

TABLE S3 | Partitioning scheme for combined analysis.

Subset	Best Model	# Sites	Partition Names
1	GTR+G	411	uce_524_left
2	GTR+I+G	722	uce_108_core, uce_524_core
3	GTR+G	439	uce_524_right
4	GTR+G	83	uce_585_left
5	GTR+I+G	203	uce_585_core
6	GTR+G	64	uce_585_right
7	GTR+I+G	729	uce_271_left
8	GTR+G	53	uce_271_core
9	GTR+G	296	uce_881_left, uce_271_right
10	GTR+G	285	uce_655_left
11	GTR+I+G	362	uce_655_core
12	GTR+I+G	120	uce_655_right
13	GTR+I+G	637	uce_27_left
14	GTR+G	73	uce_27_core
15	GTR+I+G	710	uce_757_left, uce_27_right
16	GTR+G	243	uce_122_left
17	GTR+I+G	514	uce_122_core
18	GTR+I+G	50	uce_122_right
19	GTR+I+G	266	uce_172_left
20	GTR+G	162	uce_172_core
21	GTR+G	124	uce_172_right
22	GTR+G	109	uce_129_left
23	GTR+G	136	uce_129_core
24	GTR+I+G	729	uce_129_right
25	GTR+G	757	uce_1075_left
26	GTR+G	173	uce_1075_core
27	GTR+G	91	uce_1075_right
28	GTR+I+G	882	uce_359_left
29	GTR+G	414	uce_359_core
30	GTR+I+G	1167	uce_359_right, uce_344_right
31	GTR+G	87	uce_54_left
32	GTR+G	112	uce_54_core
33	GTR+I+G	664	uce_54_right
34	GTR+I+G	65	uce_1204_left
35	GTR+G	731	uce_1204_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
36	GTR+G	134	uce_1204_right
37	GTR+G	136	uce_458_left
38	GTR+G	445	uce_458_core
39	GTR+I+G	389	uce_458_right
40	GTR+G	288	uce_575_left
41	GTR+I+G	551	uce_116_core, uce_575_core
42	GTR+G	152	uce_575_right
43	GTR+G	513	uce_869_left
44	GTR+I+G	189	uce_869_core
45	GTR+G	51	uce_869_right
46	GTR+G	82	uce_592_left
47	GTR+G	410	uce_592_core
48	GTR+G	463	uce_592_right
49	GTR+G	578	uce_24_left
50	GTR+G	66	uce_24_core
51	GTR+G	55	uce_24_right
52	GTR+G	391	uce_547_left
53	GTR+I+G	305	uce_547_core
54	GTR+I+G	66	uce_547_right
55	GTR+I+G	594	uce_1119_left
56	GTR+G	271	uce_1119_core
57	GTR+I+G	183	uce_1119_right
58	GTR	255	uce_85_left
59	GTR+G	95	uce_85_core
60	GTR+I+G	60	uce_85_right
61	GTR+G	65	uce_552_left
62	GTR+I+G	354	uce_552_core
63	GTR+G	206	uce_552_right
64	GTR+I+G	611	uce_159_left
65	GTR+I+G	260	uce_159_core
66	GTR+G	436	uce_159_right
67	GTR+G	195	uce_459_left
68	GTR+G	56	uce_459_core
69	GTR+I+G	396	uce_459_right
70	GTR+I+G	595	uce_894_left



**TABLE S3 |** (Continued)

Subset	Best Model	# Sites	Partition Names
71	GTR+G	247	uce_894_core
72	GTR+G	217	uce_894_right
73	GTR+I+G	119	uce_1295_left
74	GTR+G	322	uce_1295_core
75	GTR+G	480	uce_1295_right
76	GTR+G	53	uce_181_left
77	GTR+I+G	69	uce_181_core
78	GTR+I+G	50	uce_181_right
79	GTR+G	180	uce_993_left
80	GTR+I+G	1405	uce_3_core, uce_993_core, uce_660_left, uce_808_core
81	GTR+G	198	uce_247_right, uce_993_right
82	GTR+G	187	uce_837_left
83	GTR+G	441	uce_837_core, uce_1209_left
84	GTR+I+G	476	uce_837_right
85	GTR+G	132	uce_1286_left
86	GTR+I+G	345	uce_1286_core
87	GTR+G	430	uce_1286_right
88	GTR+G	369	uce_1017_left
89	GTR+G	374	uce_1017_core, uce_1066_core
90	GTR+G	450	uce_1017_right
91	GTR+G	130	uce_759_left
92	GTR+I+G	566	uce_759_core
93	GTR+I+G	558	uce_759_right, uce_157_core
94	GTR+G	73	uce_367_left
95	GTR+I+G	869	RAG1b, uce_367_core
96	GTR+G	154	uce_367_right
97	GTR+G	86	uce_249_left
98	GTR+I+G	333	uce_249_core
99	GTR+G	175	uce_249_right
100	GTR+I+G	372	uce_115_left
101	GTR+G	303	uce_115_core
102	GTR+I+G	508	uce_36_right, uce_115_right
103	GTR+G	129	uce_921_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
104	GTR+G	50	uce_921_core
105	GTR+I+G	762	uce_921_right
106	GTR+I+G	828	uce_26_left
107	GTR+G	80	uce_26_core
108	GTR+G	197	uce_26_right
109	GTR+I+G	742	uce_756_left
110	GTR+G	90	uce_756_core
111	GTR+G	51	uce_756_right
112	GTR+G	434	uce_510_left
113	GTR+I+G	187	uce_510_core
114	GTR+G	268	uce_510_right
115	GTR+G	233	uce_36_left
116	GTR+G	134	uce_36_core
117	GTR+I+G	608	uce_966_left
118	GTR+G	332	uce_966_core
119	GTR+G	62	uce_966_right
120	GTR+I+G	710	uce_1251_left
121	GTR+G	332	uce_1251_core
122	GTR+G	53	uce_1251_right
123	GTR+G	77	uce_685_left
124	GTR+I+G	459	uce_685_core
125	GTR+G	122	uce_685_right
126	GTR+I+G	558	uce_597_left
127	GTR+G	55	uce_597_core
128	GTR+G	179	uce_597_right
129	GTR+I+G	236	uce_574_left
130	GTR+I+G	345	uce_574_core
131	GTR+G	350	uce_574_right
132	GTR+I+G	688	uce_183_left
133	GTR+G	151	uce_183_core
134	GTR+I+G	162	uce_183_right
135	GTR+G	253	uce_335_left
136	GTR+I+G	342	uce_335_core
137	GTR+G	379	uce_335_right
138	GTR+I+G	322	uce_920_left, uce_502_core



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
139	GTR+G	119	uce_920_core
140	GTR+I+G	680	uce_920_right
141	GTR+I+G	344	uce_179_left
142	GTR+G	87	uce_179_core
143	GTR+I+G	589	uce_179_right
144	GTR+G	81	uce_1256_left
145	GTR+G	323	uce_1256_core
146	GTR+G	209	uce_1256_right
147	GTR+G	297	uce_1233_left
148	GTR+G	195	uce_1233_core
149	GTR+G	170	uce_1233_right
150	GTR+G	363	uce_338_left
151	GTR+G	197	uce_338_core
152	GTR+G	145	uce_338_right
153	GTR+G	110	uce_713_left
154	GTR+G	91	uce_713_core
155	GTR+I+G	820	uce_713_right
156	GTR+G	130	uce_496_left
157	GTR+G	276	uce_496_core
158	GTR+G	259	uce_496_right
159	GTR+I+G	478	uce_640_left
160	GTR+G	91	uce_640_core
161	GTR+G	52	uce_640_right
162	GTR+G	177	uce_1211_left, uce_47_left
163	GTR+G	575	uce_1211_core
164	GTR+I+G	751	uce_1211_right
165	GTR+G	289	uce_498_left
166	GTR+I+G	228	uce_498_core
167	GTR+I+G	543	uce_498_right
168	GTR+G	421	uce_410_left
169	GTR+G	505	uce_410_core
170	GTR+G	458	uce_410_right
171	GTR+G	953	uce_716_left
172	GTR+G	336	uce_716_core
173	GTR+I+G	640	uce_948_core, uce_716_right



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
174	GTR+G	122	uce_761_left
175	GTR+G	145	uce_761_core
176	GTR+I+G	544	uce_761_right
177	GTR+I+G	325	uce_305_left
178	GTR+G	66	uce_305_core
179	GTR+G	214	uce_305_right
180	GTR+I+G	844	uce_690_left
181	GTR+G	50	uce_690_core
182	GTR+G	56	uce_690_right
183	GTR+G	490	uce_781_left
184	GTR+G	135	uce_781_core
185	GTR+G	146	uce_781_right
186	GTR+G	251	uce_669_left
187	GTR+I+G	384	uce_669_core
188	GTR+G	153	uce_669_right
189	GTR+I+G	312	uce_392_left
190	GTR+G	57	uce_392_core
191	GTR+G	67	uce_392_right
192	GTR+G	224	uce_997_left
193	GTR+I+G	1186	uce_204_core, uce_997_core
194	GTR+G	278	uce_997_right
195	GTR+G	131	uce_605_left
196	GTR+G	254	uce_605_core
197	GTR+I+G	413	uce_605_right
198	GTR+G	173	uce_136_left
199	GTR+I+G	2458	uce_136_core, uce_340_right, uce_332_right
200	GTR+G	308	uce_136_right
201	GTR+I+G	700	uce_885_left
202	GTR+G	50	uce_885_core
203	GTR+G	315	uce_885_right
204	GTR+G	94	uce_1307_left
205	GTR+I+G	99	uce_1307_core
206	GTR+I+G	562	uce_1307_right
207	GTR+I+G	90	uce_295_left
208	GTR+I+G	339	uce_295_core



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
209	GTR+G	125	uce_295_right
210	GTR+G	916	uce_1321_left
211	GTR	62	uce_1321_core
212	GTR+G	55	uce_1321_right
213	GTR+G	463	uce_427_left
214	GTR+I+G	314	uce_427_core
215	GTR+G	106	uce_427_right
216	GTR+I+G	146	uce_1036_left
217	GTR+G	143	uce_1036_core
218	GTR+I+G	238	uce_1036_right
219	GTR+G	166	uce_168_left
220	GTR+I+G	126	uce_168_core
221	GTR+I+G	50	uce_168_right
222	GTR+G	289	uce_474_left
223	GTR+G	324	uce_474_core
224	GTR+G	52	uce_474_right
225	GTR+I+G	664	uce_302_left
226	GTR+G	239	uce_302_core
227	GTR+G	98	uce_302_right
228	GTR+G	115	uce_811_left
229	GTR+I+G	196	uce_811_core
230	GTR+G	352	uce_811_right
231	GTR+G	104	uce_3_left
232	GTR+G	297	uce_3_right
233	GTR+G	56	uce_901_left
234	GTR+G	123	uce_901_core
235	GTR+I+G	387	uce_901_right
236	GTR+I+G	271	uce_111_left
237	GTR+I+G	50	uce_111_core
238	GTR+G	148	uce_111_right
239	GTR+G	196	uce_1173_left
240	GTR+I+G	352	uce_1173_core
241	GTR+G	499	uce_1173_right
242	GTR+G	67	uce_1093_left
243	GTR+G	101	uce_1093_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
244	GTR+I+G	406	uce_1093_right
245	GTR+G	226	uce_377_left
246	GTR+G	292	uce_377_core
247	GTR+G	219	uce_377_right
248	GTR+G	67	uce_161_left
249	GTR	50	uce_161_core
250	GTR+I+G	905	uce_161_right
251	GTR+G	267	uce_124_left
252	GTR+I+G	337	uce_124_core
253	GTR+G	329	uce_124_right
254	GTR+I+G	284	uce_407_left
255	GTR+G	283	uce_407_core
256	GTR+G	306	uce_407_right
257	GTR+G	389	uce_712_left
258	GTR+I+G	379	uce_712_core
259	GTR+I+G	395	uce_712_right
260	GTR+G	304	uce_73_left
261	GTR+I+G	456	uce_73_core
262	GTR+G	114	uce_73_right
263	GTR+I+G	117	uce_983_left
264	GTR+I+G	349	uce_983_core
265	GTR+G	402	uce_983_right
266	GTR+I+G	811	uce_846_left
267	GTR+I+G	350	uce_846_core
268	GTR+G	88	uce_846_right
269	GTR+I+G	686	uce_642_left
270	GTR+G	104	uce_642_core
271	GTR+G	316	uce_642_right
272	GTR+G	150	uce_89_left
273	GTR+G	237	uce_89_core
274	GTR+I+G	276	uce_89_right
275	GTR+G	196	uce_495_left
276	GTR+G	186	uce_495_core
277	GTR+I+G	849	uce_495_right
278	GTR+G	451	uce_413_left





**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
279	GTR+I+G	341	uce_413_core
280	GTR+G	361	uce_413_right
281	GTR+I+G	421	uce_943_left
282	GTR+G	277	uce_943_core
283	GTR	73	uce_943_right
284	GTR+G	280	uce_987_left
285	GTR+G	278	uce_987_core
286	GTR+G	439	uce_987_right
287	GTR+G	69	uce_1305_left
288	GTR+G	82	uce_1305_core
289	GTR+I+G	731	uce_1305_right
290	GTR+G	137	uce_57_left
291	GTR+I+G	450	uce_57_core
292	GTR+G	220	uce_57_right
293	GTR+G	50	uce_471_left
294	GTR+I+G	399	uce_471_core
295	GTR+G	99	uce_471_right
296	GTR+G	231	uce_60_left
297	GTR+G	359	uce_60_core
298	GTR+G	273	uce_60_right
299	GTR+G	124	uce_600_left
300	GTR+G	234	uce_600_core
301	GTR+I+G	645	uce_600_right
302	GTR+I+G	379	uce_553_left
303	GTR+G	268	uce_553_core
304	GTR+G	129	uce_553_right
305	GTR+G	106	uce_1110_left
306	GTR+I+G	365	uce_1110_core
307	GTR+G	394	uce_1110_right
308	GTR+I+G	1400	uce_737_left, uce_408_right, uce_467_left
309	GTR+G	150	uce_737_core
310	GTR+G	162	uce_737_right
311	GTR+I+G	750	uce_1338_left
312	GTR+G	121	uce_1338_core
313	GTR+G	135	uce_1338_right



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
314	GTR+G	62	uce_467_core
315	GTR+I+G	405	uce_467_right
316	GTR	112	uce_76_left
317	GTR+G	154	uce_76_core
318	GTR+G	50	uce_76_right
319	GTR+I+G	622	uce_1253_left
320	GTR+G	285	uce_1253_core
321	GTR+I+G	365	uce_1253_right
322	GTR+I+G	210	uce_609_left
323	GTR+G	256	uce_609_core
324	GTR+G	456	uce_609_right
325	GTR+G	50	uce_948_left
326	GTR+G	272	uce_948_right
327	GTR+G	190	uce_620_left
328	GTR+G	309	uce_620_core
329	GTR+G	547	uce_620_right
330	GTR+G	303	uce_468_left
331	GTR+G	138	uce_468_core
332	GTR+I+G	419	uce_468_right
333	GTR+G	496	uce_113_left
334	GTR+I+G	360	uce_113_core
335	GTR+G	131	uce_113_right
336	GTR+I+G	303	uce_692_left
337	GTR+G	164	uce_692_core
338	GTR+I+G	307	uce_692_right
339	GTR+G	208	uce_21_left
340	GTR+I+G	804	uce_21_core
341	GTR+G	79	uce_21_right
342	GTR+G	200	uce_1334_left
343	GTR+I+G	170	uce_1334_core
344	GTR+I+G	847	uce_1334_right
345	GTR+I+G	606	uce_647_left
346	GTR+G	91	uce_647_core
347	GTR+G	320	uce_647_right
348	GTR+G	79	uce_139_left



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
349	GTR+I+G	173	uce_139_core
350	GTR+I+G	52	uce_139_right
351	GTR+G	606	uce_546_left
352	GTR+G	238	uce_546_core
353	GTR+G	179	uce_546_right
354	GTR+G	263	uce_1224_left
355	GTR+I+G	1354	uce_1224_core, uce_1192_right
356	GTR+I+G	193	uce_1224_right
357	GTR+G	95	uce_154_left
358	GTR+I+G	283	uce_154_core
359	GTR+G	239	uce_154_right
360	GTR+G	328	uce_31_left
361	GTR+I+G	487	uce_31_core
362	GTR+G	192	uce_31_right
363	GTR+G	123	uce_309_left
364	GTR+I+G	271	uce_309_core
365	GTR+I+G	510	uce_309_right
366	GTR+G	200	uce_826_left
367	GTR+I+G	425	uce_826_core
368	GTR+G	228	uce_826_right
369	GTR+G	356	uce_242_left
370	GTR+I+G	370	uce_242_core
371	GTR+I+G	235	uce_242_right
372	GTR+G	354	uce_1106_left
373	GTR+I+G	306	uce_1106_core
374	GTR+G	263	uce_1106_right
375	GTR+G	420	uce_106_left
376	GTR+I+G	273	uce_106_core
377	GTR+G	544	uce_106_right
378	GTR+G	412	uce_61_left
379	GTR+G	370	uce_61_core
380	GTR+G	82	uce_61_right
381	GTR+G	444	uce_660_core
382	GTR+G	138	uce_660_right
383	GTR+I+G	511	uce_1229_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
384	GTR+G	114	uce_1229_core
385	GTR+G	98	uce_1229_right
386	GTR+G	175	uce_466_left
387	GTR+I+G	422	uce_466_core
388	GTR+G	211	uce_466_right
389	GTR+G	253	uce_331_left
390	GTR+G	147	uce_331_core
391	GTR+G	157	uce_331_right
392	GTR+I+G	318	uce_810_left
393	GTR+I+G	86	uce_810_core
394	GTR+I+G	688	uce_810_right
395	GTR+G	96	uce_525_left
396	GTR+I+G	434	uce_525_core
397	GTR+I+G	82	uce_525_right
398	GTR+G	103	uce_879_left
399	GTR+I+G	638	uce_879_core
400	GTR+G	142	uce_879_right
401	GTR+I+G	270	uce_564_left
402	GTR+G	721	uce_564_core
403	GTR+G	84	uce_564_right
404	GTR+G	177	uce_109_left
405	GTR+I+G	780	uce_109_core, uce_431_core, uce_363_core
406	GTR+G	258	uce_109_right
407	GTR+I+G	611	uce_189_left
408	GTR+G	113	uce_189_core
409	GTR+G	250	uce_68_left, uce_189_right
410	GTR+G	281	uce_157_left
411	GTR+G	647	uce_157_right, uce_199_left
412	GTR+G	412	uce_748_left
413	GTR+I+G	546	uce_748_core
414	GTR+G	134	uce_748_right
415	GTR+G	162	uce_372_left
416	GTR+G	61	uce_372_core
417	GTR+I+G	604	uce_372_right
418	GTR+G	51	uce_311_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
419	GTR+I+G	476	uce_311_core
420	GTR+G	114	uce_311_right
421	GTR+I+G	242	uce_858_left
422	GTR+I+G	475	uce_858_core, uce_70_left
423	GTR+G	496	uce_858_right
424	GTR+I+G	367	uce_396_left
425	GTR+G	88	uce_396_core
426	GTR+I+G	368	uce_396_right
427	GTR+G	100	uce_68_core
428	GTR+I+G	579	uce_68_right
429	GTR+G	336	uce_758_left
430	GTR+I+G	293	uce_758_core
431	GTR+I+G	462	uce_758_right
432	GTR+G	58	uce_204_left
433	GTR+G	164	uce_204_right
434	GTR+I+G	267	uce_231_left
435	GTR+G	58	uce_231_core
436	GTR+G	95	uce_231_right
437	GTR+G	178	uce_777_left
438	GTR+I+G	137	uce_777_core
439	GTR+G	272	uce_777_right
440	GTR+G	50	uce_1133_left
441	GTR+I+G	308	uce_1133_core
442	GTR+G	215	uce_1133_right
443	GTR+I+G	895	uce_472_left
444	GTR+G	153	uce_288_right, uce_472_core
445	GTR+G	232	uce_567_right, uce_472_right
446	GTR+G	661	uce_805_left, uce_1062_left
447	GTR+G	522	uce_1062_core
448	GTR+G	141	uce_1062_right
449	GTR+G	64	uce_649_left
450	GTR+G	68	uce_649_core
451	GTR+I+G	512	uce_649_right
452	GTR+I+G	546	uce_1296_left
453	GTR+G	172	uce_1296_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
454	GTR+G	286	uce_1296_right
455	GTR+G	51	uce_1046_left
456	GTR+I+G	304	uce_1046_core
457	GTR+G	318	uce_1046_right
458	GTR+I+G	540	uce_469_left
459	GTR+G	360	uce_469_core
460	GTR+G	165	uce_469_right
461	GTR+G	77	uce_696_left
462	GTR+I+G	184	uce_696_core
463	GTR+G	514	uce_696_right
464	GTR+I+G	532	uce_162_left
465	GTR+G	307	uce_162_core
466	GTR+G	121	uce_162_right
467	GTR+I+G	777	uce_289_left
468	GTR+G	50	uce_289_core
469	GTR+I+G	461	uce_289_right
470	GTR+G	248	uce_648_left
471	GTR+G	218	uce_648_core
472	GTR+I+G	521	uce_648_right
473	GTR+G	385	uce_830_left
474	GTR+I+G	681	uce_23_core, uce_830_core
475	GTR+G	206	uce_830_right
476	GTR+G	276	uce_166_left
477	GTR+I+G	1130	uce_541_right, uce_166_core
478	GTR+G	424	uce_166_right
479	GTR+G	216	uce_1260_left
480	GTR+G	323	uce_1260_core
481	GTR+G	389	uce_1260_right
482	GTR+I+G	181	uce_527_left
483	GTR+I+G	671	uce_527_core
484	GTR+G	92	uce_527_right
485	GTR+I+G	667	uce_276_left
486	GTR	62	uce_276_core
487	GTR+G	255	uce_276_right
488	GTR+G	123	uce_215_left



TABLE S3 I (Continued)

Subset	Best Model	# Sites	Partition Names
489	GTR+G	362	uce_215_core
490	GTR+G	58	uce_215_right
491	GTR+G	85	uce_399_left
492	GTR+G	343	uce_399_core
493	GTR+G	50	uce_399_right
494	GTR+G	104	uce_768_left
495	GTR+G	224	uce_768_core
496	GTR+I+G	606	uce_768_right
497	GTR+G	120	uce_287_left
498	GTR+I+G	708	uce_287_core, uce_526_core
499	GTR+G	144	uce_287_right
500	GTR+G	207	uce_1001_left
501	GTR+I+G	387	uce_1001_core
502	GTR+I+G	157	uce_1001_right
503	GTR+I+G	256	uce_924_left
504	GTR+G	230	uce_924_core
505	GTR+I+G	810	uce_924_right
506	GTR+G	164	uce_180_left
507	GTR+I+G	250	uce_180_core
508	GTR+I+G	369	uce_180_right
509	GTR+G	497	uce_567_left
510	GTR+G	50	uce_567_core
511	GTR+G	60	uce_971_left
512	GTR+I+G	473	uce_971_core
513	GTR+G	111	uce_971_right
514	GTR+I+G	572	uce_238_left
515	GTR+G	418	uce_238_core
516	GTR+G	93	uce_238_right
517	GTR+I+G	459	uce_98_left
518	GTR+G	82	uce_98_core
519	GTR+G	62	uce_98_right
520	GTR+I+G	896	uce_749_left
521	GTR+G	51	uce_749_core
522	GTR+I+G	216	uce_749_right
523	GTR+G	312	uce_1280_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
524	GTR+I+G	227	uce_1280_core
525	GTR+G	109	uce_1280_right
526	GTR+G	56	uce_734_left
527	GTR+G	54	uce_734_core
528	GTR+I+G	627	uce_734_right
529	GTR+I+G	293	uce_1191_left
530	GTR+I+G	320	uce_1191_core
531	GTR+G	370	uce_1191_right
532	GTR+I+G	575	uce_1154_left
533	GTR+G	343	uce_1154_core
534	GTR+G	135	uce_1154_right
535	GTR+G	73	uce_990_left
536	GTR+I+G	367	uce_990_core
537	GTR+G	169	uce_990_right
538	GTR+G	602	uce_34_left
539	GTR+I+G	258	uce_34_core
540	GTR+G	393	uce_34_right
541	GTR+I+G	493	uce_1113_left
542	GTR+I+G	398	uce_1113_core
543	GTR+I+G	204	uce_1113_right
544	GTR+G	179	uce_1287_left
545	GTR+I+G	818	uce_1287_core
546	GTR+G	65	uce_1287_right
547	GTR+G	301	uce_219_left
548	GTR+I+G	1281	uce_219_core, uce_67_core, uce_1064_right
549	GTR+G	175	uce_219_right
550	GTR+G	96	uce_187_left
551	GTR	67	uce_187_core
552	GTR+I+G	810	uce_187_right, uce_1279_core
553	GTR+G	291	uce_1027_left
554	GTR+I+G	643	uce_1027_core
555	GTR+G	141	uce_1027_right
556	GTR+G	283	uce_67_left
557	GTR+G	450	uce_67_right
558	GTR+G	146	uce_1209_core





**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
559	GTR+I+G	226	uce_1209_right
560	GTR+G	406	uce_1087_left
561	GTR	53	uce_1087_core
562	GTR+I+G	668	uce_1087_right
563	GTR+G	481	uce_750_left
564	GTR+G	231	uce_750_core
565	GTR+G	176	uce_750_right
566	GTR+I+G	455	uce_864_left
567	GTR+G	157	uce_864_core
568	GTR	53	uce_864_right
569	GTR+G	63	uce_577_left
570	GTR+I+G	353	uce_577_core
571	GTR+I+G	339	uce_577_right
572	GTR+I+G	772	uce_449_left
573	GTR+G	197	uce_449_core
574	GTR+I+G	171	uce_449_right
575	GTR+G	189	uce_1064_left
576	GTR+G	199	uce_1064_core
577	GTR+G	75	uce_321_left
578	GTR+G	92	uce_321_core
579	GTR+G	229	uce_321_right
580	GTR+I+G	283	uce_855_left
581	GTR	50	uce_855_core
582	GTR+I+G	850	uce_855_right
583	GTR+G	153	uce_364_left
584	GTR+I+G	331	uce_364_core
585	GTR+G	333	uce_364_right
586	GTR+G	435	uce_672_left
587	GTR+I+G	156	uce_672_core
588	GTR+G	412	uce_672_right
589	GTR+I+G	547	uce_1324_left
590	GTR+G	517	uce_1324_core
591	GTR+I+G	113	uce_1324_right
592	GTR+G	61	uce_1242_left
593	GTR+G	375	uce_1242_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
594	GTR+G	646	uce_1242_right
595	GTR+G	106	uce_932_left
596	GTR+G	293	uce_932_core
597	GTR+G	555	uce_932_right
598	GTR+I+G	741	uce_815_left
599	GTR+G	200	uce_815_core
600	GTR+I+G	145	uce_815_right
601	GTR+I+G	585	uce_653_left
602	GTR+G	61	uce_653_core
603	GTR+G	111	uce_653_right
604	GTR+I+G	628	uce_408_left
605	GTR+I+G	142	uce_408_core
606	GTR+I+G	212	uce_665_left
607	GTR+G	327	uce_665_core
608	GTR+I+G	657	uce_665_right
609	GTR+G	63	uce_175_left
610	GTR+G	232	uce_175_core
611	GTR+I+G	1154	uce_934_core, uce_175_right
612	GTR+G	231	uce_588_left
613	GTR+G	545	uce_588_core
614	GTR+G	108	uce_588_right
615	GTR+G	164	uce_176_left
616	GTR+G	121	uce_176_core
617	GTR+I+G	713	uce_176_right
618	GTR+G	229	uce_460_left
619	GTR+I+G	305	uce_460_core
620	GTR+G	363	uce_460_right
621	GTR+G	105	uce_1168_left
622	GTR+G	290	uce_1168_core
623	GTR+G	130	uce_1168_right
624	GTR+G	185	uce_834_left
625	GTR+G	55	uce_834_core
626	GTR+I+G	214	uce_834_right
627	GTR+G	424	uce_1032_left
628	GTR+I+G	355	uce_1032_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
629	GTR+G	399	uce_1032_right
630	GTR+G	610	uce_23_left
631	GTR+G	279	uce_23_right
632	GTR+G	192	uce_541_left
633	GTR+G	66	uce_541_core
634	GTR+G	90	uce_192_left
635	GTR+I+G	448	uce_192_core
636	GTR+G	81	uce_192_right
637	GTR+G	111	uce_1192_left
638	GTR+G	108	uce_1192_core
639	GTR+G	219	uce_327_left
640	GTR+I+G	754	uce_327_core
641	GTR+G	341	uce_327_right
642	GTR+G	69	uce_1044_left
643	GTR+I+G	220	uce_1044_core
644	GTR+G	157	uce_1044_right
645	GTR	65	uce_358_left
646	GTR+G	352	uce_358_core
647	GTR+G	409	uce_358_right
648	GTR+G	268	uce_1277_left
649	GTR+I+G	335	uce_1277_core
650	GTR+G	249	uce_1277_right
651	GTR+I+G	620	uce_865_left
652	GTR+G	94	uce_865_core
653	GTR+G	115	uce_865_right
654	GTR	50	uce_267_left
655	GTR+G	82	uce_267_core
656	GTR+I+G	410	uce_267_right
657	GTR+I+G	501	uce_590_left
658	GTR+G	398	uce_590_core
659	GTR+G	50	uce_590_right
660	GTR+I+G	444	uce_565_left
661	GTR+I+G	277	uce_565_core
662	GTR+G	398	uce_565_right
663	GTR+G	317	uce_569_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
664	GTR+G	340	uce_569_core
665	GTR+I+G	736	uce_569_right
666	GTR+G	92	uce_340_left
667	GTR+G	152	uce_340_core
668	GTR+I+G	878	uce_674_left
669	GTR+G	60	uce_674_core
670	GTR+G	114	uce_674_right
671	GTR+G	89	uce_705_left
672	GTR+I+G	490	uce_705_core
673	GTR+G	87	uce_705_right
674	GTR+I+G	148	uce_695_left
675	GTR+I+G	562	uce_695_core
676	GTR+G	186	uce_695_right
677	GTR	53	uce_1038_left
678	GTR+G	66	uce_1038_core
679	GTR+I+G	440	uce_1038_right
680	GTR+G	206	uce_201_left
681	GTR+I+G	312	uce_201_core
682	GTR+G	584	uce_201_right, uce_952_right
683	GTR+G	153	uce_881_core
684	GTR+I+G	390	uce_881_right
685	GTR+G	138	uce_693_left
686	GTR+I+G	857	uce_320_right, uce_693_core
687	GTR+G	50	uce_693_right
688	GTR+G	291	uce_1200_left
689	GTR+G	85	uce_1200_core
690	GTR+G	629	uce_1200_right
691	GTR+G	401	uce_252_left
692	GTR+I+G	484	uce_252_core
693	GTR+G	85	uce_252_right
694	GTR+G	215	uce_861_left
695	GTR+I+G	529	uce_861_core
696	GTR+G	53	uce_861_right
697	GTR+G	64	uce_332_left
698	GTR+G	156	uce_332_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
699	GTR+G	253	uce_1184_left
700	GTR+I+G	617	uce_1184_core
701	GTR+G	62	uce_1184_right
702	GTR+G	82	uce_108_left
703	GTR+G	90	uce_108_right
704	GTR+G	132	uce_580_left
705	GTR+I+G	275	uce_580_core
706	GTR+G	50	uce_580_right
707	GTR+G	81	uce_245_left
708	GTR+G	84	uce_245_core
709	GTR+G	356	uce_245_right
710	GTR+G	50	uce_346_left
711	GTR+I+G	473	uce_346_core
712	GTR+G	60	uce_346_right
713	GTR+G	189	uce_701_left
714	GTR+G	216	uce_701_core
715	GTR+I+G	435	uce_701_right
716	GTR+G	192	uce_442_left
717	GTR+G	175	uce_442_core
718	GTR+I+G	662	uce_442_right
719	GTR+I+G	615	uce_540_left
720	GTR+G	341	uce_540_core
721	GTR+G	327	uce_1175_right, uce_540_right
722	GTR+G	216	uce_944_left
723	GTR+G	327	uce_944_core
724	GTR+I+G	402	uce_944_right
725	GTR+G	359	uce_952_left
726	GTR+I+G	370	uce_952_core
727	GTR+I+G	167	uce_243_left
728	GTR+G	71	uce_243_core
729	GTR+I+G	70	uce_243_right
730	GTR+G	231	uce_1139_left
731	GTR+I+G	312	uce_1139_core
732	GTR+G	270	uce_1139_right
733	GTR+I+G	146	uce_1061_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
734	GTR+G	118	uce_1061_core
735	GTR+I+G	516	uce_1061_right
736	GTR+I+G	290	uce_140_left
737	GTR+G	50	uce_140_core
738	GTR+G	228	uce_140_right
739	GTR+G	50	uce_456_left
740	GTR+G	420	uce_456_core
741	GTR+I+G	476	uce_456_right
742	GTR+G	76	uce_797_left
743	GTR+G	174	uce_797_core
744	GTR+I+G	204	uce_797_right
745	GTR+G	50	uce_981_left
746	GTR+G	324	uce_981_core
747	GTR+G	168	uce_981_right
748	GTR+G	86	uce_394_left
749	GTR+I+G	685	uce_394_core
750	GTR+G	260	uce_394_right
751	GTR+G	291	uce_363_left
752	GTR+I+G	314	uce_363_right
753	GTR+G	170	uce_884_left
754	GTR+I+G	70	uce_884_core
755	GTR+G	391	uce_884_right
756	GTR+G	97	uce_170_left
757	GTR+G	227	uce_170_core
758	GTR+I+G	795	uce_170_right
759	GTR+G	180	uce_420_left
760	GTR+I+G	499	uce_420_core
761	GTR+G	535	uce_420_right
762	GTR+G	358	uce_142_left
763	GTR+G	182	uce_142_core
764	GTR+G	396	uce_142_right
765	GTR	53	uce_1160_left
766	GTR+I+G	187	uce_1160_core
767	GTR+I+G	545	uce_1160_right
768	GTR+I+G	82	uce_529_left



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
769	GTR+G	301	uce_529_core
770	GTR+G	263	uce_529_right
771	GTR+G	489	uce_802_left
772	GTR+G	183	uce_802_core
773	GTR+G	221	uce_802_right
774	GTR+I+G	443	uce_1318_left
775	GTR+G	57	uce_1318_core
776	GTR+G	291	uce_1318_right
777	GTR+G	57	uce_518_left
778	GTR+G	296	uce_518_core
779	GTR+G	407	uce_518_right
780	GTR+I+G	751	uce_706_left
781	GTR+G	56	uce_706_core
782	GTR+G	156	uce_706_right
783	GTR+G	240	uce_214_left
784	GTR+G	349	uce_214_core
785	GTR+G	109	uce_214_right
786	GTR+I+G	551	uce_731_left
787	GTR+G	50	uce_731_core
788	GTR+G	106	uce_731_right
789	GTR+I+G	259	uce_747_left
790	GTR+G	176	uce_747_core
791	GTR+G	358	uce_747_right
792	GTR+G	100	uce_668_left
793	GTR+G	513	uce_668_core
794	GTR+I+G	163	uce_668_right
795	GTR+G	393	uce_493_left
796	GTR+G	194	uce_493_core
797	GTR+G	111	uce_493_right
798	GTR+G	249	uce_723_left
799	GTR+G	228	uce_723_core
800	GTR+G	280	uce_723_right
801	GTR+G	59	uce_808_left
802	GTR+G	335	uce_808_right
803	GTR+G	70	uce_572_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
804	GTR+I+G	327	uce_572_core
805	GTR+G	421	uce_572_right
806	GTR+I+G	572	uce_1249_left
807	GTR+G	286	uce_1249_core
808	GTR	113	uce_1249_right
809	GTR+G	478	uce_288_left
810	GTR+G	206	uce_288_core
811	GTR+I+G	142	uce_1042_left
812	GTR+I+G	599	uce_1042_core
813	GTR+G	201	uce_1042_right
814	GTR+G	282	uce_63_left
815	GTR+G	120	uce_63_core
816	GTR+G	414	uce_63_right
817	GTR+G	163	uce_992_left
818	GTR+G	171	uce_992_core
819	GTR+I+G	671	uce_992_right
820	GTR+I+G	78	uce_1169_left
821	GTR+G	54	uce_1169_core
822	GTR+G	69	uce_1169_right
823	GTR+G	378	uce_435_left
824	GTR+I+G	454	uce_435_core
825	GTR+G	226	uce_435_right
826	GTR+G	242	uce_709_left
827	GTR+G	152	uce_709_core
828	GTR+G	508	uce_709_right
829	GTR+G	100	uce_1243_left
830	GTR+I+G	512	uce_1243_core
831	GTR+G	186	uce_1243_right
832	GTR+G	52	uce_910_left
833	GTR+G	324	uce_910_core
834	GTR+G	494	uce_910_right
835	GTR+G	636	uce_74_left
836	GTR	70	uce_74_core
837	GTR+G	215	uce_74_right
838	GTR+G	133	uce_376_left





TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
839	GTR+I+G	593	uce_376_core
840	GTR+G	177	uce_376_right
841	GTR+G	139	uce_570_left
842	GTR+G	359	uce_570_core
843	GTR+I+G	161	uce_570_right
844	GTR+G	206	uce_356_left
845	GTR+I+G	171	uce_356_core
846	GTR+G	123	uce_356_right
847	GTR+G	97	uce_1263_left
848	GTR+I+G	379	uce_1263_core
849	GTR+G	196	uce_1263_right
850	GTR+G	308	uce_414_left
851	GTR+I+G	470	uce_414_core
852	GTR+I+G	324	uce_414_right
853	GTR+G	50	uce_537_left
854	GTR+I+G	367	uce_537_core
855	GTR+I+G	492	uce_537_right
856	GTR+I+G	194	uce_51_left
857	GTR	211	uce_51_core
858	GTR+I+G	209	uce_51_right
859	GTR+G	145	uce_1105_left
860	GTR+G	121	uce_1105_core
861	GTR+I+G	617	uce_1105_right
862	GTR+G	168	uce_813_left
863	GTR+G	274	uce_813_core
864	GTR+I+G	509	uce_813_right
865	GTR+G	348	uce_70_core
866	GTR+I+G	655	uce_70_right
867	GTR+I+G	703	uce_503_left
868	GTR+G	345	uce_503_core
869	GTR+G	145	uce_503_right
870	GTR+G	189	uce_383_left
871	GTR+I+G	598	uce_383_core
872	GTR+G	65	uce_383_right
873	GTR+I+G	356	uce_461_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
874	GTR+G	228	uce_461_core
875	GTR+I+G	181	uce_461_right
876	GTR+G	364	uce_348_left
877	GTR+I+G	475	uce_348_core
878	GTR+G	137	uce_348_right
879	GTR+I+G	860	uce_84_left
880	GTR+G	151	uce_84_core
881	GTR+G	128	uce_84_right
882	GTR+I+G	830	uce_374_left
883	GTR+I+G	342	uce_374_core
884	GTR+G	71	uce_374_right
885	GTR+G	129	uce_203_left
886	GTR+G	94	uce_203_core
887	GTR+I+G	983	uce_203_right
888	GTR+I+G	219	uce_307_left
889	GTR+I+G	278	uce_307_core
890	GTR+I+G	523	uce_307_right
891	GTR+G	168	uce_1066_left
892	GTR+G	538	uce_1066_right
893	GTR+G	240	uce_310_left
894	GTR+I+G	507	uce_310_core
895	GTR+G	205	uce_310_right
896	GTR+G	424	uce_545_left
897	GTR+G	309	uce_545_core
898	GTR+G	288	uce_545_right
899	GTR+G	552	uce_416_left
900	GTR+G	126	uce_416_core
901	GTR+G	169	uce_416_right
902	GTR+G	432	uce_663_left
903	GTR+I+G	182	uce_663_core
904	GTR+G	290	uce_663_right
905	GTR+I+G	471	uce_1281_left
906	GTR+G	436	uce_1281_core
907	GTR+G	69	uce_1281_right
908	GTR+G	283	uce_149_left



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
909	GTR+I+G	440	uce_149_core
910	GTR+G	200	uce_149_right
911	GTR+I+G	388	uce_651_left
912	GTR+G	154	uce_651_core
913	GTR+G	214	uce_651_right
914	GTR+G	175	uce_174_left
915	GTR+I+G	297	uce_174_core
916	GTR+G	239	uce_174_right
917	GTR+G	526	uce_622_left
918	GTR+G	251	uce_622_core
919	GTR+I+G	236	uce_622_right
920	GTR+G	140	uce_1234_left
921	GTR+G	50	uce_1234_core
922	GTR+I+G	180	uce_1234_right
923	GTR+G	180	uce_320_left
924	GTR+G	50	uce_320_core
925	GTR+I+G	814	uce_717_left
926	GTR+G	206	uce_717_core
927	GTR+G	104	uce_717_right
928	GTR+G	1030	uce_64_left
929	GTR+G	107	uce_64_core
930	GTR+G	202	uce_64_right
931	GTR+G	276	uce_494_left
932	GTR+I+G	345	uce_494_core
933	GTR+G	95	uce_494_right
934	GTR+G	324	uce_88_left
935	GTR+G	300	uce_88_core
936	GTR+G	232	uce_88_right
937	GTR+G	119	uce_1040_left
938	GTR+I+G	483	uce_1040_core
939	GTR+G	179	uce_1040_right
940	GTR+G	383	uce_444_left
941	GTR+G	547	uce_444_core
942	GTR+G	88	uce_444_right
943	GTR+G	88	uce_196_left



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
944	GTR	121	uce_196_core
945	GTR+I+G	435	uce_196_right
946	GTR+I+G	269	uce_532_left
947	GTR+I+G	185	uce_532_core
948	GTR+G	338	uce_532_right
949	GTR+I+G	618	uce_160_left
950	GTR+I+G	138	uce_160_core
951	GTR+I+G	364	uce_160_right
952	GTR+I+G	226	uce_556_left
953	GTR+G	197	uce_556_core
954	GTR+G	411	uce_556_right
955	GTR+G	93	uce_351_left
956	GTR+G	324	uce_351_core
957	GTR+I+G	817	uce_351_right
958	GTR+G	182	uce_227_left
959	GTR+I+G	265	uce_227_core
960	GTR+G	212	uce_227_right
961	GTR+G	69	uce_682_left
962	GTR+I+G	336	uce_682_core
963	GTR+G	716	uce_682_right
964	GTR+I+G	305	uce_1069_left
965	GTR+I+G	205	uce_1069_core
966	GTR+G	187	uce_1069_right
967	GTR+G	104	uce_402_left
968	GTR+G	232	uce_402_core
969	GTR+G	375	uce_402_right
970	GTR+G	150	uce_833_left
971	GTR+I+G	590	uce_833_core
972	GTR+G	177	uce_833_right
973	GTR+I+G	770	uce_450_core, uce_561_left
974	GTR+G	50	uce_561_core
975	GTR+I+G	912	uce_561_right
976	GTR+G	306	uce_526_left
977	GTR+G	224	uce_526_right
978	GTR+G	546	uce_30_left



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
979	GTR+I+G	507	uce_30_core
980	GTR+G	373	uce_30_right
981	GTR+G	298	uce_1273_left
982	GTR+I+G	619	uce_1273_core
983	GTR+G	81	uce_1273_right
984	GTR+G	158	uce_1097_left
985	GTR+I+G	478	uce_1097_core
986	GTR+G	87	uce_1097_right
987	GTR+G	78	uce_832_left
988	GTR+I+G	456	uce_832_core
989	GTR+G	205	uce_832_right
990	GTR+G	244	uce_118_left
991	GTR+I+G	627	uce_118_core, uce_860_core
992	GTR+G	324	uce_118_right
993	GTR+G	80	uce_536_left
994	GTR+G	99	uce_536_core
995	GTR+I+G	244	uce_536_right
996	GTR+I+G	204	uce_646_left
997	GTR+I+G	379	uce_646_core
998	GTR+G	337	uce_646_right
999	GTR+G	200	uce_792_left
1000	GTR+I+G	143	uce_792_core
1001	GTR+I+G	474	uce_792_right
1002	GTR+G	273	uce_980_left
1003	GTR+G	116	uce_980_core
1004	GTR+I+G	706	uce_980_right
1005	GTR+G	51	uce_353_left
1006	GTR+I+G	394	uce_353_core
1007	GTR+G	436	uce_353_right
1008	GTR+G	134	uce_1293_left
1009	GTR+I+G	315	uce_1293_core
1010	GTR+G	284	uce_1293_right
1011	GTR+I+G	773	uce_282_left
1012	GTR+G	66	uce_282_core
1013	GTR+G	108	uce_282_right



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
1014	GTR+G	223	uce_549_left
1015	GTR+I+G	372	uce_1018_left, uce_549_core
1016	GTR+I+G	330	uce_549_right
1017	GTR+G	50	uce_762_left
1018	GTR+G	150	uce_762_core
1019	GTR+I+G	311	uce_762_right
1020	GTR+G	177	uce_1007_left
1021	GTR+G	338	uce_1007_core
1022	GTR+I+G	424	uce_1007_right
1023	GTR+G	232	uce_1269_left
1024	GTR+I+G	478	uce_1269_core
1025	GTR+G	345	uce_1269_right
1026	GTR+I+G	715	uce_968_left
1027	GTR+G	137	uce_968_core
1028	GTR+G	312	uce_968_right
1029	GTR+G	151	uce_573_left
1030	GTR+G	70	uce_573_core
1031	GTR+I+G	278	uce_573_right
1032	GTR+G	92	uce_280_left
1033	GTR+G	51	uce_280_core
1034	GTR+I+G	431	uce_280_right
1035	GTR+I+G	440	uce_870_left
1036	GTR+G	191	uce_870_core
1037	GTR+G	357	uce_870_right
1038	GTR+G	269	uce_996_left
1039	GTR+G	194	uce_996_core
1040	GTR+G	628	uce_996_right
1041	GTR+G	426	uce_368_left
1042	GTR+I+G	652	uce_368_core
1043	GTR+G	122	uce_368_right
1044	GTR+G	190	uce_982_left
1045	GTR+I+G	944	uce_418_core, uce_982_core
1046	GTR+G	317	uce_982_right
1047	GTR+G	139	uce_411_left
1048	GTR+G	136	uce_411_core



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
1049	GTR+I+G	507	uce_411_right
1050	GTR+G	149	uce_934_left
1051	GTR+G	214	uce_934_right
1052	GTR+I+G	567	uce_691_left
1053	GTR+G	157	uce_691_core
1054	GTR+G	387	uce_691_right
1055	GTR+G	134	uce_666_left
1056	GTR+I+G	387	uce_666_core
1057	GTR+G	200	uce_666_right
1058	GTR+G	317	uce_819_left
1059	GTR+G	251	uce_819_core
1060	GTR+G	244	uce_819_right
1061	GTR+G	210	uce_852_left
1062	GTR+I+G	603	uce_852_core
1063	GTR+G	179	uce_852_right
1064	GTR+I+G	133	uce_92_all
1065	GTR+G	205	uce_566_left
1066	GTR+I+G	350	uce_566_core
1067	GTR+G	330	uce_566_right
1068	GTR+I+G	267	uce_1238_left
1069	GTR+G	66	uce_1238_core
1070	GTR+G	401	uce_1238_right
1071	GTR+I+G	778	uce_191_left
1072	GTR+G	160	uce_191_core
1073	GTR+G	129	uce_191_right
1074	GTR+G	394	uce_1108_left
1075	GTR+I+G	230	uce_1108_core
1076	GTR+G	182	uce_1108_right
1077	GTR+G	420	uce_699_left
1078	GTR+G	352	uce_699_core
1079	GTR	87	uce_699_right
1080	GTR+G	310	uce_47_core
1081	GTR+I+G	315	uce_47_right
1082	GTR+I+G	599	uce_915_left
1083	GTR+G	60	uce_915_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
1084	GTR+I+G	345	uce_915_right
1085	GTR+G	108	uce_194_left
1086	GTR+I+G	216	uce_194_core
1087	GTR+G	396	uce_194_right
1088	GTR+G	194	uce_908_left
1089	GTR+I+G	666	uce_908_core
1090	GTR+G	109	uce_908_right
1091	GTR+G	64	uce_1282_left
1092	GTR+I+G	340	uce_1282_core
1093	GTR+G	517	uce_1282_right
1094	GTR+G	98	uce_418_left
1095	GTR+G	157	uce_418_right
1096	GTR+G	51	uce_167_left
1097	GTR+I+G	480	uce_167_core
1098	GTR+I+G	611	uce_167_right
1099	GTR+I+G	833	uce_476_left
1100	GTR+G	65	uce_476_core
1101	GTR+I+G	66	uce_476_right
1102	GTR+G	148	uce_607_left
1103	GTR+I+G	426	uce_607_core
1104	GTR+G	200	uce_607_right
1105	GTR+I+G	140	uce_535_left
1106	GTR+G	251	uce_535_core
1107	GTR+I+G	741	uce_535_right
1108	GTR+I+G	853	uce_1219_left
1109	GTR+G	111	uce_1219_core
1110	GTR+G	81	uce_1219_right
1111	GTR+I+G	634	uce_126_left
1112	GTR+G	290	uce_126_core
1113	GTR+G	102	uce_126_right
1114	GTR+G	128	uce_283_left
1115	GTR+G	265	uce_283_core
1116	GTR+I+G	718	uce_283_right
1117	GTR+G	111	uce_624_left
1118	GTR+I+G	629	uce_624_core





**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
1119	GTR+G	491	uce_624_right
1120	GTR+G	147	uce_509_left
1121	GTR+I+G	527	uce_509_core
1122	GTR+I+G	519	uce_509_right
1123	GTR+G	388	uce_502_left
1124	GTR+G	200	uce_502_right
1125	GTR+G	293	uce_697_left
1126	GTR+I+G	665	uce_697_core
1127	GTR+G	87	uce_697_right
1128	GTR+I+G	383	uce_1111_left
1129	GTR+G	151	uce_1111_core
1130	GTR+G	404	uce_1111_right
1131	GTR	55	uce_446_left
1132	GTR+G	136	uce_446_core
1133	GTR+I+G	701	uce_446_right
1134	GTR+G	153	uce_450_left
1135	GTR+G	236	uce_450_right
1136	GTR+G	372	uce_975_left
1137	GTR+G	352	uce_975_core
1138	GTR+G	70	uce_975_right
1139	GTR+G	109	uce_805_core
1140	GTR+I+G	794	uce_805_right
1141	GTR+I+G	360	uce_391_left
1142	GTR+G	163	uce_391_core
1143	GTR+I+G	187	uce_391_right
1144	GTR+G	325	uce_1279_left
1145	GTR+G	353	uce_1279_right
1146	GTR+G	296	uce_568_left
1147	GTR+G	121	uce_568_core
1148	GTR+G	626	uce_568_right
1149	GTR+G	573	uce_1276_left
1150	GTR+I+G	271	uce_1276_core
1151	GTR+G	304	uce_1276_right
1152	GTR+G	384	uce_1186_left
1153	GTR+G	60	uce_1186_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
1154	GTR+I+G	632	uce_1186_right
1155	GTR+G	895	uce_504_left
1156	GTR+G	53	uce_504_core
1157	GTR+G	157	uce_504_right
1158	GTR+I+G	620	uce_883_left
1159	GTR+G	127	uce_883_core
1160	GTR+G	144	uce_883_right
1161	GTR+G	234	uce_1175_left
1162	GTR+I+G	373	uce_1175_core
1163	GTR+G	64	uce_757_core
1164	GTR+G	322	uce_757_right
1165	GTR+I+G	1414	uce_1326_left, uce_151_left
1166	GTR	51	uce_151_core
1167	GTR+G	276	uce_151_right
1168	GTR+I+G	346	uce_46_left
1169	GTR	90	uce_46_core
1170	GTR+I+G	63	uce_46_right
1171	GTR+G	488	uce_1232_left
1172	GTR+G	344	uce_1232_core
1173	GTR+G	424	uce_1232_right
1174	GTR+G	225	uce_957_left
1175	GTR+I+G	435	uce_957_core
1176	GTR+G	74	uce_957_right
1177	GTR+G	76	uce_1228_left
1178	GTR+I+G	594	uce_1228_core
1179	GTR+G	300	uce_1228_right
1180	GTR+G	362	uce_891_left
1181	GTR+I+G	296	uce_891_core
1182	GTR+G	245	uce_891_right
1183	GTR+G	50	uce_1018_core
1184	GTR+I+G	702	uce_1018_right
1185	GTR+I+G	765	uce_42_left
1186	GTR+G	323	uce_42_core
1187	GTR+G	242	uce_42_right
1188	GTR+G	57	uce_1054_left



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
1189	GTR+I+G	114	uce_1054_core
1190	GTR+I+G	246	uce_1054_right
1191	GTR+G	273	uce_1020_left
1192	GTR+G	80	uce_1020_core
1193	GTR+I+G	168	uce_1020_right
1194	GTR+G	69	uce_251_left
1195	GTR+G	167	uce_251_core
1196	GTR+I+G	953	uce_251_right
1197	GTR+I+G	665	uce_103_left
1198	GTR+G	203	uce_103_core
1199	GTR+G	259	uce_103_right
1200	GTR+I+G	422	uce_643_left
1201	GTR+G	140	uce_643_core
1202	GTR	50	uce_643_right
1203	GTR+I+G	729	uce_520_left
1204	GTR+G	155	uce_520_core
1205	GTR+I+G	282	uce_520_right
1206	GTR+G	208	uce_508_left
1207	GTR+G	97	uce_508_core
1208	GTR+G	143	uce_508_right
1209	GTR+I+G	537	uce_598_left
1210	GTR+G	172	uce_598_core
1211	GTR+I+G	357	uce_598_right
1212	GTR+I+G	564	uce_636_left
1213	GTR+I+G	274	uce_636_core
1214	GTR+I+G	389	uce_636_right
1215	GTR+I+G	461	uce_516_left
1216	GTR+I+G	258	uce_516_core
1217	GTR+G	463	uce_516_right
1218	GTR+G	308	uce_787_left
1219	GTR+G	214	uce_787_core
1220	GTR+G	540	uce_787_right
1221	GTR+G	73	uce_375_left
1222	GTR+G	338	uce_375_core
1223	GTR	59	uce_375_right



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
1224	GTR+G	157	uce_152_left
1225	GTR+I+G	329	uce_152_core
1226	GTR+G	189	uce_152_right
1227	GTR+G	147	uce_220_left
1228	GTR+G	185	uce_220_core
1229	GTR+I+G	572	uce_220_right
1230	GTR+G	275	uce_431_left
1231	GTR+G	405	uce_431_right
1232	GTR+I+G	165	uce_835_left
1233	GTR+I+G	390	uce_835_core
1234	GTR+I+G	351	uce_835_right
1235	GTR+G	204	uce_836_left
1236	GTR+I+G	398	uce_836_core
1237	GTR+I+G	113	uce_836_right
1238	GTR+G	164	uce_447_left
1239	GTR+G	67	uce_447_core
1240	GTR+I+G	334	uce_447_right
1241	GTR+G	290	uce_1270_left
1242	GTR+G	250	uce_1270_core
1243	GTR+G	367	uce_1270_right
1244	GTR+G	84	uce_247_left
1245	GTR+I+G	431	uce_247_core
1246	GTR+I+G	365	uce_1053_left
1247	GTR+G	163	uce_1053_core
1248	GTR+G	192	uce_1053_right
1249	GTR+G	430	uce_428_left
1250	GTR+I+G	276	uce_428_core
1251	GTR+G	66	uce_428_right
1252	GTR+G	64	uce_185_left
1253	GTR+G	64	uce_185_core
1254	GTR+I+G	815	uce_185_right
1255	GTR+G	64	uce_718_left
1256	GTR+I+G	418	uce_718_core
1257	GTR+G	275	uce_718_right
1258	GTR+G	52	uce_960_left



**TABLE S3 I** (Continued)

Subset	Best Model	# Sites	Partition Names
1259	GTR+G	68	uce_960_core
1260	GTR+G	992	uce_960_right
1261	GTR+I+G	134	uce_116_left
1262	GTR+G	398	uce_116_right
1263	GTR+G	67	uce_344_left
1264	GTR+G	154	uce_344_core
1265	GTR+I+G	179	uce_278_left
1266	GTR+G	171	uce_278_core
1267	GTR+I+G	837	uce_278_right
1268	GTR+I+G	272	uce_274_left
1269	GTR+I+G	89	uce_274_core
1270	GTR+I+G	281	uce_274_right
1271	GTR+G	165	uce_769_left
1272	GTR+I+G	263	uce_769_core
1273	GTR+G	152	uce_769_right
1274	GTR+G	64	uce_863_left
1275	GTR+G	365	uce_863_core
1276	GTR+I+G	623	uce_863_right
1277	GTR+G	50	uce_13_left
1278	GTR+G	227	uce_13_core
1279	GTR+G	172	uce_13_right
1280	GTR+I+G	746	uce_99_left
1281	GTR+G	50	uce_99_core
1282	GTR+G	72	uce_99_right
1283	GTR+G	105	uce_38_left
1284	GTR+I+G	322	uce_38_core
1285	GTR+G	269	uce_38_right
1286	GTR+I+G	683	uce_1316_left
1287	GTR+G	88	uce_1316_core
1288	GTR+G	208	uce_1316_right
1289	GTR+G	243	uce_120_left
1290	GTR+G	393	uce_120_core
1291	GTR+G	390	uce_120_right
1292	GTR+G	132	uce_143_left
1293	GTR+I+G	706	uce_143_core



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
1294	GTR+G	232	uce_143_right
1295	GTR+G	117	uce_25_left
1296	GTR+G	198	uce_25_core
1297	GTR+I+G	608	uce_25_right
1298	GTR+G	162	uce_1326_core
1299	GTR+G	76	uce_1326_right
1300	GTR+I+G	393	uce_319_left
1301	GTR+G	274	uce_319_core
1302	GTR+I+G	186	uce_319_right
1303	GTR+I+G	609	uce_671_left
1304	GTR+G	183	uce_671_core
1305	GTR+G	112	uce_671_right
1306	GTR+G	302	uce_860_left
1307	GTR+G	110	uce_860_right
1308	GTR+G	356	uce_199_core
1309	GTR+G	154	uce_199_right
1310	GTR+G	261	uce_1080_left
1311	GTR+I+G	427	uce_1080_core
1312	GTR+G	70	uce_1080_right
1313	GTR+G	99	uce_795_left
1314	GTR+I+G	565	uce_795_core
1315	GTR+G	368	uce_795_right
1316	GTR+I+G	592	16s
1317	GTR+I+G	201	COIa
1318	GTR+I+G	201	COIb
1319	GTR+I+G	201	COIc
1320	GTR+G	235	ENCa
1321	GTR+I+G	235	ENCb
1322	GTR+G	235	ENCc
1323	GTR+I+G	275	GLYT <sub>a</sub>
1324	GTR+I+G	275	GLYT <sub>b</sub>
1325	GTR+G	275	GLYT <sub>c</sub>
1326	GTR+I+G	110	HH3a
1327	GTR	110	HH3b
1328	GTR+G	110	HH3c



TABLE S3 | (Continued)

Subset	Best Model	# Sites	Partition Names
1329	GTR+I+G	200	PLAGL2a
1330	GTR+G	200	PLAGL2b
1331	GTR+G	200	PLAGL2c
1332	GTR+I+G	419	RAG1a
1333	GTR+G	419	RAG1c
1334	GTR+I+G	210	SH3PX3a
1335	GTR+I+G	210	SH3PX3b
1336	GTR+G	210	SH3PX3c
1337	GTR+I+G	286	SREB2a
1338	GTR+I+G	286	SREB2b
1339	GTR+G	286	SREB2c
1340	GTR+I+G	209	TBR1a
1341	GTR+I+G	209	TBR1b
1342	GTR+I+G	209	TBR1c



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