

Table S1. Dinoflagellate taxa and GenBank accessions used for comparisons in this study

Suessiales	Isolate	Symbiodinium Invertebrate Host & Geographical Location	Symbiodinium Clade B Phylogenetic Marker			Dinoflagellate sPCP Sequences		
			ITS1-ITS2	CA4.86	Si15	sPCP size	sPCP genomic	sPCP cDNA
	<i>Symbiodinium</i> sp. Dstok28 (B / B1 / B184)	<i>Dichocoenia stokesii</i> (Scleractinaria) Bock Cay, Bahamas	JN602458	JN602470	JN602468	Long	JN602521-JN602528	(N/A)
	<i>Symbiodinium</i> sp. Dstrig102 (B / B19)	<i>Diploria strigosa</i> (Scleractinaria) Lee Stocking Island, Bahamas	JN602456	JN602473	JN602467	Long	JN602517-JN602520	(N/A)
	<i>Symbiodinium muscatinei</i> (B / B4)	<i>Anthopleura elegantissima</i> (Actiniaria) Central Oregon Coast, USA	JN602454	(null)	(null)	Short	JN602614-JN602617	AF42573 ³
	<i>Symbiodinium</i> sp. Ap1 (B / B1 / B184)	<i>Aiptasia pulchella</i> (Actiniaria) Sesoko Jima, Japan	JN602457	JN602474	JN602469	Long	JN602529, JN602530, JN602532, JN602533	JN602590-JN602600
	<i>Symbiodinium</i> sp. FLAp2-10AB (B / B1 / B184)	<i>Aiptasia pallida</i> (Actiniaria) Long Key, Florida, USA	JN602455	JN602472	JN602466	Long	JN602510, JN602512, JN602514-JN602516	JN602576-JN602589
	<i>Symbiodinium minutum</i> Pd (B / B1 / B184)	<i>Pocillopora damicornis</i> (Scleractinaria) Kaneohe Bay, Hawaii, USA	AF360565 ⁴	AY264305 ⁵	JN602464	Long	JN602497, JN602498, JN602500-JN602502	JN602567-JN602573
	<i>Symbiodinium</i> sp. Pe (B / B1 / B184)	<i>Porites evermanni</i> (Scleractinaria) Kaneohe Bay, Hawaii, USA	AF360566 ⁴	JN602475	JN602463	Long	JN602494-JN602496, JN602499	JN602557-JN602566
	<i>Symbiodinium</i> sp. Pk702 (B / B19 / B211)	<i>Plexaura kuna</i> (Gorgonacea) San Blas, Panama	AF360575 ⁴	AF474167 ⁶	JN602462	Long	JN602489, JN602491-JN602493	JN602601-JN602613
	<i>Symbiodinium psygmoophilum</i> HIAP (B / B2 / B224)	<i>Aiptasia pulchella</i> (Actiniaria) Kaneohe Bay, Hawaii, USA	AF360564 ⁴	(null)	JN602465	Long	JN602510, JN602511, JN602513	JN602574, JN602575
	<i>Symbiodinium psygmoophilum</i> PurPflax (B / B2 / B224)	<i>Plexaura flexuosa</i> (Gorgonacea) Tennessee Reef, Florida, USA	AF360574 ⁴	(null)	JN602461	Long	JN602485-JN602488, JN602490	JN602544-JN602556
	<i>Symbiodinium</i> sp. SSPe (B / B1 / B184)	<i>Pseudoterogorgia elisabethae</i> (Gorgonacea) San Salvador, Bahamas	AF360570 ⁴	AY264307 ⁵	JN602460	Long	JN602479, JN602481-JN602484	JN602538-JN602543
	<i>Symbiodinium</i> sp. Zp (B / B1 / B184)	<i>Zonathus pacificus</i> (Zoantharia) Kaneohe Bay, Hawaii, USA	JN602453	JN602471	JN602459	Long	JN602476-JN602478, JN602480, JN602531	JN602534-JN602537
	<i>Symbiodinium pilosum</i> 185 (A / A2)	<i>Zonathus sociatus</i> (Zoantharia) Discovery Bay, Jamaica				Short	AY149140-AY149147 ⁷	JN602618-JN602624
	<i>Symbiodinium microadriaticum</i> 61 (A / A1)	<i>Cassiopeia xamachana</i> (Rhizostomeae) Florida Keys, USA				Long	JN602625-JN602628	JN602629-JN602633
	<i>Symbiodinium</i> sp. 203 (C / C2)	<i>Hippopus hippopus</i> (Bivalvia) Republic of Palau				Short	JN602634-JN602642	JN602643-JN602648
	<i>Symbiodinium kawagutii</i> 135 (F / F1)	<i>Montipora capitata</i> (Scleractinaria) Kaneohe Bay, Hawaii, USA				Long	AY149163-AY149172 ⁷	JN602649-JN602659
	<i>Symbiodinium</i> sp. (N/A)	<i>Acropora formosa</i> (Scleractinaria) Magnetic Island, Australia				Long		L13613 ⁸
Gonyaucales								
	<i>Lingulodinium polyedra</i>	(Free-living)				Long	U93077 ⁹	
	<i>Alexandrium tamarense</i>	(Free-living)				Long		AY847685 ¹⁰
Gymnodiniales								
	<i>Amphidinium caterae</i>	(Free-living)				Long	Z50793 ¹¹	
Peridinales								
	<i>Heterocapsa pygmaea</i>	(Free-living)				Short	AJ298193 ¹²	

1 [23], 2 [24], 3 [65], 4 [97], 5 [40], 6 [98], 7 [57], 8 [53], 9 [54], 10 [55], 11 [56]