Appendix 2. AIC_c model ranks and Δ AIC_c values for models selected under the alternative hLRT, BIC, and DT methods. Values were obtained from the weighted AIC_c output generated by Modeltest3.7. Missing data indicates that the given method selected the same model as the AIC_c.

Data Set	1	2	3
TreeBASE ID	S1266/M2209	S685/M1075	S388/M542
hLRT model	14 / 16.970	9 / 18.008	-
BIC model	8 / 5.207	2 / 2.046	-
DT model	5 / 2.950	2 / 2.046	19 / 395.523
Data Set	4	5	6
TreeBASE ID	S904/M1486	S631/M977	S1067/M1819
hLRT model	-	4 / 5.920	4 / 1.718
BIC model	-	4 / 5.920	3 / 1.644
DT model	-	4 / 5.920	16 / 8.911
Data Set	7	8	9
TreeBASE ID	S769/M1216	S1038/M1767	S320/M391
TreeBASE ID hLRT model	S769/M1216 9 / 10.912	S1038/M1767 6 / 1.671	S320/M391
			S320/M391 - -
hLRT model	9 / 10.912	6 / 1.671	S320/M391 - -
hLRT model BIC model	9 / 10.912 11 / 12.859	6 / 1.671 6 / 1.671	S320/M391 - -
hLRT model BIC model	9 / 10.912 11 / 12.859	6 / 1.671 6 / 1.671	S320/M391 - - -
hLRT model BIC model DT model	9 / 10.912 11 / 12.859 11 / 12.859	6 / 1.671 6 / 1.671 6 / 1.671	- -
hLRT model BIC model DT model	9 / 10.912 11 / 12.859 11 / 12.859	6 / 1.671 6 / 1.671 6 / 1.671	- -
hLRT model BIC model DT model Data Set	9 / 10.912 11 / 12.859 11 / 12.859	6 / 1.671 6 / 1.671 6 / 1.671	- - -

DT model	2 / 0.332	14 / 13.797	-
Data Set	13	14	15
TreeBASE ID	S927/M1533	S1120/M1917	S1123/M1924
hLRT model	2 / 1.563	8 / 48.664	2 / 0.078
BIC model	2 / 1.563	-	2 / 0.078
DT model	2 / 1.563	-	2 / 0.078
Data Set	16	17	18
TreeBASE ID	S662/M1038	S736/M1168	S756/M1194
hLRT model	4 / 53.867	-	4 / 3.282
BIC model	-	6 / 8.188	4 / 3.282
DT model	-	3 / 3.446	4 / 3.282
Data Set	19	20	21
TreeBASE ID	S644/M1001	S1213/M2099	S1078/M1849
hLRT model	-	-	2 / 14.263
BIC model	-	2 / 5.239	2 / 14.263
DT model	-	2 / 5.239	2 / 14.263
Data Set	22	23	24
TreeBASE ID	S3x27x98c12c26c10/ M186c3x27x33c47	S1234/M2146	S1112/M1902
TreeBASE ID		S1234/M2146 2 / 9.279	S1112/M1902 3 / 46.816
	M186c3x27x33c47		

TreeBASE ID \$1316/M2309 \$426/M620 \$808/M1278 hLRT model	Data Set	25	26	27
hLRT model - - - BIC model 2 / 1.677 - - DT model - - - Data Set 28 29 30 TreeBASE ID \$1088/M1862 \$498/M725 \$1096/M1874 hLRT model 20 / 8.679 3 / 1.883 3 / 2.992 BIC model 28 / 13.326 3 / 1.883 4 / 3.574 DT model 20 / 8.679 3 / 1.883 4 / 3.574 Data Set 31 32 33 TreeBASE ID \$1315/M2308 \$725/M1156 \$259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model 4 / 4.760 - 3 / 1.741				
BIC model 2 / 1.677 - - Data Set 28 29 30 TreeBASE ID \$1088/M1862 \$498/M725 \$1096/M1874 hLRT model \$20 / 8.679 \$3 / 1.883 \$3 / 2.992 BIC model \$28 / 13.326 \$3 / 1.883 \$4 / 3.574 DT model \$20 / 8.679 \$3 / 1.883 \$4 / 3.574 Data Set \$3 \$3 \$3 TreeBASE ID \$1315/M2308 \$725/M1156 \$259/M299 hLRT model \$2 / 2.832 - \$3 / 2.356 BIC model \$2 / 2.832 7 / 7.324 \$5 / 8.473 Data Set \$3 \$3 Data Set \$4 \$5 \$8.473 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model \$4 / 4.760 - \$3 / 1.741	TreeBASE ID	S1316/M2309	S426/M620	S808/M1278
DT model - - - Data Set 28 29 30 TreeBASE ID \$1088/M1862 \$498/M725 \$1096/M1874 hLRT model \$20 / 8.679 \$3 / 1.883 \$3 / 2.992 BIC model \$28 / 13.326 \$3 / 1.883 \$4 / 3.574 DT model \$20 / 8.679 \$3 / 1.883 \$4 / 3.574 Data Set 31 32 33 TreeBASE ID \$1315/M2308 \$725/M1156 \$259/M299 hLRT model \$2 / 2.832 - \$3 / 2.356 BIC model \$2 / 2.832 7 / 7.324 \$5 / 8.473 DT model \$2 / 2.832 7 / 7.324 \$5 / 8.473 Data Set 34 35 36 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model \$4 / 4.760 - \$3 / 1.741	hLRT model	-	-	-
Data Set 28 29 30 TreeBASE ID \$1088/M1862 \$498/M725 \$1096/M1874 hLRT model \$20 / 8.679 \$3 / 1.883 \$3 / 2.992 BIC model \$28 / 13.326 \$3 / 1.883 \$4 / 3.574 DT model \$20 / 8.679 \$3 / 1.883 \$4 / 3.574 Data Set \$3 \$3 TreeBASE ID \$1315/M2308 \$725/M1156 \$259/M299 hLRT model \$2 / 2.832 - \$3 / 2.356 BIC model \$2 / 2.832 7 / 7.324 \$5 / 8.473 DT model \$2 / 2.832 7 / 7.324 \$5 / 8.473 Data Set \$3 \$35 \$36 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model \$4 / 4.760 - \$3 / 1.741	BIC model	2 / 1.677	-	-
TreeBASE ID S1088/M1862 S498/M725 S1096/M1874 hLRT model 20 / 8.679 3 / 1.883 3 / 2.992 BIC model 28 / 13.326 3 / 1.883 4 / 3.574 DT model 20 / 8.679 3 / 1.883 4 / 3.574 Data Set 31 32 33 TreeBASE ID S1315/M2308 S725/M1156 S259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	DT model	-	-	-
TreeBASE ID \$1088/M1862 \$498/M725 \$1096/M1874 hLRT model 20 / 8.679 3 / 1.883 3 / 2.992 BIC model 28 / 13.326 3 / 1.883 4 / 3.574 DT model 20 / 8.679 3 / 1.883 4 / 3.574 Data Set 31 32 33 TreeBASE ID \$1315/M2308 \$725/M1156 \$259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model 4 / 4.760 - 3 / 1.741				
hLRT model 20 / 8.679 3 / 1.883 3 / 2.992 BIC model 28 / 13.326 3 / 1.883 4 / 3.574 DT model 20 / 8.679 3 / 1.883 4 / 3.574 Data Set 31 32 33 TreeBASE ID S1315/M2308 S725/M1156 S259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	Data Set	28	29	30
hLRT model 20 / 8.679 3 / 1.883 3 / 2.992 BIC model 28 / 13.326 3 / 1.883 4 / 3.574 DT model 20 / 8.679 3 / 1.883 4 / 3.574 Data Set 31 32 33 TreeBASE ID S1315/M2308 S725/M1156 S259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741				
BIC model 28 / 13.326 3 / 1.883 4 / 3.574 DT model 20 / 8.679 3 / 1.883 4 / 3.574 Data Set 31 32 33 TreeBASE ID S1315/M2308 S725/M1156 S259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	TreeBASE ID	S1088/M1862	S498/M725	S1096/M1874
DT model 20 / 8.679 3 / 1.883 4 / 3.574 Data Set 31 32 33 TreeBASE ID S1315/M2308 S725/M1156 S259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	hLRT model	20 / 8.679	3 / 1.883	3 / 2.992
Data Set 31 32 33 TreeBASE ID \$1315/M2308 \$725/M1156 \$259/M299 hLRT model \$2 / 2.832 - \$3 / 2.356 BIC model \$2 / 2.832 \$7 / 7.324 \$5 / 8.473 DT model \$2 / 2.832 \$7 / 7.324 \$5 / 8.473 Data Set 34 35 36 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model \$4 / 4.760 - \$3 / 1.741	BIC model	28 / 13.326	3 / 1.883	4 / 3.574
TreeBASE ID S1315/M2308 S725/M1156 S259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	DT model	20 / 8.679	3 / 1.883	4 / 3.574
TreeBASE ID S1315/M2308 S725/M1156 S259/M299 hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741				
hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	Data Set	31	32	33
hLRT model 2 / 2.832 - 3 / 2.356 BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741				
BIC model 2 / 2.832 7 / 7.324 5 / 8.473 DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	TreeBASE ID	S1315/M2308	S725/M1156	S259/M299
DT model 2 / 2.832 7 / 7.324 5 / 8.473 Data Set 34 35 36 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	hLRT model	2 / 2.832	-	3 / 2.356
Data Set 34 35 36 TreeBASE ID \$1069/M1823 \$1095/M1873 \$771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	BIC model	2 / 2.832	7 / 7.324	5 / 8.473
TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741	DT model	2 / 2.832	7 / 7.324	5 / 8.473
TreeBASE ID S1069/M1823 S1095/M1873 S771/M1220 hLRT model 4 / 4.760 - 3 / 1.741				
hLRT model 4 / 4.760 - 3 / 1.741	Data Set	34	35	36
hLRT model 4 / 4.760 - 3 / 1.741				
	TreeBASE ID	S1069/M1823	S1095/M1873	S771/M1220
DIG. 11 10/16047	hLRT model	4 / 4.760	-	3 / 1.741
BIC model 10 / 16.94 / - 3 / 1.741				
DT model 10 / 16.947 - 3 / 1.741	BIC model	10 / 16.947	-	3 / 1.741

Data Set	37	38	39
TreeBASE ID	S428/M626	S553/M824	S1178/M2038
hLRT model	7 / 2.130	4 / 6.992	2 / 3.029
BIC model	2 / 0.465	4 / 6.992	5 / 7.305
DT model	2 / 0.465	4 / 6.992	5 / 7.305
Data Set	40	41	42
TreeBASE ID	S911/M1509	S570/M863	S724/M1155
hLRT model	10 / 13.226	5 / 4.674	5 / 2.035
BIC model	12 / 14.185	7 / 5.982	35 / 12.103
DT model	8 / 9.706	7 / 5.982	35 / 12.103
Data Set	43	44	45
TreeBASE ID	S890/M1452	S390/M545	S693/M1102
hLRT model	-	5 / 5.869	2 / 0.574
BIC model	-	6 / 7.246	2 / 0.574
DT model	-	6 / 7.246	2 / 0.574
Data Set	46	47	48
TreeBASE ID	S1243/M2167	S425/M619	S1304/M2284
hLRT model	-	-	7 / 13.823
BIC model	-	-	7 / 13.823
DT model	-	-	8 / 14.248
Data Set	49	50	51

TreeBASE ID	S3x10x98c09c42c47/ M184c3x2x98c11c12c31	S333/M435	S1262/M2204
hLRT model	5 / 186.734	5 / 3.829	14 / 5.761
BIC model	-	-	12 / 5.037
DT model	-	-	12 / 5.037
Data Set	52	53	54
TreeBASE ID	S2x14x97c16c11c45/ M165c2x14xM165c2x14x	S659/M1034	S711/M1134
hLRT model	7 / 41.944	3 / 2.275	-
BIC model	2 / 3.051	3 / 2.275	-
DT model	2 / 3.051	3 / 2.275	-
Data Set	55	56	57
TreeBASE ID	S1302/M2281	S679/M1064	S712/M1135
hLRT model	-	-	-
BIC model	-	-	-
DT model	-	-	-
Data Set	58	59	60
TreeBASE ID	S367/M502	S322/M401	S1046/M1782
hLRT model	11 / 7.246	12 / 47.084	2 / 0.254
BIC model	11 / 7.246	4 / 1.837	2 / 0.254
DT model	11 / 7.246	4 / 1.837	2 / 0.254
Data Set	61	62	63

TreeBASE ID	S529/M777	S1217/M2104	S400/M568
hLRT model	-	4 / 234.781	4 / 5.062
BIC model	5 / 7.140	-	5 / 11.892
DT model	5 / 7.140	-	5 / 11.892
Data Set	64	65	66
TreeBASE ID	S958/M1589	S964/M1596	S522/M760
hLRT model	3 / 38.518	10 / 14.225	3 / 0.664
BIC model	-	6 / 4.559	6 / 5.023
DT model	-	6 / 4.559	6 / 5.023
Data Set	67	68	69
TreeBASE ID	S967/M1604	S608/M935	S385/M537
hLRT model	2 / 0.513	5 / 3.856	-
BIC model	5 / 1.936	6 / 4.424	7 / 4.041
DT model	5 / 1.936	6 / 4.424	7 / 4.041
Data Set	70	71	72
TreeBASE ID	S6x22x97c14c38c41/ M170c6x22x97c14c48c20	S1000/M1688	S1227/M2133
hLRT model	2 / 1.427	-	4 / 119.688
BIC model	2 / 1.427	-	-
DT model	2 / 1.427	-	-
Data Set	73	74	75

hLRT model	-	-	2 / 11.249
BIC model	-	-	2 / 11.249
DT model	-	-	2 / 11.249
Data Set	76	77	78
TreeBASE ID	S990/M1650	S1013/M1709	S560/M847
hLRT model	3 / 2.306	-	-
BIC model	3 / 2.306	-	2 / 8.539
DT model	3 / 2.306	-	2 / 8.539
Data Set	79	80	81
TreeBASE ID	S1053/M1794	S980/M1630	S548/M808
hLRT model	7 / 44.410	-	-
BIC model	2 / 1.172	-	-
DT model	2 / 1.172	-	-
Data Set	82	83	84
TreeBASE ID	S1186/M2053	S605/M929	S1099/M1881
hLRT model	-	4 / 24.881	12 / 58.452
BIC model	-	4 / 24.881	4 / 9.523
DT model	-	-	4 / 9.523
Data Set	85	86	87
TreeBASE ID	S945/M1568	S436/M641	S489/M714
hLRT model	-	-	21 / 20.489

BIC model	-	4 / 4.615	-
DT model	3 / 12.441	5 / 5.185	2 / 0
Data Set	88	89	90
TreeBASE ID	S413/M603	S1192/M2059	S1313/M2305
hLRT model	2 / 1.170	4 / 49.164	2 / 0.449
BIC model	4 / 4.747	-	7 / 7.688
DT model	4 / 4.747	-	7 / 7.688
Data Set	91	92	93
TreeBASE ID	S472/M688	S1030/M1749	S1036/M1760
hLRT model	4 / 13.545	4 / 1.180	2 / 4.720
BIC model	4 / 13.545	2 / 0.148	4 / 10.236
DT model	-	2 / 0.148	4 / 10.236
DT model	-	2 / 0.148	4 / 10.236
DT model Data Set	94	2 / 0.148 95	4 / 10.236 96
	94		
	94 S432/M636		
Data Set		95	96
Data Set TreeBASE ID	S432/M636	95 S578/M872	96 S804/M1270
Data Set TreeBASE ID hLRT model	S432/M636	95 S578/M872	96 S804/M1270 4 / 2.907
Data Set TreeBASE ID hLRT model BIC model	S432/M636	95 S578/M872	96 S804/M1270 4 / 2.907 4 / 2.907
Data Set TreeBASE ID hLRT model BIC model	S432/M636	95 S578/M872	96 S804/M1270 4 / 2.907 4 / 2.907
Data Set TreeBASE ID hLRT model BIC model DT model	S432/M636 3 / 106.398 -	95 S578/M872 - -	96 \$804/M1270 4 / 2.907 4 / 2.907 4 / 2.907
Data Set TreeBASE ID hLRT model BIC model DT model	S432/M636 3 / 106.398 -	95 S578/M872 - -	96 \$804/M1270 4 / 2.907 4 / 2.907 4 / 2.907
Data Set TreeBASE ID hLRT model BIC model DT model Data Set	S432/M636 3 / 106.398 - -	95 S578/M872 - - -	96 \$804/M1270 4 / 2.907 4 / 2.907 4 / 2.907
Data Set TreeBASE ID hLRT model BIC model DT model Data Set TreeBASE ID	S432/M636 3 / 106.398 - - - S821/M1318	95 S578/M872 98 S568/M861	96 \$804/M1270 4 / 2.907 4 / 2.907 4 / 2.907

DT model 6 / 20.936 5 / 0.995

Data Set	100	101	102
TreeBASE ID	S11x6x95c10c11c33/ M58c11x6x95c10c13c27	S1094/M1869	S777/M1232
hLRT model		2 / 41.273	11 / 13.865
BIC model	-	-	2 / 0.028
DT model	-	-	2 / 0.028
Data Set	103	104	105
TreeBASE ID	S421/M615	S916/M1516	S664/M1042
hLRT model	-	-	2 / 1.889
BIC model	3 / 5.250	-	2 / 1.889
DT model	3 / 5.250	-	2 / 1.889
Data Set	106	107	108
TreeBASE ID	S1140/M1958	S671/M1053	S584/M880
hLRT model	-	2 / 0.768	22 / 15.732
BIC model	-	2 / 0 7/0	20 / 10 116
		2 / 0.768	29 / 19.116
DT model	-	2 / 0.768	29 / 19.116
DT model	-		
DT model Data Set	109		
	109	2 / 0.768	29 / 19.116
	- 109 S753/M1189	2 / 0.768	29 / 19.116
Data Set		2 / 0.768	29 / 19.116 111
Data Set TreeBASE ID	S753/M1189	2 / 0.768 110 S533/M780	29 / 19.116 111 S375/M515

Data Set	112	113	114
TreeBASE ID	S1197/M2066	S884/M1435	S1322/M2318
hLRT model	6 / 4.173	6 / 5.615	-
BIC model	7 / 8.693	6 / 5.615	-
DT model	7 / 8.693	6 / 5.615	-
Data Set	115	116	117
TreeBASE ID	S941/M1560	S6x23x97c17c57c34/ M171c6x23x97c18c01c10	S557/M837
hLRT model	26 / 201.778	-	6 / 39.553
BIC model	4 / 3.660	-	-
DT model	4 / 3.660	-	-
Data Set	118	119	120
TreeBASE ID	S703/M1124	S1089/M1864	S1020/M1727
hLRT model	-	-	2 / 0.859
BIC model	5 / 11.008	3 / 5.315	-
DT model	5 / 11.008	3 / 5.315	-
Data Set	121	122	123
TreeBASE ID	S1278/M2234	S1097/M1877	S619/M955
hLRT model	-	-	-
BIC model	4 / 3.250	71 / 5.033	2 / 9.342

Data Set	124	125	126
TreeBASE ID	S902/M1482	S824/M1323	S667/M1048
hLRT model	-	7 / 17.184	2 / 9.648
BIC model	4 / 2.241	-	2 / 9.648
DT model	4 / 2.241	-	2 / 9.648
Data Set	127	128	129
TreeBASE ID	S700/M1118	S1061/M1811	S731/M1163
hLRT model	2 / 57.988	-	4 / 7.681
BIC model	-	19 / 12.741	4 / 7.681
DT model	-	19 / 12.741	4 / 7.681
Data Set	130	131	132
TreeBASE ID	S1307/M2290	S470/M685	S681/M1066
hLRT model	4 / 0.149	-	2 / 2.652
BIC model	3 / 0.136	-	2 / 2.652
DT model	4 / 0.149	-	2 / 2.652
Data Set	133	134	135
TreeBASE ID	S1052/M1793	S284/M322	S1071/M1827
hLRT model	4 / 72.547	2 / 1.711	2 / 1.658
BIC model	-	4 / 5.804	2 / 1.658
DT model	-	4 / 5.804	2 / 1.658
Data Set	136	137	138

TreeBASE ID	S554/M825	S1037/M1765	S816/M1305
hLRT model	2 / 1.881	14 / 2.720	4 / 8.861
BIC model	2 / 1.881	14 / 2.720	4 / 8.861
DT model	2 / 1.881	14 / 2.720	4 / 8.861
Data Set	139	140	141
TreeBASE ID	S643/M1000	S669/M1051	S1230/M2141
hLRT model	14 / 3.943	-	-
BIC model	14 / 3.943	-	4 / 2.311
DT model	7 / 1.942	-	4 / 2.311
Data Set	142	143	144
TreeBASE ID	S647/M1013	S1296/M2273	S397/M565
hLRT model	-	2 / 1.610	6 / 33.586
BIC model	-	-	-
DT model	-	-	-
Data Set	145	146	147
TreeBASE ID	S404/M584	S997/M1673	S422/M616
hLRT model	6 / 13.064	13 / 18.453	8 / 11.348
BIC model	6 / 13.064	8 / 3.058	3 / 1.438
DT model	6 / 13.064	8 / 3.058	3 / 1.438
Data Set	148	149	150

TreeBASE ID	S818/M1310	S357/M489	S1177/M2035
hLRT model	6 / 1.006	7 / 21.022	6 / 6.387
BIC model	5 / 0.982	-	2 / 0.309
DT model	6 / 1.006	-	2 / 0.309
Data Set	151	152	153
TreeBASE ID	S726/M1157	S351/M468	S971/M1612
hLRT model	13 / 17.209	2 / 0.461	-
BIC model	-	4 / 1.070	-
DT model	-	4 / 1.070	-
Data Set	154	155	156
TreeBASE ID	S1006/M1698	S1057/M1802	S658/M1032
hLRT model	9 / 13.733	-	18 / 4.556
LRT model	9 / 13.733	-	18 / 4.556
BIC model	9 / 13.733	-	18 / 4.556
Data Set	157	158	159
TreeBASE ID	S657/M1031	S1180/M2041	S1090/M1865
hLRT model	5 / 50.381	-	15 / 3.727
BIC model	2 / 4.487	2 / 5.404	15 / 3.727
DT model	2 / 4.487	2 / 5.404	15 / 3.727
Data Set	160	161	162
TreeBASE ID	S466/M680	S799/M1265	S757/M1197

hLRT model			
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	-	16 / 19.174	4 / 4.440
BIC model	3 / 3.564	8 / 10.909	4 / 4.440
DT model	3 / 3.564	8 / 10.909	3 / 1.911
Data Set	163	164	165
TreeBASE ID	S928/M1538	S1023/M1734	S1229/M2139
hLRT model	3 / 9.819	-	13 / 2.713
BIC model	7 / 21.515	2 / 2.957	13 / 2.713
DT model	7 / 21.515	2 / 2.957	2 / 0.028
Data Set	166	167	168
TreeBASE ID	S305/M347	S1161/M1998	S414/M604
hLRT model	4 / 44.000	5 / 3.494	-
BIC model	-	9 / 5.028	-
DT model	-	9 / 5.028	-
Data Set	169	170	171
Data Set	169	170	171
Data Set TreeBASE ID	169 S1059/M1806	170 S969/M1606	171 S1125/M1928
TreeBASE ID	S1059/M1806	S969/M1606	S1125/M1928
TreeBASE ID	S1059/M1806 5 / 14.256	S969/M1606 2 / 0.856	S1125/M1928 9 / 10.502
TreeBASE ID hLRT model BIC model DT model	S1059/M1806 5 / 14.256 5 / 14.256	S969/M1606 2 / 0.856 2 / 0.856	S1125/M1928 9 / 10.502 9 / 10.502
TreeBASE ID hLRT model BIC model DT model Data Set	S1059/M1806 5 / 14.256 5 / 14.256 5 / 14.256	S969/M1606 2 / 0.856 2 / 0.856 2 / 0.856	S1125/M1928 9 / 10.502 9 / 10.502 9 / 10.502
TreeBASE ID hLRT model BIC model DT model Data Set TreeBASE ID	S1059/M1806 5 / 14.256 5 / 14.256 5 / 14.256 172 S1301/M2279	S969/M1606 2 / 0.856 2 / 0.856 2 / 0.856 173 S543/M801	S1125/M1928 9 / 10.502 9 / 10.502 9 / 10.502
TreeBASE ID hLRT model BIC model DT model Data Set	S1059/M1806 5 / 14.256 5 / 14.256 5 / 14.256	S969/M1606 2 / 0.856 2 / 0.856 2 / 0.856	S1125/M1928 9 / 10.502 9 / 10.502 9 / 10.502

BIC model	3 / 9.711	-	-
DT model	3 / 9.711	-	-
Data Set	175	176	177
TreeBASE ID	S701/M1119	S887/M1438	S1199/M2068
hLRT model	2 / 0.176	2 / 0.276	8 / 20.053
BIC model	7 / 8.097	2 / 0.276	-
DT model	7 / 8.097	2 / 0.276	-
Data Set	178	179	180
TreeBASE ID	S655/M1029	S709/M1131	S1028/M1746
hLRT model	4 / 32.164	3 / 121.422	2 / 1.242
BIC model	-	-	2 / 1.242
DT model	-	-	2 / 1.242
DT model	-	-	2 / 1.242
DT model Data Set	181	182	2 / 1.242 183
	181	182	
		- 182 S672/M1054	
Data Set			183
Data Set TreeBASE ID		S672/M1054	183 S331/M433
Data Set TreeBASE ID hLRT model		S672/M1054	183 S331/M433 2 / 0.075
Data Set TreeBASE ID hLRT model BIC model		S672/M1054	183 S331/M433 2 / 0.075 23 / 5.946
Data Set TreeBASE ID hLRT model BIC model		S672/M1054	183 S331/M433 2 / 0.075 23 / 5.946
Data Set TreeBASE ID hLRT model BIC model DT model	S833/M1334 - -	S672/M1054 12 / 17.446 -	183 S331/M433 2 / 0.075 23 / 5.946 2 / 0.075
Data Set TreeBASE ID hLRT model BIC model DT model	S833/M1334 - -	S672/M1054 12 / 17.446 -	183 S331/M433 2 / 0.075 23 / 5.946 2 / 0.075
Data Set TreeBASE ID hLRT model BIC model DT model Data Set	S833/M1334 - - -	S672/M1054 12 / 17.446 - -	183 S331/M433 2 / 0.075 23 / 5.946 2 / 0.075
Data Set TreeBASE ID hLRT model BIC model DT model Data Set TreeBASE ID	S833/M1334 184 S903/M1483	S672/M1054 12 / 17.446 - - - 185	183 S331/M433 2 / 0.075 23 / 5.946 2 / 0.075 186 S1001/M1692

DT model	2 / 8.672	10 / 9.184	8 / 8.754
Data Set	187	188	189
TreeBASE ID	S892/M1465	S1195/M2064	S798/M1263
hLRT model	7 / 7.887	5 / 5.234	-
BIC model	7 / 7.887	5 / 5.234	-
DT model	7 / 7.887	5 / 5.234	-
Data Set	190	191	192
TreeBASE ID	S1018/M1725	S1155/M1984	S979/M1629
hLRT model	4 / 72.184	15 / 2.931	2 / 22.191
BIC model	-	15 / 2.931	-
DT model	-	15 / 2.931	-
Data Set	193	194	195
Data Set	193	194	195
Data Set TreeBASE ID		194 S935/M1550	195 S1101/M1883
	S532/M779		
TreeBASE ID	S532/M779	S935/M1550	S1101/M1883
TreeBASE ID	S532/M779 4 / 54.815	S935/M1550 16 / 20.679	S1101/M1883 13 / 9.419
TreeBASE ID hLRT model BIC model	S532/M779 4 / 54.815	S935/M1550 16 / 20.679 16 / 20.679	S1101/M1883 13 / 9.419 8 / 6.880
TreeBASE ID hLRT model BIC model	S532/M779 4 / 54.815	S935/M1550 16 / 20.679 16 / 20.679	S1101/M1883 13 / 9.419 8 / 6.880
TreeBASE ID hLRT model BIC model DT model	S532/M779 4 / 54.815 -	S935/M1550 16 / 20.679 16 / 20.679 13 / 19.429	S1101/M1883 13 / 9.419 8 / 6.880 8 / 6.880
TreeBASE ID hLRT model BIC model DT model	S532/M779 4 / 54.815 -	S935/M1550 16 / 20.679 16 / 20.679 13 / 19.429	S1101/M1883 13 / 9.419 8 / 6.880 8 / 6.880
TreeBASE ID hLRT model BIC model DT model Data Set	S532/M779 4 / 54.815 - -	S935/M1550 16 / 20.679 16 / 20.679 13 / 19.429	S1101/M1883 13 / 9.419 8 / 6.880 8 / 6.880
TreeBASE ID hLRT model BIC model DT model Data Set TreeBASE ID	S532/M779 4 / 54.815 196 S1008/M1704	S935/M1550 16 / 20.679 16 / 20.679 13 / 19.429 197 S1050/M1790	S1101/M1883 13 / 9.419 8 / 6.880 8 / 6.880
TreeBASE ID hLRT model BIC model DT model Data Set TreeBASE ID hLRT model	S532/M779 4 / 54.815 196 S1008/M1704 11 / 4.694	S935/M1550 16 / 20.679 16 / 20.679 13 / 19.429 197 S1050/M1790	S1101/M1883 13 / 9.419 8 / 6.880 8 / 6.880

Data Set	199	200	201
TreeBASE ID	S1092/M1867	S914/M1512	S1312/M2300
hLRT model	2 / 0.012	-	2 / 12.045
BIC model	-	-	2 / 12.045
DT model	-	-	2 / 12.045
Data Set	202	203	204
TreeBASE ID	S1320/M2316	S838/M1354	S1044/M1780
hLRT model	-	-	-
BIC model	-	-	-
DT model	-	-	-
Data Set	205	206	207
Data Set	205	206	207
Data Set TreeBASE ID		206 S920/M1521	207 S1298/M2276
TreeBASE ID	S1295/M2266	S920/M1521	S1298/M2276
TreeBASE ID hLRT model	S1295/M2266	S920/M1521	S1298/M2276 3 / 14.492
TreeBASE ID hLRT model BIC model	S1295/M2266	S920/M1521 - 7 / 18.176	S1298/M2276 3 / 14.492 3 / 14.492
TreeBASE ID hLRT model BIC model	S1295/M2266	S920/M1521 - 7 / 18.176	S1298/M2276 3 / 14.492 3 / 14.492
TreeBASE ID hLRT model BIC model DT model	S1295/M2266 - -	S920/M1521 - 7 / 18.176 5 / 13.547	S1298/M2276 3 / 14.492 3 / 14.492 3 / 14.492
TreeBASE ID hLRT model BIC model DT model	S1295/M2266 - -	S920/M1521 - 7 / 18.176 5 / 13.547	S1298/M2276 3 / 14.492 3 / 14.492 3 / 14.492
TreeBASE ID hLRT model BIC model DT model Data Set	S1295/M2266 - - - 208	S920/M1521 - 7 / 18.176 5 / 13.547	S1298/M2276 3 / 14.492 3 / 14.492 3 / 14.492 210
TreeBASE ID hLRT model BIC model DT model Data Set TreeBASE ID	S1295/M2266 - - - 208	S920/M1521 - 7 / 18.176 5 / 13.547 209 S338/M441	S1298/M2276 3 / 14.492 3 / 14.492 3 / 14.492 210 S565/M856
TreeBASE ID hLRT model BIC model DT model Data Set TreeBASE ID hLRT model	S1295/M2266 208 S1253/M2191 -	S920/M1521 - 7 / 18.176 5 / 13.547 209 S338/M441 3 / 0.908	S1298/M2276 3 / 14.492 3 / 14.492 3 / 14.492 210 S565/M856 21 / 30.917

Data Set	211	212	213
TreeBASE ID	S1010/M1706	S384/M536	S1303/M2283
hLRT model	6 / 10.172	4 / 28.488	-
BIC model	-	-	-
DT model	-	-	-
Data Set	214	215	216
TreeBASE ID	S524/M765	S837/M1353	S392/M548
hLRT model	4 / 36.273	-	2 / 8.033
BIC model	-	-	2 / 8.033
DT model	-	-	2 / 8.033
Data Set	217	218	219
TreeBASE ID	S1072/M1828	S496/M722	S1122/M1919
hLRT model	-	18 / 8.266	4 / 5.533
BIC model	-	20 / 7.379	2 / 0.938
DT model	-	20 / 7.379	2 / 0.938
Data Set	220	221	222
TreeBASE ID	S1200/M2069	S983/M1636	S773/M1224
hLRT model	4 / 135.537	9 / 9.854	6 / 11.051
BIC model	-	33 / 27.011	2 / 0.301
DT model	-	35 / 27.403	2 / 0.301
Data Set	223	224	225

TreeBASE ID	S1310/M2295	S1126/M1930	S836/M1352
hLRT model	-	2 / 0.900	-
BIC model	4 / 7.207	7 / 11.231	2 / 135.106
DT model	4 / 7.207	7 / 11.231	2 / 135.106
Data Set	226	227	228
TreeBASE ID	S1102/M1884	S396/M564	S382/M529
hLRT model	3 / 7.746	2 / 2.918	11 / 3.595
BIC model	3 / 7.746	2 / 2.918	22 / 7.276
DT model	3 / 7.746	2 / 2.918	9 / 3.173
Data Set	229	230	231
TreeBASE ID	S1305/M2286	S962/M1594	S1007/M1700
TreeBASE ID hLRT model	S1305/M2286	S962/M1594 12 / 26.837	S1007/M1700 -
	S1305/M2286 -		S1007/M1700 -
hLRT model	S1305/M2286 - -		S1007/M1700 - -
hLRT model BIC model	S1305/M2286 - -		S1007/M1700 - -
hLRT model BIC model	S1305/M2286 - - - 232		S1007/M1700 - - - 234
hLRT model BIC model DT model	- -	12 / 26.837 - -	- -
hLRT model BIC model DT model	- -	12 / 26.837 - -	- -
hLRT model BIC model DT model Data Set	- - - 232	12 / 26.837 - - 233	- - - 234
hLRT model BIC model DT model Data Set TreeBASE ID	- - - 232	12 / 26.837 - - 233	- - - 234
hLRT model BIC model DT model Data Set TreeBASE ID hLRT model	- - - 232	12 / 26.837 - - 233	- - - 234
hLRT model BIC model DT model Data Set TreeBASE ID hLRT model BIC model	- - - 232	12 / 26.837 - - 233	- - - 234
hLRT model BIC model DT model Data Set TreeBASE ID hLRT model BIC model	- - - 232	12 / 26.837 - - 233	- - - 234

TreeBASE ID	S792/M1215	S1270/M2218	S1231/M2143
hLRT model	-	4 / 19.539	-
BIC model	-	-	3 / 7.416
DT model	-	-	3 / 7.416
Data Set	238	239	240
TreeBASE ID	S1075/M1832	S1070/M1826	S403/M581
hLRT model	-	3 / 1.614	32 / 9.543
BIC model	-	3 / 1.614	11 / 4.550
DT model	-	3 / 1.614	11 / 4.550
Data Set	241	242	243
TreeBASE ID	S1127/M1933	S1163/M000	S537/M787
hLRT model	7 / 4.124	31 / 11.914	5 / 8.246
BIC model	30 / 14.169	31 / 11.914	4 / 7.545
DT model	30 / 14.169	31 / 11.914	4 / 7.545
Data Set	244	245	246
TreeBASE ID	S1235/M2149	S1216/M2102	S1039/M1769
hLRT model	3 / 2.618	11 / 27.863	-
BIC model	9 / 9.876	3 / 9.377	10 / 6.763
DT model	12 / 15.443	3 / 9.377	12 / 7.166
Data Set	247	248	249
TreeBASE ID	S1060/M1809	S368/M503	S389/M543

hLRT model	-	-	3 / 2.298
BIC model	2 / 3.492	3 / 2.662	3 / 2.298
DT model	2 / 3.492	3 / 2.662	3 / 2.298

Data Set 250

TreeBASE ID S939/M1556

hLRT model 15 / 37.843

BIC model -

DT model -