

Figure S4. The schemes of 12 piRNAs and spiRNAs interaction with CDS gRNA SARS-CoV-2 from 4670 nt to 29475 nt

piRNA or spiRNA; BS, nt; Region; ΔG , kJ/mol; $\Delta G/\Delta G_m$, %; piRNA length, nt

piR-2047904; 4670; CDS; -136; 81; 32

```
5' -CUCAAAGUGCCAGCUACAGUUUCUGUUUCUUC-3'
    | | | | | | | | | | | | | | | | | | | |
3' -AUGCCUCAAGGUCGUUGUCUAAGACGAAGAAG-5'
```

spiR-2047904; 4670; CDS; -168; 100; 32

```
5' -CUCAAAGUGCCAGCUACAGUUUCUGUUUCUUC-3'
    | | | | | | | | | | | | | | | | | | | |
3' -GAGUUUCACGGUCGAUGUCAAGACAAAGAAG-5'
```

piR-912075; 9102; CDS; -140; 80; 33

```
5' -AAAGUUUACGCCUGACACACGUUAUGUGCUCA-3'
    | | | | | | | | | | | | | | | | | | | |
3' -UUACAAGUGAGGGACCGUGUAUCAUCCACGAGU-5'
```

spiR-912075; 9102; CDS; -175; 100; 33

```
5' -AAAGUUUACGCCUGACACACGUUAUGUGCUCA-3'
    | | | | | | | | | | | | | | | | | | | |
3' -UUUCAAUAGCGGGACUGUGUGCAAUACACGAGU-5'
```

piR-2352720, 9123; CDS; -138; 81; 34

```
5' -GUUAUGUGCUCAUGGAUGGCUCUAUUUUAUCAAUU-3'
    | | | | | | | | | | | | | | | | | | | |
3' -CGAUCCACGAGCAUUUACCCUGAUAAUAAUUA-5'
```

spiR-2352720, 9123; CDS; -170; 100; 34

```
5' -GUUAUGUGCUCAUGGAUGGCUCUAUUUUAUCAAUU-3'
    | | | | | | | | | | | | | | | | | | | |
3' -CAAUACACGAGUACUUACCGAGAUAAUAAGUUA-5'
```

piR-2490582; 10012; CDS; -142; 83; 33

```
5' -UUACCAACCACCACAAACCUCUAUACCUCAGC-3'
    | | | | | | | | | | | | | | | | | | | |
3' -AAAGGUGGUGGUGGUUGAAGUAAAGGAAUCG-5'
```

spiR-2490582; 10012; CDS; -171; 100; 33

```
5' -UUACCAACCACCACAAACCUCUAUACCUCAGC-3'
    | | | | | | | | | | | | | | | | | | | |
3' -AAUGGUUGGUGGUGUUUGGAGAUAGUGGAGUCG-5'
```

piR-1491787; 17115; CDS; -138; 80; 32

```
5' -UGGCCUAGCUCUCUACUACCCUUCUGCUCGCA-3'
    | | | | | | | | | | | | | | | | | | | |
3' -ACUGGAUCGAGUGACGAAGGGUAGAGGACUGU-5'
```

spiR-1491787; 17115; CDS; -173; 100; 32

```
5' -UGGCCUAGCUCUCUACUACCCUUCUGCUCGCA-3'
    | | | | | | | | | | | | | | | | | | | |
3' -ACCGGAUCGAGAGAUGAUGGGAAGACGAGCGU-5'
```

piR-3555322; 21712; CDS; -136; 82; 34

```
5' -AACUCAGGACUUGUUCUUAACCUUUCUUUCCAAU-3'
    | | | | | | | | | | | | | | | | | | | |
3' -UUGAGUUUUGAAAGAGAGUAGAAAGGUAAAGUUA-5'
```

spiR-3555322; 21712; CDS; -166; 100; 34

```
5' -AACUCAGGACUUGUUCUUAACCUUUCUUUCCAAU-3'
    | | | | | | | | | | | | | | | | | | | |
3' -UUGAGUCCUGAACAAGAAUGGAAAGAAAAGGUUA-5'
```

piR-703629; 25672; CDS; -142; 82; 31
 5' -CUUUUGCUCGUUGCUGGCCUUGAAGCCC-3'
 |||||
 3' -CAAAACAAGCGACGACGGACGGGACGUCGGG-5'
 spiR-703629; 25672; CDS; -173; 100; 31
 5' -CUUUUGCUCGUUGCUGGCCUUGAAGCCC-3'
 |||||
 3' -GAAAACGAGCAACGACGACCGGAACUUCGGG-5'

piR-1525356; 26106; CDS; -136; 80; 32
 5' -UGAGCCUGAAGAACAUGUCCAAAUUCACACAA-3'
 |||||
 3' -CCUUGGACUUACUGUCCAGGUUUCAGUGUGUC-5'
 spiR-1525356; 26106; CDS; -170; 100; 32
 5' -UGAGCCUGAAGAACAUGUCCAAAUUCACACAA-3'
 |||||
 3' -ACUCGGACUUCUUGUACAGGUUUAAGUGUGUU-5'

piR-2599982; 27070; CDS; -144; 82; 34
 5' -CUUCGCAGCGUGUAGCAGGUGACUCAGGUUUUGC-3'
 |||||
 3' -GAAGAAAUUCACGUCUCCACCAAGUCCAAAACG-5'
 spiR-2599982; 27070; CDS; -176; 100; 34
 5' -CUUCGCAGCGUGUAGCAGGUGACUCAGGUUUUGC-3'
 |||||
 3' -GAAGCGUCGCACAUCGUCCACUGAGUCCAAAACG-5'

piR-806264; 28427; CDS; -142; 83; 33
 5' -UGGUUCACCGCUCUCACUCAACAUGGCAAGGAA-3'
 |||||
 3' -ACCCAGUGGUGAGAAUGAGUUGUAUCAUGACCU-5'
 spiR-806264; 28427; CDS; -171; 100; 33
 5' -UGGUUCACCGCUCUCACUCAACAUGGCAAGGAA-3'
 |||||
 3' -ACCAAGUGGCGAGAGUGAGUUGUACCGUUCUU-5'

piR-98504; 29024; CDS; -136; 84; 32
 5' -GCUCGUGAGGCUUCUAAGAAGCCUCGGCAAAA-3'
 |||||
 3' -CGACGACUCUCAAGUUCUUUAAGUCGUUUU-5'
 spiR-98504; 29024; CDS; -162; 100; 32
 5' -GCUCGUGAGGCUUCUAAGAAGCCUCGGCAAAA-3'
 |||||
 3' -CGACGACUCCGAAGAUUCUUCGGAGCCGUUUU-5'

piR-3218674; 29475; CDS; -138; 81; 34
 5' -AUGAUUUCUCCAAACAAUUGCAACAAUCCAUGAG-3'
 |||||
 3' -UACUGAAUAGGUUAGUUACCUUUGUUAGGUACGU-5'
 spiR-3218674; 29475; CDS; -170; 100; 34
 5' -AUGAUUUCUCCAAACAAUUGCAACAAUCCAUGAG-3'
 |||||
 3' -UACUAAAAGAGGUUUGUUAACGUUGUUAGGUACUU-5'