

gsa-mir-1

ENERGY = -35.4

total reads	mature	loop	star
2568546	2567299	1	1246

Bases 1 to 96

	10	20	30	40		
--	C	AA	UUU	-	-	GUU
	UCGUAC	UCGUUACAU	CCGUAA	AGAUGUU	CACAA	UCAUU \
	GGUAUG	AGCGGUGUA	GGUAUU	UUUACAA	GUGUU	AGUAA G
CU	A	A-	C--	C	U	AAU
	90	80	70	60	50	

***** *** *****

gsa-mir-1	TGGAATGTGGCGAAGTATGGTC
sja-mir-1	TGGAATGTGGCGAAGTATGGTC
egr-mir-1	TGGAATGTTGTGAAGTATGT--
cte-mir-1	TGGAATGTAAAGAAGTATGTAG
sme-mir-1b	TGGAATGTCGTGAATTATGGTC

gsa-mir-87

ENERGY = -38.2

total reads	mature	loop	star
319657	319625	0	32

Bases 1 to 121

	10	20	30	40	50	60			
--	U AG	UU	UC	UGAU	AUA	CU	C AA		
	ACGCCUGA	ACU	GCUC	ACCA	AGAGU	AGAAAGA	UUU	GUAU G	GGAA
	UGUGGACU	UGA	CGAG	UGGU	UUUCA	UUUUUCU	AAA	CAUA C	CCUU
CG	U AA	--	--	----	---	AU	A GC	U	
	110	100		90		80	70		

cte-mir-87b	GUGAGCAAAGUUUCAGGUGU
egr-mir-87	GUGAGCAAAGUUUCAGGUGU
gsa-mir-87	GUGAGCAAAGUUUCAGGUGU
lgi-mir-87	GUGAGCAAAGUUUCAGGUGU
sme-mir-87a	GUGAGCAAAGUUUCAAGUGU

gsa-mir-279

ENERGY = -21.3

total reads	mature	loop	star
211059	210627	0	432

Bases 1 to 57

```

          10          20
--A      A-      UUC      UCU
      GUGAGUG  UAUUCUA  CAUGA  \
      CACUCAC  GUAAGAU  GUACU  A
CCG      GA      CA-      UAG
          50      40      30
```

***** *****

gsa-mir-279	TGACTAGAATGAGCACTCACGCC
cte-mir-279	TGACTAGA-TCCCACTCATCCA
sme-mir-61a	TGACTAGAAAGTTCACTTACTGT
lgi-mir-279	TGACTAGA-TCCCACTCATCCA
isc-mir-279	TGACTAGA-TCCCACTCATCCA

gsa-mir-71a

ENERGY = -18.5

total reads	mature	loop	star
144721	142764	0	1957

Bases 1 to 55

```

      10      20
--   A   U           UAU AU
   UGAA GACA GGGUAAUGAG   C C
   ACUU CUGU CUUAUUACUC   G U
AU   C   C           UU- AA
      50      40      30
```

gsa-mir-71a

gsa-mir-71b

cel-mir-71

cte-mir-71

sja-mir-71a

sme-mir-71a-1

***** *** ****

TGAAAGACATGGGTAATGAGT

TGAAAGACTTGCGTAGTGAGA

TGAAAGACATGGGTAGTGAGA

TGAAAGACATGGGTAGTGAGA

TGAAAGACGATGGTAGTGAGA

TGAAAGACACGGGTAGTGAGA

gsa-mir-184a

ENERGY = -24.7

total reads **mature** loop **star**
128624 128526 4 94
Bases 1 to 80

```

      10      20      30      40
--      -      A  AAUCUUG      UUG
   UCUUUAACAA UUUUCGUU CAUC      UUAGGAA  \
   AGAAAUUGUU AGAGGCAG GUAG      AAUUCUU  U
CU      U      -  AAAA---      UAA
      70      60      50
```

***** *

```
gsa-mir-184      TGGACGGAGATTTGTTAAAGATC
gsa-mir-184b     GGGACGGAAGTCTGAAAGGGAGT
cte-mir-184b    TGGACGGAGAACTGATAGGGCCC
sme-mir-748     TGGACGGAAGTGTAATGAGGGTA
sme-mir-184     TGGACGGAGGTTTGCTAAGG--A
lgi-mir-184     TGGACGGAGAACTGATAAGGGCT
```

gsa-mir-71b

ENERGY = -21.7

total reads	mature	loop	star
127342	127338	0	4

Bases 1 to 62

```

      10      20      30
--U   A   C   U   CUAAA
   GAAAG CUUG GUAG GAGACGCU   U
   CUUUC GAAC UAUC UUCUGCGA   G
AUG   A   -   -   UACGU
  60     50     40
```

```

*****      ***  ****
gsa-mir-71a   TGAAAGACATGGGTAATGAGT
gsa-mir-71b  TGAAAGACTTGCGTAGTGAGA
cel-mir-71   TGAAAGACATGGGTTAGTGAGA
cte-mir-71   TGAAAGACATGGGTTAGTGAGA
sja-mir-71a  TGAAAGACGATGGTAGTGAGA
sme-mir-71a-1 TGAAAGACACGGGTTAGTGAGA
```

gsa-mir-190

ENERGY = -23.8

total reads	mature	loop	star
72813	72017	60	736

Bases 1 to 75

```

      10      20      30
--U      GG      A      GUG  UCU  AA
      GAUAUGUUU  GUUAC  AGGUGGU  UA  GCA  \
      CUAUACAAA  CAAUG  UCUACUA  GU  UGU  U
UGU      A-      A      AA-  U--  CU
      70      60      50      40
```

***** ** ** **

gsa-mir-190	TGATATGTTTGGGTTACAAGGTG
sja-mir-190	TGATATGTATGGGTTACTTGGTG
emu-mir-190	AGATATGTTTGGGTTACTTGGTG
cte-mir-190	AGATATGTTTGGGTTACTTGGTG
egr-mir-190	AGATATGTTTGGGTTACTTGGTG
sme-mir-190a	AGATATGTTTGG-TTAATTGGTG

gsa-mir-1175

ENERGY = -19.0

total reads	mature	loop	star
70534	70234	14	286

Bases 1 to 66

```

          10      20      30
---      -      A      U UUCACG
      GUCGGA AAGUUGAAU UCGAA UG      A
      CAGCUU UUCAACUUA AGUUU AU      U
AGU      C      G      U UCUCUU
      60      50      40
```

***** ** * **

gsa-mir-1175	TGAGATTCAACTTCTTCGACTGA
lgi-mir-1175	TGAGATTCAACTCCTCCAAGTGC
cqu-mir-1175	TGAGATTCTACTTCTCCGACTTA
cte-mir-1175	TGAGATTCAACTCCTCCAAGTGC
sme-mir-1175	TGAGATTCAACTCCTCCTACTAA

gsa-mir-96a

ENERGY = -22.2

total reads	mature	loop	star
60906	50338	6	10562

Bases 1 to 73

```

          10      20      30
--C      U  A  AA      UAACA      UUAA
      UUGGCAC CU GG UCGUCUC      GAAUAA  \
      AAUCGUG GA CC GGCAGAG      UUUAUU  C
ACA      U  G  A-      -----      UACC
      70      60      50      40
```

```

          *****      *****      * *
gsa-mir-96      CTTGGCACTCTAGGAATCGTCTC
gsa-mir-96      CTTGGCAC-ATTGGAATTGGCAC
sme-mir-96a      TTTGGCACTTAAGGAATTGTCAC
sme-mir-96b      TTTGGCACTTAAGGAATCGTCAC
emu-mir-96      ATTGGCACTTTTGGGAATTGTCAC
cte-mir-96      CTTGGCACTGGCGGAATTATCAC
```

gsa-mir-36

ENERGY = -24.9

total reads	mature	loop	star
58369	57107	1	1261

Bases 1 to 95

	10	20	30	40	
-- CU - CU A GA UUAU UAAAC- U					
GG UGA UGUUU CCGGU GAUG AAU GAG CUUU U					
CC ACU ACAGA GGCCA CUAC UUAA CUC GAAA C					
CA U- U UG - A- U---- UAACUU U					
90	80	70	60	50	

gsa_mir-36	TCACCGGGTAGACATTCATCCAC
sme-mir-36c	TCACCGGGTAGACATTCATTCTC
sme-mir-36a	TCACCGGGTAGACATTCATTATA
sja-mir-36	CCACCGGGTAGACATTCATTCGC
sma-mir-36	CCACCGGGTAGACATTCATTCGC

gsa-let-7

ENERGY = -32.2

total reads	mature	loop	star
31964	31548	0	416

Bases 1 to 80

	10	20	30	40	
-A	G U	AUUACA	UG --	AU	
	GAGGUAGA	UG UGUAGAGAU	UG G	GGGA	A
	UUCCGUCU	AC ACAUCUCUAA	AC U	UCCU	U
CA	A U	G-----	GU UU	AU	
	70	60	50		

***** * * *

gsa-let-7	AGAGGTAGAGTGTTGTAGAGAT
egr-let-7	TGAGGTAGTGTTTCGAATGTCT
emu-let-7	TGAGGTAGTGTTTCGAATGTCT
lgi-let-7	TGAGGTAGTAGGTTGTATAGTT
sja-let-7	GGAGGTAGTTCGTTGTGTGGTT

gsa-mir-67

ENERGY = -21.8

total reads	mature	loop	star
26840	23377	0	3463

Bases 1 to 60

```

          10      20
---      --  U      A C      UCU
      UCUCA  CAA  GGAGGUUG  G  GCAAU  \
      AGAGU  GUU  CCUCCAAC  C  UGUUG  G
AGU      UA  -      A  -      CCA
          50      40      30
```

***** * ** **

gsa-mir-67	TCACAACCTCCTTGATTGAGATGA
cte-mir-67	TCACAACCTGCATGAATGAGGTAA
lgi-mir-67	TCACAACCTGCATGAATGAGGACA
sme-mir-67	TCACAACCTCCATGAACGAGGGTA
isc-mir-307	TCACAACCTCCTTGAGTGAGTGAG

gsa-mir-219

ENERGY = -26.0

total reads	mature	loop	star
25524	25429	28	67

Bases 1 to 71

	10	20	30			
--U	U	C	U	CGCCU	CU	
	GAU	GUCCA	UCGCAU	UCUUGU	GUUGA	U
	CUA	CAGGU	AGUGUG	AGAACA	UAACU	C
AUU	-	A	U	U----	CU	
70	60	50	40			

gsa-mir-219	TGATTGTCCACTCGCATTTCTTG
sme-miR-219	TGATTGTCCATACGCAGTTCTCA
cte-mir-219	TGATTGTCCAAACGCAATTCTTG
egr-mir-219	TGATTGTCCATTTCGCATTTCTTG
emu-mir-219	TGATTGTCCATTTCGCATTTCTTG

gsa-mir-2

ENERGY = -21.5

total reads	mature	loop	star
24483	21395	1	3087

Bases 1 to 62

```

          10      20      30
--  -  --    C          UA  U  U
   GUC C  GAGUG GACUGUGAUGU  UG CA G
   CAG G  UUCGU CUGACACUAUA  AC GU U
GG  U GU    C          --  -  U
 60      50      40
```

* * * * *

gsa-mir-2a	TATCACAGTCCTGCTTTGGTGACGG
gsa-mir-2b	TATCACAGCCCTGCTTGGAACGCA-
gsa-mir-2c	TGTCACAGCCAATCTT-GATGTCA-
gsa-mir-2d	TATCACAGCCGTGCTTTAAGGGCTT
egr-mir-2b	TATCACAGCCCTGCTTGGGACACAT
emu-mir-2b	TATCACAGCCCTGCTTGGGACACAT
sja-mir-2b	TATCACAGCCCTGCTTGGGACACAG
sja-mir-2c	TATCACAGCCGTGCTT-AAGGGCTT

gsa-mir-281

ENERGY = -23.6

total reads	mature	loop	star
23203	20311	0	2892

Bases 1 to 66

```

      10      20      30
--      A   CU   --   A  CCA
  UGGAGGGCAA CUCU  UGAC  GUAA GA  A
  ACUUCUCGUU GAGG  ACUG  CAUU CU  G
AA      -   U-   UA   A  AAA
      60      50      40
```

gsa-mir-281	TGTCATGGAGTTGCTCTTCAA
dme-mir-281-2	TGTCATGGAATTGCTCTCTTTG
lgi-mir-281	TGTCATGGAGTTGCTCTCTTTA
cte-mir-281	TGTCATGGAGTTGCTCTCTTTA

gsa-mir-96b

ENERGY = -18.5

total reads	mature	loop	star
20853	20607	0	246

Bases 1 to 55

	10	20		
-C	G	A	G	CAAA
	UUG	CACAUUGGA	UUG	CAC
	AAC	GUGUAACUU	AAC	GUG
UA	A	A	G	AAAC
	50	40	30	

***** ***** * *

gsa-mir-96	CTTGGCACTCTAGGAATCGTCTC
gsa-mir-96	CTTGGCAC-ATTGGAATTGGCAC
sme-mir-96a	TTTGGCACTTAAGGAATTGTCAC
sme-mir-96b	TTTGGCACTTAAGGAATCGTCAC
emu-mir-96	ATTGGCACTTTTGGGAATTGTCAC
cte-mir-96	CTTGGCACTGGCGGAATTATCAC

gsa-mir-2b

ENERGY = -18.7

total reads	mature	loop	star
20616	20268	87	261

Bases 1 to 66

```

      10      20      30
--A  G  --      U  AUUUCAUU
   GUU CAAGC  GGUUGU  AUAUA      U
   CAA GUUCG  CCGACA  UAUAU      U
ACG  G  UC      C  AACUUAUU
      60      50      40
```

* * * * *

gsa-mir-2a	TATCACAGTCCTGCTTTGGTGACGG
gsa-mir-2b	TATCACAGCCCTGCTTGGAACGCA-
gsa-mir-2c	TGTCACAGCCAATCTT-GATGTCA-
gsa-mir-2d	TATCACAGCCGTGCTTTAAGGGCTT
egr-mir-2b	TATCACAGCCCTGCTTGGGACACAT
emu-mir-2b	TATCACAGCCCTGCTTGGGACACAT
sja-mir-2b	TATCACAGCCCTGCTTGGGACACAG
sja-mir-2c	TATCACAGCCGTGCTT-AAGGGCTT

gsa-mir-124a

ENERGY = -19.1

total reads **mature** loop **star**
17932 16594 35 1303

Bases 1 to 68

```
      10      20      30
      U A AA      GGA      AAU
GGUAUUU CC CG GUCUUA AGUUGAA A
CCAUAAG GG GC CGGAAU UCAAUUU A
      U C A-      ---      AUAA
      60      50      40
```

```
gsa-mir-124a TAAGGCACGCGGTGAATACC
gsa-mir-124b TAAGGCACGCGGTGAATATC
egr-mir-124a TAAGGCACGCGGTGAATGCC
egr-mir-124b TAAGGCACGCGGTGAATACC
emu-mir-124a TAAGGCACGCGGTGAATGCC
emu-mir-124b TAAGGCACGCGGTGAATACC
sme-mir-124a TAAGGCACGCGGTGAATGCT
```

gsa-mir-2c

ENERGY = -19.6

total reads	mature	loop	star
15314	15300	0	14

Bases 1 to 61

```
          10          20          30
-         UC          CAA UAA  AA
  GGCAUUAA AUUGGCUG  A   UGU  \
  CUGUAGUU UAACCGAC  U   ACG  G
A         C-          AC- GUAA  AU
60         50         40
```

* * * * *

```
gsa-mir-2a      TATCACAGTCCTGCTTTGGTGACGG
gsa-mir-2b      TATCACAGCCCTGCTTGGAACGCA-
gsa-mir-2c     TGTCACAGCCAATCTT-GATGTCA-
gsa-mir-2d      TATCACAGCCGTGCTTTAAGGGCTT
egr-mir-2b      TATCACAGCCCTGCTTGGGACACAT
emu-mir-2b      TATCACAGCCCTGCTTGGGACACAT
sja-mir-2b      TATCACAGCCCTGCTTGGGACACAG
sja-mir-2c      TATCACAGCCGTGCTT-AAGGGCTT
```

gsa-mir-10a

ENERGY = -18.8

total reads	mature	loop	star
14955	14372	0	583

Bases 1 to 57

```

      10      20
--  G  A GA  G  C  A
    GAC CUGU G UCGAAU UUAC UU A
    CUG GACA C AGCUUA AAUG AA A
UG  G  A UG  -  A  U
      50      40      30
```

```

                    ****  **  *  ****
gsa-mir-10a      TAAATTCGAGTCAACAGGGTC
gsa-mir-10b      TAAATTCGGGTCTACAGGGTT
cte-miR-10a     CAAATCCGGA ACTACAGGGTA
egr-miR-10      CAAACTCGGGTCTACAGGGTG
emu-miR-10      CAAACTCGGGTCTACAGGGTG
lgi-miR-10      CAAATTCGGATCTACAGGGTA
```

gsa-mir-2001

ENERGY = -22.2

total reads	mature	loop	star
13575	13368	11	196

Bases 1 to 72

	10	20	30			
--	G	UU	U	CACAAGAU	UGA	
	UUGU	ACCGU	UAA	AGGCCA	UUGAA	A
	AACA	UGGCA	AUU	UCCGGU	AACUU	C
GU	A	CU	U	-----	CAA	
70	60	50	40			

***** ** *

gsa-mir-2001	TTGTGACCGTTTTAATAGGCCA
cte-mir-2001	TTGTGACCGTTATAATGGGC-A
lgi-mir-2001	TTGTGACCGTTATAATGGGC-A
sko-mir-2001	TTGTGACCGTTATAATGGGC-A
isc-mir-2001	TTGTGACCGTTACAATGGGC-A

gsa-mir-7

ENERGY = -23.4

total reads **mature** loop **star**
12811 12345 1 465

Bases 1 to 78

```

      10      20      30      40
--U      C  U  U  A      CGAACUAU      C UA
      GGAAGA UUG GAU G GUUGUUU      AUACUC C \
      CCUUCU AAC CUA C CAACAAG      UAUGAG G U
AAG      U  -  -  -      -----      A CA
      70      60      50
```

***** ** *

```
gsa-mir-7      TGGAAGACTTGTGATTGAGTTGTT
sme-mir-7c     TGGAAGACTGATGATTTGCTGTAA
sme-mir-7b     TGGAAGACTGTCGATTTGTTGTC
sja-mir-7      TGGAAGACTGGTGATATGTTGTTG
emu-mir-7      TGGAAGACTGGTGATATGTTGTAA
egr-mir-7      TGGAAGACTGGTGATATGTTGTAA
```

gsa-mir-8

ENERGY = -14.5

total reads	mature	loop		star
12420	12323		0	97

Bases 1 to 60

	10	20		
--	U	U	AAA	
	AGUCUU	AAUGAUGGUAUU	AAUUG	U
	UUAGAA	UUAUUGUCAUAA	UUAAU	U
CU	U	U	AAG	
	50	40	30	

	*****	* * **	*
gsa-mir-8	TAATACTGTTA	-TTTAAGATTC	
sme-miR-8a	TAATACTGTCAGGTAACGATGCC		
sja-miR-8	TAATACTGTTAGGTAAAGATGCC		
sma-miR-8	TAATACTGTTAGGTAAAGATGCC		
egr-miR-8	TAATACTGTTTCGGTTAGGACGCC		
emu-miR-8	TAATACTGTTTCGGTTAGGACGCC		

gsa-mir-76

ENERGY = -15.9

total reads	mature	loop	star
9896	9753	50	93

Bases 1 to 62

	10	20	30	
-A	A-	U	GA	UAAA
UUGUUUU	UCAAUAACGA	UA	UC	\
AACAAAA	AGUUGUUGCU	AU	AG	U
AG	AA	U	A-	UUUA
60	50	40		

***** **

gsa-mir-76	TTCGTTGTTGAAAAAACAAGA
sme-mir-76	TTCGTTGTTTATGAATGAGAGA
cte-mir-981	TTCGTTGTCGTCGAAACCTGCT
dpu-mir-981	TTCGTTGTCGACGAAACCTGCA
lgi-mir-981	TTCGTTGTCGACGAAACCTGCC

gsa-mir-9

ENERGY = -28.1

total reads	mature	loop	star
8092	8066	1	25

Bases 1 to 101

```

      10      20      30      40      50
--      CUU      -      UGCAAUAAAGA      AUAAU      ACC
      UCUUUGGUUUU      UAGCUG      UGUGAU      CACUAUU      UGG      U
      AGAAAUCAAAG      AUUGAC      AUACUA      GUGAUAA      ACC      C
AA      ---      U      -----      CUUCU      CGA
      90      80      70      60
```

***** ** ***** **

```
gsa-mir-9      TCTTTGGTTTTCTTTAGCTGTGTGA
egr-mir-9      TCTTTGGTTATCT--AGCTGTGTGA
emu-mir-9      TCTTTGGTTATCT--AGCTGTGTGA
lgi-mir-9      TCTTTGGTTATCT--AGCTGTATGA
sme-mir-9a     TCTTTGGTTTTCT--AGCTGTATGA
```

gsa-bantam

ENERGY = -28.0

total reads	mature	loop	star
7837	4095	0	3742

Bases 1 to 80

	10	20	30	40	
	UCA	G	UUAUGAAAUGC	AG	UU
GCGGU	UGUGAUCU	AGA		UGAGAG	GG C
CGUUA	ACACUAGA	UCU		ACUCUC	CU A
GU	UUC	G	U-----		CU UU
	70	60		50	

	*****	*	*	**	*
gsa-bantam	TGAGATCACACTTATTGCTGAT				
sme-bantam	TGAGATCATTATGAAAGCTTTT				
sja-bantam	TGAGATCGCGATTAAAGCTGGT				
isc-bantam	TGAGATCATTGTGAAAGCTGAT				
cte-bantam	TGAGATCATTGTGAAAATAAT				

gsa-mir-124b

ENERGY = -22.8

total reads	mature	loop	star
7625	5748	0	1877

Bases 1 to 56

```
          10      20
-          GG      UU GU
  GUGUUUACCGUG  GUCUUGAU  G  U
  UAUAAGUGGCGC  CGGAAUUA  U  G
C              A-      UU AU
          50      40      30
```

gsa-mir-124a	TAAGGCACGCGGTGAATACC
gsa-mir-124b	TAAGGCACGCGGTGAATATC
egr-mir-124a	TAAGGCACGCGGTGAATGCC
egr-mir-124b	TAAGGCACGCGGTGAATACC
emu-mir-124a	TAAGGCACGCGGTGAATGCC
emu-mir-124b	TAAGGCACGCGGTGAATACC
sme-mir-124a	TAAGGCACGCGGTGAATGCT

gsa-mir-278

ENERGY = -21.6

total reads	mature	loop	star
7509	7493	0	16

Bases 1 to 61

	10	20	30		
--	C	A	CUA	CAA	
	ACAAGGGU	CUUC	ACCG	AGUACC	C
	UGUUUUUA	GAGG	UGGC	UCAUGG	A
CA	U	G	---	UUU	
60	50		40		

***** * * *

gsa-mir-278	CUCGGUGGGAGUAUU-UUUGUAC
sme-mir-278	CUCGGUGGGAGUAACAUCGAAA
dme-mir-278	GUCGGUGGGACUUUCGUCCGUUU
lgi-mir-278	AUCGGUGGGACUUUCGUUCGUCU
cte-mir-278	AUCGGUGGGACUUUCGUUCGUUC

gsa-mir-277a

ENERGY = -15.0

total reads	mature	loop	star
7319	7166	0	153

Bases 1 to 59

```

          10      20
-- -   UUU-           UU  AA
   GA GCCA   CUUUGUGUUUGUA  GA  \
   CU UGGU   GAAACGUAAAU  CU  A
UA  A   CUAU           --  GU
          50      40      30
```

```

          *****   * *   *
gsa_mir_277a      TAAATGCAAAGTATCTGGTATCAT
gsa_mir_277b      TAAATGCATGTTTTTGTCTATAC-
sja-mir-277      TAAATGCATTTTCTGGCCCGTAAC
sme-mir-277a     TAAATGCAC--TATCGGATATGAC
egr-mir-277      TAAATGCATTTTCTGGCCCGTAAC
emu-mir-277      TAAATGCATTTTCTGGCCCGTAAC
```

gsa-mir-2d

ENERGY = -26.6

total reads	mature	loop	star
6371	3028	0	3343

Bases 1 to 62

```

          10      20
--A      ---  U  G          UC  AU
      CCCUU  GC CGG UGUGAUGUG  UA  \
      GGGAA  CG GCC ACACUAUAC  AU  G
UUC      UUU  U  G          UA  UA
 60      50      40      30
```

* * * * *

gsa-mir-2a	TATCACAGTCCTGCTTTGGTGACGG
gsa-mir-2b	TATCACAGCCCTGCTTGGAACGCA-
gsa-mir-2c	TGTCACAGCCAATCTT-GATGTCA-
gsa-mir-2d	TATCACAGCCGTGCTTTAAGGGCTT
egr-mir-2b	TATCACAGCCCTGCTTGGGACACAT
emu-mir-2b	TATCACAGCCCTGCTTGGGACACAT
sja-mir-2b	TATCACAGCCCTGCTTGGGACACAG
sja-mir-2c	TATCACAGCCGTGCTT-AAGGGCTT

gsa-mir-1993

ENERGY = -15.4

total reads	mature	loop	star
5722	5586	12	124

Bases 1 to 64

```

      10      20      30
--      AAC      C      GUUAA      UUA
      AGUGGAA      UUGCAUAA      UACA      AGA      \
      UCACUUU      AACGUAUU      AUGU      UCU      U
GC      AU-      -      -----      UAU
      60      50      40
```

```

*****      ****
gsa-mir-1993      TATTATGCAATATTTCACTCG
emu-mir-2162      TATTATGCAACTTTTCACTCC
sme-mir-1993      TATTATGCTGTTATTCATGAG
sja-mir-2162      TATTATGCAACGTTTCACTCT
sme-mir-2162      TATTATGCAAATATTCACAAT
```

gsa-mir-184b

ENERGY = -25.1

total reads	mature	loop	star
5236	5149	0	87

Bases 1 to 62

10	20	30	
A	A	G	AAGUC
AUUCUUUUUCA	AUUUCC	UCC	GU A
UGAGGGAAAGU	UGAAGG	AGG	CA A
C	C	G	AUACA
60	50	40	

***** *

gsa-mir-184	TGGACGGAGATTTGTTAAAGATC
gsa-mir-184b	GGGACGGAAGTCTGAAAGGGAGT
cte-mir-184b	TGGACGGAGAACTGATAGGGCCC
sme-mir-748	TGGACGGAAGTGTAATGAGGGTA
sme-mir-184	TGGACGGAGGTTTGCTAAGG--A
lgi-mir-184	TGGACGGAGAACTGATAAGGGCT

gsa-mir-993 (mir-10)

ENERGY = -27.4

total reads	mature	loop	star
5032	2921	0	2111

Bases 1 to 60

```

--      10      20
      U      G      GUUU
AUCUGUAU CUUGAGCUU UGGUU  A
UGGACAUA GAGCUCGAA AUCAA  A
CU      C      G      AUUU
      50      40      30
```

```

*****      *****
gsa-mir-993      AGAAGCTCGAGCATAACAGGTTC
api-mir-993      AGAAGCTCGTCTCTACAGGTAT
bmo-mir-993a     AGAAGCTCGTCTCTACAGGTAT
cte-mir-993      AGAAGCTCTGTTCTACAGGTAT
dme-mir-993      AGAAGCTCGTCTCTACAGGTAT
```

gsa-lin-4 (mir-10)

ENERGY = -21.8

total reads	mature	loop	star
4914	4674	0	240

Bases 1 to 60

	10	20	
--AC	C	CGCAU	
CCUGAGU	AGAAAAACGUUUU	U	
GGACUCA	UUUUUUUGCAGAA	U	
AUAC	C	AAUCC	
	50	40	30

***** *

gsa-lin-4	ACCCTGAGTCAGAAAAACGTTT
sme-lin-4	TCCCTGAGACC-TTCGACTGTG
emu-mir-125	TCCCTGAGACCCTAGAGTTGT-
egr-mir-125	TCCCTGAGACCCTAGAGTTGT-
sja-mir-125a	TCCCTGAGACCCTTTGATTGTC
sma-mir-125a	TCCCTGAGACCCTTTGATTGCC

gsa-mir-10b

ENERGY = -15.7

total reads	mature	loop	star
4500	4283	0	217

Bases 1 to 60

```

      10      20
--A  C   GA C  A      G--  G
   ACC UGUA C CGA UUUGAU  AU A
   UGG ACAU G GCU AAACUA  UA A
AUA  A   UC A  A      AAG  A
      50      40      30
```

```

          ****  **  *  ****
gsa-mir-10a      TAAATTCGAGTCAACAGGGTC
gsa-mir-10b     TAAATTCGGGTCTACAGGGTT
cte-miR-10a     CAAATCCGGA ACTACAGGGTA
egr-miR-10     CAAACTCGGGTCTACAGGGTG
emu-miR-10     CAAACTCGGGTCTACAGGGTG
lgi-miR-10     CAAATTCGGATCTACAGGGTA
```

gsa-mir-277b

ENERGY = -19.0

total reads	mature	loop	star
1968	1243	1	724

Bases 1 to 70

```

      10      20      30
--    UCU-      C  AACAG  U  U
    AUAGAC    ACAUGUAUUU  UAU    GG CA A
    UAUCUG    UGUACGUAAA  AUA    CC GU A
CA    UUUU      U  ACA--  -  G
      60      50      40
```

***** * * *

```
gsa_mir_277a    TAAATGCAAAGTATCTGGTATCAT
gsa_mir_277b  TAAATGCATGTTTTTGTCTATAC-
sja-mir-277    TAAATGCATTTTCTGGCCCGTAAC
sme-mir-277a  TAAATGCAC--TATCGGATATGAC
egr-mir-277   TAAATGCATTTTCTGGCCCGTAAC
emu-mir-277   TAAATGCATTTTCTGGCCCGTAAC
```

gsa-mir-1992

ENERGY = -18.9

total reads	mature	loop	star
743	741	0	2

Bases 1 to 64

```
          10      20      30
-   U   -   UU   CCUUA
GUGGC AUG UUCAUUGCU GAUA   G
UACUG UAC GAGUUGACGA CUAU   U
G   U   U   --   UUGCGU
      60      50      40
```

***** ** **

gsa-mir-1992	TCAGCAGTTGAGTCATTGTCATG
sme-miR-1992	TCAGCAGTTGTTCCATTGAC---
cla-mir-1992	TCAGCAGTTGTACCACTGATGTG
cte-mir-1992	TCAGCAGTTGTACCACTGATGTG
lgi-mir-1992	TCAGCAGTTGTACCACTGATTTG

gsa-mir-31*

ENERGY = -19.6

total reads	mature	loop	star
275	253	0	22

Bases 1 to 55

```

      10      20
--U      U  U  C      U  CU
      GGCAAGA CA GG AUAGC GAG  G
      UUGUUCU GU CC UAUCG CUC  G
AAC      U  -  A      C  AU
      50      40      30
```

```

*****
gsa-mir-31  TGGCAAGATCATGGCATAGCTGAGCTG-----GTACTCCGCTATACCTGTTCTTGTTCAA
cte-mir-31  AGGCAAGATGTTGGCATAGCTGATTTACAC-TCTGTGGTCAGCTCTGTCGCATATTGCCCCC
lgi-mir-31  AGGCAAGATGTTGGCATAGCTGAGTCATATATGAACCATCAGCTGTGTCTCATATTGCTATC
sme-mir-31b1 AGGCAAGATGCTGGCATAGCTGATAAAC-TATTTATTACCAGCTATTCAGGATCTTTCCCTG
sme-mir-31b2 AGGCAAGATGCTGGCATAGCTGATAAAC-TATTTATTACCAGCTATTCAGGATCTTTCCATG
*****
```

gsa-mir-2163

ENERGY = -24.6

total reads	mature	loop	star
67	38	0	29

Bases 1 to 58

```

          10      20
--C  UG  U      GU      GCU
   C  CU GUGGGGCU AUGCAAUC  A
   G  GA UAUUCCGA UACGUUAG  G
UCC GU  U      --      GCA
          50      40      30
```

***** * ***

```
gsa-mir-153      TTGCATAGCCTTATTAGTGGCCT
cte-mir-153      TTGCATAGTCACAAAAGTGATCG
lgi-mir-153      TTGCATAGTCACAAAAGTGATCG
sme-miR-2163     TTGCATAGTCTATTAAGTTGGT-
```

gsa-mir-nov-1

ENERGY = -26.5

total reads	mature	loop	star
6555	4691	2	1862

Bases 1 to 74

```

      10      20      30
--C C      AU C      CAUCUC      CA
  GG GCUUUG UGU CACACUGAAU      UGCA U
  CC UGGAAC ACA GUGUGACUUG      ACGU G
AUA U      -- C      CA----      UU
  70      60      50      40
```

gsa-mir-nov-2

ENERGY = -17.1

total reads	mature	loop	star
1484	1483	0	1

Bases 1 to 52

```

      10      20
-      - AA      AACUUA
GAAGGACA GG UAAUGAG      \
CUUUCUGU CC AUUACUC      G
A      A C-      AUAGUA
  50      40      30
```

gsa-mir-nov-3

ENERGY = -9.4

total reads	mature	loop	star
829	770	0	59

Bases 1 to 49

```

      10      20
UG -   CU   A  CC  ACG
   C GGUAUA GAUG GU  C  A
   G CCAUAU CUGC CA  G  G
UG U     --   G  AA  CAA
      40      30
```

gsa-mir-nov-4

ENERGY = -14.6

total reads	mature	loop	star
686	685	0	1

Bases 1 to 80

```

      10      20      30
GA      A C  ----   C  UU  A  AUU
   UCUUUAACAA U UC   CGUC AUCUU UUA GAA \
   AGAAAUUGUU A AG   GUAG UAGAA AAU CUU  A
--      A A  CAAU   U   C-  C  AAC
   80      70      60      50
```

gsa-mir-nov-5

ENERGY = -23.2

total reads	mature	loop	star
607	592	0	15

Bases 1 to 78

```

          10          20          30
---AUC      -   A      ----      G UUU
      CAUGUUU UAGA AAUGGUGG  AUUAUU A  U
      GUACAAG GUCU UUGCCACC  UAAUAG U  U
AAAUGU      U   G      ACUU      G UUA
          70          60          50          40
```

gsa-mir-nov-6

ENERGY = -3.9

total reads	mature	loop	star
353	341	0	12

Bases 1 to 53

```

          10          20
--      A  U  U  C      G  UU
      AUUAA UG UU U UACGU UU \
      UAGUU AC AA A AUGUA AA A
UU      C  U  U  U      G  AA
50          40          30
```

gsa-mir-nov-7

ENERGY = -19.2

total reads **mature** loop **star**
267 265 0 2

Bases 1 to 111

```

      10      20      30      40      50
--- U      U      UUC      CAUAA- U G      AA---      AUAAA
      G GAGGGAA GGUUU GAUUGA      UU CA UUUUAU      UUCU      \
      C CUUCCUU UCAAA CUAAUU      AA GU AAAAUA      AAGA      A
UGA -      C      UCU      CCCAAG C A      GCAAA      AAAGA
      100      90      80      70      60
```

gsa-mir-nov-8

ENERGY = -32.2

total reads **mature** loop **star**
163 158 1 4

Bases 1 to 68

```

      10      20      30
---      UG      A      A C      C
      GGGGAAUC GAUC GUGGCU GUG AUUGG U
      CUCCUUAG UUAG CGCUGA CAU UAACC U
UCC      CU      -      C C      G
      60      50      40
```

gsa-mir-nov-9

ENERGY = -10.9

total reads	mature	loop	star
139	137	1	1

Bases 1 to 62

	10	20	30	
UC	UU	C	A	U- AAAU
	UUGUUUU	UCAA	AACGA	UA UC \
	AACAAAA	AGUU	UUGC	AU AG A
U-	U-	A	A	CU AUUU
60	50	40		

gsa-mir-nov-10

ENERGY = -18.9

total reads	mature	loop	star
116	98	0	18

Bases 1 to 61

	10	20	30	
--U	U	U C	CG	AAU
	UCU	GAUCU	G GAGUGAUUC	AUG \
	AGG	CUAGA	C CUUACUAAG	UAC A
GUC	U	U U	--	AGA
60	50	40		

gsa-mir-nov-11

ENERGY = -10.9

total reads	mature	loop	star
87	84	0	3

Bases 1 to 58

```

      10      20
--   - U      A      AU-      A
    GUAA G GAUGA GAAAU AAUUGGA \
    CAUU C CUGCU CUUUA UUAUUU A
GA   U C      -      AUC      U
      50      40      30
```

gsa-mir-nov-12

ENERGY = -22.8

total reads	mature	loop	star
53	38	0	15

Bases 1 to 75

```

      10      20      30
---A      UUC      A      ACCCAAC      CUC
    GAUGUA  UUGGC CGAGA      AAUCGA \
    CUACGU  AAUCG GCUCU      UUAGCU U
UUCG      UAA      -      AAACU--      AUC
      70      60      50      40
```

gsa-mir-nov-13

ENERGY = -27.2

total reads	mature	loop	star
37	26	0	11

Bases 1 to 70

```

      10      20      30
--A  A      ----      C
  AAGU AUCUUUAAUCUGAUUGG  UUUUCAU G
  UUCG UAGAGGUUAGAUUAACC  AGAAGUA A
UUC  G      UUAU      A
      60      50      40
```

gsa-mir-nov-14

ENERGY = -33.5

total reads	mature	loop	star
33	19	1	13

Bases 1 to 100

```

      10      20      30      40
---CCAAUU  C      UG UG      AU  A  GU  AA
  UCUGU CACUACA  G  AAUGUG  CUAG  CUCU  UUUU  \
  AGACA GUGGUGU  U  UUACAC  GGUC  GAGG  GGAA  A
GGAAAAUU  U      UU GU      --  G  UU  AU
      90      80      70      60
```

gsa-mir-nov-15

ENERGY = -18.4

total reads	mature	loop	star
24	23	0	1

Bases 1 to 67

```

      10      20      30
U      AG      A      C CA CAU
  AGACAAGA AAUGAA GAUUU AC GC C
  UUUGUUUU UUACUU CUAAA UG CG A
-      CU      A      C UC UAA
      60      50      40
```

gsa-mir-nov-16

ENERGY = -25.5

total reads	mature	loop	star
24	14	0	10

Bases 1 to 64

```

      10      20
---A      U      CA      ----- C
      GAGGAAUC GGAU GUGGCA      UUGG U
      CUCCUUAG CUUG CGCUGU      AACC U
AUCC      -      AG      UCUUAU      G
      60      50      40      30
```

gsa-mir-nov-17

ENERGY = -19.5

total reads	mature	loop	star
20	18	0	2

Bases 1 to 61

```

      10      20
--  -  C  U  --  GCA
  UGUA CUGG UGU CCAUCA AUUAG  G
  ACAU GACC ACA GGUGGU UGAUU  G
AU  A  U  C  AC  AUU
60      50      40      30
```

gsa-mir-nov-18

ENERGY = -22.4

total reads	mature	loop	star
19	18	0	1

Bases 1 to 72

```

      10      20      30
----  G      U  U  AA----  UU
  GU AAAGAGGUU GGA UGAAAU  GGGUC  \
  CG UUUCUCCAA CUU ACUUUA  CUUAG  U
UUAA -      U  U  CAUUAG  UA
70      60      50      40
```

gsa-mir-nov-19

ENERGY = -14.3

total reads	mature	loop	star
18	15	0	3

Bases 1 to 65

```

      10      20      30
--      G- C      A G      C CUA
  UAUUUU C UAUUUU CA ACAGA AC  A
  AUAAGA G AUAAGU GU UGUCU UG  U
UU      GA A      G G      C AAC
      60      50      40
```

gsa-mir-nov-20

ENERGY = -24.9

total reads	mature	loop	star
18	13	0	5

Bases 1 to 58

```

      10      20
GC U  A      A      AAGUC
  G CUC GAGGUC AACACAGU  A
  C GAG CUCCGG UUGUGUCG  U
GU U  C      A      AAUUA
      50      40      30
```

gsa-mir-nov-21

ENERGY = -18.2

total reads	mature	loop	star
15	14	0	1

Bases 1 to 67

	10	20		30	
-UC	UUUA	A	-	-	UC
GCGUA	AGGUUUC	UC	GAG	AAUG	C
CGCAU	UUUAAAGU	AG	CUU	UUAC	U
CUA	UCAG	A	A	A	UU
	60	50	40		