

**NOTE:** These primers are biased toward dinoflagellate/*Symbiodinium*. See cited references for details on the PCR cocktail that was utilized.

<b>Nuclear ribosomal genes and spacers</b>				
<b>Molecule (Size in bp)</b>	<b>Primer name</b>	<b>Primer Sequence (in 5'-3' direction)</b>	<b>Reference</b>	<b>PCR profile</b>
18S-rDNA (~1800)	SS5 SS3Z	GGTTGATCCTGCCAGTAGTCATATGCTTG AGCACTGCGTCAGTCCGAATAATTCACCGG	Rowan & Powers (1991)	94°C 2:30 min 56°C 1 min 72°C 2 min 94°C 1 min 56°C 1 min 72°C 2:30 min 29X to step 4 72°C 8 min Hold 4°C
18S-rDNA (~750)	SS5 SSE21.6	GGTTGATCCTGCCAGTAGTCATATGCTTG CTAGAAACCAACAAAATAGAACTGAGGTC	Santos et al. (2003)	94°C 2:30 min 56°C 1 min 72°C 2 min 94°C 1 min 56°C 1 min 72°C 2:30 min 29X to step 4 72°C 8 min Hold 4°C

28S-rDNA (~900)	ls1.5 ls1.3	CGCTGAAATTAAGCATATAAGTAAG AACGATTTGCACGTCAGTATC	Wilcox (1998)	94°C 2:00 min 94°C 15 sec 52°C 20 sec 72°C 45 sec 29X to step 2 72°C 7 min Hold 4°C
28S-rDNA (~600)	24D15F1 24D23R1	TTAAGCATATAAGTAAGCGGAGGA CTCCTTGGTCCGTGTTTCAAGGACG	Baker et al. (1997)	Contact A.C. Baker for details
18S-ITS-28S (~1600)	S_DINO L_O	CGCTCCTACCGATTGAGTGA GCTATCCTGAG (AG) GAAACTTCG	Pochon et al. (2001)	94°C 30 sec 50°C 30 sec 72°C 120 sec 39X to step 1 72°C 5 min Hold 4°C
ITS (~750)	ZITSUP ZITSDN	CCGGTGAATTATTCGGACTGACGCAGTGCT CTGTTTACCTTTTCCTCCGC	Santos et al. (2001)	94°C 2 min 94°C 30 sec 60°C 30 sec 72°C 45 sec 35X to step 2 72°C 5 min Hold 4°C

ITS1 (~330)	symITSFP symITSRP	CTCAGCTCTGGACGTTGYGTT GCTGCGTTCTTCATCGATGC	van Oppen et al. (2001)	94°C 3 min 95°C 30 sec 59°C 30 sec 72°C 30 sec 29X to step 2 72°C 5 min Hold 4°C
ITS2 (~350)	ITSintfor2 ITS2CLAMP (note: clamp has been removed from the primer seq)	GAATTGCAGAACTCCGTG GGGATCCATATGCTTAAGTTCAGCGGGT	LaJeunesse & Trench (2000)	See reference for ramping profile

**Chloroplast genes**

<b>Molecule (Size in bp)</b>	<b>Primer name</b>	<b>Primer Sequence (in 5'-3' direction)</b>	<b>Reference</b>	<b>PCR profile</b>
23S-rDNA (~700)	23S1 23S2	GGCTGTAAC TATAACGGTCC CCATCGTATTGAACCCAGC	Zhang et al. (2000)	95°C 1 min 95°C 45 sec 55°C 45 sec 72°C 60 sec 34X to step 2 72°C 7 min Hold 4°C
23S-rDNA Domain V hypervariable region (~175)	23SHYPERUP 23SHYPERDN	TCAGTACAAATAATATGCTG TTATCGCCCCAATTAAACAGT	Santos et al. (2003) Marine Biotechnology	94°C 1 min 94°C 30 sec 50°C 30 sec 72°C 30 sec 34X to step 2 72°C 5 min Hold 4°C
<i>psbA</i> (~900)	PSBA2 PSBA3	YTITAYATHGGITGGTTYGG TCRTGCATIACYTCCATICC	Takashita & Uchida (1999)	94°C 60 sec 50°C 60 sec 72°C 120 sec 29X to step 1 72°C 10 min Hold 4°C

<i>psbA</i> non-coding region (~880-1200)	7.4-Forw 7.8-Rev	GCATGAAAGAAATGCACACAACCTTCCC GGTTCTCTTATTCCATCAATATCTACTG	Moore et al. (2003); see paper for other primers that can be used to amplify the entire <i>psbA</i> mini-circle	94°C 2 min 94°C 10 sec 55°C 30 sec 72°C 120 sec 29X to step 2 72°C 10 min Hold 4°C
---	---------------------	--	---	--

**Mitochondrial genes**

<b>Molecule (Size in bp)</b>	<b>Primer name</b>	<b>Primer Sequence (in 5'-3' direction)</b>	<b>Reference</b>	<b>PCR profile</b>
COI (~600) Takabayashi et al. (2004); <b>NOTE</b> : USE BOTH COI PRIMER SETS TO OBTAIN 1000 bp	Forward Reverse	TTATTTTGRTTTTTTGGTCATCCTGARGT TCTGGGTAGTCTGGTATTCKTCKTGGCA	Norman & Gray (1997)	94°C 4 min 94°C 30 sec 55°C 60 sec 72°C 60 sec 29X to step 2 72°C 7 min Hold 4°C
COI (~600) Takabayashi et al. (2004); <b>NOTE</b> : USE BOTH COI PRIMER SETS TO OBTAIN 1000 bp	Forward Reverse	AAAAATTGTAATCATAAACGCTTAGG TGTTGAGCCACCTATAGTAAACATTA	Dr. S. Lin (University of Connecticut)	94°C 4 min 94°C 30 sec 55°C 60 sec 72°C 60 sec 29X to step 2 72°C 7 min Hold 4°C
COB (~900)	Dinocob1F Dinocob1R	ATGAAATCTCATTTACAWWCATATCCTTGT CC TCTCTTGAGGKAATTGWKMACCTATCCA	Zhang et al. (2005)	94°C 1 min 94°C 20 sec 55°C 30 sec 72°C 40 sec 39X to step 2 Hold 4°C

***Symbiodinium* Clade B microsatellite loci**

<b>Molecule (Size in bp)</b>	<b>Primer name</b>	<b>Primer Sequence (in 5'-3' direction)</b>	<b>Reference</b>	<b>PCR profile</b>
GA2.8: ITS type B1 microsatellite – <i>P. kuna</i> (~155)	GA2.8UP GA2.8DN	TCGACTCTTGGCGCAAATG GGGATGAAACACTGGGATAATCCAG	Santos et al. (2001)	94°C 3 min 94°C 45 sec 60°C 45 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
GA4.84: ITS type B1 microsatellite – <i>P. kuna</i> (~170)	GA4.84UP GA4.84DN	GATCAAACCTCTTGTGATGAC GTCAGATTGTCATCAAAGACTGC	Santos et al. (2001)	94°C 3 min 94°C 45 sec 60°C 45 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
CA6.10: ITS type B1 microsatellite – <i>P. kuna</i> (~119)	CA6.10UP CA6.10DN	GGTCCAAGCTGGAAGCAGC CCTACAATAGACAGCAACCTAGGAC	Santos et al. (2001)	94°C 3 min 94°C 45 sec 60°C 45 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C

CA1'.7: ITS type B1 microsatellite – <i>P. kuna</i> (~345)	CA1'.7UP CA1'.7DN	GCAGTGTGTTACCTTAAAGTGCGG GTTTAGTTGAGCAACTTCCGAG	Santos & Coffroth (2003)	94°C 3 min 94°C 30 sec 60°C 30 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
CA4.86: ITS type B1 microsatellite – <i>P. elisabethae</i> (~193)	CA4.86R CA4.86L	GCCTTCAATGCAATCACCTT GGAATTGGCCATCCCTCTAT	Santos & Coffroth (2003)	94°C 3 min 94°C 30 sec 50°C 30 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C
CA6.38: ITS type B1 microsatellite – <i>P. elisabethae</i> (~112)	CA6.38R CA6.38L	CAAAGAATATTCGGGGGTCA AGTTGATACGCCGGATGTGT	Santos & Coffroth (2003)	94°C 3 min 94°C 30 sec 50°C 30 sec 72°C 30 sec 39X to step 2 72°C 5 min Hold 4°C

***Symbiodinium* Clade C microsatellite loci**

<b>Molecule (Size in bp)</b>	<b>Primer name</b>	<b>Primer Sequence (in 5'-3' direction)</b>	<b>Reference</b>	<b>PCR profile</b>
PV1: ITS type C2 microsatellite – <i>P. verrucosa</i> (~159)	PV1F PV1R	TGATTCAGGAAGATGGTAAGTCC ATGCACATAGGCTTCTTGTC	Magalon et al. (2004)	94°C 10 min 94°C 45 sec 54°C 45 sec 72°C 45 sec 29X to step 2 72°C 8 min Hold 4°C
PV4: ITS type C2 microsatellite – <i>P. verrucosa</i> (~122)	PV4F PV4R	CGTGTTTGAAAAGGGTTCTTC CAAACCCAGCCAAAAGTGAC	Magalon et al. (2004)	94°C 10 min 94°C 45 sec 54°C 45 sec 72°C 45 sec 29X to step 2 72°C 8 min Hold 4°C
PV1bis: ITS type C2 microsatellite – <i>P. verrucosa</i> (~159) <b>NOTE:</b> redesigned from PV1 owing to null alleles	PV1bis-for PV1bis-rev	GGACCAAGCTGAATAATTTG ACCAAGGTACTGTAGTTGTTATG	Magalon et al. (2005); Magalon pers. comm.	94°C 10 min 94°C 45 sec 54°C 45 sec 72°C 45 sec 29X to step 2 72°C 8 min Hold 4°C