

Appendix A

Complete List of U12-Dependent Introns Identified in Chapter 4

Description of the table of U12-dependent introns

The table below contains one line for each of the 404 U12-dependent introns identified in the computational scan for U12-dependent introns described in Chapter 4. Each intron has a unique ID, which matches the ID field on Tables 4.3, 4.4, 4.5 and 4.6. Additionally the golden path contig on which each intron was found is indicated, as are the donor and acceptor positions of the intron in the specified contig. The terminal dinucleotides (termini), the length, the distance from the branch site to the acceptor site (b_to_a), the number of mRNA and EST sequences supporting the intron and the name of the gene in which the intron was found (if known) are also provided.

ID	contig	donor	acceptor	termini	length	b_to_a	rna	est	gene (if known)
1	ctg_na	8406675	8405853	atac	822	9	3	8	serine threonine kinase (STK11/LKB1)
2	ctg12269	12008161	12008008	gtag	153	13	3	5	unassigned RNA
3	ctg12269	14606903	14608048	gtag	1145	14	3	23	porphobilinogen deaminase (PBG-D, EC 4.3.1.8)
4	ctg12269	14606903	14608496	gtag	1593	16	0	2	no RNA
5	ctg12269	15088391	15088226	gtag	165	17	1	3	ubiquitin-specific protease UBP41
6	ctg12316	1504800	1504510	gtag	290	13	0	1	no RNA
7	ctg12323	2773877	2775625	gtag	1748	14	4	33	Human sapiens BAF53a (BAF53a) mRNA, complete cds.
8	ctg12364	630349	638172	gtag	7823	14	1	2	unassigned RNA
9	ctg12369	5058034	5057161	gtag	873	15	1	0	Human dihydropyridine-sensitive L-type calcium channel alpha-1 subunit CACNL1A3
10	ctg12369	5106119	5104281	gtag	1838	13	1	0	Human dihydropyridine-sensitive L-type calcium channel alpha-1 subunit CACNL1A3
11	ctg12387	11807771	11808673	gtag	902	10	2	115	Ku autoimmune antigen gene
12	ctg12393	4271894	4270764	gtag	1130	17	1	3	unassigned RNA
13	ctg12393	9130298	9147203	atac	16905	14	1	0	unassigned RNA
14	ctg12438	1007607	1008983	gtag	1376	16	1	93	RNA polymerase II subunit
15	ctg12475	783919	784561	gtag	642	12	2	12	unassigned RNA
16	ctg12475	2803637	2805326	gtag	1689	13	5	15	GTP-binding protein RAB6
17	ctg12475	2924257	2919307	gtag	4950	13	1	2	unassigned RNA
18	ctg12475	3207262	3207792	atac	530	11	3	22	phosphatase methyltransferase-1 (PME-1)
19	ctg12475	4000723	4004365	atac	3642	13	1	61	unassigned RNA
20	ctg12475	7854989	7853175	gtag	1814	12	1	15	no RNA
21	ctg12475	16986837	16988015	gtag	1178	17	5	12	WAI1-1
22	ctg12482	13320567	13319384	gtag	1183	14	5	17	origin recognition complex subunit 3 (ORC3)
23	ctg12483	796536	797214	atac	678	12	0	2	no RNA
24	ctg12483	1359141	1356780	atac	2361	11	2	75	Arp2/3 complex 16kDa subunit (ARC16)
25	ctg12483	2769484	2767362	gtag	2122	15	1	9	unassigned RNA
26	ctg12559	9058733	9059659	atac	926	11	3	5	mediator (Sur2)
27	ctg12559	16869554	16873925	gtag	4371	14	0	10	no RNA
28	ctg12559	21752756	21751538	gtag	1218	12	0	5	no RNA
29	ctg12616	437115	438183	gtag	1068	15	1	11	rRNA-guanine transglycosylase
30	ctg12691	2366591	2366385	gtag	206	12	0	3	no RNA
31	ctg12719	2624577	2627566	gtag	2989	14	1	2	unassigned RNA
32	ctg12723	1314122	1325072	atac	10950	11	0	57	no RNA
33	ctg12729	2263390	2260721	atac	2669	13	1	4	unassigned RNA
34	ctg12743	1633901	1637859	gtag	3958	14	2	3	unassigned RNA

35	ctg12749	1119576	1120193	gtag	617	13	0	6	no RNA
36	ctg12749	7826157	7821817	gtag	4340	15	1	2	unassigned RNA
37	ctg12766	4129283	4128597	gtag	686	12	3	3	TATA binding protein associated factor (TAFIII50)
38	ctg12770	448596	448803	gtag	207	16	1	0	neuronal apoptosis inhibitory protein
39	ctg12772	2626497	2623661	atac	2836	10	0	1	no RNA
40	ctg12824	4885849	4879798	atac	6051	12	0	2	no RNA
41	ctg12824	5036385	5035593	atac	792	10	1	1	unassigned RNA
42	ctg12824	24133076	24133856	gtag	780	11	0	1	no RNA
43	ctg12850	3847805	3846674	atac	1131	12	3	1	matrilin-3
44	ctg12913	3545077	3547144	gtag	2067	16	0	2	no RNA - AOX1
45	ctg13001	11511077	11514110	gtag	3033	15	1	6	unassigned RNA
46	ctg13010	10127356	10125651	gtag	1705	11	0	1	no RNA
47	ctg13023	6097907	6101881	gtag	3974	12	1	23	unassigned RNA
48	ctg13038	666224	667824	gtag	1600	9	2	23	cap-binding protein (CBP20)
49	ctg13067	2493412	2494448	gtag	1036	18	1	63	translocon-associated protein gamma subunit
50	ctg13079	905421	905917	gtag	496	15	2	2	digestive tract-specific calpain (nCL-4)
51	ctg13079	3127622	3122059	gtag	5563	15	0	2	no RNA
52	ctg13103	593749	592779	gtag	970	14	2	4	cap-binding protein (CBP80)
53	ctg13103	28344485	28348736	atac	4251	16	0	20	no RNA
54	ctg13116	5048234	5044745	gtag	3489	11	3	2	Mcd4p homolog (ER membrane protein)
55	ctg13155	344147	342208	atac	1939	12	0	2	no RNA
56	ctg13155	789323	789693	gtag	370	9	1	2	unassigned RNA
57	ctg13206	5570875	5571996	gtag	1121	16	1	1	unassigned RNA
58	ctg13206	7466044	7470648	gtag	4604	14	1	3	unassigned RNA
59	ctg13255	3171119	3189402	gtag	18283	16	1	9	unassigned RNA
60	ctg13284	4336888	4336361	gtag	527	14	0	1	no RNA
61	ctg13284	4338164	4337189	atac	975	14	0	5	no RNA
62	ctg13284	5500810	5501841	gtag	1031	13	2	2	TBP-associated factor 172 (TAF-172)
63	ctg13284	7392474	7395671	gtag	3197	16	0	7	no RNA
64	ctg13284	9369109	9368784	gtgg	325	21	1	6	unassigned RNA
65	ctg13284	11466790	11466375	gtat	415	11	0	1	no RNA
66	ctg13284	11480067	11466367	gtag	13700	19	1	46	CGI-108 protein
67	ctg13284	11495291	11495896	gtag	605	16	0	17	no RNA
68	ctg13284	11495291	11497968	gtag	2677	12	0	1	no RNA
69	ctg13284	11901924	11903243	gtag	1319	14	0	1	no RNA
70	ctg13284	36675973	36671828	atac	4145	14	2	9	unassigned RNA
71	ctg13284	38171842	38173541	atac	1699	12	5	10	unassigned RNA
72	ctg13286	5835001	5839465	gtag	4464	15	1	2	unassigned RNA
73	ctg13286	6858793	6865696	atac	6903	16	1	0	homeodomain protein (Prox 1)
74	ctg13286	7208221	7207276	atac	945	12	1	16	HSKM-B
75	ctg13290	406895	409087	gtag	2192	14	1	33	WS-3
76	ctg13321	2691917	2696822	gtag	4905	16	1	0	unassigned RNA
77	ctg13361	5083938	5076925	gtag	7013	14	4	16	RNA 3'-terminal phosphate cyclase-like protein (rd1) - RNA processing
78	ctg13361	29016571	29018536	gtag	1965	14	2	22	unassigned RNA
79	ctg13420	1202058	1202336	atat	278	11	4	45	Homo sapiens mRNA for Prer protein
80	ctg13420	1229175	1230401	gtag	1226	15	1	14	histidyl-tRNA synthetase homolog (HO3)
81	ctg13420	2217557	2216441	atac	1116	15	1	8	diaphanous 1 (HDIA1) -cell motility
82	ctg13420	2268292	2267660	atac	632	19	2	2	diaphanous 1 (HDIA1)
83	ctg13446	3682407	3686111	atac	3704	10	0	1	no RNA

84	ctg13446	3911600	3906115	gtag	5485	15	2	17	Smg GDS-associated protein SMAP
85	ctg13446	3963637	3961251	atac	2386	13	2	3	Smg GDS-associated protein SMAP
86	ctg13458	146979	147679	gtag	700	15	5	4	exonuclease 1 (EXO1/HEX1)
87	ctg13464	1066836	1066653	gtag	183	11	1	0	unassigned RNA
88	ctg13513	10699073	10697038	gtag	2035	17	0	2	no RNA
89	ctg13516	940311	939774	gtag	537	13	0	25	no RNA
90	ctg13531	420977	420720	gtag	257	13	0	1	no RNA
91	ctg13617	3757596	3754663	gtag	2933	12	0	3	no RNA
92	ctg13617	8399283	8400103	gtat	820	14	0	2	no RNA
93	ctg13617	9191549	9192965	gtag	1416	8	0	1	no RNA
94	ctg13685	819711	818448	atac	1263	12	4	29	WDR1
95	ctg13698	1854642	1854357	atac	285	16	1	3	unassigned RNA
96	ctg13715	10611722	10615286	gtag	3564	13	0	1	no RNA
97	ctg13915	3025345	3020796	atac	4549	12	3	4	unassigned RNA
98	ctg13915	3748815	3745770	gtag	3045	14	1	2	histidase
99	ctg13915	3759837	3759731	gtag	106	12	1	0	histidase
100	ctg13934	572024	570979	gtag	1045	17	2	35	unassigned RNA
101	ctg13980	739832	742971	gtag	3139	15	5	0	chloride channel ClC-6
102	ctg14007	5421950	5419413	gtag	2537	13	3	13	phosphatidylcholine transfer protein (PC-TP)
103	ctg14015	1249901	1252645	gtag	2744	17	3	3	transportin (TRN)
104	ctg14055	3072440	3070650	gtag	1790	12	2	9	c-raf
105	ctg14071	1105167	1108118	gtag	2951	14	0	2	no RNA
106	ctg14071	1105167	1110205	gtag	5038	12	0	1	no RNA
107	ctg14071	1108221	1110205	atag	1984	12	0	5	no RNA
108	ctg14101	1195665	1193266	gtag	2399	17	1	6	succinyl CoA:3-oxoacid CoA transferase precursor (OXCT)
109	ctg14101	2623729	2622933	gtag	796	14	0	5	no RNA
110	ctg14246	821462	817648	gtag	3814	12	3	22	Homo sapiens UBA3 (UBA3) mRNA, complete cds.
111	ctg14250	3519653	3517060	atac	2593	14	1	12	syntaxin 6 - intracellular transport
112	ctg14250	4973363	4970770	gtag	2593	14	3	0	voltage-operated calcium channel, alpha-1 subunit (CACNA1E)
113	ctg14294	495670	496370	gtag	700	17	1	22	unassigned RNA
114	ctg14357	629389	630300	gtag	911	14	1	37	unassigned RNA
115	ctg14374	382695	387822	gtag	5127	17	2	12	unassigned RNA
116	ctg14391	3791571	3790979	gtag	592	13	2	6	unassigned RNA
117	ctg14391	16583662	16583551	gtag	111	16	2	13	peroxisomal biogenesis factor 16 (PEX16)
118	ctg14409	807680	808697	gtag	1017	15	2	4	unassigned RNA
119	ctg14422	1769401	1770614	gtag	1213	20	2	2	actin-related protein
120	ctg14468	171935	166225	gtag	5710	13	0	1	no RNA
121	ctg14473	3901018	3900657	gtag	361	15	1	0	voltage-dependent, calcium channel alpha-2b subunit (CACNB2)
122	ctg14473	9976267	9977017	gtag	750	12	2	58	sorcini (SRI) - interacts with alpha subunit of calcium channels
123	ctg14489	1150032	1149419	atac	613	13	1	2	Matrilin-1 (MATN1/CMP)
124	ctg14489	3061271	3061558	gtag	287	12	2	284	translation initiation factor eIF3 p36 subunit
125	ctg14493	4961242	4956440	gtag	4802	12	1	3	phospholipase c delta 1
126	ctg14502	123828	124496	gtag	668	15	0	19	no RNA
127	ctg14583	4420669	4420129	gtag	540	16	0	12	no RNA
128	ctg14637	2733434	2729462	gtag	3972	12	3	19	unassigned RNA
129	ctg14715	1891368	1891157	gtag	211	12	0	2	no RNA
130	ctg14716	9916	9061	atac	855	12	5	8	unassigned RNA
131	ctg14716	561957	561336	gtag	621	16	2	1	Lowe oculocerebrorenal syndrome (OCRL)
132	ctg14748	308334	310737	gtag	2403	13	3	32	VHL binding protein-1 (VBP-1)

133	ctg14748	308334	311521	gtag	3187	12	0	1	no RNA
134	ctg14797	1949969	1962548	gtag	12579	15	0	4	no RNA
135	ctg14824	1647813	1648294	gtag	481	15	4	83	small nuclear RNA protein E
136	ctg14927	479891	478533	gtag	1358	15	0	5	no RNA
137	ctg14947	462503	463948	gtag	1445	14	1	1	unassigned RNA
138	ctg14950	244053	242815	atac	1238	10	1	1	unassigned RNA
139	ctg14950	1247199	1234330	atac	12869	11	1	1	unassigned RNA
140	ctg14977	1979429	1986609	atac	7180	11	14	0	T-type calcium channel alpha 1 subunit G (CACNA1G)
141	ctg15054	12070488	12075387	gtag	4899	14	1	11	unassigned RNA
142	ctg15054	17805347	17802943	gtag	2404	14	1	9	guanylate binding protein isoform II (GBP2) - GTPase
143	ctg15054	17878464	17878263	gtag	201	13	0	1	no RNA
144	ctg15054	17952420	17952158	gtag	262	12	0	1	no RNA
145	ctg15058	958544	959953	atac	1409	9	0	12	no RNA
146	ctg15064	13222495	13223157	gtag	662	15	3	7	tetraspan NET-6
147	ctg15064	19066287	19061872	atac	4415	11	1	11	unassigned RNA
148	ctg15064	27659180	27659995	atac	815	12	3	42	glycyl-tRNA synthetase
149	ctg15064	29526923	29526328	gtag	595	14	4	60	U6 snRNA-associated Sm-like protein LSm5
150	ctg15071	5016381	5016550	gtag	169	12	1	77	dynactin 3 subunit (p22) (DCTN3) intracellular movement
151	ctg15071	5726108	5725550	gtag	558	8	1	1	unassigned RNA
152	ctg15082	2783499	2793213	gtag	9714	20	0	1	no RNA
153	ctg15082	2931568	2930258	gtag	1310	15	0	5	no RNA
154	ctg15082	3913049	3911462	atac	1587	11	2	7	unassigned RNA
155	ctg15105	135358	135913	atac	555	15	0	9	no RNA
156	ctg15131	21411977	21413577	atac	1600	11	1	2	unassigned RNA
157	ctg15140	1730299	1730919	atat	620	13	0	14	no RNA
158	ctg15140	1730299	1733643	atac	3344	12	1	1	unassigned RNA
159	ctg15140	4494303	4494812	gtag	509	14	0	52	no RNA
160	ctg15174	959704	961245	gtag	1541	12	1	6	transportin2 (TRN2) - mediates import into nucleus
161	ctg15174	2527802	2527650	gtag	152	16	5	1	voltage dependent, calcium channel alpha 1a subunit (CACNA1A)
162	ctg15247	179006	179162	atac	156	12	3	4	Ran binding protein 11
163	ctg15256	1289716	1290291	gtag	575	9	2	18	unassigned RNA
164	ctg15279	8355332	8353611	gtag	1721	13	2	12	peroxisomal phytanoyl-CoA alpha-hydroxylase (PAHX)
165	ctg15285	4771601	4773174	gtag	1573	15	1	226	c-myc binding protein
166	ctg15285	7447913	7447436	gtgg	477	12	0	1	no RNA
167	ctg15285	8374087	8372939	atac	1148	12	1	2	primase subunit p48 (PRIM1) - DNA replication
168	ctg15296	1320787	1319254	gtag	1533	12	0	4	no RNA
169	ctg15361	11723280	11722879	atag	401	14	0	2	no RNA
170	ctg15380	220141	218801	gtag	1340	12	0	1	no RNA
171	ctg15422	678097	677654	atac	443	10	0	10	no RNA
172	ctg15424	16078856	16089564	atac	10708	12	1	1	voltage-gated sodium channel, alpha subunit (SCN2A)
173	ctg15424	16220741	16222344	atac	1603	12	3	0	voltage-gated sodium channel, alpha subunit (SCN3A)
174	ctg15424	17632082	17632418	atac	336	12	1	0	voltage-gated sodium channel, alpha subunit (SCN6A)
175	ctg15467	4828879	4828262	gtag	617	14	1	3	unassigned RNA
176	ctg15478	200862	208439	gtag	7577	14	1	9	tubulin-folding cofactor E
177	ctg15485	396014	395568	atac	446	10	0	1	no RNA
178	ctg15493	2991532	2992090	atac	558	10	1	195	heat shock factor binding protein 1 (HSBP1)
179	ctg15540	2379952	2380862	gtag	910	13	1	13	GAR1
180	ctg15556	280785	278872	atac	1913	9	2	1	diphanos 2
181	ctg15583	362230	360031	atac	2199	10	1	11	CAGF28

182	ctg15590	223017	212044	gtag	10973	14	3	8transcription factor WSTF
183	ctg1564	202394	203654	atac	1260	21	2	2Ran binding protein 16
184	ctg15649	24839	24233	gtag	606	11	2	0testicular protein (TSPY) mRNA
185	ctg15649	1517488	1518323	atac	835	10	0	4no RNA
186	ctg15649	6183029	6180918	gtag	2111	15	3	5unassigned RNA
187	ctg15665	7010226	7010145	atac	81	9	1	3matilin-4
188	ctg15665	7804915	7805058	gtag	143	14	1	2unassigned RNA
189	ctg15665	7818487	7818696	gtag	209	12	1	0unassigned RNA
190	ctg15665	14192682	14194352	atac	1670	15	1	1unassigned RNA
191	ctg15665	16701597	16701116	atag	481	12	0	1no RNA
192	ctg15665	20538455	20538796	gtag	341	9	2	0SPO11
193	ctg15684	235800	235557	gtag	243	14	1	3unassigned RNA
194	ctg15751	632335	633044	gtaa	709	9	0	1no RNA
195	ctg15811	1354967	1359317	gtag	4350	14	2	15unassigned RNA
196	ctg15855	608204	608132	gtag	72	12	1	0unassigned RNA
197	ctg15907	22033710	22037477	atac	3767	11	1	2E2F3 transcription factor
198	ctg15907	38170325	38170611	gtgg	286	12	0	9no RNA
199	ctg15907	41619758	41621171	gtag	1413	13	4	3stress-activated protein kinase 4 (SAPK4)
200	ctg15907	45248089	45243757	gtag	4332	13	0	4no RNA
201	ctg15907	49142084	49140321	atac	1763	14	4	10unassigned RNA
202	ctg15944	3676837	3676967	gtag	130	15	1	4unassigned RNA
203	ctg15944	7438132	7440203	atac	2071	14	4	45damage-specific DNA binding protein 1 (DDB1)
204	ctg15944	8059651	8059081	gtag	570	14	4	88unassigned RNA
205	ctg15951	37181	38072	gtag	891	16	4	3K-Cl cotransporter KCC4
206	ctg15951	217765	219484	gtag	1719	9	1	1unassigned RNA
207	ctg15966	141492	142094	gtag	602	12	3	8unassigned RNA
208	ctg15988	7782645	7781130	atac	1515	12	2	0unassigned RNA
209	ctg15988	11926421	11924866	gtag	1555	15	1	68unassigned RNA
210	ctg15988	13393246	13396290	gtag	3044	14	1	6vacuolar ATPase
211	ctg15995	608008	608452	gtag	444	8	0	1no RNA
212	ctg16008	18497646	18503408	gtag	5762	13	3	8excision repair protein (ERCC5/XPC)
213	ctg16008	18525768	18526627	atat	859	11	2	17excision repair protein (ERCC5/XPC)
214	ctg16106	815887	815369	atag	518	13	1	1unassigned RNA
215	ctg16106	900543	903194	gtag	2651	15	1	70MCT-1
216	ctg16166	5418471	5418020	atac	451	13	2	14glia maturation factor beta
217	ctg16166	5467290	5467965	gtag	675	14	1	5CGR19
218	ctg16170	732939	733805	gtag	866	13	3	5huntingtin
219	ctg16235	274250	272440	gtag	1810	15	2	4nummuse muscle myosin heavy chain-B(MYH10)
220	ctg16282	693960	694394	gtag	434	16	2	67ionizing radiation resistance conferring protein (DAP-3)
221	ctg16307	2640943	2641913	gtag	970	13	0	2no RNA
222	ctg16307	3656542	3658072	gtag	1530	16	1	9protein phosphatase 2A alpha subunit mRNA,
223	ctg16335	751972	753283	atac	1311	13	0	2no RNA
224	ctg16335	2141893	2143100	gtag	1207	12	3	11RAB-like protein 2a or 2b ?
225	ctg16335	6765525	6768939	gtag	3414	13	2	5insulin induced protein
226	ctg16391	891630	891155	atac	475	13	0	3no RNA
227	ctg16408	1261706	1260537	atac	1169	14	0	41no RNA
228	ctg16453	1353893	1353656	gtag	237	10	0	6no RNA
229	ctg16478	747742	748168	gtag	426	16	3	56poly(ADP-ribose) polymerase
230	ctg16537	2759032	2759131	gtag	99	11	0	4no RNA

231	ctg16537	9860000	9860338	gtag	338	11	2	4	phospholipase c beta 4
232	ctg16537	13762255	13761061	gtag	1194	16	1	2	unassigned RNA
233	ctg16537	21773758	21776953	gtag	3195	12	1	38	N-terminal acetyltransferase complex arl1 subunit
234	ctg16537	21799041	21796764	atac	2277	12	4	9	unassigned RNA
235	ctg16551	142124	140613	gtag	1511	15	9	16	WDR10p/SPG
236	ctg16551	147305	145331	gtag	1974	16	6	9	WDR10p/SPG
237	ctg16574	125108	127679	gtag	2571	15	0	1	no RNA
238	ctg16574	356281	358062	atac	1781	15	1	0	E2F2 transcription factor
239	ctg16574	657348	653838	atac	3510	10	2	8	transcription elongation factor TFIIIS.h
240	ctg16574	699775	691254	gtag	8521	18	2	1	transcription elongation factor TFIIIS.h
241	ctg16586	2170190	2170756	atag	566	14	0	1	no RNA
242	ctg16586	2475706	2475047	atac	659	11	2	3	E2F1 transcription factor
243	ctg16704	2269288	2269537	gtag	249	12	6	7	erythroid K:Cl cotransporter (KCC1)
244	ctg16704	2275163	2275317	gtag	154	16	4	7	erythroid K:Cl cotransporter (KCC1)
245	ctg16704	2338461	2338354	gtag	107	12	2	4	autoantigen
246	ctg16704	2342900	2342799	gtag	101	13	1	3	autoantigen
247	ctg16733	591947	591844	gtag	103	19	2	0	calcium channel, alpha2/delta 2 (CACNA2D2)
248	ctg16733	591947	591850	gtat	97	13	4	0	calcium channel, alpha2/delta 2 (CACNA2D2)
249	ctg16733	1400085	1401149	gtag	1064	13	1	0	unassigned RNA
250	ctg16733	1553239	1552660	gtag	579	16	4	5	HIV-1 Vpr binding protein (VprBP)
251	ctg16734	3065528	3062694	gtag	2834	12	1	6	unassigned RNA
252	ctg16736	59874	59737	gtag	137	11	1	5	DNA binding regulatory factor (RFX5)
253	ctg16751	982697	982896	gtag	199	13	2	24	unassigned RNA
254	ctg16827	93452	102023	atac	8571	14	0	1	no RNA
255	ctg16842	2089152	2085000	gtag	4152	14	2	0	voltage-dependent, calcium channel alpha1D subunit (CACNA1D)
256	ctg16842	3242482	3242700	atac	218	12	2	4	calcium channel alpha2-delta3 subunit (CACNA2D3)
257	ctg16861	362833	353907	atac	8926	12	1	20	cullin 4A (CUL4A)
258	ctg16861	362833	362556	atac	277	12	0	1	unassigned RNA
259	ctg16861	384494	385448	atac	954	9	4	25	unassigned RNA
260	ctg16920	87556	84880	gtag	2676	15	2	14	calcium dependent protease
261	ctg16938	622316	618364	gtag	3952	18	0	1	no RNA
262	ctg17028	225680	224089	gtag	1591	9	4	12	inositol hexakisphosphate kinase 2 (IP6K2)
263	ctg17036	610045	611041	atag	996	13	2	3	cAMP-binding guanine nucleotide exchange factor III (cAMP-GEFIII)
264	ctg17042	511298	511012	gtag	286	14	2	1	phospholipase C beta 3
265	ctg17042	744623	740530	gtag	4093	16	1	25	ADP-ribosylation factor-like protein 2 (ARL2)
266	ctg17042	1179863	1179356	atac	507	14	5	7	calcium- and diacylglycerol-regulated guanine nucleotide exchange factor I (CalDAG-GEFI)
267	ctg17042	1585240	1585700	gtag	460	12	2	35	calcium activated neutral protease large subunit
268	ctg17042	1643482	1644584	gtag	1102	14	2	11	DNA polymerase alpha
269	ctg17042	2319296	2319390	gtag	94	11	2	17	Dr1-associated corepressor (DRAP1)
270	ctg17042	2862671	2861338	gtag	1333	13	3	18	unassigned RNA
271	ctg17057	150869	148794	atac	2075	15	0	10	no RNA
272	ctg17064	105526	105725	gtag	199	15	1	48	unassigned RNA
273	ctg17077	14755	14975	gtag	220	19	0	4	no RNA
274	ctg17082	2828242	2829125	gtag	883	17	0	5	no RNA
275	ctg17129	1016435	1017201	gtag	766	12	0	47	no RNA
276	ctg17189	530732	537766	gtag	7034	16	0	1	no RNA
277	ctg17207	20648	21739	atac	1091	11	2	5	unassigned RNA
278	ctg17207	407037	404994	gtag	2043	14	0	17	no RNA
279	ctg17326	1011062	1010964	atac	98	10	2	9	proliferating-cell nuclear protein P120

280	ctg17326	1025477	1025367	gtag	110	15	1	22	Mi-2 putative helicase
281	ctg17326	1455072	1454646	atac	426	11	4	98	B-cell receptor associated protein (BAP/REA)
282	ctg17328	3847091	3848228	gtag	1137	14	0	2	no RNA
283	ctg17328	3850251	3852930	gtag	2679	16	1	0	unassigned RNA
284	ctg17403	1436192	1435940	atac	252	9	2	10	protein kinase Njmu-R1
285	ctg17403	1448312	1449770	gtag	1458	14	1	60	zinc finger transcription factor (ZNF207)
286	ctg17436	62912	59269	gtag	3643	16	1	11	β-phosphoinositide dependent protein kinase-1 (PDK1)
287	ctg17441	554593	556064	gtag	1471	14	2	37	unassigned RNA
288	ctg17441	554593	557340	gtag	2747	10	0	1	no RNA
289	ctg17441	1509924	1507805	atac	2119	13	1	11	ras guanine nucleotide releasing factor (C3G/GNRP)
290	ctg17450	79338	78013	atac	1325	10	2	11	c6.1A protein
291	ctg17450	632419	632981	gtag	562	13	2	1	muscle-specific serine kinase 1 (MSSK1)
292	ctg17450	1217559	1217245	gtag	314	16	1	12	no RNA
293	ctg17490	3218237	3217909	gtag	328	18	1	1	unassigned RNA
294	ctg17492	287351	287665	gtag	314	17	0	10	no RNA
295	ctg17565	132197	132405	ataa	208	13	1	0	arginine methyltransferase
296	ctg17565	1280410	1276853	gtag	3557	15	0	1	no RNA
297	ctg17568	404113	407685	gtag	3572	8	0	1	no RNA
298	ctg17689	543157	540679	atac	2478	11	2	7	unassigned RNA
299	ctg17714	1177567	1185148	gtag	7581	15	0	1	no RNA
300	ctg17737	961395	962640	gtag	1245	15	1	19	unassigned RNA
301	ctg17748	4534286	4534924	gtag	638	13	1	14	Homo sapiens cyclin K (CPR4) mRNA, complete cds.
302	ctg17748	4936163	4938548	gtag	2385	12	1	1	echinoderm microtubule-associated protein homolog HuEMAP
303	ctg17777	5860664	5847241	gtag	13423	19	0	2	no RNA
304	ctg17777	5860664	5847279	gtag	13385	16	0	1	no RNA
305	ctg17782	10920	9461	gtag	1459	16	1	2	S2P
306	ctg17872	240784	241252	atac	468	12	1	0	unassigned RNA
307	ctg17887	5412	21221	gtag	15809	13	2	2	TFIIB related factor hBRF (HBRF)
308	ctg17936	210218	210813	atac	595	12	1	21	Not56-like protein
309	ctg18037	948689	947897	gtag	792	16	2	3	B-raf
310	ctg18037	11933911	11934471	atac	560	13	3	12	serine threonine protein kinase (PSSALRE)
311	ctg18037	11938328	11938180	gtag	148	17	4	0	proton-gated cation channel ASIC3 mRNA,
312	ctg18073	67763	68524	atac	761	13	2	51	spermidine aminopropyltransferase
313	ctg18073	82361	83959	gtag	1598	13	2	34	spermidine aminopropyltransferase
314	ctg18126	322495	321974	atac	521	11	0	7	no RNA
315	ctg18147	809169	810258	gtag	1089	15	0	161	no RNA
316	ctg18251	465553	466711	gtag	1158	16	1	1	unassigned RNA
317	ctg18306	1072422	1071862	atac	560	13	1	2	unassigned RNA
318	ctg18322	250426	251296	gtag	870	15	1	100	neutrophil cytochrome b light chain p22 phagocyte b-cytochrome
319	ctg18348	4421	5521	atac	1100	12	1	6	H.sapiens mRNA for stress activated protein kinase-3
320	ctg18433	380147	382873	gtag	2726	18	0	18	no RNA
321	ctg18539	96086	95515	gtag	571	16	2	1	inositol polyphosphate 5-phosphatase (5ptase)
322	ctg18539	141393	140991	atag	402	15	1	0	inositol polyphosphate 5-phosphatase (5ptase)
323	ctg18591	458333	458466	gtag	133	15	1	2	DOCK180 - cytokinesis related
324	ctg18647	69156	69368	gtag	212	12	1	16	phosphoethanolamine cytidyltransferase
325	ctg18730	733964	735578	gtag	1614	13	2	36	unassigned RNA
326	ctg18743	128944	127430	gtag	1514	13	2	4	unassigned RNA
327	ctg18743	2159516	2160690	atac	1174	11	1	3	unassigned RNA
328	ctg18846	7470681	7473601	atac	2920	16	4	25	E2F5 transcription factor

329	ctg18867	4302903	4290778	gtag	12125	15	1	4	phosphatase 2A beta subunit
330	ctg18891	175534	173705	gtag	1829	17	5	171	unassigned RNA - muscle specific
331	ctg18961	67022	66819	ataa	203	12	0	1	no RNA
332	ctg19078	317626	317854	gtag	228	13	1	44	FX protein
333	ctg19085	380214	379830	atac	384	10	0	17	no RNA
334	ctg19153	800390	798728	gtag	1662	13	0	1	no RNA
335	ctg19153	1479008	1476247	gtag	2761	16	3	0	Human xanthine dehydrogenase/oxidase mRNA,
336	ctg19153	9470504	9468833	atat	1671	11	1	10	unassigned RNA
337	ctg19153	13443567	13445415	gtag	1848	17	1	3	no RNA
338	ctg19247	6229884	6223216	atac	6668	12	1	1	huntingtin interacting protein (HIP1)
339	ctg19247	6512938	6514398	gtag	1460	15	1	30	unassigned RNA
340	ctg19262	1221484	1221690	gtag	206	11	3	84	26S proteasome ATPase subunit (PSMC4/MIP224)
341	ctg21fin2	20530904	20530455	gtag	449	14	4	9	B17
342	ctg21fin2	20544684	20540162	atac	4522	17	2	9	quinone oxidoreductase homolog-1
343	ctg21fin2	20544684	20540183	atac	4501	10	0	3	no RNA
344	ctg21fin2	23286697	23287523	atac	826	13	1	3	unassigned RNA
345	ctg21fin2	23293458	23293661	gtag	203	10	1	0	unassigned RNA
346	ctg21fin5	812324	812633	gtag	309	14	2	3	GT334 protein - sodium transporter?
347	ctg21fin5	875982	877440	atac	1458	11	4	33	GT335/HES1
348	ctg22fin10	269229	269115	gtag	114	12	3	2	ERK6 mRNA for extracellular signal regulated kinase
349	ctg22fin3	2640958	2642861	gtag	1903	13	4	7	CDC45L - cell cycle regulator
350	ctg22fin3	3034523	3033606	gtag	917	15	2	2	thioredoxin reductase II
351	ctg22fin4	1460899	1459276	gtag	1623	14	3	30	mitogen-activated protein kinase (MAPK1)
352	ctg22fin4	3476936	3476440	gtag	496	12	1	20	unassigned RNA
353	ctg22fin4	9498501	9497117	gtag	1384	14	2	7	unassigned RNA
354	ctg22fin4	10762104	10761734	gtag	370	13	0	22	no RNA
355	ctg22fin4	15925520	15924660	gtag	860	12	2	4	nonmuscle myosin heavy chain-A (MYH9)
356	ctg22fin4	18174711	18172305	atac	2406	14	0	1	no RNA
357	ctg22fin4	21107040	21105836	gtag	1204	10	1	5	unassigned RNA
358	ctg22fin4	21383941	21384825	gtag	884	16	1	3	unassigned RNA
359	ctg24	7455313	7460459	gtag	5146	15	2	4	unassigned RNA
360	ctg25099	1737750	1730988	gtag	6762	12	1	35	serine kinase SRPK2
361	ctg25099	16016139	16017537	gtag	1398	13	1	9	U6 snRNA-associated Sm-like protein LSm8 mRNA,
362	ctg25099	28277769	28269840	atac	7929	10	2	29	unassigned RNA
363	ctg25099	28574133	28573075	gtag	1058	17	2	3	unassigned RNA
364	ctg25122	37541	35997	atac	1544	11	1	18	RNP L protein
365	ctg25256	3760070	3773188	atac	13118	12	1	0	cAMP-regulated guanine nucleotide exchange factor II (cAMP-GEFII)
366	ctg25448	1509029	1509768	gtag	739	20	1	5	Homo sapiens gamma SNAP mRNA, complete cds.
367	ctg25478	890414	892141	gtag	1727	15	2	0	protein kinase JNK1alpha
368	ctg25478	890840	892141	gtag	1301	15	2	1	protein kinase JNK1beta
369	ctg2712	1031063	1037862	gtag	6799	15	0	3	no RNA
370	ctg2712	1088091	1087917	gtag	174	11	0	2	no RNA
371	ctg2712	2077364	2077225	gtag	139	12	1	1	phospholipase C beta 2
372	ctg2712	4131796	4129425	atac	2371	12	1	10	unassigned RNA
373	ctg2712	6749294	6751075	gtag	1781	14	0	1	no RNA
374	ctg2712	13478834	13480499	atac	1665	13	2	0	adaptor-related protein complex AP-4 epsilon subunit
375	ctg28041	686879	689242	gtag	2363	14	1	8	unassigned RNA
376	ctg28078	495770	493168	gtag	2602	16	1	40	unassigned RNA
377	ctg28098	2577564	2571847	gtag	5717	16	1	2	small GTPase RAB6B

378	ctg2810	968984	971060	atac	2076	9	1	9	unassigned RNA
379	ctg30153	8866080	8868016	atac	1936	10	1	26	no RNA
380	ctg3235	1449702	1453964	atac	4262	13	2	0	unassigned RNA
381	ctg3454	1046368	1046656	gtag	712	14	2	8	hypothetical transmembrane protein SBB153
382	ctg3454	1047881	1046463	gtag	1418	14	2	18	hypothetical transmembrane protein SBB153
383	ctg3461	2469486	2466933	gtag	2553	11	3	3	CSNK1G1 mRNA for casein kinase 1 gamma 1
384	ctg36	8022436	8022646	atac	210	12	2	1	cAMP-regulated guanine nucleotide exchange factor I cAMP-GEFI
385	ctg36	8972276	8974265	gtag	1989	15	2	0	cyclin T1
386	ctg36	9031169	9043672	gtag	12503	14	1	1	unassigned RNA
387	ctg36	9031169	9045709	gtag	14540	15	1	3	unassigned RNA
388	ctg3678	130684	134088	gtag	3404	11	2	18	Ca2-activated neutral protease large subunit (CANP)
389	ctg38	42393	42552	gtag	159	13	2	27	unassigned RNA
390	ctg44	2600507	2598508	atac	1999	13	2	17	matilin-2
391	ctg45	15904279	15917906	gtag	13627	13	1	28	N33 - putative membrane protein
392	ctg46	63383	60928	gtag	2455	15	2	1	LLGL - putative cytoskeletal protein
393	ctg46	169621	168789	gtag	832	15	1	23	GTP-binding protein (DRG2)
394	ctg53	3106670	3095974	gtag	10696	18	1	2	unassigned RNA
395	ctg53	4278471	4278361	gtag	110	12	1	3	unassigned RNA
396	ctg53	4363072	4362407	gtag	665	15	1	38	rab geranylgeranyl transferase, alpha-subunit
397	ctg53	25845384	25843610	gtag	1774	13	3	47	rapamycin binding protein (FKBP3)
398	ctg595	7436975	7443108	atac	6133	13	0	2	no RNA
399	ctg595	11831740	11831262	gtag	478	13	1	10	nuclear pore complex protein (NUP107)
400	ctg7013	207167	209191	gtag	2024	12	1	3	H.sapiens mRNA for human giant larvae homolog
401	ctg78	98515	100884	atac	2369	10	2	2	sodium-hydrogen exchanger 6 (NHE-6)
402	ctg78	104694	110650	gtag	5956	18	2	1	sodium-hydrogen exchanger 6 (NHE-6)
403	ctg78	121558	128138	gtag	6580	10	2	2	sodium-hydrogen exchanger 6 (NHE-6)
404	ctg9872	61949	64475	gtag	2526	20	0	15	no RNA