

βTC-3 (127)

```

      39
      a
      45
      g
c    u    u    uu  g  +g  10  11  28
      ugca gu cccagg gag uag agguuguauaguu aa
      ||||| || ||||| ||| ||| ||||| ||||| |||
      acgu ca gguuuc uuc auc uccgacaugucaa uag g
c    u    -    cu    g    c    -----    ag

```

Mus musculus let-7b stem-loop Stem-loop

E14.5 (124)

g -> a not highlighted
outside of sequence

```

      16      26
      a  u  +a
g    caggg gagguaguagguugugugguu uc gggcag g
      ||||| ||||| ||||| ||||| ||| ||||| a
      guccc uccgucauccaacaauaaucaa ag cccguu u
a    -    uaga ccuc    g

```

βTC-3 (1598)

```

      11
      +a
      54  13
      +a +u
g    caggg gagguaguagguugugugguu uc gggcag g
      ||||| ||||| ||||| ||||| ||| ||||| a
      guccc uccgucauccaacaauaaucaa ag cccguu u
a    -    uaga ccuc    g

```

Mus musculus let-7c-1 stem-loop Stem-loop

E14.5 (258)

```

      22      12
      a  u  +u
u    a    uu  g  u  a  +u  cua  g  ua  a
      gugugc uccggg gag uag agguuguauugguu ga u c c
      ||||| ||||| ||| ||| ||||| ||||| ||| ||| c
      cacacg agguuc uuc auc uccaacaugucaa uu a g c
u    -    cu    g    u    --    g  gg  u

```

u->a not highlighted
outside of sequence

βTC-3 (690)

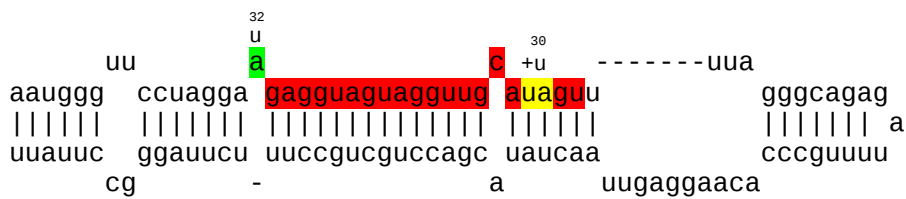
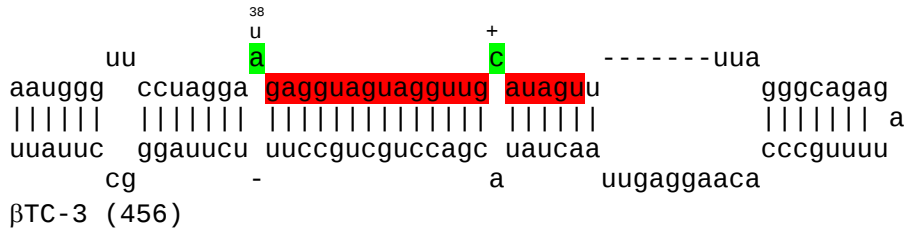
```

      10      12      28      *
      +g  +a  +u
u    a    uu  g  a  u  +u  cua  g  ua  a
      gugugc uccggg gag uag agguuguauugguu ga u c c
      ||||| ||||| ||| ||| ||||| ||||| ||| ||| c
      cacacg agguuc uuc auc uccaacaugucaa uu a g c
u    -    cu    g    u    --    g  gg  u

```

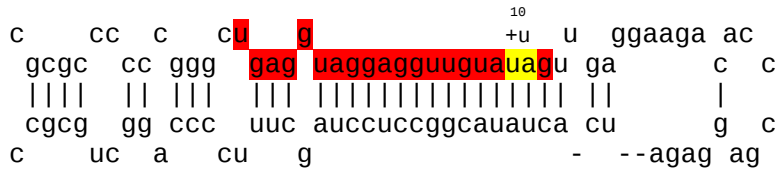
Mus musculus let-7d stem-loop Stem-loop

E14.5 (108)

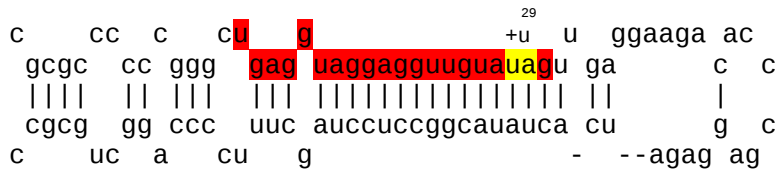


Mus musculus let-7e stem-loop Stem-loop

E14.5 (446)

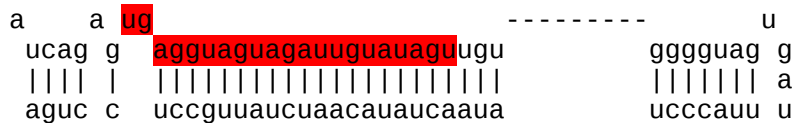


βTC-3 (103)



Mus musculus let-7f-1 stem-loop Stem-loop

E14.5 (8)



g - cu gaggaauug u

βTC-3 (207)

```

a   a   ug                    59      +u      -----      u
ucag g   agguaguagauuguauaguugu      gggguag g
||||| |   |||||||||||||||||||||   ||||||| a
aguc c   uccguuaucuaacauaucaaua      ucccuu u
g   - cu                    gaggaauug      u

```

Mus musculus let-7f-2 stem-loop Stem-loop

E14.5 (0)

βTC-3 (13)

```

u       u   gu                    100      +g   uuagggucauac
guggga   gag   aguagauuguauaguuu      c
||||| |   |||||||||||||||||||||   |||||||
cacccu uuc   ucaucugacauaucaa      c
g   -   ug                    uagagguucuaac

```

Mus musculus let-7g stem-loop Stem-loop

E14.5 (21)

```

a       u       a                    43      +u      ugagg   -a   a   a
cc ggc   gagguagu   guuuguacaguuu      gucu   ug   uacc c
|| |||   ||||||||||| |||||||||||||   ||||   ||   |||||
gg ccg   uuccguca   cggacaugucaa      uaga   ac   augg c
a   -           c           -----   gg   -   c

```

βTC-3 (133)

```

a       u       a                    32      22  11
cc ggc   gagguagu   guuuguacaguuu      gucu   ug   uacc c
|| |||   ||||||||||| |||||||||||||   ||||   ||   |||||
gg ccg   uuccguca   cggacaugucaa      uaga   ac   augg c
a   -           c           -----   gg   -   c

```

Mus musculus miR-122a stem-loop

E14.5 (54)

```

      36      11      39
      a gg      c      g - a UC
agcugu aguguga aaugguguuug ug c
||||| ||||| ||||| ||||| ||| a
ucgaua ucacacu uuaccgcaaac ac a
      aa      a      u ca

```

βTC-3 (0)

Mus musculus miR-125a stem-loop

E14.5 (204)

```

      16      22      11      13
      ug a uc ug c ua Δ a ---- a
c gg cc aga ccuu accuguga gg c
| || || ||| |||| ||||| |||
g cc gg ucu ggag uggacacu cc g
gu ga gu u -- ggga u

```

βTC-3 (95)

```

      14
      u
      21
      ug uc ug c ua +u ---- a
c gg cc aga ccuu accuguga gg c
| || || ||| |||| ||||| |||
g cc gg ucu ggag uggacacu cc g
gu ga gu u -- ggga u

```

Mus musculus miR-125b-1 stem-loop

E14.5 (354)

```

      12      19
      27C      11+U
ugcgcuccccu auc ug c + aau c
      cag cc aga ccuaacuugug guuua c
      ||| || ||||| ||||| ||||| g
      guc gg ucu ggauugggcac uaaau u
----- ga gu c -c u

```

βTC-3 (0)

Mus musculus miR-126 stem-loop Stem-loop

E14.5 (597)

```

      17      *
      uΔ      ac a cug c

```

```

gac gc cauuauuacuu ugguacg g uga a
||| || ||||| ||||| ||||| | |||
cug cg guaaauaugag gccaugc c acu c
a g c u u -aa u

```

βTC-3 (5)

```

u a a u c cug c
gac gc cauuauuacuu ugguacg g uga a
||| || ||||| ||||| ||||| | |||
cug cg guaaauaugag gccaugc c acu c
a g c u u -aa u

```

Mus musculus miR-127 stem-loop Stem-loop

E14.5 (373)

```

---- ugcug g c -- a
ccagcc aagcucaga gg ucugau uc g
||| ||| ||| ||| ||| ||| |||
ggugg uucgagucu cc aggcua ag a
ggcu u ----- g u cu a
12

```

βTC-3 (0)

Mus musculus miR-130a stem-loop Stem-loop

E14.5 (352)

```

-ga c ug a -- - ua
gcucuuuu acauug cu cu gu c a
||| ||| ||| ||| ||| |||
cgggaaaa uguaac ga ga ca g c
cua Δu gu c gc u ug
c 22 u 13 u
a
17#

```

βTC-3 (85)

```

-ga c ug a -- - ua
gcucuuuu acauug cu cu gu c a
||| ||| ||| ||| ||| |||
cgggaaaa uguaac ga ga ca g c
cua +a u gu c gc u ug
c 54 15 u 12

```

a at 16th position is deleted

E14.5 (26)

βTC-3 (0)

E14.5 (76) 13
a

16# 58

βTC-3 (0)

E14.5 (246)

βTC-3 (0)

CC TGC CAGGTGG TTTTACCC TATGG TAGG TTAC

120 125 130 135 140 145

E14.5 (53)

```

      15      11 26
      Δ      +ua uu uc
ccug c c gugguuu uacccu ugguagg acg a
||||| ||| ||||| ||||| ||||| |||
ggac gg caccaagauggga accaucu ugu u
      a - c -- cg

```

βTC-3 (83)

```

      17      18 31
      Δ      ua uu uc
ccug c c gugguuu uacccu ugguagg acg a
||||| ||| ||||| ||||| ||||| |||
ggac gg caccaagauggga accaucu ugu u
      a - c -- cg

```

Mus musculus miR-143 stem-loop

E14.5 (122)

```

      g      g      u - ag
ccugag ugcagugcu caucuc gg uc u
||||| ||||| ||||| ||||| |||
ggacuc augucacga guagag cu ag u
      u g a u g gg
      49

```

βTC-3 (0)

Mus musculus miR-15b stem-loop Stem-loop

E14.5 (49)

```

      39      41 27
      u c c ua Δ a ac
cug agcagca au augguu cau cu a
||| ||||| || ||||| ||| || g
gau ucgucgu ua uacuaa gua ga u
      c u u gc - ac

```

βTC-3 (138)

```

      15      16      17 14
      +a c c ua Δ a ac
cug agcagca au augguu cau cu a
||| ||||| || ||||| ||| || g
gau ucgucgu ua uacuaa gua ga u

```

c u u gc - ac

Mus musculus miR-16-1 stem-loop Stem-loop

E14.5 (247)

```

      40      15
a      gg  c  u      -  a      a  u  11  gauu
ugucagc  ugc  u  uagcagcac  gu  aaauuugg  g  uaa  c
|||||  |||  |||||  |||  |||  |||  |||  |||
acgguug  aug  agucgucgug  ca  uuauagacc  c  auu  u
a      ga  a      u  g      u  c  aaag

```

βTC-3 (623)

```

      14 15      10      21
a      gg  c  au  +a  -  a      a  u  +u  gauu
ugucagc  ugc  u  uagcagcac  gu  aaauuugg  g  uaa  c
|||||  |||  |||||  |||  |||  |||  |||  |||
acgguug  aug  agucgucgug  ca  uuauagacc  c  auu  u
a      ga  a      u  g      u  c  aaag

```

u is inserted between 20 (g)
and 21 (c) base position

Mus musculus miR-17 stem-loop

E14.5 (88)

```

      11
a      -ca      ua  g      guagu  u
gucag  auaaugu  aagugcu  ca  ugcag  gaug  g
|||||  |||||  |||||  |||  |||||
caguc  uauuacg  uucacgg  gu  acguc  cuac  u
g      aug      ga  g      ---au  g

```

βTC-3 (0)

Mus musculus miR-18 stem-loop

E14.5 (29)

```

      g
      *
      Δ
      21# 41
u      -      u  --  u  uc  u  a  u  a-  -a  u
gcgug  cuuuuugu  cua  agg  gca  uag  gcag  uag  ug  ag  a
|||||  |||||  |||  |||  |||  |||  |||  |||  |||
uguau  gaagaaua  ggu  ucc  cgU  auc  cguc  auc  ac  uc  g
c      u      c  cu  u  ga  c  -  u  ga  a

```

Mus musculus miR-191 stem-loop Stem-loop

E14.5 (92)

```

      10      24
      u      Δ
      c      aa
agcggg aacgggaaucc aa gcagcug uu - c
||||| ||||| || ||||| || ||
ucgucc uugcuuuagg uu cgucgac ua ga a
      c      - ca      cu c g

```

βTC-3 (76)

```

      51
      Δ 11
      aa+a
agcggg aacgggaaucc aa gcagcug uu - c
||||| ||||| || ||||| || ||
ucgucc uugcuuuagg uu cgucgac ua ga a
      c      - ca      cu c g

```

Mus musculus miR-199a-1 stem-loop

E14.5 (439)

```

      18      23
      u      a g
      au c      u c      -----
gcc ccagugu cagacuac ugu ucag a
||| ||||| ||||| |||||
cgg gguuaca gucugaug aca gguc g
      auu      c      -      uguacag      g

```

βTC-3 (0)

Mus musculus miR-20a stem-loop

E14.5 (54)

```

      39
      52 a
g u u --g ucu c -a ua g a u u
ug ga gu acagcu guag ac u aagugcu uagugcag uag gug a
|| || || ||||| ||||| ||||| ||||| ||||| |||||
ac cu ca ugucga cguc uga uucacga auuacguc auc uac g
g - - aga --c a aa gc - - c

```

βTC-3 (0)

Mus musculus miR-200b stem-loop Stem-loop

E14.5 (91)

```

      ggc      -      ug      c      u gug
gccgu cauc uuac ggcag auugga a u
||||| ||||| ||||| ||||| |||||
cggca guag aaug ccguc uau cu u c

```

E14.5 (620)

```

ggccu      acaga      u      aca      aacau
  ggcugg      guugucaugug  cugccugucu  cuugcugugcag  c
  |||||      |||||      |||||      |||||      c
  ccgacc      caacaguacac  gacggacaga  ggacgacauguc  g
  ----u      -----      u a u      cac      u      cacuc
                        a18
                        29

```

βTC-3 (0)

Mus musculus miR-25 stem-loop

E14.5 (66)

```

a ug  ag  g  uu g  u  --  ac
ggcc g  uug  aggc  gagac  g  gcaau  gcu  gg  g
||| | |  |||  ||||  ||||  |  ||||  |||  |  c
ccgg c  gac  ucug  cucug  c  cguua  cgg  cc  u
      c gu  a ag  g  uu  a  -u  gu  cg
                39 +u
                17
                u
                12

```

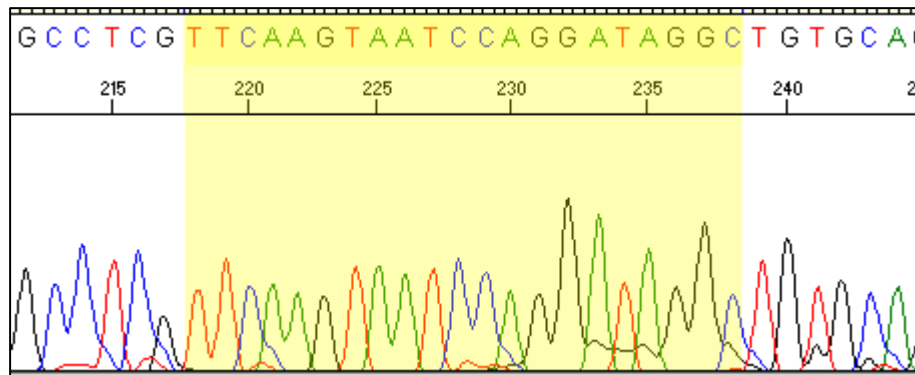
βTC-3 (158)

```

a ug  ag  g  uu g  u  --  ac
ggcc g  uug  aggc  gagac  g  gcaau  gcu  gg  g
||| | |  |||  ||||  ||||  |  ||||  |||  |  c
ccgg c  gac  ucug  cucug  c  cguua  cgg  cc  u
      c gu  u ag  +u  g  uu  a  -u  gu  cg
                27 +u  13
                10
                15
                u
                14

```

Mus musculus miR-26a-1 stem-loop



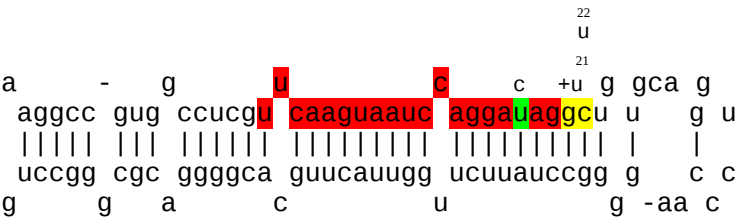
E14.5 (138)

```

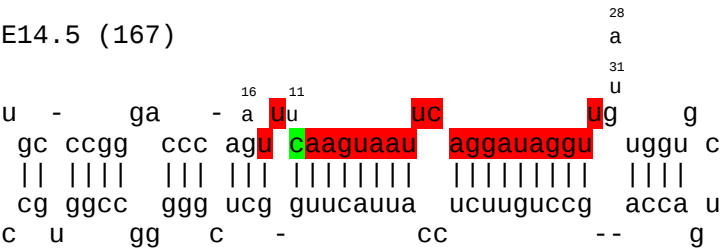
a      -  g      u      c      +u14 g gca g
aggcc  gug  ccucg  u  caaguaauc  aggauaggcu  u  g  u
||| | |  ||||  ||||  ||||  ||||  ||||  |||  |
uccgg  cgc  ggggca  guucauugg  ucuuaucgg  g  c  c
g      g  a      c      u      g  -aa  c

```

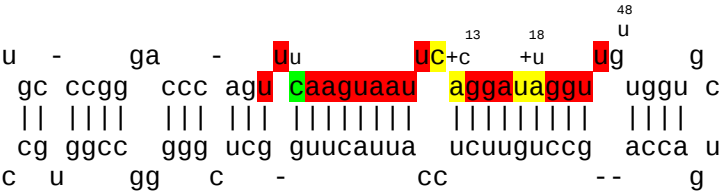
βTC-3 (176)



Mus musculus miR-26b stem-loop



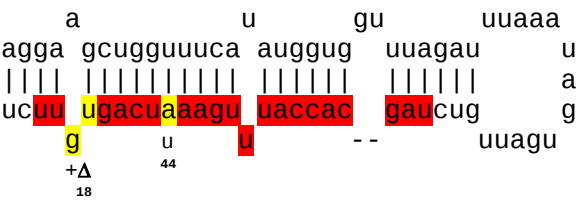
βTC-3 (502)



Mus musculus miR-29b-1 stem-loop

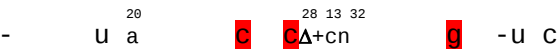
E14.5 (0)

βTC-3(55)



Mus musculus miR-296 stem-loop

E14.5 (111)



```

gggc cuuuc ggagggcc cc cucaauccu uug g u
||||| ||||| ||||| || ||||| ||| |
ccug ggaag ccucucgg gg gggugggga gac c c
      u      u      a u      -    uu g

```

βTC-3 (0)

Mus musculus miR-299 stem-loop

E14.5 (20)

```

              100
a              auu
aagaa ugguuuaccguccacauacau u
||||| ||||| ||||| ||||| ||||| g
uucuu gccaaauggcaggguguaugua a
      c              ug

```

βTC-3 (0)

Mus musculus miR-30d stem-loop

E14.5 (0)

βTC-3(25)

```

              48
a      u      u32  u+C  ccc  guaa c
aguc gug c guaaacauc gacuggaagcu gc a
||||| ||| | ||||| ||||| ||||| |||
ucgg cau g cguuuguag cugacuuucga cg c
c      u      c u      --a      --ac a

```

Mus musculus miR-301 stem-loop

E14.5 (301)

```

aa c c ---u ----a
ccugcu cgg ugc ugc uuauugcacu cuguac
||||| ||| ||| ||| ||||| ||||| ||||| u
ggacga gcc acga acug gaauacguga gacauu
      gc      u+u      a      uuau      agagc
              16              a
              22

```

βTC-3 (0)

Mus musculus miR-322/miR-424 stem-loop

E14.5 (53)

βTC-3 (0)

E14.5 (220)

βTC-3 (0)

E14.5 (74)

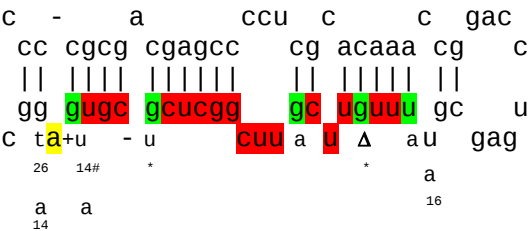
βTC-3 (0)

E14.5 (162)

βTC-3 (0)

Mus musculus miR-375 stem-loop

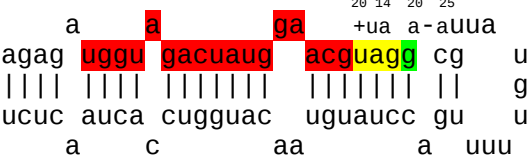
E14.5



βTC-3 (0)

Mus musculus miR-379 stem-loop

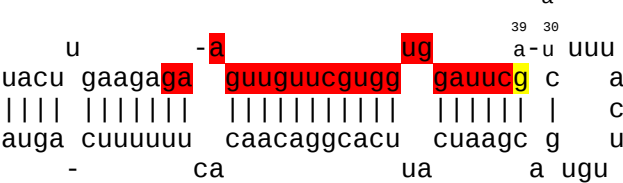
E14.5 (187)



βTC-3 (0)

Mus musculus miR-382 stem-loop

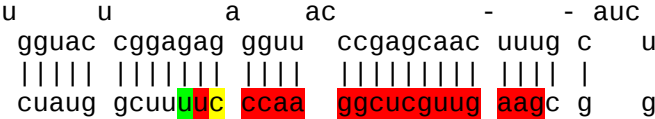
E14.5 (23)



βTC-3 (0)

Mus musculus miR-409 stem-loop

E14.5 (64)



a - a a u⁴⁴ c⁷³ gu u a gag

βTC-3 (0)

Mus musculus miR-411 stem-loop

E14.5 (421)

u ug a a a a a - uuu
 gguacu gag g uagu gaccgu u gcguacg c a
 ||||| ||||| ||||| ||||| ||||| ||||| |||||
 cua uga cuc c auca cuggca a uguaugc g c
 a -- c¹⁹ a c a c a a ugu
 au⁴⁵
 a³⁶

βTC-3 (0)

Mus musculus miR-423 stem-loop

E14.5 (36)

acuu a aaauaa u -ag g a cua
 gug gg aggaagu aggcugaggggc aga cgag cuuuu u
 ||| || ||||| ||||| ||||| ||||| ||||| |||||
 cgc cc uccuucg ucugacuccccg ucu gcuc ga aaa u
 -guu g ---cca u c+u gag g - ccu
 36 16

βTC-3 (0)

Mus musculus miR-431 stem-loop

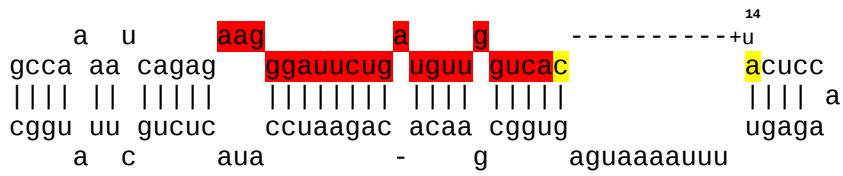
E14.5 (61)

----- c u c u a a
 20 u
 59 a
 11 a
 +u 0 ----- aca
 cguc ugcgagg gucuugcagg cg c ugcag gcc c
 ||||| ||||| ||||| ||||| ||||| ||||| |||||
 gcag acgcucu cgggacguuc gc g acguu ugg u
 cuaca a u u u g gcaa cag

βTC-3 (0)

Mus musculus miR-541 stem-loop

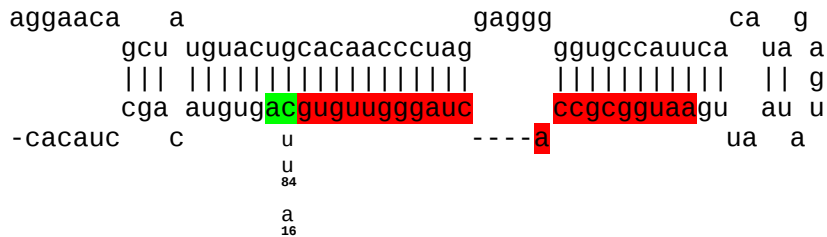
E14.5 (607)



βTC-3 (0)

Mus musculus miR-652 stem-loop

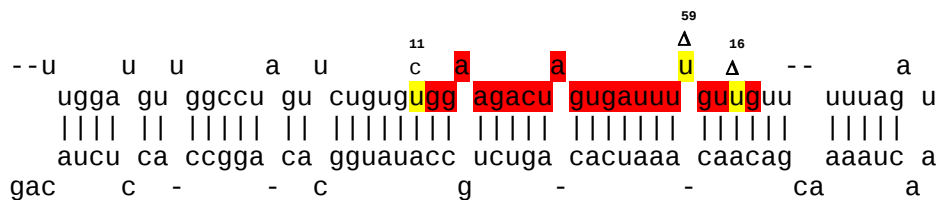
E14.5 (184)



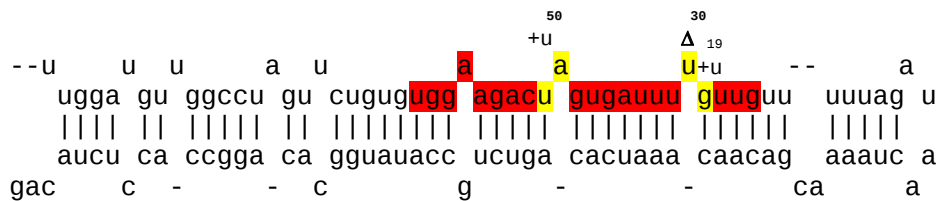
βTC-3 (0)

Mus musculus miR-7-1 stem-loop

E14.5 (44)



βTC-3(205)



Mus musculus miR-720 stem-loop

E14.5 (26)

```

      -      aau -      g g uua
cuggag cccag ga agau ca cu g
||||| ||||| || ||||| ||| a
gaccuc gggguc cu ucug gu gg a
      c      gcu a - g uuu
              +a
              42#

```

βTC-3 (0)

Mus musculus miR-92-1 stem-loop

E14.5 (28)

```

---cu uac      uu c      uuu
uuc acagguugggau gu gcaaugcugug c
||| ||||| ||||| ||||| |||||
gag ugucgggccug ca cguuaugguau u
gguuu - -u +u 18 uu - guc

```

βTC-3 (0)

Mus musculus miR-93 stem-loop

E14.5 (50)

```

12 40
u a
16 34 0
a a -ca - u g+u au aau
guc ugsggggcuc aagugcu guucg gcag uag gu u
||| ||||| ||||| ||||| ||||| ||| a
cag acccccag uucacga cgagu cguc auc ca c
a g ccc u - - - guc

```

βTC-3(35)

```

17
a
17 34 17 0
a a -ca - u +u g+u au aau
guc ugsggggcuc aagugcu guucg gcag uag gu u
||| ||||| ||||| ||||| ||||| ||| a
cag acccccag uucacga cgagu cguc auc ca c
a g ccc u - - - guc

```

Mus musculus miR-7b stem-loop

E14.5

```

aggagcggaguacgu - g u aagac u c au

```

β TC-3 (34)

Mus musculus miR-98 stem-loop

β TC-3(72)

Mus musculus miR-99b stem-loop

g g c a c a c c c g u a g a c g a c u u g g g g g c u

cugug	ugggugucu	gcu	gaac	c	c	ccg u
cc	gu	c	a	a	g	c

βTC-3(33)

				¹⁵ +u			
	c		ac	c	c	-	c
ggcac	acccguaga	cga	cuug	g	g	ggc	u
cugug	ugggugucu	gcu	gaac	c	c	ccg u	
cc	gu	c	a	a	g	c	