

Additional file 3 - Primer specifications for cone opsin genes

Target	Primer	Sequence ^a	Primer ^b (bp)	GC (%)	Tm ^c (°C)	Annealing site	Product ^b (bp)	Location	Input PCR template ^d
<i>SWS1</i>	UV F3	ACATCCCTGAAAG TCTGGGC	20	60	55.59	655-674	148	Exon III	AF191222
	UV R2	AGCAGCTGGGAG TAGCAGAA	20	55	54.96	802-783	148		
<i>SWS2b</i>	Blue2 F2b	GCTTGTGGTCTCT TGCTGTGG	21	57	55.96	437-457	151	Exon I	AF317674
	Blue2 R2b	CCAAACAGAGGT GGAAGTGC	20	55	53.29	587-568	151		
<i>SWS2a</i>	Blue1 F1a	GCAGAGAGGGAA GTGACCAG	20	60	53.94	1267-1286	156	Exon IV	AF247114
	Blue1 R1a	AGCCTTTGAGAAA CAGGACG	20	50	52.35	1422-1403	156		
<i>RH2b</i>	PaG- Rh2b-F12	GCCTTGTCATTAC TGGATTC	20	45	48.37	165-184	357	Exon I-II	DQ088645
	PaG- Rh2b-R2	AGCAAGAACCACA AGAGACC	20	50	51.93	521-502	357		
<i>RH2a</i>	Green1 F4	CTGAGAAGGAAGT GACCCGT	20	55	53.2	1160-1179	187	Exon IV	AF247122
	Green1 R3	AGCACGTAGATAA CAGGGTTGT	22	45	53.51	1346-1325	187		
<i>LWS</i>	Red F1a	TGAGGGTCCCAAT TACCA	18	50	48.57	853-870	271	Exon I	AF247126
	Red R0	GCCCTCAAAGATA CACATTGG	21	48	51.15	1123-1103	271		

^a Tails associated with restriction sites were removed from the original primer sequences [8,15] with an exception of the *RH2b* primer sequence that was designed in our lab.

^b Length in base pairs.

^c Melting temperature.

^d Accession numbers of gene sequences used to assess the specificity of primers.