

Compilation of small RNA sequences, 1990

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This is an update of the compilation of small RNA sequences. The sequences included in the last compilation [Nucleic Acids Research (1988) 16:71–85] are not included here. Only complete sequences are included; abbreviations and symbols used for bases and sugars are same as in earlier compilations. Thanks to Mr. R. Singh and Dr. H. Mayor for help in preparing this compilation.

U1 RNA Nematode (*Caenorhabditis elegans*) Thomas, J et al. (1989) Personal communication.

m3GpppAAACUUACCGUGCGGGGU UAUUCGCGAUCACAAAGGC GGAAUCCCAUGGUUAGGCC UACCAUUGCACUUUUGGUG CGGGCUGACCUGUGGCGAG 100
UCUCGAGUUGAGAUUCGCCA ACAGCUAAUUUUGCGUAU CGGGCUGCGUGCGCGCGGC CCUGAA 166

U1 RNA Slime mold (*Physarum polycephalum*) Branlant, C (1989) NAR 17:1019

ACCUGGCCGGGGAAGUCGG UGAUCAAGACGGCCGAGUCC CUAGUUGGGGAACCUCCU GCACUUGAGAGGGGCUCCU CUAUGAUUGCCUUCGGGUA 100
CUCAACGGCAUAAUUGUGA UAGCGUGGGGUGCGCUUGUC GCGCCUGCAU 152

U1 RNA Algae (*Chlorella saccharophila*) Kiss, T et al. (1988) NAR 16:2734

m3GpppAUACFUACCGUGCCGGCCUG CGACCUCGAGCAAGAAGGGG GUCUAGGUAGUCUUGUACC UCGCCUUGUACUAUGCUUGG GGUAGCGCUGUGGGGCAA 100
GUCCUCGUUACAACGGAAUA AUUUCUGGCAGGCCGUUGCA CGCGCUUGCGGUCCUGGC AA_{OH} 162

U1 RNA Tomato (*Lycopersicon esculentum*) Abel, S et al. (1989) NAR 17:6319

1.1 AUACUUACCGUGCCGGGGUC AAUGGGCGAUCAAUAGACC CAUGGCCUAGGCUUGUAGCC UCCAUGCACUUUGGAGGGG UGCCUGCCUAAGGUCGGCU 100
1.2 -----U-----C-----U-----
1.3 -----A-----U-G-----AAU-----C
1.4 U-----U-----UG--GU-----U-G--A-----A--A-----A-----C
1.5 -----U-----UGU--GU-----U-G-----U-U-----C-----A--A--C
1.6 -----UA-----G--UU-----U-G-----AA-----U-----A-C
1.7 -----U-----A-----U-----C
1.8 -----UG--C-----U-G-----A U-----A-----C-----C

1.1 CAAGUAGUCGAGCCUACGUC AUAAUUUGUUG...CAGAGGGGG GCCUGCGUUCGCGCAGCCCC UACC 162

1.2 ---C-----U-----U-----
1.3 ---G-----U-U-A-----U-----G-----G--
1.4 ---G-C---AU-----U-----G-----G.-
1.5 ---AG--U--U--U--U-----U-----A-----G-----G.-
1.6 ---G--U-----UUG-----U-----
1.7 ---G-----U-U-----A-----G--
1.8 ---G-----U-----G-----G--

U1 RNA soybean (*Glycine max*) van Santen, VL et al. NAR (1988) 16:4176

UACUUACCGGACGGGGUC AAUGGAUGAUCAGAGGUCC AUGGCCUAGGGAAGUAACC UCCAUGCAGAGGAGGGG UGCCUUUCUAAGGUCUGUCC 100
-----U-----U-----U-----C-----C--
AAGUGACAGAGCCUACGUCA UAAUUUGUGUAGUGGGGGCC UGCGUUCGCGCGGCCUU UCAAU 165
-----G-----U-----A-----C-----

U2 RNA Nematode (*Caenorhabditis elegans*) Thomas, J et al. Personal communication.

m3GpppAUCGUUCUUCGGCUUUAUAG CUAAGAUCAAAGUGUAGUAU CUGUUCUUAUCGUUUAUACC UACGGUAUACACUCGAAUGA GUGUAUAAAGGUUAUUGA 100
-----G-----
UUUUUGGAACCUAGGGAAGA CUCGGGGCUUGCUCCGACUU CCAAGGGUUCGUCCGGCGU UGCACUGCGCCGGGUCUGG CCCAGU 186
-----UA-C--A-----U--U--GG-----A--C-----U-----

U2 RNA Yeast (*Schizosaccharomyces pombe*) Brennwald, P et al. (1988) MCB 8:5575

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- m3GpppAUUCUCUCUUUGCCUUUUGG CUUAGAUAAGUGUAGUAUC UGUUCUUUCAGUUUAAUCG CUGAAAUCACCUCACUGAGG UGUUCCGAUUAUCUUGUUU 100
UUGUUUGAGUUGGAAAGCC UCUGGCUUGCUAUGCUUCC GACACUGGUGUUCUUGCUAU UGCACUACUGGCAAGCGAC GCCGAA_{OH} 186
- U2 RNA Maize (*Zea mays*) Brown, JWS & Waugh, R (1989) NAR 17:8991
AUACCUUCUCGCGCCUUUG GCUAAGAUAAGUGUAGUAUC UGUUCUUUCAGUUUAAUC CUGAUUUGUGGGCCAUUG UCCACUUCGAUUAUAAUUA 100
AUUUUUGUGGGGAAAGGUC CACUACAGUGGCUUGCAUUG GGUCCCUAUGUGUCGUCU AGCGUUGCACUUAUUGCUUGA GCCUGGCGACCCCAAC 197
- U2 RNA Pea (*Pisum sativum*) Hanley, BA & Schuler, MA (1989) NAR 17:10106
AUACCUUCUCGCGCCUUUG GCUAAGAUAAGUGUAGUAUC UGUUCUUUCAGUUUAAUC CUGAUUUGUGAGCCAUUG UUCACACGAUUAUAAUUA 100
UCUCUUGAGGGGAGAGUCC ACUACAUAAGCUUGCUAGCU AUUGGGUCUCUACAGUGUUG CUUUUGCGUUGCACUUAUAGC AAUAGCCCGACACCCCAAC 200
- U3 RNA Mouse (liver) Mazan, S and Bachelleri, J (1988) JBC 263:19461
U3B m3GpppAAGACUAUACUUCAGGGAU CAUUUCUAUAGUUCGUUACU AGAGAAGUUCUCUGACUGU GUAGAGCACCCGAAACCAG AGGACGAGACGUAGCGUCC 100
CUCCUGAGCGUGAAGCCGGC UCUAGGUGCUGCUUGACUGC AGCUGCCUCCGCAUUGAU GAUCGUUCUCCCUUUG GGAGGGUGAGAGGGAGGAA 200
CGCAGUCUGAGUGGA-OH (215)
- U3 RNA Frog (*Xenopus laevis*) Jeppeson, C. et al. (1988) NAR 2:27
m3GpppAAGACUAUACUUCAGGGAU CAUUUCUAUAGUUCGUUACU AGAGAAGUUCUCUGACUGU GUAGAGCACCCGAAACCAG AGGACGAGACGUAGCGUCC 100
CUCCUGAGCGUGAAGGAGC UCACAGUCGUCUUAUUGU GGCUGCUGUUGCUAUGAU GAACGUUCUGCUCUCCCUUUA UUAUUGGGGAGAUAGAGGA 200
GAGAACACAAGCUGAGUGG 219
- U3 RNA Fruit Fly (*Drosophila melanogaster*) Akao, M et al. (1986) BBRC 138:512
AUCAUCAUACGACGGGUA UCAUUCUUCUUGGACGG UUGGAUCUCCAGUGUUGC AUGAUUUGCAUUAUUGGC AAUUGUUGCGAUACCGGAC 100
GCCGACGAUAGCGUGACA UGACCAGAUCCAUUUGUCA UAAUUAAGCCACAGCUUC CAUCCUCCGUCUCCUCCU CGGGUUCUGGGUGUCUGC 200
UACUCUGGCCACAU 215
- U3 RNA Yeast (*Schizosaccharomyces pombe*) Porter, GL et al. (1988) NAR 16:10131
m3GpppACGUAUCGAUACUCCAUAG AUCAUUCUUAUAGUUAUCGU CCUUCUUGGGUUCUUAACC UAGCCACAGAAGUGAACACG GAUGAUGAUAGGAGGCCCG 100
UUGCCUCAGAGUGAGGACU UUAUUCUUGAAGGCAUGC UUUUCGAUJAGGAUUUUUA CCUAAUUGUUGCUGUCU UCUAUGCGAUGAUCUUAAC 200
AUGAUUUGUUCUUGGU CGUAUUAUGUAGGCGAGCUG GUGUUUCUGACGUGU 256
- U4 RNA Nematode (*Caenorhabditis elegans*) Zucker-Aprison, E et al. (1988) NAR 16:7188
GpppAGCUUUGCGUGGGGCGAUA ACGUACCAUAGAGGCUUUG CCGAGGUGCGUUUJUGCUG GUUGAAAACUUUCCCAAU GCCCGGAUGUCCCGGAA 100
CAUGGGUGGCAUACGCAAUU UUGAACGCCUCUAGGAGGC AGAA 144
- U4 RNA Protozoa (*Trypanosoma brucei* subsp. *brucei*) Mottram J. et al. (1989) MCB 9:1212
m3GpppAAGCCUUGCGCAGGGAGGUG UGAACGCAAGAUCCUAGGU GAUUGUACUAGUGCAUAU CUAUAUCCGGUACUCCUUG GGGAAAGUUUGCUACCCACC 100
ACGGGUGGGA 110
- U4 Broad Bean (*Vicia faba*) Kiss, T et al. (1988) NAR 16:5407
U4A m3GpppAUCUFUGCGCFUGGGGCAAU GACGUAGCUAGUGAGGUFU AACCGAGGCGGUCUAFUGC UGGUUGAAAACUAFUUGCAA ACCCCUUCUAGGCUUGGC 100
U4B -----A-U
- U4A UUGGGUUAAGCCUUGAGAA UUUCUGGAAGGACUCCUUG GGGUAAAGUCU_{OH} 152
U4B ---AAC-----
- U5 RNA Nematode (*Caenorhabditis elegans*) Thomas, J et al. (1989) personal communication.
m3GpppAACUCUGGUUCCUCUGCAU UAACCGUGAAAUCUUCGC CUUUUACUAAAGAUUCCGU GCAAAGGAGCAUUUACUGAG UAUUACAUAUUUUUGGA 100
GACUCCUUGAGAAAGCGGGU CA 122
- U5 RNA Yeast (*Schizosaccharomyces pombe*) Small, K et al. (1989) NAR 17:9483
m3GpppAUAAUCCGUCAAAGCACUUU GCAAAGCUAACGUACUGU UUCUUGCCUUUACAGAAA CAGCCGUUGUAAGGUGUC UAAUUGACUGUAUAGUUU 100
UGUAAUCUUUUUCUUGAA_{OH} 119
- U5 RNA Crucifer (*Arabidopsis thaliana*) Vankan, P et al. (1988) NAR 16:10425

m3GpppACGCAGCCAUGGUGAGUA CAAAGCGAACUAAUUCUUC GCCUUUACUAAAGAAUACCG UGUGCUCUCGACGCUAAGU GCAUACGCCUAAUUUUGGAG 100
GGCUCCACUUCUCUGUGGAA CCAA 125

U6 RNA Nematode (*Caenorhabditis elegans*) Zucker-Aprison,E et al. (1988) NAR 16:7188
GUUCUCCGAGAACAUAUAC UAAAAUUGGAACAUAACAGA GAAGAUUAGCAUGGCCCCUG CGCAAGGAUGACACGCAAU UCGUGAAGCGUCCAAUUU 100
UU 102

U6 RNA Yeast (*Saccharomyces cerevisiae*) Brow,D & Guthrie,C (1988) Nature, 334:213
GUUCGCGAAGUACCCUUCG UGGACAUUUGGUCAUUUGA AACAAUACAGAGAUCAUCAG CAGUCCCCUGCAUAAAGAU GAACCGUUUACAAGAGAU 100
UUAUUUCGUUU 112

U6 RNA Yeast (*Schizosaccharomyces pombe*) Tani,T & Ohshima,Y (1989) Nature 337:87
GAUCUUCGGAUACUUUGGU CAAAUUGAAACGAUACAGAG AAGAUUAGCAUGGCCCCUG ACAAGGAUGACACUGCGACAU UGAGAGAAAACCCAUUUU 98

U6 RNA Protozoan (*Trypanosoma brucei*) Tschudi,C et al. (1988) NAR 16:11375; Mottram,J et al. (1989) MCB 9:1212
GGAGCCUUCGGGACAUCC ACAACUGGAAAUCAACAG AGAAGAUUAGCACUCUCCU GCGCAAGGCUAUGUCAUC UUCGAGAGAUUAGCUUUU 100

U8 RNA Human (HeLa cells) Tyc,K & Steitz,JA (1989) EMBO J 8:3113
m3GpppAUCGUCAGGUGGUAUAUCC UUACCUGUCCUCCCGGA GGCAGAUJAGAACAUGAUG AUUGGAGAUGCAUGAAACGU GAUUAACGUCUCUGCGUAAU 100
CAGGUCUUGCAACAUCUGA UUGCUCUUAUCUGAUU-OH 126

U11 RNA Human (HeLa cells) Montzka,KA & Steitz,JA (1988) PNAS USA 85:8885
m3GpppNAAGGCUUCUGUGAGUG GCACACGUAGGGCAACUCGA UUGCUCUGCGUGCGAAUUCG ACAUCAAGAGAUUUCGGAAG CAUAAUUUUUUGGUUUUGG 100
GCAGCUGGUGAUCGUUGGUC CCGGCGCCCU-OH 131

U12 RNA Human (HeLa cells) Montzka,KA & Steitz,JA (1988) PNAS USA 85:8885
m3GpppNUGCCUUAACUUAUGAGUA AGGAAAUAACGAUUCGGGG UGACGCCCGAAUCCUCACUG CUAUUGUGAGACGAUUUUU GAGCGGGUAAAGGUCGCCU 100
CAAGGUGACCCGCUACUUU GCGGGAUGCCUGGGAGUUGC GAUCUGCCCC-OH 150

U13 RNA Human (HeLa cells) Tyc,K & Steitz,JA (1989) EMBO J 8:3113
m3GpppNAUCCUUUUGUAGUUAUGA GCGUGAUGAUUGGGUGUUA UACGCUUGUGUGAGAUUGGC CACCCUUGAACCUUGUUCG ACGUGGGCACAUUUAUCGUC 100
UGAUC 105

PhyUR RNA Slime mold (*Physarum polycephalum*) Mylinski,E & Branlant,C (1989) NAR 17:9470
m3GpppGCCUAUCUAGGCGGUAAUG UUUGCGUGUAUCGAAAGUG AGCAUAAACGUUGCUGGCAC CCUAGCAUUUCAAACACAC UGGUAGACUUCGUGCUAAU 100
AUAGCUUUUUUGGUCCGUA AGGGCUUU 128

SNR5 Yeast (*Saccharomyces cerevisiae*) Parker,R et al. (1988) MCB 8:3150
AUCAUCAAUAAACUGAUCU UCCGGAUACCCAUGCUUAA GACAUCACGCCUCCAUUGU CUAUUAAGCGCAAUUGG UGGAAGUAGACCAUUUUUU 100
UUGUCCUAGCUUUUCAUUA UUGAAUCUAAUCCAGUUUU AAUGGUUUUUCUAAUUAAG AAAACAAUUAUCAUUGGUU CGCUCUAGGUGUACAUUUCU 200
UCACU 205

SNR8 Yeast (*Saccharomyces cerevisiae*) Parker,R et al. (1988) MCB 8:3150
AUGAUACAUAUAAACAUUC CUUCUAUUCACUGGCAUC UACAUCGUGAGGUAUCAG AGGGGAAAAGAAGAGCUAGA GCAACUCCACACUCAUGAG 100
CGUCCUCAUACUGUUCUGG CGCUUCUCACAGGUGCUUCU UUUAGUGUCUCCAUUGGCC CAGAUCCGUACUGCGGAGU GAGAUUCU 189

SNR9 Yeast (*Saccharomyces cerevisiae*) Parker,R et al. (1988) MCB 8:3150
GGGAAUUAUUAACUAAUAC UCUGUUAUUAAGAACUUUC ACGCCUUUCCUUAUGGCU AUGAAAGCGUGGACAACGGA GAUCAAAUAGACCAAUUACU 100
GAAUAGGCUUUUGACAUAU CUUCUUCUUAUGGGUGAGG AUUAAGCUGAUUCCUGACC CACCUAUAUUAUGUCCUUA GACAUUCU 188

SNR128 Yeast (*Saccharomyces cerevisiae*) Zagorski,J et al. (1988) MCB 8:3282
GAUCACGGUGAUGAAAGACU GGUUCCUUAACAUUCGAGU UCCACGGUAGGAGUACGCU UACGAACCAUCGUUAGUAC UCUCGGUGACCGCUCUUCU 100
UAGAGACCUUCUAGGAUGU CUGAGUGA 128

SNR190 Yeast (*Saccharomyces cerevisiae*) Zagorski,J et al. (1988) MCB 8:3282

GGCCCGAUGAUAAUGGUGU CUCUUCUUCCUCGUCCGAU UCGACCAUGACGACAAGGA UUUUAUCUCGUUCUUAU GCGAAUGAUUUUGAAAAGAU 100
GUUGCUUCUGUGACAUUUU UUUUAUCAUUUGUGUUGC AACGGGAACUUUCUUGCC AGUGUUUAACAACAUGCA GAUCUGAGCC 190

SCR1 Yeast (*Saccharomyces cerevisiae*) Felici, F et al. (1989) MCB 9:3260

AGGCUGUAAUGGCUUUCUGG UGGGAUGGGAUACGUUGAGA AUUCUGGCCAGGAACAAUUC CUUCCUCGCGGCUAGACACG GAUUGCACGCCCUUUGGCAA 100
GGGAUAGUUCUUAUUCGCG ACCGUGCCCGUUGUGGCAA CCGUCUUCUCCGUCGUAA AUUUGUCCUGGGCAGAGCUG UCUGCCCGGAGGGGGAGAG 200
UCCGUUCUGAAGUGUCCCG CUUAAUAAAUCGAUCUUG CGGGACGCCGUUGGCAGGA GCGUGAGGAUCCGUCUCU CUGUCUGGUGCGGCAAGGUA 300
GUUCUGGGUCCUAGGGGCU CCACCUACCCGUCUJAGG GGAGUUUAUCCAGCGUCAG AAGGUGACCGUGAUGGAGGC GGCCGGGAUAGCAUAUCG 400
AGUCGGAAUUAUGUGCAAGU UGAUCGCUUCGGCGGUUAA UUUGGCGGUGCCAUCAGGAU UUAUCUCGACAUUGGGCCG UUCCUCGGGGAUGGAGUGU 500
GUCCUGAACCAUUAUUU 518

RNA B Protozoa (*Trypanosoma brucei* subsp. *brucei*) Mottram, J et al. (1989) MCB 9:1212

AAGACCGUACUCUGAACAGA AUCGUUUUAUGAGUACAACC UCUAAAUGAGAAUAACCA ACAACCAAUCCUGAUGAUG AAGGUUGCUGGCCCGCCG 100
GAGAGCUGUUGAUGAACGG CAGGAGCCGGUCCAGAAGG AUCC 144

HSUR RNA Virus (*Herpesvirus saimiri*) Lee, S.I et al. (1988) Cell 54:599

HSUR1 m3GpppACACUACAUUUUUUUUUAU UAUUUUUUAGUAAUGUUUAC UGGAACUAAAUCUGUGUAU ACCUAAAUCAAAAGUCUCA ACAACCCGUUACCUGCUGAC 100
CAUUUUUUGUAGGUACUGGG UGUAAAUAUGAUGACCGGUA CAA_{-OH} 143
HSUR2 m3GpppACACUACAUUUUUUUUUU AUUUUAUCCUGAUAUUGCUG CUUUAUACACACAGGAGUA UCGUUCUACUAAUUUUUA AAGCGCUGGGUGUACAUUU 100
UAAAAACAGCGCUG_{-OH} 115
HSUR3 m3GpppAAGACUUGCUUAGGAGAUU AACAAACCAAGAAUUAUUU UGAAGGCUCUGGGUCUUUAG GUCCAAACAGUGCCA-OH 96
HSUR4 m3GpppGCCCCACGCGAGAGAUUAC UCUUCAGGUUCAUACAGUUG GAGCUUCUCAGUUCAGAAAG CACUCAGCAUUUUUGAAGG CUCUGGGUAGUCCAAACCA 100
GUGCCA_{-OH} 106

HSUR5 RNA Virus (*Herpesvirus saimiri*) Wasserman, D.A et al. (1989) NAR 17:1258

m3GpppAACACUACAUUUUUUUUUU CGCUCGCAAAGCUGAACUG AGGAGCAUGUAGUCUUUUUC CAUUUACCUGUCAAUUUUU GGAGGCAAUGGUGUUAUCU 100
AACAAACAGAGCCG_{OH} 114

7SL RNA Yeast (*Schizosaccharomyces pombe*) Ribes, V et al. (1988) EMBO J 7:231; Brenwald, P et al. (1988) MCB 8:1580;
(*S.pombe* and *Yarrowia lipolytica*) Poritz, M.A et al. (1988) PNAS 85:4315

S.P. pppGCGUAAUUGGCUUGGUCGAA GUGUUUAGUACUCCCAAUAG UGCAUGUUCGGUGGUCUCGG GUUCGAGUCUGGCUUUCGAU CCCUCGAUCUGCCAGCUGUC 100
UUCGAAGAGUAGUCUUCGUG GCAACUGGCAUUUAAACCG UGUAGUACCGAUGGAGGUUG GAAACAAUGCACAUCACUAC CGGGUCUUGGGCAGUGCGAU 200
AGCGAUGGGAUACCUUCG CAGGAUGGCAUGGAAGUAA AACACAACGGUCGU(U)OH 257
Y.L. pppGCGUAAUUGGCAUUUUGUCG GAGUCGUAUUCGUCUUCUU GUUGGCGUUCGAGUCUUGG GCUCUGCACUUGGCCAUUUG GUUGUCCUUCGAAUUCUG 100
CGGUUGAUGGGGCGUCGCGU CUGAGUAAUCGCGUUUGAGA UUUCGCUUCAAAGAUUAACU GGGAAACUUCAGUGGAGCAA UCCAGCAGAGAUCCAGUUGC 200
CGUGGGAUUGGCGGGGAU CGCAACCAAGUGGUAUUGU UAUGGAAGAUUUACGAUC ACGAUU 266

7SL RNA Wheat germ (*Triticum sp.*) Marshallsay, C et al. (1989) NAR 17:1771

NCCGAGCUCAGUUGCGAGAG CUUGUAACCGAGUGGGGGCA UUAAGUGAUGUGAACGUCG UUGUAGCGCUGGGGCCUGGUCU GGGUCUGGGUGUCUACUCG 100
UGGCCCGCCGUCCAAGUU GCGUAGUGGAGCCUGGGGUU AUGCGAAAGACUGGGUCUAC GGUCCAUAUUGGCGAGGCACAG CGUGAGGCGUGGCUACAGAG 200
GCAGCGAACACUGCCGCUUC CAACGGUGGAAGGAUUAUGG GCCGUCGACUCCUAGCCAA UUGGCCUCGCGACCUACUCCAGC AGACCACC 288

7SL RNA Maize (*Zea mays*) Campos, N et al. (1989) NAR 17:1573

NCCGAGCUCUGAAGCGAGAG CUUGUAACCGAGCGGGGGCA UUAAGUGGUGCGGAUUCU UUGCGAUGGCUUUCUGGGCC CGGGCUCGUAUGUGCCUUU 100
GGCCCGCCGCGGCCAA GUUGGUAGUGGCGGGGAGG CUUJAGCGGAAGCUUUGGU CUCUCCAGACCUGAAGUGGC AGGAAUGGCGUGAGGCGUGC 200
UUCACAGAGCAGCAUCACU CGCCCGCUCCAACGGUGGGA GGAUAACGGGCGCUGCAC UUCGAGCCCAACUCAGGCC AGAGCCUACUAAGCAGACC 300
ACCAUCUUU 310

RNase P RNA Human (spleen) Baer, M et al. (1989) NAR 18:97

AUAGGGCGGAGGGAAGCUCA UCAGUGGGGCCACGAGCUGA GUGCGUCCUGUCACUCCACU CCCAUGUCCUUGGGAAGGU CUGAGACUAGGGCCAGAGGGC 100
GGCCCUAACAGGGCUCUCC UGAGCUUCGGGAGGUGAGU UCCAGAGAACGGGCUCCG CGCGAGGUCAGACUGGGCAG GAGAUGCCGUGGACCCCGCCC 200
UUCGGGAGGGGCGCGGCGG AUGCCUCCUUGCCGGAGCU UGGAACAGACUCACGGGCCAG CGAAGUGAGUCAAUGGCUG AGGUGAGGUACCCCGAGGGG 300
ACCUCUAACCAAUUCAGA CUACUCUCCUCCGCCCAU 339

MRP RNA Human (HeLa cells) Gold, H.A et al. (1989) Science 245:1377; Rat (Novikoff hepatoma) Yuan, Y. et al.

(1989) JBC 264:14835; Mouse (LA9 cells) Chang,DD & Clayton,DA (1989) Cell 56:131

ThrNA GUUCGUGCUGAAGGCCUGUA UCCUAGGCACACACUGAGG ACUCU.GUCCUCCCCUUCC GCCUAGGGGAAAGUCCCGG ACCUCGGGCAGAGAGGCCA 100
 Human -----
 Mouse A-C---CU-----U -----U--.-.---- GACA-.-----UAU-C--U- -----A-----G
 Rat A-C---CU-----U -----GU--.-G-- GACC-U-----UAU-C--U- -----AU-----G

ThrNA CGUGCAUACGCACGUAGACA UCCCCGCUUCCACUCCAA AGUCCGCCAAGAAGCGAUUC C.....CGCUGAGCGGCGUGGCGCG GGGGCGUCAUCCGUCAGCUC 2
 Human -----UA-------
 Mouse -----C---G-----U -C-----AAGU---.GUU --C-----ACC- -UCCGGGGCGA-----CA-. -----
 Rat -----C---G-----G-U -C-----AAGU---.GUU --C-----ACC- -UCCGGGGCGA-----CG-. ----U-----U--

ThrNA CCUCUAGUUACGCAGGCAGU GCG..UGUCCGCGCACCUACCA CACGGGGCUCAAUUCUCAGC GCGGCUGU-OH 268
 Human -----A-----
 Mouse A-.A---G----- --ACCUGG-U-----A-----AC
 Rat U-.C---G----- --ACCUU-UA-----A-----GU

fr3 RNA Mouse (rat liver chromatin) Urosevic,N et al.(1988) EJB 173:375
 AGUGGGGACUGCGUUCGCG CUCUCCCCUG 30

Telomerase RNA Protozoa (Tetrahymena) Greider,CW & Blackburn,EH (1989) Nature 337:331
 AUACCCGCUJAAUJCAUJCA GAUCUGUAAUAGAACUGUCA UUCAACCCCAAAAUCUAGU GCUGAUUAACCUJACACCA UJAGGUJCAAAUJAGUGJUA 100
 AUGCGGGACAAAAGACUJAU GACAUUGAUACACUJUUUA UCAAUGGAUGUCUJAUUUUU 160

s-polyA+ RNA (Dinoflagellates) Reddy,R et al. (1985) BBRC 127:552
 NAAUUAACGGUUGAAUAGCG GUUACGCUUCAUGACFGGAU AUUAACCUAGCUJAGAGACC UGGAUUAUAGUJAGUAAAAA AAAAAAAAAAAAAAAAAAAAAA AAAAAH 104

polyA+ RNA Mouse (Brain) Anzai,K. et al. (1986) J Neurochem. 47:673
 AAAGGAGUUGGGAUUUAGC UCAGUGGUJAGAAUGCUUGCCU AGCAAGCGCAAGGCCUUG GUUCAGUCCUCAGCUCUGUG AAAGGAAAAAAAAAGACAA 100
 AAUAAAAUUAUJAGGAAGUA UJAGUUAUJAGGGAAUUA AAGUAAUCAAUUJACUUC AUUJUGAACCUGAAACAG AACCCUJAGAUUJACAGC 200
 CAA 203

msdRNA (Escherichia coli) Lampson,BC et al.(1989) Science 243:1033
 CACGCAUGUAGGCAGAUUUG UUGGUUGUGAAUCGCAACCA GUGGCCUJAAUGGCAGGA 58

RQ120 RNA (QB phage-infected Escherichia coli) Munishkin,AV et al (1988) Nature 333:473
 GGGUUCGGGGUUAAGUCC CGUCCGUUCCACCAAGGAA CGAGCUUUJUGUJCGUACAGA GCUUGCUGCUCUGCUCGUG GUCCUCUGCUGAUCGAUGCU 100
 AUUGAUCAGCUGAAGUCCCA 120

HVP RNAs (Herpes virus Papio) Howe,JG & SHU,M (1988) J. Virol. 62:2790
 HVP1 AAGACCUACGCUGCCUJAGC GGUUCUGCUAGGGAGGAGAU UGGUGCGGUJAAUGCCGCC GUCCCGGUJACAAGUCCCG GAGGUGACGGUJAGCUGUCU 100
 AUUJGCCUGUJACAGGUGU AUAGCUGCUCUCGCGAGUC GCUGCUAUCAGCCGUCUCCG GUCCGAGCCAGCUGGUGG UCUGCUCUU 189
 HVP2 AGACCAUCGGCUGCCUJAAU GGUJACGUAGGGAGGAGUUG UGUCCGGCUJAGUCCGAGCG UACCGGUJACAAUCCCGG GGGGUJAGAAAGAGCGGCUC 100
 CGCCAAGUGCAUUJGAGUC AGGAUUCUCUJACCCUCCCG GUAAAGCCAGCUCUJAGGUCU GCUCUUJUG 169

Bacteriophage 029 small RNA Guo,P. (1987) NAR 15:7081
 UCAUJGUJACGGUJACUJCCA UUGCUAUGUGUJAGUJGGG AUUAAACCCUGAUJAGUUC AGCCCAUACUJUGUJAGU UGGUJGUJCAUJAGGCAA 100

A 101
 -GUGCCGCUACUJUGAUAA 119