

Additional File 4: Characteristics of the elements from the cDNA-based and repeat-based alignments.

Element	Length (nt)	#	Diversity		Variable Positions (%)			States per variable position (average)		Unique Sequences		Unshared Polymorphisms	
			Nt	Aa	Ratio	Nt	Aa	Nt	Aa	Nt	Aa	Nt	Aa
Leader	55	121	0.0840	0.0949	1.13	25.5	36.8	2.14	2.43	14	10	4	3
Ex1	63	121	0.0893	0.2268	2.54	23.8	47.6	2.13	2.3	15	12	1	1
Ex2	48	121	0.1364	0.2420	1.77	45.8	81.3	2.09	2.23	16	14	3	2
Ex3	27	121	0.1029	0.1193	1.16	44.4	55.6	2.08	2.20	9	6	1	1
Ex4	75	121	0.1278	0.1526	1.19	38.7	40.0	2.10	2.80	21	15	6	7
Ex5	75	4	0.0185	0.0277	1.50	2.7	4.0	2.00	2.00	2	2	0	0
Ex6	75	46	0.0431	0.0663	1.54	17.3	28.0	2.00	2.29	6	4	5	6
Ex7	129	121	0.0539	0.0929	1.72	38.8	60.5	2.28	2.58	42	33	37	24
Ex8	15	121	0.1216	0.3132	2.58	53.3	60.0	2.00	3.00	10	9	3	2
Ex9	12	121	0.0587	0.1147	1.95	33.3	50.0	2.00	2.00	5	3	1	0
Ex10	21	83	0.0807	0.2422	3.00	23.8	71.4	2.00	2.00	4	4	0	0
Ex11	66	4	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Ex12	21	38	0.0766	0.1267	1.65	19.1	28.6	2.00	2.00	4	3	0	0
Ex13	51	97	0.0799	0.1416	1.77	21.6	35.3	2.09	2.17	8	6	1	1
Ex14	54	101	0.1058	0.2643	2.50	29.6	61.1	2.00	2.27	10	9	1	1
Ex15	54	101	0.4702	0.4977	1.06	88.9	88.9	2.25	2.50	11	12	0	0
Ex15a	51	2	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Ex15b	33	19	0.0471	0.1412	3.00	9.1	27.3	2.00	2.00	3	2	0	0
Ex15c	30	6	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Ex15d	24	43	0.0078	0.0235	3.00	4.2	12.5	2.00	2.00	2	2	0	0
Ex15e	18	32	0.0292	0.0000	0.00	5.6	0.0	2.00	0.00	2	1	0	0
Ex15f	15	5	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Ex15g	48	2	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Ex16	21	69	0.0718	0.0978	1.36	14.3	14.3	2.00	2.00	4	2	0	0
Ex17	75	65	0.0714	0.1303	1.82	21.3	32.0	2.06	2.50	13	11	5	5
Ex18	30	64	0.0139	0.0278	2.00	10.0	20.0	2.00	2.00	3	3	0	0
Ex19	84	116	0.0935	0.0779	0.83	25.0	32.1	2.05	2.00	16	11	1	1
Ex20	30	120	0.0619	0.0735	1.19	20.0	30.0	2.33	2.67	8	6	2	2

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			Nt	Aa	Ratio	Nt	Aa	Nt	Aa	Nt	Aa	Nt	Aa
			Ex21	24	99	0.0491	0.0292	0.59	16.7	12.5	2.25	3.00	6
Ex22	36	100	0.0510	0.1319	2.59	13.9	33.3	2.00	2.00	7	5	0	0
Ex23	357	3	0.0036	0.0107	2.97	0.6	1.7	2.00	2.00	2	2	2	2
Ex24	60	24	0.0085	0.0256	3.00	1.7	5.0	2.00	2.00	2	2	0	0
Ex25	192	121	0.1266	0.1818	1.44	34.9	50.0	2.22	2.56	53	38	23	15
Ex25a	138	121	0.0495	0.0949	1.92	21.0	41.3	2.07	2.21	33	21	10	7
Ex25b	54	121	0.3237	0.4039	1.25	70.4	72.2	2.34	3.08	26	18	13	8
Er1	92	121	0.0888	0.2058	2.32	29.4	58.1	2.07	2.22	21	17	3	2
Er2	75	121	0.1272	0.2937	2.31	42.7	76.0	2.09	2.37	24	21	4	2
Er3	75	46	0.0514	0.1145	2.23	22.7	40.0	2.00	2.30	7	7	8	6
Er4	75	4	0.0092	0.0277	3.01	1.3	4.0	2.00	2.00	2	2	0	0
Er5	76	121	0.0886	0.2125	2.40	40.8	65.4	2.16	2.77	19	19	16	17
Er6	147	121	0.0715	0.1468	2.05	38.8	65.3	2.23	2.50	50	44	32	21
Er7	66	4	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er8	51	97	0.0799	0.1416	1.77	21.6	35.3	2.09	2.17	8	6	1	1
Er9	45	101	0.0935	0.2167	2.32	26.7	53.3	2.00	2.25	9	8	0	0
Er10	84	101	0.2554	0.3463	1.36	58.3	64.3	2.23	2.61	12	11	1	1
Er10a	60	2	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er10b	43	19	0.0621	0.1198	1.93	11.6	0.2	2.00	2.00	11	11	0	0
Er10c	39	6	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er10d	33	39	0.0097	0.0292	3.01	6.06	18.2	2.00	2.00	36	36	1	1
Er10e	33	39	0.1172	0.1005	0.85	21.2	18.2	2.00	2.00	22	22	0	0
Er10f	24	4	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er10g	57	2	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er11	21	101	0.0860	0.1192	1.39	28.6	14.3	2.00	3.00	6	3	1	0
Er12	88	3	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er13	23	3	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er14	23	100	0.0723	0.0387	0.54	21.7	25.0	2.00	2.00	5	3	1	1
Er15	33	3	0.0193	0.0579	3.00	3.0	9.1	2.00	2.00	2	1	1	1
Er16	11	68	0.0070	0.0000	0	9.1	0.0	2.00	0.00	2	1	1	0

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			Nt	Aa	Ratio	Nt	Aa	Nt	Aa	Nt	Aa	Nt	Aa
Er17	14	65	0.1785	0.2638	1.48	42.9	80.0	2.00	2.25	6	6	1	1
Er18	49	3	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er19	22	3	0.0289	0.0000	0.00	4.6	0.0	2.00	0.00	2	1	1	0
Er20	27	3	0.0000	0.0000	n/a	n/a	n/a	n/a	n/a	1	1	0	0
Er21	26	67	0.0602	0.1191	1.98	19.2	22.2	2.20	3.00	7	5	1	1
Er22	30	67	0.0398	0.0878	2.21	16.7	30.0	2.00	2.00	5	4	0	0
Er23	28	87	0.0346	0.0970	2.80	10.7	30.0	2.00	2.00	4	4	0	0
Er24	23	87	0.0300	0.0078	0.26	8.7	12.5	2.00	2.00	3	2	1	1
Er25	34	119	0.0513	0.1309	2.56	14.7	33.3	2.00	2.00	8	6	0	0
Er26	90	121	0.0728	0.1192	1.64	42.2	50.0	2.21	2.33	22	12	33	12
Er27	192	121	0.1277	0.1855	1.45	35.4	50.0	2.28	2.59	56	40	23	14
Er27a	138	121	0.0495	0.0949	1.92	21.0	41.3	2.07	2.21	33	21	10	7
Er27b	54	121	0.3276	0.4168	1.27	72.2	72.2	2.44	3.15	27	18	13	7