Table S1. Summary of the small RNA reads in this study

	Egg	1st Instar	2nd Instar	3rd Instar	4th Instar	Adult
Illumina sequencing reads	5,633,241	3,527,456	4,041,614	3,857,810	3,695,978	3,943,449
Reads counts of ≥ 5	579,881	447,023	536,984	455,710	462,298	476,686
Reads mapped to *Triops* genomic sequences	388,360	405,810	484,109	412,425	414,983	432,126
miRNA fraction reads (18-24 nt)	72,071	66,949	79,489	62,687	64,709	52,270
Reads that did not match known *Triops* cDNA sequences	46,989	58,533	69,924	57,811	55,819	40,301
Conserved miRNAs	68	85	86	86	87	83
Novel candidate miRNAs	65	74	83	81	82	71
Unannotated small RNA reads	46,856	58,374	69,755	57,644	55,650	40,147

Table S2. Nucleotide sequences of conserved miRNAs in *Triops cancriformis* and their read numbers for each developmental stage

miRNA name	miRNA sequence	Egg	1st Instar	2nd Instar	3rd Instar	4th Instar	Adult	Average read	[a]Reliability level
tcf-bantam	UGAGAUCAUUGUGAAAGCUGAUU	40083	91300	122780	297010	357576	331433	206697.0	4
tcf-let-7-3p	CUGUACAACUUGCUAACUUUCC	0	22	54	173	151	649	174.8	4
tcf-let-7-5p	UGAGGUAGUAGGUUGUAUGGUU	23	174	687	2627	4568	29195	6212.3	4
tcf-miR-1	UGGAAUGUAAAGAAGUAUGGAG	238	3758	6365	12373	15609	17187	9255.0	4
tcf-miR-2a-5p	CUCACAAAGUGGCUGUCAUGUG	5	265	447	718	887	110	405.3	4
tcf-miR-2a-3p	UAUCACAGCCAGCUUUGAUGAG	431	1471	2672	5055	5483	864	2662.7	4
tcf-miR-2a-2	UAUCACAGCCAGCUUUGAUGAG	431	1471	2672	5055	5483	864	2662.7	4
tcf-miR-2b	UAUCACAGCCAGCUUUGACGAG	1456	3382	6701	13389	14353	2720	7000.2	3
tcf-miR-7	UGGAAGACUAGUGAUUUUGUUGUU	36	121	260	668	965	225	379.2	3
tcf-miR-8-5p	CAUCUUACCGGGCAGCAUUAGA	254	1209	2957	3799	4084	6348	3108.5	4
tcf-miR-8-3p	UAAUACUGUCAGGUAAAGAUGUC	9057	15144	36306	105985	117144	244410	88007.7	4
tcf-miR-9a-5p	UCUUUGGUUAUCUAGCUGUAUGA	3833	5753	10456	19403	19433	19321	13033.2	4
tcf-miR-9a-3p	AUAAAGCUAGGUUACCAAAGUU	20	18	44	165	79	127	75.5	4
tcf-miR-9b-5p	UCUUUGGUGGUCUAGCUGUAUGA	2788	880	1291	843	394	220	1069.3	4
tcf-miR-9b-3p	AUAAAGCUAGAUCAGCAAGGC	1578	2687	1629	1978	1533	125	1588.3	4
tcf-miR-10-5p	UACCCUGUAGAUCCGAAUUUGU	13950	147193	584564	499716	1127757	379788	458828.0	4
tcf-miR-10-3p	CAAAUUCGGUUCUAGAGAGGUUC	206	1763	3310	4235	4826	4303	3107.2	3
tcf-miR-12	UGAGUAUUACAUCAGGUACUGGU	11076	66920	53056	141652	85565	104791	77176.7	4
tcf-miR-13	UAUCACAGCCAUUCUUGAUGAG	342	1417	2516	4388	5270	435	2394.7	4
tcf-miR-31	AGGCAAGAUGUCGGCAUAGCU	153	2625	5047	8976	15182	32874	10809.5	4
tcf-miR-33	GUGCAUUGUAGUUGCAUUGCA	8	23	52	69	162	86	66.7	4
tcf-miR-34	UGGCAGUGUGGUUAGCUGGUUG	22323	75	63	64	88	389	3833.7	4
tcf-miR-61	UGACUAGAUCCAUACUCACCAG	5578	52820	94316	121020	140716	31063	74252.2	4
tcf-miR-71-5p	UGAAAGACAUGGGUAGUGAGAU	340	1719	3143	4203	5661	1051	2686.2	4
tcf-miR-71-3p	UCUCACUAUCUUGUCGUUCAUG	1129	3416	4578	9529	10295	2344	5215.2	4
tcf-miR-87	UUGAGCAAAGCUUCAGGUGCGU	1787	8427	11635	23019	25062	37880	17968.3	4
tcf-miR-92a	UAUUGCACUCGUCCCGGCCUGU	11090	119532	112208	98046	74381	23387	73107.3	4
tcf-miR-92b	AAUUGCACUUGUCCCGGCCUGC	6898	74004	75245	65076	55903	19824	49491.7	4
tcf-miR-96	UUUGGCACUAGCACAUUUUUGU	140	329	1115	1409	3758	1216	1327.8	4
tcf-miR-100	AACCCGUAGAUCCGAACUUGUG	14	800	4197	6453	15434	21586	8080.7	4
tcf-miR-124-5p	CGUGUUCACUGUUGGCCUUGAUG	0	334	811	1507	1770	29	741.8	3
tcf-miR-124-3p	UAAGGCACGCGGUGAAUGCCAA	0	37	77	219	366	19	119.7	3
tcf-miR-125	UCCCUGAGACCCUAACUUGUGA	27	440	1300	2626	5340	10645	3396.3	4
tcf-miR-133	UUGGUCCCCUUCAACCAGCUGU	13	1538	2612	6232	6842	4411	3608.0	4
tcf-miR-137	UUAUUGCUUGAGAAUACACGU	0	15	46	100	177	91	71.5	4
tcf-miR-153-5p	UCAUUUUUGUGAUUUUUGCAAUU	0	0	0	0	8	11	3.2	4
tcf-miR-153-3p	UUGCAUAGUCACAAAAGUGAUG	29	87	239	641	1470	4698	1194.0	4
tcf-miR-184-5p	CCUUAUCAUUCACCAGUCCGG	0	10	13	26	31	17	16.2	4
tcf-miR-184-3p	UGGACGGAGAACUGAUAAGGGC	125505	780841	746145	838107	975769	838326	717448.8	4
tcf-miR-190	AGAUAUGUUUGAUAUUCUUGGUUG	122	176	297	898	1056	1300	641.5	4
tcf-miR-193	UACUGGCCUGCUAAGUCCCAAG	0	226	864	2754	3720	2760	1720.7	4
tcf-miR-210-5p	AGCUGCUGGACACUGCUCAAGAU	0	38	48	73	112	190	76.8	4
tcf-miR-210-3p	CUUGUGCGUGUGACAGCGGCU	18	20	70	149	363	671	215.2	4
tcf-miR-219	UGAUUGUCCAAACGCAAUUCUUG	0	50	53	93	79	0	45.8	4
tcf-miR-252a-5p	UAAGUACUAGUGCCGCAGGAG	23	103	245	766	945	3662	957.3	4
tcf-miR-252a-3p	UCCUGCAGCUAUAGUGCUUACC	0	5	13	29	22	44	18.8	4
tcf-miR-252b	CUAAGUAGUUGUGCCGCAGGUAA	0	110	309	677	774	1049	486.5	4
tcf-miR-263a	AAUGGCACUGGAAGAAUUCACGGG	3021	7125	35687	27734	65163	16552	25880.3	4
tcf-miR-263b	CUUGGCACUGGAAGAAUUCACAGA	186	554	2538	2841	6824	2255	2533.0	4
tcf-miR-275	UCAGGUACCUGAAGUAGCGCGC	8559	28360	46715	45526	32406	12538	29017.3	4
tcf-miR-276-5p	AGCGAGGUAUAGAGUUCCUACG	0	10	33	78	125	49	49.2	4
tcf-miR-276-3p	UAGGAACUUCAUACCGUGCUCU	2225	20586	67272	219025	301011	275009	147521.3	4
tcf-miR-277	UAAAUGCAUUUUCUGGUAUGUC	1155	231	516	892	1356	1812	993.7	4
tcf-miR-278	UCGGUGGGAUUUUCGUCCGUU	0	33	65	131	160	166	92.5	4
tcf-miR-279a	UGACUAGAUCCACACUCAUCCA	5306	29898	54580	90741	88716	20710	48325.2	4
tcf-miR-279b	UGACUAGAUCCAUACUCAUCU	5604	9781	21739	36678	51644	46649	28682.5	4
tcf-miR-279c	UGACUAGAUCCCACACUCGUCCGG	4836	886	713	404	188	146	1195.5	4
tcf-miR-279d	UGACUAGAUUCACACUCAUCCA	123	236	445	1283	852	628	594.5	4
tcf-miR-279e	UGACUAGAUCCUACACUCGUCC	118	99	101	105	80	0	83.8	4
tcf-miR-281-5p	AAGAGAGCUAUCCGUCGACAGU	3854	43816	52395	85978	124278	54417	60789.7	4
tcf-miR-281-3p	UGUCAUGGAGCUGCUCUCUUUA	78	512	781	2022	2048	780	1036.8	4
tcf-miR-282	UAGCCUCUCCUAGGCUUUGUCU	6	17	31	65	152	173	74.0	3
tcf-miR-283	AAAUAUCAGCAGGUAAUUCUGGGC	461	1849	4438	10030	9893	6060	5455.2	4
tcf-miR-285	UAGCACCAUUGGAAUUCAGUUUA	17	65	186	279	677	185	234.8	4
tcf-miR-305	AUUGUACUUCAUCAGGUGCUCUGG	522	1743	2053	3881	1795	1312	1884.3	4
tcf-miR-307	UCACAACCUCCUUGAGUGAGUG	29	2117	3427	3742	3555	2061	2488.5	4
tcf-miR-315-5p	UUUUGAUUGUUGCUCAGAAAGCC	325	18356	42306	113690	159939	77117	68622.2	4
tcf-miR-315-3p	CUUUCGAGUAACAAUCAGAGUC	0	14	37	46	38	0	22.5	4
tcf-miR-317	UGAACACAGCUGGUGGUAUCU	18	564	1631	1620	3326	5022	2030.2	3
tcf-miR-375	UUUGUUCGUUCGGCUCGAGUUA	115	3366	6503	10298	10372	20126	8463.3	4
tcf-miR-745	GAGCUGCCCAGUGAAGGGCUUUC	0	26	30	67	74	228	70.8	4
tcf-miR-750	CCAGAUCUAUCUCUUCCAGCUCA	472	6053	10705	16024	14614	13494	10227.0	4
tcf-miR-965	UAAGCGUAUGGCUUUUCCCCUG	561	718	1344	2240	2197	250	1218.3	4
tcf-miR-981	UUCGUUGUCGACGAAACCUGCAC	112	662	1076	2805	3576	2337	1761.3	4
tcf-miR-993-5p	CUACCCUGUGGAUCCGGGCUUUU	174	1048	887	1633	1975	2047	1294.0	3
tcf-miR-993-3p	GAAGCUCGUCUCUACAGGUAUCU	617	4059	6597	11014	12086	11759	7688.7	3
tcf-miR-995	UAGCACCACAGGAUUCAGCUU	13	67	179	109	175	53	99.3	4
tcf-miR-996	UGACUAGAGUUACACUCAUCU	161	115	280	463	576	1595	531.7	4
tcf-miR-998	UAGCACCACGGGAUUCAGCCGC	131	22	74	25	42	29	53.8	3
tcf-miR-1175-5p	AAGUGGAGCAGUAGUCUCGUCACU	89	15454	26966	20523	23449	12212	16448.8	4
tcf-miR-1175-3p	UGAGAUUCAACUCCUCCAACUUUG	99	270	531	1028	958	2539	904.2	4
tcf-miR-2788	CAAUGCCCUGAGAAAUCCCAGA	0	50	729	507	2732	920	823.0	4
tcf-miR-2944	UAUCACAGCCGUAGUUACCUAGA	10898	6694	11530	8236	6174	962	7415.7	4
tcf-miR-3477	UAAUCUCAUGCGGUAACUCUGAGA	589	15297	22305	23198	24658	24459	18417.7	4
tcf-miR-3791	UCACCGGGUAGAAUUCAUCCAG	1825700	35480	70510	41510	48868	62798	347477.7	4
tcf-miR-5608	UUUUAUCCGACCGUGCGUACUGUA	0	7	15	15	43	0	13.3	3
tcf-miR-iab-4	ACGUAUACUGAAUGUAUCCUGA	0	371	607	824	880	247	488.2	3
tcf-miR-iab-8	UACGUAUACUGAAGGUAUACCGGA	0	0	5	47	68	68	31.3	4

[a]Reliability level; see the main text in details.

Table S3. Nucleotide sequences of putative conserved miRNA precursors in *T. cancriformis*

miRNA name	precursor sequence
tcf-bantam	CUAGUUUUCUCAGUGAUCUGCCAGAUAUUGUUAAAAUUUCUGAGAUCAUUGUGAAAGCUGAUU
tcf-let-7	UGAGGUAGUAGGUUGUAUGGUUCAGAAUUACACCGUUCAGGCGAAACUGUACAACUUGCUAACUUUCC
tcf-miR-1	CCAUGCUUCCUUACUUCCCAUAGCGAUAUGACAUAUGGAAUGUAAAGAAGUAUGGAG
tcf-miR-2a	CUCACAAAGUGGCUGUCAUGUGUAGGUGAUUCACGUUGGAUUGCAUAUCACAGCCAGCUUUGAUGAG
tcf-miR-2a-2	CUCGUCAGAGUGGUAGUGAUGUGUAGACGUAACUUCAUAUCACAGCCAGCUUUGAUGAG
tcf-miR-2b	AGUCGAAGCGGGUUGGGAAAUGGUGUGACGAAAACGCAUAUCACAGCCAGCUUUGACGAG
tcf-miR-7	UGGAAGACUAGUGAUUUUGUUGUUCGAUAUAUGGGGAAACAAAAAGUCACUAGUUAUCCUA
tcf-miR-8	CAUCUUACCGGGCAGCAUUAGAUGUACAAAAAAACUUCUAAUACUGUCAGGUAAAGAUGUC
tcf-miR-9a	UCUUUGGUUAUCUAGCUGUAUGAGUGAAACAGACGUCAUAAAGCUAGGUUACCAAAGUU
tcf-miR-9b	UCUUUGGUGGUCUAGCUGUAUGACUGUGUUCGACUCAUAAAGCUAGAUCAGCAAGGC
tcf-miR-10	UACCCUGUAGAUCCGAAUUUGUAUUUCCCACAAUGACAAAUUCGGUUCUAGAGAGGUUC
tcf-miR-12	UGAGUAUUACAUCAGGUACUGGUUGAACUUGGGACACCAGUACUUCUGUAACACUCUCC
tcf-miR-13	CGUCGGAAUGGCUGCGGUGUGUUGCGUUGGUUCAUAUCACAGCCAUUCUUGAUGAG
tcf-miR-31	AGGCAAGAUGUCGGCAUAGCUGAGAUAUUUUCACUUUUUGGUAUAGAAAAGUAAGCUGUGUUUACAUCGUGCCAUC
tcf-miR-33	GUGCAUUGUAGUUGCAUUGCAUGGUCGGUUUAAGAUGUGCAGUGUUUCUGCAGUGCAAACC
tcf-miR-34	UGGCAGUGUGGUUAGCUGGUUGUGUGGAUUUCAAGUUUUCACAGCCACUAUCCAUACUGCGCCC
tcf-miR-61	GGUGGGCAUGGCUCUGACGUCAUGGAGAAUUGAACGCGUGACUAGAUCCAUACUCACCAG
tcf-miR-71	UGAAAGACAUGGGUAGUGAGAUGUUGGCAUAUCGUACCUCUCACUAUCUUGUCGUUCAUG
tcf-miR-87	GGCCUGAGGCUCCUUUGCUCAACAGGGUCUUGUUGAUGUUGAGCAAAGCUUACUGGCCUGCGU
tcf-miR-92a	AGACUGCGACUUGGGCAAUGUUCUGUCGUCUUAAGAGUAAUAUUGCACUCGUCCCGGCCUGU
tcf-miR-92b	AGGCUGGUUCAGGGGCAAAUUGUUGGAUAACGUGAGUCAAAUUGCACUUGUCCCGGCCUGC
tcf-miR-96	UUUGGCACUAGCACAUUUUUGUGUUGAGACUGUUAACAAAACUGUGAUAGUGUCAAGU
tcf-miR-100	AACCCGUAGAUCCGAACUUGUGUGGCAACCUCGCAAUUUCUUUCGCAAGUUCGAUUCUAAGGGCGCA
tcf-miR-124	CGUGUUCACUGUUGGCCUUGAUGUGGAUAUUGUCAUAAGGCACGCGGUGAAUGCCAA
tcf-miR-125	UCCCUGAGACCCUAACUUGUGAUAGCAAUCUCACAGGCUAGCUUCUCAGGUAU
tcf-miR-133	AGCUGGUUGAAUCCGGGCCAAAUUGUUAUUCAUAGCGGAGCAUUUGGUCCCCUUCAACCAGCUGU
tcf-miR-137	GCGUAUUCUUAAGUGAUUAGCACGCAUUUUAAGUUGUUAUUGCUUGAGAAUACACGU
tcf-miR-153	UCAUUUUUGUGAUUUUUGCAAUUGUAUUAAAGAUUUUAAUUGCAUAGUCACAAAAGUGAUG
tcf-miR-184	CCUUAUCAUUCACCAGUCCGGUUGGAAUUCUGUAGACUGGACGGAGAACUGAUAAGGGC
tcf-miR-190	AGAUAUGUUUGAUAUUCUUGGUUGUGGCUUUCCAACUCAACCAGAUAUCAGACAUAUUAUUA
tcf-miR-193	AGGGACUUGGCGGAACUGUGGGUUGGGACUUGGACCUCUUAAGGAAGCCUACUGGCCUGCUAAGUCCCAAG
tcf-miR-210	AGCUGCUGGACACUGCUCAAGAUUAGAAUGGUACACAACUCUUGUGCGUGUGACAGCGGCU
tcf-miR-219	UGAUUGUCCAAACGCAAUUCUUGUAACAUAUUAUUCAACAAGAAGUGUGUGGGGACAUCAUU
tcf-miR-252a	UAAGUACUAGUGCCGCAGGAGAGGGAAUUCGAGUCCUCCUGCAGCUAUAGUGCUUACC
tcf-miR-252b	CUAAGUAGUUGUGCCGCAGGUAACCGAUCCGAGUGCUUACCUGCACACGCCUGCUUACAUC
tcf-miR-263a	AAUGGCACUGGAAGAAUUCACGGGAAGAGGCACAUUGAGACGGCCCCCGUGGCUCUCCAGUGCUGUACC
tcf-miR-263b	CUUGGCACUGGAAGAAUUCACAGAGUAUUUGAAACCAUCGUGGAUUCCCUGGUGCCAUAGA
tcf-miR-275	CUGUGCUACGGCAGGUGCUUGCGUCUGAGUCAGAUCAGUCAGGUACCUGAAGUAGCGCGC
tcf-miR-276	AGCGAGGUAUAGAGUUCCUACGUCAUUUUAUGCGGUAGGAACUUCAUACCGUGCUCU
tcf-miR-277	CGUACCAGGAAUGUGUUUACAUUAUGUUUCGUAAAAGAUGUAAAUGCAUUUUCUGGUAUGUC
tcf-miR-278	CCGGACGAAAAUCUUCUUGCCAGACCUUAAUUCCAAAUCAUGUCGUAUGAUGUAUUGGUCGGUGGGAUUUUCGUCCGUU
tcf-miR-279a	GGUGAAUGUGUAUCUGGUGCAUGUGUAUCAAUUUCCAUGACUAGAUCCACACUCAUCCA
tcf-miR-279b	GGUGGGUAUGUUUCUAGUGCAUGCAUGAGGUUGUUUAUAAGAACCAUGACUAGAUCCAUACUCAUCU
tcf-miR-279c	GGCGAGUGGGCAUCUGGUACAUGUGUUUUCACUAAGUUGGUCAUGACUAGAUCCCACACUCGUCCGG
tcf-miR-279d	GAUGAGUGCGUUUCUGGUGCAUAGUACUGUAACAUAUGACUAGAUUCACACUCAUCCA
tcf-miR-279e	UGGCGAGUGGGUUUGUAGUCCACGUGCAAUAGUUUCCGUGACUAGAUCCUACACUCGUCC
tcf-miR-281	AAGAGAGCUAUCCGUCGACAGUCAAGAAUUCACGAUACUGUCAUGGAGCUGCUCUCUUUA
tcf-miR-282	UAGCCUCUCCUAGGCUUUGUCUGUCUGUUGUGACCGGAGACACUGCCUUGAGGAGGCCAUCC
tcf-miR-283	AAAUAUCAGCAGGUAAUUCUGGGCUGUUCCCAUCCCAGACUACCCGUUGAUAUGCAA
tcf-miR-285	ACUGAAUUCUUUUGAUGCGUAGAUUGACUCCGUUUAGUAUUCUAGCACCAUUGGAAUUCAGUUUA
tcf-miR-305	AUUGUACUUCAUCAGGUGCUCUGGUACAGCUUCACCCGGCACCUGUUGGAGUGCAAUUU
tcf-miR-307	UCACUCAACUUGGGUGUGGCGCGUGAUUCAAAAAAAUGUCGUCACAACCUCCUUGAGUGAGUG
tcf-miR-315	UUUUGAUUGUUGCUCAGAAAGCCGUGCGACAAGUGAGGCUUUCGAGUAACAAUCAGAGUC
tcf-miR-317	CGGGAGCCACCCUGAGUUCACUUGGACUUGAAAAGUGAACACAGCUGGUGGUAUCU
tcf-miR-375	ACUCGAGCCCUUCGUAGCACAUCCCAUAUACGUUGGAAUUGAUUUGUUCGUUCGGCUCGAGUUA
tcf-miR-745	CAGUCCUUUCCCGGGCACUAGCUUCUGGUAUCGAAAGAGCUGCCCAGUGAAGGGCUUUC
tcf-miR-750	AGUUGGAAGUGGGGAUCUAGGCACCUGCAACUUGCUCACAAUUUCGCAAAGCUUUCCUUCAACUCGUUGCUGAAAGAGCU UUGCUGAAAUCGUGCCAGAUCUAUCUCUUCCAGCUCA
tcf-miR-965	AGGGAAAAGCUGUGACGAUUGUGCGAAUCUAAGAAUUGCAUAAGCGUAUGGCUUUUCCCCUG
tcf-miR-981	UCGGGUUUCGCGAUAUUCGAACUGUGCUUCCCGGAGCCUAUUGCUACCGAGUUCGUUGUCGACGAAACCUGCAC
tcf-miR-993	CUACCCUGUGGAUCCGGGCUUUUGUAGAAUUUAGCCAUCAGAAGCUCGUCUCUACAGGUAUCU
tcf-miR-995	ACUGAAUCUUGCGGUGGGUACCAGCUUCGCACGGCCGUACUGUACUGUACAUCAAGCUUGCUUUCCGACUCAAGGUAGC ACCACAGGAUUCAGCUU
tcf-miR-996	GAUGGGUGUUGCUUUGGUGCAUGUGAUACUAUACUCUCCAUGACUAGAGUUACACUCAUCU
tcf-miR-998	UGGAUCCAGUGGAUGGGAUGCUGGGAUAUUCACGUUCGAUAAUGCAUAGCACCACGGGAUUCAGCCGC
tcf-miR-1175	AAGUGGAGCAGUAGUCUCGUCACUUGGAUACUUAGCAAGUGAGAUUCAACUCCUCCAACUUUG
tcf-miR-2788	UGGGGGUUCUUGUGGGCAUAUGCCAUGCAAUGGGGCAAUGCCCUGAGAAAUCCCAGA
tcf-miR-2944	AAGGAACUACCGCUGUGGUAUGUGGAGCCUUCCGUAUCACAGCCGUAGUUACCUAGA
tcf-miR-3477	UAAUCUCAUGCGGUAACUCUGAGAGAGUGUAUGUCUCUCGGAGUGUCACGUGAGAUAUG
tcf-miR-3791	CGGUGAAUUUUGCUAUCGGUGAUGUUAACGUCGGUUUUUCAUCACCGGGUAGAAUUCAUCCAG
tcf-miR-5608	UUUUAUCCGACCGUGCGUACUGUAACCGGUAUUUGGAUCUGAUACUUGAACUCGUGGGUAGAGGC
tcf-miR-iab-4	ACGUAUACUGAAUGUAUCCUGAGCAUAUACAUUCCGGUAUACCUUCAGUAUACGUAAC
tcf-miR-iab-8	UACGUAUACUGAAGGUAUACCGGAAUGUAUAUGCUCAGGAUACAUUCAGUAUACGUCC

Table S4. Nucleotide sequences of novel candidate miRNAs in *T. cancriformis* and their read numbers for each developmental stage

miRNA name	miRNA sequence	Egg	1st Instar	2nd Instar	3rd Instar	4th Instar	Adult	Average read	[a]Reliability level
tcf-miR-n501	ACUUGGUUAUAUGAUUGACAGCU	15230	23048	40512	54129	60082	33266	37711.2	4
tcf-miR-n502	UCACUGGGUGCGGUUCAUCCUG	34665	1873	2582	1750	1473	1324	7277.8	4
tcf-miR-n503	UUGCACUGUAUGGUUCGAGGCGA	29350	322	372	313	282	9934	6762.2	4
tcf-miR-n504	UUGCACUAACCGGUAGUGGGCUU	34766	918	832	601	343	94	6259.0	4
tcf-miR-n505	GUGAGCAAAUCAUCAGGUGCGU	90	1083	1994	3485	4599	4285	2589.3	4
tcf-miR-n506	UUGGUUUGAGAUGAGUGGACCCG	263	837	1347	1632	2145	5370	1932.3	3
tcf-miR-n507	AUCGGCACUGGGUAACAAUGAA	120	852	1950	1281	2877	3201	1713.5	4
tcf-miR-n508	UGUGAUGUGUUAUUUCAAACUAGU	8	0	0	0	0	9589	1599.5	4
tcf-miR-n509	AAGGAACACUUGCUGUGGUAUG	441	1032	1852	2301	1745	1473	1474.0	4
tcf-miR-n510	UGAGAUCAACCUAUGUAGCAUU	1183	714	1435	743	961	3535	1428.5	4
tcf-miR-n511	UCUUGGUUAUGGUGAAAAUGG	174	1090	1083	709	542	143	623.5	4
tcf-miR-n512	UUGCACUGGCCUGCCCGGGGGU	3639	5	22	10	28	18	620.3	4
tcf-miR-n513	UGUCUUUUCCGCUUGACUGCCG	0	105	276	657	966	1019	503.8	4
tcf-miR-n514	GUAGAAGUUUUCGCCACCCCUGAA	35	315	466	378	754	227	362.5	4
tcf-miR-n515	AUAUAUUGCGAGGUGCAGAACU	118	112	207	370	396	257	243.3	4
tcf-miR-n516	UCGGUAUUUCUAUUUCUGUCCU	33	85	216	328	410	177	208.2	4
tcf-miR-n517	UUGGUCCCAGGACGGUAGAUGACG	148	283	268	223	193	27	190.3	2
tcf-miR-n518	CUAAAGCUAAGCCACCAGAGGG	479	151	166	194	100	27	186.2	4
tcf-miR-n519	UCCAUGAGCUCUCCAACGAACCU	56	353	348	126	169	30	180.3	2
tcf-miR-n520	UCACUGGGUGUGGUUUAUCCG	744	19	45	49	47	0	150.7	4
tcf-miR-n521	UCACUGGGUAAGGUUCGCCCCCG	610	10	12	10	21	88	125.2	4
tcf-miR-n522	UGUGUAGGAUAGGUGGGAGGCU	705	0	0	0	0	0	117.5	2
tcf-miR-n523	UAAGCAGCAUCGGGCUUGGUGACC	69	234	116	88	80	49	106.0	3
tcf-miR-n524	UGCAAGGUCGUUCUGCUUACGGUC	88	145	127	130	91	30	101.8	3
tcf-miR-n525	UUGGUCUGUAACGCUUUUACCACC	51	142	171	116	118	9	101.2	2
tcf-miR-n526	UUCGUGAAUUUUAGCAUAAUGU	0	0	5	17	20	551	98.8	4
tcf-miR-n527	UCACCAGGUGAGAUUCAUCCAU	246	80	100	53	53	10	90.3	4
tcf-miR-n528	UCUGCGACAAUCUUGGCCUCGUCG	28	128	181	63	87	53	90.0	4
tcf-miR-n529	AAUGUCCAACUUUUAGAAACUU	21	29	82	93	119	191	89.2	2
tcf-miR-n530	AAGAAACGAAUCGGCGCUGAGACU	64	109	149	108	85	19	89.0	3
tcf-miR-n531	UCGUAUACGAGACCGGGGUCUC	32	60	80	102	113	26	68.8	4
tcf-miR-n531-2	UCGUAUACGAGACCGGGGUCUC	32	60	80	102	113	26	68.8	4
tcf-miR-n532	CUACAUAGGUUGAUCUCACCG	96	64	75	99	43	27	67.3	4
tcf-miR-n533	CUGGGCAACAAUGAAAAACGCU	11	34	69	61	68	44	47.8	4
tcf-miR-n534	CAUUCUUGUAGCAGUAUCACCU	20	39	45	38	47	21	35.0	4
tcf-miR-n535	UUGCACUGGCCGGUCCAGGGUU	169	5	9	7	7	12	34.8	4
tcf-miR-n536	GCAAGAAACAAGUCGGAAAUCGGA	28	52	36	40	27	24	34.5	4
tcf-miR-n537	UUGCACUGGCUAGCCCAGGGGA	196	0	0	0	0	0	32.7	4
tcf-miR-n538	UUUUUGAAACACAGCGGUACUG	19	37	36	28	32	18	28.3	4
tcf-miR-n539	UCUGAGAACGGUUCGACUCGACU	10	40	36	37	30	5	26.3	3
tcf-miR-n540	UCAACAUUCUGUAACUCAGCCU	6	36	39	17	23	33	25.7	1
tcf-miR-n541	UUUGAAAAACUCAGUGCGCACC	0	0	10	7	17	116	25.0	4
tcf-miR-n542	CUUCCAUAGGUCGUACCUGAAU	5	13	27	31	35	19	21.7	4
tcf-miR-n543	UCUGAUCUGAUCUUUUUUACACC	14	26	23	23	14	11	18.5	4
tcf-miR-n544	UUGGAUAGAGGUAAUCUCGGCCU	16	27	14	8	11	34	18.3	4
tcf-miR-n545	UGUGUCUUGUCGUGCUGCUGCU	0	17	18	36	28	6	17.5	4
tcf-miR-n546	GUACGGUUUUCAGGGAGUCGGCU	30	32	19	13	0	10	17.3	3
tcf-miR-n547	UGCACUUACUGACUUUACUGCCA	0	8	10	26	30	30	17.3	4
tcf-miR-n548	UAUGAACUCGUCCCUUGGUCACGU	6	13	22	28	26	8	17.2	2
tcf-miR-n549	AUGGCGGACAAAGGGUUUGACAUU	6	25	31	19	15	0	16.0	4
tcf-miR-n550	UAAGAACGAGAGCAACUCAGAACC	12	12	25	21	15	11	16.0	3
tcf-miR-n551	UCGACCAGUACUCGUCACGGCACC	5	22	41	20	6	0	15.7	4
tcf-miR-n552	UAUCAUCGUCUUCUAUGGAUGGCU	13	10	28	22	19	0	15.3	2
tcf-miR-n553	UGUAUAGUACUCGGCAUAAAAA	29	6	17	26	14	0	15.3	4
tcf-miR-n554	UUUUGGUGGAUUCGGAUGCAAGC	9	26	26	6	11	12	15.0	3
tcf-miR-n555	UUCUCUCCCGGACUCUUCUUGGUC	10	25	22	13	14	0	14.0	3
tcf-miR-n556	CAAGGAAAAGGUUAUAAUAACC	0	0	5	8	11	53	12.8	3
tcf-miR-n557	CUUUUGAAUUGCGCGGUCUAGC	0	9	6	0	9	50	12.3	4
tcf-miR-n558	UAGGUCUGUCGCAACGGCGAGCC	10	24	15	11	0	11	11.8	4
tcf-miR-n559	UGCGUGACAGAAUUCAUAAGAA	0	6	18	15	32	0	11.8	3
tcf-miR-n560	AGAAGUCUUAGCGAAGGAGAGCUU	9	12	11	24	13	0	11.5	4
tcf-miR-n561	CCCCGUGGAAGUCUGGAUAUUUUA	0	21	21	12	8	7	11.5	3
tcf-miR-n562	UAAAGAUUGACAAGCUGGCGUAGC	15	7	18	7	13	5	10.8	4
tcf-miR-n563	UAAAAACCACAUGUCCGAUUUG	11	13	22	17	0	0	10.5	4
tcf-miR-n564	GAAAUGCUCCCGUCGUUUGGG	0	10	13	11	16	12	10.3	4
tcf-miR-n565	UUGUCGGAGUAGAUACUCAAUGGC	12	17	0	14	12	7	10.3	4
tcf-miR-n566	AACCAGGCUGAGGUCUUGACGAGA	0	0	0	7	36	16	9.8	3
tcf-miR-n567	UAGGAUCGUUUCAAGUGACACGUC	10	15	13	9	7	5	9.8	3
tcf-miR-n568	UAAGCUCUACGUCUGGAGGCAUCC	5	9	17	10	15	0	9.3	3
tcf-miR-n569	AUUGGACCUAGAUCUCGGAAACGC	0	13	20	6	8	7	9.0	2
tcf-miR-n570	UAGGGGAUAGUGCAGAGGUCUA	7	15	8	9	8	7	9.0	4
tcf-miR-n571	UUCAAGGUUUGCGCUCUGCAACU	0	0	10	0	9	35	9.0	4
tcf-miR-n572	UUGGCUCGGAAAUGGGGAUUUUCU	0	12	15	7	9	7	8.3	3
tcf-miR-n573	UGAGUCGACAACGGGAACCGAACC	5	19	10	9	5	0	8.0	2
tcf-miR-n574	ACUGAGAACGGUUCGAGUCGACU	0	15	7	5	14	5	7.7	4
tcf-miR-n575	AGCGCUCUGACGGAUUACUGAAA	0	6	0	0	0	40	7.7	4
tcf-miR-n576	CGAUCGACGACUCGAAGAUUGCCA	6	0	5	9	8	16	7.3	3
tcf-miR-n576-2	CGAUCGACGACUCGAAGAUUGCCA	6	0	5	9	8	16	7.3	4
tcf-miR-n577	UGGGUAGACUCUCCAUCAUUCGU	14	0	10	14	5	0	7.2	4
tcf-miR-n578	UCCGCCAUCAGCUGAGGAUUG	6	11	11	8	6	0	7.0	4
tcf-miR-n579	GUAUACAAACGAGGUACGGCUAA	0	0	14	12	8	5	6.5	4
tcf-miR-n580	UUUCGAAUUCGAACUUUGUUUU	0	0	5	12	16	6	6.5	4
tcf-miR-n581	AGGUCCCUGGUUCGAGUCC	36	0	0	0	0	0	6.0	4
tcf-miR-n581-2	AGGUCCCUGGUUCGAGUCC	36	0	0	0	0	0	6.0	4
tcf-miR-n582	AAAUAAACUGAUCGAGGUGCUU	0	0	0	0	0	35	5.8	4
tcf-miR-n582-2	AAAUAAACUGAUCGAGGUGCUU	0	0	0	0	0	35	5.8	4
tcf-miR-n583	GAACGGUCCGAGUCGACUCGCU	0	0	0	8	12	15	5.8	2
tcf-miR-n584	UAGGUCUUGGAAUGCUUGUUCCU	13	0	6	9	6	0	5.7	2
tcf-miR-n585	UUACGUAUUCGUUCGGCUGGCCCC	0	8	13	6	7	0	5.7	2
tcf-miR-n585-2	UUACGUAUUCGUUCGGCUGGCCCC	0	8	13	6	7	0	5.7	2
tcf-miR-n586	UCGAGAGUUUUCUCGCGUGCU	0	0	5	10	10	8	5.5	4
tcf-miR-n587	UGAGCACCAAUAAGCACACGGACU	0	8	13	6	5	0	5.3	4
tcf-miR-n588	UACGGCUAAGGGAACCUUUACC	0	0	5	5	10	11	5.2	4
tcf-miR-n589	ACAGAGUAUACGAGCGGAGAUCG	0	10	12	0	8	0	5.0	4
tcf-miR-n590	CUUCUUAUCCGUCUGUCCCGGU	0	11	9	10	0	0	5.0	4
tcf-miR-n591	AUUGUUUGAGAUAAGUGGACCC	0	0	0	0	0	28	4.7	3
tcf-miR-n592	UCCGAGAUCCGUCGAACUGGGAUC	0	8	9	0	5	5	4.5	4
tcf-miR-n593	UGCAAUGGGUCGCACUGAGACU	6	8	5	0	8	0	4.5	4

[a]Reliability level; see the main text in details.

Table S5. Nucleotide sequences of putative novel candidate miRNA precursors in *T. cancriformis*

miRNA name	precursor sequence
tcf-miR-n501	CUGUUGAUCAUUUGGCCAAUCCUGCUUACUCGUGAAAGCACUUGGUUAUAUGAUUGACAGCU
tcf-miR-n502	GGAUGGACAACACUUCGGUUGGCAGUUCCUGUUGAUUGUCACUGGGUGCGUUUCAUCCUG
tcf-miR-n503	GCUUCGAAUCUAUGGUUGCAAUGCUGACUUGCUUCAUUGCACUGUAUGGUUCGAGGCGA
tcf-miR-n504	CCCUAUUACUUGUUGGCUCAACAUUACGUCAUGUUGCACUAACCGGUAGUGGGCUU
tcf-miR-n505	AGCCUGAUAUCUUGCUCGACCUUAUGUAUGGCGGUGAGCAAAUCAUCAGGUGCGU
tcf-miR-n506	UUGGUUUGAGAUGAGUGGACCGUAAAUGUAAUAUCCGGGUCCACUUAUCUCAAACAAU
tcf-miR-n507	AUCGGCACUGGGUAACAAUGAAUGUUCCACUAUGGAAAUAUUAAUAUCAUUGUUAUCCAGUGCCGUGUA
tcf-miR-n508	UGUGAUGUGUUAUUUCAAACUAGUGUGCUUUUAUGCAUUCACUAGUUAAAUAGCACAUCAUUAG
tcf-miR-n509	AAGGAACACUUGCUGUGGUAUGUGGUUGUGUUCUUGUGAGUCGUAUCACAGUGAGUGUUACCUAG
tcf-miR-n510	AGUUACAUAGGUUUAUUCCGCCGUUCGAUAUUUUGAUACCCGGUGAGAUCAACCUAUGUAGCAUU
tcf-miR-n511	GUUUUCACCUUGGCCAAUGUCGUAACGCUAGUAUCGUCUUGGUUAUGGUGAAAAUGG
tcf-miR-n512	CCUUGGUCAGCCAUGUGCUAUGCGAAUUUUAUAACAUUGCACUGGCCUGCCCGGGGGU
tcf-miR-n513	UGUCUUUUCCGCUUGACUGCCGAGCAAGGGCCGAUGAUCAAGUUGAAACCCCGGCAAUCUAGAGGAAGAGACAGA
tcf-miR-n514	AGGAGUGGCACUUUUUGAAAUACGGGAGCGUGAUUGUCGUGAUGGAUCUACAACAAUCAUUGCUCCCGUAGAAGUUUUCGCCACCCCUGAA
tcf-miR-n515	UUCUACACCUCGCAAUAUCGUCUUUGAUGUUGCGGUGAUAUAUUGCGAGGUGCAGAACU
tcf-miR-n516	UCGGUAUUUCUAUUUCUGUCCUUAAGAUAAGGACAGAAAUAGAAAUACCGGUAC
tcf-miR-n517	UUGGUCCCAGGACGGUAGAUGACGCUGCUCUUGCCGGUAUUGGUUACGGUACCACGUCAGGGC
tcf-miR-n518	UUGGUGGUUUCGCUUUCUGGAAGAUUUUUUGGUAUUUCCUAAAGCUAAGCCACCAGAGGG
tcf-miR-n519	UCCAUGAGCUCUCCAACGAACCUUGAAACUUUUGUUGUACUGGCAUAUGCAGCC
tcf-miR-n520	GGUAGACUAGGCUCAGUUUGACUGUUUUCCAAGUGCAGUCACUGGGUGUGGUUUAUCCG
tcf-miR-n521	GGGAGAACCCUACCUUAGUGGAUGGAGCCUAUUUAGUAACAUCACUGGGUAAGGUUCGCCCCCG
tcf-miR-n522	UGUGUAGGAUAGGUGGGAGGCUAUGAAGAUGUGACGCCAGUUACAUUGGAGCCAUCCUUGAAAUACCACCCUG
tcf-miR-n523	UAAGCAGCAUCGGGCUUGGUGACCUUGGAUGGGUGAGCACCAGGAAAGCUGUCGGCU
tcf-miR-n524	UGCAAGGUCGUUCUGCUUACGGUCGAAACGACCACGGUCGUUUUGACAAAGGUCGUUUCGACCCGCACC
tcf-miR-n525	UGGUACGCUGUUUUAGUCACGUGGUUGGUCUGUAACGCUUUUACCACC
tcf-miR-n526	UUCGUGAAUUUUAGCAUAAUGUCGUAACUGAGGAACUUAUCUAUUAUUCCUCUUACAAGGAUAUUAUGCUAAAUUUCAUGAGAUU
tcf-miR-n527	GGAUGGACUUGCCUUGGUUAUAUAAUGUCUAGGUAUCACCAGGUGAGAUUCAUCCAU
tcf-miR-n528	GUGGGGCCGCGAAUGGCGCGGCAGGAAGAUCCGCUUAUUCUGCGACAAUCUUGGCCUCGUCG
tcf-miR-n529	AAAGUUGGACAUUGUUUUGAAACUCUUCAUUACGGGUGAAUGAAGAGUUUCAAAACAAUGUCCAACUUUUAGAAACUU
tcf-miR-n530	AAGAAACGAAUCGGCGCUGAGACUAGUCACAGUUUCCAGAUGCACGGCUCGACUAG
tcf-miR-n531	UCGUAUACGAGACCGGGGUCUCAGCAUGUGUUGCAGAGGCCUCGUUUCGAGUGUACGAAG
tcf-miR-n531-2	UCGUAUACGAGACCGGGGUCUCAGCAUGUGUUGCUGAGGCCUCGUUUCAAGUGUACGAAG
tcf-miR-n532	CUACAUAGGUUGAUCUCACCGGGUAUCAAAAUAUCGAACGGCGGAAUAAACCUAUGUAACU
tcf-miR-n533	CUGGGCAACAAUGAAAAACGCUAUUAUAGCGUUUUUCAUUGUUGCCCAGUCCG
tcf-miR-n534	CAUUCUUGUAGCAGUAUCACCUUAGCAAGGUGAUACUACUACAAGAAUGCA
tcf-miR-n535	CCCUUAGUCCUUCUAGUGCAAUGUGGUUACUUCGAUUCAUUGCACUGGCCGGUCCAGGGUU
tcf-miR-n536	GCAAGAAACAAGUCGGAAAUCGGACGAAAAAAGUUCUGUCUGAGCCCGGCUUUUACUGCCA
tcf-miR-n537	CCUUGUGCCAGCGGUUGCAUUGGCAAAUUUGUUCAUUGCACUGGCUAGCCCAGGGGA
tcf-miR-n538	UUUUUGAAACACAGCGGUACUGUGUGCUUGAAAAACUGAAGUUUUUGAAACACACUGUACCGUUGUGUUUCAAAAACU
tcf-miR-n539	UCUGAGAACGGUUCGACUCGACUCGCCUUAACCAUAGUGACUCGGCUCGACUCCACGUAACCUUAUGAGUCGACUCGAACCGUUCUCAGCCCU
tcf-miR-n540	UCAACAUUCUGUAACUCAGCCUUGCAAAGAGAACUAUAGGAGACCG
tcf-miR-n541	UGCGCACCGAGUUUUUGAAACACAGCGAUUACUUGUGUUUGAAAAACUCAGUGCGCACC
tcf-miR-n542	ACGGGUACACCUUAAGGGCAGCUUCCAUGGCAUCUGUCCCAGAAGCUUCCAUAGGUCGUACCUGAAU
tcf-miR-n543	UUUAAAAAAGAUCAGAUCAGAUCAGAUCAAAUGAUCUGAUCUGAUCUUUUUUACACC
tcf-miR-n544	UUGGAUAGAGGUAAUCUCGGCCUGGUCGACUUCUUCUGCUCGUAGAAGGGAGUCUUUCGGCUUCGGAUUACCUGCUUUGUCCGAAG
tcf-miR-n545	UGUGUCUUGUCGUGCUGCUGCUUAUACAUGUAAUGCAGACAGCAGAAAAAGGUACAGA
tcf-miR-n546	GUACGGUUUUCAGGGAGUCGGCUUUCGGGAAAAAAUUUCUCGCAAAUGAGCUUGACUGGCCUGAGCCGAGGACU
tcf-miR-n547	AGUAGUAAAGGGUGGGAUGCACUGUAAAGUAACAAAGUGCACUUACUGACUUUACUGCCA
tcf-miR-n548	UAUGAACUCGUCCCUUGGUCACGUGUGGGUGUCCCUCAGAUGGUUGAUCCACGCGUCCGGGUGGACAGAUGAUGCC
tcf-miR-n549	AUGGCGGACAAAGGGUUUGACAUUCAAAGAGUCUUGCCUGACGGUCUCGCUAUUA
tcf-miR-n550	UAAGAACGAGAGCAACUCAGAACCCCUCCGGGGUGAUGAUGAUAGCUCCGGAUUGUGCCAGUUCUGAGUUUCUCGUUCAUUGGCA
tcf-miR-n551	UCGACCAGUACUCGUCACGGCACCGUCUUGUUACUGAUCGGUACUGGUUCCU
tcf-miR-n552	UAUCUAGCAAUCCUGAUGAUGUCGCAAUCGUGGGAAAGAUUUGGUCCACUAAAUUUCCCCCACCCAUAUCAUCGUCUUCUAUGGAUGGCU
tcf-miR-n553	UGUAUAGUACUCGGCAUAAAAAAAAUGACAGUUCGCUUUUAUGCCGAGCACUAUACAGU
tcf-miR-n554	UUUUCCGGAUCUCUCGAAACCGUUUUUGGUGGAUUCGGAUGCAAGC
tcf-miR-n555	UUCUCUCCCGGACUCUUCUUGGUCCGGUGGACUAGAGACCUAAAAAGGUCUAUCCAUUGGAACCAUUCCAAGGCAGAACCGGAAUACGGCU
tcf-miR-n556	AUAACCUUUUCGUUGGAAAUCGCUGUCCCAGGAAUAGGAAAAGUCAGAGAUUCCAAGGAAAAGGUUAUAAUAACC
tcf-miR-n557	UAGACCGCGCAAUUCAGAAACAUAGGAUUUGACUUCUGCUUGCUGCUUUUGAAUUGCGCGGUCUAGC
tcf-miR-n558	CUUGUUGUUGACGCGACUGCUGUUAGGAAGACCUUCCCAGUUGUAGUUCUUCCAAACUAGGUCUGUCGCAACGGCGAGCC
tcf-miR-n559	UGCGUGACAGAAUUCAUAAGAAAAAGUAUGAUAUAACAAUGUCUGAGAUUUCUGUCACGUACAG
tcf-miR-n560	GCUCUCAAAGUUGAGCUUCUCGAGUUGGGAGAAGUCUUAGCGAAGGAGAGCUU
tcf-miR-n561	CCCCGUGGAAGUCUGGAUAUUUUAUAUAAAAAAUUCCAGGCUCUUCGGGAU
tcf-miR-n562	UAAAGAUUGACAAGCUGGCGUAGCAAAAGUUAUGUCAAUUGUCGAGUGGCUGCC
tcf-miR-n563	AUCGGACAAGUAGUUUUUACGAAAUCAUGACUAGAGUUUCCAAAUACUAGUAAAUGGUUUCGUAAAAACCACAUGUCCGAUUUG
tcf-miR-n564	GAAAUGCUCCCGUCGUUUGGGUCUCCCUGGGCCCAAACGACUAGAGCAUUUUGC
tcf-miR-n565	UUGUCGGAGUAGAUACUCAAUGGCUUGCCGCGGGUCGCAGCGAAGCGACGCAGUACAAGUAGGAAGUCAUCCGUCGACAAGGU
tcf-miR-n566	AACCAGGCUGAGGUCUUGACGAGAAUUUCAAUGAGAUUCUUGUACUUUGGCCUGGAAACAAAU
tcf-miR-n567	UGUUUCGCUUGUUGUGCGGCGUUCUCCAUAGCUCGAGCUUUGUCUAGGAUCGUUUCAAGUGACACGUC
tcf-miR-n568	UAAGCUCUACGUCUGGAGGCAUCCGGCGAUACUGGCCACUUUUGCCAGUAUCUGGAUGCAUAGAGGCGAAGGAGUGUGGU
tcf-miR-n569	AUUGGACCUAGAUCUCGGAAACGCAGUGCUUAGACACUUCGCUUAGAGAUACUGGGAUAAAUGG
tcf-miR-n570	UAGGGGAUAGUGCAGAGGUCUAUUUAUUCACUAGACCUCUGCACUAUCCCCUGUA
tcf-miR-n571	CUGCAGAGCGCAAACCUUGAAGUACAUGUACUUCAAGGUUUGCGCUCUGCAACU
tcf-miR-n572	UUGGCUCGGAAAUGGGGAUUUUCUCCUCAGUUCCCUCUUCCGAACAAGCAAGAGCAGGGCACC
tcf-miR-n573	UUCUUCCCAAAAACCUUGUUGGCUAGUCACUAUAUAGCAGAAACUGUCGGUGUCGGUGAAUAUGAGUCGACAACGGGAACCGAACC
tcf-miR-n574	ACUGAGAACGGUUCGAGUCGACUCAUAAGGUUACGUGGAGUCGAGUCGAGUCACUAUGGUUAAAGCGAGUCGAGUCGAACCGUUCUCAGACC
tcf-miR-n575	AGCGCUCUGACGGAUUACUGAAAAAGCCUUCGAUUCCUUUUGAUACCAAAAGGAAUCGAAGGCUUUUUCAGUAAUCCGUCAGAGCGCU
tcf-miR-n576	CGAUCGACGACUCGAAGAUUGCCACGUUGCACCUGUUCGUGGCGUUCGGGUUACAGAUUGUC
tcf-miR-n576-2	CGAUCGACGACUCGAAGAUUGCCACGUUGCACCUGUUCGUGGCGUUCGGGUUACCGAUUGUC
tcf-miR-n577	UGGGUAGACUCUCCAUCAUUCGUUUGGUCGAUGGUAGUAGAAAUUGCUCGUCGGAUGUAAGUGGAUCUUUACCCACG
tcf-miR-n578	UCCGCCAUCAGCUGAGGAUUGAUGGUCACAUCAAUCCUCAGCUGAUGGCGGAUU
tcf-miR-n579	UGCCGUACCUCGUUUGUGUGAUGUGAUAAAACAAAUGUAUACAAACGAGGUACGGCUAA
tcf-miR-n580	AACAAAGUUCGAUUUCGAAACGUCGUGCGCACCGUUUCGAAUUCGAACUUUGUUUU
tcf-miR-n581	AGCUUGAACGAGUGGAUAGCGUACCUGCCUGUGGUGCGUGAGGUCCCUGGUUCGAGUCC
tcf-miR-n581-2	GCCUUGAACGAGUGGAUAGCGUACCUGCCUGUGGUGCGUGAGGUCCCUGGUUCGAGUCC
tcf-miR-n582	GCACCUCGAUCAGUUUAUUUUUUUUGCAAAAAAAAUAAACUGAUCGAGGUGCUU
tcf-miR-n582-2	GCACCUCGAUCAGUUUAUUUUUUUGCAAAAAAUAAACUGAUCGAGGUGCUU
tcf-miR-n583	GAACGGUCCGAGUCGACUCGCUAAGGUUACGGCGAGUCGAGUCGAACCCUGACC
tcf-miR-n584	GUGCGCUGGUCAGGGCUUACUUUAGGUCUUGGAAUGCUUGUUCCU
tcf-miR-n585	UUACGUAUUCGUUCGGCUGGCCCCUCUUCCUCGCUUUCAGCUAGGGGGAUGGGUUCGGCCGAAGCGCCUAACGCCACG
tcf-miR-n585-2	UUACGUAUUCGUUCGGCUGGCCCCUCUUCCUCGCUUUCAGCUAGGGGAAUGGGUUCGGCCGAAGCGCCUAACGCCACG
tcf-miR-n586	UCGAGAGUUUUCUCGCGUGCUUGGUCGAUCAACUUAGAGCACGCGAGAAACUCAUUCUCGACA
tcf-miR-n587	UGAGCACCAAUAAGCACACGGACUCCAGAUUUCGCAUUGUAGCGCUUGCCGUGGCUUCGUUGGGACCAUCC
tcf-miR-n588	UACGGCUAAGGGAACCUUUACCGGCGCAGGCUGGUAAAGAGUCUUUAGCCGUCCC
tcf-miR-n589	ACUCCCUCUGUCUACUCUGUGCUCUGUAUACUCUGUGUUGAGCACAGAGUAUACGAGCGGAGAUCG
tcf-miR-n590	CCGGGGAAGAGGGAAAGGUGGCCCUGUUCAAGUAAGCAGCAAAUGUUCGCUUACGCGGGCUUCUUAUCCGUCUGUCCCGGU
tcf-miR-n591	AUUGUUUGAGAUAAGUGGACCCGGAUAUUACAUUUACGGGUCCACUCAUCUCAAACCAAUAC
tcf-miR-n592	UCCGUUGCGUGGAUCGCGAUUCGUGAGCCCGAAGAUCCGCGAACCGGGGAUCCAAAAUCCGCGAUCCGAGAUCCGUCGAACUGGGAUC
tcf-miR-n593	UGCAAUGGGUCGCACUGAGACUGAGGCAUGCCUCCCUCAGUGUUCGAGCUUUUGUCUU

Table S6. Normalization of small RNA reads in this study

	Egg	1st Instar	2nd Instar	3rd Instar	4th Instar	Adult
Spike1	28,746	30,235	36,053	61,382	42,651	54,232
Spike2	2,150	3,143	3,545	6,407	4,063	4,264
Spike1/Spike2	13.4	9.6	10.2	9.6	10.5	12.7
Fold change to standard	1.432395941	1.155164531	0.996075363	0.567836288	0.855427095	0.740516285
Total small RNA reads	23,438,746	15,019,413	20,078,802	17,921,148	21,597,504	22,625,712
Normalized small RNA reads	33,573,565	17,349,893	20,000,000	10,176,278	18,475,090	16,754,708

Table S7. Normalized relative expression of conserved miRNAs in *T. cancriformis*

miRNA name	Egg	1st Instar	2nd Instar	3rd Instar	4th Instar	Adult
tcf-bantam	0.057121	0.104927	0.121672	0.167790	0.304315	0.244175
tcf-let-7-3p	0.000000	0.032283	0.068328	0.124791	0.164087	0.610511
tcf-let-7-5p	0.001179	0.007195	0.024495	0.053396	0.139872	0.773864
tcf-miR-1	0.007726	0.098377	0.143675	0.159217	0.302586	0.288420
tcf-miR-2a-5p	0.003569	0.152567	0.221907	0.203198	0.378162	0.040597
tcf-miR-2a-3p	0.046846	0.128939	0.201956	0.217808	0.355902	0.048549
tcf-miR-2b	0.060343	0.113037	0.193123	0.219975	0.355245	0.058278
tcf-miR-7	0.028306	0.076726	0.142161	0.208216	0.453131	0.091460
tcf-miR-8-5p	0.024163	0.092751	0.195611	0.143266	0.232017	0.312192
tcf-miR-8-3p	0.031796	0.042876	0.088634	0.147501	0.245602	0.443591
tcf-miR-9a-5p	0.548965	0.139738	0.176769	0.065802	0.046331	0.022395
tcf-miR-9a-3p	0.237579	0.326249	0.170550	0.118056	0.137836	0.009729
tcf-miR-9b-5p	0.085122	0.103034	0.161473	0.170818	0.257730	0.221823
tcf-miR-9b-3p	0.082183	0.059650	0.125729	0.268781	0.193866	0.269792
tcf-miR-10-5p	0.008680	0.073863	0.252942	0.123266	0.419078	0.122172
tcf-miR-10-3p	0.019225	0.132691	0.214815	0.156682	0.268976	0.207611
tcf-miR-12	0.042055	0.204916	0.140088	0.213217	0.194024	0.205700
tcf-miR-13	0.040978	0.136922	0.209634	0.208424	0.377097	0.026945
tcf-miR-31	0.004322	0.059801	0.099143	0.100518	0.256123	0.480092
tcf-miR-33	0.034592	0.080203	0.156356	0.118275	0.418329	0.192244
tcf-miR-34	0.983118	0.002664	0.001929	0.001117	0.002314	0.008857
tcf-miR-61	0.021304	0.162689	0.250492	0.183230	0.320953	0.061333
tcf-miR-71-5p	0.035781	0.145893	0.230012	0.175346	0.355787	0.057181
tcf-miR-71-3p	0.062016	0.151325	0.174871	0.207501	0.337722	0.066564
tcf-miR-87	0.029611	0.112611	0.134067	0.151208	0.248007	0.324496
tcf-miR-92a	0.039481	0.343180	0.277786	0.138372	0.158139	0.043043
tcf-miR-92b	0.036626	0.316887	0.277827	0.136978	0.177265	0.054417
tcf-miR-96	0.030354	0.057527	0.168112	0.121106	0.486599	0.136301
tcf-miR-100	0.000528	0.024334	0.110082	0.096487	0.347654	0.420914
tcf-miR-124-5p	0.000000	0.107623	0.225336	0.238700	0.422350	0.005990
tcf-miR-124-3p	0.000000	0.074859	0.134333	0.217805	0.548359	0.024643
tcf-miR-125	0.002450	0.032202	0.082040	0.094473	0.289410	0.499424
tcf-miR-133	0.001092	0.104171	0.152550	0.207491	0.343174	0.191522
tcf-miR-137	0.000000	0.051154	0.135269	0.167638	0.446997	0.198941
tcf-miR-153-5p	0.000000	0.000000	0.000000	0.000000	0.456560	0.543440
tcf-miR-153-3p	0.007579	0.018338	0.043438	0.066414	0.229446	0.634785
tcf-miR-184-5p	0.000000	0.147396	0.165226	0.188382	0.338366	0.160630
tcf-miR-184-3p	0.047858	0.240124	0.197854	0.126693	0.222208	0.165263
tcf-miR-190	0.057299	0.066663	0.097001	0.167196	0.296192	0.315649
tcf-miR-193	0.000000	0.032998	0.108779	0.197664	0.402223	0.258336
tcf-miR-210-5p	0.000000	0.118746	0.129337	0.112134	0.259174	0.380609
tcf-miR-210-3p	0.025512	0.022860	0.068992	0.083718	0.307255	0.491662
tcf-miR-219	0.000000	0.250103	0.228598	0.228671	0.292628	0.000000
tcf-miR-252a-5p	0.007572	0.027345	0.056087	0.099967	0.185788	0.623241
tcf-miR-252a-3p	0.000000	0.066700	0.149536	0.190166	0.217329	0.376269
tcf-miR-252b	0.000000	0.056270	0.136299	0.170237	0.293201	0.343994
tcf-miR-263a	0.032819	0.062422	0.269597	0.119439	0.422762	0.092960
tcf-miR-263b	0.021221	0.050973	0.201358	0.128493	0.464951	0.133004
tcf-miR-275	0.079399	0.212167	0.301354	0.167421	0.179530	0.060130
tcf-miR-276-5p	0.000000	0.049807	0.141728	0.190971	0.461043	0.156451
tcf-miR-276-3p	0.004690	0.034997	0.098616	0.183036	0.378952	0.299709
tcf-miR-277	0.303924	0.049020	0.094420	0.093048	0.213090	0.246498
tcf-miR-278	0.000000	0.087223	0.148142	0.170203	0.313167	0.281265
tcf-miR-279a	0.031766	0.144352	0.227229	0.215360	0.317193	0.064099
tcf-miR-279b	0.057121	0.080401	0.154087	0.148205	0.314368	0.245817
tcf-miR-279c	0.756305	0.111744	0.077541	0.025047	0.017559	0.011804
tcf-miR-279d	0.062600	0.096864	0.157492	0.258854	0.258957	0.165234
tcf-miR-279e	0.330094	0.223342	0.196474	0.116441	0.133649	0.000000
tcf-miR-281-5p	0.018174	0.166631	0.171815	0.160727	0.349990	0.132662
tcf-miR-281-3p	0.022531	0.119272	0.156880	0.231541	0.353295	0.116481
tcf-miR-282	0.024267	0.055450	0.087189	0.104218	0.367142	0.361733
tcf-miR-283	0.025533	0.082587	0.170926	0.220219	0.327221	0.173515
tcf-miR-285	0.021006	0.064771	0.159819	0.136662	0.499567	0.118176
tcf-miR-305	0.078566	0.211565	0.214874	0.231563	0.161343	0.102087
tcf-miR-307	0.003299	0.194199	0.271075	0.168737	0.241493	0.121198
tcf-miR-315-5p	0.001444	0.065792	0.130752	0.200308	0.424513	0.177190
tcf-miR-315-3p	0.000000	0.144843	0.330081	0.233942	0.291134	0.000000
tcf-miR-317	0.002635	0.066577	0.166016	0.094003	0.290742	0.380027
tcf-miR-375	0.004102	0.096834	0.161315	0.145628	0.220961	0.371160
tcf-miR-745	0.000000	0.090985	0.090525	0.115253	0.191764	0.511473
tcf-miR-750	0.013542	0.140057	0.213584	0.182257	0.250405	0.200155
tcf-miR-965	0.127386	0.131482	0.212221	0.201636	0.297927	0.029348
tcf-miR-981	0.019146	0.091263	0.127908	0.190085	0.365067	0.206531
tcf-miR-993-5p	0.038487	0.186940	0.136431	0.143188	0.260883	0.234072
tcf-miR-993-3p	0.023603	0.125221	0.175490	0.167025	0.276109	0.232552
tcf-miR-995	0.035458	0.147377	0.339513	0.117859	0.285058	0.074735
tcf-miR-996	0.089417	0.051507	0.108138	0.101937	0.191044	0.457956
tcf-miR-998	0.523610	0.070915	0.205682	0.039613	0.100255	0.059925
tcf-miR-1175-5p	0.001489	0.208562	0.313804	0.136149	0.234346	0.105650
tcf-miR-1175-3p	0.033241	0.073111	0.123983	0.136834	0.192099	0.440731
tcf-miR-2788	0.000000	0.014121	0.177536	0.070388	0.571387	0.166567
tcf-miR-2944	0.343096	0.169956	0.252422	0.102789	0.116080	0.015657
tcf-miR-3477	0.009061	0.189782	0.238616	0.141475	0.226540	0.194526
tcf-miR-3791	0.921396	0.014440	0.024746	0.008305	0.014729	0.016385
tcf-miR-5608	0.000000	0.118343	0.218667	0.124656	0.538334	0.000000
tcf-miR-iab-4	0.000000	0.175875	0.248123	0.192016	0.308924	0.075062
tcf-miR-iab-8	0.000000	0.000000	0.035525	0.190369	0.414922	0.359185

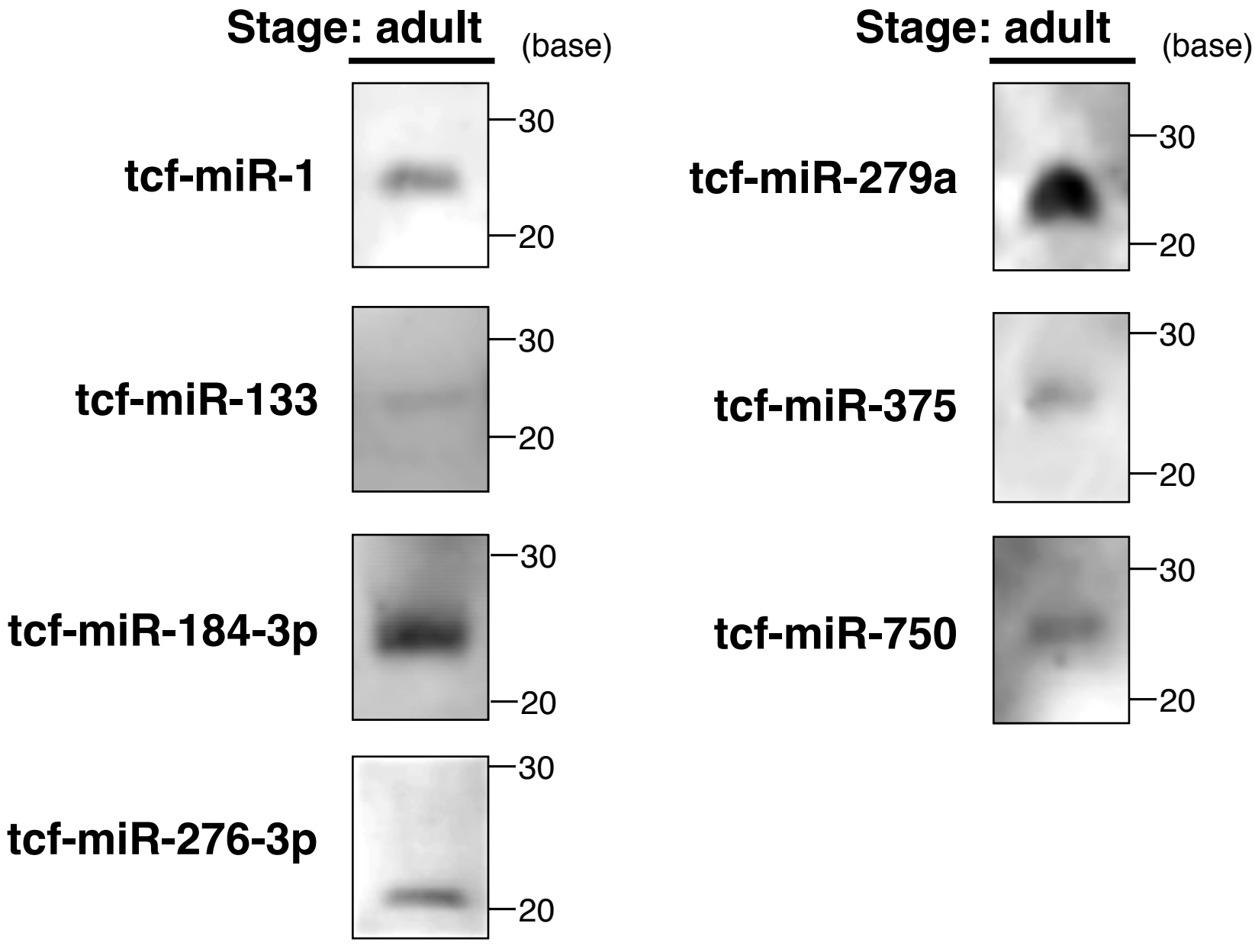
Table S8. Normalized relative expression of novel candidate miRNAs in *T. cancriformis*

miRNA name	Egg	1st Instar	2nd Instar	3rd Instar	4th Instar	Adult
tcf-miR-n501	0.111554	0.136144	0.206347	0.157172	0.262815	0.125967
tcf-miR-n502	0.861694	0.037547	0.044632	0.017245	0.021867	0.017015
tcf-miR-n503	0.831527	0.007357	0.007329	0.003515	0.004771	0.145500
tcf-miR-n504	0.950499	0.020240	0.015818	0.006514	0.005600	0.001329
tcf-miR-n505	0.010353	0.100467	0.159503	0.158920	0.315935	0.254822
tcf-miR-n506	0.039977	0.102603	0.142380	0.098340	0.194715	0.421986
tcf-miR-n507	0.019855	0.113685	0.224360	0.084021	0.284276	0.273803
tcf-miR-n508	0.001611	0.000000	0.000000	0.000000	0.000000	0.998389
tcf-miR-n509	0.083571	0.157717	0.244056	0.172861	0.197485	0.144309
tcf-miR-n510	0.216958	0.105602	0.183009	0.054018	0.105253	0.335160
tcf-miR-n511	0.070025	0.353763	0.303084	0.113113	0.130264	0.029752
tcf-miR-n512	0.986627	0.001093	0.004148	0.001075	0.004534	0.002523
tcf-miR-n513	0.000000	0.051609	0.116976	0.158739	0.351604	0.321072
tcf-miR-n514	0.026304	0.190920	0.243543	0.112619	0.338416	0.088198
tcf-miR-n515	0.135898	0.104023	0.165779	0.168924	0.272361	0.153015
tcf-miR-n516	0.045952	0.095454	0.209158	0.181062	0.340954	0.127420
tcf-miR-n517	0.189692	0.292519	0.238864	0.113306	0.147729	0.017890
tcf-miR-n518	0.552611	0.140489	0.133174	0.088725	0.068898	0.016103
tcf-miR-n519	0.074760	0.380048	0.323066	0.066683	0.134738	0.020705
tcf-miR-n520	0.887713	0.018282	0.037337	0.023177	0.033490	0.000000
tcf-miR-n521	0.886102	0.011715	0.012122	0.005759	0.018218	0.066086
tcf-miR-n522	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000
tcf-miR-n523	0.154581	0.422768	0.180714	0.078153	0.107032	0.056751
tcf-miR-n524	0.212232	0.282018	0.212991	0.124289	0.131066	0.037404
tcf-miR-n525	0.125759	0.282384	0.293221	0.113394	0.173769	0.011473
tcf-miR-n526	0.000000	0.000000	0.011325	0.021951	0.038904	0.927820
tcf-miR-n527	0.561788	0.147336	0.158806	0.047981	0.072283	0.011806
tcf-miR-n528	0.077472	0.285611	0.348251	0.069101	0.143755	0.075811
tcf-miR-n529	0.068163	0.075911	0.185085	0.119666	0.230672	0.320503
tcf-miR-n530	0.178315	0.244915	0.288684	0.119287	0.141432	0.027367
tcf-miR-n531	0.124330	0.188000	0.216145	0.157104	0.262196	0.052224
tcf-miR-n532	0.344516	0.185225	0.187167	0.140843	0.092157	0.050093
tcf-miR-n533	0.063240	0.157638	0.275854	0.139024	0.233469	0.130775
tcf-miR-n534	0.146270	0.230023	0.228858	0.110171	0.205278	0.079399
tcf-miR-n535	0.878151	0.020952	0.032520	0.014419	0.021722	0.032236
tcf-miR-n536	0.200920	0.300919	0.179638	0.113785	0.115704	0.089033
tcf-miR-n537	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000
tcf-miR-n538	0.167565	0.263155	0.220781	0.097892	0.168539	0.082068
tcf-miR-n539	0.097598	0.314835	0.244328	0.143154	0.174857	0.025228
tcf-miR-n540	0.060188	0.291234	0.272052	0.067603	0.137786	0.171137
tcf-miR-n541	0.000000	0.000000	0.087086	0.034752	0.127142	0.751019
tcf-miR-n542	0.064705	0.135674	0.242976	0.159035	0.270495	0.127115
tcf-miR-n543	0.188865	0.282863	0.215764	0.123002	0.112790	0.076716
tcf-miR-n544	0.213825	0.290993	0.130105	0.042383	0.087791	0.234903
tcf-miR-n545	0.000000	0.227278	0.207505	0.236587	0.277208	0.051422
tcf-miR-n546	0.378108	0.325256	0.166524	0.064953	0.000000	0.065158
tcf-miR-n547	0.000000	0.112914	0.121704	0.180389	0.313557	0.271437
tcf-miR-n548	0.095930	0.167621	0.244600	0.177469	0.248255	0.066125
tcf-miR-n549	0.093445	0.313999	0.335736	0.117306	0.139514	0.000000
tcf-miR-n550	0.193449	0.156008	0.280255	0.134204	0.144410	0.091675
tcf-miR-n551	0.079663	0.282675	0.454252	0.126321	0.057089	0.000000
tcf-miR-n552	0.214509	0.133071	0.321283	0.143908	0.187230	0.000000
tcf-miR-n553	0.450813	0.075220	0.183771	0.160226	0.129971	0.000000
tcf-miR-n554	0.142406	0.331773	0.286081	0.037635	0.103944	0.098161
tcf-miR-n555	0.169565	0.341867	0.259411	0.087386	0.141770	0.000000
tcf-miR-n556	0.000000	0.000000	0.085603	0.078080	0.161734	0.674584
tcf-miR-n557	0.000000	0.170162	0.097818	0.000000	0.126009	0.606011
tcf-miR-n558	0.200669	0.388394	0.209315	0.087505	0.000000	0.114116
tcf-miR-n559	0.000000	0.114087	0.295126	0.140203	0.450584	0.000000
tcf-miR-n560	0.206400	0.221937	0.175424	0.218192	0.178046	0.000000
tcf-miR-n561	0.000000	0.378937	0.326750	0.106441	0.106900	0.080972
tcf-miR-n562	0.324074	0.121964	0.270430	0.059953	0.167732	0.055846
tcf-miR-n563	0.252747	0.240889	0.351516	0.154847	0.000000	0.000000
tcf-miR-n564	0.000000	0.216648	0.242855	0.117146	0.256693	0.166658
tcf-miR-n565	0.285409	0.326074	0.000000	0.132000	0.170446	0.086071
tcf-miR-n566	0.000000	0.000000	0.000000	0.085263	0.660583	0.254154
tcf-miR-n567	0.241138	0.291701	0.217991	0.086034	0.100805	0.062331
tcf-miR-n568	0.135128	0.196154	0.319487	0.107136	0.242095	0.000000
tcf-miR-n569	0.000000	0.298121	0.395482	0.067636	0.135856	0.102905
tcf-miR-n570	0.191130	0.330296	0.151897	0.097417	0.130449	0.098810
tcf-miR-n571	0.000000	0.000000	0.228575	0.000000	0.176669	0.594756
tcf-miR-n572	0.000000	0.303588	0.327223	0.087053	0.168611	0.113525
tcf-miR-n573	0.147796	0.452926	0.205552	0.105462	0.088264	0.000000
tcf-miR-n574	0.000000	0.404680	0.162842	0.066309	0.279697	0.086473
tcf-miR-n575	0.000000	0.189622	0.000000	0.000000	0.000000	0.810378
tcf-miR-n576	0.229938	0.000000	0.133247	0.136729	0.183092	0.316994
tcf-miR-n577	0.474740	0.000000	0.235807	0.188198	0.101255	0.000000
tcf-miR-n578	0.204954	0.303025	0.261292	0.108331	0.122398	0.000000
tcf-miR-n579	0.000000	0.000000	0.445456	0.217665	0.218604	0.118274
tcf-miR-n580	0.000000	0.000000	0.166432	0.227709	0.457381	0.148478
tcf-miR-n581	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000
tcf-miR-n582	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000
tcf-miR-n583	0.000000	0.000000	0.000000	0.175288	0.396099	0.428613
tcf-miR-n584	0.534466	0.000000	0.171537	0.146683	0.147315	0.000000
tcf-miR-n585	0.000000	0.292583	0.409969	0.107867	0.189582	0.000000
tcf-miR-n586	0.000000	0.000000	0.198128	0.225895	0.340304	0.235672
tcf-miR-n587	0.000000	0.309338	0.433447	0.114045	0.143170	0.000000
tcf-miR-n588	0.000000	0.000000	0.203119	0.115793	0.348876	0.332212
tcf-miR-n589	0.000000	0.380640	0.393862	0.000000	0.225498	0.000000
tcf-miR-n590	0.000000	0.464603	0.327778	0.207620	0.000000	0.000000
tcf-miR-n591	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000
tcf-miR-n592	0.000000	0.352914	0.342350	0.000000	0.163339	0.141397
tcf-miR-n593	0.289768	0.311580	0.167919	0.000000	0.230733	0.000000

Table S9. miRNA clusters in *T. cancriformis*

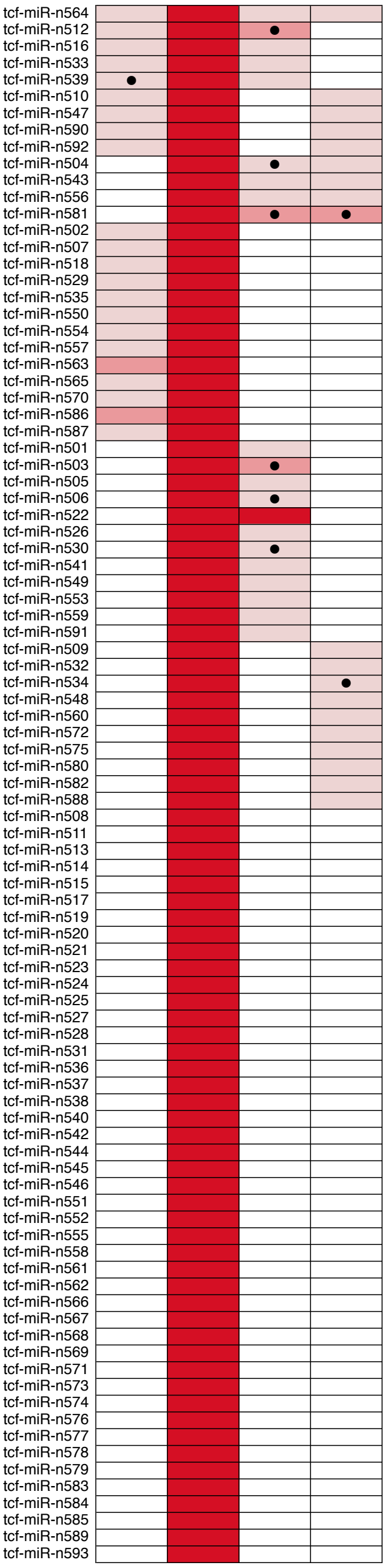
Cluster	Strand	Contig#	Start position	End position	Length (nt)	Expression correlation
miR-96/263b/263a	minus	contig_68-70816	44256	45925	1670	r > 0.93 **
miR-277/34	plus	contig_643-10482	320	1625	1306	r = 0.66
miR-2a-2/2a/13/2b/71	minus	contig_751-13972	11521	12303	783	r > 0.96 **
miR-12/3477/283	minus	contig_869-45389	28247	29019	773	r > 0.60
miR-n504/n512/n537/n503	plus	contig_1320-28899	25634	26273	640	r > 0.98 ***
miR-2788/193	minus	contig_1401-52320	26513	26775	263	r = 0.87 *
miR-305/275	minus	contig_1756-59422	31314	31547	234	r = 0.81 *
miR-61/279b	plus	contig_1838-20014	11507	11737	231	r = 0.53
miR-252a/252b	minus	contig_2308-38970	25406	27071	1666	r > 0.83 *
miR-87/n505	plus	contig_2981-25385	3101	3296	196	r = 0.90 *
miR-n509/995	plus	contig_3153-8869	5995	6309	315	r = 0.92 **
miR-92a/92b	plus	contig_4248-31752	30650	30887	238	r = 0.99 ***
let-7/miR-100	minus	contig_5716-15662	2819	3063	245	r > 0.81 *
miR-n527/n518/n502/n520/n535	minus	contig_8886-8311	1674	2310	637	r > 0.95 **
miR-3791/279c/n521/n511/998/2944/9b/279e	minus	contig_9912-3069	1103	3031	1929	r > -0.19
miR-1175/750	minus	contig_10104-5963	445	745	301	r > -0.02

Statistically significant differences: * $p \leq 0.05$, ** $p \leq 0.01$ and *** $p \leq 0.001$.

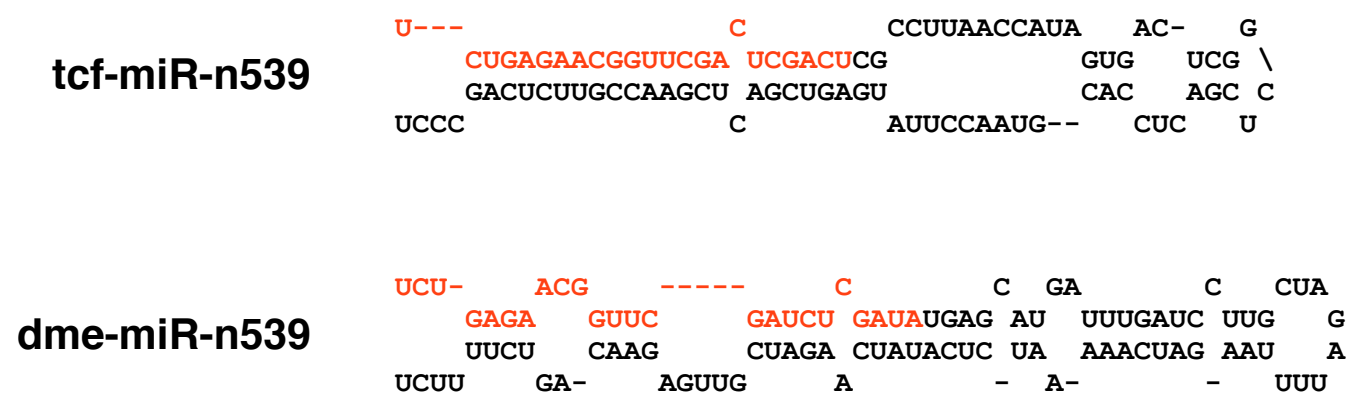


Ikeda-Takane *et al*., Figure S1

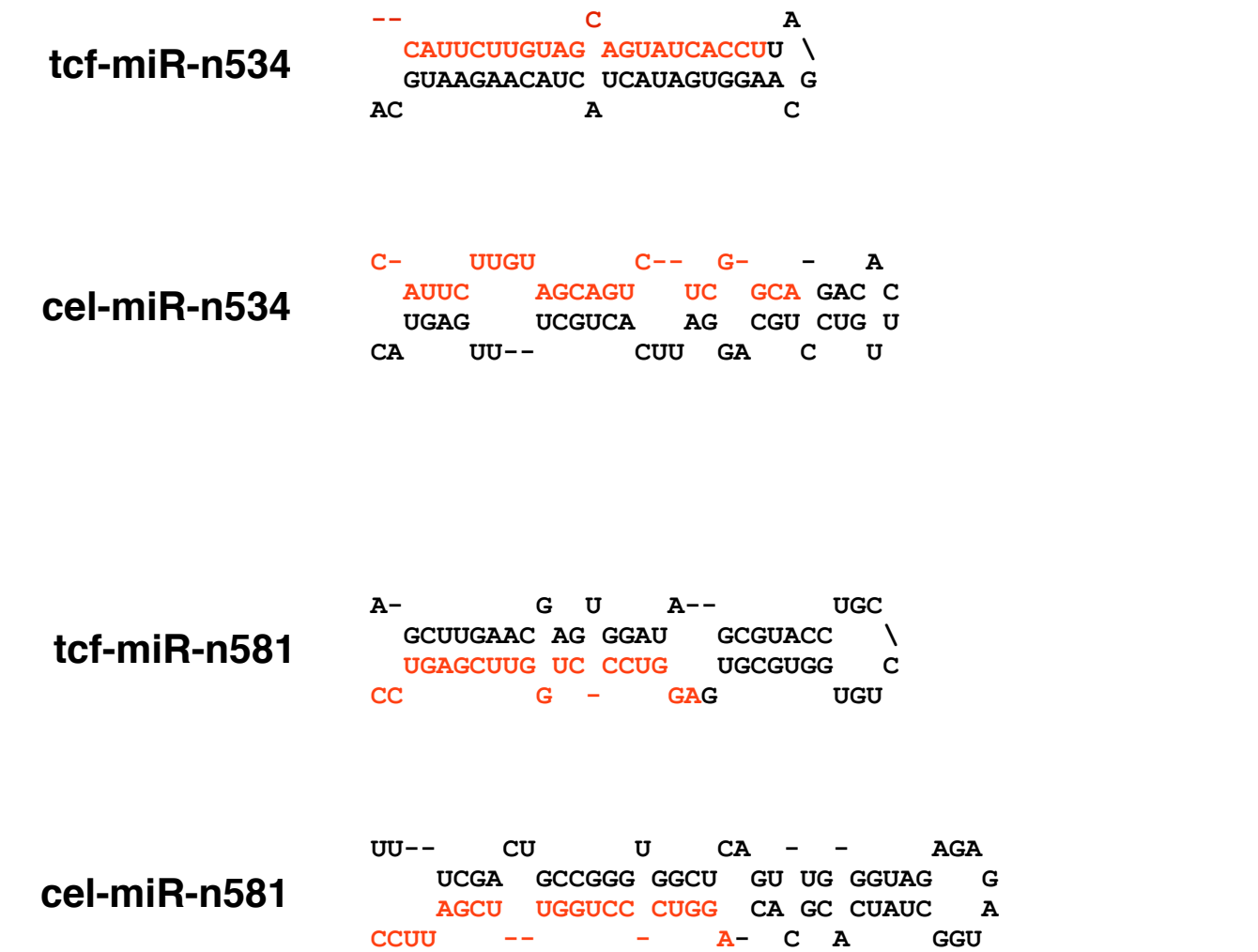
A



B



C



Ikeda-Takane *et al.*, Figure S2

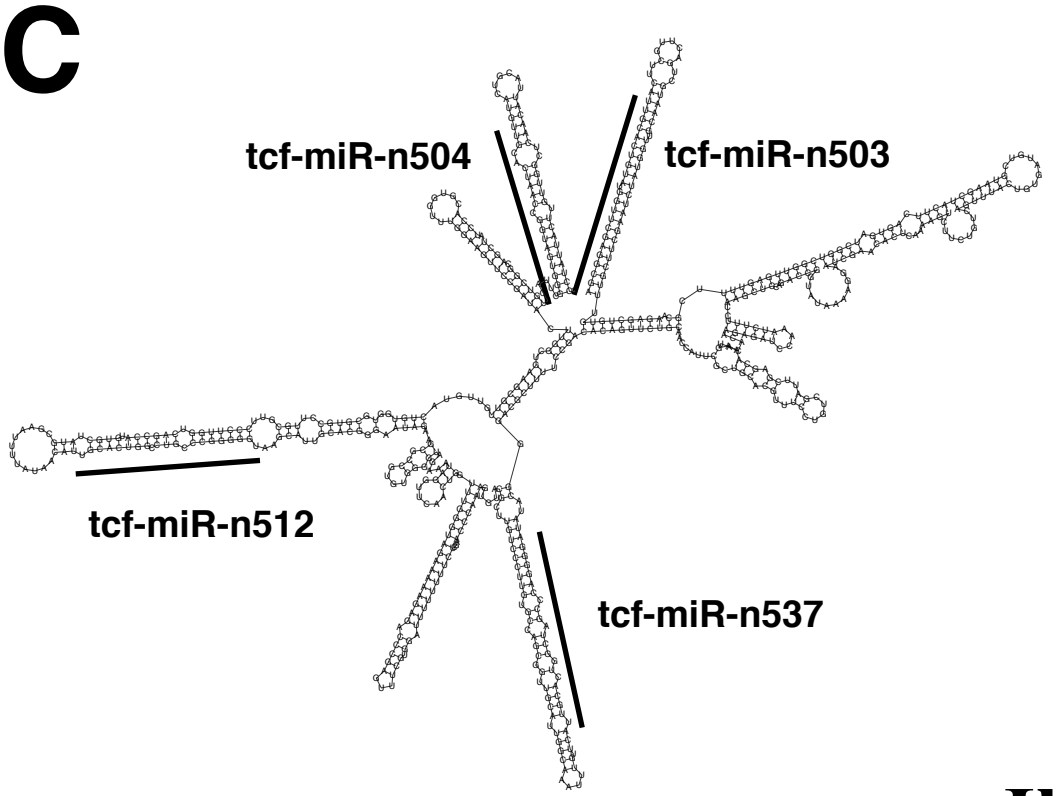
A

	Triops cancriformis	*Daphnia pulex*
miR-n503	-- - U CU AC GCUUCGAAUC UAUGG UGCAAUG G \ CGGAGCUUGG AUGUC ACGUUAC C U AG U - UU GU	A-- AC U UU U CAU CUUCGAGCCG CAGU GC UG GG C GGAGCUUGGC GUCA CG AC UC A AGC AU - UU U AGA
miR-n504	C-- U CU UA CCUAUUACU GUUGG CAACAU C GGGUGAUGG CAAUC GUUGUA G UUC C AC CU	A--- U G UG CG UA CU CUGCUGGUUAGU G ACU UAU \ GG GAUGGCCAAUCA C UGA AUG C GCAG U - GU CA UA
miR-n506	UUG UAAAUG GUUUGAGAUGAGUGGACCCG \ CAAACUCUAUUCACCUGGGC U UAA CUAUAA	-- G GAG G UU UUGGUUU AGUU UGGA UUG \ GAUCAGA UCGA AUCU AGC A AA G AG- G CA
miR-n512	-- U - U U CGAAU CCUUGG CA GCCA GUGC AUG U GGGGCC GU CGGU CACG UAC U UG C C - U AAUAU	-- A - AU - GAUG CCUUG GCA GCCA UGCAGAG UC \ GGGAC CGU CGGU ACGUUUC AG A CG C C C- U GAAU
miR-n530	AAGAAA AU - - - AG CGA CG GCG CU GAGACU U GCU GC CGU GA CUUUGA C GAUCA- CG A A C CA	-- GAAAC UGC U UC GG GAAUG GCUGAGAC G \ CC CUUAC UGGCUUUG C G CG AA--- U-- C GU
miR-n581	A- G U A-- UGC GCUUGAAC AG GGAU GCGUACC \ UGAGCUUG UC CCUG UGCGUGG C CC G - GAG UGU	C--- - UU A G G - U UC AG GGG GA C UUAGA C G AG UU UCC CU G AAUCU G A CCUU C GG - G A A A

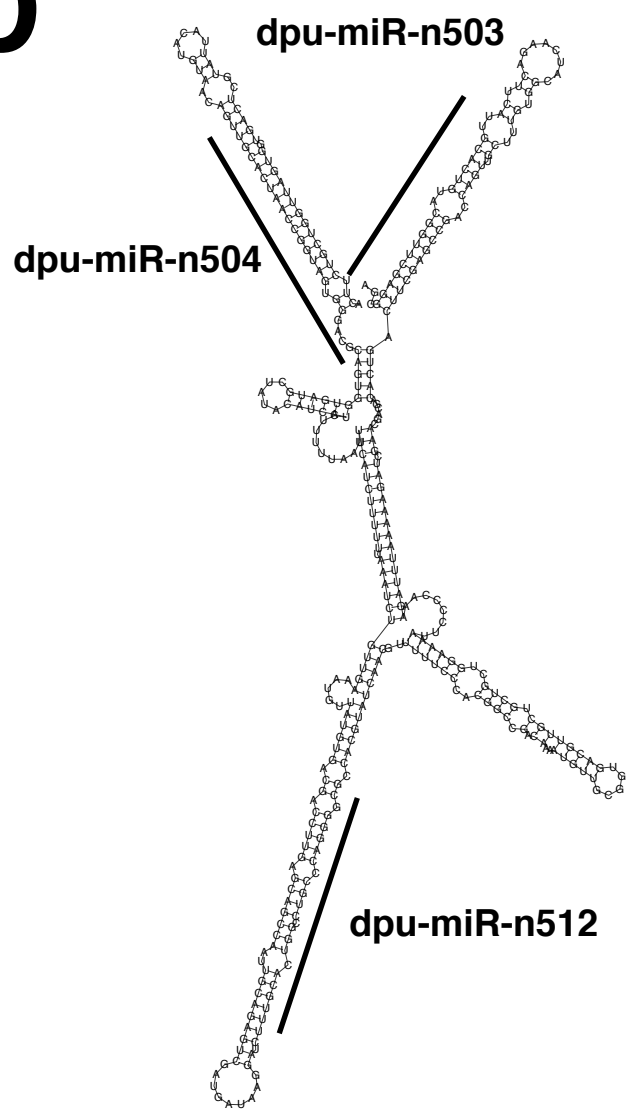
B

```
tcf-miR-n503  5'  UUGCACUGUAUGGUUCGAGGCGA  3'
dpu-miR-n503      UUGCACUGUACGGUUCGAGGCGA
tcf-miR-n504      UUGCACUAACCGGUAGUGGGCUU
dpu-miR-n504      UUGCACUAACCGGUAGUGGGACG
tcf-miR-n512      UUGCACUGGCCUGCCCGGGGGU-
dpu-miR-n512      UUGCACUGGCCUGCCCAGGGGC-
                  *******       *       **
```

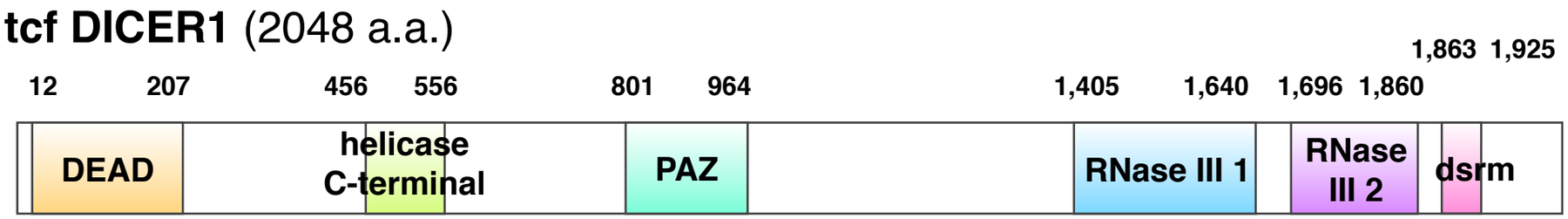
C



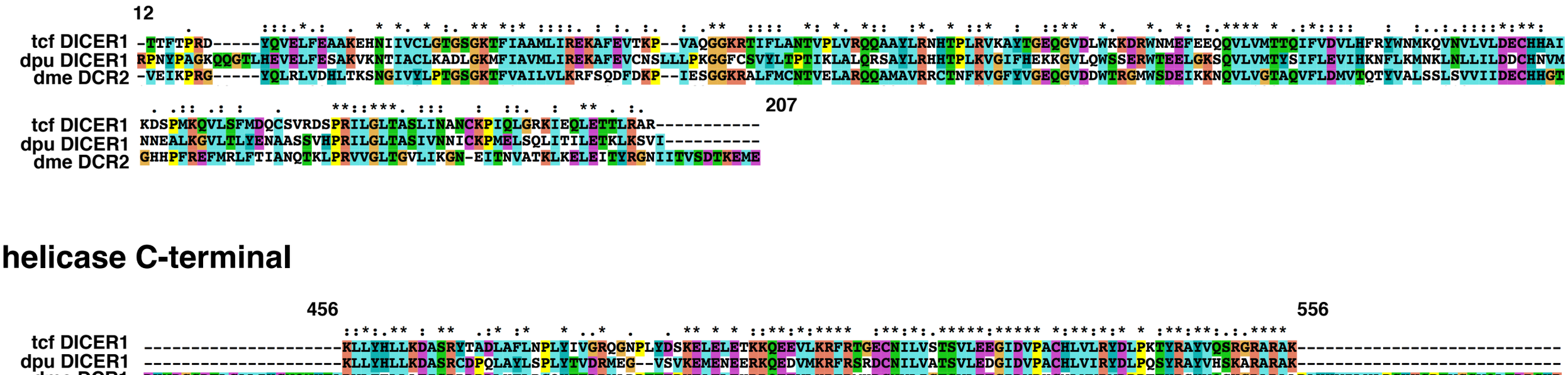
D



Ikeda-Takane *et al.*, Figure S3

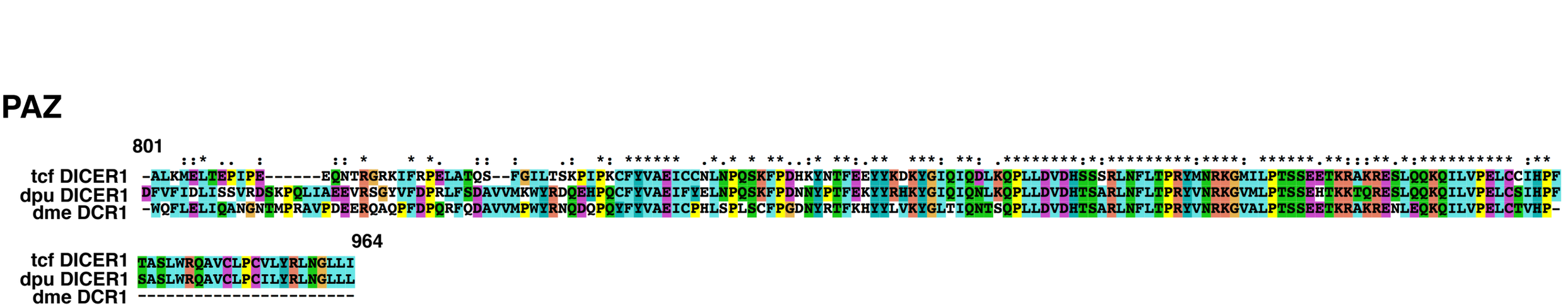


DEAD



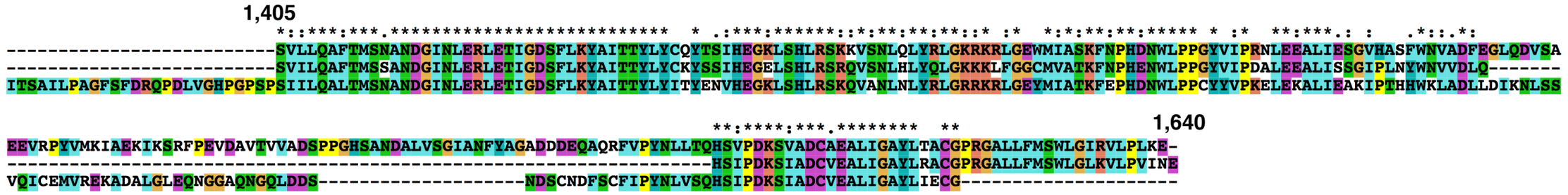
helicase C-terminal

PAZ

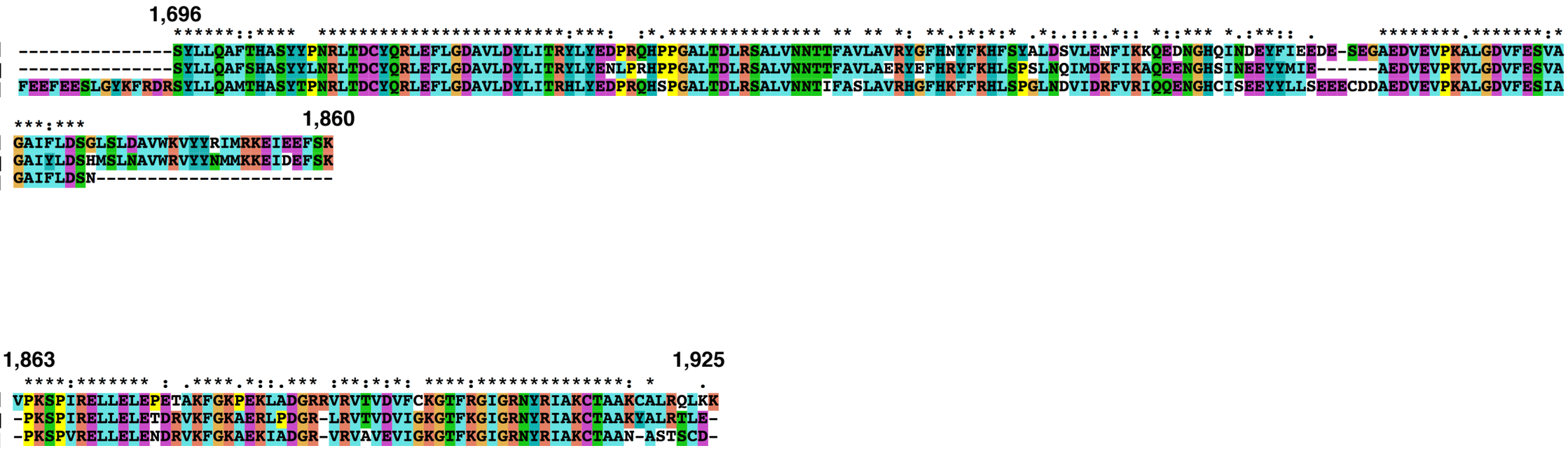


Ikeda-Takane *et al.*, Figure S4

RNase III 1



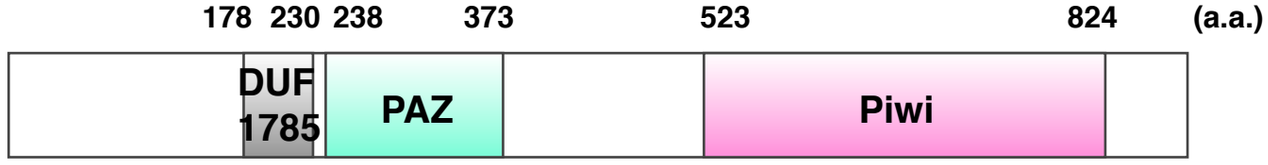
RNase III 2



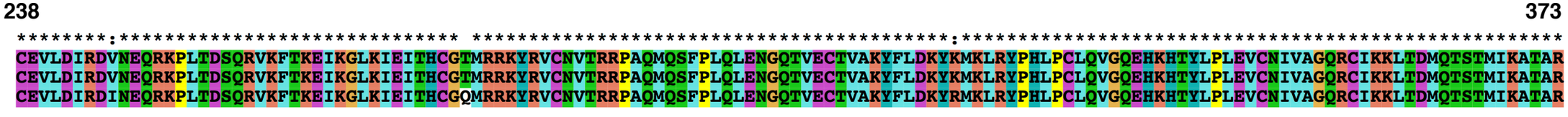
dsrm

Ikeda-Takane *et al.*, Figure S4 (Continued)

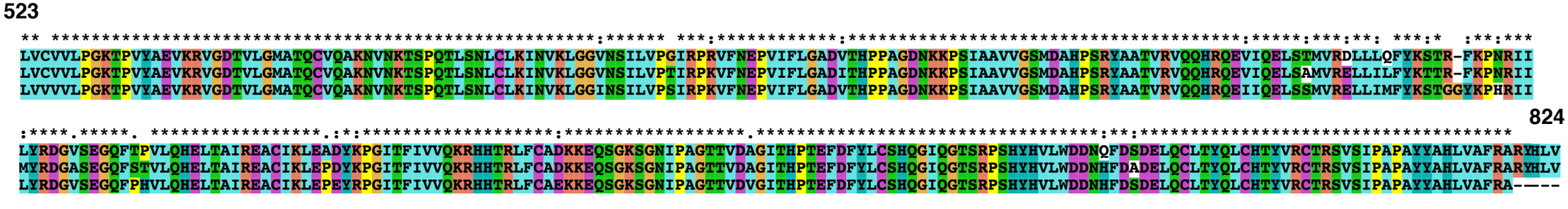
A **tcf AGO1** (884 a.a.)



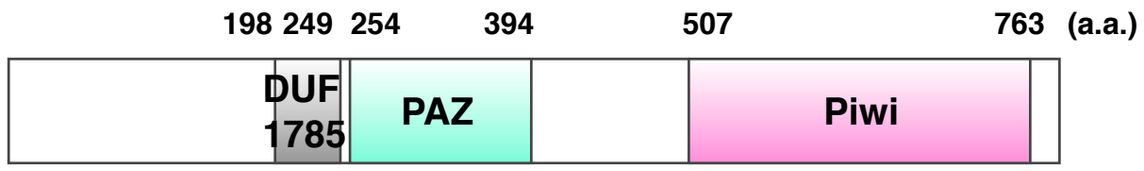
PAZ



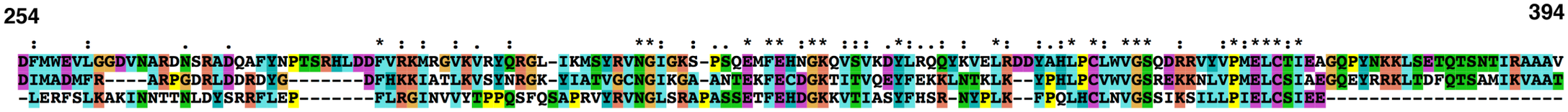
Piwi



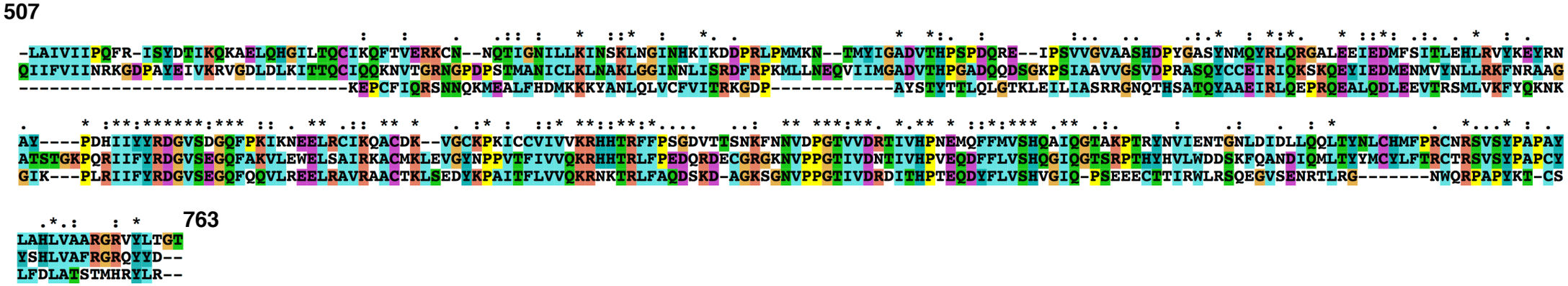
B **tcf AGO2** (786 a.a.)



PAZ

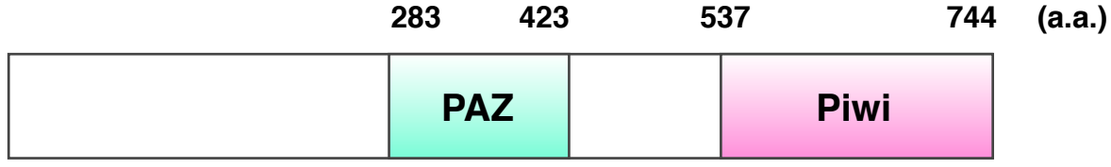


Piwi



Ikeda-Takane *et al.*, Figure S5

C **tcf AGO3** (744 a.a.)



PAZ

283 423

```
tcf AGO3 KLAHAIPAHKKNES-QRRQLNFKELVQKELIGLVVVTKYNNRNYRIDDVEWDQTPKSTFTFYSGEEISYKDYYKKQYNLQIRDENQPLLLNRLTKKRQGEEDKTHLVCLVPELCHITGLSDELRADRKIMKDLSFHTRVSPM
dpu AGO3 ----TTVRDELVEM-SKKGGYFHQTAQDVLIGLSVLTRYNNKMYRIDEILFDKNPLSIFDCQ-GEPMSYVDYYKKQYNIDIQDKGQPMLLNRLKKKMQGKEDETVLVCLVPELCFLTGLDDRLRSNFTIMRSLATHTKVAPM
dme AGO3 ILCQKTVLEMLVDLYQQNVEHYQESARKMLVGNIVLTRYNNRTYKINDICFDQNPTCQFEIKTG-CTSYVEYYKQYHNINIKDVNQPLIYSIKKSRGIPAERENLQFCLIPELCYLTG----------------------
```

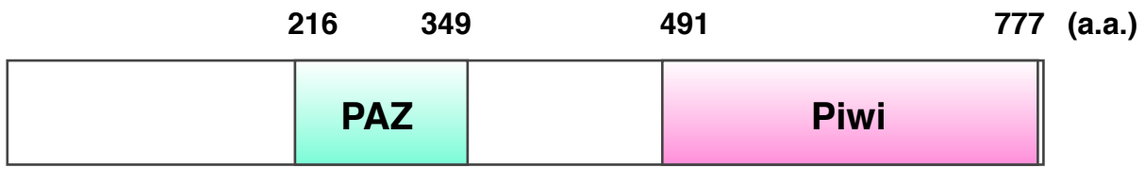
Piwi

537 744

```
tcf AGO3 PQLVFLNNDRTDTYIA------ALRKISREVINSRTINRPDKVRSIMQKIALQINCKLGGELWAVKIP----------------------------------------------------------LVNGQYPGTIIIYRDGV
dpu AGO3 LVVAIFPTSRDDRYAAVKTLCTAQYAIPSQMMNSKTISNPSKLRSVVQKIALQINCKMGGELWAVSIPTKTLMVCGVDVYHDPTKRGQSVVGFVASVNPGLTRWFSRAKYQGPGVELVDTLKICFLESLKKYYELNQDYPKQIVLFRDGV
dme AGO3 MVVCICHNRRDDRYAAIKKICCSEIPIPSQVINAKTLQNDLKIRSVVQKIVLQMNCKLGGSLWTVKIPFKNVMICGIDSYHDPSNRGNSVAAFVASINSSYSQWYSKAVVQTKREEIVNGLSASFEIALKMYRKRNGKLPTNIIIYRDGI
```

```
tcf AGO3 GDGQLTLVREHEVQQLMTAFESVGPDYHPKFTEVVVQKRINTRIFAQLHSGKLDNPAPGTVVDHTVVRRNWFDFFLVSQHVGQGTVSPTHYVVIKDGG-MKVDHLQRLTYKMTHMYYNWPGTVRVPAPCL----------
dpu AGO3 GDGQLQFAAAHEAAQFLSAFQALSPPFEPKFTMVVVQKRINTRLFHNSR-GAINNPPPGTVVDHTVTRRDWWDFFLVSQFVTQGTVSPTHFIVVHDGG-MKPDNLQKLAYKMTHMYYNWPGTIRVPAPCQYAHKLAYLVGESIR
dme AGO3 GDGQLYTCLNYEIPQFEMVCGNR-----IKISYIVVQKRINTRIFSGSG-IHLENPLPGTVVDQHITKSNMYDFFLVSQLVRQGTVTPTHYVVLRDDCNYGPDIIQKLSYKLCFLYYNWAGTVRIPACCMYAHKLAYLIGQSIQ
```

D **tcf PIWI** (782 a.a.)



PAZ

216 349

```
tcf PIWI ERASDVLAR---NLRSGQEAALASLLGEIVMTRYNNKTYRVDDIDWGKTPADTFELRKEKRMVSYAEYYQERYNLVTRDMRQPMLISKPKEKSRNRGDDQPVYLIPEHAYMTGLSEEMRKDFNTMKTVGAVTRLDPP
dme PIWI ETIYDIMRRCSHNPARHQDEVRVNVLDLIVLTDYNNRTYRINDVDFGQTPKSTFSCK--GRDISFVEYYLTKYNIRIRDHNQPLLISKNRDKALKTNASELVVLIPELCRVTG----------------------
```

Piwi

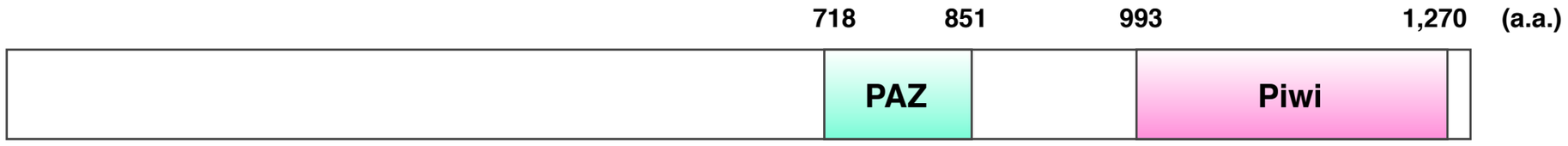
491 777

```
tcf PIWI FILVLLRSQRADMYAAIKKLLTCENAIPNQVITGRILKKG--LSVATKVYIQMACKMGCEAWRVQIPMQNAMAIGFDTYHD-KGQKRSVGAFVASIN-QAMTRYCSTAVLHSNNEELCGKIGICMRKSLVEYQKANGGAVPDKIFYYRDG
dme PIWI LILCLVPNDNAERYSSIKKRGYVDRAVPTQVVTLKTTKNRSLMSIATKIAIQLNCKLGYTPWMIELPLSGLMTIGFDIAKSTRDRKRAYGALIASMDLQQNSTYFSTVTECSAFDVLANTLWPMIAKALRQYQHEHR-KLPSRIVFYRDG
```

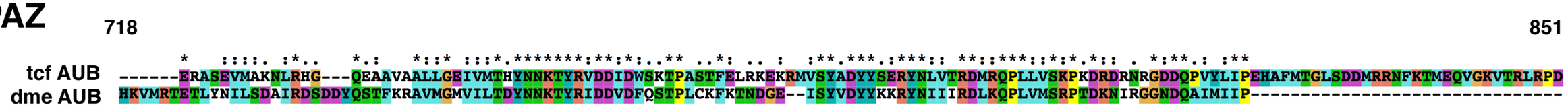
```
tcf PIWI VGTGDIQYLKMQEIAQLREAFRATHPDYN---PKLVVVLVSKRINTRIMRESAREGNPEPGTVVDDVITLPDRYDFFLVSQYVTQGTVSPTAYNVIEDTLGLPPDRVQQLTYKLTHLYYNWQFT--LSAVFWIFRERSDRIRSFGR
dme PIWI VSSGSLKQLFEFEVKDIIEKLKTEYARVQLSPPQLAYIVVTRSMNTRFFLNGQ---NPPPGTIVDDVITLPERYDFYLVSQQVRQGTVSPTSYNVLYSSMGLSPEKMQKLTYKMCHLYYNWSGTTRVPAVCQYAKKLATLVGTNLH
```

Ikeda-Takane *et al.*, Figure S5 (Continued)

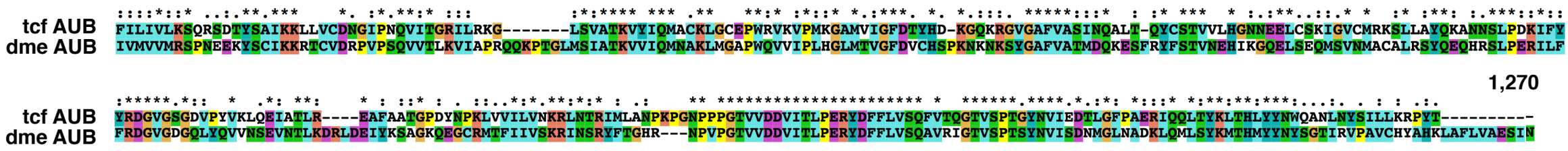
E **tcf AUB** (1,291 a.a.)



PAZ



Piwi



Ikeda-Takane *et al*., Figure S5 (Continued)