

**Supplemental Table S3:** Marker Gene table for *Floridaphiala radiotolerans* FKI-L1-BK-DR1; N/A- not available

Genus	Species	Strain	LSU	ITS	TEF1	RPB2	TUB
<i>Elasticomyces</i>	<i>elasticus</i>	CCFEE 5490	KF309992	KF309951	N/ A	KF310047	KF546746
<i>Friedmanniomyces</i>	<i>endolithicus</i>	CCFEE 524	GU250364	JN88554	N/ A	KF310054	KF546732
<i>Recurvomyces</i>	<i>mirabilis</i>	CCFEE 5475	KC315876	KF309962	N/ A	KF310060	N/ A
<i>Mycosphaerella</i>	<i>fijiensis</i>	AFTOL 2021	DQ678098	N/ A	N/ A	DQ677993	N/ A
<i>Capnodium</i>	<i>salicinum</i>	CBS 131.34	MH866941	MH855469	DQ677889	KT216553	N/ A
<i>Capnodium</i>	<i>coffaeae</i>	CBS 147.52	MH868489	MH856967	DQ471089	KF902196	N/ A
<i>Phaeotheca</i>	<i>fissurella</i>	CBS 520.89	MH873872	MH862184	MN829428	MN829342	N/ A
<i>Stylodothis</i>	<i>puccinioides</i>	CBS 193.58	MH869286	MH857753	DQ677886		N/ A
<i>Dothidea</i>	<i>insculpta</i>	CBS 189.58	MH869284	AF027764	DQ471081	DQ247792	N/ A
<i>Sydowia</i>	<i>polyspora</i>	CBS 116.29	MH866487	MH855019	DQ677899	GU357791	N/ A
<i>Elsinoe</i>	<i>centrolobi</i>	CBS 222.50	NG_069000	MH856595	DQ677934	KX887089	N/ A
<i>Myriangium</i>	<i>duriae</i>	CBS 260.36	OM238138	MH855793	DQ677900	KT216528	N/ A
<i>Saxomyces</i>	<i>alpinus</i>	CCFEE 5466	GU250392	N/ A	N/ A	N/ A	N/ A
<i>Saxomyces</i>	<i>penninicus</i>	CCFEE 5495	KC315875	N/ A	N/ A	N/ A	N/ A
<i>Lichenothelia</i>	<i>convexa</i>	LMCC0061	KR045750	Mycocosm	Mycocosm	N/ A	Mycocosm
<i>Lichenothelia</i>	<i>calcareae</i>	L1324	KC015062	N/ A	N/ A	N/ A	N/ A
<i>Laurera</i>	<i>megasperma</i>	AFTOL 2094	FJ267702	N/ A	N/ A		N/ A
<i>Trypethelium</i>	<i>nitidiusculum</i>	AFTOL 2099	FJ267701	N/ A	GU327732	GU561856	N/ A
<i>Astrothelium</i>	<i>cinnamomeum</i>	DUKE 0000007	AY584652	AY584652	DQ782896	AY584690	N/ A
<i>Verruconis</i>	<i>gallopava</i>	CBS 437.64	NG_058016	HQ667553	KF155968	AB569127	KF156203
<i>Kirschsteiniothelia</i>	<i>aethiops</i>	CBS 109.53	MH869065	MH857990	DQ471084	DQ470914	
<i>Leptosphaeria</i>	<i>maculans</i>	CBS 275.63	MH869888	MH858282	MW735661	KT389669	KT389841
<i>Pleospora</i>	<i>herbarum</i>	CBS 191.86	JX681120	MH861935	KC584731	KC584471	AY749032
<i>Westerdykella</i>	<i>cylindrical</i>	CBS 454.72	NG_027595	N/ A	N/ A	N/ A	N/ A
<i>Hysterobrevium</i>	<i>smilacis</i>	CBS 114601	FJ161174	N/ A	FJ161091	GU357806	N/ A
<i>Gloniopsis</i>	<i>praelonga</i>	CBS 112415	FJ161173	N/ A	FJ161090	FJ161113	N/ A
<i>Anisomeridium</i>	<i>polypori</i>	AFTOL 101	DQ782906	DQ782838	DQ782894	DQ782864	N/ A
<i>Lophium</i>	<i>mytilinum</i>	CBS 269.34	DQ678081	EF596817	DQ677926	GU456342	Mycocosm
<i>Mytilinidion</i>	<i>resinicola</i>	CBS 304.34	MH867038	MH855535	FJ161101	FJ161120	N/ A
<i>Diplodia</i>	<i>corticola</i>	CBS 112549	KF766323	KF766156	KF766398	KX46395	DQ458853
<i>Neofusicoccum</i>	<i>ribis</i>	CBS 115475	DQ678053	KF766205	DQ677893	GU357789	
<i>Dothiorella</i>	<i>ulmicola</i>	CPC 24416	KR611899	KR611881	KR611910	N/ A	KR611909
<i>Botryosphaeria</i>	<i>dothidea</i>	CBS 115476	NG_027577	KF766151	DQ767637	GU357802	N/ A
<i>Abrothallus</i>	<i>cladoniae</i>	AB53	KF816228	KF816173	KF816181	KF816200	N/ A
<i>Abrothallus</i>	<i>parmotrematis</i>	AB1	KF816231	KF816176	KF816185.1	KF816204	
<i>Kellermania</i>	<i>confusa</i>	CBS 131723	KF766344	NR_165953	KF766405	N/ A	KF766134
<i>Macrophomina</i>	<i>phaseolina</i>	CBS 227.33	DQ377906	KF951627	KF952000	N/ A	KF531806
<i>Saccharata</i>	<i>capensis</i>	CBS 122693	N/ A	KF766224	N/ A	N/ A	KX465073
<i>Saccharata</i>	<i>leucospermi</i>	CBS 122694	NR_168142	EU552129	EU552094	KX464073	
<i>Rupestriomyces</i>	<i>sinensis</i>	CGMCC 3.1706	KF680788	KF513525	N/ A	KJ733740	KJ733715
<i>Rupestriomyces</i>	<i>torulosus</i>	CGMCC 3.1705	KF680792	KF513528	N/ A		KJ733710
<i>Rupestriomyces</i>	<i>ampulliformis</i>	CGMCC 3.1706	KF680798	KF513537	N/ A	KJ733739	KJ733713
<i>Spissiomycetes</i>	<i>aggregatus</i>	CGMCC 3.1707	NG_059959	KF513518	N/ A	KJ733736	KJ733706
<i>Spissiomycetes</i>	<i>ramosus</i>	CGMCC 3.1707	KF680783	KF513515		KJ733734	KJ733700
<i>Helicomyces</i>	<i>roseus</i>	CBS 283.51	DQ678083	AY916464	DQ677928	DQ677981	N/ A
<i>Tubeufia</i>	<i>paludosa</i>	CBS 120503	GU301877	N/ A	GU349024	GU357754	N/ A
<i>Tubeufia</i>	<i>amazonensis</i>	ATCC 42524	AY787938	AY916458	N/ A	N/ A	N/ A
<i>Tubeufia</i>	<i>cereae</i>	CBS 254.75	DQ470982	N/ A	DQ471105	DQ470934	N/ A
<i>Coniosporium</i>	<i>uncinatum</i>	CBS 100219	NG_058806	NR_145343	N/ A	GU250957	N/ A
<i>Coniosporium</i>	<i>apollinis</i>	CBS 109860	GU250899	N/ A	Mycocosm	GU250953	Mycocosm

<i>Schismatomma</i>	<i>decolorans</i>	AFTOL 307	AY548815	N/ A	DQ883725	DQ883715	N/ A
<i>Hysteropatella</i>	<i>clavispora</i>	CBS 247.34	AY541483	N/ A	DQ677901	DQ677955	N/ A
<i>Cryomyces</i>	<i>minteri</i>	CCFEE 5187	NG_058847	Mycocosm	Mycocosm	N/ A	N/ A
<i>Cryomyces</i>	<i>antarcticus</i>	CCFEE 534	Mycocosm	Mycocosm	Mycocosm	N/ A	Mycocosm
<i>Cryomyces</i>	<i>montanus</i>	CCFEE 5476	NG_073589	NR_171791	N/ A	N/ A	N/ A
<i>Cryomyces</i>	<i>funiculosus</i>	CCFEE 5554	N/ A	NR_171790	N/ A	N/ A	N/ A
<i>Haudseptoria</i>	<i>typhae</i>	CPC 38203	MW883815	MW883421	N/ A	N/ A	MW890131
<i>Asterodiscus</i>	<i>tamaricis</i>	L114	KU234101	KU234101	KU234133	KU234116	KU234135
<i>Jahnula</i>	<i>sangamonensis</i>	A482-1B	EF175662	JN942350	N/ A	N/ A	N/ A
<i>Jahnula</i>	<i>aquatica</i>	R68-1	EF175655	JN942354	N/ A	N/ A	N/ A
<i>Aliquandostipite</i>	<i>khaoyaiensis</i>	ISAN100	MT860428	MT864350	MT873577	MT873578	N/ A