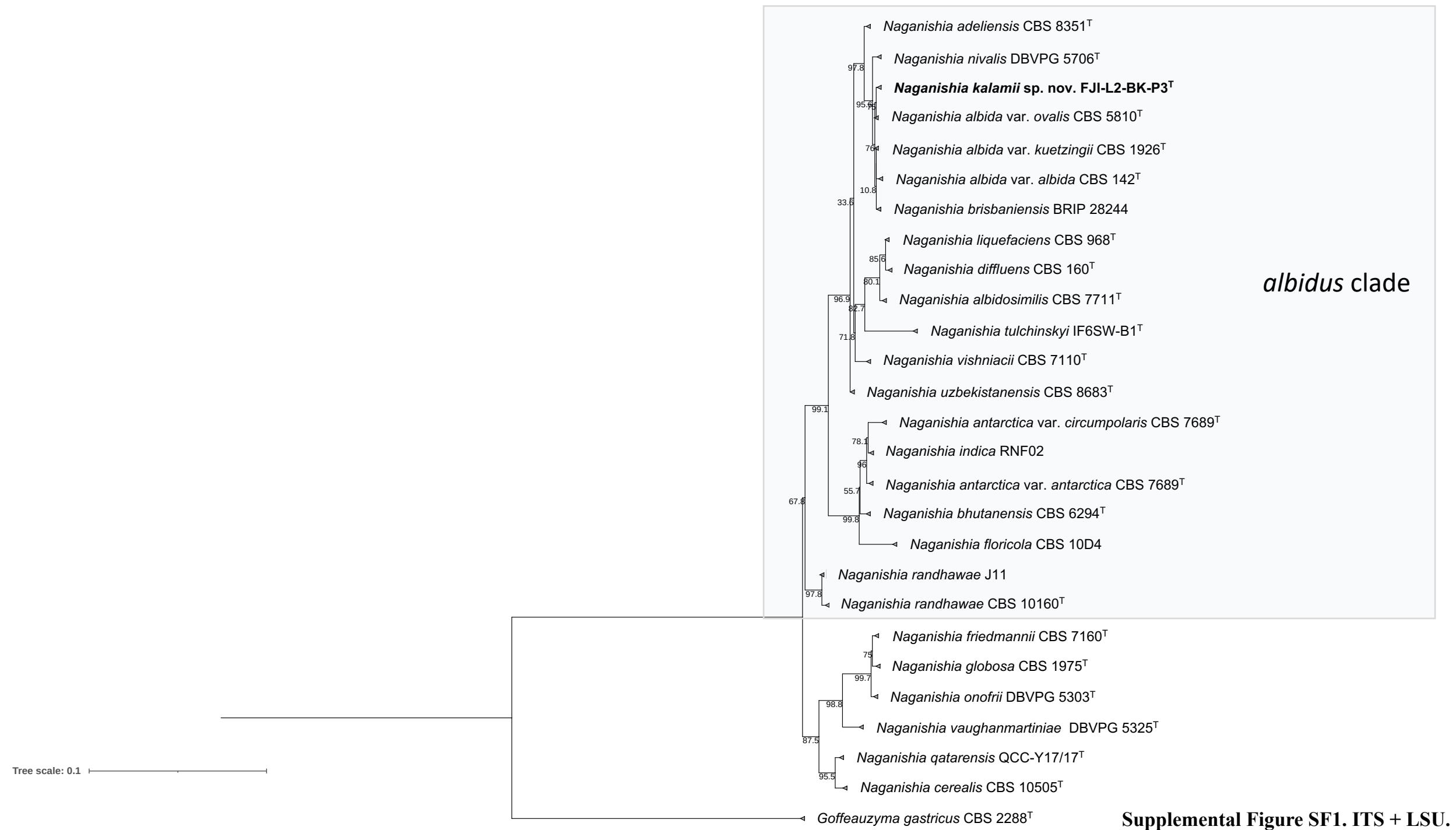
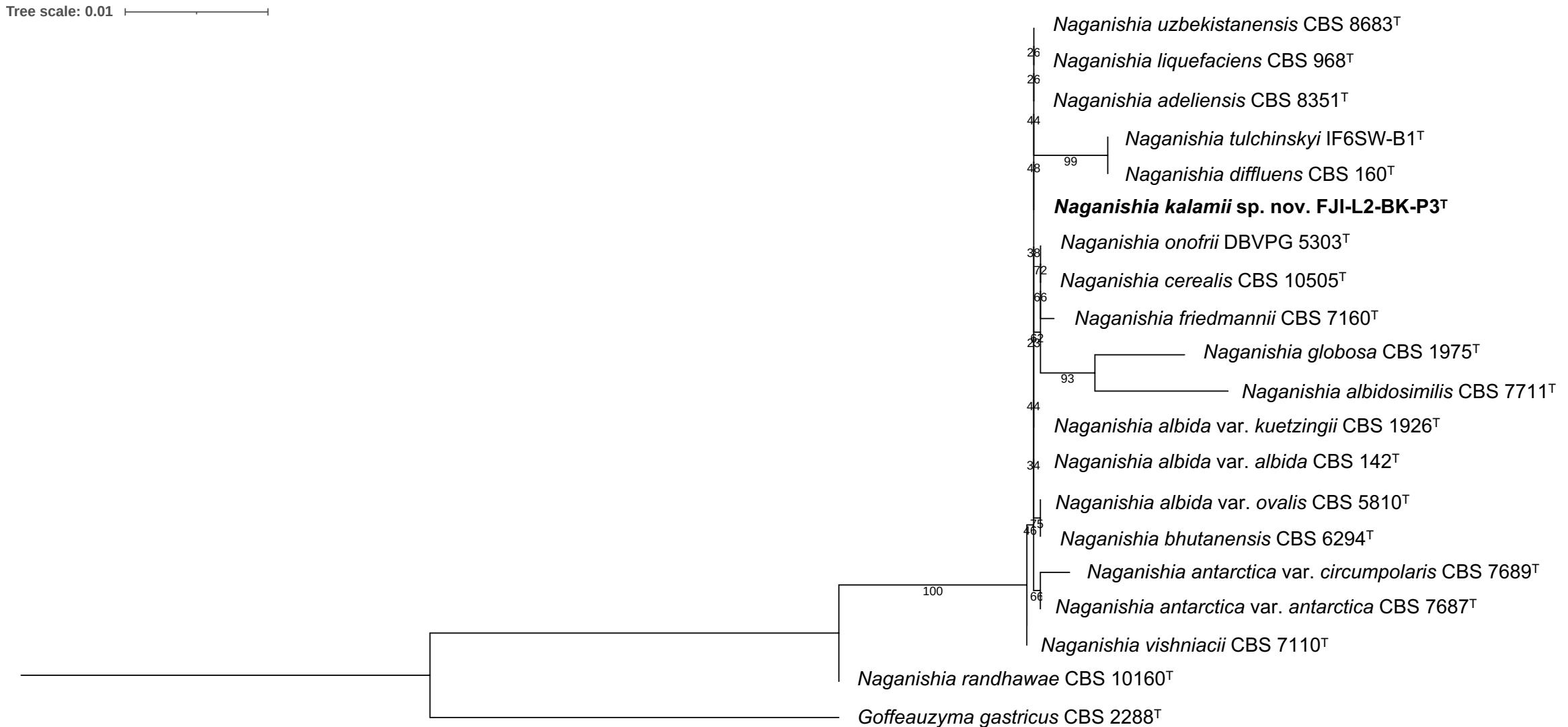


Supplementary figures

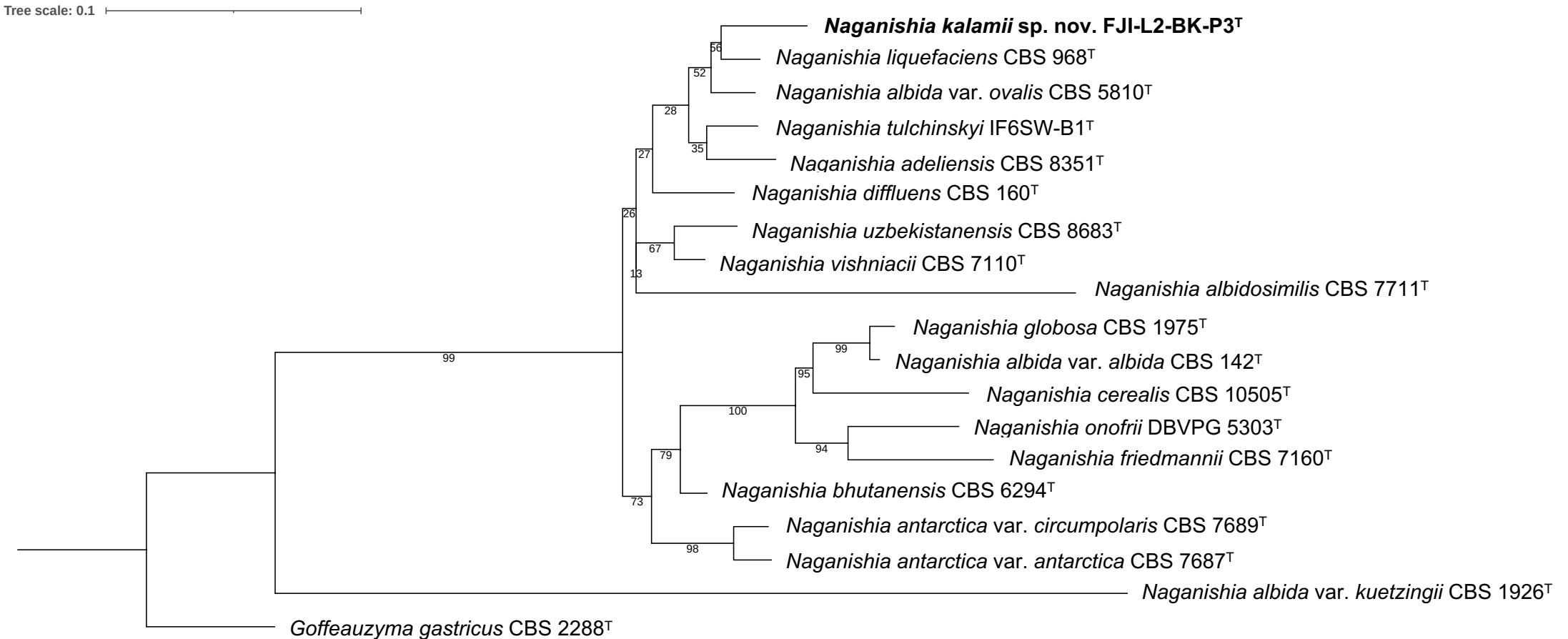


Supplemental
Figure SF2

		LSU	ITS																								
			<i>Naganishia_kalamii_FJI-L2-BK-P3</i>	<i>Naganishia_albida_var_ovalis_CBS5810</i>	<i>Naganishia_albida_var_kuetzingii_CBS1926</i>	<i>Naganishia_albida_var_albida_CBS142</i>	<i>Naganishia_adeliensis_CBS8351</i>	<i>Naganishia_nivalis_DBVPG5706</i>	<i>Naganishia_brisbanensis_BRIP_28244</i>	<i>Naganishia_albidosimilis_CBS7711</i>	<i>Naganishia_liquefaciens_CBS968</i>	<i>Naganishia_diffluens_CBS160</i>	<i>Naganishia_friedmannii_CBS7160</i>	<i>Naganishia_tulchinskyi_IF6SW-B1</i>	<i>Naganishia_randhwae_J11</i>	<i>Naganishia_uzbekistanensis_CBS8683</i>	<i>Naganishia_onofrii_DBVPG5303</i>	<i>Naganishia_vishniaci CBS7110</i>	<i>Naganishia_qatarensis_QCC-Y17/17</i>	<i>Naganishia_randhwae_CBS10160</i>	<i>Naganishia_vaughanmartiniae_DBVPG4736</i>	<i>Naganishia_cerealis_CBS10505</i>	<i>Naganishia_floricola_10D4</i>	<i>Naganishia_bhutanensis_CBS6294</i>	<i>Naganishia_antarctica_var_circumpolaris_CBS7689</i>	<i>Naganishia_antarctica_var_antarcticus_CBS7687</i>	<i>Goffeauzyma_gastricus_CBS2288</i>
ITS	<i>Naganishia_kalamii_FJI-L2-BK-P3</i>	0.000	0.002	0.005	0.008	0.002	0.003	0.025	0.025	0.023	0.104	0.104	0.121	0.054	0.000	0.102	0.015	0.091	0.062	0.103	0.084	0.035	0.028	0.032	0.038	0.350	
	<i>Naganishia_albida_var_ovalis_CBS5810</i>	0.044		0.002	0.005	0.008	0.002	0.003	0.025	0.025	0.023	0.104	0.104	0.121	0.054	0.000	0.102	0.015	0.091	0.062	0.103	0.084	0.035	0.028	0.032	0.038	0.350
	<i>Naganishia_albida_var_kuetzingii_CBS1926</i>	0.045	0.042		0.003	0.006	0.004	0.002	0.025	0.025	0.023	0.106	0.106	0.121	0.056	0.000	0.104	0.015	0.093	0.064	0.105	0.086	0.037	0.029	0.034	0.040	0.352
	<i>Naganishia_albida_var_albida_CBS142</i>	0.047	0.044	0.042		0.010	0.007	0.005	0.028	0.028	0.026	0.108	0.108	0.125	0.059	0.000	0.106	0.015	0.093	0.067	0.107	0.086	0.040	0.033	0.037	0.044	0.352
	<i>Naganishia_adeliensis_CBS8351</i>	0.055	0.052	0.054	0.055		0.009	0.008	0.028	0.028	0.026	0.106	0.106	0.123	0.056	0.000	0.106	0.018	0.093	0.064	0.105	0.086	0.037	0.031	0.037	0.040	0.350
	<i>Naganishia_nivalis_DBVPG5706</i>	0.055	0.051	0.053	0.055	0.059		0.006	0.021	0.021	0.019	0.092	0.089	0.057	0.035	0.003	0.095	0.013	0.075	0.042	0.090	0.073	0.033	0.013	0.018	0.023	0.348
	<i>Naganishia_brisbanensis_BRIP_28244</i>	NA	NA	NA	NA	NA	NA		0.027	0.027	0.026	0.111	0.113	0.126	0.060	NA	0.108	0.017	0.095	0.068	0.110	0.089	0.038	0.032	0.037	0.043	0.372
	<i>Naganishia_albidosimilis_CBS7711</i>	0.060	0.064	0.066	0.067	0.064	0.064	NA		0.000	0.002	0.101	0.100	0.109	0.059	0.000	0.102	0.023	0.089	0.067	0.101	0.089	0.037	0.039	0.037	0.040	0.357
	<i>Naganishia_liquefaciens_CBS968</i>	0.064	0.066	0.067	0.069	0.066	0.066	NA	0.052		0.002	0.101	0.100	0.109	0.059	0.000	0.102	0.023	0.089	0.067	0.101	0.089	0.037	0.039	0.037	0.040	0.357
	<i>Naganishia_diffluens_CBS160</i>	0.066	0.069	0.071	0.072	0.069	0.070	NA	0.054	0.044		0.102	0.102	0.109	0.058	0.000	0.104	0.021	0.089	0.066	0.101	0.089	0.038	0.041	0.039	0.042	0.354
	<i>Naganishia_friedmannii_CBS7160</i>	0.081	0.078	0.079	0.081	0.045	0.085	NA	0.088	0.090	0.093		0.011	0.182	0.071	0.088	0.011	0.101	0.079	0.077	0.077	0.083	0.090	0.092	0.086	0.085	0.363
	<i>Naganishia_globosa_CBS1975</i>	0.079	0.076	0.078	0.079	0.044	0.085	NA	0.086	0.088	0.092	0.017		0.180	0.071	0.000	0.014	0.100	0.077	0.079	0.083	0.079	0.088	0.090	0.086	0.085	0.364
	<i>Naganishia_tulchinskyi_IF6SW-B1</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.135	0.047	0.181	0.119	0.172	0.146	0.200	0.186	0.101	0.119	0.124	0.136	0.459
	<i>Naganishia_randhwae_J11</i>	0.088	0.084	0.086	0.084	0.047	0.095	NA	0.097	0.099	0.098	0.032	0.030	NA		0.000	0.075	0.052	0.055	0.006	0.085	0.057	0.036	0.039	0.040	0.346	
	<i>Naganishia_uzbekistanensis_CBS8683</i>	0.057	0.060	0.062	0.064	0.024	0.068	NA	0.062	0.062	0.064	0.044	0.042	NA	0.049		0.000	0.000	NA	NA	NA	NA	0.060	0.000	NA	NA	0.000
	<i>Naganishia_onofrii_DBVPG5303</i>	0.080	0.077	0.078	0.080	0.043	0.085	NA	0.088	0.090	0.093	0.013	0.013	NA	0.029	0.041		0.100	0.082	0.082	0.089	0.088	0.090	0.090	0.089	0.089	0.369
	<i>Naganishia_vishniaci CBS7110</i>	0.059	0.060	0.062	0.062	0.030	0.064	NA	0.062	0.062	0.067	0.050	0.049	NA	0.059	0.030	0.048		0.089	0.060	0.099	0.080	0.033	0.033	0.027	0.033	0.350
	<i>Naganishia_qatarensis_QCC-Y17/17</i>	0.081	0.078	0.077	0.081	0.047	0.083	NA	0.084	0.086	0.086	0.029	0.027	NA	0.032	0.045	0.025	0.045		0.060	0.076	0.015	0.072	0.072	0.070	0.070	0.377
	<i>Naganishia_randhwae_CBS10160</i>	0.088	0.084	0.086	0.084	0.047	0.095	NA	0.097	0.099	0.098	0.032	0.030	NA	0.014	0.049	0.029	0.059	0.031		0.087	0.057	0.044	0.046	0.046	0.046	0.361
	<i>Naganishia_vaughanmartiniae_DBVPG4736</i>	0.076	0.073	0.076	0.076	0.030	0.083	NA	0.085	0.088	0.090	0.004	0.002	NA	0.013	0.028	0.002	0.030	0.011	0.013		0.080	0.090	0.092	0.084	0.078	0.400
	<i>Naganishia_cerealis_CBS10505</i>	0.087	0.083	0.085	0.087	0.051	0.084	NA	0.090	0.092	0.092	0.032	0.030	NA	0.035	0.049	0.030	0.049	0.022	0.035	0.017		0.066	0.066	0.062	0.060	0.394
	<i>Naganishia_floricola_10D4</i>	0.109	0.106	0.107	0.106	0.079	0.108	NA	0.115	0.117	0.116	0.078	0.076	NA	0.081	0.078	0.082	0.081	0.084	0.062	0.072		0.013	0.010	0.011	0.356	
	<i>Naganishia_bhutanensis_CBS6294</i>	0.097	0.093	0.095	0.093	0.063	0.103	NA	0.102	0.102	0.102	0.068	0.067	NA	0.068	0.061	0.068	0.065	0.061	0.068	0.060	0.067	0.041		0.012	0.014	0.345
	<i>Naganishia_antarctica_var_circumpolaris_CBS7689</i>	0.127	0.123	0.125	0.123	0.094	0.124	NA	0.131	0.131	0.131	0.099	0.098	NA	0.099	0.092	0.092	0.096	0.092	0.099	0.064	0.096	0.062	0.047		0.004	0.366
	<i>Naganishia_antarctica_var_antarcticus_CBS7687</i>	0.095	0.092	0.093	0.092	0.066	0.101	NA	0.099	0.099	0.099	0.071	0.069	NA	0.071	0.064	0.069	0.067	0.064	0.071	0.062	0.069	0.047	0.026	0.044		0.398
	<i>Goffeauzyma_gastricus_CBS2288</i>	0.183	0.179	0.181	0.183	0.191	0.198	NA	0.191	0.185	0.187	0.191	0.189	NA	0.191	0.193	0.197	0.195	0.185	0.191	0.124	0.200	0.226	0.217	0.256	0.217	

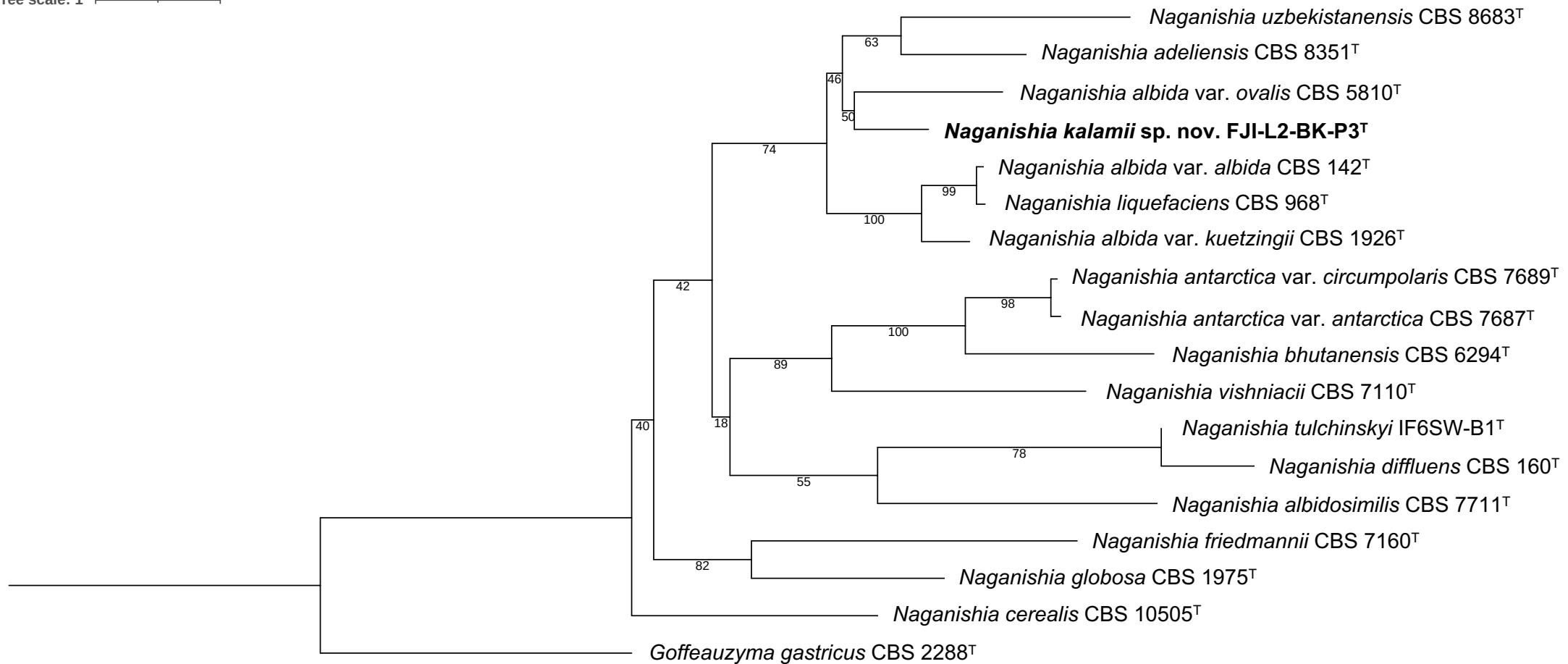


Supplemental Figure SF3. SSU



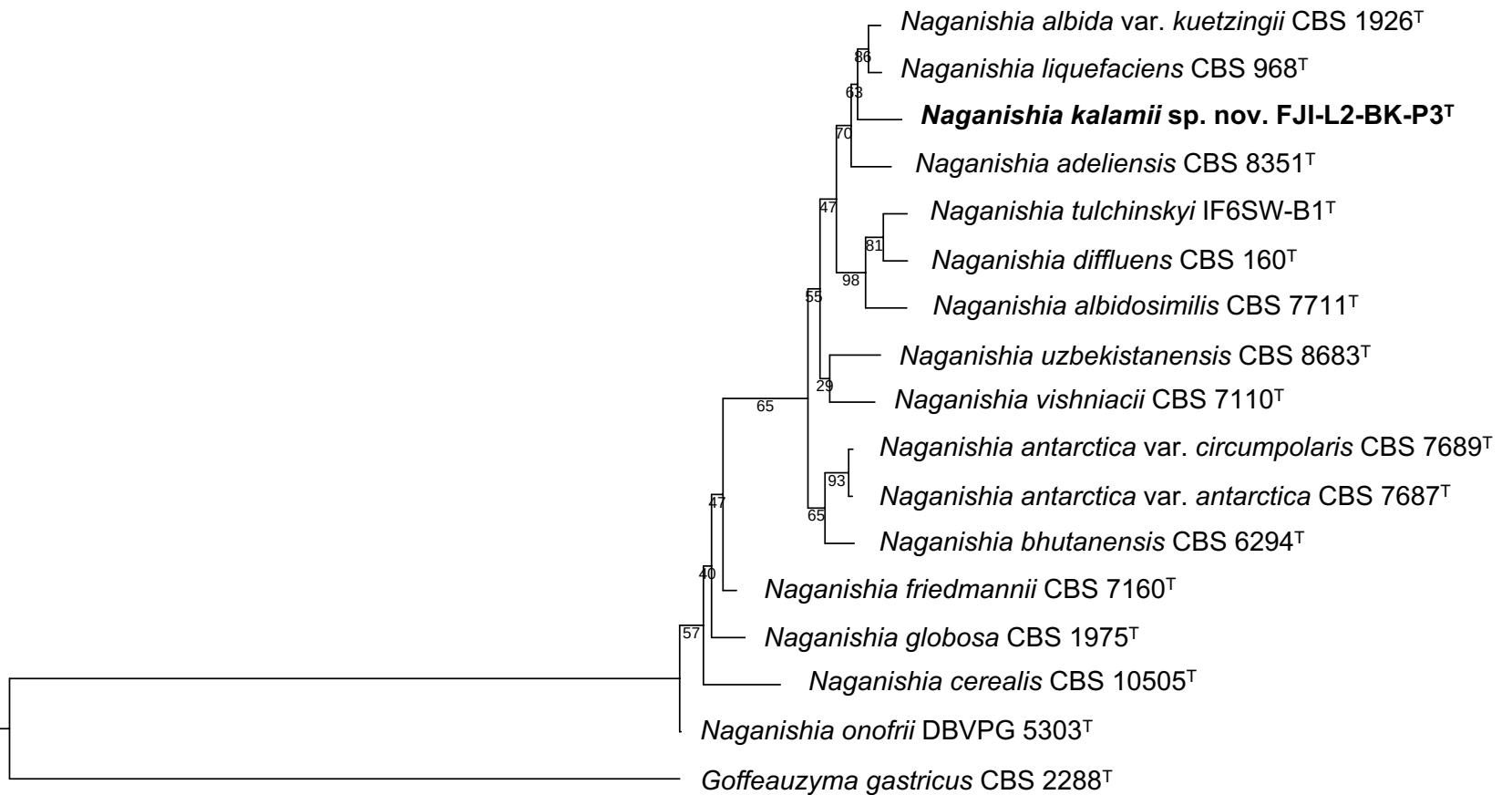
Supplemental Figure SF4. CYTB

Tree scale: 1



Supplemental Figure SF5. *TEF1*

Tree scale: 1



Supplemental Figure SF6. *RPB1*

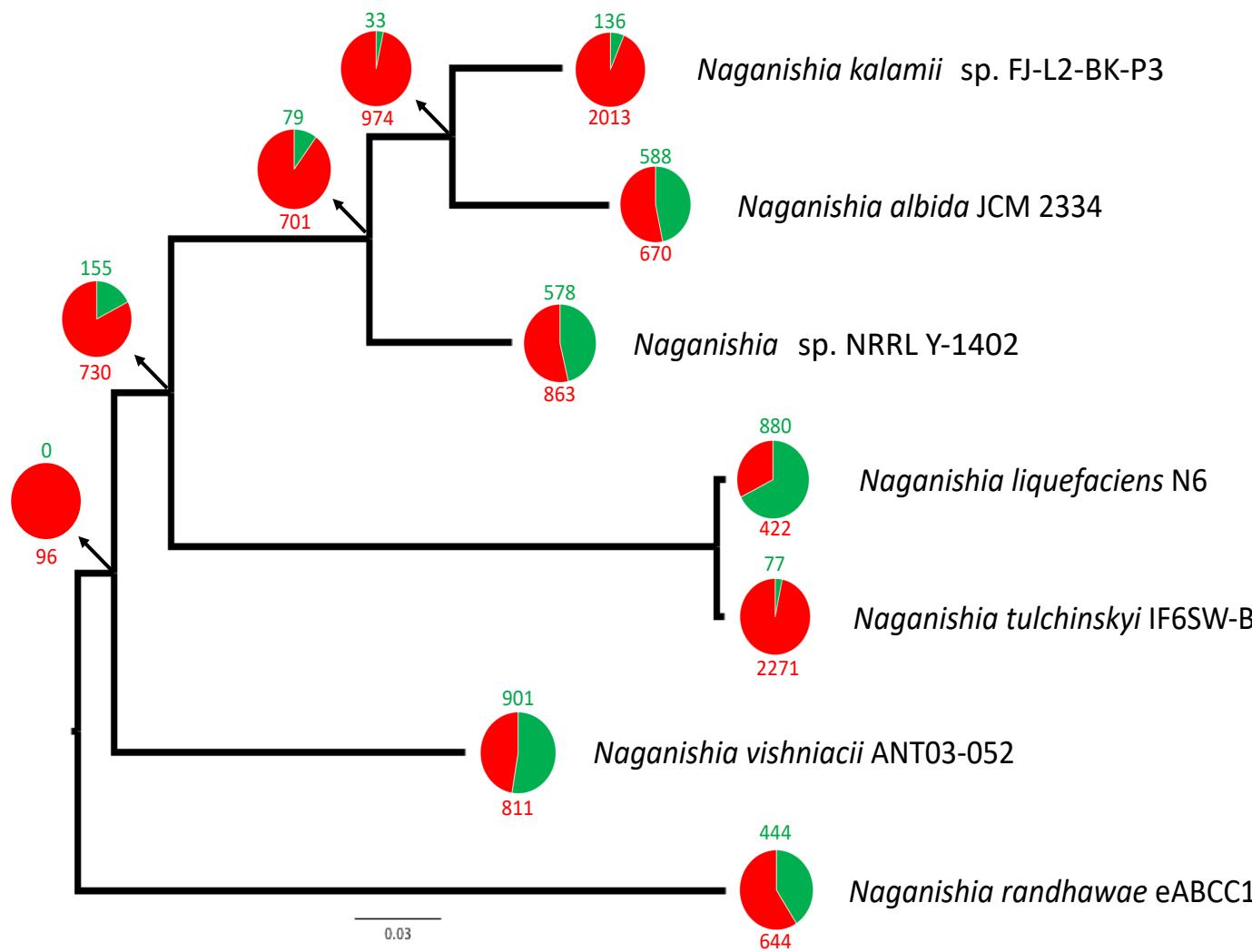
Tree scale: 0.1



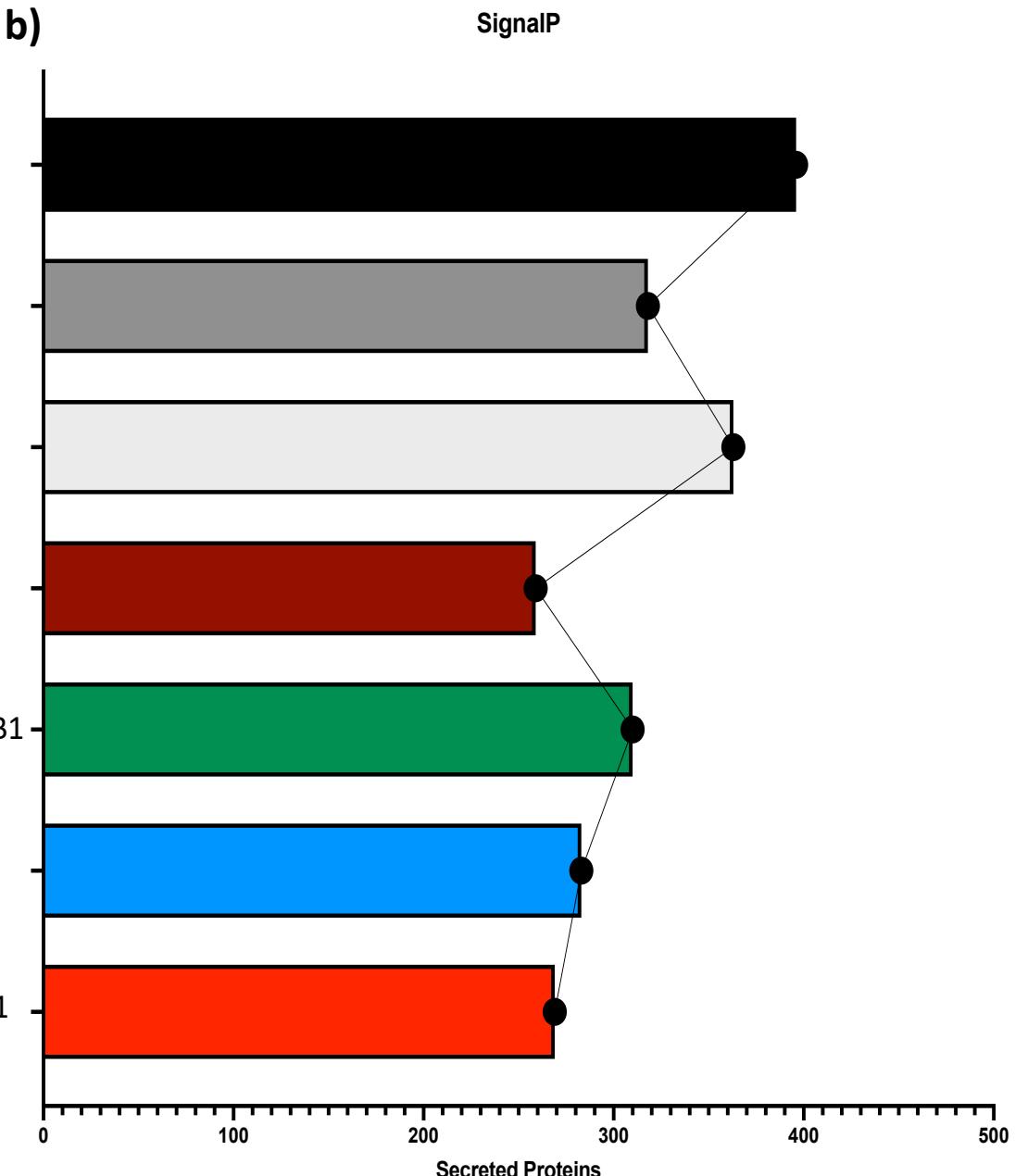
Supplemental Figure SF7. *RPB2*

Interpro domain losses

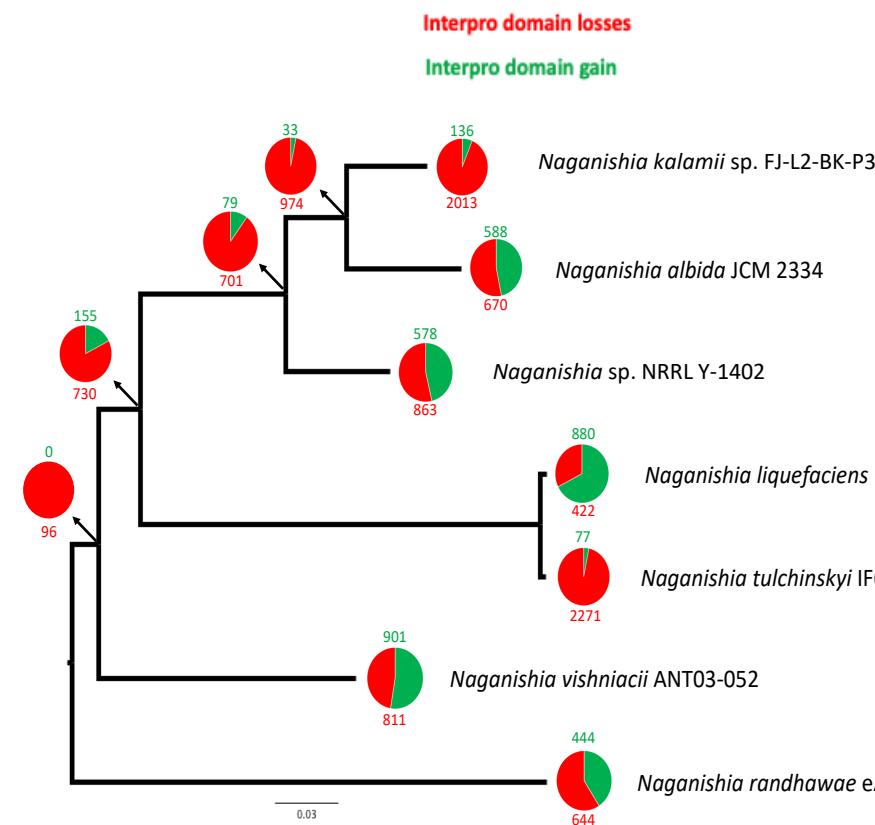
Interpro domain gain



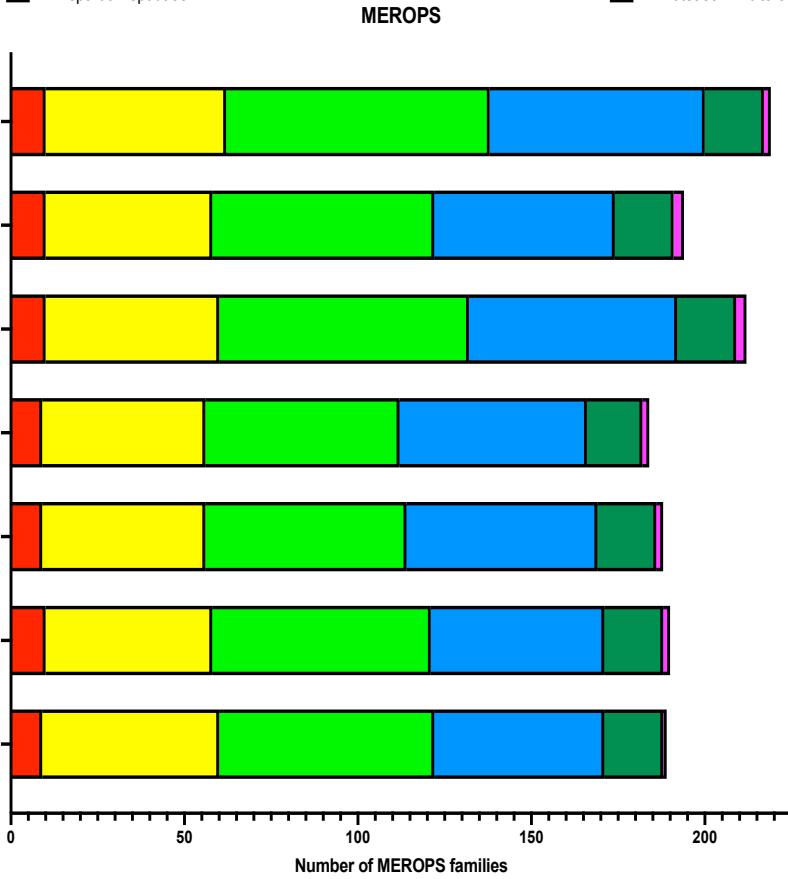
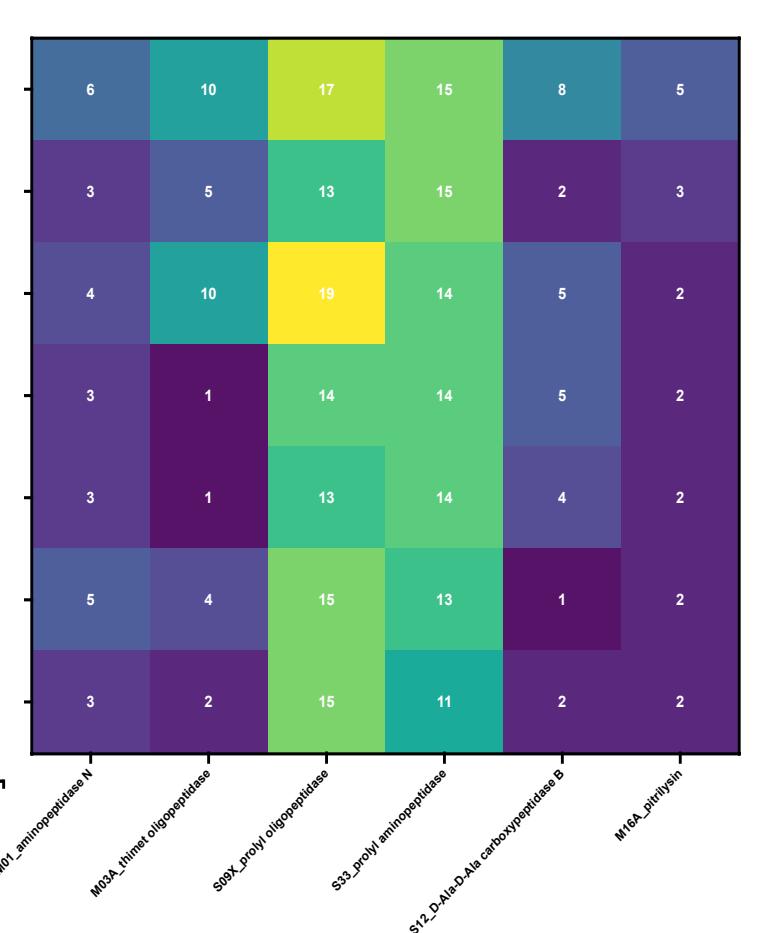
b)



Supplemental Figure SF8

a)**b)****MEROPS – Gene groups**

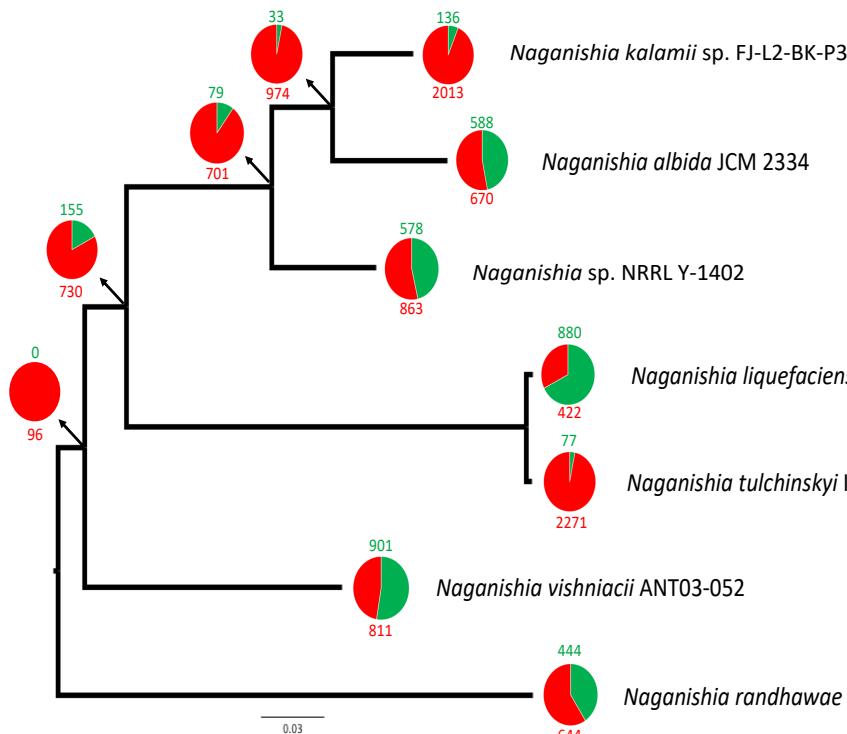
Legend: C: Cysteine Peptidase (yellow), M: Metallo Peptidase (green), S: Serine Peptidase (blue), T: Threonine Peptidase (dark green), A: Aspartic Peptidase (red), I: Protease Inhibitors (purple).

**c)****MEROPS - peptidase family and subfamily****Supplemental Figure SF9.**

a)

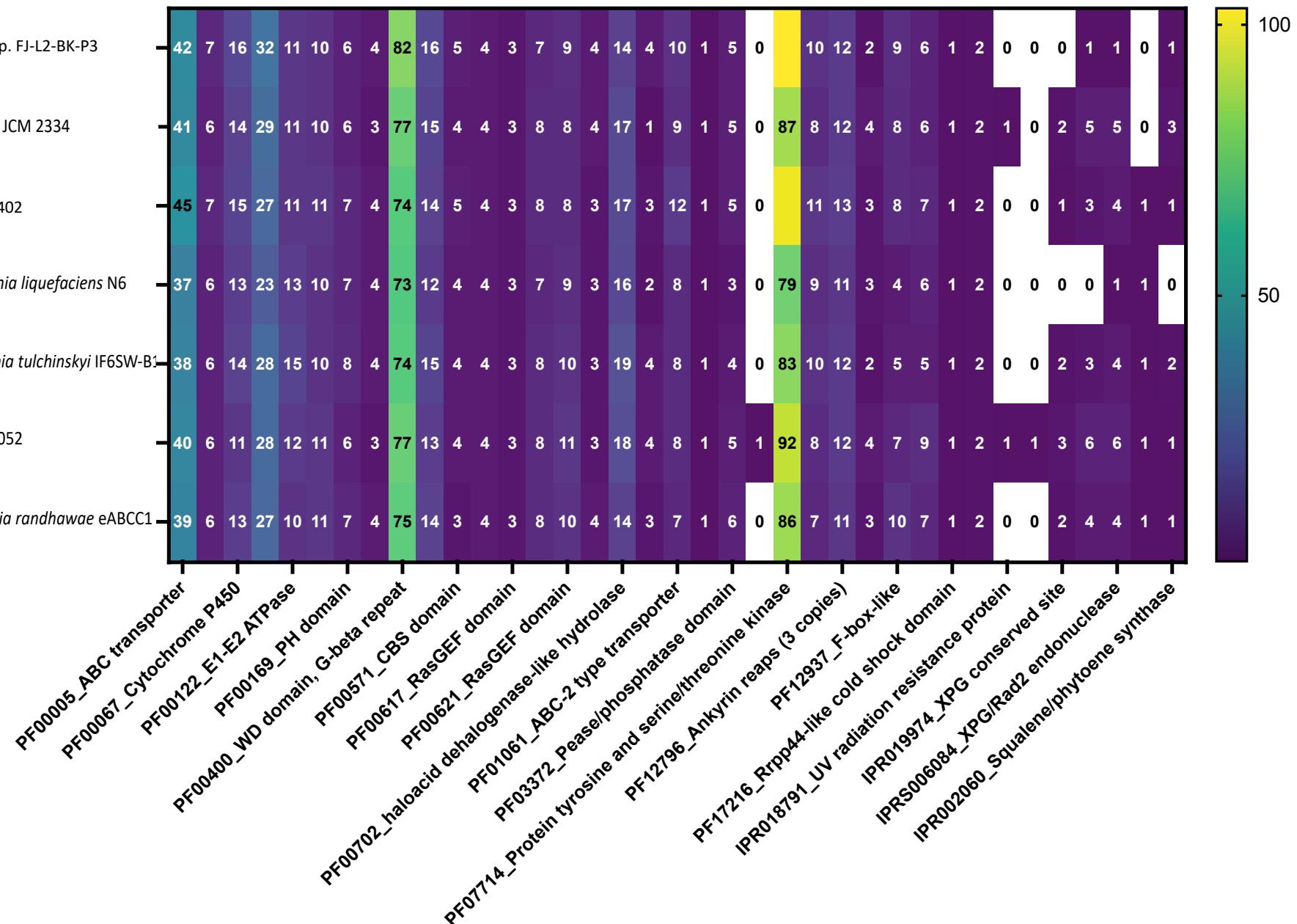
Interpro domain losses

Interpro domain gain



b)

Pfam and Interpro terms filtered for: dehydration, desiccation, rehydration and UV resistance

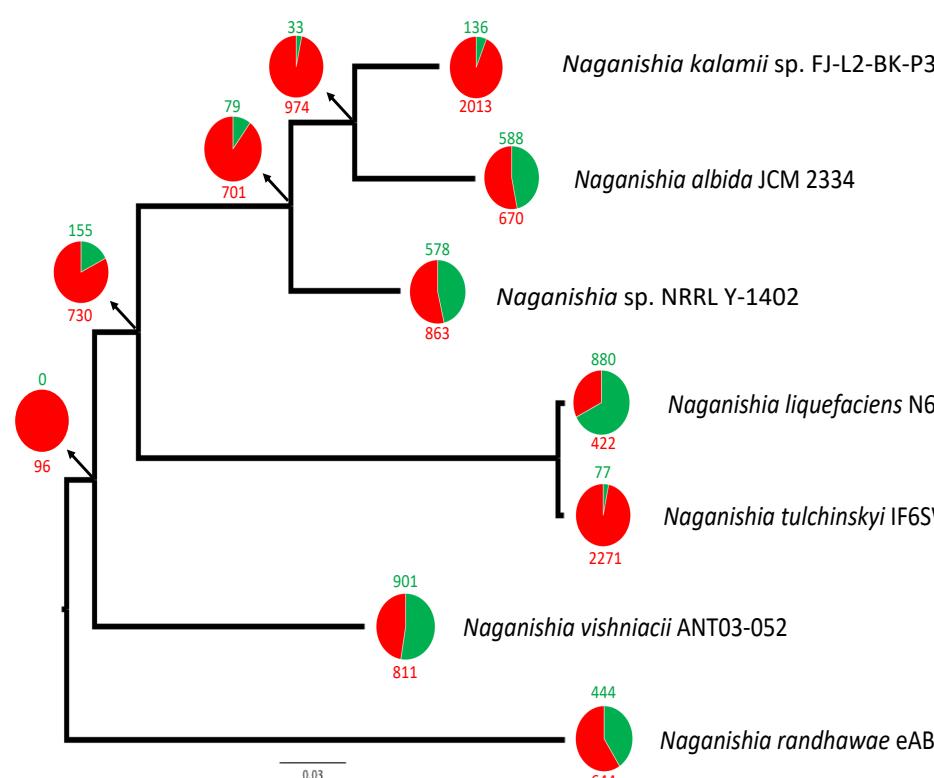


Supplemental Figure SF10.

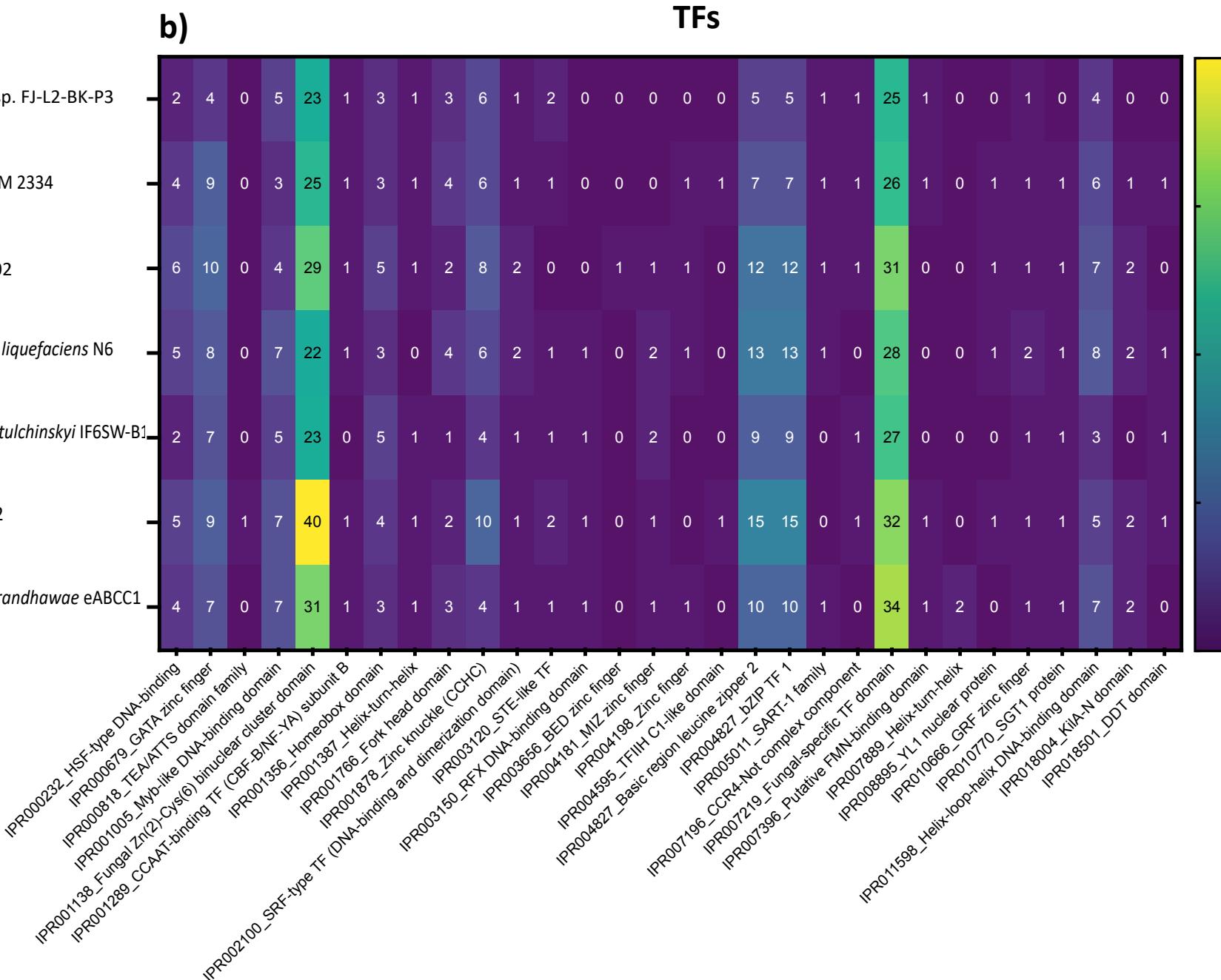
Interpro domain losses

Interpro domain gain

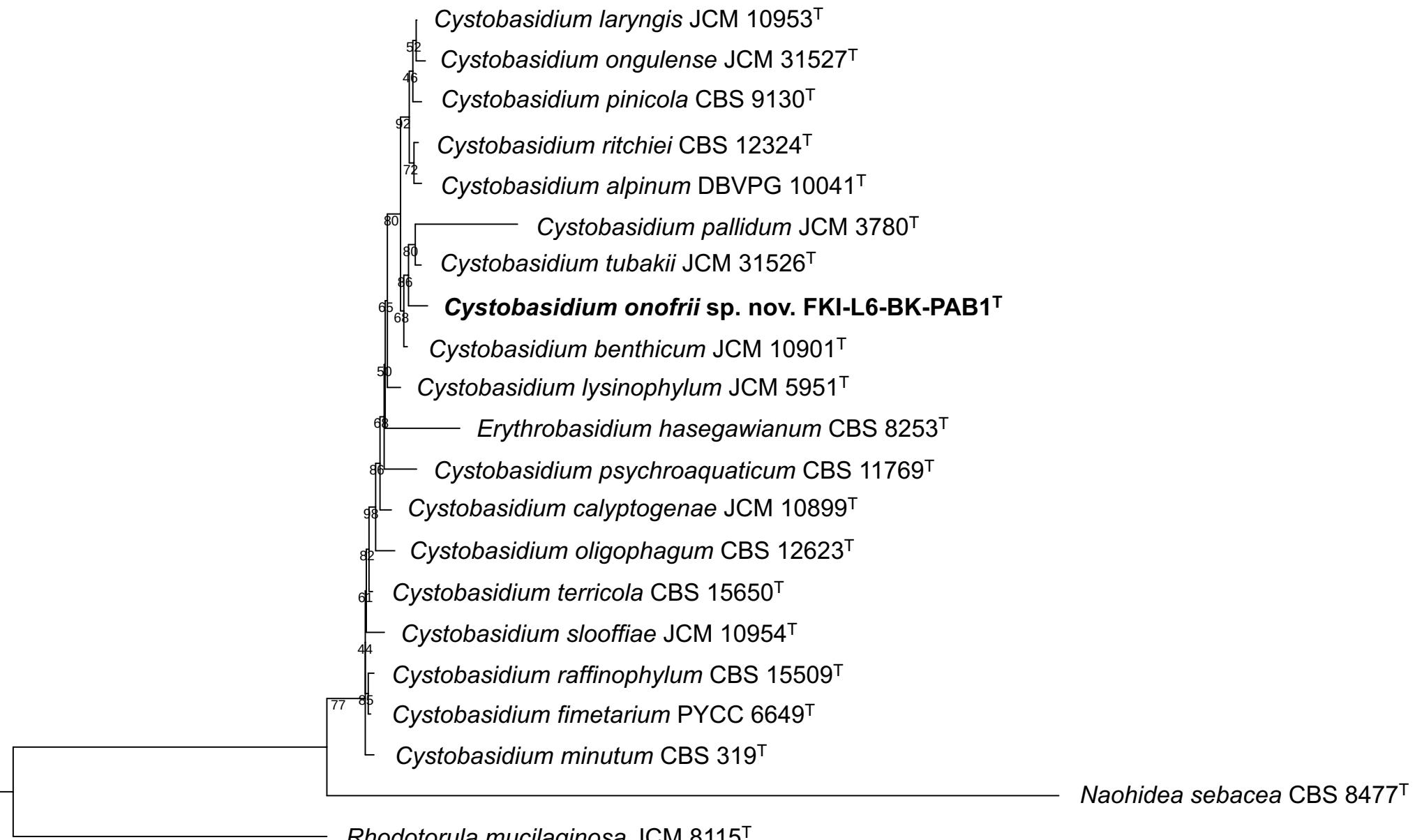
a)



b)



Supplemental Figure SF11.



Tree scale: 0.1

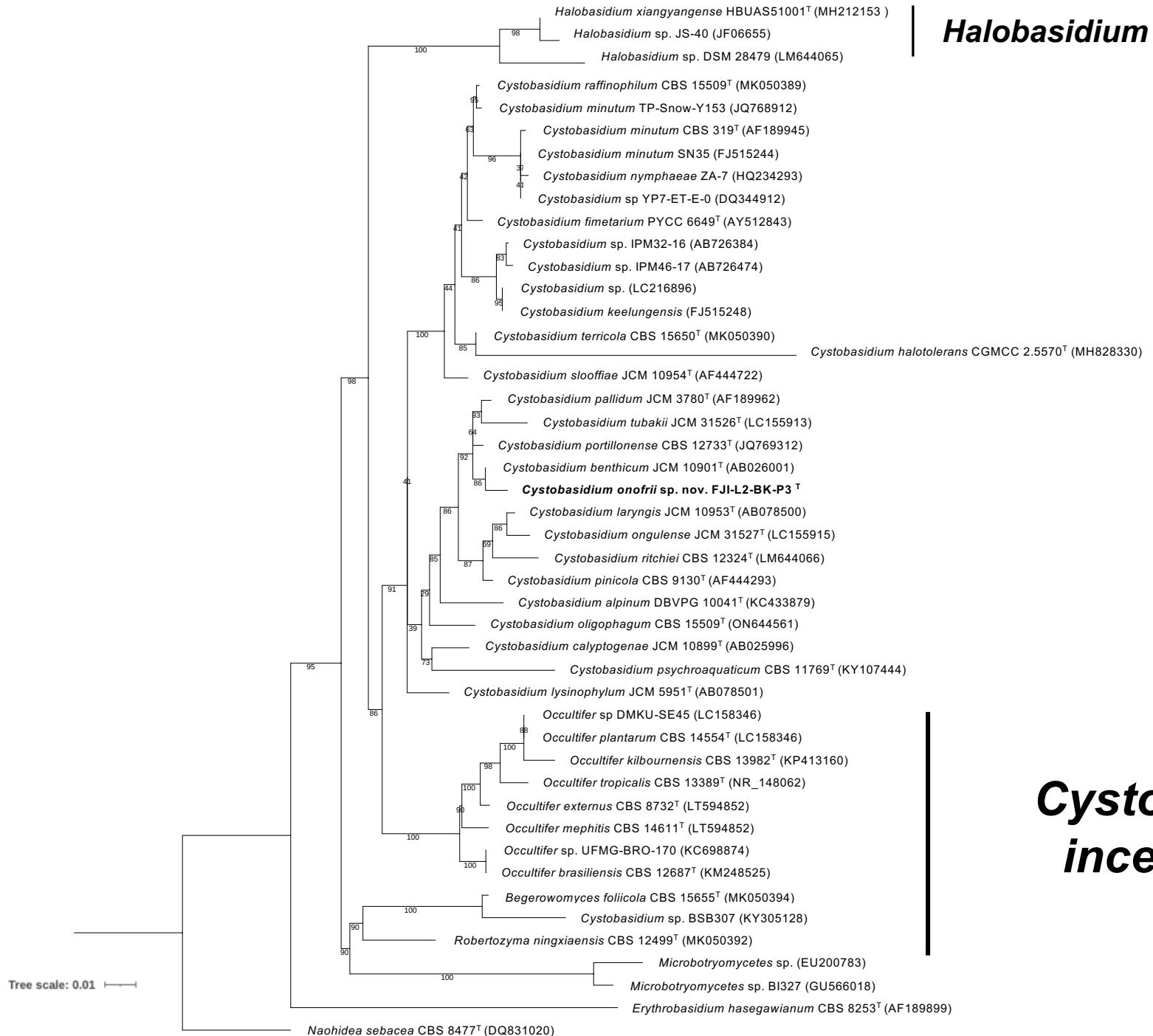
Supplemental Figure SF12. ITS

Cystobasidiaceae

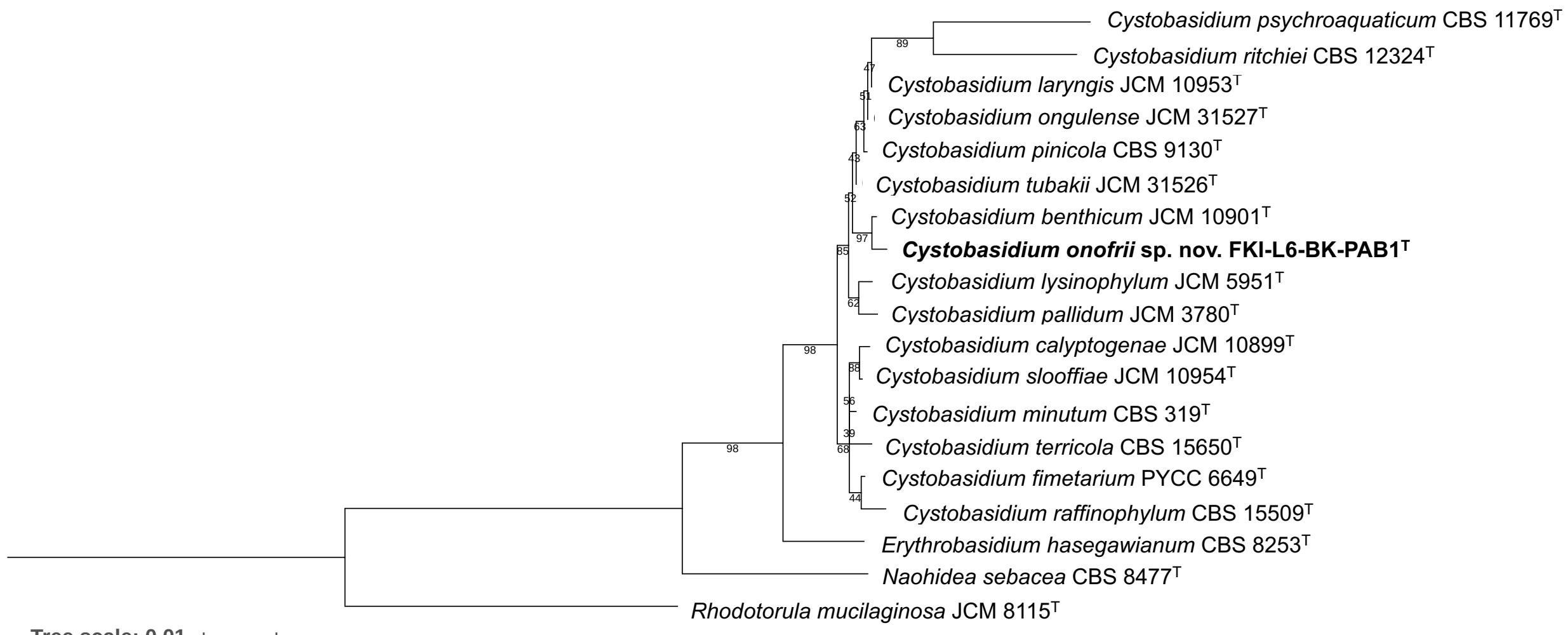
Cystobasidiales incertae sedis

Cystobasidium

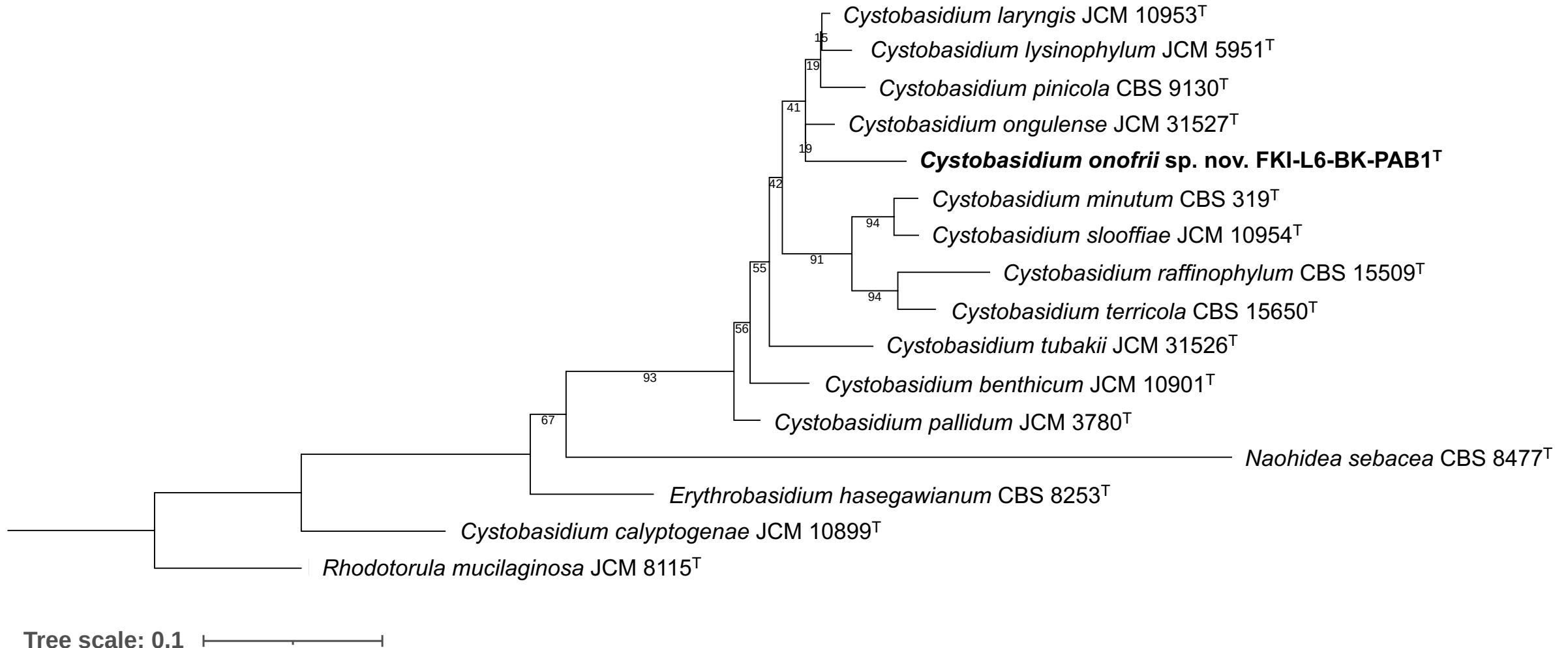
Halobasidium



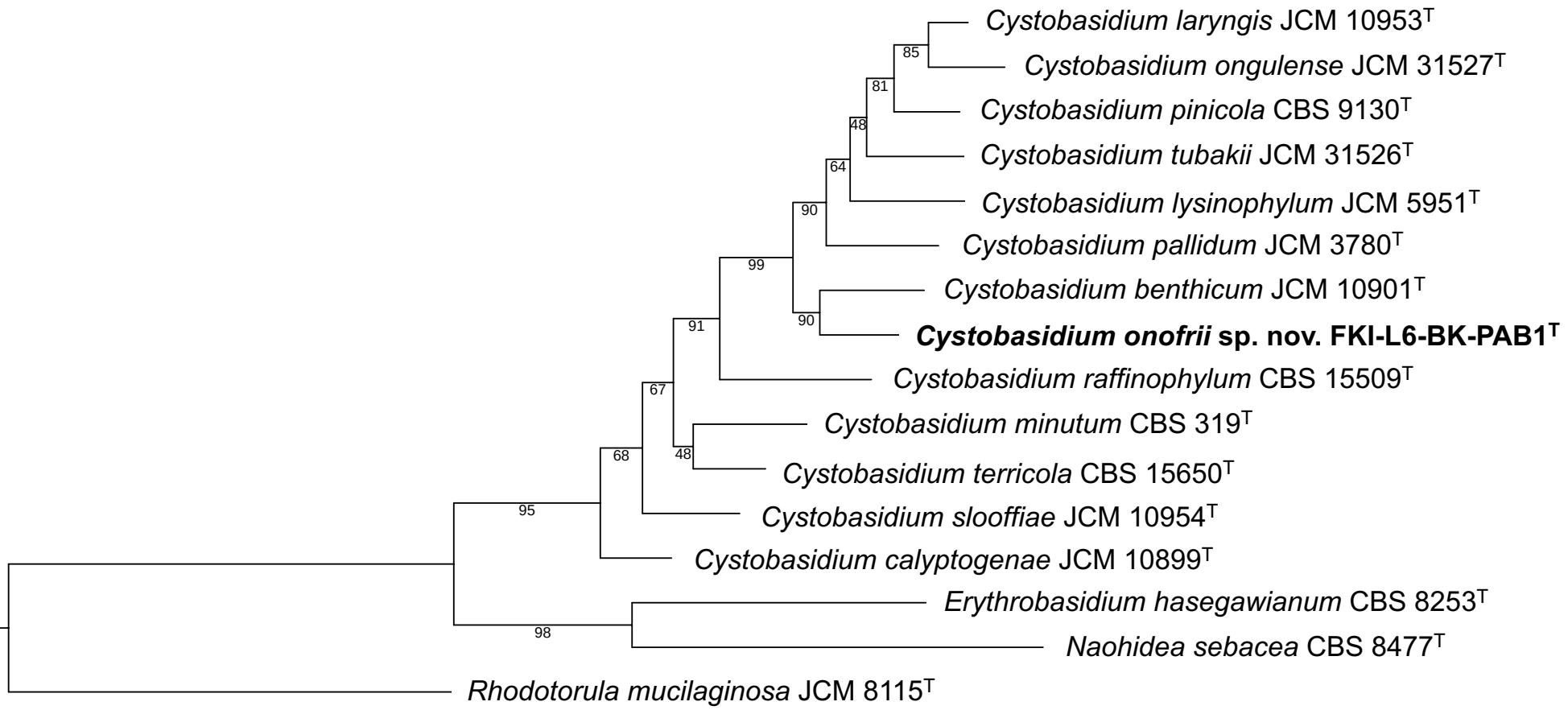
Supplemental Figure SF13. LSU



Supplemental Figure SF14. SSU



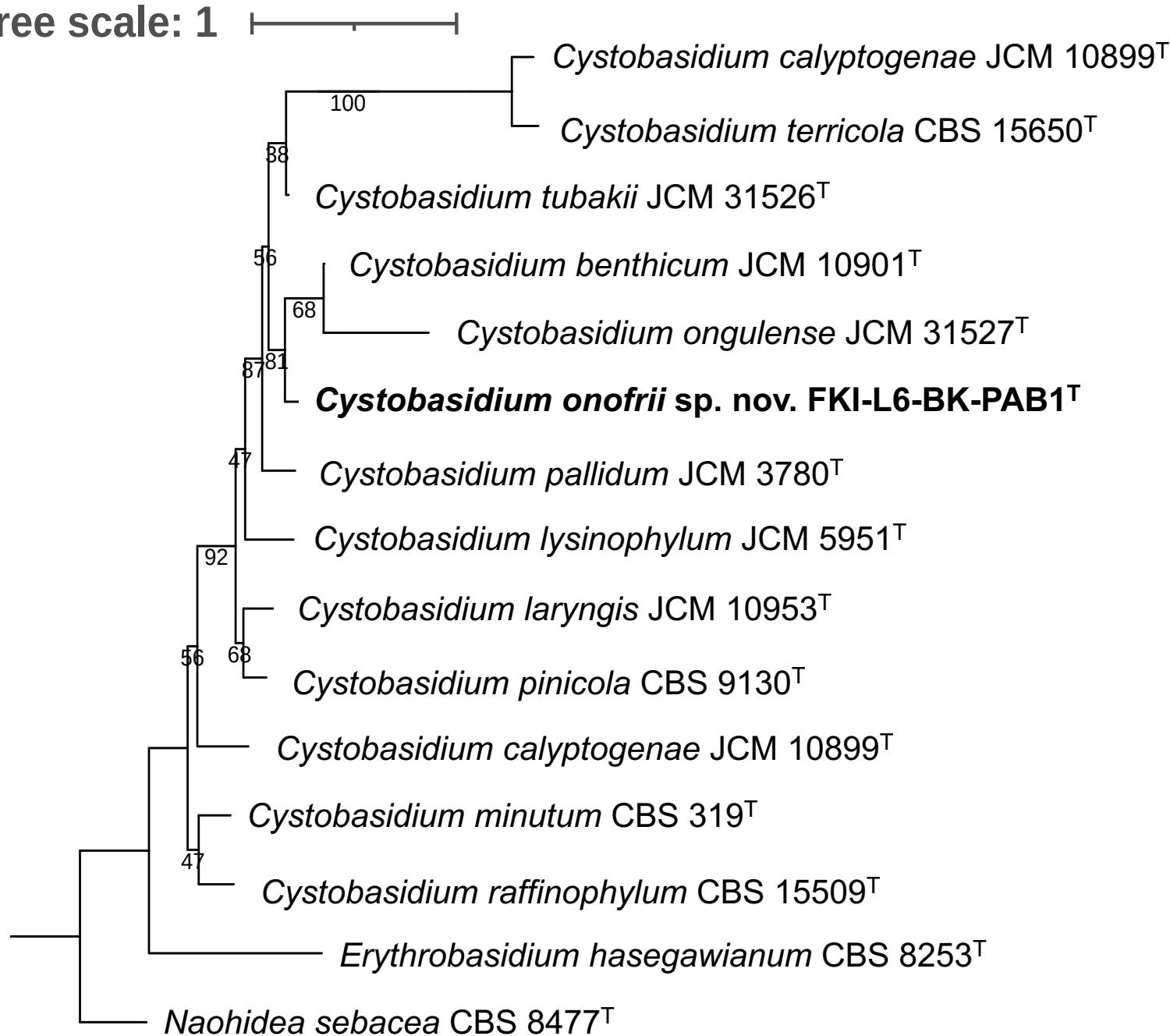
Supplemental Figure SF15. *CYTB*



Tree scale: 1

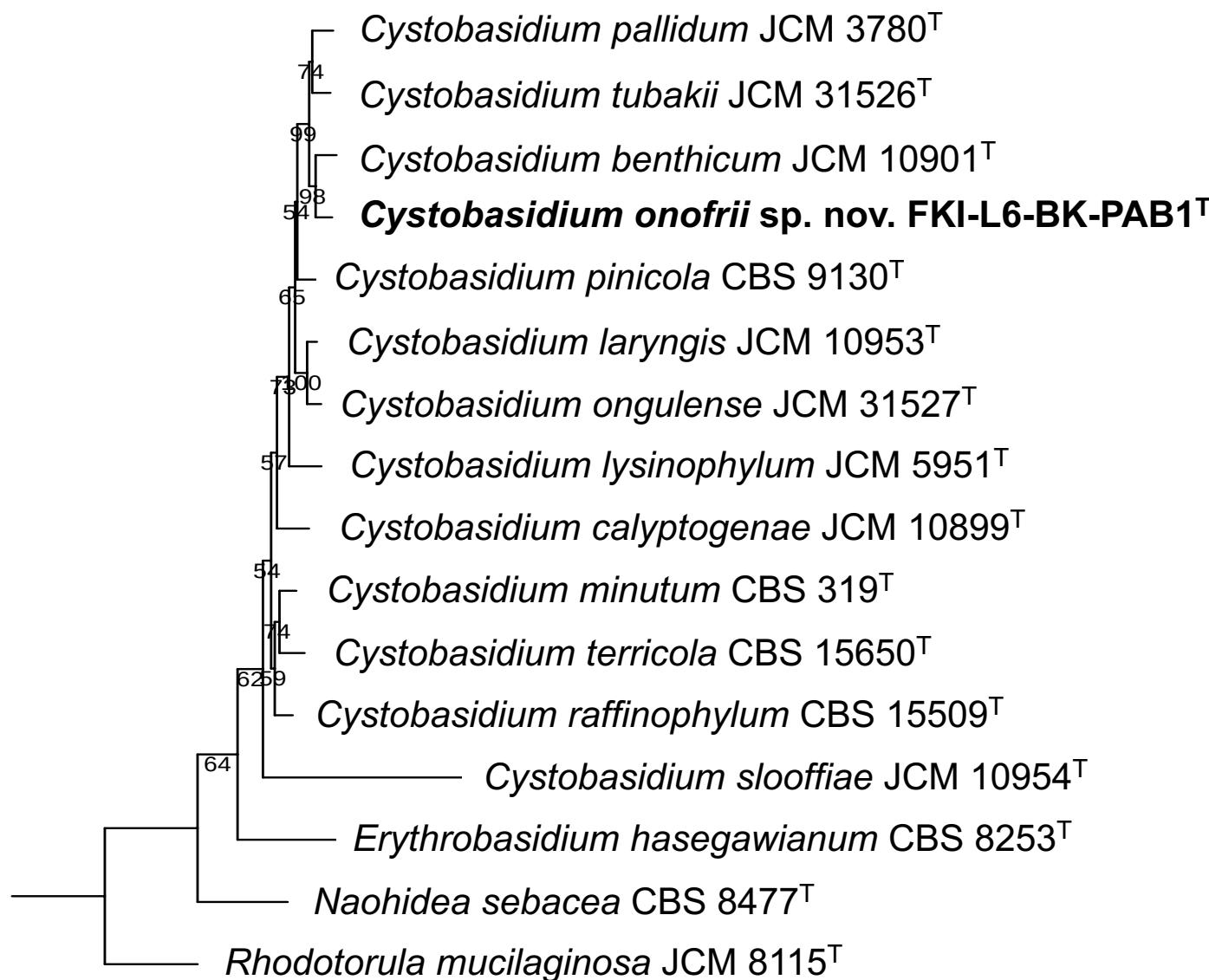
Supplemental Figure SF16. *TEF1*

Tree scale: 1

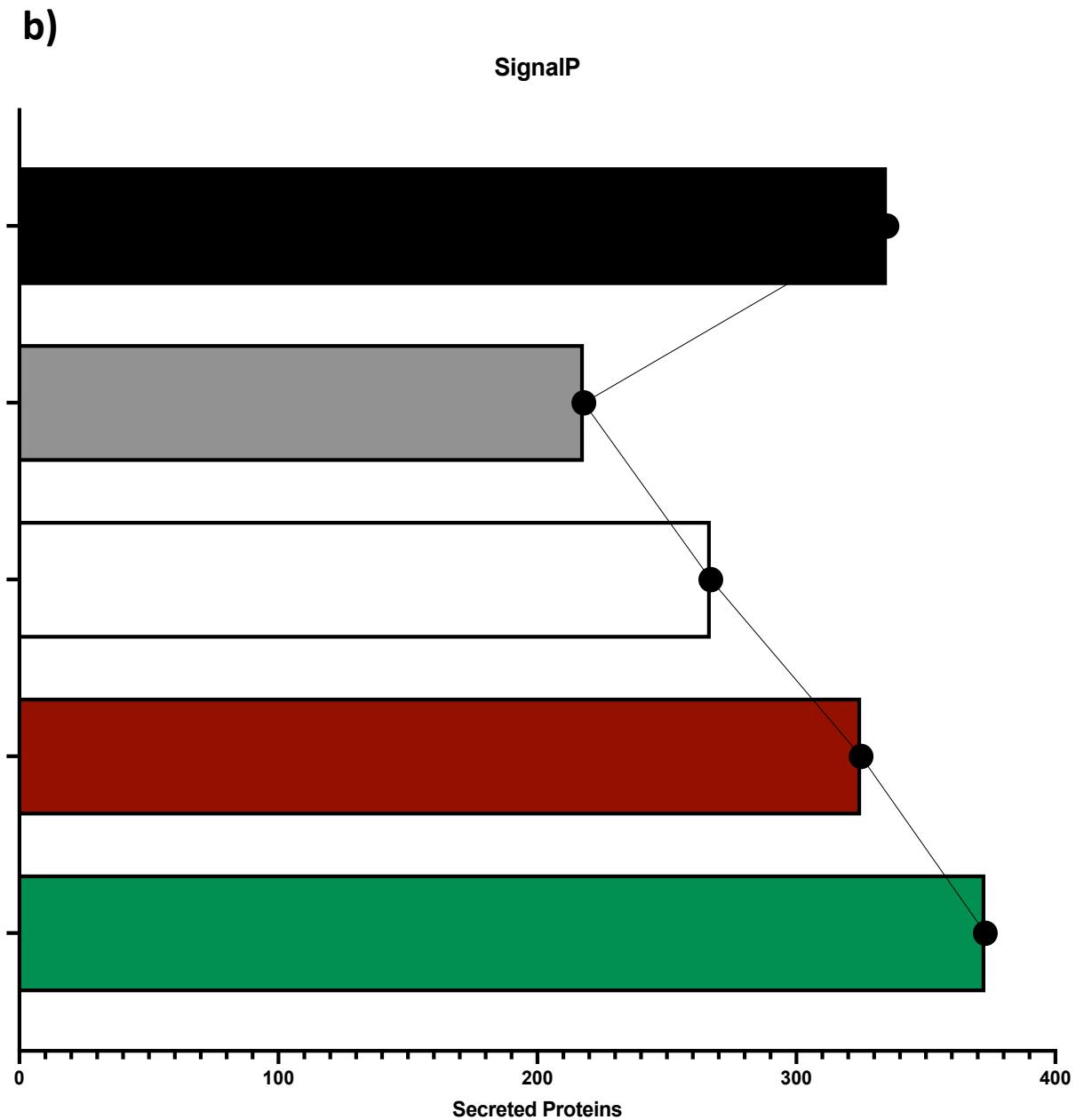
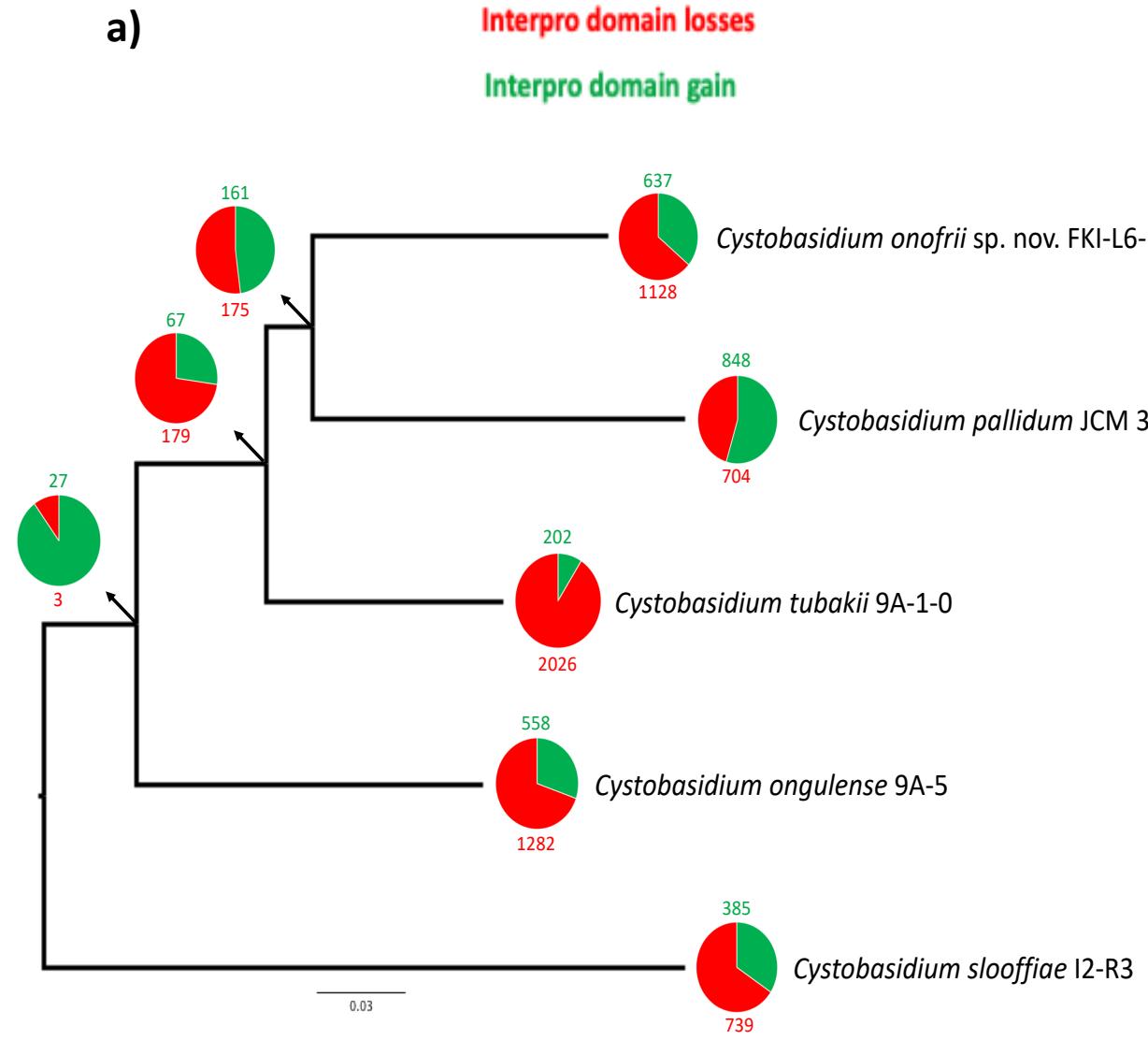


Supplemental Figure SF17. *RPB1*

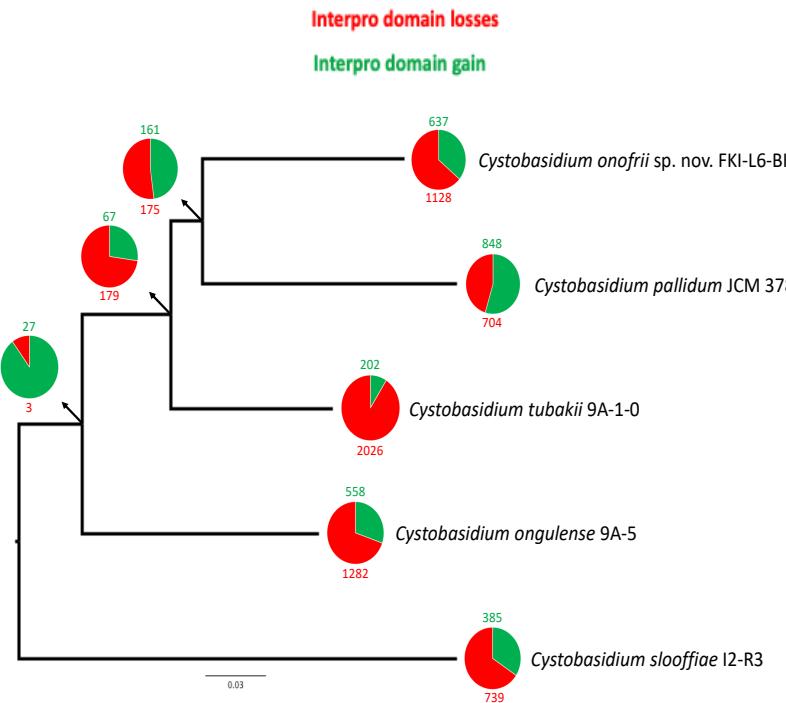
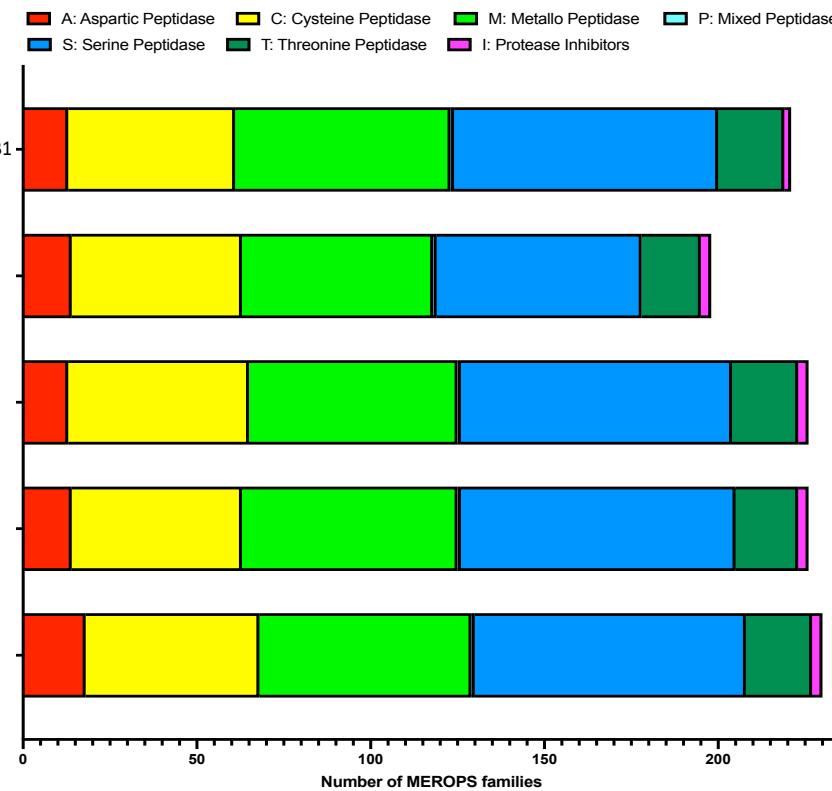
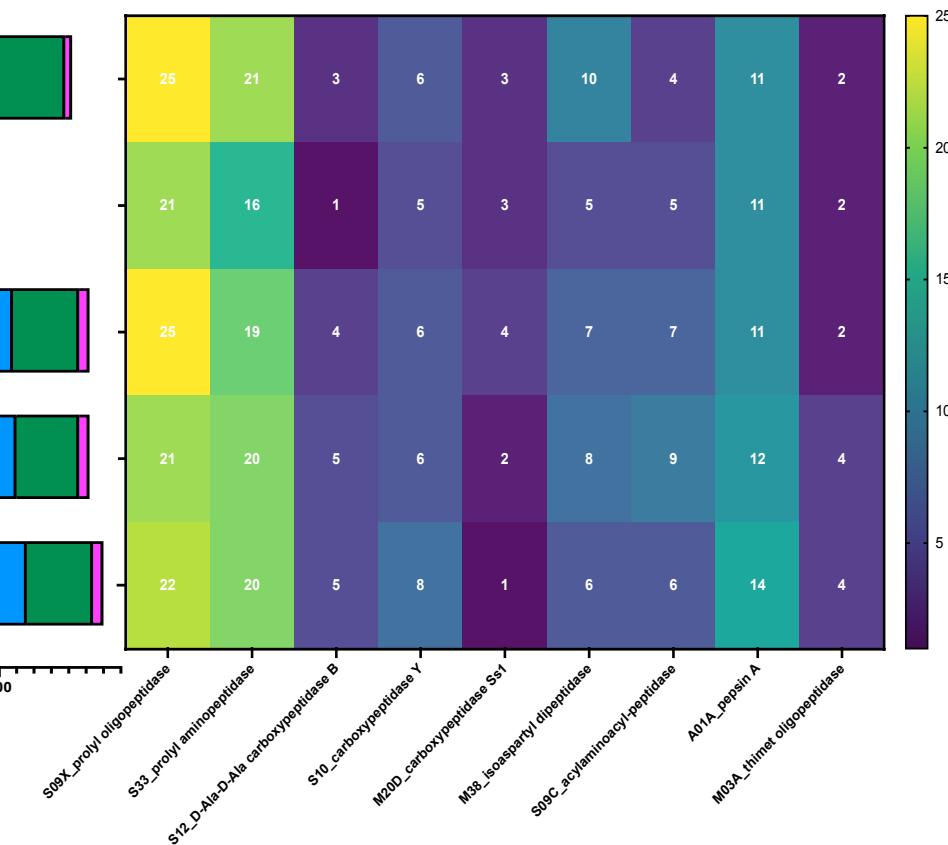
Tree scale: 1

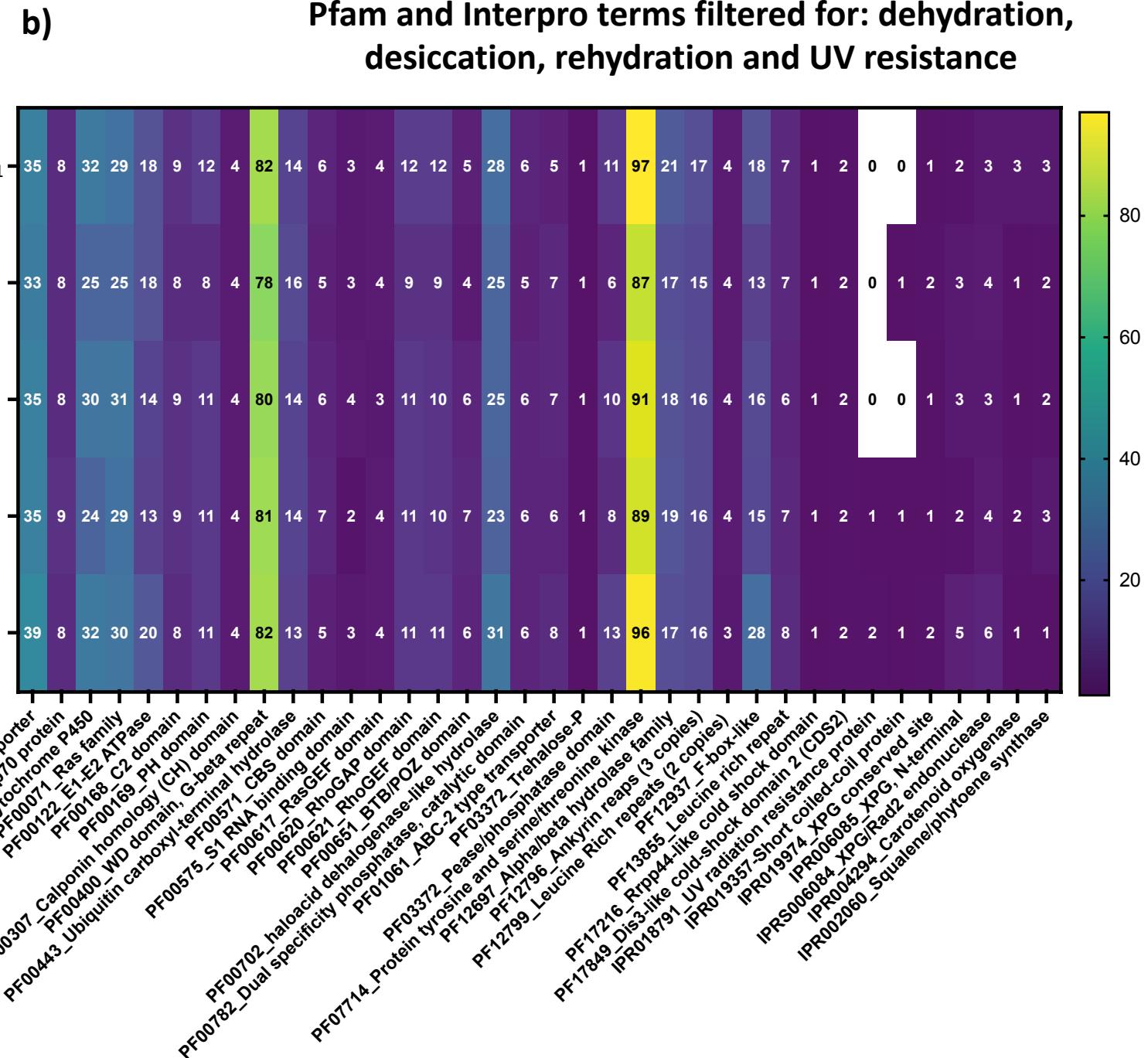
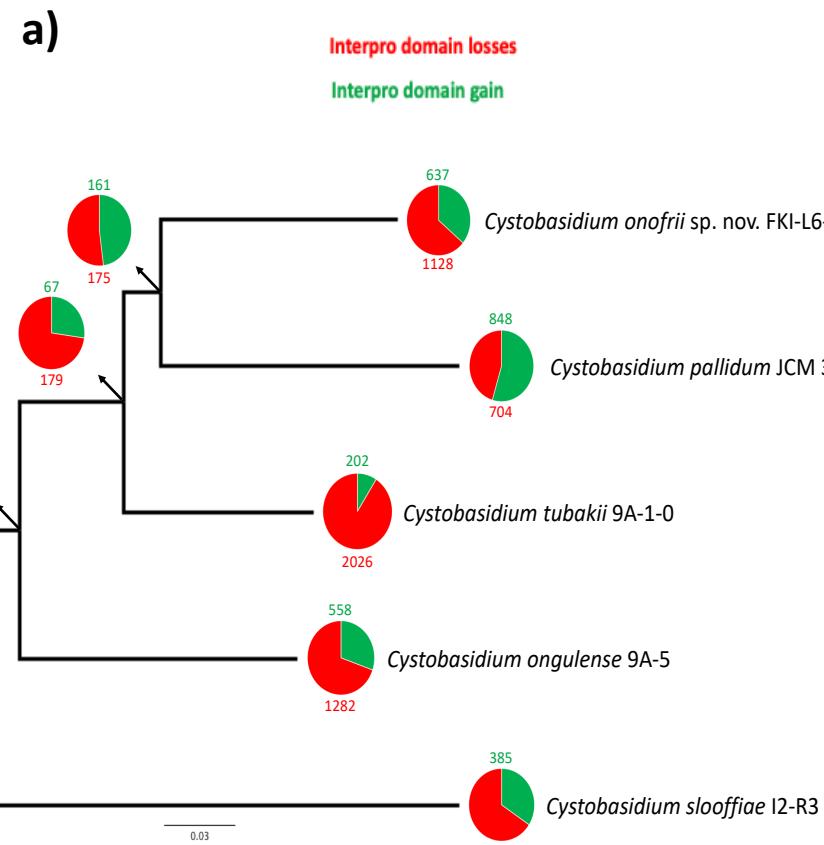


Supplemental Figure SF18. *RPB2*

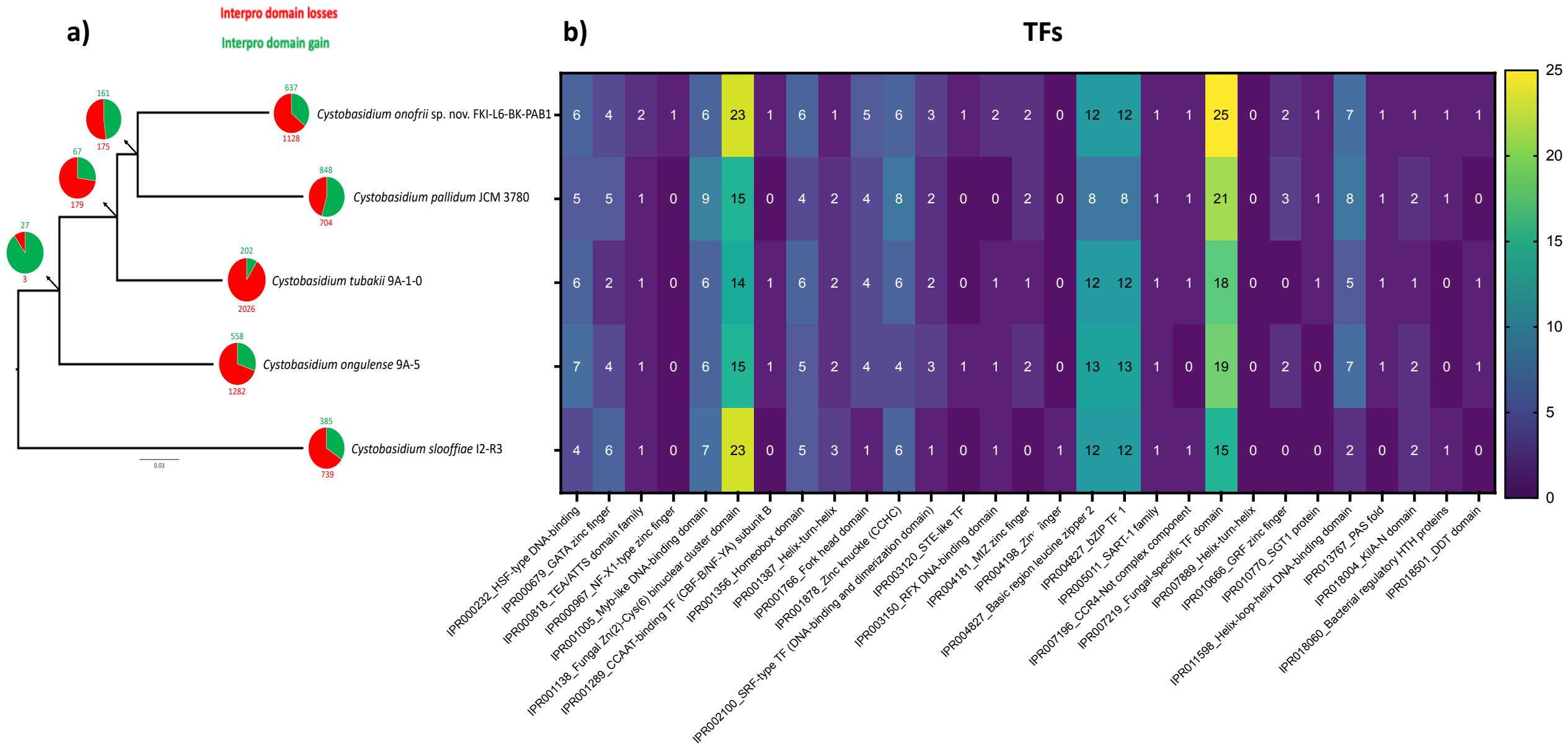


Supplemental Figure SF19.

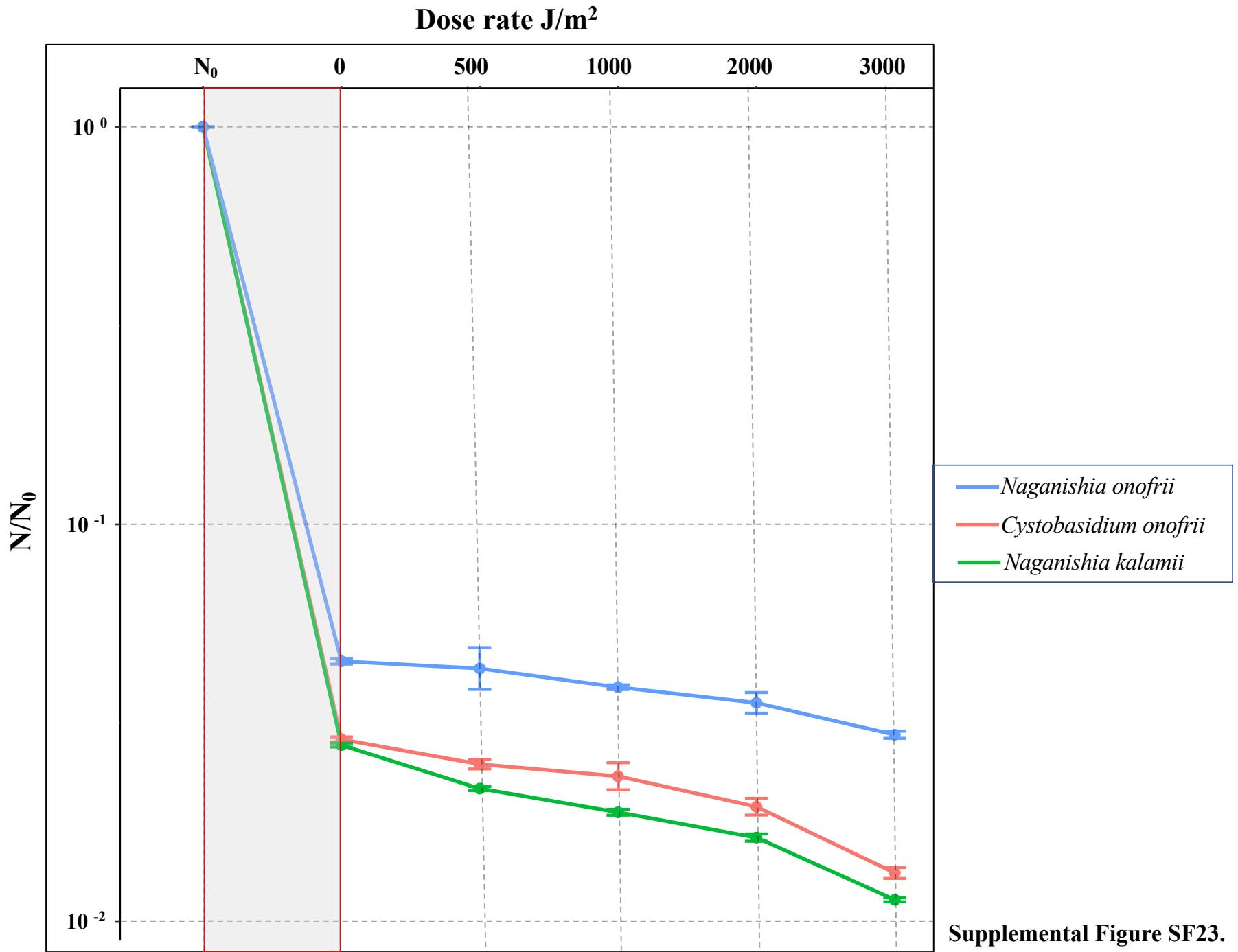
a)**b) MEROPS – Gene groups****c) MEROPS - peptidase family and subfamily**

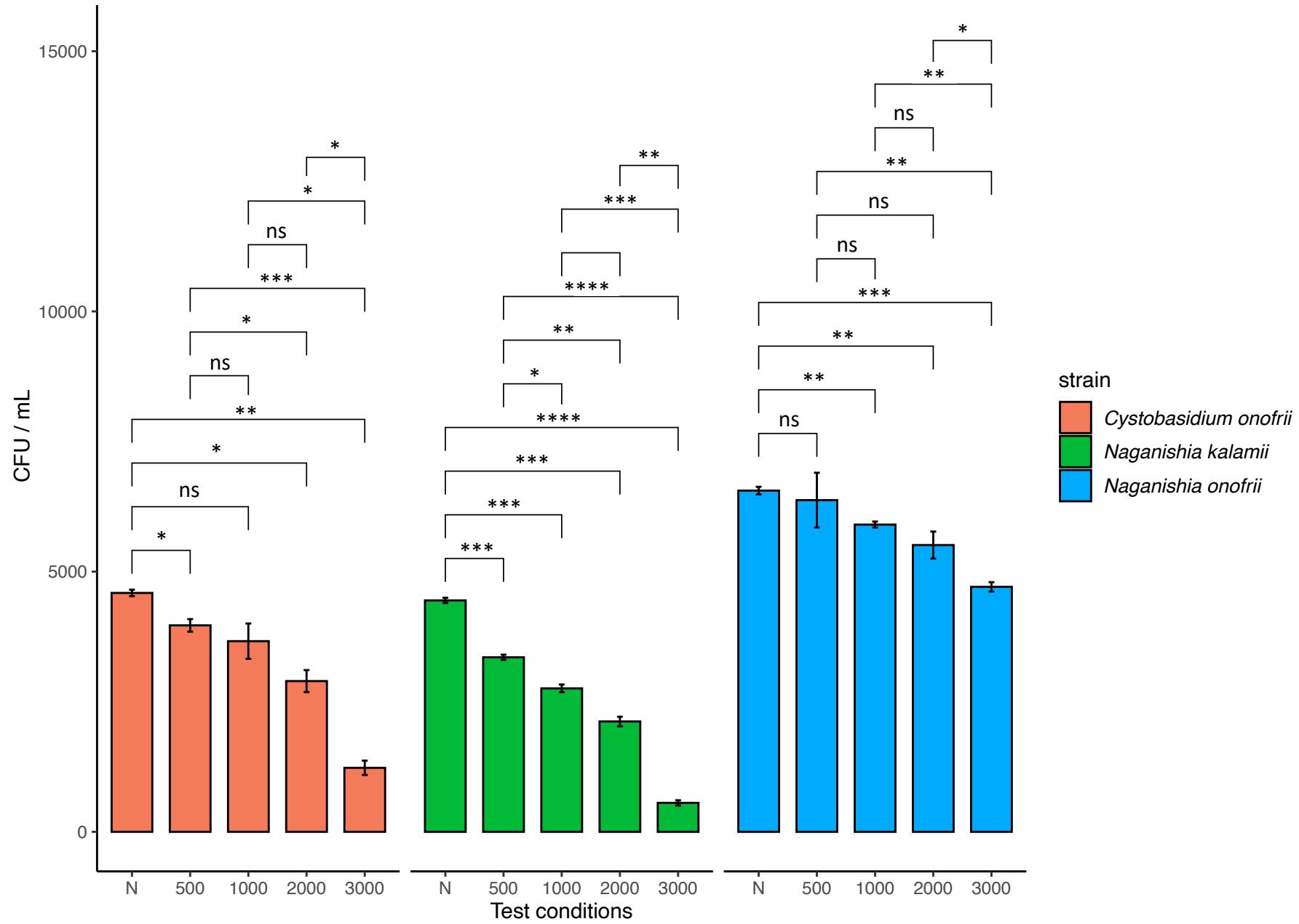


Supplemental Figure SF21.



Supplemental Figure SF22.





Supplemental Figure SF24.