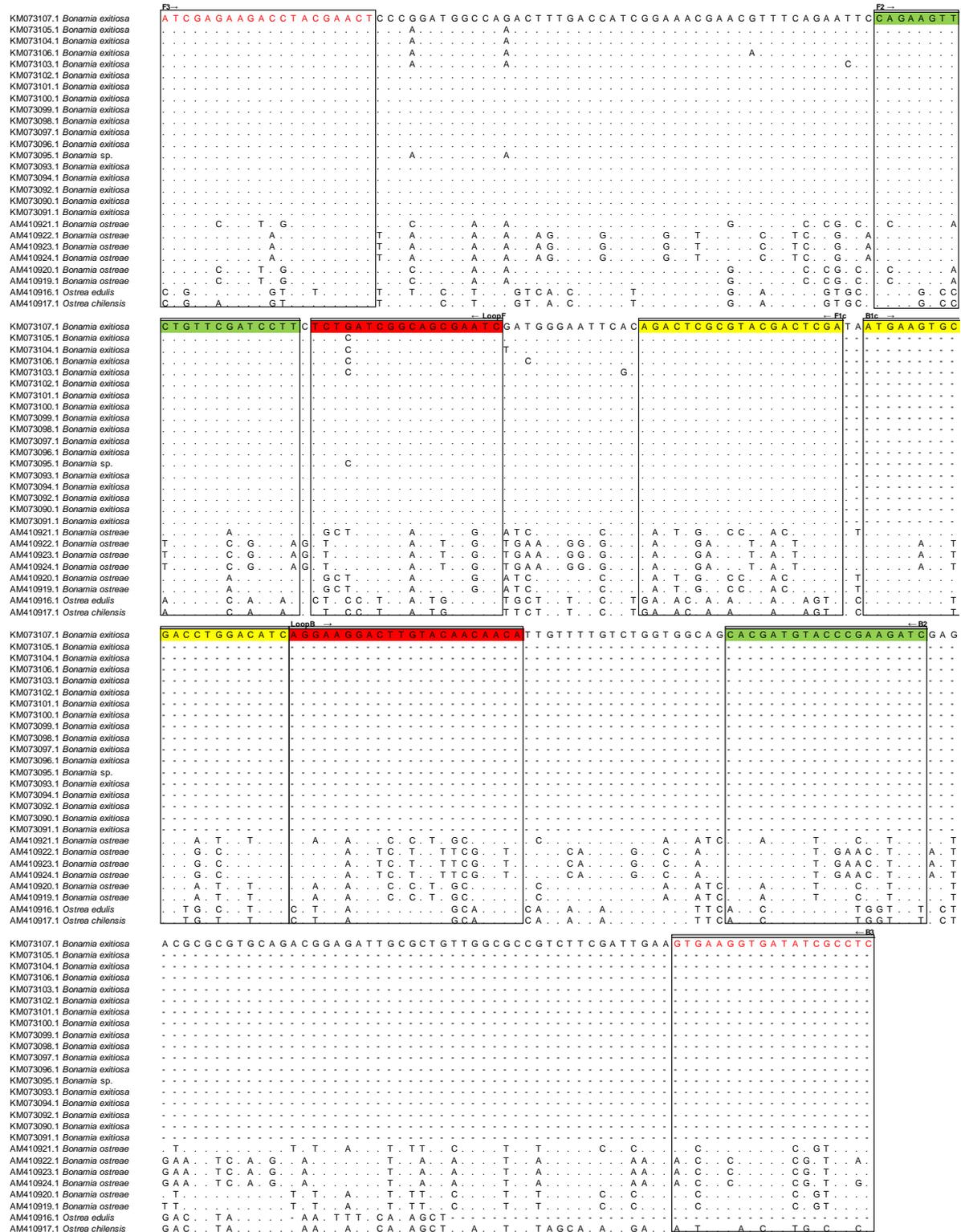


Figure S1. Nucleotide alignment of partial gene sequences of the *actin* and *18S rRNA* genes of bonamia species, their oyster hosts, and other haplosporidian sequences available in GenBank (accessed in March 2022). The LAMP primers binding sites are highlighted as follows: outer primers F3 and B3 coloured in red; inner primers FIP (F1c + F2) and BIP (B1c + B2) boxed in yellow and green; and loop primers LoopF and LoopB boxed in red.

A) *Bonamia exitiosa actin* gene alignment.



	F2 →		← LoopF	
	A C G A	C A G A T A C C G T C G T A G T C C	C A - A C C A T	A A A C G A T G T C A - A C T A A G C A T T G
MZ305451.1 <i>Bonamia ostreae</i>
JN040832.1 <i>Bonamia ostreae</i>
JN040831.1 <i>Bonamia ostreae</i>
JQ936481.1 <i>Bonamia ostreae</i>
AF262995.1 <i>Bonamia ostreae</i>
AF192759.1 <i>Bonamia ostreae</i>
JF831802.1 <i>Bonamia exitiosa</i>	.	.	.	G
JF495410.1 <i>Bonamia exitiosa</i>	.	.	.	G
JF831804.1 <i>Bonamia sp.</i>	.	.	.	G
JF495408.1 <i>Bonamia sp.</i>	.	.	.	G
JF831803.1 <i>Bonamia sp.</i>	.	.	.	G
AY542903.2 <i>Bonamia sp.</i>	.	.	.	G
GQ366703.1 <i>Bonamia sp.</i>	.	.	.	G
AF337563.1 <i>Bonamia sp.</i>	.	.	.	G
DQ312295.1 <i>Bonamia sp.</i>	.	.	.	G
KC578009.1 <i>Bonamia sp.</i>	.	.	.	G
EU016528.1 <i>Bonamia sp.</i>	.	.	.	G
DQ356000.1 <i>Bonamia perspora</i>	.	.	.	G
AY449710.1 <i>Minchinia tapetis</i>	.	.	T	G
KY522823.1 <i>Minchinia sp.</i>	.	.	.	G
KY522821.1 <i>Minchinia sp.</i>	.	.	.	G
FJ518816.1 <i>Minchinia mercenariae</i>	.	.	.	G
MK070859.1 <i>Haplosporidium sp.</i>	.	.	C	G
AY449712.1 <i>Haplosporidian parasite</i>	.	.	C	G
MK070858.1 <i>Minchinia mytili</i>	.	.	C	G
MT311215.1 <i>Haplosporidium carcini</i>	.	T	T	C
DQ653412.2 <i>Haplosporidia sp.</i>	.	G	T	T
U20858.1 <i>Haplosporidium costale</i>	.	G	T	G
DQ458793.1 <i>Haplosporidium edule</i>	.	T	G	T
EF165631.1 <i>Minchinia sp.</i>	.	T	G	T
HQ176469.1 <i>Haplosporidium raabei</i>	.	T	G	T
AY449711.1 <i>Minchinia chitonis</i>	N	.	.	.
KJ534587.1 <i>Haplosporidium patagon</i>	.	G	.	.
MN104247.1 <i>Haplosporidium pinnae</i>	.	T	.	.
U20319.1 <i>Minchinia teredinis</i>	.	.	C	.
MZ666334.1 <i>Haplosporidium costale</i>	.	.	G	.
AY449713.1 <i>Haplosporidium lusitanicu</i>	.	.	G	.
HQ285783.1 <i>Haplosporidia sp.</i>	.	T	.	.
MZ666335.1 <i>Haplosporidium costale</i>	.	G	.	.
MT367896.1 <i>Haplosporidium pinnae</i>	.	T	.	.
U19538.2 <i>Haplosporidium nelsoni</i>	.	.	T	.
AB080597.1 <i>Haplosporidium nelsoni</i>	.	.	T	.
MT311214.1 <i>Haplosporidium cranc</i>	.	.	T	.
X74131.1 <i>Haplosporidium nelsoni</i>	.	.	T	.
DQ219484.1 <i>Haplosporidium montforti</i>	.	T	G	.
MK142774.1 <i>Haplosporidium pinnae</i>	.	T	.	.
MF621965.1 <i>Haplosporidium sp.</i>	.	.	G	.
KT861000.1 <i>Pelagophyceae sp.</i>	T	.	T	.
MW695753.1 <i>Uncultured_eukaryote</i>	.	.	T	.

	← F1c		B1c →		← LoopB	
	C C T C A G C A C T	T - - T T C G A G A A T C A A A G T T T T C G G A C T C A G G G	G G A A G T A T G C T C G C A A G A G T G - A	A A C	T T A A A	
MZ305451.1 <i>Bonamia ostreae</i>	.	.	.	.	.	.
JN040832.1 <i>Bonamia ostreae</i>	.	.	.	.	.	.
JN040831.1 <i>Bonamia ostreae</i>	.	.	.	.	.	.
JQ936481.1 <i>Bonamia ostreae</i>	.	.	.	.	.	.
AF262995.1 <i>Bonamia ostreae</i>	.	.	.	.	.	.
AF192759.1 <i>Bonamia ostreae</i>	.	.	.	.	.	.
JF831802.1 <i>Bonamia exitiosa</i>	.	.	.	.	.	A
JF495410.1 <i>Bonamia exitiosa</i>	.	.	.	.	.	A
JF831804.1 <i>Bonamia sp.</i>	.	.	.	.	.	A
JF495408.1 <i>Bonamia sp.</i>	.	.	.	.	.	A
JF831803.1 <i>Bonamia sp.</i>	C	.	.	.	.	A
AY542903.2 <i>Bonamia sp.</i>	.	.	.	.	.	A
GQ366703.1 <i>Bonamia sp.</i>	.	.	.	.	.	A
AF337563.1 <i>Bonamia sp.</i>	.	.	.	.	.	A
DQ312295.1 <i>Bonamia sp.</i>	.	.	.	.	.	A
KC578009.1 <i>Bonamia sp.</i>	.	.	.	.	.	A
EU016528.1 <i>Bonamia sp.</i>	.	.	.	.	.	A
DQ356000.1 <i>Bonamia perspora</i>	.	.	.	.	.	A
AY449710.1 <i>Minchinia tapetis</i>	.	.	.	.	.	A
KY522823.1 <i>Minchinia sp.</i>	.	A	.	.	.	G
KY522821.1 <i>Minchinia sp.</i>	.	A	.	.	.	G
FJ518816.1 <i>Minchinia mercenariae</i>	.	A	.	.	.	G
MK070859.1 <i>Haplosporidium sp.</i>	.	.	.	.	.	A
AY449712.1 <i>Haplosporidian parasite</i>	T	A	G	.	.	G
MK070858.1 <i>Minchinia mytili</i>	T	A	.	.	.	G
MT311215.1 <i>Haplosporidium carcini</i>	.	A	.	.	.	G
DQ653412.2 <i>Haplosporidia sp.</i>	C	A	T	.	.	G
U20858.1 <i>Haplosporidium costale</i>	.	G	.	.	.	G
DQ458793.1 <i>Haplosporidium edule</i>	G	A	C	.	.	G
EF165631.1 <i>Minchinia sp.</i>	G	A	.	.	.	G
HQ176469.1 <i>Haplosporidium raabei</i>	T	G	C	.	.	G
AY449711.1 <i>Minchinia chitonis</i>	T	G	.	.	.	G
KJ534587.1 <i>Haplosporidium patagon</i>	.	.	.	.	.	A
MN104247.1 <i>Haplosporidium pinnae</i>	.	.	.	.	.	A
U20319.1 <i>Minchinia teredinis</i>	G	A	G	.	.	A
MZ666334.1 <i>Haplosporidium costale</i>	.	G	.	.	.	A
AY449713.1 <i>Haplosporidium lusitanicu</i>	C	.	.	.	.	A
HQ285783.1 <i>Haplosporidia sp.</i>	C	A	T	.	.	A
MZ666335.1 <i>Haplosporidium costale</i>	.	G	.	.	.	A
MT367896.1 <i>Haplosporidium pinnae</i>	.	C	.	.	.	A
U19538.2 <i>Haplosporidium nelsoni</i>	.	A	.	.	.	A
AB080597.1 <i>Haplosporidium nelsoni</i>	.	A	.	.	.	A
MT311214.1 <i>Haplosporidium cranc</i>	A	C	A	G	C	A
X74131.1 <i>Haplosporidium nelsoni</i>	.	A	.	.	.	A
DQ219484.1 <i>Haplosporidium montforti</i>	C	.	.	.	.	A
MK142774.1 <i>Haplosporidium pinnae</i>	.	.	.	.	.	A
MF621965.1 <i>Haplosporidium sp.</i>	.	.	.	.	.	A
KT861000.1 <i>Pelagophyceae sp.</i>	G	.	.	.	.	A
MW695753.1 <i>Uncultured_eukaryote</i>	C	.	.	.	.	A

