**Supplemental file 1. Foldback structure of novel MIRNA (with miRNA\*) predicted by mfold server**

1. ***novel\_MIRNA*\_30**

 10 20 30 40 50 60

CUUU GA- U AUCAAC C .-GCAAAAUCAGCUUCAC| A

 AAGUUUGGCCAAGUCUA GAA AAUGU AGC ACAGC CAU A

 UUUAAACUGGUUCAGAU CUU UUACA UUG UGUUG GUA A

UUUC AUC - CGAUUA A \ ----------------^ A

 . 140 130 120 110 70

 80 90

 UACUU U A

 UCG AAUAUAU U

 AGU UUAUAUA A

 U---- - U

 100

1. ***novel\_MIRNA\_127***

 10 20 30 40 50 60

- - A C A .-CUUGAA| A GA

 CUG CUUCUCAUUUGAAGACU GUUUAUUA AU UAAGCAUAUU UGUUUG GA G

 GAC GAAGAGUAGAUUUCUGA CAAAUAAU UA AUUUGUAUAA ACGAAC CU A

A G A A G \ ------^ A AG

 190 180 170 160 150 70

 80 90 100

 GA U .-A A-- C A C

 UCUCG GC GAAG GAG AUCAUUG UA A

 AGAGU CG CUUC UUC UAGUAAU AU A

 -- - \ - ACC U - C

 120 110

 130

 AAGA A

 GCC U

1. ***novel\_MIRNA\_128***

 10 20 30 40 50 60

- - U A C A UU .-AGA| ACA

 CUG CUUCUCAUC GAAGACU GUUUAUUA AU UAAGCAU--GUUUUUGGAAGU GAGAG GAUC \

 GAU GAAGAGUAG UUUCUGA CAGAUAAU UA AUUUGUA CGAGAACCUUCA UUCUU CUAG A

A G U A A G \ CC \ ---^ ACG

 190 180 170 160 130 120

 80 90

 CC--------- A A GA

 GUGU GA GA \

 CAUA UU CU A

 AAUAAUAUCAA G A AC

 110 100

 140

 CA--- UG A

 U G C

 A C C

 UAAAG GU A

 150

1. ***novel\_MIRNA\_193***

 10 20 30 40 50 60 70 80 90

U G A -| A A G C C AG G G A

 GUACAAUG GAG UGCUUA GGGAGGUGUUUAGA AAAUAAACCG GUUUUUCU AAGCACCGGUGC UAUUU UAU GA AGA GCUU G

 CAUGUUAC UUC ACGAAU CCCUCCACGAAUCU UUUAUUUGGU CGAAAGGA UUCGUGGCCAUG AUAAA AUG CU UCU CGAA U

- G C C^ C C A A C GA A G U

 180 170 160 150 140 130 120 110 100

1. ***novel\_MIRNA\_259***

 10 20 30 40

-| C A A G U GG - CU

 GUG UCAGG GAG UGACACCGAC CCGA CAGAU GUC GG \

 UAC AGUCC CUC ACUGUGGUUG GGCU GUCUG CGG CC U

A^ A G C A U -- A AA

 80 70 60 50

1. ***novel\_MIRNA\_364***

 10 20 30

C| G

 GAUACUGGUUCAGGACGUUGCAACAUUAACACCU U

 CUAUGACCAAGUCCUGCAACGUUGUAAUUGUGGA U

A^ C

 70 60 50 40

1. ***novel\_MIRNA\_381***

 10 20 30 40

-| G G A UGUAU

 UCCGUUC GAAUUACUUGUC CG AAAUGGAUGUAUCUAGA \

 AGGCAAG UUUAAUGAACAG GC UUUACCUACAUAGAUCU U

G^ G A C UGAUU

 90 80 70 60 50

1. ***novel\_MIRNA\_390***

 10 20 30 40 50 60 70

GUGCU| C U AC A U UUGUUUG U UG GG AUGA

 G AC GUCG CUG UUUGGUCGUGAU AUCGCGG UUGC U GG CAUGGGU U

 C UG UAGC GAC AAACCAGCACUA UAGCGCC AACG G UU GUACCCA U

UUUUG^ U U GA A C UUCUGGA - GU A- AAAU

. 130 120 110 100 90 80

1. ***novel\_MIRNA\_553***

 10 20 30 40 50

A| A A - UCUAA ACC

 CUUCUCCUAGAAUUGCCACUU AU CUUUUUUG CAAUUCUUA UUAG \

 GAAGAGGGUCUUAACGGUGAG UA GAAAAAAC GUUAAGGAU AAUC U

C^ G - U C---- AAU

 100 90 80 70 60

1. ***novel\_MIRNA\_639***

 10 20 30 40 50

GAAACCAA--| U AAC A UUUU

 AUC UCAGG AGUUGAAGAUGAGAUAUUG ACGAAGA \

 UAG AGUCC UCAACUUUUACUCUAUAAC UGUUUUU A

ACAACACCCA^ U CUA C CUUU

 100 90 80 70 60

1. ***novel\_MIRNA\_641***

 10 20 30 40

UACUU| A C U A C G A

 ACUA UCCUUC GUC CAUAAUAUAA AA GUUUUU ACACUA \

 UGAU AGGAAG CAG GUAUUAUAUU UU CAAAAA UGUGAU U

AUUUU^ G A U C A A G

 90 80 70 60

1. ***novel\_MIRNA\_652***

 10 20 30 40

-| G G A UGUAU

 UCCGUUC GAAUUACUUGUC CG AAAUGGAUGUAUCUAGA \

 AGGCAAG UUUAAUGAACAG GC UUUACCUACAUAGAUCU U

G^ G A C UGAUU

 90 80 70 60 50

1. ***novel\_MIRNA\_669***

 10 20 30 40 50

C| AACUU

 CUGACGUACUGCAGGGUGCAGUUGGGUCACUGACAGGUGGGCC G

 GACUGCAUGACGUCCCACGUCAACCCGGUGACUGUCCACCCGG C

-^ GCUUU

 90 80 70 60

1. ***novel\_MIRNA\_678***

 10 20 30 40 50

AUGUUAUAC - U C - .-AAA| GCU U A

 AGAAGGGG AGCC UGG GCA GUGGU GCU GCCU GUGACC U

 UCUUUCCC UCGG GCC CGU CAUCG UGA UGGG CACUGG G

GAAAUUAUA G - A A \ ---^ ACU - A

 . 190 180 170 70 60

 80 90

 .-CCUGGAAA --- G

 CAGCCU CUUACA A

 GUCGGA GGAUGU A

 \ -------- AAG A

 110 100

 120 130 140

 CGUACUAUAGA .-AA U ACC

 CCC AG GGUCGG C

 GGG UC CCAGCC U

 A---------- \ -- - CCU

 150

 G

 GC C

 CG A

 A

 160

1. ***novel\_MIRNA\_692***

 10 20 30 40 50

AC AA U U A ---| C AC AU

 GCGAGGA UUCC GCGGGG CGA CUGGGAACACAUGG GAUA GA CGCUUG \

 CGCUCCU GAGG CGCCCC GCU GACUCUUGUGUACU CUAU CU GCGAGC U

GC CC U C G CAA^ U CA AG

. 110 100 90 80 70 60

1. ***novel\_MIRNA\_810***

 10 20 30 40 50

----| A UC - G U AAU A UCA

 UGUC GGGGGUG AGUUUCUU CAGAA AGCAUG CAUUUUCUGG GA GGC A

 AUAG CCCCCAC UCAAAGAA GUCUU UUGUGC GUAAAAGACC CU CCG A

CAAC^ - CA A G C CUC A UCA

. 110 100 90 80 70 60

1. ***novel\_MIRNA\_866***

- A CC A | A

 CAUU UAGUGUAGUCUCGU UCUUGCUAAGAUAU UUUAAA--UCCUC G

 GUAA AUUAUAUCAGAGCA GGAGCGGUUCUAUA AGGUUU AGGAG C

C C UA C \ ^ A

 120 110 100 90 50

 60 70

 AACAUACAG AAA

 CUUA G

 GAAU G

 AG------- AUA

 80

***(18) novel\_MIRNA\_1009***

 10 20 30 40 50

-| C A U C UGUAU

 ACUCC UCCGUUCCGA UUACUUGUCGCAGA AUGGAUGUAU UAGA \

 UGAGG AGGCAAGGUU AAUGAGCAGCGUCU UACUUAUAUA AUUU U

A^ A G U U UGAUU

100 90 80 70 60

***(19) novel\_MIRNA\_1154***

 10 20 30

-| UC C CA

 GUACCC AUAAAAAGAAUGA CUCAUUGUCUU \

 CAUGGG UAUUUUUCUUACU GAGUAACAGAA A

C^ GA A UC

 70 60 50 40

(20) novel\_MIRNA\_1255

 10 20 30 40 50 60 70 80

UGC A -| GCU UAAUUACCCCCCACU U -------- CGU

 CUUUCCACAGCUUUCUUGA CUUC UCUUGC CUCCU CUC CUGUCUCUCCCU UUCUCUC U

 GAAGGGUGUCGAAAGAACU GGAG AGAACG GAGGA GAG GACAGGGAGGGG GAGAGAG G

AAA G A^ AC- C-------------- - UAAGUACA AUG

 150 140 130 120 110 100 90

***(21) novel\_MIRNA\_1304***

 10 20 30 40 50

UUUU| C C U GAUAA GCU

 UUA CACUG CGGUGAGUGCUU AUAUCUUCUU UUUUG A

 AAU GUGAC GCUACUCACGAA UAUAGAAGAA AGAAC A

UUAU^ A A C AGA-- ACA

. 90 80 70 60

***(22) novel\_MIRNA\_1322***

 10 20 30

C| U A A UG

 UCUUCCUA CUAGAG AGCACAU CAAAAAAAUU G

 AGAAGGAU GAUCUC UCGUGUA GUUUUUUUGG C

A^ C C G UU

 70 60 50 40

***(23) novel\_MIRNA\_1372***

 10 20 30 40

U| C U U C C GCCGAG AA

 UCU CGUGGUU CCGGU CCAC UCGGC GCC UCCCAUG \

 AGA GUAUCAA GGCCA GGUG AGCCG CGG GGGGUGC C

U^ C U C - A UA---- GG

 90 80 70 60 50

***(24) novel\_MIRNA\_1401***

 10 20 30 40 50 60

AU| AC C U C ACA A A CG

 UGUAC UC C CCGU CCAUAAUAUAAGAUGUUUUUUGACACUA UA UGU AGA \

 AUAUG AG G GGCA GGUAUUAUAUUCUAUAAAAAACUGUGAU AU ACA UCU U

UU^ A- C - A GUG C G UU

 120 110 100 90 80 70

***(25) novel\_MIRNA\_1419***

 10 20 30 40 50 60 70

G U - CC C --- .-CCAACA .-GCAA| C

 UUAAAAGUG UA GGAACAACAACCGCAUUUUC CAUGG UCUCAU UAGGAUAGAUCCAA GCC UU U

 AAUUUUCAC AU CCUUGUUGUUGGCGUAAAAG GUACC AGGGUA AUCCUAUCUAGGUU CGG AG A

- U C AC A AAA \ ------ \ ----^ G

 190 180 170 160 150 140 130 80

 90

 AA C

 GUAGC G

 UAUCG A

 GA A

 100

 110

 ACCCC UCC

 CCAUG A

 GGUAC U

 CUU-- UAC

 120

***(26) novel\_MIRNA\_1544***

 10 20 30 40

A---| UGCG U U AU

 GCAAAGAU AAGAGCGCGAAGGAUU GCAGA ACUCCGUAAA \

 CGUUUCUG UUCUUGUGCUUCUUAA CGUCU UGAGGUAUUU C

UUGA^ CAA- C C CA

 90 80 70 60 50

***(27) novel\_MIRNA\_1560***

 10 20 30 40 50 60 70 80

- U U U C C AUU .-AAUAA UU---| AA C

 GAA AUA UGUAAACC UCACAAAUU CCUUGAUUAUUU AUAGCGCU UUAA AUGA UGUAUUGGA AAC \

 UUU UAU ACAUUUGG AGUGUUUAA GGAACUAGUAAG UAUCGCGA AGUU UACU AUAUAACCU UUG A

G C U - - U AAU \ ----- UAUAC^ G- A

. 270 260 250 240 230 100 90

 110

 .-G G

 ACUU A

 UGAA A

 \ - A

 120 130 140 150 160

 .-AAAAAAAUACA A UG AUUG- AGAAAGA

 GUC U UAU UGUUUGACUU A

 CGG A GUA ACAAAUUGAA A

 \ ----------- A GU GAAAA AAAGUAG

 190 180 170

 200 210

 AG GCUU U

 AUGAAU UGC U

 UACUUA ACG A

 A- AGU- U

 220

***(28) novel\_MIRNA\_1613***

 10 20 30 40

UCCUUCCU -| A U

 GGUGGGCGUACG GAACACGGGUG UUUUUC U

 CUACCCGCAUGC CUUGUGCCCAC AAAAGG A

ACCCUUUC A^ - G

. 70 60 50

***(29) novel\_MIRNA\_1617***

 10 20 30 40 50 60 70 80

C U C -| G UC AUA GG UC U C - CUUG

 AUAACC CUUGAAU UUGG GAAAAA CUGCAUAAC CA AAUU AAACC AU UU UAUCCCA AAAUUG C

 UAUUGG GAACUUA AACC CUUUUU GACGUAUUG GU UUGA UUUGG UA AA AUGGGGU UUUAAC A

C U U A^ A GA A-- AG UA U A C ACAA

. 150 140 130 120 110 100 90

***(30) novel\_MIRNA\_1686***

 10 20 30 40 50 60

- - A .-UUACAUAUA .-UAUUUUUGAAA| A GA

 GAUCUG CUUCUCAUCUGAAGACU GUUUA AGCA GUUUG GA G

 CUAGAU GAAGAGUAGAUUUCUGA CAAAU UCGU CGAAC CU A

A G A \ --------- \ -----------^ A AG

 170 160 150 70

 80

 AGA---- GUG

 UCCC C

 AGGG A

 UACUACA AAG

 100 90

 110 120

 ACAACUA AA CCA

 CAAU UUCUU \

 GUUA GAGAA C

 CGCCAG- CC CUU

 140 130

***(31) novel\_MIRNA\_1737***

 10 20 30 40 50

AU| CAA A CCAA

 GGG CCUUCA CCCUCUUUAGUUCAAUCAAGUGGAUUAAAUUU A

 CCC GGAGGU GGGAGGAAUCAAGUUAGUUUACUUGAUUUAGA A

CU^ ACG G CAUU

 100 90 80 70 60

***(32) novel\_MIRNA\_1744***

 10 20 30 40 50 60 70 80 90 100 110

CG U CUC G AUC GGAA C UG CCAC UU-----| A

 GCUAC CU CGUCC GGUGUAUAAGUCAUUCGCGUAGUUUUAGGUC GAUUUGA UUAAAUAUGUGUUAUAUGU A AAAAGUAUA UAGA UCC C

 UGAUG GA GCAGG CCACAUAUUCAGUAAGCGCAUCAAGAUCCAG UUAAAUU GAUUUAUACAUAAUAUACA U UUUUUAUAU AUCU AGG A

CA - A-- G CUA GAUA C GU AUAA UUGAUGU^ C

 220 210 200 190 180 170 160 150 140 130 120

***(33) novel\_MIRNA\_1875***

 10 20 30 40 50

G U - U A C A CC-| GA-- AG

 CUC C GG AGC GC GUUGAG UGAGAUUACCCCAUAC UG GCGUC \

 GAG G CC UCG CG CAACUC ACUCUAAUGGGGUAUG AC CGUAG C

- U U C C A C CGC^ AUGC CU

 100 90 80 70 60

***(34) novel\_MIRNA\_2079***

 10 20 30 40 50

C --- CU U G A .-GU -|G

 GC GCC GGAG CUCUGGUUGGUCUGU UUUGUUUCAAAC AGGUG CAGG C U

 CG CGG CCUC GAGGCCAACCAGACA AAGCAGAGUUUG UCCAC GUCC G A

A AUA U- U A C \ -- U^C

 . 120 110 100 90 60

 70

 U- CUCUC

 GC \

 CG U

 GU UUGUU

 80

***(35) novel\_MIRNA\_2133***

 10 20 30 40

G UA -| UA

 AAUUACUUGUCUUGGAUUUGUCUAGAUA GAUGUAUCUAG ACU C

 UUAAUGAACAGAAUCUAAACAGAUCUAU CUACAUAGAUC UGA U

- GC G^ UU

 90 80 70 60 50

***(36) novel\_MIRNA\_2185***

 10

A .-A| CU

 CUGCAUU GUGAU G

 GAUGUGA CAUUA G

- \ -^ UU

 180 20

 30 40 50 60 70 80 90

 U A G A .-GAGAA AUU- GUGA

 CAAG GAAAGCAAUGUCAGA GAGUUUUAGCA CAGUCUGAA GCUG AUGUAUAU \

 GUUC CUUUCGUUACGGUUU CUCGAAGUUGU GUCAGACUU CGAC UAUAUGUG G

 A C A C \ ----- GGCU AGAG

 170 160 150 140 110 100

 120

 A GA

 GUAUAUUC \

 UAUGUGAG G

 A AG

 130

***(37) novel\_MIRNA\_2191***

 10 20 30 40 50 60 70 80 90

- G A CG- G GA-------------- UGC- -| AAUUCAUGC A AA CA AAAGU

 CA CCUAC UUGAUCCCA UCUAAG CCUGGAGCAGCGUAGACGU GGGGU GUUGAAAU AUUG UCU GCC UC UUCA \

 GU GGAUG AGCUGGGGU AGAUUC GGAUCUCGUCGUAUUUGCA CCCCA UAACUUUA UAAC AGA CGG AG AAGU C

C G C ACA A AAAAAAACACAACCCC CCAU U^ --------- - -- AG CAUAC

 200 190 180 170 160 150 140 130 120 110

***(38) novel\_MIRNA\_2567***

 10 20 30 40 50

G| AU A C U

 CGUUUC UUCAUCAAUUUCUGUCUAACUAUUGUGCA UGUACC UG G

 GUAAAG AAGUAGUUAAAGACAGAUUGAUAACACGU ACAUGG AC A

A^ -- G A C

 90 80 70 60

***(39) novel\_MIRNA\_2745***

 10 20 30 40 50 60 70 80 90 100 110

UCUC G C GU G C A ------- -- .-AACGACAACAUA| UGAA AA

 CAUAU AA UG CUUGCUUAAUUUU UAGUCUUCUGGAUAUAUGCUUA AUAUAAUAA UAAU GUGA AGGUAGAUCA--UAG AUCUUUAGUCU CA \

 GUAUA UU AC GAACGAAUUAGAG AUUAGAAGACUUGUGUACGAAU UAUAUUAUU AUUA UACU UCCAUCUAGU AUC UAGAGAUCAGA GU U

AAAU G C UG G C G GGAUAGC GU \ \ ------------^ UG-- AU

 350 340 330 320 310 300 290 280 270 130 120

 140 150

 AGAACA - AACCAGAC

 CUAUA CG \

 GGUAU GC A

***(40) novel\_MIRNA\_2917***

 10 20 30 40 50

G U -| G U AAU A UCA

 GGGGUG CAGUUUC UUCAGAA AGCAUG CAUUUUCUGG GA GGC A

 CCCCAC GUCAAAG AAGUCUU UUGUGC GUAAAAGACC CU CCG A

- C A^ G C CUC A UCA

 100 90 80 70 60

***(41) novel\_MIRNA\_3314***

 10 20 30 40 50 60 70

GU AA A AGCGUU-- -| A G CAU AG

 UGCUACCAUGAAGAGCGCGGGCAGCACAACCG GGC CU GCGUA GG GG GCUG CGC \

 GCGAUGGUACUUCUCGCGCCCGUCGUGUUGGC CUG GA CGCGU CC CC CGGC GCG C

CU -- C CCAUACUU G^ A G U-- UA

140 130 120 110 100 90 80

***(42) novel\_MIRNA\_3417***

 10 20 30

A GAACUU - -| C GAGU

 UUGAUU UCCAA CGGA CUCAUUC AU \

 AACUAA GGGUU GCUU GGGUAAG UA A

G AGCAAC C A^ U ACAA

 70 60 50 40

***(43) novel\_MIRNA\_3607***

 10 20 30

A GAACUU - -| C GAGU

 UUGAUU UCCAA CGGA CUCAUUC AU \

 AACUAA GGGUU GCUU GGGUAAG UA A

- AGCAAC C A^ U GCAA

 70 60 50 40

***(44) novel\_MIRNA\_3791***

 10 20 30 40

AA - AA---| AAAAAG A UGGA

 GA UGAAA ACCAAA CUCUGCCCUUCC UCUCU \

 CU ACUUU UGGUUU GAGACGGGAGGG AGAGA U

AA G CCCUG^ CCG--- - UAGA

90 80 70 60 50

***(45) novel\_MIRNA\_4191***

- A C C UU .-A| AAUC A AUCUA

 CUGCU UGCA ACGAUACU UUGGACGAUUC GGACGAUA UGCA AG CC \

 GAUGA GUGU UGCUAUGA GACCUGCUAAG UCUGCUAU ACGU UC GG U

U A C C UC \ -^ GGA- A AAAUA

 . 130 120 110 100 70

 80

 A-------- AG

 CAC \

 GUG C

 ACAAAUUAG AC

 90

***(46) novel\_MIRNA\_4740***

 10 20 30

U| GCAAUUAAAC UUU

 UGAUU UCGGCUCAAUCUUUUUU \

 ACUAG AGCCGAGUUAGAAAAAA U

-^ AUAAAAAUA- UCU

 70 60 50 40

***(47) novel\_MIRNA\_5134***

 10 20 30 40 50 60 70 80 90

G - A UGGAGCAU - - GA- C U ACA -------- .-CA| U

 CGAGGA CCCGACAGAGUUGGGC GUAUCCA GGG GCG GAGG AGGGCAU CCCAUA GA AAGUAGU CGAGC GGGU G

 GUUUCU GGGUUGUCUCAACCCG CAUAGGU CCC CGC CUCC UCCCGUA GGGUAU CU UUCAUCG GCUCG CCCG C

- G C -------- A G ACC - C CGC UCCCGCUG \ --^ U

 220 210 200 190 180 170 160 150

 100

 .-A - AU

 GUGC CGCG \

 CACG GUGU C

 \ - A CA

 120 110

 130

 GA C C

 CCA CG C

 GGU GC A

 AG U C

 140

***(48) novel\_MIRNA\_5169***

 10 20 30 40 50 60 70 80 90

- G U C AU--------- UG GCA .-AAUAACAUA| CAA AAG

 CUUAAUUUU UAAUCUUCUGGA AUAUGCUUG AUAUAAUAA GAUG AAGGUAGA UAGAAC AUCUUUAGUCU GC G

 GAAUUAGAA AUUAGAAGAUUU UGUAUGAAU UAUAUUAUU CUAC UUCCAUCU GUUUUG UAGAGAUCAGA UG U

C G U C GAUUAGAAGAU UA A-- \ ---------^ --- AGG

 . 300 290 280 270 260 250 240 110 100

 120 130

 .-AGAA .-AAGA CA

 UGC UGUGU \

 ACG ACACA C

 \ ---- \ ---- UA

 160

 140

 A------ AC

 CA A

 GU A

 AUGAAAG AC

 150

 170 180 190 200

 AAAAA U CC G G CA

 UGGUAAA GGAGCU UGACUU UAGAUUAU U \

 AUCAUUU CUUCGA ACUGAG AUCUAGUA G A

 ACC-- U -- - G GA

 230 220 210

***(49) novel\_MIRNA\_5172***

 10 20 30

G --- - ---| C

 AUCCCUUUU UUGGCGUCCCCAUGUC CC CC U

 UAGGGAAAG AACUGUAGGGGUACGG GG GG G

- GAA C UGU^ U

70 60 50 40

***(50) novel\_MIRNA\_5542***

 10 20 30 40 50 60 70

CGU AA A AGCGUU-- -| A G CAU AG

 UGCUACCAUGAAGAGCGCGGGCAGCACAACCG GGC CU GCGUA GG GG GCUG CGC \

 GCGAUGGUACUUCUCGCGCCCGUCGUGUUGGC CUG GA CGCGU CC CC CGGC GCG C

UCU -- C CCAUACUU G^ A G U-- UA

 140 130 120 110 100 90 80

***(51) novel\_MIRNA\_5552***

 10 20 30 40

GU GAUAUUAUAC G UG UUC .-A| G

 GAUU CUCCC GACCAGAACUUCU U AG GGG G

 CUAA GGGGG CUGGUUUUGGAGG G UC CCU A

G- AGACGCA--- A GU UAA \ -^ A

 120 110 100 90 50

 60 70

 AUCAA AUCAA

 GCUUG C

 CGAAC C

 CUAA- AAUUA

 80

***(52) novel\_MIRNA\_5598***

 10 20 30

AUUCCUCUUU| A AA

 ACCG AGAAGCCUGUGCUCGA \

 UGGU UUUUCGGGCACGAGCU U

UAUGCAAAAC^ C AA

 60 50 40

***(53) novel\_MIRNA\_5756***

 10 20 30

-| AAAA -- A UGGA

 CA AAAG CUCUGCCCUUCC UCUCU \

 GU UUUC GAGACGGGAGGG AGAGA U

U^ GG-- CG - UAGA

 60 50 40

***(54) novel\_MIRNA\_5816***

 10 20 30 40

GU- G A ----------|UC CG

 CUCUGGUUGGUCUGU UUUGUUUCAAAC AGGUG G AGGCGUA \

 GAGGCCAACCAGACA AAGCAGAGUUUG UCCAC C UCCGUGU U

UCU A C GUCGUUGUUU^UC CC

 100 90 80 70 60 50

***(55) novel\_MIRNA\_5831***

 10 20 30 40 50 60 70

U CU G U A G- A U AAAUUU .-A| AG

 GCUCC UGCGA CUCGGCCGUUGGAUC UUGAU CAGCGGACAU UG GG GCUCC UUUGCA GA C

 CGAGG ACGCU GAGUCGGCAACCUAG AGCUA GUCGCCUGUA GC CC CGGGG GGACGU CU C

- C- G - G GA - U ACCU-- \ -^ CC

 160 150 140 130 120 110 80

 90

 AAGAA CU

 GUCA \

 CAGU A

 G---- AA

 100