

Small RNA database

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ABSTRACT

The small RNA database is a compilation of all the small size RNA sequences available to date, including nuclear, nucleolar, cytoplasmic and mitochondrial small RNAs from eukaryotic organisms and small RNAs from prokaryotic cells as well as viruses. Currently, about 600 small RNA sequences are in our database. It also gives the sources of individual RNAs and their GenBank accession numbers. The small RNA database can be accessed through WWW(World Wide Web). Our WWW URL address is: <http://mbcr.bcm.tmc.edu/smallRNA/smallrna.html>. The new small RNA sequences published since our last compilation are listed in this paper.

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REFERENCES

- Reddy, R. (1980) *Nucleic Acids Res.*, **16**, r71–r85.
- Reddy, R. and Gupta, S. (1990) *Nucleic Acids Res.*, **18**, 2231–2235.
- Reddy, R. and Gupta, S. (1991) *Nucleic Acids Res.*, **19**, 2073–2075.
- Shumyatsky, G. and Reddy, R. (1992) *Nucleic Acids Res.*, **20**, 2159–2165.
- Shumyatsky, G. and Reddy, R. (1993) *Nucleic Acids Res.*, **21**, 3017.
- Gu, J. and Reddy, R. (1994) *Nucleic Acids Res.*, **22**, 3481–3482.
- Gu, J. and Reddy, R. (1996) *Nucleic Acids Res.*, **24**, 73–75.
- Gao, J.P. and Herrera, R.J. (1995) *Insect Mol. Biol.* **4**, 193–202.
- DiMaria, P., Palic, B., Debrunner-Vossbrinck, B.A., Lapp, J. and Vossbrinck, C.R. (1996) *Nucleic Acids Res.* **24**, 515–522.
- Yuzi, T., Seiichi, U., Kenji, K., Tokio, T. and Yasumi, O. (1993) *Mol. Cell. Biol.* **13**, 5613–5619.
- He, P. and Bellofatto, V. (1995) *Gene* **165**, 131–135.
- Wang, X., Geng, Z. and Cao, K., unpublished data.
- Greenwood, S.J., Schnare, M.N. and Gray, M.W., unpublished data.
- Brule, F., Venema, J., Segault, V., Tollervey, D. and Branlant, C. (1996) *RNA* **2**, 183–197.
- Potter, S., Durovic, P. and Dennis, P.P. (1995) *Science* **268**, 1056–1060.
- Lopez, J., Borrero, M. and Santiago, C.L., unpublished data.
- Tarn, W.-Y. and Steitz, J.A. (1996) *Science*, in press.
- Szkukalek, A., Myslinski, E., Mougou, A., Luhrmann, R. and Branlant, C. (1995) *Biochimie* **77**, 16–21.
- Dungan, J.M., Watkins, K.P. and Agabian, N. (1996) *EMBO J.* **15**, 4016–4029.
- Miranda, R., Salgado, L.M., Sanchez-Lopez, R., Alagon, A. and Lizardi, P.M., unpublished data.
- Wieland, B. and Bindereif, A. (1995) *Gene* **161**, 129–133.
- Samarsky, D.A., Schneider, G.S. and Fournier, M.J. (1996) *Nucleic Acids Res.* **24**, 2059–2066.
- Xia, L., Liu, J., Sage, C., Trexler, E.B., Andrews, M.T. and Maxwell E.S. (1995) *Nucleic Acids Res.* **23**, 4844–4849.
- Ceccconi, F., Crosio, C., Mariottini, P., Cesareni, G., Giorgi, M., Brenner, S. and Amaldi, F. (1996) *Nucleic Acids Res.* **24**, 3167–3172.
- Kiss, T., Bortolin, M.L. and Filipowicz, W. (1996) *Mol. Cell. Biol.* **16**, 1391–1400.
- Renalier, M.H., Nicoloso, M. Qu, L. and Bachelier, J.P. (1996) *FEBS Lett.* **379**, 212–216.
- Tycowski, K.T., Shu, M.D. and Steitz, J.A. (1996) *Nature* **379**, 464–466.
- Nicoloso, M., Qu, L., Michot, B. and Bachelier, J.P. (1996) *J. Mol. Biol.* **260**, 178–195.
- Kiss-Laszlo, Z., Henry, Y., Bachelier, J.P., Caizergues-Ferrer, M. and Kiss, T. (1996) *Cell* **85**, 1077–1088.
- Balakin, A.G., Smith, L. and Fournier, M.J., unpublished data.
- Selvamurugan, N. and Eliceiri, G.L. (1995) *Genomics* **30**, 400–401.
- Shambaugh, J.D., unpublished data.
- Roberts, T., Dungan, J., Watkins, K. and Agabian, N., unpublished data.
- Kass, D.H., Kim, J. and Deininger, P.L. (1996) *J. Mol. Evol.* **42**, 7–14.
- Farris, A.D., Gross, J.K., Hanas, J.S. and Harley, J.B., unpublished data.
- Riedel, L., Putz, A., Hauser, M., Luckinger, R., Wassenegger, M. and Sanger, H.L. (1995) *Plant Mol. Biol.* **27**, 669–680.
- Hauser, M.T., Haas, B. and Saenger, H.L., unpublished data.
- Li, K. and Williams, R.S. (1995) *J. Biol. Chem.* **270**, 25281–25285.
- Baum, M. and Schon, A. (1996) *FEBS Lett.* **382**, 60–64.
- Lee, Y.C., Lee, B.J. and Kang, H.S. (1996) *Eur. J. Biochem.* **235**, 297–303.
- Haas, E.S., Armbruster, D.W., Vucson, B.M., Daniels, C.J. and Brown, J.W. (1996) *Nucleic Acids Res.* **24**, 1252–1259.
- Siegel, R.W., Banta, A.B., Haas, E.S., Brown, J.W. and Pace, N.R. (1996) *RNA* **2**, 452–462.

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Table 1. An update containing small RNA sequences published since our last compilation. Sequences from various sources covered in earlier compilations (1–7) are not included in this update

Small RNA	Source	Accession no.	Reference
U1 snRNA	Insect (<i>Bombyx mori</i>)	L42955, L42956, L42957, L42958	8
U2 snRNA	Microsporidian (<i>V.necatrix</i>)	Z50072	9
	Basidiomycete (<i>R.hasegawae</i>)	X69967	10
	Trypanosome (<i>L.seymouri</i>)	U23406	11
	Rice (<i>O.sativa</i>)	U27085	12
U3 snoRNA	Euglena (<i>E.gracilis</i>)	U27297	13
	Yeast (<i>H.wingei</i>)	X91005	14
U3-like RNA	Archaea (<i>S.acidocaldarius</i>)	U13990	15
U4 snRNA	Green Urchin (<i>L.variegatus</i>)	U37266	16
U4atac snRNA	Human (<i>H.sapiens</i>)		17
U5 snRNA	Slime Mold (<i>P.polycephalum</i>)	X74440, X74441	18
U5-like RNA (SLA2 RNA)	Trypanosome (<i>T.brucei</i>)		19
U6 snRNA	Entamoeba (<i>E.histolytica</i>)	U43841	20
	Trypanosome (<i>L.mexicana</i>)	X82228	21
	(<i>Phytomonas ap.</i>)	X82229	21
U6atac snRNA	Human (<i>H.sapiens</i>)		17
U14 snoRNA	Yeast (<i>S.pombe</i>)	U29583	22
	Frog (<i>X.laevis</i>)	Z49897	23
U17 snoRNA	Fugu (<i>F.rubripes</i>)	X94942	24
U19 snoRNA	Human (<i>H.sapiens</i>)	X94290	25
	Mouse (<i>M.musculus</i>)	X94291	25
U21 snoRNA	Fruit Fly (<i>D.melanogaster</i>)		26
U22 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U25 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U26 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U27 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U28 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U29 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U30 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U31 snoRNA	Human (<i>H.sapiens</i>)	U40580	27
	Mouse (<i>M.musculus</i>)	U40654	27
U32 snoRNA	Human (<i>H.sapiens</i>)	X94598	28
	Mouse (<i>M.musculus</i>)	Z69622	28
U33 snoRNA	Human (<i>H.sapiens</i>)	X94599	28
	Mouse (<i>M.musculus</i>)	Z69623	28
U34 snoRNA	Human (<i>H.sapiens</i>)	X94600	28

Table 1. *continued*

Small RNA	Source	Accession no.	Reference
	Mouse (<i>M.musculus</i>)	Z69624	28
U35 snoRNA	Human (<i>H.sapiens</i>)	X94601	28
	Mouse (<i>M.musculus</i>)	Z69625	28
U36 snoRNA	Human (<i>H.sapiens</i>)		28
	Chicken (<i>G.gallus</i>)		28
U37 snoRNA	Human (<i>H.sapiens</i>)	X94602	28
	Hamster (<i>C.cricetus</i>)	X94606	28
U38 snoRNA	Human (<i>H.sapiens</i>)		28
	Mouse (<i>M.musculus</i>)	X94603	28
U39 snoRNA	Human (<i>H.sapiens</i>)	Z69626	28
	Mouse (<i>M.musculus</i>)	Z69627	28
U40 snoRNA	Human (<i>H.sapiens</i>)	Z69628	28
	Mouse (<i>M.musculus</i>)	X94604	28
U41 snoRNA	Human (<i>H.sapiens</i>)	X96640	29
U42 snoRNA	Human (<i>H.sapiens</i>)	X96641	29
U43 snoRNA	Human (<i>H.sapiens</i>)	X96642	29
U44 snoRNA	Human (<i>H.sapiens</i>)	X96643	29
U45a snoRNA	Human (<i>H.sapiens</i>)	X96644	29
U45b snoRNA	Human (<i>H.sapiens</i>)	X96645	29
U46 snoRNA	Human (<i>H.sapiens</i>)	X96646	29
U47 snoRNA	Human (<i>H.sapiens</i>)	X96647	29
U48 snoRNA	Human (<i>H.sapiens</i>)	X96648	29
U49 snoRNA	Human (<i>H.sapiens</i>)	X96649	29
U50 snoRNA	Human (<i>H.sapiens</i>)	X96662	29
U51 snoRNA	Human (<i>H.sapiens</i>)	X96650	29
U52 snoRNA	Human (<i>H.sapiens</i>)	X96651	29
U53 snoRNA	Human (<i>H.sapiens</i>)	X96652	29
U54 snoRNA	Human (<i>H.sapiens</i>)	X96653	29
U55 snoRNA	Human (<i>H.sapiens</i>)	X96654	29
U56 snoRNA	Human (<i>H.sapiens</i>)	X96655	29
U57 snoRNA	Human (<i>H.sapiens</i>)	X96656	29
U58a snoRNA	Human (<i>H.sapiens</i>)	X96657	29
U58b snoRNA	Human (<i>H.sapiens</i>)	X96658	29
U59 snoRNA	Human (<i>H.sapiens</i>)	X96659	29
U60 snoRNA	Human (<i>H.sapiens</i>)	X96660	29
U61 snoRNA	Human (<i>H.sapiens</i>)	X96661	29
snr11 snRNA	Yeast (<i>S.cerevisiae</i>)	U16691	30
snr13 snRNA	Yeast (<i>S.cerevisiae</i>)	U16692	30
E2 snoRNA	Human (<i>H.sapiens</i>)	U36484	31
snRNA X	Nematode (<i>A.lubricoides</i>)	U52371	32
snRNA Y	Nematode (<i>A.lubricoides</i>)	U52372	32
SLA RNA	Trypanosome (<i>T.brucei</i>)	Z50171	33
BC1 RNA	Mouse (<i>P.californicus</i>)	U33850	34
	<i>P.maniculatus</i>	U33851	34

Table 1. continued

Small RNA	Source	Accession no.	Reference
	<i>M.unguiculatus</i>	U33852	34
Y1 RNA	Mouse (<i>M.musculus</i>)	U34828	35
Y3 RNA	Mouse (<i>M.musculus</i>)	U34827	35
SRP RNA	Tomato (<i>L.esculentum</i>)	Z29099, Z29100, Z29101, Z29103, Z29104, Z29105, Z29106, Z29107, Z29109, Z29110, Z29111, Z29112, Z29260, Z29261	36
	Hop (<i>H.lupulus</i>)	X65983, X65984, X65985, X65986, X65987	37
	<i>H.japonicus</i>	X65988, X65989, X65990, X65991	37
	<i>P.americana</i>	X65992	37
	<i>C.blumei</i>	X65993	37
RNase P RNA	Mouse (<i>M.musculus</i>)	U31003, U31227, U31228	38
	Cyanelle (<i>C.paradoxa</i>)	X89853	39
	Aspergillus (<i>A.nidulans</i>)	X93307	40
	Archaea (<i>N.gregoryi</i>)	U42980	41
	<i>H.morrhuae</i>	U42981	41
	<i>H.trapanicum</i>	U42982	41
	<i>H.cutirubrum</i>	U42983	41
	<i>M.barkeri</i>	U42984	41
	<i>M.thermoautotrophicum</i>	U42985, U42986	41
	<i>M.fermidus</i>	U42987	41
	<i>T.celer</i>	U42988	41
	Eubacteria (<i>M.fermentans</i>)	U41756	42