGGGt-5'
|:| | |: ||| |:| |||||
mRNA 5'-tcATTcATTAAACAT-CTACCTATCCC--3'

217.>Fabp9 NM_011598 474.659 246.181 1.92809 0

alignScore: 175, piRNA readNum: 2508
piRNA 3'-tgtagaagTGTCTCCAAAAGATGTAGTGGt-5'
|||| | ||| |||||
mRNA 5'-ccccagggACAGTGATTTAAGACATCACCAg-3'

alignScore: 170, piRNA readNum: 2156
piRNA 3'-tgtagaagTGTCTCCAAAAGATGTAGTGGt-5'
|||| | ||| |||||
mRNA 5'-ccccagggACAGTGATTTAAGACATCACCa-3'

alignScore: 165, piRNA readNum: 1525
piRNA 3'-tgaTTCAGAAGTCGGAATCTGTTTCTTGA-5'
||| |:| | | |||||
mRNA 5'-agcAAGAACTTGGCC-ACCACAAAGAACTt-3'

alignScore: 169, piRNA readNum: 1201
piRNA 3'-ggggaagtggaacGGACTGGTAGTGTTCt-5'
|:| |:| | | |||||
mRNA 5'-acaccagcaagaaCTTGGCCACCACAAAGa-3'

alignScore: 168, piRNA readNum: 736
piRNA 3'-caTGGCCCACGAGTCT-TA-TGGTCGTAA-5'
|| | | :| ||| || |||||
mRNA 5'-ggACAGTGATTTAAGACATCACcAGCATTa-3'

218.>Nt5c2 NM_001164365 0.223448 0.116301 1.92129 0.0120441

alignScore: 173, piRNA readNum: 38780
piRNA 3'-gacCCCATAGGAA-GA-AGTCGTCAAGAACTt-5'

| || ||||| || | :|:: |||||
mRNA 5'-tgtGAGTTTCCTTGCTGTAGGTGATTCTTGAc-3'

alignScore: 178, piRNA readNum: 32471
piRNA 3'-tgTCGTGGAAGGTGAGTAGATTCTGAGt-5'

||||| || | || | |||||
mRNA 5'-ggAGCACCCATCAAGTC-TGTCAGACTCAc-3'

alignScore: 177, piRNA readNum: 24141
piRNA 3'-ttgTTCTGGTCTGT-TAGGGTTGTACct-5'

:|| || ||| ||| || |||||
mRNA 5'-gtgGAGTGCACACAGATCGCACACATGgc-3'

alignScore: 175, piRNA readNum: 20542
piRNA 3'-tcCAATGGCGGGACAACTCAAGGACAAGAc-5'

| |||: | | |||| || :|||||
mRNA 5'-taGCTACTTCAGT-TTTGTGTATCTGTTCTc-3'

alignScore: 166, piRNA readNum: 18606
piRNA 3'-atGACACGAGTACA-AGT-CTCTTTGAAGAt-5'

| | | :| | ||| || |||||
mRNA 5'-aaCAGGGATTGTCTGCATCAGTAACTTCTc-3'

219.>Uqorc2 NM_025899 102.074 53.1733 1.91965 9.42E-07

alignScore: 171, piRNA readNum: 17518
piRNA 3'-ccaagagtacTAACACGTCATACACAAGAA-5'

|||||: ||| |||||
mRNA 5'-tcaataaagcATTGTGT-GTAAATGTTCTTc-3'

alignScore: 169, piRNA readNum: 16260
piRNA 3'-tgtGTACCTGACGAGTGAGATGTCAGTCgt-5'

| || |:| ||: || :|||||
mRNA 5'-cttCTTGCATT-CTTTCTAAGCAGTCAGCa-3'

alignScore: 169, piRNA readNum: 8890
piRNA 3'-acTTTATGGAGATGGTTATAGATTGTCGGt-5'

||| | ||:| || |: |||||
mRNA 5'-aaAAACAACTTAACA--CTTGAACAGCct-3'

alignScore: 165, piRNA readNum: 8231
piRNA 3'-ggTGTAGAT---GCTAAGAGGA-CGTTAATTAt-5'

|||| | | : ||||:| :||||||
mRNA 5'-gcACATCAAAGTCAGGTCTCTTAATAATTAATt-3'

alignScore: 168, piRNA readNum: 3259
piRNA 3'-gtaaTGGTCAT-AGTAAGGAAGGAAATTCt-5'
:| |||| |:|| | |||||
mRNA 5'-gtcaGCAAGTATTTATTAATGCTTTAAGg-3'

220.>PlecNM_001163542 1.27937 6.10E-13 2.10E+12 0

alignScore: 178, piRNA readNum: 92488
piRNA 3'-agGGAGTC-AGGG---TGTCTAAAGAAGACACAt-5'
||||| |||| :| :| |||||
mRNA 5'-agCCTCAGCTCCCCTTGTAAGTGCCTTCTGTGTc-3'

alignScore: 176, piRNA readNum: 21035
piRNA 3'-agtAGGTAGGGAAGAGGTAACGAATTGTAt-5'
|:| |:|:|:| || |||||
mRNA 5'-tttTTCTTTTTTTTTCCTTT--TTAACATt-3'

alignScore: 178, piRNA readNum: 15890
piRNA 3'-cggtAGAGGAGCAGGCACACAAAGGAAAAt-5'
|:|:|:|: ||: | | |||||
mRNA 5'-tcttTTTTTTTTTCTTTTTTTTCCTTTt-3'

alignScore: 167, piRNA readNum: 13874
piRNA 3'-ggggttGAGGCTAGGTCAAAGATAGACc-5'
||| : :| |||||
mRNA 5'-ctgtctCTCCTGGGAGGATTCTATCTGGg-3'

alignScore: 170, piRNA readNum: 7850
piRNA 3'-cgtGACGGTATCTGAGTCT-CACAGAAGGAa-5'
|| :| |:| | |||||
mRNA 5'-ttcCTTTTAAACATTTAAAGGTGTCTTCTc-3'

221.>4732415M23Rik NM_177279 684.33 364.952 1.87512 0

222.>Egln2 NM_053208 112.441 60.149 1.86937 8.99E-05

alignScore: 176, piRNA readNum: 6933
piRNA 3'-ccGGTAAAGACAAGAGGAAGAGACCAGGct-5'
 : || | || | | |: | |||||
mRNA 5'-ggTCATGACTGGTGGCTGTGTCTGGTCCgt-3'

alignScore: 168, piRNA readNum: 5870
piRNA 3'-tgtcaagGACGAGAAAAGAAAACGAACGGat-5'
 |||| | :| | |||||
mRNA 5'-cctgccaCTGCTGCTGCTTCTGGCTTGCCtc-3'

alignScore: 182, piRNA readNum: 4766
piRNA 3'-cgTACCCGGCTGTC-TCAGAGACGGAGTct-5'
 : || | | : || | | : |||||
mRNA 5'-gcGTGGACCAGCAGCAGCTCCTGCCTCAGt-3'

alignScore: 168, piRNA readNum: 1749
piRNA 3'-tccCGACCGACGAACACTCAGA-GACAACGAAGat-5'
 || | : | | | | || | |||||
mRNA 5'-cccGCTCCTTTCCTGCCACTGCTGCTGCTTCTg-3'

alignScore: 173, piRNA readNum: 1688
piRNA 3'-caacGAGAACGAACAAGA-GAAACGGAGACT-5'
 || ||| ||| |||||
mRNA 5'-gcccaCTGCTGCTGCTTCTGGCTTGCCCTGT-3'

223.>Lpcat3 NM_145130 179.018 95.9344 1.86605 5.93E-07

alignScore: 165, piRNA readNum: 22363
piRNA 3'-taAGGGGT-AGGA-CGAA---TCGGATGAAAGAA-5'
 |::: || | || | | || | | |||||
mRNA 5'-gtTTTTCACTGCTAGCATCCCAGACTGCTTTCTTt-3'

alignScore: 165, piRNA readNum: 13471
piRNA 3'-gacgTGGT-AGATCGAGACAGTATTAAGAGt-5'
 ||: : | : || |||||
mRNA 5'-ccagACTGCTTTCTTTCATACATAATTCTCc-3'

alignScore: 166, piRNA readNum: 12820
piRNA 3'-cgtctcACACCGGTTTGTGCT-ACCAGTct-5'
 || | | : || | | : |||||
mRNA 5'-ctgaccTGAGGAGAGACAGAGCTGGTCAGg-3'

alignScore: 167, piRNA readNum: 8908
piRNA 3'-tgacggAAC-GAGAGGGTACTCATAGATGAt-5'
||| :|||:: || |||||
mRNA 5'-aatctgTTGTTTCTTCTGCCAATCTACTa-3'

alignScore: 169, piRNA readNum: 7585
piRNA 3'-ctTCTCCTTTGG--CAGGTTTCGTTCTTTTct-5'
||| :::| ||:|:|: |||||
mRNA 5'-acAGAGCTGGTCAGGTTTCAGGGT-AGAAAAGc-3'

224.>Lrrc8b NM_001033550 142.849 76.6499 1.86366 1.10E-05

alignScore: 169, piRNA readNum: 1954
piRNA 3'-tggtgtagaGAGATGGAGATCTGTTTTCGt-5'
:|| : ||| ||:|||||
mRNA 5'---cctgaggTTCAGACTCGAGGCAAAGCa-3'

alignScore: 169, piRNA readNum: 1834
piRNA 3'-agacCCTTCACGATAAGATGAAATAGTTt-5'
||| | || | || |||||
mRNA 5'-aggaGGATGAACTTTCCTAAGTTATCAAg-3'

alignScore: 169, piRNA readNum: 791
piRNA 3'-cgacgaaTCCTTGTAAGAT--GATAGTTCt-5'
| |||| || ||| :|||||
mRNA 5'-taggaggATGAACTTTCCTAAGTTATCAAGa-3'

alignScore: 167, piRNA readNum: 763
piRNA 3'-agatgatatGATTCAGGAATCTGAGCTCct-5'
||:|| :| |||||
mRNA 5'-----cCTGAG-GTTCAGACTCGAGGc-3'

alignScore: 179, piRNA readNum: 687
piRNA 3'-cgggTCGACAAGTGGTCTCAGATGCCCTATt-5'
|| | || | || | | |||||
mRNA 5'-caaaAGCAGTTCTAAAGAGGCCCGGATAg-3'

225.>Gk2 NM_010294 604.493 325.489 1.85718 0

alignScore: 165, piRNA readNum: 60737

piRNA 3'-tgTGCAGATG-AAGAT-ACGGTCTTAAGGt-5'
 :| | | | | | | | | |
mRNA 5'-atGTGTGAACTTTTACAGAAAGAATTCCa-3'

alignScore: 166, piRNA readNum: 26689
piRNA 3'-ctTGTGCAGATG-AAGAT-ACGGTCTTAAGGt-5'
 | : : | | | | | | | | | |
mRNA 5'-caATGTGTGAACTTTTACAGAAAGAATTCCa-3'

alignScore: 166, piRNA readNum: 6999
piRNA 3'-atggTATGATAGGGTAAAATGTCTa-5'
 | | | | | : | | | | | | | | | |
mRNA 5'-cttgCAATG-TGTGAACTTTTACAGAAa-3'

alignScore: 170, piRNA readNum: 5490
piRNA 3'-tgACAC---AAGACGGATTATC-TGAGGTAGAAt-5'
 | | | | | | | | | : | | | | | | | | | |
mRNA 5'-tgTGTGAACTTTTACAGAAAGAATCCATCTTt-3'

alignScore: 171, piRNA readNum: 1935
piRNA 3'-gtCGTGGAGCA-CAC-TTCTCAAGATAGAAAAt-5'
 | | | | | : | | | | | | | | | | | | | | | |
mRNA 5'-gtGAACTTTTACAGAAAGAATCCATCTTTa-3'

226.>Fkbp4 NM_010219 193.168 104.136 1.85496 3.73E-07

alignScore: 165, piRNA readNum: 15959
piRNA 3'-aagaGTCAGGTGGAAGGAAAGAGAGTc-5'
 | | | | | | | | | | | | | | | |
mRNA 5'-ctacCAGT--ACCTCCGCTCCTCTCAGt-3'

alignScore: 172, piRNA readNum: 7816
piRNA 3'-cgcgggaaACGACGGAT--GATGAAAAGAAt-5'
 | | | | | : | | | | | | | | | | | | | | | |
mRNA 5'-gttttagaTGGTGCAACCCTACTTTTCTTc-3'

alignScore: 175, piRNA readNum: 6496
piRNA 3'-tgtcaGATTGTAGTGATTGGAGAAGGTCCAAt-5'
 | | : | | | | | | | | | | | | | | | |
mRNA 5'-ctccgCTCCTCTCAGTTTCTCATCCAGGTTg-3'

alignScore: 165, piRNA readNum: 5558

piRNA 3'-tggaggagATGTTTCGTAGGAAAAGAAGt-5'
|:: || | | |||||
mRNA 5'-ttagatggTGCAACCCTACTTTCTTCc-3'

alignScore: 170, piRNA readNum: 3915
piRNA 3'-tgcggCTAATCAAACCTCGATGTT--TTGGGATGa-5'
|: ||||| || |: : |||||
mRNA 5'-atgggGGGTAGTTTTAGATGGTGTCAACCCTACT-3'

227.>Dmrtb1 NM_019872 121.35 65.5399 1.85154 5.85E-05

alignScore: 168, piRNA readNum: 9431
piRNA 3'-agtcGAC-AAGA-CAGACAGACAGGTCTCTc-5'
||| ||| ||| ||| |||||
mRNA 5'-aacaCTGCCTCTCGTC-CTCT-TCCAGAGAGt-3'

alignScore: 166, piRNA readNum: 6754
piRNA 3'-ttACGTTTCGTG-CGGAGA----TGGTAGGTCTc-5'
||| | ||| ||||| :| |||||
mRNA 5'-ttTGCCCAACACTGCCTCTCGTCTCTTCCAGAGa-3'

alignScore: 166, piRNA readNum: 6018
piRNA 3'-aaCTCACGG-AGACAAGT-CCCAAGTACAAt-5'
|:| |:| |:| ||| |||||
mRNA 5'-gcGGGGTTATTTTTTACCATGTTTCATGTTa-3'

alignScore: 173, piRNA readNum: 5949
piRNA 3'-taagGTTTAGGGTAACGTAGG-ATGTCACGt-5'
|||| ||| || ||| |||||
mRNA 5'-accgCAAACACCAAGGCCTCCAGACAGTGCa-3'

alignScore: 165, piRNA readNum: 3837
piRNA 3'-ttgGAC-AAGAAGTGTAGACAGTCTCTCa-5'
||| ||| | ||| |||||
mRNA 5'-acaCTGCCTCTCGTCTCTTCCAGAGAGTg-3'

228.>Atp1a4 NM_013734 178.787 96.5835 1.85111 1.08E-06

alignScore: 166, piRNA readNum: 15191
piRNA 3'-tgtaGTAGACGCA-CCACG-CAGA--AATGTAGGt-5'

|| | | || ||| ||| |||||
mRNA 5'-ggtcCAGC-GAGTATGTGCAGTCTTGTACATCCa-3'

alignScore: 165, piRNA readNum: 9912

piRNA 3'-tgGTAA-AACTTTGAACAACAGTTCTCAGAGt-5'

|||| |:::| | | |||||
mRNA 5'-caCATTCTGGGGCTGGAGG---AAGAGTCTc-3'

alignScore: 165, piRNA readNum: 5037

piRNA 3'-ggGAGTTTCGAGTCGTCTGTCTCAGAGt-5'

:||| :| | | | |||||
mRNA 5'-caTTCCTGGGGCTGGAGGA-AGAGTCTc-3'

alignScore: 168, piRNA readNum: 3470

piRNA 3'-tacctcACCAGCGGAGGAC--AGGACAGATCTt-5'

| ||: | || | |||||
mRNA 5'-gcagtcTTGTTACATCCAGCAGCCTGTCTAGAg-3'

alignScore: 180, piRNA readNum: 2945

piRNA 3'-cggatgAACTTA---GATGTCTTCTCTCTGTa-5'

||||| || :|| :|||||
mRNA 5'-tatgggTTGAATTGACTCTGGATGAGAGAGACAc-3'

229.>Pdxdc1 NM_053181 7.06266 3.82989 1.84409 0.000573163

alignScore: 168, piRNA readNum: 22363

piRNA 3'-taagGGGTAGGACGAAT-CGGAT--GAAAGAAt-5'

||:| | | | | |||||
mRNA 5'-ttggCCTGTCCAACATAGGCATACCCTTTCTTc-3'

alignScore: 176, piRNA readNum: 13397

piRNA 3'-gggaggGACTTCGGAGA--ATTCAGAGCAAAGt-5'

||:| | | | |||||
mRNA 5'-gctgggCTGGAGGCTGTACTAACTGTCGTTTca-3'

alignScore: 172, piRNA readNum: 8149

piRNA 3'-agtGGAAA-AA-GATGGGGATCTAAAACat-5'

|||| | ||: | | |||||
mRNA 5'-tacCCTTTCTTCTGTACCACACATTTGTa-3'

alignScore: 167, piRNA readNum: 7324

piRNA 3'-agGGAAGCACA-GGAACGACAGTCATGACTt-5'

piRNA 3'-cggTTGATGTAAAGGGTCTTAGGAAt-5'

|||| :|| :|| |||

mRNA 5'-cagAACTTAGTTATTCA-AATCCTTc-3'

alignScore: 172, piRNA readNum: 5713

piRNA 3'-ggtcCAGTCAGGAGAC-A-CGATGATGTTAt-5'

||: || |||| | | |: |||||

mRNA 5'-ttgtGTTTGTACTCTGCTGGGTGGAATAa-3'

alignScore: 167, piRNA readNum: 4807

piRNA 3'-tgtCAGTGTCGTGAGTTTTCCATTt-5'

||::| ||:| | :| |||||

mRNA 5'-ggtGTTGCCAGTAGTGGGTACAGTAAATAa-3'

alignScore: 166, piRNA readNum: 3782

piRNA 3'-ttcggggaggTGT-CAAGTTTAGACAACAt-5'

||| ||| |:|||||

mRNA 5'-tattgggaaagACACTTCTAGTCTGTTGTt-3'

235.>A730008H23Rik NM_172505 11.7958 6.50966 1.81205 2.28E-06

alignScore: 168, piRNA readNum: 22082

piRNA 3'-aattGGTAAAGTAGA-TGTTGCAGTAGAGt-5'

|:: | |:| | |||:| |||||

mRNA 5'-tcccCTGCTCGGTATCACAGCATCATCTct-3'

alignScore: 167, piRNA readNum: 19862

piRNA 3'-acggtGAA-ACGTTTCTTAAGGG----GTCAAAAt-5'

||| | ||::|:||||:| |||||

mRNA 5'-tttatCTTATTCAGGGGATTCTCAGTGGCAGTTTTc-3'

alignScore: 178, piRNA readNum: 16260

piRNA 3'-tgTGTACCTGACGAGTGAGATGTCAGTCgt-5'

|||| || ||||:| | |:|||||

mRNA 5'-ggACAT-GA-TGCTTA-TGTGTAGTCAGCa-3'

alignScore: 174, piRNA readNum: 13591

piRNA 3'-ggtTTGTGACGTTAAAGTAAAGACAGGAt-5'

| ||| ||| |||| |||||

mRNA 5'-cgtATCACAGCA---TCATCTCTGCCTt-3'

alignScore: 179, piRNA readNum: 9256

||||| :||:| ||| |||||
mRNA 5'-agaaCCCAGAAATGTTGGTCCCACAGACGACCAACACAGa-3'

alignScore: 175, piRNA readNum: 3838
piRNA 3'-tgGAGTCTCATTACGTAACCAAGTCAGTTGt-5'
| | || ||||| | |||||
mRNA 5'-aaCCCCAG-AATGCATATGCCAGTCAACg-3'

alignScore: 166, piRNA readNum: 2853
piRNA 3'-tggtaGGATGTTTC-TTTG-GGGTCAGTTGt-5'
|| | || | | : |||||
mRNA 5'-aaaccCCCAGAATGCATATGCCAGTCAACg-3'

alignScore: 165, piRNA readNum: 2085
piRNA 3'-gaGAAAGATG--GTG-GTCGTGAATAAAAAt-5'
|| || | :| | |||||
mRNA 5'-gcCCAGTCAACGGTGCAAATCACTTATTTTTt-3'

238.>Trim28 NM_011588 155.458 86.834 1.79029 1.38E-05

alignScore: 166, piRNA readNum: 5239
piRNA 3'-tgGGGACGAGAACATGTTAGAGAGAAGTg-5'
|| | || | ||:| |||||
mRNA 5'-ccCCATCGTCCCCT-CAGTCCCTCTTCACa-3'

alignScore: 165, piRNA readNum: 4873
piRNA 3'-ggACA-CAGTTTACAGGATAGAAGGGACAAGt-5'
|| | |: :|| |||: || |||||
mRNA 5'-ccTGTCTTTGGTGGCCTGACT--CCTGTTc-3'

alignScore: 169, piRNA readNum: 3967
piRNA 3'-tgggtGAAGTGGACAGTGTGTAGGAAAct-5'
:||||| :|| :|||
mRNA 5'-tgtatTTTCACCCATACCCTGTCCTTTGg-3'

alignScore: 173, piRNA readNum: 3791
piRNA 3'-tgtGGTTGTCAGTAGAGAGAAGAAAAGTg-5'
||:| | :||| | |||||
mRNA 5'-agtCCAGCTCTGGTCTCT-GTATTTTCACc-3'

alignScore: 174, piRNA readNum: 2964
piRNA 3'-tgACGGAT-ACCATGGTAGTTAGGGAGTc-5'

| |:|: ||| ||||: |||||
mRNA 5'-tgTTCTTGCTGGCCCATCGTCCCCTCAGt-3'

239.>Sec14l1 NM_028777 55.9686 31.4052 1.78214 0.000346569

alignScore: 168, piRNA readNum: 8010
piRNA 3'-gaccatacgaCAGGGAAAATA--GATGTTATTt-5'
| ::||| :|||
mRNA 5'-gtctttaaaaGATTTTTTATTGTTACAATAAt-3'

alignScore: 187, piRNA readNum: 6716
piRNA 3'-acaagtGGTAAGAACCGAAAAGTCTAAGAt-5'
||||| || |||||
mRNA 5'-ctgaatCCATTCTT-TGCATATCAGATTCTg-3'

alignScore: 166, piRNA readNum: 5713
piRNA 3'-ggtccagtcAG-GAGACACGATGATGTTATt-5'
|| ||| || |||||
mRNA 5'-catattaccTCACTCT-TGGTAATACAATAc-3'

alignScore: 173, piRNA readNum: 5407
piRNA 3'-acggAGGATGGGAAAGGT-TA--CTAAGACAt-5'
|| |:| || || |||||
mRNA 5'-tgaaTCC-ATTCTTTGCATATCAGATTCTGTa-3'

alignScore: 166, piRNA readNum: 4679
piRNA 3'-tgTGGG-AAGAGGGTAGGCT---CCCAGAAACGt-5'
||| ||||: |:| |||||
mRNA 5'-taACCCATTCTCCTCCTGAATCCATTCTTTGCa-3'

240.>Tulp2 NM_008807 188.655 105.96 1.78044 1.83E-06

alignScore: 166, piRNA readNum: 3808
piRNA 3'-agtgtgtacATTGAGGTTTATGGTAGGGt-5'
|:| |||||
mRNA 5'-----cTGAAT-AAAATACCATCCct-3'

alignScore: 173, piRNA readNum: 149
piRNA 3'-tgacaggaaaGACTTCTGAAGGTAGGGAt-5'
|||| || | |||||
mRNA 5'-----CTGAATAAAATACCATCCctc-3'

alignScore: 174, piRNA readNum: 60
piRNA 3'-ttgacgGAGGGATCTTGTGGTAGGGAGt-5'
 || || ||:|||||
mRNA 5'-----CTGAATAAAATACCATCCCTCa-3'

241.>Bag1 NM_001171739 199.117 112.035 1.77727 1.12E-06

alignScore: 165, piRNA readNum: 5078
piRNA 3'-ttgggtaagCCGTTTACAAGATTACAGTTt-5'
 |||| | | |||||
mRNA 5'-gctgccaggGGCAACTAGCCAAATGTCAAt-3'

alignScore: 174, piRNA readNum: 3848
piRNA 3'-taccGGGAAGATTGGGGTCTCTTTTTCAGt-5'
 :| | | : :| | | |||||
mRNA 5'-ctocTCGGTCGGTTCTCAATGAAAAAGTcc-3'

alignScore: 174, piRNA readNum: 3397
piRNA 3'-tgccGAAGTCATGGATATCGTTTTTCAGGAt-5'
 | ||:| |: | | |||||
mRNA 5'-cctcCGTCGGTTCTCAATGAAAAAGTCTg-3'

alignScore: 166, piRNA readNum: 2821
piRNA 3'-tgtcaggGTCATCAGAATCGGA-AAAGAGGt-5'
 || |||| || |||||
mRNA 5'-tctggaacAGAAGTC---GCCTGTTTCTCCa-3'

alignScore: 176, piRNA readNum: 1476
piRNA 3'-tgGGAGAGTCGTTTAAAAAT---CTTTTTCAGGt-5'
 |: || |: ::| | | |||||
mRNA 5'-tgCTCCTCCGTCGGTTCTCAATGAAAAAGTCCt-3'

242.>Pdpk1 NM_001080773 30.8258 17.3618 1.7755 0.00123556

alignScore: 179, piRNA readNum: 1492
piRNA 3'-agGAGGTAGAATGGGTG-AGTCAGAACATTt-5'
 :| | | ||: | | :|||||
mRNA 5'-atTCCCTCGTATGCTCGGTAGTCTTGTAAt-3'

alignScore: 168, piRNA readNum: 1268
piRNA 3'-atTGGTAGGAGTACA-GATGTTATCAGAAa-5'

|:: ||||:| || |::|||
mRNA 5'-ggATTTCCTCGTATGCT-CGGTAGTCTTg-3'

alignScore: 170, piRNA readNum: 786
piRNA 3'-tgaGGAGGTAGAATGGGTG-AGTCAGAACA-5'
::||| || |: | | :|||
mRNA 5'-ggaTTTCCTCGTATGCTCGGTAGTCTTGTa-3'

alignScore: 172, piRNA readNum: 357
piRNA 3'-tgGAGGAGTCACGACACAATTTTCgt-5'
||| :||| :||| |||
mRNA 5'-tgCTCGGTAGTCTTGTAAATAAAAGCa-3'

alignScore: 170, piRNA readNum: 254
piRNA 3'-ggGAATTCTAGAGATTGGGAC--TATTTTCt-5'
| | | | | |::|:| | | | | |
mRNA 5'-ctCGTATGCTCGGTAGTCTTGTAAATAAAAGc-3'

243.>Tcp1 NM_013686 874.14 492.706 1.77416 0

alignScore: 167, piRNA readNum: 92488
piRNA 3'-agggagtcaGGGTGTCTAAAGAAGACACAt-5'
|:| ::|:|||| |||
mRNA 5'-atgtgacacCTCCTGGGTTTC-TCTGTGTg-3'

alignScore: 173, piRNA readNum: 21843
piRNA 3'-ttCCTACACATAAAGGCAGACGTCTTAGGA-5'
||:|||| | ||| :|||
mRNA 5'-caGGGTGTGCAGCAAGGTCAGTACTAGAAATCCTg-3'

alignScore: 166, piRNA readNum: 8390
piRNA 3'-ctTCAGGAC-CCGGTAGA-GTAAGTCTCCTAt-5'
| |||| ||| | | |||
mRNA 5'-agAATCCTGCAGCCAGATGCTCCAGAGGATg-3'

alignScore: 181, piRNA readNum: 8155
piRNA 3'-agaCGGA-GTACTGACAAGGTCCAAAGAt-5'
||| :||| |||:|
mRNA 5'-tagGCCTATGTGACACCTCCTGGGTTTCTc-3'

alignScore: 187, piRNA readNum: 6732
piRNA 3'-tgTGAATAAGGGTCGGAGTTGAAAGTgt-5'

||| | |:| | |||||
mRNA 5'-aaACCATCCTTTCAAACCTCAACTTTTCACT-3'

244. >Mif1 NM_010801 439.827 248.8 1.76779 6.87E-13

alignScore: 167, piRNA readNum: 22363
piRNA 3'-taagGGGTAGGAC--GAATCGGATGAAAGAAt-5'
:| || ||| ||| | | |||||
mRNA 5'-taaaTCAATGCTGTA CTTTG-CAACTTTCTTc-3'

alignScore: 172, piRNA readNum: 17716
piRNA 3'-cgggACGACGAGAAACTCAAGTAAGAAGGt-5'
||||: |||| | |||||
mRNA 5'-tcaaTGCTGTA CTTTG-CAACTTTCTTCCa-3'

alignScore: 177, piRNA readNum: 10746
piRNA 3'-aggccgagACGGTGTAAAGTGTGAAAGt-5'
|||::| |:|:|||||
mRNA 5'-taaatcaaTGCTGTA CTTTGCAACTTTTct-3'

alignScore: 167, piRNA readNum: 5976
piRNA 3'-caGTGAAAGTGATACGTCCAGGAAGAAGGt-5'
::|| | ||| |||| |:|||||
mRNA 5'-aaTGCTGT-AC TTTGCA--ACTTTCTTCCa-3'

alignScore: 165, piRNA readNum: 3622
piRNA 3'-aaGACGGT-CAAGATTGTATAACACTTACAt-5'
:||| | |||| || | | |||||
mRNA 5'-ctTTGCAACTTTCTTCCA-AATATGAATGT-3'

245. >Usp2 NM_016808 0.231671 0.131404 1.76304 3.35E-06

alignScore: 170, piRNA readNum: 141865
piRNA 3'-tgagtGGTTGAGTGGAAAGATGGAAAAAt-5'
|::||| ||| :| :|||||
mRNA 5'-attgggCTGGCTC-CCTGTTTTCTTTTTt-3'

alignScore: 171, piRNA readNum: 20021
piRNA 3'-tgtcGTAAGGGATTCTCACAG-----GTTCCGGGt-5'
| |||| | |||| || |||||
mRNA 5'-gtccCTTTCCC--AGAGTCTCTTAGACAAAGGCCct-3'

alignScore: 168, piRNA readNum: 16260
piRNA 3'-tgTGTACCTGACGAGTGAGATGTCAGTCgt-5'
| | ||||| | |||||
mRNA 5'-gaAGACGGACTGATGCGGAGACAGTCAGCa-3'

alignScore: 168, piRNA readNum: 12820
piRNA 3'-cgtCTC-ACACCGTT-TGTCGTACCAGTct-5'
|| | |::| |||| |||||
mRNA 5'-gccGAGCAGAAGTTGATACAGCCTGGTCAGg-3'

alignScore: 166, piRNA readNum: 11422
piRNA 3'-tgCCCGTTGTG---GATGACTGTCAGAGTTGAGt-5'
|| |::|| | | | : | |||||
mRNA 5'-aaGGACAGCACAGGCTCCTTGC-CCCTCAACTCc-3'

246. >Ehd1 NM_010119 128.42 73.0958 1.75687 0.000119981

alignScore: 174, piRNA readNum: 53510
piRNA 3'-cgGTC--CCATACACAGACTCATAGGCACAAGt-5'
|| | || | | | : || |||||
mRNA 5'-ggCAGCAGGT-TGTTTCCTGCTAGCCGTGTTct-3'

alignScore: 169, piRNA readNum: 31989
piRNA 3'-ggGGGTT--GGAGGTAAGTAGGA---TAAAGGAt-5'
|||: |||:| ||: || |||||
mRNA 5'-aaCCCAGCCCCTTCCCTCGCCCTGTCATTTCTt-3'

alignScore: 168, piRNA readNum: 30918
piRNA 3'-tccGAGATGTGAAGTTACGGTTTGTCCGGt-5'
||: | |||| ||:| :|||
mRNA 5'-tttCTTGCCTCTTC--TGTCTGACAGCCCc-3'

alignScore: 179, piRNA readNum: 13581
piRNA 3'-ttggTGTATGTAGGAATCT--GT-GGAAGAAAt-5'
|:|::| | |||| || |||||
mRNA 5'-ttaaATATATAACATTAGAGGCAGCCTTCTTt-3'

alignScore: 173, piRNA readNum: 10357
piRNA 3'-acACAGG-AAGTCGAGACTAATACCTTTTgt-5'
|||| | |||| | | : |||||
mRNA 5'-agTGTCCATGCAGCAC-GACAGGGGAAAACc-3'

247.>Fdft1 NM_010191 86.7585 49.5265 1.75176 0.000130402

alignScore: 165, piRNA readNum: 38780
piRNA 3'-gaccCATAGGAAGAAGTCGTCAAGAACTt-5'
|| :| |||:|: |||||
mRNA 5'-ctacaGTCATTTGCTTTGGTTTTCTTGAa-3'

alignScore: 170, piRNA readNum: 15890
piRNA 3'-cggTAGAGGAGCAGGCACACAAAGGAAAAt-5'
|| | | | :| || |||||
mRNA 5'-aagtTCCCGTGGAGTGGGTTTTCTTTTc-3'

alignScore: 181, piRNA readNum: 11255
piRNA 3'-cacAGTAGGT-GGGTAAGTAGGTAAGTTGt-5'
||: ||| :| | :|||
mRNA 5'-gccTCGGCCAGTTCAGTGGTCCATTCAAct-3'

alignScore: 166, piRNA readNum: 5977
piRNA 3'-ctACGGAGACAGAATC--GGTTCGGAGAAAt-5'
|| || | |||:| ||: |||||
mRNA 5'-gcTGGCTGGGACTTGGTTCCTCTGCCTCTTg-3'

alignScore: 167, piRNA readNum: 5973
piRNA 3'-ctgaaCAGGGAGAACCTGAGTC-TAAAGGAAt-5'
||:| | ||| | :| |||||
mRNA 5'-tggaaGTTCC-CGTGGAGTGGGTTTTCTTt-3'

248.>Art3 NM_181728 153.712 87.8172 1.75036 2.85E-05

alignScore: 173, piRNA readNum: 30406
piRNA 3'-ctaTGGGGAATCA-GGTGTCGTAATTGAAt-5'
:| | ||| :|:| | |||||
mRNA 5'-ctgTCCAGATAGTATCATAGAATTAActt-3'

alignScore: 171, piRNA readNum: 23220
piRNA 3'-acgaaaTGGGTTATGA--TAGGGTAAAATGt-5'
||: |||:| |||:|||||
mRNA 5'-aaaagaACTGTATATTTGTTCTCATTTTACa-3'

alignScore: 169, piRNA readNum: 22701

piRNA 3'-ggcACGATTAAGAACCAACGGT-TGAACTGAt-5'
|| ||:|:| | | | |||||
mRNA 5'-aaaTG-TAGTTTTCTTGACAGACTTGACTg-3'

alignScore: 170, piRNA readNum: 10727
piRNA 3'-ggTTTACACACGATAGTAGAGGTAAAATGt-5'
|| ||| | :| | || :|||
mRNA 5'-agAACTGTATATT-TGTTCTCATTTCa-3'

alignScore: 165, piRNA readNum: 9002
piRNA 3'-tgAAAGGTGGGATTGAGCTGTATCAGGTCTt-5'
||| || :||| | | |:|
mRNA 5'-atTTTACAATTTAAAAG-C-TGGTCCAGAt-3'

249. >Bsc12 NM_001136064 340.668 195.07 1.74639 4.91E-10

alignScore: 179, piRNA readNum: 4800
piRNA 3'-ggggctctacGAAAGAAGGAATTATTTGa-5'
||| || |||||
mRNA 5'-caccttttccCTTGCTCCCTTAATAAACt-3'

alignScore: 173, piRNA readNum: 1450
piRNA 3'-caGAGGTGAGTGA--TCGT-AAA-GTTAGTATGt-5'
:||| | ||:| |||: ||| | |||||
mRNA 5'-aaTTCCTCACATTCCAGCGCTTCCCATCATAc-3'

alignScore: 170, piRNA readNum: 1006
piRNA 3'-gtacggtcGTCTCTCACATAAGGAGt-5'
|| ||:| | |||||
mRNA 5'------aCAAAGGTGAATTCCTCa-3'

alignScore: 167, piRNA readNum: 804
piRNA 3'-gggATCGAGGAACAAGGAACGAGt-5'
|| | |||| | |||||
mRNA 5'-tcaTA-CACCTTTCCCTTGTCTc-3'

alignScore: 165, piRNA readNum: 613
piRNA 3'-tgacacATTGTCACAGAAGAAGTTCGACT-5'
||| | | |:| | |||||
mRNA 5'-ccttaaTAA-ACTATTTGTGGCAGCTGc-3'

250.>Kih110 NM_025727 208.466 119.462 1.74504 1.22E-06

alignScore: 178, piRNA readNum: 69514
piRNA 3'-tgtcggGAGGGAAGAATGACTATTTACGt-5'
 :|:|:|:| | | | | | | | | |
mRNA 5'-aattaaTTCTTTTTTTA--AATAAATGCAGt-3'

alignScore: 170, piRNA readNum: 2442
piRNA 3'-aaCAGGCACACGTTTCGTTCTCAATTAAGt-5'
 | | | | | | | | | | :| | | | | | | | | |
mRNA 5'-aaGTC--TAAGCAA-TAAGAATTAATTCt-3'

alignScore: 166, piRNA readNum: 731
piRNA 3'-cgggggtGTTAGAAGTACAAGTATTTAt-5'
 :| | | : | : | | | | | | | | | |
mRNA 5'-taagaatTAATTCTTTTTTTAAATAAATg-3'

alignScore: 168, piRNA readNum: 459
piRNA 3'-tgtcggGAGGGAAGAATGACTATTTACGt-5'
 :|:|:|:| | | | | | | | | |
mRNA 5'-aattaaTTCTTTTTTTA--AATAAATGCa-3'

alignScore: 175, piRNA readNum: 304
piRNA 3'-cgtAAGAAGGTACAGGTAT-TTATAAATTTGt-5'
 | |:| |:| :| | | | | | | | | |
mRNA 5'-ttcTTTTTTTAAATAAATGCAGTGTTAAACt-3'

251.>Ppi12 NM_144954 24.774 14.2082 1.74364 0.00103195

alignScore: 181, piRNA readNum: 104304
piRNA 3'-gggTTGAG-TGTTTGTAGTTTGTCTACGt-5'
 | | | | | | | | | | :| | | | | | | | | |
mRNA 5'-ctgATCTCTTCAAATACCTGACAGATGCCa-3'

alignScore: 166, piRNA readNum: 30716
piRNA 3'-acaggggtacGACGGATTG--AGAGTAGTc-5'
 | | | | | | | | | | :| | | | | | | | | |
mRNA 5'-atthttgaaaaCTGCCTGATGAGCTCATCAGa-3'

alignScore: 182, piRNA readNum: 16260
piRNA 3'-tgtGTACCTGACGAGT-GAGATGTCAGTCGt-5'

::|||::| | || | ||:|||||
mRNA 5'-cccTGTGGGTCCACAGCACTGCAGTCAGCc-3'

alignScore: 169, piRNA readNum: 7485
piRNA 3'-gtGACG-AGTGTGGACC---AGGTAAAATATGt-5'
 |||: | ||: | || |::|||||
mRNA 5'-tgCTGTGTGACGACAGGAGCTTTATTTTATACc-3'

alignScore: 169, piRNA readNum: 4080
piRNA 3'-ggACAGGAGACA---AAGGTTGTACCCAAGGt-5'
 |||:|: || | || |::|||||
mRNA 5'-gcTGTCTTGGTGAACCTCC-CTGTGGGTCCAa-3'

252.>Taf9 NM_027592 30.3569 17.4356 1.74109 1.91E-07

alignScore: 174, piRNA readNum: 11363
piRNA 3'-ctCGACAAAGAC-ATGAACC-CAGGAAAAAGt-5'
 ||| | ||| |:| ||| |:|||||
mRNA 5'-caGCTCTAGCTGCTGCCTGGATTTCTTTTTc-3'

alignScore: 168, piRNA readNum: 8915
piRNA 3'-ctAGGAAGGGG-----TTTGGATGGTTGTTAGAt-5'
 |::|||:| | |||| | |||||
mRNA 5'-tcTTTTTCTCCGTGAGAAACCTTAC-ACAATCTc-3'

alignScore: 166, piRNA readNum: 5032
piRNA 3'-tggATAGGTTTTGGAC-TCGATAAGATGTGt-5'
 | |: ::|: | | |||: |||||
mRNA 5'-agaTCTTAGGAGGCAGCAGCTGGTCTACACa-3'

alignScore: 169, piRNA readNum: 3901
piRNA 3'-ctaagagTTTGTcAGAAC-CATCATCGAGAt-5'
 |:| || |||| || | |||||
mRNA 5'-gagcagaAGAAAG-CTTGTGTCGCAGCTCTAg-3'

alignScore: 166, piRNA readNum: 2206
piRNA 3'-ttACGACAGTCTTCGTCCACGAGTACGGACc-5'
 || |||| | || | || |||||
mRNA 5'-ctTG-TGTC-GCAGCTAGCTGCTGCCTGGa-3'

253.>Cet3 NM_009836 232.185 133.615 1.73772 3.60E-07

alignScore: 165, piRNA readNum: 12418
piRNA 3'-tggatGAGGTACCAGA-GTCGTAGAGTCAA-5'
| ||| |||| : |||||
mRNA 5'-gcagcCCCCA--GTCTGTCCCATCTCAGTT-3'

alignScore: 167, piRNA readNum: 10305
piRNA 3'-agTTCAGATGCCATAGTCATAACGAAGGt-5'
||| :| | | |:||| |||||
mRNA 5'-gtAAGCTTTCCAT-TTAGT-TTGCTTCCa-3'

alignScore: 168, piRNA readNum: 7069
piRNA 3'-tcacaaagacGTCTG--TCTCTGTC--GGGTCAGAt-5'
|||:: ||:|:| |||||
mRNA 5'-tgccaaggatCAGGTTGAGGGGAGCCCCAGTCTg-3'

alignScore: 175, piRNA readNum: 5599
piRNA 3'-cccggtcAAGGTGATGCAAACGAAGt-5'
|||||:| |||||
mRNA 5'-gtaagctTTCCATTTAGTTTGCTTCc-3'

alignScore: 169, piRNA readNum: 2020
piRNA 3'-ttcGGTGGAGATGA-AT--GAACCCTAAATCA-5'
:| |:||||:| || ||| |||||
mRNA 5'-gtaTCTCTTCTATTGTAAGCTTCCATTTAGTt-3'

254.>Atp5a1 NM_007505 210.472 121.378 1.73402 1.37E-06

alignScore: 166, piRNA readNum: 5382
piRNA 3'-ctcagacAAGAGACGAAGGTCG-AAATAAGt-5'
| ||:| ||::: | |||||
mRNA 5'-cagatacTGCTTTGGTTTTGTCATTTATTc-3'

alignScore: 166, piRNA readNum: 4984
piRNA 3'-tgGGAGTC--TGTCAA---AAGTCGTTAAGAACA-5'
||||| |:| | | :|| |||||
mRNA 5'-gaCCTCAGCAATGGCTAGCCTAGGCTATTCTTGTa-3'

alignScore: 188, piRNA readNum: 4873
piRNA 3'-ggacACAGTTTACAGGATAGAA-GGGACAAGt-5'
|| ||||| | || |||| |||||
mRNA 5'-tagcTGGCAAAT-TGCTCTTTACCCTGTTc-3'

alignScore: 169, piRNA readNum: 4766
piRNA 3'-tacGAGTCAGTCCCACACACGTCAGTCgt-5'
| | ||: | || |||||
mRNA 5'-ttaCCCTGTTCTTGCTG-GTGCAGTCAGCa-3'

alignScore: 174, piRNA readNum: 4359
piRNA 3'-tgTCGGTTCAGACGTTAAGTCTCGTCAATGt-5'
||::|: |:|:| | || |
mRNA 5'-taAGTTAGTTTTGTAAGACAG---AGCTTAct-3'

255.>Tpst1 NM_001130476 110.732 63.9141 1.73251 0.00156532

alignScore: 169, piRNA readNum: 147401
piRNA 3'-tacggataAGCAGATGTACGAAGAGAAAGGt-5'
| | ||| :| | | |||||
mRNA 5'-gtcacagcTCCTCT-TGTCCTTGCTTTCCt-3'

alignScore: 166, piRNA readNum: 23561
piRNA 3'-gggGCGT-AAGA-GGAGT-GAGG-TAACAGGAt-5'
| | | ||| :| | | ||| |
mRNA 5'-ggaCACAGTCTGTCCACAGCTCCTCTTGTCct-3'

alignScore: 165, piRNA readNum: 15811
piRNA 3'-ggAAGCACAAAAG---CTGTCTAAAGGTCAGt-5'
| | || | || | ||: |
mRNA 5'-tgTCCTTGCTTTCCCTCCAGG-TTCCAGTct-3'

alignScore: 165, piRNA readNum: 9048
piRNA 3'-ccgGTAGAGTAAGGGACGAG--TAACAGGAt-5'
| | :| | | | ||| |
mRNA 5'-acaCAGTTCTGTCCACAGCTCCTCTTGTCct-3'

alignScore: 169, piRNA readNum: 6999
piRNA 3'-ccCCGTCT-TCCGTACG--GTCGA-GAGAACAGt-5'
| | | | | : | | : | | | |
mRNA 5'-caGGGACACAGTTCTGTCCACAGCTCCTCTTGTCc-3'

256.>Ubxn10 NM_178671 101.227 58.7297 1.72361 0.000903393

alignScore: 170, piRNA readNum: 141865

piRNA 3'-tgaGTGGGTTGAGTGGAAGATGGAAAAAt-5'
||:| | |||| || | |||||
mRNA 5'-agcCATCGTAATCACC-TCT-CTTTTTTt-3'

alignScore: 169, piRNA readNum: 92488
piRNA 3'-agggaGTCAGGGTGTCTAAAGAAGACACAt-5'
||| | | | | || |||||
mRNA 5'-tcagcCAGACACCCACAAGTCATCTGTGt-3'

alignScore: 172, piRNA readNum: 51946
piRNA 3'-tgCCGGCTTAAGTAAACGTG-TCGTAAAGAAt-5'
|| | | || | ||:| :|||
mRNA 5'-agGGACCACGGCACTGGCGCTGGCATTCTTg-3'

alignScore: 167, piRNA readNum: 29015
piRNA 3'-taccGGATCAGAAGTGTGAGTTTCGCAGAGt-5'
::|| || || || | |||||
mRNA 5'-ttatTTTA-TC-TCCCAGCCTCAGCGTCTCt-3'

alignScore: 169, piRNA readNum: 17716
piRNA 3'-cggaCGACGAGAACTCAAGTAAGAAGGt-5'
|| |||| |||:| | |||||
mRNA 5'-ggaagGCAGCTCGTTGGG-GC-TTCTTCCc-3'

257.>Pgp NM_025954 255.916 149.703 1.70949 1.88E-07

alignScore: 181, piRNA readNum: 400
piRNA 3'-ggggacgaTGATTACAGGAGTTAGAGAt-5'
|: ||:||||:|:|||||
mRNA 5'-----agATCTAGTGTCTTTAATCTCTg-3'

alignScore: 166, piRNA readNum: 335
piRNA 3'-agaaacgtTCCGGTTCCTAGTATTAGAGt-5'
|| :| || :|| :|||
mRNA 5'-----AGATCTAGTGTCTTTAATCTCt-3'

alignScore: 167, piRNA readNum: 249
piRNA 3'-tataacacaaccacgTACGGAAATTAGAGt-5'
:||:|||||
mRNA 5'-----agatctaGTGTCTTTAATCTCt-3'

alignScore: 167, piRNA readNum: 86

piRNA 3'-ctaTATGTGGTA-AGATGAAGAGACCTTat-5'
 || :| ::| |:|| |||||
mRNA 5'--agATCTAGTGTCTTTA-ATCTCTGGAATa-3'

258.>Pde1c NM_001159953 0.054219 0.0317841 1.70585 0.00447034

alignScore: 167, piRNA readNum: 64245
piRNA 3'-ccCGTCAGTCAG-ACCGTCAAGTAAGAAAGt-5'
 |:| | |: | |::|
mRNA 5'-ggGTAGGGTGTGAGGATGTTTGTCTTTc-3'

alignScore: 166, piRNA readNum: 7868
piRNA 3'-taacggaaGAAAACCTTCTAAGGT----GAGAGGAt-5'
 || |||:| | || |
mRNA 5'-accocaaagCTCTTGAGGTCCACCTGCTCTCCTc-3'

alignScore: 170, piRNA readNum: 7503
piRNA 3'-cacagtcgacgACACTGGTCAGATGTAAt-5'
 |||: |||||
mRNA 5'-aacattcacaTGTGGAGAGTCTACATTg-3'

alignScore: 168, piRNA readNum: 6857
piRNA 3'-aagaAGGGGTGAATATC--AAGGGTAACAAt-5'
 || || |||:| | |
mRNA 5'-taagTCACCTTTGTTGGCATGCCATTGTTa-3'

alignScore: 168, piRNA readNum: 6821
piRNA 3'-ctcGGTATATCTAAGTCTCAATATTGAt-5'
 |||| | | | |
mRNA 5'-agaCCATAATTATCCA-AGAAATAAGCTc-3'

259.>Ift122 NM_001167763 200.351 117.517 1.70487 0.000430182

alignScore: 168, piRNA readNum: 26434
piRNA 3'-cgATGGTA--AGAGGGTCCAGATA-AGGTCTGAt-5'
 | ||| |||:| ||:|
mRNA 5'-gcTCCCATGGTCTCCTTG--CTGTCCCAGACTg-3'

alignScore: 186, piRNA readNum: 2802
piRNA 3'-cccggaatAGGGAAGCACAGGAACGACAGt-5'

|||| | || |||||
mRNA 5'-accacggcTCCCATGGTCTCCTTGCTGTc-3'

alignScore: 169, piRNA readNum: 2252
piRNA 3'-caCACAA-CAACGTTTAGGA-GACCTCAGt-5'
|||| | |||: ||| |||||
mRNA 5'-atGTGTTcATAGCAG--CCTGCTGGAGTc-3'

alignScore: 165, piRNA readNum: 1669
piRNA 3'-tgtGGGGTAAAGTA-AGTAAGTAAGTAAGt-5'
:|:|:|:| | | | |||||
mRNA 5'-gatTTCCTATTTATGGCAT--TTCATTc-3'

alignScore: 173, piRNA readNum: 1627
piRNA 3'-tgcgTAGAGAATACG-ACAGTGTA-TAAGGAAt-5'
|:| | | | : | | | : | |||||
mRNA 5'-acagATTCCTATTTATGGCATTTCATTcCTTg-3'

260.>Spata21 NM_177867 133.951 78.7064 1.70191 0.000181077

alignScore: 165, piRNA readNum: 9598
piRNA 3'-cacCCTTCGGTAGACAAGAGAACAAGTTCCt-5'
|||| ||| || ||| |||||
mRNA 5'-tccGGAA-CCA--TG-GCTCCAGTTCAAGGc-3'

alignScore: 165, piRNA readNum: 6251
piRNA 3'-tgtcggaaGAAGTTCTTCAAGTTcGTCCCGt-5'
|| ||: |||| :|||
mRNA 5'-ttcaaggcCTGCAGATAGTT-GGGCAGGGC-3'

alignScore: 176, piRNA readNum: 1736
piRNA 3'-tgAAACGGTTCAGTGTTCGAGTTCCTTg-5'
| | :|| | :| | | |||||
mRNA 5'-ggTCTGGTAAGCCAATAAACACCAAGAACc-3'

alignScore: 171, piRNA readNum: 427
piRNA 3'-ctCTCGACTTATACGGCTCAAGTACc-5'
| | :|:|:| | | : |||||
mRNA 5'-tgGATTTGGGAGTTTgCT--TTCATGg-3'

alignScore: 174, piRNA readNum: 360
piRNA 3'-tgTCGA--CGACTCAG-CATAAA-CCACAAACGA-5'

||:| || |:| | | |||| || |||||
mRNA 5'-atAGTTGGGCAGGGCCTGGATTTGGGAGTTTGCTt-3'

261.>Adam1a NM_172126 127.529 75.1051 1.69801 0.000272559

alignScore: 173, piRNA readNum: 4873
piRNA 3'-ggACACAGTTT--ACAGGATAGAAG-GGACAAGt-5'
||| || | | |||:| | | |||||
mRNA 5'-aaTGT-TCTAACTTGCCCTGTCAGCTCCTGTTCa-3'

alignScore: 172, piRNA readNum: 3591
piRNA 3'-cccccggagggtGAATAAGATGT-GGAGAGTACa-5'
:|||||: | | |||||
mRNA 5'-----agtTTTATTTAAGATCCTCTCATGg-3'

alignScore: 176, piRNA readNum: 2567
piRNA 3'-ctTGTAGTCGACTAAGTAGATGTCTTTGTt-5'
|| | |:| | ||||| |||||
mRNA 5'-atACTTGTGTTG-CTCATCT-CAGAAACAa-3'

alignScore: 170, piRNA readNum: 2283
piRNA 3'-tggTAGAATAGTGA-GGTCGGGTCGAGGAt-5'
|| || | ||:| || :|||||
mRNA 5'-taaATGTTCTAACTTGCCCTGTCAGCTCCTg-3'

alignScore: 175, piRNA readNum: 1979
piRNA 3'-tatccAATG-GCGGGACAACTCAAGGACAAGa-5'
| || :||||| | || |||||
mRNA 5'-tgttcTAACTTGCCCTG--TCAGCTCCTGTTCa-3'

262.>Aplp2 NM_009691 48.4221 28.5677 1.69499 0.0171846

alignScore: 168, piRNA readNum: 83145
piRNA 3'-cggtaaACATGTTTCAGAGTCAGACTCCGAt-5'
|||:::| | | |||||
mRNA 5'-acagcgTGTGTGACACCCTGGCTGAGGCTg-3'

alignScore: 167, piRNA readNum: 39700
piRNA 3'-tttgGGAAGATGATAGTTAGGTGAAGGt-5'
||||:| | | |||||
mRNA 5'-ggtagCCTTTTCCT----ATCCACTTCCc-3'

alignScore: 175, piRNA readNum: 17518
piRNA 3'-ccaagagtacTAACACGTCATACACAAGAA-5'
|| || |||| |||||
mRNA 5'-caactagcccATAGT-CAGTCTGTGTTCTTc-3'

alignScore: 166, piRNA readNum: 13843
piRNA 3'-ggGAAACA-GAAACG-CA---AACGCAAGGGAAGGt-5'
:|||| | || | | | |||||
mRNA 5'-gtTTTTGTACTTTTCTGTGACTCACCTGCCCTTCct-3'

alignScore: 174, piRNA readNum: 13177
piRNA 3'-catcGGAGA-ATCA-AGTA-AGTGT-TACGAGAt-5'
|:| | | | | |:| | |||| | |||||
mRNA 5'-gcccaCTTCTATTGTATTGTCTCACACATGCTCTa-3'

263.>Suc1a2 NM_011506 208.999 123.33 1.69463 3.40E-06

alignScore: 170, piRNA readNum: 6086
piRNA 3'-ggTAGAT-AGACAGGGATTGAAGACGAt-5'
||:| | || | :||:| | |||||
mRNA 5'-gcATTTGCTCTGCATCTGA-TTCTGCTg-3'

alignScore: 170, piRNA readNum: 5286
piRNA 3'-ggTCAGTTG-GT-TTCGTTTAAACGGAAACTt-5'
| || | | | |:| | | | |||||
mRNA 5'-gtAATCACCACATAGGCACACATACCTTTGAa-3'

alignScore: 178, piRNA readNum: 4650
piRNA 3'-gggTAGAACAGGGACAT-ATATATTTATATc-5'
| || | |:| | | |||| | |||||
mRNA 5'-taaAGCTTTATTCTTTAGTATAAAAAATATAt-3'

alignScore: 176, piRNA readNum: 3520
piRNA 3'-tatctGAGTCTC-ACAGAAGGAAACGAAGGt-5'
||:| | | |||:| |||||
mRNA 5'-cttttCTTGACCCATCTTTTTTGGCTTCCt-3'

alignScore: 173, piRNA readNum: 3444
piRNA 3'-gttaGGTTAAGT-CTAGATAT-T-TCTTGAACt-5'
:| | | | | |:| | | | |||||
mRNA 5'-tgtaTCAA-TCATTATTTATACATAGAAGCTTg-3'

264. >Ldha NM_001136069 190.07 112.435 1.69049 9.29E-06

alignScore: 167, piRNA readNum: 44963
piRNA 3'-ttgGCACATGGTACGGGATGC-TATAGAA-5'
 :||||| |:| | : |:| |||||
mRNA 5'-cagTGTGTA-CGTCCATGATGCATATCTTg-3'

alignScore: 165, piRNA readNum: 26266
piRNA 3'-ttAGGGGGTGAAGTTTTAGGGGATGAAC-5'
 | |||:| | ||:| |||
mRNA 5'-tcTGCCCTGCTGCCAAGT--GGTACTGTg-3'

alignScore: 177, piRNA readNum: 2707
piRNA 3'-atggtaaaaGGTTGCTCAATGGTCA-5'
 ||:||||| |||||
mRNA 5'-atgcctaggCCGACGAGTT-CCAGTta-3'

alignScore: 175, piRNA readNum: 2618
piRNA 3'-agacGGTTTACG--ACAGGTGATTTGG-5'
 |||:|: || | | |||||
mRNA 5'-ccacCCAAGTGCATGCCAATAAACCTt-3'

alignScore: 165, piRNA readNum: 2159
piRNA 3'-tccCTCTTTCGGGAAGTCCG-AT-GAACACG-5'
 | | | |:| | | || | |||||
mRNA 5'-agtGTGTACGTCCATGATGCATATCTTGTGCa-3'

265. >Pgs1 NM_133757 13.4462 8.00034 1.6807 2.21E-05

alignScore: 166, piRNA readNum: 22082
piRNA 3'-aaTTGGTAAAGTAGA-TGTTGCAGTAGAG-5'
 :|:: || || | |:| |||||
mRNA 5'-gaGGCTGCATCTTCTCAGAGCTTCATCTCa-3'

alignScore: 178, piRNA readNum: 11643
piRNA 3'-ccAATGAAGGTCGGATGGTT--GAAAAGTc-5'
 | :| ||| || | | | |||||
mRNA 5'-ccTGGCTCCAACCTCCCACTCTTTTCAGa-3'

alignScore: 166, piRNA readNum: 8328

piRNA 3'-agaacCGGAGATCGTACAAGAC-ACAACAGt-5'
||| :||| | ||| |||||
mRNA 5'-tatctGCCCTTAGCCAG-ACTGCTGTTGTct-3'

alignScore: 170, piRNA readNum: 3973
piRNA 3'-ggAGGATAGTCCGTGTTGACGTAGAGTct-5'
||:| ||| | :|| |||||
mRNA 5'-caTCTTCTCAG----AGCTTCATCTCAGc-3'

alignScore: 173, piRNA readNum: 3857
piRNA 3'-tgAGGGTGGTATCAGAGG-TATGACGTAGAt-5'
| ||:| ||:| |||: | :|||
mRNA 5'-caTGCCGTAATGG-CTCTGAGGCTGCATCTt-3'

266.>Me1 NM_001198933 0.0664425 0.0395431 1.68026 0.000153632

alignScore: 170, piRNA readNum: 104304
piRNA 3'-ggGTTGAGTGTGTTGTAGTTT--GTCTACGGt-5'
|| ||| |:||| ::| |||||
mRNA 5'-ccCACCTCTGAGACAAGGGAGTCAGATGCCa-3'

alignScore: 167, piRNA readNum: 92488
piRNA 3'-aggGAGTCAGGGTGTCTAAGAAGACACAt-5'
||||| ::|| ||| |||||
mRNA 5'-aagCTCAGGTTCA-AGA-ACATTCTGTGTa-3'

alignScore: 172, piRNA readNum: 30716
piRNA 3'-acaGGGTACGACGGATTGAGAGTAGTct-5'
|||:| |: ||| | |||||
mRNA 5'-gtaCCCTGCGTAGCCTTA-GCTCATCAGc-3'

alignScore: 170, piRNA readNum: 21154
piRNA 3'-tcGGAAGGATCAAAGAATG-GGATGTCAAGAc-5'
|:| :|| || | |: |||||
mRNA 5'-aaCTTGATTACATT-TAATGCCTACAGTTCTt-3'

alignScore: 165, piRNA readNum: 12741
piRNA 3'-tgGAAGACTGTGGTCGAGGTGATGTAGAGt-5'
|| ||:|: || : | |||||
mRNA 5'-agCTCATGGCATGAG--TAAATACATCTct-3'

267.>1700016M24Rik NM_001177437 125.794 75.0992 1.67504 0.000404147

alignScore: 174, piRNA readNum: 10268

piRNA 3'-agacgtcGAATTACGG-AGAAGC-CTCAGGAt-5'

|||| | :| ||||:| |||||

mRNA 5'-gattgttCTTATTTTGTCTTTGTTGAGTCCTa-3'

alignScore: 165, piRNA readNum: 6959

piRNA 3'-ttcggtttatACAAGACCATAGAC--CTCAGGAt-5'

| ||:| || |:| | |||||

mRNA 5'-cgattgttctTATTTTGTCTTTGTTGAGTCCTa-3'

alignScore: 166, piRNA readNum: 1715

piRNA 3'-gcggcccccCGGAGGGTGAATA-AGATGTGGAGAGTa-5'

|||| | ||| ||: :|||||

mRNA 5'-tattaaatGCCTCAGA-GTATCTCTG-GCCTCTCAc-3'

alignScore: 167, piRNA readNum: 1357

piRNA 3'-ctctCGGTAAAGTATGGTCAAACAGAAAt-5'

|| ||| : | :|| |||||

mRNA 5'-acctGCGATTGT-TCTTATTTTGTCTTt-3'

alignScore: 168, piRNA readNum: 1022

piRNA 3'-gtctccgctggTAAGG-GTCTCATAGAGt-5'

|| || |||||

mRNA 5'-tatctttattaaATGCCTCAGAGTATCTCt-3'

268.>Laptm4a NM_008640 424.591 253.499 1.67492 8.14E-11

alignScore: 166, piRNA readNum: 58953

piRNA 3'-tgtAGAATAAATAATCAGGATGAA----CTGAAAAt-5'

|:|:| | || | |:| | |||||

mRNA 5'-actTTTTGTTAAGTA-TCACATTTAGAGACTTTTt-3'

alignScore: 169, piRNA readNum: 26246

piRNA 3'-ctccCAGGTTG-AGAGATGACCTGTAATAAt-5'

|| || : |||: ||| :|||||

mRNA 5'-gaaaGTACTGTCTTGCTGAGCATTATt-3'

alignScore: 166, piRNA readNum: 22363

piRNA 3'-taAGGGT-----AGGACGAATCGGA---TGAAAGAAAt-5'

alignScore: 174, piRNA readNum: 7757
piRNA 3'-ataGGAGTCGACCAAGTTGTAGCCGAGTct-5'
|||| |||| || || |||||
mRNA 5'-agaCCTC--CTGG-CCACCAGCGGCTCAGc-3'

alignScore: 165, piRNA readNum: 3208
piRNA 3'-gggttGTAGGATTAGTGTAGTACTGTTct-5'
|| | : || |||||
mRNA 5'-ctggcCACCAGCGGCTCAGCCATGACAAGc-3'

alignScore: 170, piRNA readNum: 2486
piRNA 3'-atTGTAGGTC--G TTCAGGTAGATCAACGt-5'
||| ||||| :|| ||| | |||||
mRNA 5'-aaACA-CCAAGTTCTAACTCCCT-TAGTTGct-3'

alignScore: 172, piRNA readNum: 912
piRNA 3'-tccTTGCTTCTCCTTGTcAGT-CTTCAAGAt-5'
:|:|||| ||| | || |||||
mRNA 5'-gctGATGAAGAAGAA-AAACACCAAGTTCTa-3'

alignScore: 169, piRNA readNum: 807
piRNA 3'-tgcgGGGTAAGA--AGGAAATTG-GAATTTt-5'
|| | |||| ||||| : : |||||
mRNA 5'-aacaCCAAGTTCTAACTCCCTTAGTTGCTTAAAAG-3'

271.>Cct7 NM_007638 199.022 119.929 1.6595 1.18E-05

alignScore: 169, piRNA readNum: 8383
piRNA 3'-ggtAGGGTCGACGTAGGA--TGTTTGTAAAt-5'
| |: | |:|:|:| |:|||||
mRNA 5'-attTGCTTGGTGTGTTTTTCATAAACATTTt-3'

alignScore: 165, piRNA readNum: 7560
piRNA 3'-ctcagtttGAACAAGTAGTCCT--AAGGACGGt-5'
|| ||||| | | |||||
mRNA 5'-cttgggtgtgTTTTTCATAAACATTTTCCTGCct-3'

alignScore: 166, piRNA readNum: 1402
piRNA 3'-cgggaGACTACGAGAGGGTGTCAAGAGTt-5'
:|| || ||| |: :| |||||
mRNA 5'-gatggTTGCTGGTCTGCTG-GGTTCTCAc-3'

alignScore: 180, piRNA readNum: 838
piRNA 3'-gcCAAGGGTCCCGGACGAGCAAAGAGTgt-5'
||| |: ||:|||| | |||||
mRNA 5'-tgGTTGCT--GGTCTGCTGGGTCTCACt-3'

alignScore: 166, piRNA readNum: 600
piRNA 3'-cgggtCGTTAGTATAGGTACTGACCTTt-5'
| |:||||:| || :|||||
mRNA 5'-gaattGGAGTCATGT--ATACTTGAAATa-3'

272.>Zc3h14 NM_001160107 31.9167 19.3897 1.64606 0.00395567

alignScore: 172, piRNA readNum: 47397
piRNA 3'-ttcCACAAAGACCAGTCTCGTAAAATAGTgt-5'
|| ||:||| :|| :| |||||
mRNA 5'-taaGTAATTTTGGAGGGACTACATTATCAGa-3'

alignScore: 168, piRNA readNum: 30716
piRNA 3'-acAGGG-GTACGACGGATTGAGAGTAGTct-5'
||| |:| || | | |||||
mRNA 5'-atTCCCATATTCTG-AAAAATATCATCAGa-3'

alignScore: 165, piRNA readNum: 10727
piRNA 3'-ggTTTACA-CACGATAGTA-GAGG--TAAAATgt-5'
:||| | ||| ||| | | |||||
mRNA 5'-taGAATATATTGCTTTCATAATACGAATTTTACT-3'

alignScore: 165, piRNA readNum: 8837
piRNA 3'-tgggGAGGAATTTTG-TCATGGTAGAAACTt-5'
:||: |:||| || |:|||||
mRNA 5'-gatgTTCTACAGAACTTGTACAGTCTTTGAa-3'

alignScore: 166, piRNA readNum: 7412
piRNA 3'-ttACTCGGAGATAAGTTCTC-GGGACAGTGct-5'
||| |:||| | || |:|||||
mRNA 5'-gaTGAG-AGATGTTCTACAGAACTTGTACAGt-3'

273.>Rab11fip5 NM_001003955 79.9083 48.6786 1.64155 0.00564539

alignScore: 165, piRNA readNum: 23561

piRNA 3'-ggggcgtaAGAGGAGTGAGGTAACAGGAt-5'
||| ||| || |||||
mRNA 5'-ggcacagcTCTGCTCTGCCCTTGTCTc-3'

alignScore: 170, piRNA readNum: 15442
piRNA 3'-ttgGCAGTCAGTGTTTAGTTCTCTACGGa-5'
:||| ||:| | ||: |||||
mRNA 5'-tcaTGTCTGTAACTCGTCAGATGCCa-3'

alignScore: 166, piRNA readNum: 12509
piRNA 3'-agatatcATAGGAAGATT--TTAGGAAGTAGt-5'
| |||| |:| || :|||
mRNA 5'-atttgttTCTCCTCTTGACCAACTCTTCATc-3'

alignScore: 166, piRNA readNum: 11701
piRNA 3'-ggGTAGAAGAGT-CACTACG--AGTCCGAGGGt-5'
|||: || || | || |: | :|||
mRNA 5'-acCATTCTCACACGCGAGGTTATGGGGCTCCCc-3'

alignScore: 172, piRNA readNum: 11422
piRNA 3'-tgCCCGTT-GTGGATGACTGTCAGAGTTGAGt-5'
| |||: :||| || |:| |||||
mRNA 5'-ctGTGCAGTTACCAACT-ATAG-GTCAACTCa-3'

274. >Bag5 NM_027404 142.33 86.8132 1.6395 0.000282979

alignScore: 180, piRNA readNum: 43196
piRNA 3'-ggCATAAAGAATCAGTCGGAATGTACAACGt-5'
||||||| | | ||:| |||||
mRNA 5'-caGTATTTCT--G-CTGCTTTTGATGTTGCa-3'

alignScore: 166, piRNA readNum: 21023
piRNA 3'-ttcGGGAAGA--GAAGTCGGGCGTTAAAAAt-5'
|:| ||| || :||| :|||
mRNA 5'-agaCTTTTCTAACTCTAGCC---TAATTTTta-3'

alignScore: 171, piRNA readNum: 10028
piRNA 3'-tgTTGCTGGACTCGAAAATCGAAACCGAGTt-5'
|:| || | ||||| | |||||
mRNA 5'-atAGC-ACATTACCTTTTCCATCTGGCTCa-3'

alignScore: 165, piRNA readNum: 8383

piRNA 3'-ggtagGGTCGACGTAGGATGTTTGTAAAt-5'
 :| |:| :||| |:|||||||
mRNA 5'-gatggTCTGTTTTATC--ATAACATTTt-3'

alignScore: 172, piRNA readNum: 5137
piRNA 3'-atgGTGTCTTTGGTAGAAATGT--TGTAATGt-5'
 || | :|| :||| |||:| |||||
mRNA 5'-ttgCAAACGAA-TATCATTATAGCACATTACc-3'

275.>1700012A16Rik NM_001033162 167.833 102.429 1.63853 8.21E-05

alignScore: 170, piRNA readNum: 4984
piRNA 3'-tggGAGTCTGT-CAAAAGTCGTTAAGAACAAt-5'
 :||||: | || | | :|||
mRNA 5'-tagTTCAGGAATGTGATAAATGATTCTTGTa-3'

alignScore: 165, piRNA readNum: 1610
piRNA 3'-agcGGACAGAGTATGTCGTCA-CAACAAAAt-5'
 |: ||| || | ||| | | |||||
mRNA 5'-attCTTGATATC-T-CAGAAATGGTTGTTTt-3'

alignScore: 170, piRNA readNum: 1117
piRNA 3'-tgGTATCTAGGTTGTCGTCAGTTTACTAt-5'
 :|||| |:||: || | :|||||
mRNA 5'-ttTATAG-TTCAGGAATGTGATAAATGATt-3'

alignScore: 185, piRNA readNum: 717
piRNA 3'-acgacAGATCAT-GAATCTTCATGAACAAAAt-5'
 ||| ||| || |||| |: |||||
mRNA 5'-atgatTCTTGATCTCAGAAATGGTTGTTTt-3'

alignScore: 169, piRNA readNum: 397
piRNA 3'-cgTGTAGAGAAGCCAG-ACAA--GTCAAGTct-5'
 |:| | |||| || |||| :|||
mRNA 5'-ggATAGGTGTTGTTGTTTATAGTTCAGg-3'

276.>Act17a NM_009611 222.112 135.89 1.6345 6.44E-06

alignScore: 171, piRNA readNum: 1232
piRNA 3'-gtccCATACACAGACTCATAGGCACAAGTAt-5'

||: |||| |||| | |||||
mRNA 5'-acaaGTG-GTGT-TGAGTTGGCATGTTcATt-3'

alignScore: 165, piRNA readNum: 988
piRNA 3'-ttcgGACAAACTT---ACTTAGCAAAGATGt-5'

|||| |||: |||| | |||||
mRNA 5'-tttaCTGTGTGAGGGCTGAACC--TTCTACAa-3'

alignScore: 169, piRNA readNum: 882
piRNA 3'-acctgACAGTCCAGACGAATCTGTAAGAt-5'

|||: ||: || |: |||||
mRNA 5'-agtggTGTGAGTTGGCATGTTcATTCTg-3'

alignScore: 179, piRNA readNum: 774
piRNA 3'-tgGCCCACTCCGGACGTAGGTAAGATGt-5'

:| ||||| ||| | || |||||
mRNA 5'-acTGTGTGAGGGCTG-AACC--TTCTACAa-3'

alignScore: 167, piRNA readNum: 403
piRNA 3'-ccttcgTTTCGGTGAG-AGAGACAGGt-5'

||| || ||| | |||||
mRNA 5'-gcattaAAAACCCCTCGTGTCTGTCCc-3'

277.>Fbp1 NM_019395 161.814 99.0298 1.63399 0.000118786

alignScore: 169, piRNA readNum: 3038
piRNA 3'-atctTGGACGGTACAGAGATGTTACGGGt-5'

| || : ||| ||:| |||||
mRNA 5'-tcacAGCT-TAATG-CTTTGCAATGCCCa-3'

alignScore: 169, piRNA readNum: 2219
piRNA 3'-tgGAACGTT--GACTGTAAGTAGGAGTAGGAt-5'

:||||| | | : ||| |:|||||
mRNA 5'-gcTTTGCAATGCCCAAGGTCA-CTTCATCCTc-3'

alignScore: 173, piRNA readNum: 2168
piRNA 3'-tggaggggGTCGTGTCAGT--AAGTGTCGAAt-5'

|||:|:| :| |||||
mRNA 5'-aacctaaCAGCGTGGATAGTTTcACAGCTTa-3'

alignScore: 172, piRNA readNum: 2044
piRNA 3'-ggggaTGGAGATCGTTGTCAAGATTGTc-5'

alignScore: 167, piRNA readNum: 400
piRNA 3'-ggagagTAGAA-GTTTTCAGAAGGGTCGT-5'
 ||:| | :| : ||| | |||||
mRNA 5'-gacaagATTTTATACGTGCATACCCAGCAg-3'

alignScore: 189, piRNA readNum: 255
piRNA 3'-gagagaCAT-ACGT-CAGTAAACCAGATT-5'
 ||| |||| ||| |||||
mRNA 5'-ataaagGTAGTGCATGTCTTTTGGTCTCAA--3'

alignScore: 179, piRNA readNum: 212
piRNA 3'-cgtggagagaCAT-ACGT-CAGTAAACCAGAg-5'
 ||| |||| ||| |||||
mRNA 5'-gaaaataaagGTAGTGCATGTCTTTTGGTCTCa-3'

alignScore: 169, piRNA readNum: 204
piRNA 3'-atTTTCTA-GACGTTTGTGAA-CAGATT-5'
 |||:| |||| :: :|| |||||
mRNA 5'-atAAAAGGTAGTGCATGTCTTTTGGTCTCAA--3'

280.>Actb NM_007393 399.477 246.51 1.62053 2.52E-09

alignScore: 173, piRNA readNum: 92488
piRNA 3'-agggagtcaggTGTc-TAAAGAAGACACAt-5'
 ||| | |||||
mRNA 5'-ccggggaaggtgACAGCATTGCTTCTGTGTa-3'

alignScore: 170, piRNA readNum: 11391
piRNA 3'-agAGGAACAATCAAGAGT-GAGCAGAAAAt-5'
 |:| | | | |:| : :|:|
mRNA 5'-gtTTTTTTTTTTTTTGGTTTTGTCTTTTt-3'

alignScore: 167, piRNA readNum: 8203
piRNA 3'-tacGTAGAGGCTT-TC-GTGAG--TCATAGGTt-5'
 | |:|:| | | |:| | |||||
mRNA 5'-tgtCTTTTTTAATAGTCATTCCAAGTATCCAt-3'

alignScore: 170, piRNA readNum: 4933
piRNA 3'-tgtcggtAAACAGGAGGg---TCTTAGTAAGGt-5'
 ||| |:|:| | |:|
mRNA 5'-ttttggtTTTGTCTTTTTTAATAGTCATTCCa-3'

alignScore: 193, piRNA readNum: 3765
piRNA 3'-cggGAAGTAAAAGATGGAGATT-CAGACTTAt-5'
 ||||| |:::|:| | |||||
mRNA 5'-ataCTTCATTTT-TGTTTTTAATTTCTGAATg-3'

281.>DoIpp1 NM_020329 5.95715 3.6788 1.61932 7.60E-11

alignScore: 165, piRNA readNum: 141865
piRNA 3'-tgagTGGGTTGAGTGG--AAGATGGAAAAAt-5'
 ||| :| |||| | :|||||
mRNA 5'-acagACCAGAGTCACCAAGTGGAGCCTTTTTTt-3'

alignScore: 166, piRNA readNum: 17716
piRNA 3'-cgGGACGACGAGA-AACTCAA-GTAAGAAGGt-5'
 :| ||| | | |: | | :|||
mRNA 5'-tgTCGGCTGGGCTGCTGGCTTGTGTTCTTCCc-3'

alignScore: 170, piRNA readNum: 11046
piRNA 3'-aatgtcggacGTCGAGTTTCTCAGGGt-5'
 |||| | |:|||||
mRNA 5'-gctctgatccCAGCTGCCAGGAGTCCct-3'

alignScore: 175, piRNA readNum: 10426
piRNA 3'-cccgtettCCGTACGGTCGAGAGAACAGTct-5'
 | ||| ||| | |||||
mRNA 5'-ccaccatcGCCATTCCAGAACCCTTGTcAGt-3'

alignScore: 172, piRNA readNum: 10349
piRNA 3'-ctcGGAAGA--CCCT--AGAAGTAAACAGGAt-5'
 |||:| ||| || | |||||
mRNA 5'-gtcCCTTTTAAGGGACTCTCTCCAGGTTGCCTg-3'

282.>Fam78a NM_175511 61.6228 38.2673 1.61033 0.0206194

alignScore: 167, piRNA readNum: 185258
piRNA 3'-tctctccttAGGTTcACAAGACGGAGCTct-5'
 |||| ||| | | |||||
mRNA 5'-cctggctccTCCACGTGCT-TCCTGCAGg-3'

alignScore: 165, piRNA readNum: 104304

piRNA 3'-ggGTTGAGTGTGTTGTAGTTTGTCTACGGt-5'
| : |||| ||: | | |||||
mRNA 5'-taCTGCTCAGAAGGA-AACCCAGATGCCc-3'

alignScore: 165, piRNA readNum: 59414
piRNA 3'-tgaaGGGGATCGTTGGGAAct-5'
|: ||| | ||: | | |||||
mRNA 5'-agggCTCCTCTCCTATCACAACTCAGt-3'

alignScore: 165, piRNA readNum: 13295
piRNA 3'-ggtTGGAGGTAAGTAGGATA-AAGGATAGt-5'
||| ||| |||| | |||||
mRNA 5'-cccACCCCCAGGGCTCCTCCTCTATCa-3'

alignScore: 170, piRNA readNum: 12092
piRNA 3'-ctcacGTATAATAGTGAAGACGTCCAAGTA-5'
|||| | : |||| | |||||
mRNA 5'-gaagcCATATCAGAGCTTCT---GGTTCATt-3'

283.>Clip4 NM_030179 8.68271 5.40829 1.60544 0.0159448

alignScore: 166, piRNA readNum: 51946
piRNA 3'-tgccGGCTTAAGTAA-ACGTGTCGTAAGAAt-5'
|: | ||: || | :| | |||||
mRNA 5'-tgaaCTTATTTTATTATATAGATGATTTCTTa-3'

alignScore: 180, piRNA readNum: 37996
piRNA 3'-cgtcgaaGACTTAAGTTGAAAGTTCAAGGt-5'
|| ||||: |||| | |||||
mRNA 5'-ttgcacaCTTAATTTAACTT---AAGTTCc-3'

alignScore: 170, piRNA readNum: 18465
piRNA 3'-cttACCTGTCAATACTCAGAAGGGTTCAAGGt-5'
|| ||| ||| | |: |: |||||
mRNA 5'-tttTGCACACTTA--ATTTAACTTAAGTTCc-3'

alignScore: 166, piRNA readNum: 14028
piRNA 3'-ggGCAGG-CTGTAGG-GTAGATAGGGTAAGGt-5'
| ||| ||: |: | | | |||||
mRNA 5'-agCTTCGGATGTTTACA-CGA-CCCATTCCc-3'

alignScore: 165, piRNA readNum: 11602

||| :||:|:| |:| :|||||||
mRNA 5'-actacttTGCATAGTTTTGTTGTCTATCTGCa-3'

alignScore: 170, piRNA readNum: 13126
piRNA 3'-ttgGAAAGTTATGTGGGTGAAAAGTAt-5'
:|||| || : | :|:|||||||

mRNA 5'-ttgTTTTTAAAAGGAATTATGTTTTTCATt-3'

alignScore: 174, piRNA readNum: 10699
piRNA 3'-ggaTTAGGTA--TGAGGACAAGCACTTGTCTt-5'
||| |:| ||||| ||| |||||

mRNA 5'-ttaAATACGTAAACTCCT-TTC-AGAACAGAA-3'

alignScore: 172, piRNA readNum: 7816
piRNA 3'-cgCGGAAACGACGGATGATGAAAAGAAAt-5'
||:|||| | ||: ||| |||||

mRNA 5'-ctGCTCTTGAAGCT--CTAATTTTCTTg-3'

286.>Agpat1 NM_018862 185.714 116.904 1.5886 3.03E-05

alignScore: 170, piRNA readNum: 17518
piRNA 3'-ccAAGAGT--ACTAACACGTCATACACAAGAAAt-5'
|||| | ||| ||| || | |||||

mRNA 5'-acTTCTGAAGTGAATGT-CACTCCATGTTCTTt-3'

alignScore: 179, piRNA readNum: 14028
piRNA 3'-gggcaGGCTGTAGGGT-AGAT-AGGGTAAGGt-5'
|| :| ||||| |||| | |||||

mRNA 5'-ccaccCCTGCCTCCCACTCTAGACCCATTCCt-3'

alignScore: 166, piRNA readNum: 10401
piRNA 3'-tgcgGAAACCTTCTCTTATAGTGCATGAt-5'
| | ||:| || |: | |||||

mRNA 5'-ctcaCCTGGGACTGACTGCCTCAGTACTg-3'

alignScore: 171, piRNA readNum: 6982
piRNA 3'-tctcaTGTGTTACCG--TACGGT-AGGTAGGGt-5'
|:|||| ||: | | || |||||

mRNA 5'-atccgATACAAGGGTGAAGACATTCCATCCCa-3'

alignScore: 177, piRNA readNum: 6796
piRNA 3'-acGAGAGGAGGGGTC-GAGATG-GGAAGGA-5'

| |||:|||| :| | | | |||||
mRNA 5'-ggCCCTCTTCCGGGTCCCACTCCTCCTc-3'

287.>Nup98 NM_022979 139.926 88.2453 1.58565 0.00069581

alignScore: 174, piRNA readNum: 22310
piRNA 3'-aggtAGGG-GC-TTGGGG--GTTGATTCAGGAt-5'
| | | : | | : | | | | | | | | | |
mRNA 5'-atgtTCCTATGTAGTCCCTACAATTAAGTCCTc-3'

alignScore: 175, piRNA readNum: 3864
piRNA 3'-agGA-GGGGAGTTACGGGTATGAATTTAAAt-5'
| | | : | | : | | | | | | | | | |
mRNA 5'-ccCTGCTTTTGTCTCTATATAAATTTt-3'

alignScore: 167, piRNA readNum: 3838
piRNA 3'-tggagGGGTAGAGTGTGAGGAACGAAAt-5'
| | | | | | | : | | | | | | | | | |
mRNA 5'-agaaaCCCAAGGTCA-GCACCTGCTTTTt-3'

alignScore: 176, piRNA readNum: 3045
piRNA 3'-tacGAGCGGGTTAAGTTTATGTCAAAAt-5'
: | : | | | | | | | : | | | | | | | | | |
mRNA 5'-gcaTTTACACCAAAT--ATGTACAGTTTt-3'

alignScore: 166, piRNA readNum: 2755
piRNA 3'-aggaACTGGAAGAAAGATCAGTCAGGGAt-5'
| | : | | | | | | | : | | | | | | | | | |
mRNA 5'-agtaTCATATATGTTCTATGTAGTCCTa-3'

288.>Ahsa2 NM_172391 71.4605 45.1209 1.58376 0.00200767

alignScore: 167, piRNA readNum: 48809
piRNA 3'-agACCA-TA--CGACAGGGAA--AATAGATGTTAt-5'
| | | | | | | | | | : | | | | | : | | | | | | | | | |
mRNA 5'-gcTGGTCATAGGCTGCTACTTGATTG-CTACAATt-3'

alignScore: 165, piRNA readNum: 22363
piRNA 3'-taaggGGTAGGACGAATC-GGATGAAAGAAAt-5'
| : | | | | | | | | | : | | | | | | | | | |
mRNA 5'-tacagCTAACCT--TTAGTTTTTCTTTCTTt-3'

alignScore: 165, piRNA readNum: 21675
piRNA 3'-tgcggaGGTGAAGAGTGTGAAGTTTAGGGt-5'
|||| |||| | |||||
mRNA 5'-tcccagCCACCCCTCAGCC--CAAATCCa-3'

alignScore: 170, piRNA readNum: 18936
piRNA 3'-tgagtccAGGATAGAAAGACGAGGTCAAAGt-5'
|||| |: |||| |||||
mRNA 5'-atactatTCCT-TTATTCTAAGCCAGTTTCc-3'

alignScore: 187, piRNA readNum: 17430
piRNA 3'-tgcAGATGAAGATACGGTCTTAAGTTCct-5'
|:| |||| |||| |||||
mRNA 5'-tccTTA-TTCTAAGCCAG-TTCCAAGgt-3'

289.>Agpat6 NM_018743 175.996 111.153 1.58337 0.000148761

alignScore: 165, piRNA readNum: 51946
piRNA 3'-tgCCGGCTTAAGTAAACGTGTCGTAAGAAt-5'
| |: |||| | | |:|||
mRNA 5'-ttGCCTTCATTCCTGAGAAATGTATTCTTg-3'

alignScore: 171, piRNA readNum: 18936
piRNA 3'-tgaGTCCAGGATAGA-AAGACGAGGTCAAAGt-5'
|| | |:|:| | ||: :|||
mRNA 5'-ccaCATGACTTGTTAATATGTCTCAGTTTCc-3'

alignScore: 169, piRNA readNum: 16260
piRNA 3'-tgTGTACC-TGACGAGTGAGATGTCAGTCgt-5'
:| | || | || |:|||
mRNA 5'-ctGCAGGGCACTCCGCA-GATGCAGTCAGCc-3'

alignScore: 175, piRNA readNum: 11666
piRNA 3'-cggtaGACAGTTTCTGGTATGTGCAGTAGt-5'
||| || | |: ||| |||||
mRNA 5'-tgttgCTGCCACAGCCTCTAC-CGTCATCc-3'

alignScore: 165, piRNA readNum: 6796
piRNA 3'-acgagaggaggGGTCG--AGATGGGAAGGAt-5'
:||| |||:| |||||
mRNA 5'-cgcagatgcagTCAGCCTTCTGTCTTCCTt-3'

290.>1700003M02Rik NM_027041 268.871 170.269 1.5791 3.09E-06

alignScore: 168, piRNA readNum: 1417
piRNA 3'-atacggtcgaGTGTTGCTAGACATTGAGGt-5'
||| |:|:|||||||
mRNA 5'-----aaaCACCTGGGTTTGTAACTCCt-3'

alignScore: 168, piRNA readNum: 67
piRNA 3'-taactcacTGAGTACCGACGGACATTGAGGt-5'
|| | ||| |:|:|||||||
mRNA 5'-----aaACACCTGG--GTTTGTAACTCCt-3'

291.>Mtch2 NM_019758 138.143 88.1088 1.56787 0.000971981

alignScore: 172, piRNA readNum: 75935
piRNA 3'-tggtagGAGTACAGATGTTATCAGAAACTt-5'
||:| ||:|: ||| |||||
mRNA 5'-gagtagCTTA-GTTTGAAT-GTCTTTGAt-3'

alignScore: 166, piRNA readNum: 23561
piRNA 3'-ggGGCGTAAGAGGAGTGAGGTAACAGGAt-5'
|:| | |:| |:|:|: |||||
mRNA 5'-gtCTGCCTTTT--TTGTTCT-TTGTCTa-3'

alignScore: 167, piRNA readNum: 16869
piRNA 3'-tcgGTAAAGTAAAGATGTGTTGATTAGAAt-5'
|: ||: || || || :|||
mRNA 5'-gcaCGCTTTTTTAATAATCATTTAATCTTg-3'

alignScore: 167, piRNA readNum: 13126
piRNA 3'-ttGGGAAAGTTATGTGGGTGTAAGTAt-5'
||| |: || || :|||
mRNA 5'-ttCCCTAAAGGAACAAGCAGGTTTTTCATg-3'

alignScore: 169, piRNA readNum: 12918
piRNA 3'-ttGAAGTACGGTCGATAGGTAACAGAGt-5'
:| | |:| |:| | |||||
mRNA 5'-tcTTTGATGTCAAAGTAC-TTTGTCTCa-3'

292.>Ubxn6 NM_024432 129.368 82.5365 1.5674 0.00142164

alignScore: 168, piRNA readNum: 7222
piRNA 3'-ggggTGGACTTCGGAGGGGAC--TAGAACct-5'
: ||| |: |||: || |||||
mRNA 5'-tggaGCCTTAGCCCTCTGGTGCCATCTTGGa-3'

alignScore: 179, piRNA readNum: 4178
piRNA 3'-tacGGAAAGCAGTCCA---GTCGATGTCCTTCct-5'
||||| :: || ||| |: |||||
mRNA 5'-attCCTTTCCTGAGTCCCCAGCAATAGGAAGGa-3'

alignScore: 171, piRNA readNum: 3591
piRNA 3'-cccCCGGA--GGGTGAATAAGATGTGGAGAGTACa-5'
|||:| ||||| || || |||||
mRNA 5'-gcaGGCTTGGCCCACTGTGGCTCCA-GTCTCATGc-3'

alignScore: 166, piRNA readNum: 3350
piRNA 3'-ctcacaGAGTACGGTTTACGGACTCAGGGt-5'
| ||| || | |||||
mRNA 5'-cccaaaCCCATTCc-TTTCCTGAGTCCc-3'

alignScore: 171, piRNA readNum: 2387
piRNA 3'-ttGGTT-GAG-ACGATGGGATTTTTGGGAt-5'
|||: ||| |||::| |||||
mRNA 5'-ctCCAGTCTCATGCTGTTC-CCAAACCCATt-3'

293.>Spcs1 NM_026911 194.205 123.971 1.56654 6.20E-07

alignScore: 167, piRNA readNum: 5474
piRNA 3'-ggggtaggaCGAAT---CGGATGAAAGAATAt-5'
||||| |||||: |||||
mRNA 5'-aaaacatgaGCTTAAACCGCCTATGTTCTTATa-3'

alignScore: 167, piRNA readNum: 4577
piRNA 3'-agTCGGTGTAGTGGTAT--AAGT--AGATTAGt-5'
| |:| ||::|||: ||| |||||
mRNA 5'-agATCTA-ATTGTCATGGCTTCATTTCTAATCc-3'

alignScore: 175, piRNA readNum: 3207
piRNA 3'-agacACT-TGTAG-GGAAGGGAACAAAGGAt-5'

||| || | ||| |:| |||||
mRNA 5'-ttcaTGATTGAGCACCTGCTTTTGTTCCTg-3'

alignScore: 177, piRNA readNum: 2779
piRNA 3'-ggtaggaCGAAT----CGGATGAAAGAATATCt-5'
||||| |||||: |||||
mRNA 5'-aacatgaGCTTAAACCGCCTATGTTCTTATAGc-3'

alignScore: 167, piRNA readNum: 1888
piRNA 3'-tgGATTGCGATG--GAGGAAA-AGGGTAGAGt-5'
:||| |:|: || :||| | |||||
mRNA 5'-ttTTAA-GTTATGACTATTTTATACCATCTc-3'

294.>Nbr1 NM_008676 73.6515 47.1402 1.56239 0.0167434

alignScore: 168, piRNA readNum: 24726
piRNA 3'-cggCTAC-CTCG-TAAGGCTGCGGGAATCTt-5'
|| | |||: | |: ||| :|||
mRNA 5'-gtgGAAGCGAGTAAGTGGACTTCCTTAGAt-3'

alignScore: 167, piRNA readNum: 9802
piRNA 3'-aggaagggatGTAGGACAAACACTGACAt-5'
|:|||| || |||||
mRNA 5'-aagtagtagtCGTCCTTTACTGACTGTc-3'

alignScore: 165, piRNA readNum: 8872
piRNA 3'-ggTGGTAGAATCA-AAGAGATGTAAGATTTt-5'
|| |||| | | || |:| |||||
mRNA 5'-ttACAATCTAACTCTTGAATGC-TTCTAAAt-3'

alignScore: 177, piRNA readNum: 8421
piRNA 3'-ttCCGGTTGGCTTTAAGATCGAGTGAAAGGt-5'
|| | || || | || || |||||
mRNA 5'-aaGGAC-ACAGAACTGCT-GCTGACTTTCg-3'

alignScore: 177, piRNA readNum: 8124
piRNA 3'-gacGTGATATGTGA--AGATG-GAGATTGAGAt-5'
||: |||:::| |:||| |||||
mRNA 5'-actCATAATATGTTTATTACAATCTAACTCTt-3'

295.>Calp3 NM_007590 144.193 92.3662 1.5611 0.000831972

alignScore: 169, piRNA readNum: 33923
piRNA 3'-cgtCAGAGATCTCGTATGG-TAGGTTGATt-5'
||| ||| | |||:| | : |||||
mRNA 5'-tttGTC-CTA-AACATGCCGGGCCAACTAa-3'

alignScore: 173, piRNA readNum: 15890
piRNA 3'-cggtAGAGGAGC-AGGCACACAAAGGAAAAt-5'
| |:| | |:| ||| |||||
mRNA 5'-gtttTATTTGGTTTTTGTTCCTTTTt-3'

alignScore: 172, piRNA readNum: 10685
piRNA 3'-ggaCTTTTGTc-AGTCGGA-TGAAGAAAGt-5'
| :::||| ||:|:| | : |||||
mRNA 5'-aacGCGGGCAGTTCGGTCTGGTTCCTTTc-3'

alignScore: 177, piRNA readNum: 9872
piRNA 3'-ttggACGGGACGGATGGTGAT-AGAGTAGAt-5'
| ||:| ||| :| ||: |||||
mRNA 5'-tgggTTCCTTCTTCTCTGTCTCATCTg-3'

alignScore: 165, piRNA readNum: 8735
piRNA 3'-tggAAG-GAGGGTGAAGAGAGTAAAAGAGt-5'
||| ||: : ||| :|: |||||
mRNA 5'-cagTTCGGTCTGGTTCCTTCTTCTTCTc-3'

296.>Cct2 NM_007636 173.392 111.535 1.5546 0.000277984

alignScore: 168, piRNA readNum: 11084
piRNA 3'-ggcgaGTTGAGGTCGAAAGAGATGTTCAt-5'
||| |:||| || |:|||
mRNA 5'-ccataCAA-TTCAG-TTGATTTACAAGTt-3'

alignScore: 167, piRNA readNum: 5685
piRNA 3'-atTGGGGTAGAGACGGTA-GAGAAGTCAA-5'
||: : || :| :||| | |||||
mRNA 5'-ttACTGTTTCATTTCCATACAATTCAGTTg-3'

alignScore: 172, piRNA readNum: 5277
piRNA 3'-ttAGTGCCTCAGGTGACGAGT----CACATAAt-5'
|:| |||:|:| ||| |||||
mRNA 5'-atTTAC-AAGTTCATTTCTCATACTGTGTATTa-3'

alignScore: 167, piRNA readNum: 3847
piRNA 3'-agGGTCAATTTGAAGGCGGGTCAATTTGt-5'
 ::|| |:| ||||:|: |||||
mRNA 5'-caTTAGCTGACCTTCTGT---GTTAAACa-3'

alignScore: 167, piRNA readNum: 2853
piRNA 3'-agAGACGAGAATATGAGAGGGTAAAGAGt-5'
 || |:| | ||| ::|||||
mRNA 5'-atTCAGTTGATTTACAAGTTCATTTCTCa-3'

297.>Pdha2 NM_008811 101.464 65.4004 1.55143 0.00561357

alignScore: 177, piRNA readNum: 44963
piRNA 3'-ttGGCACATGGTACGG-GATGC-TATAGAA-5'
 ::|||| ||| |: |||:| |||||
mRNA 5'-caTTGTGTTGATACTACTATGAATATCTTt-3'

alignScore: 172, piRNA readNum: 26246
piRNA 3'-ctccCAGGTTGAGAGA---TGA-CCTGTAAATat-5'
 ||: ||:|:|:| | | |||||
mRNA 5'-atttGTAAATTTTTTTTCAGTGGGACATTATg-3'

alignScore: 171, piRNA readNum: 7838
piRNA 3'-ggacttTATGGAGATGGTTATAGAt-5'
 ||||: |||: |||||
mRNA 5'-tgttgcATACTACTATGAATATCTt-3'

alignScore: 166, piRNA readNum: 6496
piRNA 3'-tgtcagattGTAGTATTGGAGA--AGGTCCAAt-5'
 ||| | ||:|||| |||||
mRNA 5'-ttccccctcCATGTCCAATCTCTGACCCAGGTTc-3'

alignScore: 171, piRNA readNum: 4739
piRNA 3'-taCGTGTGGAGTCTAGGTTCAAGAACA-5'
 |:| |:|:|: |||:|: |||||
mRNA 5'-aaGTAGATTTTGTATTTTCTTCTTGTt-3'

298.>Tmem214 NM_144525 97.5552 62.9175 1.55053 0.00667727

alignScore: 168, piRNA readNum: 30918

piRNA 3'-tccGAGAT-GT-GAAGTTACGGTT-TGTCGGGt-5'
||||| || ||| : | ||: |||||
mRNA 5'-cctCTCTATCAGCTTGGTTCACAGCACAGCCCa-3'

alignScore: 173, piRNA readNum: 20713
piRNA 3'-cgGATAGTC-AGTTTGGTCTTTCTGTCGGGt-5'
|||||| |::: || | : |||||
mRNA 5'-ctCTATCAGCTTGGTTCA-CAGCACAGCCCa-3'

alignScore: 166, piRNA readNum: 12240
piRNA 3'-tgaGGGTAGGTGGTGGGAGTGAAGACGAGt-5'
|::: |: |: ||| |||||
mRNA 5'-agcCTTGGCTTCTCAACTC-CATTCTGCTCg-3'

alignScore: 166, piRNA readNum: 12049
piRNA 3'-ggtCAGGAGA---TGGGACGGTTTTTCCCCt-5'
| |||| | ||||: :|||
mRNA 5'-agcGCCCTCTGTACGCTGCT--GAAGGGGt-3'

alignScore: 167, piRNA readNum: 11422
piRNA 3'-tgcCCGTTGTGGATGACTGTCAGAGTTGAGt-5'
| ||: :||| ||:| |||||
mRNA 5'-tctGTCAGAGCCT--TGGC-TTCTCAACTCc-3'

299.>Adad1 NM_009350 364.481 235.222 1.54952 1.64E-07

alignScore: 166, piRNA readNum: 371
piRNA 3'-ataggATCTG--GTCTGAT-TTT--TTTTTAGGAt-5'
||||| || |:| | | |||||
mRNA 5'----agTAGACAACACATTGCATATTAATAATCCTt-3'

alignScore: 170, piRNA readNum: 348
piRNA 3'-ggTGTG--GTCGGATGTTTACAGAATAAAAt-5'
|||: || :|| |||| :|||
mRNA 5'-acACATTGCATATTAATAATCCTTTATTTt-3'

alignScore: 170, piRNA readNum: 148
piRNA 3'-ggtagGTGGGT-AC-TATGATTT---GGAAATAt-5'
|| | || |||:|||| |||||
mRNA 5'-gtagaCAACACATTGCATATTAATAATCCTTTATt-3'

alignScore: 168, piRNA readNum: 110

||||| || :||| || |||||
mRNA 5'-aagtTGGGACACCTGAGTCTCTCCTCTTGTTCc-3'

alignScore: 168, piRNA readNum: 13843
piRNA 3'-gggaaACAGAAACGCAAACGCAAGGAAGGt-5'

| || ||| | || |||||
mRNA 5'-caccgTCTCCCTGC-ATGGCCTTCCCTTCc-3'

alignScore: 165, piRNA readNum: 12418
piRNA 3'-tggaTGAGGTACCAGAGTCG--TAGAGTCAAt-5'

||||| | : || | | |||||
mRNA 5'-catcACTCCAGCCTCCATCCAAGCTCAGTTt-3'

alignScore: 182, piRNA readNum: 12017
piRNA 3'-ttcGT-CGAAGTCAGTTCCCGTCTTAGGt-5'

|| || :| |||| |||||
mRNA 5'-tccCATGCAGAGGGCAAGAGGCAGAATCCA-3'

alignScore: 171, piRNA readNum: 10811
piRNA 3'-gtaACAGAGGTATAT-GTCTGTCAAGGAt-5'

|| | |||| | : |:| |||||
mRNA 5'-gccTGGC-CCAGAAGCCGGGCAGTTCCTg-3'

302.>Gm166 NM_001033040 22.2218 14.4401 1.5389 3.26E-05

alignScore: 165, piRNA readNum: 64245
piRNA 3'-cccgtCAGTCAGACCGTCAAGTAAGAAAGt-5'

||| |||| : || |||||
mRNA 5'-aaaatGTCCTCCTGGAGAGTCCTTCTTTCt-3'

alignScore: 176, piRNA readNum: 13073
piRNA 3'-ggAAAGGTGGGATTGAGCTGTATCAGGTct-5'

| ||:| |||:| || || |||||
mRNA 5'-caTCTCTGCCCTGA-TCTCCA-AGTCCAGa-3'

alignScore: 165, piRNA readNum: 12418
piRNA 3'-tgGATGAGGTAC-CAG--AGTCGT-AGAGTCAAt-5'

||: |:| || | | ||||| |||||
mRNA 5'-ggCTGGTTTCTGTGACAAGCAGCATTCTCAGTTg-3'

alignScore: 172, piRNA readNum: 10268
piRNA 3'-agacgtcgaaTTAC-GGAGAAGCACTCAGGAt-5'

||||| |||| | | |||||
mRNA 5'-tagaaaaaaAATGTCCTCCTGGAGAGTCCTt-3'

alignScore: 165, piRNA readNum: 9409
piRNA 3'-atGGTGGa--TGAAGGTG--TGTCTCAAAGGGt-5'
||||| || || | |:|||||
mRNA 5'-ccCCACCTTCACGAGCACCTTCTGGGTTCCct-3'

303.>Gm128 NM_001024841 150.755 98.2971 1.53367 0.000970932

alignScore: 166, piRNA readNum: 24141
piRNA 3'-ttGTTCTGGTCTGTTAGGGTTGTGTACct-5'
||| ||| |: : ||| |||||
mRNA 5'-gtCAA-ACCTGGGGCTCC--ACACATGGt-3'

alignScore: 168, piRNA readNum: 17716
piRNA 3'-cgggacGACGAGAACTCAAGTAAGAAGGt-5'
||:| || | | |||||
mRNA 5'-tctagcCTGTCTCTTACCCCTTCTTCCa-3'

alignScore: 167, piRNA readNum: 12304
piRNA 3'-taCGGACGGAGTCCTAGTGATGTACAGAt-5'
|:| ||||| || | | |||||
mRNA 5'-atGTCTCCCTCAAGA-GA--AGATGTCTAc-3'

alignScore: 165, piRNA readNum: 8702
piRNA 3'-atacggacaCA-ATG-GTTGTCTAAGGGAAAAt-5'
||| ||| : |:| | |||||
mRNA 5'-gagaagaTGCTACATTATAAACTCCCTTTTc-3'

alignScore: 168, piRNA readNum: 6999
piRNA 3'-atGGGTATG-ATAGGGTA-AAATGTCTa-5'
|||: || |: |: :| |||||
mRNA 5'-tcCCCAGCACTTGGCTGTGTGTTACAGa-3'

304.>Atp1b3 NM_007502 162.578 106.703 1.52365 0.000724937

alignScore: 165, piRNA readNum: 22626
piRNA 3'-taCCGC-GACAGTAGCAGGT-GCTCGAGGGt-5'
| | | | | | ||| :|||
mRNA 5'-cgGTCGCCAGACAGGGACCAGTGAGCTCCCg-3'

alignScore: 170, piRNA readNum: 10019
piRNA 3'-agACGATGGATG-AAGGTTTGACAAAGt-5'
|| | | ||: ||||:|||||||
mRNA 5'-ccTG-TCCGTATGCTCCAGACTGTTTct-3'

alignScore: 168, piRNA readNum: 5204
piRNA 3'-acagTAGAC-AACACAAGAAACGAAGACgt-5'
||||| || || |||||
mRNA 5'-gtggATCTGAAAGTAGACTCTGCTTCTGcg-3'

alignScore: 166, piRNA readNum: 4550
piRNA 3'-ggtgtGCCTAGGTTCTGAAG-CACAGGAt-5'
| |||| || ||| |||||
mRNA 5'-gcttcCAGATCATAGTGTTCAGTGCCTc-3'

alignScore: 167, piRNA readNum: 4245
piRNA 3'-aaGGGAAAGAGTGTGGCGGGAACAAAAt-5'
|| ||:|::: :::|:: |||||
mRNA 5'-caCCGATTTTTGTTGTTGTTGTTTg-3'

305.>Nudt18 NM_153136 88.7556 58.726 1.51135 0.014078

alignScore: 166, piRNA readNum: 12741
piRNA 3'-tgGAAGACT---GTGGTCGAGGTG---ATGTAGAGt-5'
| ||||| |||: ||| |: |||||
mRNA 5'-agCCTCTGAGGGCACTCACTCAATGTGTACATCTCc-3'

alignScore: 178, piRNA readNum: 12655
piRNA 3'-cggcCTTGCCAAG-GAAAGAAGGTGACGGAt-5'
||||||| | | | |||||
mRNA 5'-tgttGAACGGTTCGGTCTGGTGAAACTGCCTa-3'

alignScore: 169, piRNA readNum: 11191
piRNA 3'-agGAGTACGTGTCGAAGGAGACTAAGTct-5'
| | || |:| || :| |||||
mRNA 5'-acCCCCTGGATA-CTCTTTATGATTcAGa-3'

alignScore: 174, piRNA readNum: 10583
piRNA 3'-tgtGGCTTATATTC-TCTCGTTAGTCTGGt-5'
|| |||| ||| | ||| |||||
mRNA 5'-accCCTAATAAAAGCACAGC--TCAGACct-3'

alignScore: 173, piRNA readNum: 9598

piRNA 3'-caCCCTTCGGTAG-AC--AAGAGAACAAGTTCct-5'

||||:| ::|| || | | ||| |||||

mRNA 5'-aaGGGAGGGTGTCTTGAATCCACTT-TTCAAGGg-3'

306.>LancI1 NM_001190984 0.0156181 0.0103346 1.51124 0.00582969

alignScore: 167, piRNA readNum: 147401

piRNA 3'-taCGGATAA---GCAGATGTACGAAG--AGAAAGGt-5'

||||||| : |:|| | || | |||||

mRNA 5'-acGCCTATTGACTCTTTAGCTCCTCCCTTCTTTCct-3'

alignScore: 175, piRNA readNum: 68064

piRNA 3'-ctGGGGAAATGGGTGTTTGTAAATAAct-5'

|:|:||||: :|| : |: : |||||

mRNA 5'-ggCTCTTTTGGTCATTCAGTTTTTATTGg-3'

alignScore: 178, piRNA readNum: 32471

piRNA 3'-tgtCGTGGAAGGTGAGTAGAT-TCTGAGt-5'

|||: || :||| || | |||||

mRNA 5'-cctGCATATTGTCACCCATGAACAGACTCA-3'

alignScore: 165, piRNA readNum: 26434

piRNA 3'-cgatGGTAAGAGGGTCCAGATAAGGTCTGAt-5'

:|: | || ||| ||| |||||

mRNA 5'-ttccTCGATATCAAAGGCCTA-ACCAGACTc-3'

alignScore: 169, piRNA readNum: 19044

piRNA 3'-ttACGGTCAGTGTATGAGAT-AGGCAGAACGAt-5'

| |: | ||: |:|| | |:| |||||

mRNA 5'-ctTACTTGACATTAATTCCAGTTCCTCTTGCTt-3'

307.>1700029F12Rik NM_025585 24.8497 16.5662 1.50002 5.67E-07

alignScore: 168, piRNA readNum: 35587

piRNA 3'-ccaAACTCTGATGAAAGACGGTCAAGATTGt-5'

|| |||| || | ||: |||||

mRNA 5'-ataTTTAGAC-ACAAGCCGCT-GTTCTAACa-3'

alignScore: 167, piRNA readNum: 12918

piRNA 3'-ttgaaGTACGGTCGA-TAGGTAACAGAGt-5'
| ||| |||| | ::: |||||
mRNA 5'-tctggCCTGCAAGCTCACTTGGTTGTCTc-3'

alignScore: 189, piRNA readNum: 8735
piRNA 3'-tggaaGGAGGGTGAAGAGAGTGAAGAGt-5'
||||||| ||||| |||||
mRNA 5'-taaccCCTCCCA--TCTCTCTTTCTc-3'

alignScore: 171, piRNA readNum: 7222
piRNA 3'-ggGGTGGACT-TCGGAGGGGACTAGAACc-5'
:|||:|: |:|||:|: |||||
mRNA 5'-gcTCACTTGGTTGTCTCTCT--ATCTGGt-3'

alignScore: 178, piRNA readNum: 6249
piRNA 3'-tgGTAGTTAGGGAGTC-TTCTT--AAGGTCGGt-5'
|| |||| |||| || || |||||
mRNA 5'-atCAACAATGGGTCAGCAACAAGTTTCCAGCCc-3'