

Supplementary Table 1. Oligonucleotides used in this study.

Name	Sequence (5' to 3')	Tm	Usage
5'RNA adapter	GACUGGAGCACGAGGACACUGACAUGGACUGAAGGAGUAGAAA	71	cDNA library
RT primer	CGAATTCCTAGAGCTCGAGGACAGGCGACATG(T) ₂₅ VN	65-67	cDNA library
RT-1	GACTGGAGCACGAGGACACTGA	59	Cloning
RT-1r	CGAATTCCTAGAGCTCGAGGACAGG	59	Cloning
pcDNA	GCAGAGCTCTCTGGCTAAC	53	CPCR
BGhr	CTAGAAGGCACAGTCGAGG	53	CPCR
RTQ-UNIr	CGAATTCCTAGAGCTCGAGGACAGG	59	PCR for pilRNA
5S rRNA	TCTACGGCCATACCACCTGAAC	59	PCR for 5S rRNA
pilR-t12	GTTCTTTGTTTTGGATATGGTACAG	53	PCR for pilRNA
pilR-t23	CAACATTCAGGGTGGTTTACAC	53	PCR for pilRNA
pilR-t25	TAACCTCTTGAAAGACTTCTGAG	52	PCR for pilRNA
pilR-t26	CACATCTTCTGAAGGC	47	PCR for pilRNA
pilR-t32	ACAGTTCCTCGAGGTAGCA	51	PCR for pilRNA
pilR-t41	TACAATGACATAAACAGAAACA	46	PCR for pilRNA
pilR-t43	TAGAAGGCCTTGGTGGGTGTG	59	PCR for pilRNA
pilR-t51	GAAAAACGCAAATTTTCAGTGACC	52	PCR for pilRNA
pilR-t60	GGAATTCCTTGTCTGGTATGTAAACC	54	PCR for pilRNA
pilR-t65	TAGTCACTTGCATGATGTGCC	55	PCR for pilRNA
pilR-t66	TCTCAGAAGGGATATTCTGTGGG	55	PCR for pilRNA
pilR-t67	CTTAGATGACAAATGTGTAAAGTC	51	PCR for pilRNA
pilR-t68	CACCTTCTAAGAGTCTTGGGC	55	PCR for pilRNA
pilR-t70	TTGAGTCTTTAGATGGCTTTTGG	52	PCR for pilRNA
pilR-t72	GCTGACACTACTGGAGGACATAC	59	PCR for pilRNA
pilR-t74	TTTCTCCCTTAGTGAAGTAACA	49	PCR for pilRNA
pilR-t83	GAAACTGCCTGGTGCAGATGC	56	PCR for pilRNA
pilR-t84	GCCTCCTTGACTCGTGCTGCTTTC	61	PCR for pilRNA
pilR-t86	GTAGACTCCTTGACTTTTCCAGATTG	54	PCR for pilRNA
pilR-t99	TAATATATTGGCATGATAACCTTG	49	PCR for pilRNA
pilR-t118	TGGTCTTTGAAGTTTGACAGCTCT	54	PCR for pilRNA
pilR-t128	AGAGTCAATGCACCTGTTATTTTG	52	PCR for pilRNA
pilR-t131	TACAGGGAGCTCCATGTGCTTC	57	PCR for pilRNA
pilR-t161	AGGAAAATGATTTTCCCAGTCTG	52	PCR for pilRNA
pilR-t168	CACTCCACAGCTGTGGTTTTCAC	57	PCR for pilRNA
pilR-t170	TTAATAAAGTGCCTCTGTATTATCAC	51	PCR for pilRNA
pilR-t171	CCTTTGTCTGATGTAATCCAGTG	56	PCR for pilRNA
pilR-t178	TGACTCTGGAGTACTTCTCAAC	53	PCR for pilRNA
piR-114367	CTGACTCCTGACTTCCCAC	53	PCR for pilRNA
pilR-t186	GTAGGCTTCCTTGTCTTTACACTAGC	58	PCR for pilRNA
rat piR-69188	GGCTTCCTTGTCTTTACACTAGCGCTT	60	PCR for pilRNA
piR-113354	CCTGTCTTTACACTAGCGCTTTCTCTG	58	PCR for pilRNA
rat piR-84588	CTTTACACTAGCGCTTTCTCTGACTC	58	PCR for pilRNA
piR-26767	CCTTCTCTGACTCGGGTGCAGTC	59	PCR for pilRNA
piR-118029	GATGGTAGTAGCTGAAGTTCCTTCG	58	PCR for pilRNA
pilR-t218	ATGGCTGGGATTGGGTATAAGGAG	57	PCR for pilRNA
pilR-t252	TGACAGAATGACAGAGGGCTATC	55	PCR for pilRNA
pilR-t259	TGCACAGTGCAGTGATTGGCTCAC	59	PCR for pilRNA
pilR-t263	GAATACTTACTGGATGAGCAGGAGG	58	PCR for pilRNA
pilR-t266	TCCCTGTTCTGCTGGCTTGGG	58	PCR for pilRNA
pilR-t271	CATCTTTTGGATCTAGTCTAG	49	PCR for pilRNA
pilR-t291	GTGCACTGCCACATGCAG	53	PCR for pilRNA
pilR-t321	GGGAGTGAGTCACTTGTGGAGC	59	PCR for pilRNA
pilR-t330	AGCTTAACTTTTACCACCTTGC	51	PCR for pilRNA
pilR-t347	GATGGAGTCACTCTGGTCA	51	PCR for pilRNA
pilR-t357	TCTATGGAGATGATGAGGTTAC	51	PCR for pilRNA
pilR-t358	TGCAACTAGATGGACTTGCTTG	53	PCR for pilRNA
pilR-t364	TTTTTGGATTCAAGTCTCTGA	49	PCR for pilRNA
pilR-t385	CTCAAACCTGAGCCCAAGATTCT	53	PCR for pilRNA
pilR-t386	TTGTATTACTATAGGAATGGTC	47	PCR for pilRNA
pilR-t392	TGAATACAGGCATGCCTCAGG	57	PCR for pilRNA
pilR-t403	TCCAGCAGGGAATGTTTCAATTC	53	PCR for pilRNA
pilR-t417	CTAGAGGTTCCGAAGTTGGGCAG	59	PCR for pilRNA
pilR-t431	TCTCCTGTCAGAGCTCCAGAGGC	61	PCR for pilRNA
pilR-t454	TATTTTTCTCAGCTCTTATTGGG	50	PCR for pilRNA
pilR-t493	GAACCATCTTGTAGTTGCTG	50	PCR for pilRNA

pilR-t496	TGAGTTGCCTGGCTCTGAAGC	56	PCR for pilRNA
pilR-t522	GTGATACAGCAGGCACCAACCT	57	PCR for pilRNA
pilR-t527	GAAATGTGACTAGACTCTAGTCC	53	PCR for pilRNA
pilR-t529	TTCCCTAGGCTAAGTGACAACAAG	56	PCR for pilRNA
pilR-t552	TTCAACAAAATTAGCTGTCTATG	48	PCR for pilRNA
pilR-t556	ACTTCCAGCAGTCAGCATTGTT	53	PCR for pilRNA
pilR-t567	AGTTGATGTATATCTGAAGAC	47	PCR for pilRNA
pilR-t576	ATATGCCATTCCCTCGAATA	45	PCR for pilRNA
pre-pilRNA	CCTCCCAGATGGCTCTGTCTTAAC	59	PCR for Northern probe
pre-pilRNAr	GGACCTATTTGTCCCATACCAAGTATAC	58	PCR for Northern probe
pre-pilRNA-1	CAGAGAAGGAGTTATTCATTTATTCCTGTGAAGGACC	63	PCR for pre-pilRNA
pre-pilRNA-1r	CAAGGGTGGACCTACACTCCAACATATGC	64	PCR for pre-pilRNA
pre-pilRNA-2	GTCCTCTTATCTGTAACAGAGGGCTAAGGCTG	64	PCR for pre-pilRNA
pre-pilRNA-2r	CAATCCAAGGGTCGACAGAGATCATGAGTC	64	PCR for pre-pilRNA
pre-pilRNA-3	GCTAGTGGACCCTCTCATTGGGTTTCTCAG	64	PCR for pre-pilRNA
pre-pilRNA-3r	CTAACCAAGCAGTCAGTAATGGGTGATCTGAGTC	64	PCR for pre-pilRNA
pre-pilRNA-4	GGCAAAGAACCCTCAGCTCAACTTTAGGTGAAG	64	PCR for pre-pilRNA
pre-pilRNA-4r	GTCTTCATGGGGTACGGGAGTACGCTTAAC	64	PCR for pre-pilRNA
pre-pilRNA-5	CTTCTCTGGCCATGGTGTCTGAACCAG	64	PCR for pre-pilRNA
pre-pilRNA-5r	GTGCAGAACTTAGTAGGATCCTAAGAGCCCAG	64	PCR for pre-pilRNA
Catsper3	GTTTGTGGGTGTGATGATCATGCAC	58	PCR for Catsper3
Catsper3r	CTCTCTTCTGGCGTTTCAGGA	59	PCR for Catsper3

* V(A, G, or C), N(A, G, C, or T)

Supplementary Table 2. piRNAs identified from the testes.

Multi-copied piRNAs are indicated by a “+” next to the chromosome numbers. Nucleotide sequences that are different from the genome are in lower case. CPS stands for copy numbers.

Ch1	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Testis	Stem-loop
1+	GCCCAGATTAAAGGTGTGTTTCCTTAACTCG	pilR-t1	mRNA	50	30	+	13199024	13199053	2	P20	no
1+	TTCACCTAGCTTCTTGTGTTTTCTTCT	pilR-t2	mRNA	4	27	+	29470191	29470217	1	P20	no
						+	45499185	45499211			yes
						-	92716891	92716917			yes/no
						-	101002283	101002309			yes
1+	TGCTACAGGTGCTTCGTGGCCTT	pilR-t3	mRNA	1	23	+	30714663	30714685	1	adult	no
1	TTCGGATCTTGGAGCGAAGATTGGC	pilR-t4	mRNA	1	25	-	34873901	34873925	1	adult	no
1	TGTTTTGGTAGTGAGTTCCAGACCCAG	pilR-t5		1	29	-	39716851	39716879	1	P20	no
1+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	pilR-t6	Like piR-29217, mRNA	5	31	+	72159464	72159494	1	adult	yes/no
						+	72170170	72170200			yes/no
						+	72177437	72177467			yes/no
						+	72188232	72188262			yes/no
						+	157716808	157716838			no
1	TGCTCTGCAAGAGCAGACAAGATGTGGG	pilR-t7	rat piR-156281, mRNA	1	28	-	93235373	93235400	1	adult	no
1	TCTCACACGGCAAGTCCAAAGCTGACTGGTT	pilR-t8		1	31	-	94825315	94825345	1	adult	no
1	TCTTAAAGGCATCTCTTGATTGTGACTG	pilR-t9	Like piR-105949	1	30	-	94825354	94825383	1	adult	no
1	TCTCACACATTTTCACACACTCTCTCTAT	pilR-t10	mRNA	1	29	-	94825851	94825879	2	P20	no
										/adult	
1	TCTCTAACGTCAAGAGAATGGTTTTGGTG	pilR-t11	Like piR-122137	1	30	-	94826659	94826688	1	adult	no
1	TGTTCTTTGTTTTGGATATGGTACAGT	pilR-t12		1	27	+	106624629	106624655	1	adult	yes
1	TACACAAACCCTTGGGTAGTTTTTACTTGAT	pilR-t13	mRNA	1	31	-	167709206	167709236	1	adult	no

Ch2	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
2+	GCCCAGATTAAAGGTGTGTTTCCTTAACTCG	pilR-t1	mRNA	48	30	+	3856247	3856276	2	P20	no
2+	TTCACCTAGCTTCTTGTGTTTTCTTCT	pilR-t2	mRNA	2	27	+	39688719	39688745	1	P20	no
						-	13828890	13828916			no
2	TATTGAATGAGCTACCTCACAGAGAGGC	pilR-t14	Like piR-119975		28	+	92342234	92342261	2	adult	no
2	TCTAATAATGGATGTGGTTGCTGGGGGT	pilR-t15	Like piR-6508	1	28	+	92343205	92343232	1	adult	no
2	TGCTCTCTTTTTCATCTCCATGGTTGAAGC	pilR-t16	Like piR-19958	1	30	+	92344221	92344250	2	adult	yes

2	TGTGATGTCTGGTCACTTCCATTCA	pilR-t17	non-coding mRNA	1	26	+	92350596	92350621	1	P20	no
2	TGTCAAATTGCTTTAAAGTTAGTGGGT	pilR-t18	piR-140990	1	27	+	92351339	92351365	1	P20	yes
2	TCTTTTCTGATTCTGTGTTTACCGAGCAAT	pilR-t19	Like piR-105586	1	30	+	92352723	92352752	1	adult	no
2	TGATTCTGTGTTTACCGAGCAATGTTG	pilR-t20	Like piR-105586	1	27	+	92352730	92352756	1	adult	yes
2	AGCTGCTTCTCGCTTCCCTTGTTT	pilR-t21	Like piR-298	1	24	+	92354059	92354082	1	P20	yes
2	TGTCTTGGTGAGATGCTACTTTCAGAAT	pilR-t22	Like piR-24413	1	28	+	92354110	92354137	1	P20	no
2	TCAACATTCAGGTGGTTTACACGGG	pilR-t23	piR-124496	1	26	+	92354576	92354601	1	adult	yes
2	GCTGTTAAATGTCACCTGACAAATGATAA	pilR-t24	piR-121215	1	29	+	92354602	92354630	1	P-20	yes/no
2	TAACCTCTTGAAAGACTTCTGAGTGCATG	pilR-t25	Like rat piR-76033	1	29	+	92358269	92358296	2	P20 /adult	no
2	TACACATCTTCTGAAGGCACAACAAATGTT	pilR-t26	Like piR-113840	1	31	+	92360748	92360778	1	P20	yes
2	TAGTTGTGTATGAGTTAATAAAAAGAAG	pilR-t27	Like piR-100655	1	28	+	92362524	92362551	1	adult	no
2	TGACTACCTGGTTATGTCTATGACTACCTG	pilR-t28	Like piR-136493	1	30	+	92366467	92366496	1	adult	yes/no
2	TCTAATGAGACATTCGTCACAGCCA	pilR-t29	Like piR-107025	1	26	+	92369200	92369225	2	P20	no
2	TTTTGGTCTCTGAGACACTGCTTATAT	pilR-t30	Like piR-128243	1	27	+	92370293	92370319	1	P-20	no
2	TCTAATCTTTCCACAAGACACACGATG	pilR-t31	Like piR-110844	1	28	+	92370599	92370626	1	P20	yes
2	TACATCATTACAGTTCCTCGAGGTAGCAT	pilR-t32	piR-102266	1	29	+	92371722	92371750	1	adult	no
2	TAGCACATCAGTAGATATATCCTATCCCTTT	pilR-t33	Like piR-104903	1	31	+	92372477	92372507	2	adult	no
2	TCAAGTGTGAATTGGGTAGCCATGTGTC	pilR-t34	piR-9090	1	29	+	92372519	92372547	1	P20	yes
2	TAGATTGTTGGTAGGTTTGGGGAAGGAT	pilR-t35	piR-110523	1	28	+	92372562	92372589	1	P20	yes
2	TGTAAAATGGGGATAATAATAAGCCTGCCT	pilR-t36	piR-108591	1	30	+	92373873	92373902	1	adult	no
2	TAAAAGTGTCCCTTGCTATGTTTCTCT	pilR-t37	Like piR-137434	1	28	+	92373978	92374005	2	P20	no
2	TTGTATCAAACATTTGTTTGCTGACAC	pilR-t38	Like piR-100162	1	27	+	92378897	92378923	1	adult	no
2	CTCTGCATAAATCCTTCACAGGTCTG	pilR-t39	Like piR-118273	1	26	+	92379131	92379156	1	adult	no

2	TGGGATTTCTTTGAACCTGATACTGAGAG	pilR-t40	piR-101497	1	29	+	92379706	92379734	1	adult	no
2	TACAATGACATAAACAGAAACATCTTCCTG	pilR-t41	Like rat piR-146845	1	30	+	92381447	92381476	2	P20 /adult	yes
2	TCATCCAAATTCCTTCTGATTTCACTATG	pilR-t42	Like piR-10021	1	29	+	92381775	92381803	1	adult	no
2	TAGAAGGGCCTTGGTGGGTGTGTTAG	pilR-t43	piR-106153	1	26	+	92381844	92381869	1	P20	yes
2	TAATTACAATAAGACAGACAGTAGTGTG	pilR-t44	Like piR-139985	1	28	+	92381936	92381963	1	P20	no
2	TCCCATTTTTGACAATGCTGCT	pilR-t45	Like piR-128502	1	22	+	92384961	92384982	1	adult	no
2	TTTTCTTGTTCCCACTATCACTTTTTTA	pilR-t46		1	29	+	92385200	92385228	1	P20	no
2	TACATAGCTCTATTACTGAGTCTTCCATTT	pilR-t47	Like piR-114750	1	30	+	92386562	92386591	1	adult	no
2	TTTCATGCAAATGGTGGTGCCCTTAC	pilR-t48	Like piR-130714	1	26	+	92386674	92386699	1	P20	no
2	TTAGAGACATTTGCTCTGGACATCTGCTTT	pilR-t49	Like piR-109439	1	30	+	92394755	92394784	1	adult	no
2	TATGTTTGGGGCTCTGAAAGTCCCATCCTCAGGT	pilR-t50	Like piR-131775	1	35	+	92397685	92397719	1	adult	no
2	TAGAAAAACGCAAATTTTCAGTGACCACTC	pilR-t51	piR-112886	1	30	+	92398162	92398191	1	P20	yes
2	TGTTTTAAACTCCGCCTACGTGTGCATGTG	pilR-t52	Like piR-129531	1	30	+	92398237	92398266	2	P20 /adult	no
2	TGCAAGGCCAGCTTTCTCTCTTG	pilR-t53	Like piR-128424	1	24	+	92398808	92398831	1	P20	no
2	TGTGATTATGTGTGCTTTGTA	pilR-t54		1	21	-	98035191	98035211	1	P20	no
2	TAAAAGAGCAGACTTGGAGCTCGTAATGTG	pilR-t55	Like piR-111837	1	30	+	127383683	127383712	1	adult	no
2	TCCATGTATGCAAATGTGACTCTCTGAG	pilR-t56	Like piR-10538	1	28	+	127391175	127391202	1	P20	no
2+	TCTTAAACCAATTGTGAAGTTGTCTCTAT	pilR-t57	Like piR-140020	3	29	+ + -	150837186 151011353 150952345	150837214 151011381 150952373	1	adult	no no no
2+	TCACATTCTAAGGATTTCCAGTTGATTTG	pilR-t58	Like piR-137373	4	30	+ + - -	150839216 151013387 150950310 151103876	150839245 151013416 150950339 151103905	1	adult	no no no no
2+	TGTGTTGTTCTTTGAAACATTTGTACTCAC	pilR-t59	Like piR-103341	4	30	+ + - -	150840525 151014696 150949004 151102570	150840554 151014725 150949033 151102599	1	adult	no no no no
2	TGGAATTCCTTTGTCTGGTATGTAACCAAACCTCCACAAT	pilR-	Like piR-	1	38	+	150841748	150841785	1	P-20	yes

2+	TAGTTAGAACCAGCTTTGGACACATCCAT	pilR-t60	137176	4	29	+	150842443	150842471	1	adult	no
		pilR-t61	Like rat piR-85427			+	151016613	151016641			no
						-	150947087	150947115			no
						-	151100654	151100682			no
2+	TAAAACGGTCTCACTCTGTTCAAGTCCAAGC	pilR-t62	Like piR-124529	2	31	+	150844029	150844059	1	P20	no
						+	151018203	151018233			no
2+	CTGTCAATTGTGCTACTGCAATAAATATTCTGTT	pilR-t63	Like piR-138927	4	33	+	150844939	150844971	2	P20 /adult	no
						+	151019112	151019144			no
						-	150944587	150944619			no
						-	151098155	151098187			no
2	TAATGAAGAAAATAATATTTGTGCGTAA	pilR-t64	Like piR-102363	1	28	+	150845398	150845425	1	adult	no
2+	TGCATGAATAGCTCACTTGCATGATGTGCC	pilR-t65	Like piR-100587	2	30	+	150846470	150846499	1	adult	yes/no
						-	151096637	151096666			yes/no
2+	TCTCAGAAGGGATATTCTGTGGGAATTGCT	pilR-t66	Like piR-113096	4	30	+	150847482	150847511	1	adult	no
						+	151021647	151021676			no
						-	150942054	150942083			no
						-	151095625	151095654			no
2	TTTCTTAGATGACAAATGTGTTAAGTCT	pilR-t67	Like piR-138393	1	28	-	150942027	150942054	1	adult	yes
2+	CACCTTCTAAGAGTTCTTGGGCACATTC	pilR-t68	Like piR-140439	2	28	-	150949719	150949746	1	adult	no
						-	151103285	151103312			no
2+	TGTACCAGGACCATGATGATTTATCACAAAT	pilR-t69	Like piR-4896	3	31	+	151010552	151010582	1	P20	no
						-	150953143	150953173			no
						-	151106711	151106741			no
2+	ATTGAGTCTTTAGATGGCTTTTGGCAGGAT	pilR-t70	Like piR-134321	3	30	+	151010748	151010777	1	adult	no
						-	150952948	150952977			no
						-	151106516	151106545			no
2+	TTTCCTGGCTTTTATCCCTGA	pilR-t71	Like piR-8004	3	21	+	151012355	151012375	1	adult	no
						-	150951351	150951371			no
						-	151104918	151104938			no
2+	TGCTGACACTACTGGAGGAGACATACCCT	pilR-t72	piR-136748	3	29	+	151012390	151012418	2	adult	yes
						-	150951308	150951336			yes
						-	151104875	151104903			yes
2+	TGTTGGTTCATGCTTGGCCCTATGTGTT	pilR-t73	mRNA	3	28	+	151015200	151015227	1	adult	no
						-	150948502	150948529			no
						-	151102068	151102095			no
2+	TTTCTCCCTTAGTGAAGTAACACTTCATTG	pilR-t74	piR-131876	3	30	+	151019777	151019806	2	P20	yes
						-	150943924	150943953		/adult	yes
						-	151097493	151097522			no

Ch3	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
3+	TTACCTAGCTTTCTTGTGTTTTCTTCT	pilR-t2	mRNA	2	27	+	17238831	17238857	1	P20	yes/no
						-	6949223	6949249			no

3+	GCCAGATTAAAGGTGTGTTTCCTTAACCTCG	pilR-t1	mRNA	32	30	+	24233621	24233650	2	P20	no
3+	GTCTTTCTTTTTTCGAGCTCCATTCTCT	pilR-t75		1	29	-	29067453	29067481	1	adult	no
3	ACTCTTAATCATAAGGGT	pilR-t76		1	18	-	32882208	32882225	1	adult	no
3+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	pilR-t6	Like piR-29217, mRNA	1	31	-	72825864	72825894	1	adult	yes
3	TGGTATTGAACCACAGATTTTCCATGTCTG	pilR-t77	mRNA	1	30	+	117598275	117598304	1	P20	no
3	TACCTCTGAAAAGCTTATTAATAAACAGTACT	pilR-t78	mRNA	1	32	-	124393023	124393054	1	adult	no
3	TCCTTCACTTTATTGATTATTCCTAAGA	pilR-t79	mRNA	1	30	-	124393283	124393312	2	P20 /adult	no

Ch4	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
4+	GCCAGATTAAAGGTGTGTTTCCTTAACCTCG	pilR-t1		9	30	-	3307206	3307235	2	P20	no
4+	TTGGATGTTACTTACTCTCGGCCTTTTC	pilR-t80	mRNA	2	29	+	42255180	42255208	1	adult	no
4	TGAAAGAGCAATGCACAGAACTCACGTG	pilR-t81	Like piR-137791	1	29	-	57452343	57452371	1	adult	no
4	TCCTATTGAGTATGCATTCCAAGTCCAT	pilR-t82	Like piR-124488	1	29	-	57454580	57454608	1	adult	no
4	TAGAAACTGCCTGGTGCAGATGCCATGGTG	pilR-t83	like piR-5656, mRNA	1	30	-	57458114	57458143	6	P20 /adult	no
4+	TGCCTCCTTGACTCGTGTCTGCTTTC	pilR-t84	Like piR-18547	2	25	+	61719635	61719659	1	adult	yes
4+	TTGACTCGTGTCTTTCTTTTATCTT	pilR-t85	Like piR-11624	2	26	+	61719642	61719667	3	P20 /adult	yes/no yes/no
4+	TTGTAGACTCCTTGACTTTCAGATTGTG	pilR-t86	Like piR-29429	2	28	+	61721796	61721823	1	P20	yes
4+	TGATAAATAAGCAGTCATTGAT	pilR-t87		2	22	+	61722494	61722515	1	P20	no
4+	TGTCCCATGTGACCATAGAGGCC	pilR-t88	Like piR-24313	2	25	+	61723779	61723803	1	adult	no
4+	TGAGAACTCCTAAGTCCACAAATCTGGCCT	pilR-t89	piR-119734	2	31	+	61724267	61724297	1	P20	no
4	TAGCTACAGATCTTCAGTTAGTATGGGCTG	pilR-t90	Like piR-112293	1	30	-	93774187	93774216	1	adult	yes/no
4	TATCATGTGCATGGAGAAGACAAGCTCTC	pilR-t91	Like piR-133564	1	29	-	93781453	93781481	1	adult	no
4	TACTACAAAAGCTATCATGGATATTGCTGC	pilR-t92	piR-140822	1	30	-	93786257	93786286	1	adult	yes
4+	TTCACCTAGCTTTCTTGTTTTCTTCT	pilR-t2	mRNA	1	27	-	93787282	93787308	1	P20	no
4	TAAATGCACATAACACATGGAGAAGCCTT	pilR-t93	Like piR-136512	1	29	-	93800629	93800657	1	P20	no
4	TATTCTTTGGCATCCTTGAAGGGATTCTTG	pilR-t94	Like piR-112781	1	31	-	93802388	93802418	1	adult	no
4	TGCTTCAGTGTCTTTTATTCTTTGGCATC	pilR-t95	Like piR-19487	1	29	-	93802405	93802433	2	P20	no
4	TAGGGAGATCTATTTTGGCTCAAATGTG	pilR-t96	Like piR-108592	1	29	-	93802950	93802978	1	adult	no
4	TAAGTAGGATAGAATCTCTTGGCCCAAT	pilR-t97		1	28	-	93805259	93805286	1	P20	no
4	TTCTCTTACTTATGAATCCCAACTGCTTTTA	pilR-t98	Like rat piR-	1	31	-	93810118	93810148	1	adult	no

			148230								
4	TAATATATTGGCATGATAACCTTGGCTGGT	piLR-t99	Like piR-104738	1	30	-	93813720	93813749	2	P20	yes
4	TAACAATCGGTATTCTGTCTGTTGACATAA	piLR-t100	piR-129896	1	30	-	93813950	93813979	1	adult	no
4	TGCCAATGCATCAAGGTAAGACCCCTG	piLR-t101	Like piR-113103	1	26	-	93814448	93814473	1	adult	no
4	TTTCTAAATGATGGACAATGCCAATGCATC	piLR-t102	piR-103177	1	30	-	93814462	93814491	1	adult	no
4	TGAGGGTGAATTGTCAACTATCTAGTGGTC	piLR-t103	piR-15743	1	31	-	93820638	93820668	1	P-20	no
4	TGACATCAGGAATATTGTACACATCTTAT	piLR-t104	mRNA	1	29	-	93821647	93821675	1	adult	no
4	TAACCCCAAAGGTCCCTGGCTTTGCATG	piLR-t105		1	30	-	93821913	93821942	1	adult	no
4	TACTTCTTGGCATGCCTTTACAAAATG	piLR-t106		1	27	-	123339037	123339063	1	P20	no
4	TGTCAAGACATAACTTTTTGTCTTAAT	piLR-t107		1	28	-	123339762	123339789	1	P20	no

Ch5	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
5+	TTCACCTAGCTTTCTTGTCTTTCTTCT	piLR-t2	mRNA	2	27	-	14500313	14500339	1	P20	no
5	TCCACTGATTCATATTGGATCCCAAGTATAAC	piLR-t108	mRNA	1	32	+	17568878	17568904	2	P20	no
5	TGTTAGATGCCTTACTTGACCTTCCTAGGA	piLR-t109	piR-100467	1	30	+	28748461	28748490	1	adult	no
5	TAGGAAGTGTGATCAGCTACCTCTTTCT	piLR-t110	Like piR-109384, mRNA	1	29	+	28748486	28748514	1	adult	no
5+	TATCATGTGTGTTCTTTTGTTCATTGGGTT	piLR-t111	mRNA	1	29	-	45020683	45020711	1	adult	no
5	TTAGTTCTATGAACTTTACTCTT	piLR-t112		1	23	-	71865519	71865541	1	P20	no
5	TTGTTTTCTTTTCCCTTCTGCAGAAATC	piLR-t113	mRNA	1	28	-	102074109	102074136	1	P20	no
5	TTGGTCTCCGGCACTTCT	piLR-t114		1	18	-	113440398	113440412	4	P20 /adult	no
5	TGAGATGTGTTACTGAACTTAGATG	piLR-t115	Like piR-138445	1	25	-	113567340	113567364	1	P20	yes
5	ATAGCTTGATTGTTGGGTGTGCCATGTA	piLR-t116	Like piR-114595	1	29	-	113567664	113567692	1	adult	no
5	ACAACCTTATGAAAGAAAGCCTTTAATTG	piLR-t117	Like piR-123886	1	30	-	113573751	113573780	1	adult	no
5	TGGTCTTTGAAGTTGACAGCTCTCTGGGT	piLR-t118	Like piR-22922	1	30	-	113576460	113576489	4	P20 /adult	yes
5	GATCCTTTGCTAAGGTATTGTGTG	piLR-	Like piR-118960	1	24	+	113582964	113582987	1	P20	no

		t119				-	115111840	115111863			no
5	TCTGGAAGGTTGAACACACTTGCCTT	piR-t120	Like piR-20028	1	27	+	113583578	113583604	1	adult	no
						-	115111223	115111249			no
5	TAGCTGATCACTCTTGGGTTCACTAGT	piR-t121	Like piR-121094	1	27	-	113586796	113586822	1	P20	yes
5	TAGTATGGTCCACAGTTATAT	piR-t122	Like piR-119722	1	21	+	113589366	113589386	1	P20	no
5	TACAAGTGCTTTGCTGGTTCACGCCG	piR-t123	Like piR-4317	1	26	+	113589634	113589659	1	adult	no
5	TAGCCCTGTGTTTTTCAGACTCCCGGGG	piR-t124	Like piR-6476	1	27	+	113589681	113589707	1	adult	yes
5	TAGCCCTGTGTTTTTCAGACTCCCGGGG	piR-t125	Like piR-6476	1	28	+	113589681	113589708	1	adult	yes
5	TGGGGAAATCGGTCATTCAAGCTCAAGGG	piR-t126	piR-121418	1	29	+	113589721	113589749	1	adult	no
5	TAAGTTGTAATGTTCCACTTTGGGGAGT	piR-t127	Like piR-138183, mRNA	1	28	+	113591357	113591384	1	adult	no
5	TCTAGAGTCAATGCACCTGTTATTTTGAGC	piR-t128	Like piR-114291, mRNA	1	30	+	113591691	113591720	2	adult	yes
5	TCACCACATTTAAAACACTGAGCATTTGAT	piR-t129	Like piR-112803	1	31	+	113591766	113591796	1	P20	no
5	TAGCTACGGTTGCCCCTATGATCTTTGCATT	piR-t130	piR-138872	1	31	+	113591809	113591839	1	P20	no
5	TACAGGGAGCTCCATGTGCTTCCCATGG	piR-t131	Like piR-136286	1	28	+	113591885	113591912	1	P20	yes
5	CTGATTGTCTTGTGAAGTTGGCAT	piR-t132	Like piR-122085	1	25	+	113592178	113592202	3	P20 /adult	no
5+	TATGATGCAGGCCTTACTAGGTGCAGT	piR-t133	Like piR-115248	2	27	+	113595933	113595959	1	adult	no
						-	115079971	115079997			no
5+	TATGATGCAGGCCTTACTAGGTGCAGTTT	piR-t134	Like piR-115248	2	29	+	113595933	113595961	1	adult	no
						-	115079969	115079997			no
5+	TCTAGTTCATTATCTCTTAGAGAGAGGAG	piR-t135	Like piR-12577, mRNA	3	30	+	113597858	113597887	1	P20	no
						-	115078034	115078063			no
						-	115103589	115103618			no
5	TGACATCTCAGATTCTCTTCGGAACGCCT	piR-t136	piR-14526	1	31	-	115112488	115112518	1	P20	no
5	TAGAAGCCTCGGGCCTGGGAAAG	piR-t137	mRNA	1	24	-	115113969	115113992	1	adult	no
5	CCCCCATGCTTATTCCTCTGT	piR-t138		1	21	+	117998237	117998257	1	P20	no
5+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	piR-t6	Like piR-29217, mRNA	1	31	+	123888835	123888865	1	adult	no
5	TGTAAATGGGGAACGATGCTCTCTGTGGC	piR-t139	piR-115865, mRNA	1	30	+	135444946	135444975	1	adult	no
5	TGTAAATGGGGAACGATGCTCTCTGTGGCCTT	piR-t140	like piR-23722, mRNA	1	33	+	135444946	135444978	1	P20	no

5	TTCTGACTACACAGCTGTGCCTCAGGCTTGT	piLR-t141	mRNA	1	31	+	135446983	135447013	1	adult	no
5	TAAACAAATCTCCTAAGATCCAAGGCTACAG	piLR-t142	Like piR-135352, mRNA	1	31	+	144014236	144014266	1	adult	no
5	TGCACACTGAGCCTCCTCCCATCAA	piLR-t143	Like piR-17187, mRNA	1	25	+	144020007	144020031	1	P20	no
5	TGAAATATTTTTCAAAGAGGTTGTTCCCTT	piLR-t144	mRNA	1	30	-	150059824	150059853	1	P20	no
5	TAGTGCAAAATCTTCACTTAGAACAGATG	piLR-t145	Like piR-460, mRNA	1	29	-	150067411	150067439	1	P20	no
5	TAGAACACTCATGTGAAGTCAGAAGACACG	piLR-t146		1	30	-	150069737	150069766	1	adult	no
5	TGTAAATTCACAACGATATCCGTGATGGTT	piLR-t147	piR-119903	1	30	-	150070018	150070047	1	P20	no
5	TTGGAAGTCGTGAGTTTGGATGTGG	piLR-t148	Like piR-120375, mRNA	1	25	-	150072216	150072240	1	adult	no
5	TAAGTGACACATATATGCTTCCTTCTT	piLR-t149	Like piR-27817	1	28	-	150076541	150076568	2	adult	no
5	TACATGTGCCACGTCCAGTGAGGTTGGTG	piLR-t150	Like piR-106100	1	29	-	150084155	150084183	1	adult	no
5	TGACTCAGCCTTACCATTAAGCCACTG	piLR-t151	Like piR-23393	1	27	-	150084306	150084332	1	P20	no
5	TGCTCATAACCCTGGTACTCTCGGGC	piLR-t152	Like piR-135440	1	26	-	150085904	150085929	1	adult	no
5	TTCTCAAGCGACATGGAGAATTTCTCAAG	piLR-t153	Like rat piR-71625, mRNA	1	29	-	150087753	150087781	1	adult	no
5	TACTTTCCTGGATACCTCCTAAGTGCCAAATT	piLR-t154	Like piR-142467	1	32	-	150090543	150090574	1	P20	no
5	TTGTAGCTTTAAAAGTGATAGGGATGGATG	piLR-t155	Like piR-140839	1	30	-	150091057	150091086	1	adult	no
5	TAAATTGGCTTCATTTCTCCAAGCCTTC	piLR-t156		1	29	-	150091116	150091144	1	P20	no
5	TTCTGTGAGAAGGACTAGTGTGATTGAGTT	piLR-t157	piR-104149	1	30	-	150092182	150092211	1	adult	no
5	TAAAAATAAGGAGAGACTACATTTACT	piLR-t158	Like piR-134986	1	29	-	150094712	150094740	1	adult	no

Ch6	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
6+	TATCATGTGTGTTCTTTTGTGATTGGGTT	piLR-t111	mRNA	1	29	-	45418793	45418821	1	adult	no
6	TGCTGCACCTCGCCATTTTCTATAGG	piLR-t159	mRNA	1	27	+	54821646	54821672	1	adult	no
6	TCAACCAGGTGGAGATCAAACCAGAGAT	piLR-t160	mRNA	1	28	+	57947388	57947415	1	adult	no
6	TAGGAAAATGATTTTCCAGTCTGAGAT	piLR-	Like piR-126033	1	28	-	81863250	81863277	1	adult	no

		t161									
6	TAGGATAACCACACTAAATTTCTTGCTC	piR-t162	Like piR-109166	1	28	-	81863642	81863669	1	adult	no
6	AGTTGAAACTGTTCCCAACAAGGTGCT	piR-t163	piR-109539	1	27	-	81863710	81863736	1	adult	no
6	TGATTTGCTCACACAGAATCCATGCT	piR-t164	Like piR-128704	1	26	-	81864580	81864605	1	P20	no
6	TCTCTGTGATCTAACTGATGCCGTGGCT	piR-t165	Like piR-138724, mRNA	1	28	-	81866249	81866276	1	P20	no
6+	TCTGAAAATGAACCAACACAGTCATCC	piR-t166	mRNA	2	28	+ -	83552673 85955471	83552700 85955498	2	P20 /adult	no no
6	TAGTAGTGGTTTCTTCTGAATGGTG	piR-t167	Like piR-139916, mRNA	1	26	-	85078838	85078863	1	adult	no
6	TCACTCCACAGCTGTGGTTTTTCACAAGTGT	piR-t168	Like piR-29152, mRNA	1	30	-	85079996	85080025	2	P20	no
6	TGATATCTTCCCAGAAAGCAACATTCTATG	piR-t169	Like piR-138471, mRNA	1	30	-	85953598	85953627	2	adult	no
6	TTAATAAACTGCCTCTGTTTACTACTATTTG	piR-t170		1	31	-	87955730	87955760	1	P20	yes
6+	TTACACCTAGCTTTCTTGTTTTTCTTCT	piR-t2	mRNA	1	27	+	123222726	123222752	1	P20	no
6	TAACCTTTGCTCTGATTGAATCCAGTGGC	piR-t171	Like piR-102057	1	29	-	127754190	127754218	1	adult	yes
6	TGATTGGTGATACCGAGTTCTATATAACCTT	piR-t172	piR-113269	1	31	-	127754212	127754242	1	adult	no
6	TCCTTTATTACCTGTGGTCTTGGTAAAT	piR-t173	Like piR-124148	1	28	-	127755506	127755533	1	P20	no
6	TTCTCAACTTTGTCCATGCCAAAGATCT	piR-t174	Like rat piR-171890	1	29	-	127756972	127757000	1	adult	no
6	TTGTTATCAAATGGCGGAGGAGCCTCTCCT	piR-t175	Like rat piR-148350	1	30	-	127757892	127757921	1	P20	no
6	TTTAAAAGCCTAAGAAGCTGGTGATGT	piR-t176	Like piR-102307	1	28	+	127762948	127762975	1	P20	no
6	TTTCTAATTCTTTAGGAGAAAACCAC	piR-t177	Like piR-107581	1	26	+	127763427	127763452	2	P20	no
6	TGACTCTGGAGTACTTCTCAACAGTGAACGT	piR-t178	Like piR-14865	1	31	+	127763720	127763750	1	adult	no
6	TTTTCCCTGCTTTCTACAAGG	piR-t179	Like piR-12186, mRNA	1	21	+	127764809	127764829	2	P20 /adult	no
6	TGCTACTATATCTCTGGGGATGGGT	piR-t180	Like piR-18993	1	26	+	127765488	127765513	1	adult	no
6	TACTAATCACTATCCATCCCATGTCACTGG	piR-t181	Like piR-130918	1	30	+	127766426	127766455	1	adult	no
6	TTCAATAAGCCCATGTACCTAAAGAAACC	piR-t182	mRNA	1	30	+	127767471	127767500	1	adult	no
6	TCCATCTGAGAGGGTATCTGCAAACATC	piR-t183	mRNA	1	29	+	127771522	127771550	2	P20	no

6	TAGATGGAGATGCATAACCAGTTGCCTT	piR-t184	Like piR-100803	1	28	+	127771806	127771833	2	P20	no
6	AAGGAGAGAACCTATCCCTGCAGGTTGT	piR-t185	Like piR-20002	1	28	+	127777758	127777785	1	adult	no
6	TGGTAGGCTTCCTTGTCTTTACACTAGC	piR-t186	Like piR-140281	1	30	+	127780039	127780068	2	P20	no
6	GACTTTCCTTTCTTTTACACATGT	piR-t187		1	25	+	127780919	127780943	1	adult	no
6	TCTTATTACCTTTTGTAGTGCTTGACT	piR-t188	piR-110092	1	30	+	127795404	127795433	1	adult	no
6	TGACTGGCCGTTGACTCTGGATATCTT	piR-t189	piR-124524	1	28	+	127795429	127795456	1	adult	yes
6	TGCCAGGAGACCTTAGAAAATGGTTCACCTAT	piR-t190	rat piR-79088	1	32	+	127799396	127799427	1	P20	no
6	TGAGTGCCTGCACTGTCCATACACATCCC	piR-t191	Like piR-28774	1	30	+	127800813	127800842	1	P20	no
6	TCTCAGTACCTCTCAGGATCCAAAACATT	piR-t192	Like piR-17977	1	29	-	128150521	128150549	1	adult	no
6	TCACAGTGAGTGGCTATGGTGTGCAATT	piR-t193	piR-112188	1	29	-	128151701	128151729	1	P20	no
6+	TCCATAGGATAGTTGTTCACTGTGAGT	piR-t194		1	27	-	128151719	128151745	1	P20	no
6	TGATTCTGGGAGGACAAATGGCTGGT	piR-t195	Like piR-112908	1	26	-	128153217	128153242	1	adult	no
6	TACTAGAAGTGCTCAATAGCACACCGATGC	piR-t196	mRNA	1	30	-	128154874	128154903	1	adult	no
6	TGAGTTAGTTGCTTAGTGTGATAGGTTTC	piR-t197	piR-129712	1	29	+	128412493	128412521	1	adult	no
6	TAAAAATATATTCATGTTCTGTTTTTC	piR-t198		1	27	+	128412539	128412565	1	adult	no

Ch7	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
7+	CAAGTGCTGAGATTAAGGCGTATG	piR-t199	Like piR-127037	1	25	+	5413213	5413237	1	adult	no
7+	TTCACCTAGCTTTCTTGTTTTCTTCT	piR-t2	mRNA	5	27	-	16463888	16463914	1	P20	yes
						-	16508799	16508825			no
						-	16573070	16573096			yes
						-	16645566	16645592			yes/no
						-	16726522	16726548			yes/no
7	TCCACTGATCATCTTGACCATCCAAC	piR-t200		1	26	-	23096867	23096892	1	P20	yes
7+	TTTTGAGTTGTGAGCTGTCTGCATCTGT	piR-t201	Like piR-3193	3	28	+	38026124	38026151	1	adult	no
						-	40926423	40926450			no
						-	41057033	41057060			no
7	TACAAATATTCTATAGTGTCTACCTT	piR-	piR-119978	1	26	+	52776563	52776588	1	P20	no

7	TATCCAGAAATATTGCTCTGTCTACAC	t202 piLR-t203	Like piR-119889	1	27	+	52776763	52776789	2	P20 /adult	no
7+	TATCATGTGTCTCTTTTGTTCATTGGGTT	piLR-t111	mRNA	2	29	+	52778469	52778497	1	adult	no
7	TAGTGCTCTGTACGGAAAGTTCGCT	piLR-t204	Like piR-112509	1	26	+	82945459	82945487	1	adult	yes/no
7	TACAGAGCAGTATAGCTCTTCAAAG	piLR-t205	Like piR-137382	1	25	-	52779273	52779298	1	adult	no
7	GTCTTAGTACCCCTTCAGTTGATCCAAGGT	piLR-t206		1	30	-	69775047	69775071	2	P20 /adult	no
7	TGTCTCTTATGCAATTTAGTTTT	piLR-t207	mRNA	1	23	-	69778450	69778479	1	adult	no
7	TCCTTTTCGGTCCCTCCAACATCTGGC	piLR-t208	Like piR-11690	1	27	-	69780616	69780638	1	adult	no
7	TTTGTTTTTCAGTTATTGAGGCTTCTGCT	piLR-t209	Like piR-134290	1	30	+	69781829	69781855	1	adult	no
7	TCTGAAATCTGCCTCCTTGATATCCTTAAT	piLR-t210	Like piR-18549	1	30	+	69783797	69783826	1	adult	no
7	TTCTAGTCCAGCCAAATACCTTGATGGGCTT	piLR-t211	Like piR-127343	1	33	+	69785809	69785838	1	P20	no
7	TGCCAGGATCACTGCACGGTTTGAAGAAGC	piLR-t212	piR-109085	1	30	+	69786729	69786761	1	P20	yes
7	TTCTCAGGATTCTCTTCAGCACTTTCCC	piLR-t213	mRNA	1	29	+	69786832	69786861	1	P20	yes
7	TAGAGACCTCAGATAAGGAGTTCTG	piLR-t214		1	25	+	69787550	69787578	1	adult	no
7	TAAGAAAGTGCATTCTTCTACCTAGTGACA	piLR-t215	piR-127836	1	31	+	69788251	69788275	1	adult	no
7	TACCTAGTGACAAATAATCCTGGTTTC	piLR-t216		1	27	+	69789182	69789212	1	adult	yes
7	TGAAAAAATATCTTCAATGACATGCCATAT	piLR-t217	piR-119803	1	30	+	69789201	69789227	1	adult	no
7	TAAATGGCTGGGATTGGGTATAAGGAGC	piLR-t218	rat piR-65091	1	28	+	69793338	69793367	1	P20	no
7	TGGATGTTAAACCAAGCTTCTTGTATGT	piLR-t219	Like piR-132485	1	26	+	69793445	69793472	1	P20	yes
7	TGAAAATGTCTAGTGAGTCCATCTCTCC	piLR-t220	Like piR-133854	1	30	+	69793491	69793518	1	P20	yes
7	TGAGTGTGACACTTGCTAAGATACATGT	piLR-t221	piR-100050	1	29	+	69794463	69794492	1	adult	no
7	TCTTCCTTGCCTTAGCTGCATTCAAT	piLR-t222		1	27	+	69794498	69794526	1	adult	no
7	TTAACCATGGAGATTTTGTGTATAATCTG	piLR-t223	mRNA	1	31	+	69795293	69795319	1	P20	no
7	TAAATTGTGGTATGGCCAGTGACAGA	piLR-	Like piR-127251	1	26	+	69808490	69808520	1	P20	no
7				1	26	+	72979852	72979877	1	adult	no

		t224									
7	TCTCAGAAAGAGGAAAGCCATGTAAAGAG	piLR-t225	Like piR-131759, mRNA	1	29	+	72981056	72981084	1	adult	no
7	TTCTATAACAGGAAACAAAGTTCTAT	piLR-t226	Like piR-138424	1	26	+	72984860	72984885	1	adult	no
7	TAAATAAACAGAAAATCAGCCAGATTAGCCTT	piLR-t227	Like piR-131761	1	32	+	72986190	72986221	1	adult	no
7	CAGAAGTTCAAGGTCAATTCTCTGCCACATA	piLR-t228	piR-681	1	30	+	72987143	72987172	1	adult	no
7	TGCCTCAGGTTTCAAGTTCGTTT	piLR-t229	Like piR-118301	1	23	+	72987501	72987523	1	P20	no
7	TGCTACAAAGTAACTTCTCGGCTACTC	piLR-t230	piR-114157	1	27	+	72989323	72989349	1	P20	no
7	TAACCTGCAGCTAAACTTTAAAGAGCCCTC	piLR-t231	Like piR-136031	1	31	+	72990567	72990597	1	adult	no
7	GCCCTTCCTACATGAACCTGCTCATAC	piLR-t232	Like piR-110070	1	27	+	72990886	72990912	1	adult	no
7	TAATCATCCTGTAATGCACACTGAA	piLR-t233		1	25	+	72994532	72994556	1	P20	no
7	TCTATCTGTGTTGATTACATGTGCATCAAAT	piLR-t234	piR-110432	1	31	+	72994641	72994671	1	P20	yes
7	TCCGATAGAATTCAGCGTCACTGTGTGAAT	piLR-t235	Like rat piR-67804	1	30	+	72994675	72994704	1	adult	no
7	TGCTGAAGACCACACCTGATCTGTATAT	piLR-t236	Like rat piR-80233	1	29	+	72995136	72995164	1	adult	no
7	TGCACAGCTTCAACCTTGCTTCTTGTGTGT	piLR-t237		1	30	+	72999042	72999071	2	adult	yes
7	TGCAACCAATACCACAGTCAGGATGACT	piLR-t238		1	28	+	73004558	73004585	1	P20	no
7	TAAGCAGTCAAAGAACACATGTGGGCGT	piLR-t239	Like piR-128199	1	29	+	73019366	73019394	1	adult	no
7	TATGATGTTGtGACCTTTGTCATTGTGGAG	piLR-t240	piR-110713	1	30	-	73660242	73660271	1	adult	yes
7	TTCTATGATGTTGCGACCTTTGTCAAT	piLR-t241	Like piR-137737	1	28	-	73660248	73660275	1	P20	yes
7	TGGGATGGTATTTGGAGTTACATGTGTG	piLR-t242	piR-113955	1	28	-	73660630	73660657	1	P20	no
7	TAATTATCGCTTGAATTCATTCCCA	piLR-t243	Like piR-117831	1	26	-	73664658	73664683	2	P20	yes
7	TCAAATFACTAATCCACAAACATTGCCTCTT	piLR-t244	Like piR-5325	1	31	-	73666111	73666141	2	P20 /adult	no
7	TAATAGTATAATTAAGTGAACCTCTAAT	piLR-t245	Like piR-131494	1	28	-	73669153	73669180	1	adult	no
7	TCTCGTCATTGCTTAGTTGCCTG	piLR-t246	Like piR-139609	1	23	-	73676804	73676826	2	adult	no
7	TGTGCTTTCACTGAAAACAGTCAAACCTT	piLR-	Like piR-29518,	1	29	-	73683290	73683318	1	adult	yes

7	CCCATATCATTGGGAGACCTTCAT	t247 pilR-t248	mRNA Like piR-111777, mRNA	1	24	-	73683664	73683687	1	adult	no
7	TTTAGATCCAAACCCTAACACAGCACACCCT	pilR-t249	Like piR-138506	1	31	-	73684010	73684040	1	adult	no
7	TGCAACACATCGCATGGTCTTGCCCTGTTTT	pilR-t250	piR-126913	1	31	-	73688001	73688031	3	P20 /adult	no
7	GAATGCCGAAGCTGTTCTTGCTGCAGCGTG	pilR-t251	Like piR-111104	1	30	-	73688749	73688778	2	adult	no
7	TGACAGAATGACAGAGGGCTATCTATGCTG	pilR-t252	piR-114653	1	30	+	73691317	73691346	1	adult	no
7	TACAACAGTATCTTTCTTGCTTAATTTCTT	pilR-t253	Like piR-105700	1	30	+	73692756	73692785	1	adult	yes
7	TCTAAGTTTTATGAATTTCTGAGCCTT	pilR-t254	Like piR-102496	1	28	+	73697808	73697835	1	adult	no
7	TAGTTACTCTTCTCGGTGGTGTGACAAAA	pilR-t255	Like piR-115320	1	30	+	73710562	73710591	1	adult	no
7+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	pilR-t6	Like piR-29217, mRNA	1	31	+	111738465	111738495	1	adult	yes
7	TTGCCTTGCTAATATGTTTCTTCTCTTT	pilR-t256		1	29	+	114121515	114121543	1	P20	yes
7	GTCCGTACCAGGTAGAGACCAGATCCAATGT	pilR-t257	piR-1980, mRNA	1	31	-	125121820	125121850	1	adult	yes
7	TCTCAGTCCGTACCAGGTAGAGACCAGAT	pilR-t258	Like piR-12359, mRNA	1	29	-	125121827	125121855	1	adult	no
7	TGCACAGTGCAGTGATGGCTCACGACAGC	pilR-t259	mRNA	1	30	-	125123231	125123260	1	adult	no
7	TTGTAGATCGTGATGCACAGTGCAGTG	pilR-t260	Like piR-134936, mRNA	1	27	-	125123247	125123273	2	P-20	yes
7	TTCTGCTGCACCTCACTTCACGTCA	pilR-t261	Promoter and 5'UTR	1	26	-	141541159	141541184	1	P20	no

Ch8	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
8	TTTAACATCAAGTTGGCTCA	pilR-t262	mRNA	1	20	+	23530627	23530646	1	P20	no
8+	TTCACCTAGCTTCTTGTGTTTTCTTCT	pilR-t2	mRNA	1	27	+	54564419	54564445	1	P20	no
8+	GTCTTTCTTTTTTCGAGCTCCATTCTCT	pilR-t75		1	29	+	58486369	58486397	1	adult	no
8	GAATACTTACTGGATGAGCAGGAGGGA	pilR-t263	mRNA	1	27	-	72695721	72695747	2	adult	yes
8+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	pilR-t6	Like piR-29217, mRNA	2	31	+	75009093	75009123	1	adult	no
						-	53835761	53835791			no
8	TACACATTCACGGACTTCAAAGACTATT	pilR-t264	Like piR-119541	1	28	+	95079714	95079741	2	adult	no
8	TGGAGAAATAACAGAGTGTGGTTGCCATCT	pilR-t265	Like piR-106534	1	30	+	95079797	95079826	1	adult	no

8	TCCCTGTTCTGCTGGCTTGGGAACT	piR-t266		1	25	+	95081699	95081723	8	P20 /adult	yes
8	TTCTATGTACAGGAACTATTTGCTTTTCTC	piR-t267		1	30	-	96305954	96305983	1	P20	no
8	TGAAAAGATGCATCCAAAAGCCTCTG	piR-t268	Like piR-113402	1	26	-	96306309	96306334	1	P20	no
8	TTATTTACTTTTTTGAGATCTGTGGTGGTC	piR-t269		1	30	-	96308419	96308448	2	P20	no
8	CATTGGAAGTGAATCTTTGTGTGTGTG	piR-t270	Like piR-118751	1	28	+	113012042	113012069	1	adult	no
8	TACATCTTTTGGATCTAGTCTAGTTATG	piR-t271		1	29	+	113013380	113013408	1	adult	no
8	TTCTCTTACTGTAAGATCTGTATGAGAAG	piR-t272		1	29	+	113019576	113019604	1	P20	no
8+	TGCTACAGGTCTTCGTGGCCTT	piR-t3	mRNA	1	23	+	126114432	126114454	1	adult	no

Ch9	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
9+	TCCATAGGATAGTTGTTCACTGTGAGT	piR-t194		1	27	+	3152338	3152364	1	P20	no
9+	TATCATGTGTGTTCTTTTGTTCATTGGGTT	piR-t111	mRNA	1	29	+	5475603	5475631	1	adult	yes
9	TATTTTGCTTTGGATTTGTTTGTTTG	piR-t273	mRNA	1	26	+	23175661	23175686	1	P20	yes
9+	TTCACCTAGCTTCTTGTTTTTCTTCT	piR-t2	mRNA	1	27	+	37502601	37502627	1	P20	no
9	TATTTACATTTCAAGTAAAAGTTTTAAAAT	piR-t274	Like piR-27884, mRNA	1	31	-	43899111	43899141	1	adult	no
9	TGCTTCTCGTTTCTTTGAAAATGAAAT	piR-t275	Like rat piR-165856	1	27	-	54010287	54010313	1	adult	no
9	TTCCAAGTGTGGCAAGAGTGTGTG	piR-t276	Like piR-10153	1	25	-	54019094	54019118	1	adult	no
9	TTCATTTATATAATCTTTGG	piR-t277		1	20	-	54022656	54022675	1	P20	no
9	TCACAACAACGTGTGGAGGTATAGGTG	piR-t278	Like piR-100394, mRNA	1	28	-	54024718	54024745	2	adult	no
9	TAGAAAATTCGAGTTAGAGAAGATACAGCT	piR-t279	Like rat piR-153461	1	30	-	54026264	54026293	2	adult	no
9	TAAACTTCAGCTGTTTGTGGATCCAGCG	piR-t280		1	29	-	54026513	54026541	1	adult	no
9	TAATTCATATTGTGGGAAGATGGATGT	piR-t281		1	27	-	54026637	54026663	2	P20 /adult	yes
9	TATCTGCAGATGAATCATGACTGAATGG	piR-t282	Like piR-140886	1	28	-	54031736	54031763	1	adult	no
9	TACATTGGAGTGCTTGGATATGCCTGGAC	piR-t283	piR-110681	1	29	-	54031797	54031825	1	P20	no
9	GACATTTTCATACATGTATATAATGTATTTT	piR-	piR-101461	1	31	-	54032320	54032350	1	adult	no

		t284									
9	TGATGCTGTTAACTTGGTAGCTACTTTCAG	piR-t285	Like piR-130881	1	30	-	54032574	54032603	2	P20	no
9	TCCATTCTCTCAACATT	piR-t286		1	18	-	54033104	54033121	1	P-20	yes/no
9	TTTTAGTTCAACCCTTACTTGATCATAGA	piR-t287		1	29	-	54033527	54033555	1	adult	no
9	TATTTTAGTTCAACCCTTACTTGATCAT	piR-t288		1	28	-	54033530	54033557	1	adult	no
9	TGGGAGAGTCCAGAGTGAACAGGACCCT	piR-t289	Like piR-113877	1	28	-	54036761	54036788	1	adult	no
9	TTCACCTCAAGCCACTCAGCTGCTGAAG	piR-t290	Like piR-129678	1	29	-	54039856	54039884	1	P20	no
9	GTGCACTGCCACATGCAGAGCCTATGTGTGT	piR-t291	Like piR-134798	1	31	-	54042256	54042286	1	P20	no
9	TGACAGCCGAGGCATAGATTTG	piR-t292		1	22	-	54047323	54047344	3	P20 /adult	no
9	TATGTCATAAGGCCAGGTTAGGTTTCCTA	piR-t293	piR-109382	1	29	+	54049045	54049073	2	P20	no
9	CAGTGTAGATAAGGCACCTGTCCGG	piR-t294	Like piR-100038	1	25	+	54050405	54050429	1	adult	yes
9	TFACTTTAGTTTGAGACAGGGTTTCTTAAT	piR-t295	mRNA	1	30	-	67493773	67493802	1	adult	no
9	TTCACGTTACCTTGCTGTGCTG	piR-t296	Like piR-118372	1	22	-	67494737	67494758	1	adult	no
9	TCTTCTCTAATTTTGGTTGGCCATGTGT	piR-t297	Like piR-121372	1	29	-	67495162	67495190	3	P20 /adult	no
9	TATTATGGTATCTGCAATGCTGGCATATG	piR-t298	piR-100700	1	29	-	67495688	67495716	1	adult	no
9	TATTACAGTGTGGCCATCAGTCTCTC	piR-t299		1	28	-	67496987	67497014	1	adult	no
9	TGGGCTTGGTGGATTATGGTGATAACA	piR-t300	Like piR-22169	1	27	-	67497077	67497103	1	adult	no
9	TCATTTTACCATATGGAAGGTGGGAG	piR-t301	Like piR-117823	1	27	-	67508369	67508395	1	P20	no
9	TATTACCAGAAACACGATTGGTGCTTTGC	piR-t302	piR-125133	1	29	-	67508639	67508667	1	adult	yes
9	TATAAGACCTGAGATTGGTGCTCTTGGG	piR-t303	like piR-102372	1	29	-	67513287	67513315	1	P20	no
9	TTAGCGTCTAGTCAGAGAATTAACACATGC	piR-t304	like piR-140881	1	30	-	67517419	67517448	1	P20	no
9	TAATATAACTGATCTCAGAGTGAGGAT	piR-t305	Like piR-125795	1	27	-	67519001	67519027	1	adult	no
9	TGTCTATTTAGCTTATAGTTCCTGAGTG	piR-t306	Like piR-114499	1	29	-	67519872	67519900	2	adult	no
9	TGAGTGCTTACTCTGGGAGGTTAGGA	piR-	Like piR-15958	1	27	-	67520807	67520833	1	P20	no

		t307									
9	TGTCCAGCTGAAGCATCTAATGCTGCGATG	piR-t308	Like piR-121401	1	30	-	67521698	67521727	1	adult	no
9	TCCTCTCATTGCTCAAACAAGCCTTGTGGGT	piR-t309	Like piR-125682	1	31	-	67521761	67521791	1	adult	no
9	GTCCTCTCATTGCTCAAACAAGCCTTGTGT	piR-t310	Like piR-125682	1	30	-	67521764	67521792	1	adult	no
9	TGGGAGCGTCTTGTGTCTGTCTCTTCAGT	piR-t311	Like piR-107075	1	30	-	67521791	67521820	1	adult	yes
9	TTCTAGAAGTGTCTATTATATTAATGA	piR-t312	Like piR-120035	1	27	-	67522237	67522263	1	adult	no
9	TATTGCAGACATTACAAATTGTGGATG	piR-t313		1	27	-	67522660	67522686	1	P20	yes
9	TTGTGAAATGTGTAACCTAGAAAAATCCAT	piR-t314	Like piR-111769	1	30	-	67522946	67522975	1	adult	no
9	TATGATGATGCTCAGCTACCACTTAGAGT	piR-t315	Like piR-103772	1	29	-	67524358	67524386	1	P20	no
9	TAGTCAAGCTACAGAGCTGCCTGGCACTT	piR-t316	piR-101379	1	30	-	67525070	67525099	1	P-20	no
9	TAGCTCCTTGGTGATAACTTCTAGAC	piR-t317	piR-128265	1	26	-	67525311	67525336	1	P20	no
9	TAAGTAGTTTAGTGTCTGAATGGATGGAA	piR-t318	Like piR-3655	1	29	-	67525754	67525782	1	P20	no
9	TTGAATGTCAATAGGGGCAGGCTCTG	piR-t319	Like piR-125714	1	26	-	67526301	67526326	1	P20	no
9	TCCCAGTTGTGTGTGCTGAGTAGCAGGCT	piR-t320	Like piR-9109	1	29	-	67530868	67530896	1	adult	no
9	TAGAAGGGAGTGAGTCACTTGTGGAGCCT	piR-t321	Like piR-5819	1	29	+	67535166	67535194	2	adult	no
9	TGTGATCGGTTAGATGATGCTCGTCTAGC	piR-t322	Like piR-142036	1	30	+	67535209	67535238	1	adult	no
9	TTCTAGGTCTAGTATTTTCTCCTAGGG	piR-t323	Like piR-128651	1	27	+	67536944	67536970	1	adult	no
9	TAACCTTCATGTTATGTAAACCATTGTAATT	piR-t324	Like piR-126524	1	31	+	67537524	67537554	1	adult	no
9	TATATATAGCTTTCATTGGCGTCTAAA	piR-t325	Like piR-7950	1	28	+	67537689	67537716	2	P20 /adult	no
9	TATATAGCTTTCATTGGCGTCTAAAAGTG	piR-t326	Like piR-7950	1	29	+	67537691	67537719	3	P20 /adult	no
9	TGAGTATTTTCTATGTTTGTGGTTTGGG	piR-t327	piR-102299	1	29	+	67537869	67537897	1	adult	no
9	TAATCTTCAGAGATTCTCATTGTGGTCTA	piR-t328	Like piR-118056	1	29	+	67538137	67538165	1	adult	no
9	TAAGACAGTGTGAGTGAAGGAAAAATGG	piR-t329	piR-3291, mRNA	1	30	+	67546894	67546923	1	P20	yes
9	TACTAGCTTAACTTTTACCACCTTGCTTGT	piR-	piR-105942, mRNA	1	30	+	67546955	67546984	1	P20	no

		t330										
9	CAGATTGACTATGTATAGCTGAAGTTCTGGGT	piR-t331		1	32	+	67548306	67548337	1	adult	no	
9	ATATTTCCACAGAGCCATGTAGCTAGCACA	piR-t332		1	30	+	67561563	67561592	1	P20	no	
9+	TCCTAGAGTTACTGGGATAGTCTTTTAGC	piR-t333		4	30	+	88403168	88403197	2	adult	no	
						+	88662551	88662580			no	
						-	88859372	88859401			no	
						-	114203829	114203858			no	
9+	AGAATCTCATTCTGTGGTAGAGCAGTC	piR-t334		5	28	+	88677542	88677569	1	adult	no	
						+	88924298	88924325			no	
						-	88601973	88602000			no	
						-	88835652	88835679			no	
						-	88924298	88924325			no	

Ch10	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
10	CTCCCTTGCCACTGTACATTGTAGGTGGG	piR-t335	Like piR-109933	1	29	-	18489828	18489856	1	P-20	no
10	TGATGTTGGGTATTTGATTTTTTTCACAAT	piR-t336	Like piR-130523	1	31	-	18490033	18490063	1	adult	no
10+	TTCACCTAGCTTCTTGTTTTTCTTCT	piR-t2	mRNA	1	27	+	34968623	34968649	1	P20	no
10	TCTTTCACCCAACGAAAGTGTGGTACACAC	piR-t337	mRNA	1	30	+	58461343	58461372	1	adult	no
10	TCCCAACGGGCAGTCTGGCAACCCTTGTA	piR-t338	Like piR-135946	1	29	+	62058879	62058907	1	P20	yes
10	TTGTAAGGTCGCTTTTCACAAAGTT	piR-t339	Like piR-29415	1	25	+	62058903	62058927	1	P20	yes
10	TGAGTTGCCTCTTCATGGTTTCTGCTG	piR-t340	Like piR-118754	1	27	+	62077708	62077734	1	adult	no
10	TGCATAATTCGTGGGCATTACAT	piR-t341	Like piR-17478	1	24	+	62080982	62081005	1	P20	no
10	TGCATAATTCGTGGGCATTACATCC	piR-t342	Like piR-17478	1	26	+	62080982	62081007	1	adult	no
10	TTTTCTCTTGCGCTGGAAGTTTGGCCA	piR-t343	Like rat piR-74537	1	29	+	75281731	75281759	1	adult	yes
10	TTAGAAAGTGGCATTACGGGTAACCCTCT	piR-t344	Like piR-110208	1	29	+	75282803	75282831	1	P-20	no
10	TGTTCCGTTAATTGCTTTGTGCCAACTAC	piR-t345	Like piR-138728	1	29	+	75283845	75283873	1	P20	no
10+	TTCTGACCAAGGCCCAATGTTTAATTCTT	piR-t346	Like piR-112199	1	29	+	75292132	75292160	1	adult	no
10	TAAAAGATGGAGTCACTCTGGTCAAGTCTT	piR-t347		1	30	+	75297497	75297526	3	P20 /adult	yes
10	TGGATCCACACTAGGTAGTCAGGCCTCC	piR-t348	piR-107882	1	28	+	75301708	75301735	1	adult	yes

10	TGTCACAGTGTCCAGGATCACACAGG	piLR-t349	Like piR-141625	1	25	+	75301757	75301781	1	adult	yes
10+	TGAGAATGTGATATGGCTATCCAAGGGA	piLR-t350	piR-141582	3	28	+ + -	85179452 86047913 86020198	85179479 86047940 86020225	1	P20	no no no
10+	TCTCTTTAGGGATGCTTCTGAGTATGGAT	piLR-t351	piR-12489	4	29	+ + - -	85193782 86050169 85281238 86005900	85193810 86050197 85281266 86005928	1	adult	no no no no
10	TTTAATGTATCTTTGAGCAATGT	piLR-t352		1	23	+	85194095	85194117	1	adult	yes
10	ATGTTACTCTAGAACCTGGAAGAAGCTG	piLR-t353	Like piR-133889	1	28	+	85194260	85194287	2	adult	no
10	TGTTACTCTAGAACCTGGAAGAAGCTG	piLR-t354	Like piR-133889	1	27	+	85194261	85194287	2	P20 /adult	no
10	TGTTAGGATGGTATAGTGAACAAGTCAAG	piLR-t355	piR-134319	1	30	+	85194289	85194318	1	P20	no
10	TCTTATGCTTGCTTACCGTCTCAGTTGG	piLR-t356	piR-113798	3	28	+ + -	85194333 86050722 86005350	85194360 86050749 86005377	1	P20	yes yes yes
10+	TCTATGGAGATGATGAGGTTACTTTGTG	piLR-t357	Like piR-24373	2	28	+ +	85194502 86050891	85194529 86050918	1	adult	no no
10	TGCAACTAGATGGACTTGCTTGGATGTTA	piLR-t358	Like piR-111285	1	29	+	85195491	85195519	2	P20	yes
10	TCCATTATTAGGTCAAACATGTTTCCTCAT	piLR-t359	piR-105807	1	30	+	85196720	85196749	1	adult	no
10	TACTCAGTAACTAGATGGACTCACTT	piLR-t360	Like piR-126170	1	26	+	85197112	85197137	1	adult	no
10	TATTTATAGTTTTTCAGGGATTCCAATATC	piLR-t361	Like piR-29572	1	30	-	86000908	86000937	1	P20	no
10+	TGTATCTGTTCTTTTATAATCAAATATGGCCCT	piLR-t362	Like rat piR-174904	2	33	- -	86002233 86032163	86002265 86032195	1	adult	no no
10	TAGCTTCCAAAGTTTTGCACGATGCAC	piLR-t363	Like piR-111607, mRNA	1	27	+	86047873	86047899	7	P20 /adult	no
10	TAGGATGTTTTTGGATTCAGTCTCTGA	piLR-t364	Like piR-114513	1	28	+	86048867	86048894	1	P20	no
10+	CAACTTGATGTTTCTTTCTGAATCTATG	piLR-t365	Like piR-117765	3	28	+ - -	86051717 86001791 86003075	86051744 86001818 86003102	1	adult	no no no
10	TGAAACAGACAAACAAACAAACAAAAGATG	piLR-t366	Like rat piR-181050	1	30	+	87731337	87731366	1	adult	no
10+	TCAACCAGGTGGAGATCAAACCAGAGAT	piLR-t160	mRNA	1	28	-	116376984	116377011	1	adult	no
10+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	piLR-t6	Like piR-29217, mRNA	1	31	+	122835642	122835672	1	adult	yes

Ch11	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
11+	TATCATGTGTGTTCTTTTGTTCATTGGGTT	pilR-t111	mRNA	1	29	+	26524712	26524740	1	adult	yes
11	TAGTGTTTTCTAACCTGACAAGCCAGGGTGT	pilR-t367		1	31	-	50783640	50783670	1	adult	no
11	CAAGTGCcGAGATTAAGGCGTATG	pilR-t368	Like piR-127037	1	25	+	74943224	74943248	1	adult	no
11+	CAAGTGCTGAGATTAAGGCGTATG	pilR-t199	Like piR-127037	1	25	+	74943224	74943248	1	adult	no
11+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	pilR-t6	Like piR-29217, mRNA	6	31	+	83087709	83087739	1	adult	no
						+	101420956	101420986			yes/no
						+	101443472	101443502			no
						+	101457854	101457884			no
						+	101474344	101474374			yes
						-	101461974	101462004			no
11	TAACAGATTTTAAGTCAAGGCT	pilR-t369	mRNA	1	22	+	95582976	95582997	1	adult	no
11	TGCTACTGCTGACCAAAAGCAACTATGG	pilR-t370	Like piR-129516	1	28	+	103252428	103252455	1	P20	yes
11	CACACTTTGTGTGCACAGGAACCAATGTTGT	pilR-t371	Like piR-119669	1	32	+	103252936	103252967	1	adult	no
11	CACACTTTGTGTGCACAGGAACCAATGTTGT	pilR-t372	Like piR-119669	1	32	+	103252936	103252967	1	adult	no
11	TGCTACCGGTTCCGCAGTGGTAGAAAGG	pilR-t373	piR-112779	1	29	+	103252965	103252993	1	adult	yes
11	AGCTATGTCTTTCTGTTGCTTGC	pilR-t374		1	23	+	103253681	103253703	1	P20	no
11	TAGCTGCTTGAGCACCATCTCATACCTTTG	pilR-t375		1	30	+	103262764	103262793	1	adult	yes
11	TGATAAATGAGTCACTAATCGTAGTGT	pilR-t376		1	28	+	103263291	103263318	3	P20 /adult	no
11	TGCTTCTGTTGTGGCTTGTGTTTCGT	pilR-t377	Like piR-25503	1	25	+	107810729	107810753	1	adult	no

Ch12	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
12	TAAATACTTCTTTATACCTGCAAAATGGTACCTATTT	pilR-t378	mRNA	1	37	+	4109661	4109697	1	P20	yes
12+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	pilR-t6	Like piR-29217, mRNA	1	31	+	59958363	59958393	1	adult	no
12	TTTGCTTTTCTAAAGTATGAGCTTTCGACC	pilR-t379	Like piR-101364	1	30	-	98789509	98789538	2	adult	no
12	TTTATGACTCCTAATCTCAGA	pilR-t380	like piR-117529	1	22	-	98796470	98796491	1	adult	no
12	TTCATGGACTCCCAAGACAT	pilR-	Like piR-	1	20	-	98797383	98797402	1	adult	no

		t381	130293								
12	TAAACTGCAGCATTTTGCTTTTAAGTCCTTG	pilR-t382	Like piR-17368	1	31	-	98797946	98797976	1	P20	no
12	TAAACTGCAGCATTTTGCTTTTAAGTCCTT	pilR-t383	Like piR-17368	1	30	-	98797947	98797976	1	P20	no
12	TTTTGACTCACAGTTTCAATGGTTTTAACCC	pilR-t384	Like piR-139876	1	31	-	98798244	98798274	1	P20	no
12	TACAAAACCTCAAACCTGAGCCCAAGATTCT	pilR-t385	Like rat piR-173891	1	30	-	98799158	98799187	1	P20	yes
12	TTGTATTACTATAGGAATGGTCAAAAC	pilR-t386	Like piR-132535	1	27	-	98800829	98800855	6	P20/adult	no
12	TTGTATTACTATAGGAATGGTCAAA	pilR-t387	Like piR-132535	1	25	-	98800831	98800855	1	P20	no
12	TTGAATGACTTTGCTCCCTTTTCCCACAC	pilR-t388	piR-126298	1	29	-	98802799	98802827	1	adult	no
12	TCCAGGATCCTCCAAAGGGAGGGTATTT	pilR-t389	Like piR-113754	1	28	-	98803337	98803364	1	adult	no
12	TACAATAGCAGGAACACTTGTCTGGGATT	pilR-t390	piR-4348	1	30	-	98803502	98803530	1	adult	no
12	TACCCAAATCAGGACCGGAGGCACCGAG	pilR-t391	piR-106564	1	29	-	98804225	98804253	1	adult	yes
12	TGGAATACAGGCATGCCTCAGGAAAAATA	pilR-t392	Like piR-20082	1	30	-	98804252	98804281	1	P20	no
12	TTTTGTCAGTCCATGATTAAGCTGAGAGGT	pilR-t393	Like piR-24211	1	31	-	98804726	98804756	1	P20	no
12	TAGTGAATGCAAATAGTGTGTTCTGAAGTG	pilR-t394	Like piR-100321	1	31	-	98807157	98807187	1	P20	no
12	TGTATGTCTCTAAAACGTCCCATGTA	pilR-t395	Like piR-118732	1	27	-	98809262	98809288	1	P20	no
12	TGAGCCCTTTGTTCCCTACCATCTTAGCATG	pilR-t396	Like piR-136578	1	30	-	98816231	98816260	1	adult	yes
12	TGAAACCCAGATGTCCTTTACAAGGCTGCTCACT	pilR-t397	Like piR-126415	1	34	+	98823205	98823238	1	adult	no
12	TAACATTTAATATTGATCACTAATTTTGT	pilR-t398	Like piR-2727	1	29	+	98826312	98826340	1	P20	no
12	TGAATTTGACTTCCTATTGGTAACTG	pilR-t399	Like piR-132223	1	27	+	98826706	98826732	1	adult	no
12	TGTTACTATCATAAGTGGCAGTATTCACA	pilR-t400		1	30	+	98827675	98827704	1	P20	no
12	CACAAACATATGTTTCAGAAAAAATCTTACACATAC	pilR-t401		1	37	+	98839107	98839143	1	adult	no
12	TATATCTATGTAAAAGTTGCATGGTTT	pilR-t402	Like piR-131501	1	28	+	98839865	98839892	1	adult	no
12	TTCCAGCAGGAATGTTCAATTCAGAG	pilR-t403	mRNA	1	28	+	98847568	98847595	1	P20	no
12	TCTTCTTCAGACAAGTTTTTCAGCATTG	pilR-	Like piR-	1	28	+	98847636	98847663	1	P20	no

12	TACTTATCCTCTTTTGAAGGACATAG	t404 pilR-t405	119724, mRNA Like piR-142347	1	26	+	98847838	98847863	1	P20	no
12+	CATATTTTCTCCTCTGAGTATTTT	t406 pilR-t406	mRNA	2	25	+	115925543 116223567	116223591 115925567	1	P20	no

Ch13	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
13	GAATTCACACTGGAGAAAAACGCTATG	pilR-t407	Like piR-121286, mRNA	1	27	-	21512425	21512451	1	adult	no
13+	TATCATGTGTGTTCTTTTGCATTGGGTT	pilR-t111	mRNA	3	29	+	30179145	30179173	1	adult	yes
13+	TAGCAGCTGATATACTTTTACGCTTTTCCC	pilR-t408		2	31	+	49904423 50863524	49904453 50863554	1	adult	no
13+	TCAGTTGGAAGGTATGCCTGTATCTCTCT	pilR-t409	Like piR-9730	2	29	+	50383294 50525933	50383322 50525961	1	P20	no
13	TCTCAGTACTAGGAACAGTCTTCCACTTG	pilR-t410	Like piR-126363	1	30	-	50525906	50525935	1	P20	yes
13+	TGCATTTTGTAGGGCTGTTTTAGTTGG	pilR-t411	piR-17657	1	29	-	50525954	50525982	1	P20	yes
13	TGTGATCATCAAACACAGGGCTGGGCT	pilR-t412	Like piR-140427, mRNA	1	28	+	52131650	52131677	2	P20	no
13	TGTTGCTAAGATGTGTCCAAAAGAGTATG	pilR-t413	Like piR-25455	1	29	+	52135427	52135455	1	adult	no
13	TGCTATCTGCTTGCAAGACTCAAAGATGT	pilR-t414	mRNA	1	29	+	53409036	53409064	1	adult	no
13	CAAGTGCCGAGATTAAGGCGTATG	pilR-t415	Like piR-127037	1	25	-	61989919	61989943	1	adult	no
13+	CAAGTGCTGAGATTAAGGCGTATG	pilR-t199	Like piR-127037	1	25	-	61989919	61989943	1	adult	no
13	TGTAACTTACACCTGTTTCTTTTCT	pilR-t416		1	26	-	81209284	81209309	1	adult	no

Ch14	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
14+	GTCTTTCTTTTTCGAGCTCCCATCTCT	pilR-t75		1	29	+	18420123	18420151	1	adult	no
14	TTCTAGAGGTCCGAAGTTGGGCAGAGCA	pilR-t417	Like piR-105347	1	29	-	18434587	18434615	2	adult	no
14	TAAGTACTAGACAGCAAAAGGATTC	pilR-t418	Like piR-117488	1	26	-	18434837	18434862	1	P20	no
14	TGGCCATGTTAGGTGCTGAACTG	pilR-t419	Like piR-119805	1	23	-	18434929	18434951	1	adult	no
14	TCACTTCTTTAGACTTGCCCAAAGTCCA	pilR-t420	Like piR-116615	1	29	+	22921599	22921627	1	P20	no
14	TAGAAAAAATTTAATGTTTATGTAGT	pilR-	Like piR-109113	1	27	+	22922263	22922289	1	P20	no

		t421									
14	TATCAAATATGTTATTTCCTACACAGACT	pilR-t422	piR-127902	1	31	+	22923073	22923103	1	adult	no
14	TCTCATGACTCACAAGGCTCTTAGAGG	pilR-t423	Like piR-100165	1	28	+	22925842	22925869	1	adult	no
14	TGTTTTGTGGATTCACGCATCCTTGTC	pilR-t424	Like piR-139310	1	29	+	22926043	22926071	2	P20 /adult	no
14	TGACAAAGAGTTGATTCTTGAAAATAGCC	pilR-t425	piR-109773	1	30	+	22938031	22938060	1	adult	no
14	TAGTGTTTACCTCGTCTTCCCAAATGC	pilR-t426	Like piR-29438	1	28	+	22938204	22938231	1	P20	no
14	TATATGCTTCAGACTCTGTGTCCCTCATTG	pilR-t427	Like piR-130068, mRNA	1	30	+	22939548	22939577	1	adult	no
14	TATTAGCCCTATAACACCCAGGTTCCCAT	pilR-t428	Like piR-120278	1	30	-	23199269	23199298	1	P20	no
14+	TATCATGTGTGTTCTTTTGTGTCATTGGGTT	pilR-t111	mRNA	1	29	-	38446349	38446377	1	adult	no
14+	TAATGCTGGACTCCACACACAGTGATT	pilR-t429		2	27	+ -	43858953 43701534	43858979 43701560	1	adult	no no
14+	TAGTGTGATCACTTTATGCTTCACCTGA	pilR-t430		2	28	+ -	43859041 43701443	43859068 43701470	1	adult	no no
14	TAAATCTCCTGTCCAGACTCCAGAGGCTCAGAGCTG	pilR-t431		2	36	+ -	43859354 43701122	43859389 43701157	1	adult	no no
14+	TAAGAAATTCCTAGTGTGTCTGAC	pilR-t432	Like piR-12160	2	25	+ -	43860016 43700473	43860040 43700497	1	adult	no no
14	TTTCTTTCTCTTACTCCAAGACCAAACC	pilR-t433		1	30	+	43861837	43861866	1	adult	no
14	TTTTCACTCCTTCATGTATGAACAGTG	pilR-t434		1	27	+	43862197	43862223	1	P20	no
14+	TTCTTTTACATTATCACCAGCTTTATGTGT	pilR-t435	mRNA	2	30	+ -	43865457 43696864	43865486 43696893	2	P20	no no

Ch17	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
17+	TGCATTTTGCTAGGGCTGTTTCAGTTGG	pilR-t411	piR-17657	1	29	+	22222574	22222602	1	P20	yes
17+	TCAGTTGGAAGGTATGCCTGTATCTCTCT	pilR-t409	Like piR-9730	1	29	+	22222595	22222623	1	P20	yes/no
17	TACTACTTACTGTCTCTCTGCTCAGAC	pilR-t491	mRNA	1	28	+	24888458	24888485	1	adult	no
17	TACTCAGAAGTCACATCCAGGCCCA	pilR-t492		1	25	+	26883951	26883975	1	P20	no
17	TAACTGAACCATCTTGTAGTTGCTG	pilR-t493	piR-120200	1	26	-	27030646	27030671	2	P20/adult	no
17	TCAGAGATCTGAATGAGCATGGCCTCTAT	pilR-t494	Like piR-115523	1	29	-	27032233	27032261	1	adult	no
17	TCAGAGATCTGAATGAGCATGGCCTCTAT	pilR-t495	Like piR-115523	1	29	-	27032233	27032261	1	adult	no
17	TGAGTTGCCTGGCTCTGAAGCCTTGCTCTT	pilR-t496	Like piR-117539	1	30	-	27033692	27033721	1	adult	no

17	TAAAAACCTGGTACAGGGGCTGCCCTT	pilR-t497	Like piR-129939	1	28	-	27033947	27033974	1	adult	no
17	TACTTTCTCCTTTTATACAGCCTGGGACTG	pilR-t498	Like piR-129503	1	31	-	27036048	27036078	1	P20	no
17	TGCCCTTTTGTGCTGGCTGTGGGTC	pilR-t499	piR-111895	1	27	-	27036500	27036526	1	P20	yes
17	GAAATCAATTCATGGGCTGCAGCCAGCAC	pilR-t500	Like piR-109176	1	30	-	27036593	27036622	1	P20	no
17	GAAATCAATTCATGGGCTGCAGCCAGC	pilR-t501	Like piR-110917	1	28	-	27036595	27036622	1	adult	no
17	TAACATCAGCAACTGTCTCAGATCT	pilR-t502	Like rat piR-148425	1	25	-	27037083	27037107	1	P20	no
17	TGAGGTCAGAGCACTTCTTGTGTG	pilR-t503	Like rat piR-169896	1	26	-	27038033	27038058	1	adult	yes
17	TGATCCTCAGCATCATTGGAAGTTGC	pilR-t504	mRNA	1	27	-	27038158	27038184	1	adult	no
17	AGAGACTCTCCAGGGTGCCTGGTCCG	pilR-t505	mRNA	1	26	-	27040562	27040587	1	P20	no
17	TTTACACACTCAGAATCCTAACTCAGGCTA	pilR-t506	Like piR-141166	1	30	-	27040929	27040958	1	P20	no
17	TTCTCTAAAACCTGACAGAATCTGCTT	pilR-t507	Like piR-11187	1	28	-	27042836	27042863	1	adult	no
17	GAGAAGAGCTCCCTAGACACCC	pilR-t508	Like piR-132736	1	22	-	27044749	27044770	1	P20	no
17	TCACAGAGAATCTCCAGTCAGAACAAGTC	pilR-t509	Like rat piR-177091	1	30	-	27046885	27046914	2	P20	no
17	TTCAGTTTATTCGTGCACTGCTGCAAGT	pilR-t510	Like piR-115525	1	28	-	27047760	27047787	1	P20	no
17	TGAGCTTTCTCCCATGTGGACAAGGCC	pilR-t511	piR-126338	1	29	-	27047864	27047892	1	adult	yes
17	TGAGCATGGATTGTTAGTAGTGGTCT	pilR-t512	Like piR-134831	1	27	-	27047899	27047925	2	adult	no
17	TATTTCTTTGCTGGTTGACTGCTAGTGGGT	pilR-t513	piR-8815	1	30	-	27048405	27048434	1	P20	no
17	TTTCTTTGCTGGTTGACTGCTAG	pilR-t514	Like piR-107721	1	23	-	27048410	27048432	1	P20	no
17	TTCGAACCAGAGTTACTGTCACTCAAGTT	pilR-t515	Like piR-141714, mRNA	1	29	-	27048511	27048539	1	P20	no
17	TGTTCTCTGTAGCTGGGGATGTTTCG	pilR-t516	Like gsRNA313	1	25	-	27048709	27048733	1	P20	no
17	TGGACACAAGAAATGGATGGGCTGCC	pilR-t517	Like piR-116836, mRNA	1	26	-	27052087	27052112	1	P20	no
17	TGATTTCAAATATCCTGTCCCGTTGTC	pilR-t518	rat piR-78035	1	27	-	27052485	27052511	2	P20	no
17	TTGAGTTCCAAAAGTTGGGTATAAAGCAT	pilR-t519	mRNA	1	30	+	27053994	27054023	1	P20	no
17	TGCCTTAAGTTGTGTAGCTATCCTCTTCAT	pilR-t520	Like piR-110243	1	30	+	27060690	27060719	1	P20	no
17	TCTCTACGGTGAAGTGTGATGCAGTGTTT	pilR-t521	piR-133953	1	29	+	27061211	27061239	1	adult	yes
17	TCATGGAGTGATACAGCAGCACCAACCT	pilR-t522		1	29	+	27061238	27061266	1	adult	no
17	GAATGTCTGTGTAGCTGAGAGGTT	pilR-t523	Like piR-113537	1	25	+	27062438	27062462	1	adult	no
17	TATTTACGGTGGCAACGTCAGAAGACGT	pilR-t524	Like piR-8797	1	29	+	27064512	27064540	2	P20/adult	no
17	TGCTCTAGCTAGCAAAGCTTCTCTGTC	pilR-t525	Like piR-125235, mRNA	1	26	+	27068212	27068237	1	P20	no

17	TTCACACACAAATGTCCAACCACAGGTCT	pilR-t526	Like piR-18714	1	29	+	27068262	27068290	1	P20	no
17	TGTTTGAAATGTGACTAGACTCTAGTCCAGCC	pilR-t527	Like piR-130496	1	32	+	27068750	27068781	1	adult	no
17	TGTCAGGGTCGGTGGCTTACATCCATT	pilR-t528	Like piR-24203	1	27	+	27070186	27070212	1	P20	no
17	TTCCCTAGGCTAAGTGACAACAAGT	pilR-t529	Like piR-101183	1	25	+	27072958	27072982	2	P20/adult	no
17	TAAATAAATATGAAATCGCTA	pilR-t530	Like piR-119004	1	21	+	27074168	27074188	1	P20	no
17	TGGATCTTAAATGTCCCTCAATGTCACATG	pilR-t531	piR-125668	1	30	+	27075589	27075618	2	adult	no
17	TACTCACAGTGTGCGAAGCTGGAACCGT	pilR-t532	Like piR-123201, mRNA	1	30	+	27075921	27075950	1	P20	no
17	GAACAGGACACAGAAGGAGCTCGTT	pilR-t533	Like piR-100303	1	25	+	27075971	27075995	2	P20	no
17	TGCTCAAGAGAGGCAGTAAGCATGCAGGTC	pilR-t534	Like piR-101277, mRNA	1	30	+	27076064	27076093	1	P20	no
17	TGTGCTGGTTAAATGTTAGGACCCTGG	pilR-t535	piR-24877, miRNA	1	27	+	27076260	27076286	1	P20	yes
17	TGATTAGATGAATATGGTGTGTGGCTGA	pilR-t536	piR-128761	1	29	+	27084084	27084112	2	adult	no
17	TGAGGCACAGATGCCTAGTCTTGAAGG	pilR-t537	Like piR-120301	1	26	+	27084814	27084839	1	adult	no
17	TCATGTTTTCCGGTATATCTCCTG	pilR-t538		1	23	+	27086091	27086113	1	P20	no
17	TCTACCAGTTGGATAATGCACTTCCT	pilR-t539	Like piR-137558	1	26	+	27086193	27086218	2	P20	no
17	TAATGCTGGAGTTTTTCATGCTTCTCT	pilR-t540	Like piR-100791	1	27	+	27086325	27086351	1	adult	no
17	TGCAGCCTCTATAGATGTCAAAT	pilR-t541	Like piR-121557	1	24	+	27091488	27091511	3	P20/adult	no
17	TGAATGTCCGTACAGACGTGTGAGAAT	pilR-t542	Like piR-126091	1	27	-	66097838	66097864	1	P20	no
17	TGAATGTCCGTACAGACGTGTGAG	pilR-t543	Like piR-114589	1	24	-	66097841	66097864	1	adult	no
17	ATCATCACATGAGCTTGAAGGTCACAGT	pilR-t544	Like piR-104233	1	28	-	66099253	66099280	2	adult	no
17+	TATCACTGGAACCTGAGAGGTTGG	pilR-t545	Like piR-112625	2	24	+ -	66115146 66052552	66115169 66052575	1	adult	no no
17+	TGAGAGGTTGAAAAGCTGGCAGGCCT	pilR-t546	piR-111564	2	28	+ -	66115159 66052536	66115185 66052562	1	P20	yes yes
17	TAGTACCCATCAGGTGACAGATGAG	pilR-t547	Like piR-7486	1	25	+	66116258	66116284	1	P20	no
17	TCTATCTGCACTTCAGTGCATGCTAAACT	pilR-t548	Like piR-139183	1	29	+	66116358	66116386	3	P20	no
17	TCTTCTTGAGCACCTGTTAAAAATTG	pilR-t549	Like piR-121213	1	26	+	66117081	66117106	1	P20	no
17	TTCGTGCAGAGATAGGAGTATGTGCC	pilR-t550	mRNA	1	27	+	66119438	66119464	1	adult	no
17	TCATTCTCTCTGAAGTCGTTTGTAGCCA	pilR-t551	Like piR-12528	1	28	+	66133715	66133742	1	adult	no
17	TTCAACAAAATTAGCTGTCTATGTTCTCC	pilR-t552		1	29	-	67267062	67267090	1	adult	no

Ch18	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
18+	TTCTGACCAAGGCCCAATGTTTAATCTT	piLR-t346	Like piR-112199	1	29	+	8964797	8964825	1	adult	no
18+	TATCATGTGTGTTCTTTTGTCAATGGGTT	piLR-t111	mRNA	1	29	-	50691531	50691559	1	adult	yes/no
18+	TCAACCAGGTGGAGATCAAACCAGAGAT	piLR-t160	mRNA	1	28	+	64414037	64414064	1	adult	no
18	TATATTTAGCAGATCCATTTAGGTGGTCTT	piLR-t553		1	31	-	67165485	67165515	1	adult	no
18	CTTCTCTTTTTTCTCGCATGTGTCTTTG	piLR-t554	Like piR-118859	1	30	-	67165572	67165601	1	adult	no
18	TGGTCCAGTTATTTGTGTATCTTTTGTGG	piLR-t555	Like piR-135821, mRNA	1	30	-	67166366	67166395	1	adult	no
18	TACCACTGACTCCAGCAGTCAGCATGTGTT	piLR-t556		1	30	-	67166612	67166641	1	adult	no
18	TAGTCTCCTGGGCTAATTGCAACTCAGAGT	piLR-t557	Like piR-110427, mRNA	1	30	-	67167992	67168021	1	adult	no
18	TGTCATTTCAGAATGTTTGTCTATGCAG	piLR-t558	Like piR-24288	1	29	-	67168083	67168111	3	P20 /adult	no
18	TTTTCCCTTATCATCTATCTCCCAT	piLR-t559	Like piR-29111	1	27	-	67170062	67170088	1	adult	no
18	TCCATCTTCTTATGTTTTTGAATGGCAGTT	piLR-t560	piR-106147	1	31	-	67170104	67170134	1	P20	no
18	TCCATCTTCTTATGTTTTTGAATGGCAG	piLR-t561	piR-117819	1	29	-	67170106	67170134	1	adult	no
18	TAGCTCCTTGACTCCTGGGTCTCTCCA	piLR-t562	mRNA	1	27	-	67171005	67171031	1	P20	no
18	TTTGTTCTTCTTTTGACAACAG	piLR-t563	Like piR-130686	1	23	-	67171257	67171279	2	adult	no
18	TAAAAATCCAGTGGCAACCA	piLR-t564	Like piR-142002	1	21	-	67173708	67173728	1	adult	no
18	TGTCATGTATGTCCTGTTCTCTACTGCTT	piLR-t565	like piR-122804	1	29	-	67175919	67175947	1	P20	no
18	TAGAGTTTTCTATGGAGCAATCCGGTG	piLR-t566	Like piR-6109	1	29	-	67176295	67176322	2	P20	no
18	AGTTGATGTATATTCTGAAGACAGAGTTGGT	piLR-t567	piR-101156, mRNA	1	31	-	67180094	67180124	1	adult	no
18	TGGGATGTCACACTGCTTATGGAAG	piLR-t568	Like piR-21952	1	25	-	67181477	67181501	1	adult	no
18	TCCACAGGAGACAGTGCCTTGAATATT	piLR-t569	piR-121529	1	30	-	67183360	67183389	1	P20	yes
18	AGGGTTCAAAGATGCTTCTATGTGGTC	piLR-t570	Like piR-761	1	27	-	67184064	67184090	1	adult	no
18	TGAAATGGTTAAAATTGGGCTCTGCCCTTTGT	piLR-t571	like piR-135634	1	32	-	67185275	67185306	2	adult	no

18	TACATTCACCTCTGGACTCTCTCTGATG	pilR-t572		1	27	+	67192346	67192372	1	P20	no
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Ch19	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
19+	TATCATGTGTGTTCTTTTGTCAATGGGTT	pilR-t111	mRNA	1	29	-	13681637	13681665	1	adult	yes
19+	TTCACCTAGCTTTCTTGTTTTTCTTCT	pilR-t2	mRNA	1	27	+	16911558	16911584	1	P20	yes
19	TAATTGTGTGCCCTTAAGTCTGACTATTG	pilR-t573	Like piR-4094	1	30	-	37323023	37323052	1	adult	yes
19	TAGTTTGTATCTTGTATTTGCTCAATTTT	pilR-t574		1	29	-	37323120	37323148	1	adult	no
19	TTGATGACCCACATGAATCCATCACAGTGC	pilR-t575	Like piR-127062, mRNA	1	30	-	37325108	37325137	1	adult	no

ChX	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
X+	GTCTTTCTTTTTTCGAGCTCCCATTCTCT	pilR-t75		1	29	+	4746696	4746724	1	adult	no
X+	TTGGCTAAGATCAAGTGTAGTATCTGTTCTT	pilR-t6	Like piR-29217, mRNA	1	31	-	13472504	13472534	1	adult	no
X	ATATGCCATTCTCGAATAT	pilR-t576			20	+	83201556	83201575	1	adult	yes/no
X+	TTCTGACCAAGGCCAATGTTAATTCTT	pilR-t346	Like piR-112199	1	29	+	97446504	97446532	1	adult	no
X+	TTCACCTAGCTTTCTTGTTTTTCTTCT	pilR-t2	mRNA	2	27	-	109920721	109920747	1	P20	no
						-	133934928	133934954			no

ChY	Sequence (5'-3')	ID	Hits	CPS	Length	Strand	Start	End	Clone	Stage	Stem-loop
Y+	GTCTTTCTTTTTTCGAGCTCCCATTCTCT	pilR-t75		28	29	+	202001	202029	1	adult	yes/no

Not found in chromosomes

Ch(9)	Sequence (5'-3')	ID	Hits	Length	Strand	Start	End	Clone	Stage	Stem-loop
n/a	TCCAATGCTATATGGCTGGCCTGATTT	pilR-t577	Like piR-103426	28	n/a	n/a	n/a	1	P20	n/a
n/a	TCCAATGCTATATGGCTGGCCTGATTT	pilR-t578	Like piR-105487	28	n/a	n/a	n/a	1	adult	n/a
n/a	TTCAAATGACCTACAGCTGCTTCTTTGCCAG	pilR-t579	Like piR-107919	31	n/a	n/a	n/a	1	adult	n/a
n/a	TATTTGAGGGGATTGCATGCTTTGGAATTT	pilR-t580	like piR-109418	31	n/a	n/a	n/a	2	P20	n/a
n/a	CAGCAAGACTTTTCAGCCAAACAC	pilR-t581	Like piR-126519	23	n/a	n/a	n/a	1	adult	n/a
n/a	TCTAACTTCTACCACTGAAGTATATCACTG	pilR-t582	Like piR-132417	31	n/a	n/a	n/a	1	adult	n/a
n/a	TCTAACTTCTACCACTGAAGTATATCAC	pilR-t583	Like piR-132417	29	n/a	n/a	n/a	1	adult	n/a
n/a	TGCGTGTCTAACTTCTACCACTGAAGTAT	pilR-t584	piR-139952	30	n/a	n/a	n/a	1	P20	n/a
n/a	TTCTTTATGTCTTtagTCCTCCTTCCT	pilR-t585	mRNA	27	n/a	n/a	n/a	1	adult	n/a

Supplementary Table 3. Chromosome distribution of piRNAs cloned in this study.

Chromosome	piRNA	%
1	13	2.1
2	63	10
3	8	1.3
4	30	4.8
5	53	8.4
6	42	6.7
7	66	10.5
8	15	2.4
9	65	10.3
10	35	5.6
11	14	2.2
12	30	4.8
13	12	1.9
14	21	3.3
15	56	8.9
16	0	0
17	64	10.2
18	23	3.7
19	5	0.8
X	5	0.8
Y	1	0.2
Not found	9	1.4
Total	630	100

Supplementary Table 4. Seventy one piRNA gene clusters identified in this study¹.

Cluster	Chromosome	Start	End	Strand	Size(bp)	No. Clone
plRc-1	1	94825315	94826688	-	1373	4
plRc-2	2	92342234	92398831	+	56597	40
plRc-3*	2	150837186	150847511	+	10325	10
plRc-4*	2	150942027	150953173	-	11146	14
plRc-5*	2	151010552	151021676	+	11124	13
plRc-6*	2	151095625	151106741	-	11116	13
plRc-7	3	124393023	124393312	-	289	2
plRc-8	4	57452343	57458143	-	5800	3
plRc-9*	4	61707952	61712618	-	4666	6
plRc-10*	4	61719635	61724297	+	4662	6
plRc-11	4	93774187	93821942	-	47755	17
plRc-12	4	123339037	123339789	-	752	2
plRc-13	5	28748397	28748514	+	117	3
plRc-14*	5	113567340	113586822	-	19482	5
plRc-15*	5	113582964	113597887	+	14923	16
plRc-16	5	115078034	115111863	-	33829	8
plRc-17	5	135444946	135447013	+	2067	3
plRc-18	5	144014236	144020031	+	5795	2
plRc-19	5	150059824	150094740	-	34916	15
plRc-20	6	81863250	81866276	-	3026	5
plRc-21	6	85078838	85080025	-	1187	2
plRc-22*	6	127754190	127757921	-	3731	5
plRc-23*	6	127762948	127800842	+	37894	16
plRc-24*	6	128150521	128154903	-	4382	5
plRc-25*	6	128412493	128412565	+	72	2
plRc-26	7	52776563	52779298	+	2735	4
plRc-27*	7	69775047	69781855	-	6808	4
plRc-28*	7	69783797	69808490	+	24693	15
plRc-29	7	72979852	73019394	+	39542	16
plRc-30	7	73660242	73710591	-	50349	16
plRc-31	7	125121820	125123273	-	1453	4
plRc-32	8	95079714	95081723	+	2009	3
plRc-33	8	96305954	96308448	-	2494	3
plRc-34	8	113012042	113019604	+	7562	3
plRc-35*	9	54010287	54047344	-	37057	18
plRc-36*	9	54049045	54050429	+	1384	2
plRc-37*	9	67493773	67530896	-	37123	26
plRc-38*	9	67535166	67561592	+	26426	12
plRc-39*	9	88662551	88677569	+	15018	2
plRc-40*	9	88835652	88859401	-	23749	2
plRc-41	10	62058879	62081007	+	22128	5
plRc-42	10	75281731	75301781	+	20050	7
plRc-43	10	85179452	85197137	+	17685	11
plRc-44*	10	86000908	86032195	-	31287	8
plRc-45*	10	86047873	86051744	+	3871	7
plRc-46	11	74943224	74943248	+	24	2
plRc-47	11	103252428	103263318	+	10890	7
plRc-48*	12	98789509	98816260	-	26751	18
plRc-49*	12	98823205	98847863	+	24658	9
plRc-50	13	50525906	50525982	-	76	3
plRc-51	13	52131650	52135455	+	3805	2

plRc-52	13	61989919	61989943	-	24	2
plRc-53	14	18434587	18434951	-	364	3
plRc-54	14	22921599	22939577	+	17978	8
plRc-55*	14	43696864	43701560	-	4696	5
plRc-56*	14	43858953	43865486	+	6533	7
plRc-57*	15	59082585	59103162	-	20577	16
plRc-58*	15	59105173	59117176	+	12003	6
plRc-59*	15	74462276	74462315	-	39	2
plRc-60*	15	74464442	74486022	+	21580	17
plRc-61	15	78489986	78493034	-	3048	6
plRc-62	15	79755686	79768876	+	13190	2
plRc-63	15	83184013	83184658	-	645	2
plRc-64	17	22222574	22222623	+	49	2
plRc-65*	17	27030646	27052511	-	21865	26
plRc-66*	17	27053994	27091511	+	37517	23
plRc-67	17	66052536	66052575	-	39	2
plRc-68*	17	66097838	66099280	-	1442	3
plRc-69*	17	66115146	66133742	+	18596	7
plRc-70	18	67165485	67185306	-	19821	19
plRc-71	19	37323023	37325137	-	2114	3
Average					13645	8.3

¹Bidirectional clusters were indicated by an asterisk (*).

Supplementary Table 5. Frequency of the first nucleotide at the 5' ends of piRNAs.

Nucleotides	U	G	C	A	Total
piRNAs(%)	560(89%)	27(4%)	25(4%)	18(3%)	630

Supplementary Table 6. Expression profiles of 64 novel piRNAs.

Five values (0-4) were assigned based upon expression levels of each of the 64 piRNAs analyzed in each of the 15 tissues and 2 purified spermatogenic cell populations: 4 for high, 3 for medium, 2 for low, 1 for little or none and 0 for none. Three types of expression patterns were indicated: ubiquitous expression (expressed in all the tissues and cells), testis-specific expression (expressed exclusively in developing testes and/or 2 isolated spermatogenic cells), and preferential expression (all others). “# of Exp” stands for the number of expressed tissues and cells. Br, brain; He, heart; Li, liver; Sp, spleen; Lu, lung; Ki, kidney; St stomach; Si, small intestine; Co, colon; Ov, ovary; Ut, uterus; SP, pachytene spermatocytes; rSd, round spermatids.

Ch	piRNA (5'->3')	ID	Expression categories	# of Exp.	Testis				Br	He	Li	Sp	Lu	Ki	St	Si	Co	Ov	Ut	Cells	
					P7	P14	P21	ad												SP	rSd
2	TACAATGACATAAACAGAAACATCTTCCTG	piLR-t41	Ubiquitous	17	1	3	3	4	2	2	2	2	2	2	2	2	2	2	2	4	4
2	TACACATCTTCCTGAAGGCACAACAAATGTT	piLR-t26	Ubiquitous	17	1	3	4	4	1	2	1	3	2	1	2	2	3	2	1	4	4
4	TTGTAGACTCCTTGACTTTCAGATTGTG	piLR-t86	Ubiquitous	17	2	3	4	4	1	3	1	3	3	2	3	3	2	2	3	3	4
6	TGATGGTAGTAGCTGAAGTTCCTTCGGACC	piR-118029	Ubiquitous	17	2	4	4	4	2	2	1	3	2	2	1	2	2	3	3	4	4
6	TTAATAAACTGCCTCTGTTTATCACTATTTG	piLR-t170	Ubiquitous	17	1	2	3	4	3	3	3	2	3	4	4	3	3	3	3	4	4
9	GTGCACTGCCACATGCAGAGCCTATGTGTGT	piLR-t291	Ubiquitous	17	3	3	3	4	2	2	2	3	3	3	4	4	4	4	4	4	4
10	TAAAAGATGGAGTCACTCTGGTCAAGTCTT	piLR-t347	Ubiquitous	17	2	3	4	4	2	1	1	3	3	3	3	3	2	3	4	4	4
12	TTCCAGCAGGAATGTTTCAATTCAGAG	piLR-t403	Ubiquitous	17	2	3	4	4	2	4	2	3	2	3	1	2	3	2	2	4	4
12	TGGAATACAGGCATGCCTCAGGAAAAATA	piLR-t392	Ubiquitous	17	2	4	4	4	1	2	1	3	2	1	2	2	3	1	4	4	4
2	TCTCAGAAGGGATATTCTGTGGGAATTGCT	piLR-t66	Preferential	16	1	2	2	3	1	2	0	2	1	3	2	2	3	3	3	4	4
2	TAGAAAAACGCAAATTTTCAGTGACCACTC	piLR-t51	Preferential	16	1	4	4	4	2	3	2	2	2	3	2	3	1	2	0	4	4
6	CTGACTCCTGACTTCCCACCCTGGGGCAG	piR-114367	Preferential	16	2	3	4	4	1	2	0	3	2	2	2	1	1	2	2	4	4
10	TAGGATGTTTTTGGATTACAGTCTCTGA	piLR-t364	Preferential	16	1	3	4	4	1	3	0	3	2	2	3	2	3	2	2	4	4
17	TTCAACAAAATTAGCTGTCTATGTTCTCC	piLR-t552	Preferential	16	1	2	3	2	0	2	1	2	1	1	2	2	1	2	1	2	3
2	CACCTTCTAAGAGTTTCTGGGCACATTC	piLR-t68	Preferential	15	2	4	4	4	0	3	0	3	2	1	1	1	2	3	1	4	4
6	TGTCTTTACACTAGCGCTTTCTCTGACTC	rat piR-84588	Preferential	15	1	4	4	4	0	3	2	2	2	2	1	0	3	2	4	4	4
18	TACCACTGACTTCCAGCAGTCAAGTCTGTT	piLR-t556	Preferential	15	1	2	3	3	2	0	2	2	2	2	0	3	3	3	1	4	4
6	TCCTTGCTTTTACACTAGCGCTTTCTCTGA	piR-113354	Preferential	14	1	4	4	4	0	2	0	2	1	1	0	2	2	2	3	4	4
10	TGCAACTAGATGGACTTGCTTGGATGTTA	piLR-t358	Preferential	13	1	3	3	4	0	3	0	2	2	0	0	1	2	2	1	4	4

18	AGTTGATGTATATTCTGAAGACAGAGTTGGT	pilR-t567	Preferential	13	0	2	3	3	0	2	1	2	2	2	2	0	2	2	0	2	3
6	TGGTAGGCTTCCTGTCTTTACTACTAGC	pilR-t186	Preferential	11	0	3	4	4	0	2	1	2	2	0	1	0	0	1	0	4	4
6	GCGCTTTCTCTGACTCGGGTGCAGTCG	piR-26767	Preferential	11	2	3	4	4	0	0	0	2	1	0	0	0	2	1	2	4	4
15	TATAAATATTTTTCTCAGCTCTATTGGG	pilR-t454	Preferential	11	0	3	3	4	0	2	1	2	1	0	0	2	0	1	0	4	4
17	TTCCCTAGGCTAAGTGACAACAAGT	pilR-t529	Preferential	11	1	4	4	4	0	3	0	2	2	0	1	1	0	0	0	4	4
2	TAGAAGGGCCTTGGTGGGTGTGTAG	pilR-t43	Preferential	10	0	2	2	4	0	0	0	0	0	0	3	3	1	2	3	4	4
6	TAACCTTTGCCTGATTGAATCCAGTGGC	pilR-t171	Preferential	10	1	2	3	4	0	0	0	0	1	0	1	1	0	2	0	4	4
6	TGACTCTGGAGTACTTCTCAACAGTGAACGT	pilR-t178	Preferential	10	1	2	3	3	0	1	1	0	1	0	0	0	0	1	0	4	4
12	TTGTATTACTATAGGAATGGTCAAAC	pilR-t386	Preferential	10	2	3	3	3	0	0	0	2	2	1	0	0	0	3	0	3	3
8	TCCCTGTTCTGCTGGCTTGGGAACT	pilR-t266	Preferential	9	1	4	4	4	0	0	0	2	0	0	0	2	1	0	0	4	4
9	TACTAGCTTAACTTTTACCACCTTGCTGT	pilR-t330	Preferential	9	0	4	4	4	0	2	0	2	1	0	0	0	0	2	0	4	4
4	TAGAAACTGCCTGGTGCAGATGCCATGGTG	pilR-t83	Preferential	8	2	4	4	4	3	3	0	0	0	0	0	0	0	0	0	4	4
6	TCACTCCACAGCTGTGGTTTTCCACAAGTGT	pilR-t168	Preferential	8	0	3	4	4	0	0	0	0	0	0	2	0	2	0	3	3	4
6	TAGGAAAATGATTTTCCAGTCTGAGAT	pilR-t161	Preferential	8	0	2	3	3	0	0	0	1	0	1	1	0	0	0	0	4	4
2	TTCTTAGATGACAAATGTGTTAAGTCT	pilR-t67	Preferential	7	0	4	4	4	0	3	0	0	0	0	0	0	0	1	0	4	4
5	TCTAGAGTCAATGCACCTGTTATTTGAGC	pilR-t128	Preferential	7	0	4	3	4	0	3	0	0	1	0	0	0	0	0	0	4	4
6	TAGGCTTCTTGTCTTTACTAGCGCTTT	rat pilR-69188	Preferential	7	0	3	4	4	0	2	0	0	1	0	0	0	0	0	0	3	4
7	TGACAGAATGACAGAGGGCTATCTATGCTG	pilR-t252	Preferential	7	0	2	3	3	0	2	0	2	0	0	0	0	0	0	0	3	3
12	TACAAAACCTCAAACCTTGAGCCCAAGATTCT	pilR-t385	Preferential	7	1	2	3	3	0	2	0	0	0	0	0	0	0	0	0	4	3
2	TCAACATTCAGGGTGGTTACACGGG	pilR-t23	Preferential	6	0	3	4	4	0	0	0	0	0	0	0	0	0	2	0	3	4
2	TGGAATTCCTTGTCTGGTATGTAACCAAACCCACAAT	pilR-t60	Preferential	6	0	3	4	4	0	2	0	0	0	0	0	0	0	0	0	4	4
4	TGCCTCCTTGACTCGTCTGCTTTC	pilR-t84	Preferential	6	0	3	4	4	0	0	0	2	0	0	0	0	0	0	0	4	4
5	TACAGGGAGCTCCATGTGCTTCCCATGG	pilR-t131	Preferential	6	0	2	4	4	0	0	0	0	0	0	3	0	0	0	0	4	4
5	TGGTCTTTGAAGTTTGACAGCTCTCTGGGT	pilR-t118	Preferential	6	0	3	3	3	0	2	0	0	0	0	0	0	0	0	0	4	4
7	TAAATGGCTGGGATTGGGTATAAGGAGC	pilR-t218	Preferential	6	0	3	3	4	0	2	0	0	0	0	0	0	0	0	0	4	4
X	ATATGCCATTCCTCGAATAT	pilR-t576	Preferential	5	0	2	2	0	0	0	0	0	0	0	0	0	0	2	0	3	3

1	TGTTCTTTGTTTTGGATATGGTACAGT	pilR-t12	Testis-specific	6	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	3	2
14	TTCTAGAGGTTCCGAAGTTGGGCAGAGCA	pilR-t417	Testis-specific	6	1	2	3	3	0	0	0	0	0	0	0	0	0	0	0	4	4
2	TAACCTCTTGAAAGACTTCTGAGTGCATG	pilR-t25	Testis-specific	5	0	2	3	4	0	0	0	0	0	0	0	0	0	0	0	3	4
2	TGCTGACACTACTGGAGGAGACATACCCT	pilR-t72	Testis-specific	5	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	4	4
2	TTTCTCCCTTAGTGAAGTAACACTTCATTG	pilR-t74	Testis-specific	5	0	2	2	3	0	0	0	0	0	0	0	0	0	0	0	3	3
2	TACATCATTACAGTTCTCCTCGAGGTAGCAT	pilR-t32	Testis-specific	5	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	4	4
2	TGCATGAATAGCTCACTGTCATGATGTGCC	pilR-t65	Testis-specific	5	0	3	4	4	0	0	0	0	0	0	0	0	0	0	0	4	4
2	ATGAGTCTTTAGATGGCTTTTGGCAGGAT	pilR-t70	Testis-specific	5	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	4	4
4	TAATATATTGGCATGATAACCTTGGCTGGT	pilR-t99	Testis-specific	5	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	4	4
7	TGCACAGTGCAGTGATTGGCTCACGACAGC	pilR-t259	Testis-specific	5	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	4	4
8	GAATACTTACTGGATGAGCAGGAGGGA	pilR-t263	Testis-specific	5	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	4	4
8	TACATCTTTTGGATCTAGTCTAGTTATG	pilR-t271	Testis-specific	5	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	3	2
9	TAGAAGGGAGTGAGTCACTTGTGGAGCCT	pilR-t321	Testis-specific	5	0	3	3	4	0	0	0	0	0	0	0	0	0	0	0	4	4
10	TCTATGGAGATGATGAGGTTACTTTGTG	pilR-t357	Testis-specific	5	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	2	3
14	TAAATCTCCTGTCAGAGCTCCAGAGGCTCAGAGCTG	pilR-t431	Testis-specific	5	0	2	3	3	0	0	0	0	0	0	0	0	0	0	0	2	3
17	TGTTTGAATGTGACTAGACTCTAGTCCAGCC	pilR-t527	Testis-specific	5	0	3	4	4	0	0	0	0	0	0	0	0	0	0	0	4	4
17	TAACGAACCATCTTGTAGTTGCTG	pilR-t493	Testis-specific	5	0	2	2	3	0	0	0	0	0	0	0	0	0	0	0	2	3
17	TGAGTTGCCTGGCTCTGAAGCCTTGCTCTT	pilR-t496	Testis-specific	5	0	2	2	3	0	0	0	0	0	0	0	0	0	0	0	4	3
17	TCATGGAGTGATACAGCAGGCACCAACCT	pilR-t522	Testis-specific	5	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	4	3
	# of Expressed pilRNAs	Total: 64			29	64	64	63	15	33	17	30	30	21	24	24	23	31	22	64	64
	Amount of expression				41	177	211	224	26	77	25	69	54	42	49	50	50	67	46	235	240

Supplementary Table 7. Analysis of the 5' start sites of multiple overlapping piRNAs in 17 piRNA gene clusters.

Cluster	Chromosome	Start	End	Size (bp)	All clones	Same 5' start			Different 5' start	Total 5'start	Distance between start sites (bp)
						Total	Duplicates	Groups			
plRc-1	1	94825315	94826688	1373	112	39	26	13	73	86	16
plRc-4	2	150942027	150953173	11146	1087	369	227	142	718	860	13
plRc-7	3	124393023	124393312	289	12	2	1	1	10	11	26
plRc-17	5	135444946	135447013	2067	114	77	51	26	37	62	33
plRc-20	6	81863250	81866276	3026	242	90	51	39	152	191	16
plRc-31	7	125121820	125123273	1453	54	18	10	8	36	44	33
plRc-32	8	95079714	95081723	2009	191	114	74	40	77	117	17
plRc-36	9	54049045	54050429	1384	55	16	9	7	39	46	30
plRc-45	10	86047873	86051744	3871	49	12	7	5	37	42	92
plRc-47	11	103252428	103263318	10890	316	143	92	52	173	225	48
plRc-48	12	98789509	98816260	26751	1225	404	242	162	821	983	27
plRc-51	13	52131650	52135455	3805	47	15	9	6	32	38	100
plRc-55	14	43696864	43701560	4696	281	110	67	43	171	214	22
plRc-61	15	78489986	78493034	3048	164	44	23	21	120	141	22
plRc-68	17	66097838	66099280	1442	54	12	7	5	42	47	31
plRc-70	18	67165485	67185306	19821	1216	388	218	170	828	1028	19
plRc-71	19	37323023	37325137	2114	99	42	24	18	57	75	28
Total (%)					5318 (100%)	1895 (36%)	1138 (21%)	758 (15%)	3423 (64%)	4210 (79%)	Average: 34