

**Table 2.** Dinoflagellate gene copy numbers documented to date.

Gene	Species	Copy number per genome**	Reference
Actin*	<i>Amphidinium carterae</i>	≥113	[49]
Protein kinase gene	<i>Lingulodinium polyedrum</i>	~30	[50]
Form II Rubisco gene*	<i>Prorocentrum minimum</i>	148	[16]
Luciferase gene*	<i>Alexandrium affine</i>	60	[51]
	<i>Alexandrium tamarense</i>	126	[51]
	<i>Lingulodinium polyedrum</i>	146	[51]
	<i>Pyrocystis fusiformis</i>	44	[51]
	<i>Pyrocystis lunula</i>	160	[51]
	<i>Pyrocystis noctiluca</i>	110	[51]
	<i>Protoceratium reticulatum</i>	48	[51]
Luciferin-binding protein gene	<i>Lingulodinium polyedrum</i>	~1,000	[52]
Mitotic cyclin gene	<i>Lingulodinium polyedrum</i>	~5,000	[53]
Peridinin-chlorophyll <i>a</i> binding protein gene*	<i>Lingulodinium polyedrum</i>	~5,000	[54]
	<i>Symbiodinium</i> sp. 203	36	[55]
Proliferating cell nuclear antigen gene*	<i>Pfiesteria piscicida</i>	41	[17]

\*arranged in tandem repeats.

\*\**A. carterae* actin copy number was based on cloning and sequencing (Figure 4 in [49]); all other gene copy numbers here were based on probe hybridization or quantitative PCR.

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16. Zhang H, Lin S (2003) Complex gene structure of the form II RUBISCO in the dinoflagellate *Prorocentrum minimum* (Dinophyceae). *J Phycol* 39: 1160–1171.
17. Zhang H, Hou Y, Lin S (2006) Isolation and characterization of proliferating cell nuclear antigen from the dinoflagellate *Pfiesteria piscicida*. *J Euk Microbiol* 53: 142–150.
49. Bachvaroff TR, Place AR (2008) From stop to start: tandem gene arrangement, copy number and trans-splicing sites in the dinoflagellate *Amphidinium carterae*. *PLoS ONE* 3: e2929.
50. Salois P, Morse D (1997) Characterization and molecular phylogeny of a protein kinase cDNA from the dinoflagellate *Gonyaulax* (Dinophyceae). *J Phycol* 33: 1063–1072.
51. Liu LY, Hastings JW (2006) Novel and rapidly diverging intergenic sequences between tandem repeats of the luciferase genes in seven dinoflagellate species. *J Phycol* 42: 96–103.
52. Lee D, Mittag M, Sczekan S, Morse D, Hastings JW (1993) Molecular cloning and genomic organization of a gene for luciferin-binding protein from the dinoflagellate *Gonyaulax polyedra*. *J Biol Chem* 268: 8842–8850.
53. Bertomeu T, Morse D (2004) Isolation of a dinoflagellate mitotic cyclin by functional complementation in yeast. *Biochem Biophys Res Commun* 323: 1172–1183.
54. Le QH, Markovic P, Hastings JW, Jovine RVM, Morse D (1997) Structure and organization of the peridinin chlorophyll *a* binding protein gene in *Gonyaulax polyedra*. *Mol General Genet* 255: 595–604.
55. Reichman J, Wilcox T, Vize P (2003) PCP gene family in *Symbiodinium* from *Hippopus hippopus*: low level of concerted evolution, isoform diversity and spectral tuning of chromophores. *Mol Biol Evol* 20: 2143–2154.