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1      CATATTTCAATTTCAATTTCAACCCGGTTCCAGAAGCGTCTCTGGCGTCTGTTTCAAATCCTTTGGTTTATTCTCTCTCTGAATTC
91     AACATCTAAAAACAGCCATGCTCTTTTCGAGCGCCGCTTCCCTCTTGAGGAGTGACTTCAGCGTGATTGACCGGAGTTCA
1      M S F E R R L P L L R S D F S V I D R E F S S I
181    CGCGAAAAGTTTGACGAGGAGATGCGTCTGATGGAGGAGGAGATGAACCGCTTCAGGCTCAACTGTTGGACCGTGAGGTG
25     R E K F D Q E M R L M E E E M N R F R S Q L L D R E V P R I
271    CAGAGCCACAGCACAGCCACCGGACCGACGACAGACACACAGGTCGAGGTGAGGACGTGGCTCGACGGACTCAGCTG
55     Q S H S T A T G T D G Q T T H R S E V R T W L D G L S S P L
361    ATACAGGACTCGGACGACGAAAAGAAGCTCAGGCTCAGGTTGATGTCAGCCAATATCAGCCTGAGGAGATCGTCGTC
85     I Q D S D D G K K L R L R F D V S Q Y Q P E E I V V K T V D
451    AACAACTACAGGTTCAAGCCAAACACGAAGAAAAATCTGACACTAAGTCTGTGTACCGGAGTACAACAGAGAATTCTCCTT
115    N K L Q V Q A K H E E K S D T K S V Y R E Y N R E F L L P K
541    GGAACAAATCCTGAAATGATCAAATCCTCTCTGTCAACAGATGGCGTCTCACAGTCGAAGCTCCTTACCACCAGCTTTA
145    G T N P E M I K S S L S T D G V L T V E A P L P P A L E A G
631    GTTCATATGATACCCATCGAAAACAAATAACTTTTTAAAAATCCATTTTATATCGTTTACAGAACTACAAGTTGCTAA
175    V H M I P I E N K *
721    AGTTGTACTGGAACACATAGTATTTCTTGTAGTTTTATATAAAAAATAAAAAATATTGATGTATTTATCATGGATG
811    CATGGATATTTACGGTATTGGTTCTCTGTAACCGCTTCTGAAATTTTTTTTATTACAAGTCACCTAATGTCATTAATTC
901    TTTCTGTGCGGTAAATTTCTTGTGATGATGTTAAATTAATGCAGTTCGGCAATAAAATTACATTCTGAAAAA
991    AAAAAA

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Figure S1. Nucleotide and deduced AA sequences of *PpHSP27* from *P. pseudoannulata*s. A putative polyadenylation signal is marked in blue. Characteristic sequences of the small heat shock proteins (sHSP) family are marked in yellow. Promoters and terminators are marked in green.

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1      GTTACAATTTTCGGCTCCTGAGCCGCACATGCTTTTGTATAATTTACTATAGGGGCTCTCTGCTTCAGTATTGACACTTCTTACTCCTTT
91     TGTAAATTTGAGTCTAATTTATTTTCTCGCTTATATTACTTCTATAGGTATAGTTTTAAAGTCATCATGTACAGATTACACCATTTAA
1      M Y R L H H L
181    CCCGACCTCTCTCTCGACAAATATCATGGAGTATTAGAAGAAATTATGCTAAAGATGTCAAATTTGGCCAGATGTTAGAGCAGCTATGC
8      T R P L S R Q I S W S I R R N Y A K D V K F G P D V R A A M
271    TACAAGGTGTAGATGTCTTGGCTGATGCAGTTGCTGTAACAATGGGACCAAGGGTAGAAATGTCATTATTGAACAGTCTGGGGCTCTC
38     L Q G V D V L A D A V A V T M G P K G R N V I I E Q S W G S
361    CCAAAATTACAAAAGATGGTGTACTGTTGCAAAAGCTATTGAACTTAAGGATAAGTTCCAAAATATTGGAGCTAAACTTGTTCAGATG
68     P K I T K D G V T V A K A I E L K D K F Q N I G A K L V Q D
451    TTGCAAATAATACTAATGAAGAAGCAGGAGATGGTACAACAACAGCTACAGTATTAGCAAGAGCAATTGCTAAAGAAGGATTGAAAAAA
98     V A N N T N E E A G D G T T T A T V L A R A I A K E G F E K
541    TTAGCAAAGGAGCTAACCAATTGAATTTAGGAAAGGTGTCATGCTAGCTGTTGAAAGAGTTGTTGAAGAATTAAGAAAAAATTCAAAC
128    I S K G A N P I E F R K G V M L A V E R V V E E L R K N S K
631    CTGTTACAACCTCCAGAAGAAATAGCCAGGTTGCTACAATTTCTGCAAAATGGAGATAAAACAATAGGTGATCTTATATCTAGTGCTATGA
158    P V T T P E E I A Q V A T I S A N G D K T I G D L I S S A M
721    AAAAAAGTTGAAAAGATGGTGTAAATTACTGTCAAAGATGGAAGACATTGAGTGACGAATTAGAAGTTATTGAAGGCATGAAATTTGATA
188    K K V G K D G V I T V K D G K T L S D E L E V I E G M K F D
811    GGGGTTATATATCACCTATTTTCATCAATACAGCTAAAGGTGCCAAAGTTGAATATCAAGATGCTCTAGTTTTGTTAGTGAAGAAAAA
218    R G Y I S P Y F I N T A K G A K V E Y Q D A L V L F S E K K
901    TATCTAGTGACAGTCAATTATACCTGCACTTGAATTAGCTAACTCAAAGCGAAAGCCTCTTATAATTGTTGCTGAAGATGTAGATGGTG
248    I S S V Q S I I P A L E L A N S K R K P L I I V A E D V D G
991    AAGCTTTAAGTACTATGGTTCTGAACAGGTTAAGTTGTTGCAAGTAGCTGCAGTCAAAGCTCCTGTTTGGAGATAACAGAAAAA
278    E A L S T M V L N R L K V G L Q V A A V K A P G F G D N R K
1081   GTACTCTTCATGATATGCCATTGCTACAGGTGGTATTGTTTTTGGTGATGATGCTGATCTCGTTAAACTAGAGGATGTTACGCCAACAG
308    S T L H D M A I A T G G I V F G D D A D L V K L E D V Q P T
1171   ATCTCGGAGAGGTTTCTGAAGTTGTTATTACCAAAGATGATACTCTATTGCTTAAGGGAAAGGGCAACAAGCAAGACATTGATAGAAGAA
348    D L G E V S E V V I T K D D T L L L K G K G N K Q D I D R R
1261   TTGCTCAAATCAAAGATGAGATTGAACAAACAACGTCCAGTATGAGAAAGAAAACTTCAAGAAAGACTTGAAGGCTATCTAATTGGTG
1378   I A Q I K D E I E Q T T S Q Y E K E K L Q E R L A R L S N G
1351   TTGCACTTCTCAAGGTTGGAGGCTCTAGTGAAGTAGAAGTAAATGAGAAAAAGGACAGAGTGACTGATGCAATTGAATGCAACCCGTGCTG
408    V A L L K V G G S S E V E V N E K K D R V T D A L N A T R A
1441   CGGTTGAAGAAGGAATTGTTGCTGGTGGAGGAACAGCCCTTTTAAAGATGCTTACCAGCTCTTGATGAAATTTCTTATGAAAAATGAAGACC
438    A V E E G I V A G G G T A L L R C L P A L D E I S Y E N E D
1531   AGAAAATTGGTGTGACATAGTCAGGCGATCTCTGAAGATGCCATGCACACAAATTGCAATGAATGCTGGTGTGATGCTGCTGTAGTCA
468    Q K I G V D I V R R S L K M P C T Q I A M N A G V D A A V V
1621   CTCAAAAAGTTCTGGACAACAAAGGTGAATTTGTTATGATGCATTGCGGGGAGAATATGTAAACATGATTGAAGCTGGAATAATTGATC
498    T Q K V L D N K G E F G Y D A L R G E Y V N M I E A G I I D
1711   CTACAAAAGTGGTAAGGACAGCTTAAATGGATGCTGCTGGTGTGTCATCTTCTTACTACTGCTGAATCTGTTATTGTTGAAATCCCCA
528    P T K V V R T A L M D A A G V A S L L T T A E S V I V E I P
1801   AAGAAGAGAAACCTCCAATGGGTGGTGGCATGGGAGGTATGGGCGGTATGGGTGACTATGGAATGTAACAACCTAATCAAATTAGATAGT
558    K E E K P P M G G G M G G M G G M G D Y G M *
1891   TTTGTGCTGAACTTTAAAAATATCAGGAACACTGCAGGACATTACAGTGGCAACATTATGCATTTGAACTCATGCCATTCCAACGTCATC
1981   ATGTCTCACATTGTTGTAAATTCATTGTAGAGTCTTATATATAAATTTTTCATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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Figure S2. Nucleotide and deduced AA sequences of *PpHSP60* from *P. pseudoannulata*s. A putative polyadenylation signal is marked in blue. Characteristic sequences of the HSP60 family are marked in yellow. Promoters and terminators are marked in green.

1 GCATGTGCTATTTTCGTGACACCTTTTACCTTCAGCAATAGTGCTTTGCTCCTTGTCGGTTAAAAGCCGAGTTAAATCGCTTTTCTCGTGT
 91 AATTCCTATTTTGTATAGTTCAAGAAATTTTTATATAAACAATAATGCTTAAAAATTTAAGAAATACGAATTCAAATTTGCTTAGATCATC
 1 M L K I L R N T N S N C L R S S
 181 CGTTTTAGGCAGTTTCTATGGTTCAAGATTCTCTCACATCAAGCACATAATAAGGCACTGCTTATGTTGCCAACAAAAATGGACTTCA
 17 V L G S F Y G S R F L S H Q A H N K A L L Y V A N K N G L Q
 271 AATGCGATATAAGTCTGATGCTGTTAAAGGAAGTGTCAATTGGCATTGATTGGGAACAACGAATCATGTGTGCTGTTATGGATGGCAA
 47 M R Y K S D A V K G S V I G I D L G T T N S C V A V M D G K
 361 AACTCCAAAAGTAATAGAAAATCTGAAGGTTCAAGGACTACACCTTCTGTTGTTGCAATCAGAAAAGATGGTGAAGATTAGTTGGAAT
 77 T P K V I E N S E G S R T T P S V V A I T K D G E R L V G M
 451 GCCAGCTAAAAGACAAGCTATTACCAATGCAGCTAACACACTTTCTGCCACAAAGCGTTTGATCGGTCTAGGTTTGAGGATCCTGAGGT
 107 P A K R Q A I T N A A N T L S A T K R L I G R R F E D P E V
 541 GCAAAAAGACCAGAAAACAGCCTCATTCAAAATAGTTAAAGCATCAATGGTGATGCTTGGGTTGAAGCTCAAGGGAAAAATGATTCTCC
 147 Q K D Q K T A S F K I V K A S N G D A W V E A Q G K M Y S P
 631 AAGCCAAATTTGGTCTTTTATTTTAAATGAAAATGAAAGAGACAGAGAGTTGTTTGGGACAACTGTTAAAAATGCTGTCACTACTGT
 177 S Q I G A F I L M K M K E T A E S C L G Q T V K N A V I T V
 721 TCCTGCATATTTCAATGATTCTCAACGACAGGCAACCAAGATGCAGGCCAGATTGCAGGACTTAATGTACTTCGTGTAATTAATGAACC
 207 P A Y F N D S Q R Q A T K D A G Q I A G L N V L R V I N E P
 811 TACTGCTGCAGCCTTAGCTTATGGTATTGATAAAACAGATAAAAATAATTGCTGTTTATGATTGGGTTGGGGTACATTTGATATATCAGT
 247 T A A A L A Y G I D K T D K I I A V Y D L G G G T F D I S V
 901 TCTGAAAATTCAGAAAGGTGTTTTGAAGTAAATCTACTAATGGAGATACTTCTTGGGTGGTGAAGATTTTGACAATCTCTTGTAA
 277 E I Q K G V F E V K S T N G D T F L G G E D F D N T L V N
 991 TTATTTGGCAAAGGAGTTTAAAAAAGAACAAGGAGTTGATTATCAAAAGACACTATGGCAATGCAAAGATTAAGAAGCAAGCAGTGAAAA
 307 Y L A K E F K K E Q G V D L S K D T M A M Q R L K E A A E K
 1081 AGCTAAAATAGAGTTATCTTCATCTGTGCAACAGATATTAACITGCCATATCTGACTGTTGATGCAAGTGGACCAAGCATTGGAATAT
 337 A K I E L S S S V Q T D I N L P Y L T V D A S G P K H L N I
 1171 AAAATTATCTAGAGCTAAGCTTGAGAGTTTGGTGGCTGACCTAATCAAAAGGACAATTGAACCTTGCAAAAAGGCTATATCTGATGCTGA
 367 K L S R A K L E S L V A D L I K R T I E P C K K A I S D A D
 1261 TGTGAAAAAAGTATATCAAGAAGTAATTTTGTGTTGGAATGACTAGAATGCCAAAGGTACAAGAAGTTGTACAAGAAATTTTGG
 397 V K K T D I Q E V I L V G G M T R M P K V Q E V V V Q E I F G
 1351 AAGAGTCCCTAGTAAATCTGTGAATCCTGATGAAGCTGTGCTGTTGGAGCTGCAATTCAGGGTGGTGTCTTGTGCTGATGTCACAGA
 427 R V P S K S V N P D E A V A V G A A I Q G G V L A G D V T D
 1441 TGTTTTACTTTTAGATGTTACTCCTTTGTCATTGGGTATTGAACTCTTGGTGGCGTTTTCACAAAACCTATTACAAAAATACAACCAT
 457 V L L L D V T P L S L G I E T L G G V F T K L I T K N T T I
 1531 TCCAACCAAAAGAGTCAGATATTTTCTACTGCAGCAGATGGGAGACACAAGTAGAAATTAAGTATTCCAAGGAGAAAGAGAAATGGC
 487 P T K K S Q I F S T A A D G Q T Q V E I K V F Q G E R E M A
 1621 TGCAGATAACAACTTTTAGGACAGTTTTCATTGGTTGGCATTCCACTGCACCCAGGGGTGTTCTCAAAATGAGGTTATTTGATAT
 517 A D N K L L G Q F S L V G I P P A P R G V P Q I E V T F D I
 1711 TGATGCTAATGGAATGTCATGCTCTGCCGAGACGAGCTAGTGGCAAAGAACAAAACATTGTCATTTCAGTCTGTTGTTTAAAG
 547 D A N G I V H V S A R D R A T G K E Q N I V I Q S S G G L S
 1801 TAAAGATGAAATGAAAATATGATTAAGAATGCTGAGAAATATGCTGAACAAGATAAAATTAAGGAAACAGTTGAAGTTGTCAACCA
 577 K D E I E N M I K N A E K Y A E Q D K I K K E T V E V V N Q
 1891 AGCAGAAGGTATAATTATGATACGGAATCTAAGATGGAAGAGTTTAAAGCCAGTTACCTGAAGAAAGAGGTTACAAACATCAAAAACAA
 607 A E G I I H D T E S K M E E F K S Q L P E E E V T N I K N K
 1981 AATTAATGAAGTTAGGCAATTAATTACAAACAAAGATCAAGAGTCACCAAGAACATTGCGTAAAGCAACAAAGAACTACAGCAAGCATC
 637 I N E V R Q L I T N K D Q E S P E T L R K A T Q E L Q Q A S
 2071 TCTGAAGTTGTTTGAAGCTGTTACAAAAAGATGGCTAATGAAAGGCAAGGTGGTTCAACAGAAAGCAGTAGCAGTGAAGGTTCAAGTAC
 667 L K L F E A A Y K K M A N E R Q G G S T E S S S S E S S S T
 2161 TGAAGAAGCCGAAAAAGAAAGAAAAAATTAATAAGAAATCATGAAATTTTATGTGTGGGACTGATTCCAATAGCTGGCTATATATA
 697 E E A E K K E E K N *
 2251 TATTGCCATTTTGCCTGTGCTGTCATTAAGAAACGTCATTGTAATATTTAAGTAATCAAAAGATGTTGATTACTGCAGAACCACTTGCA
 2341 TTGTATTATAGCTCATCATTAACTCTGTAGATAAAAGATGTCTAAAAAATAATAATCTTTTATTTCATATGAAAAAAAAAAAAAAAAA
 2431 AAAAAAAA

Figure S3. Nucleotide and deduced AA sequences of *PpHSC70* from *P. pseudoannulata*s. A putative polyadenylation signal is marked in blue. Characteristic sequences of the HSP70 family are marked in yellow, violet, and red. Promoters and terminators are marked in green.

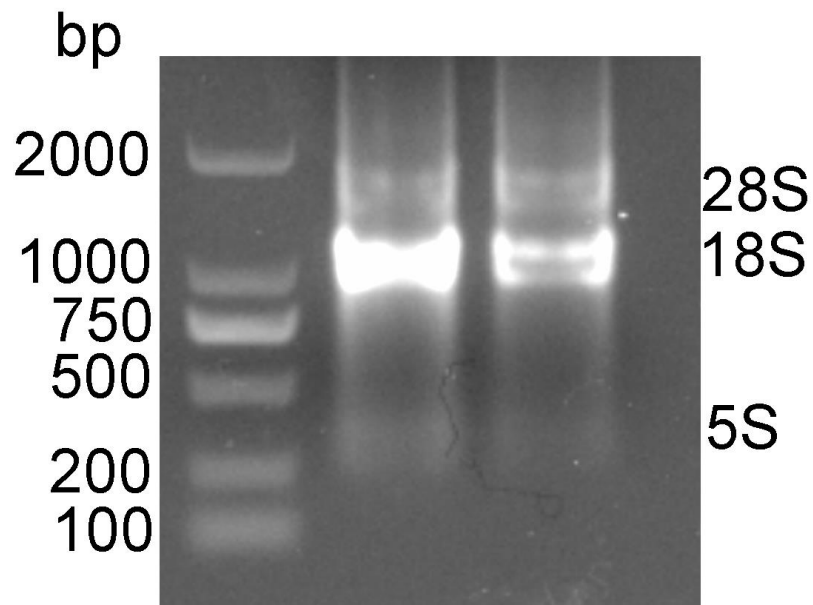


Figure S4. Agarose gel electropherogram of *P. pseudoannulata* RNA.

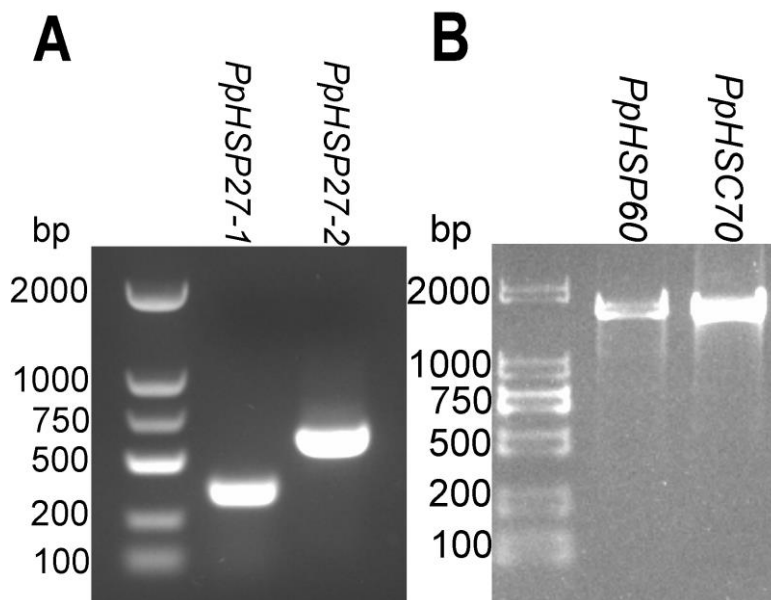


Figure S5. Agarose gel electropherogram of *PpHSP27*, *PpHSP60*, and *PpHSC70* intermediate fragments polymerase chain reaction (PCR) products. (A) *PpHSP27*, (B) *PpHSP60*, and *PpHSC70*.

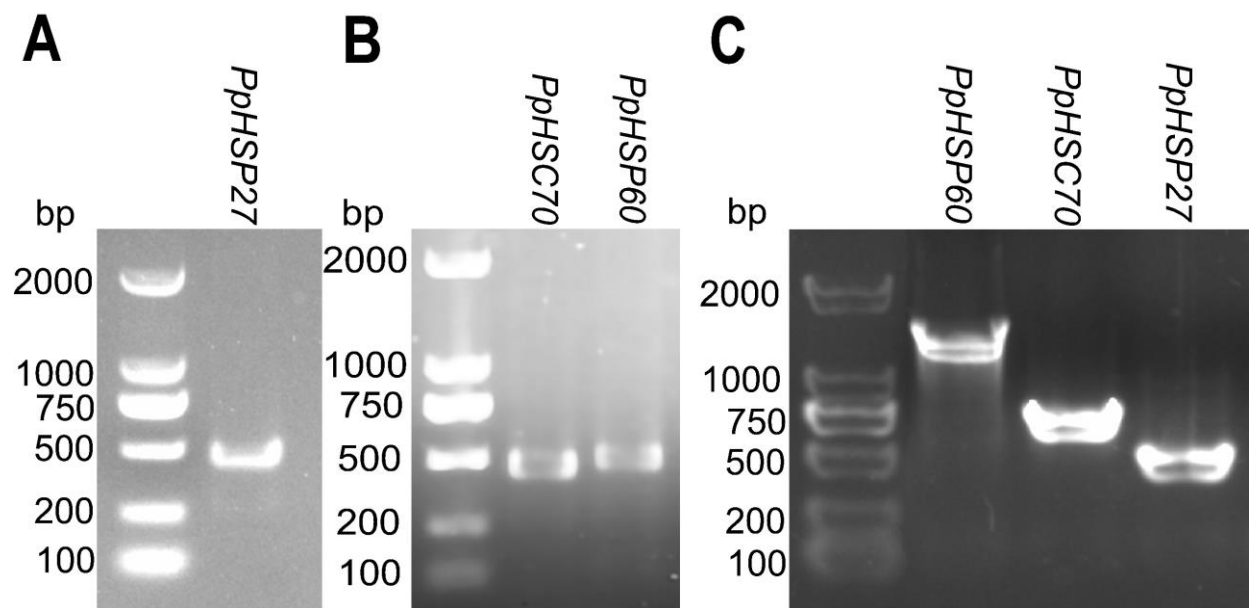


Figure S6. Agarose gel electropherogram of *PpHSP27*, *PpHSP60*, and *PpHSC70* untranslated region (UTR) PCR products. (A) *PpHSP27* 3'(UTR), (B) *PpHSP60*, and *PpHSC70* 3' UTR. (C) *PpHSP27*, *PpHSP60*, and *PpHSC70* 5' UTR.

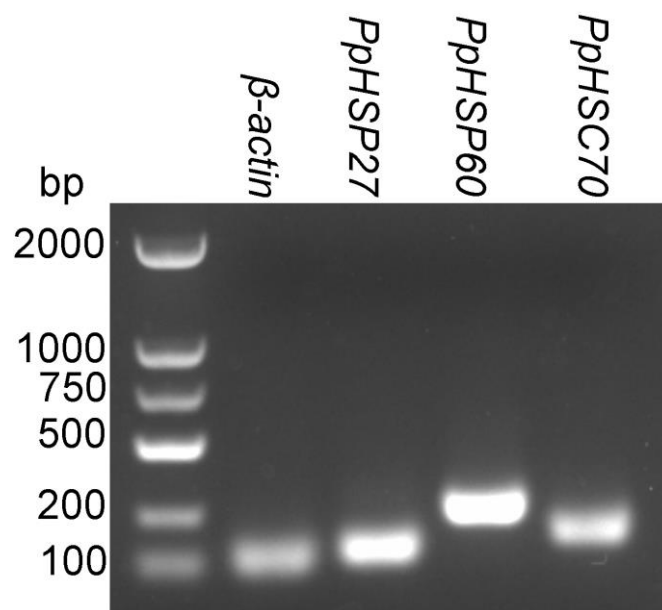


Figure S7. Agarose gel electropherogram of PCR products of qPCR primers.

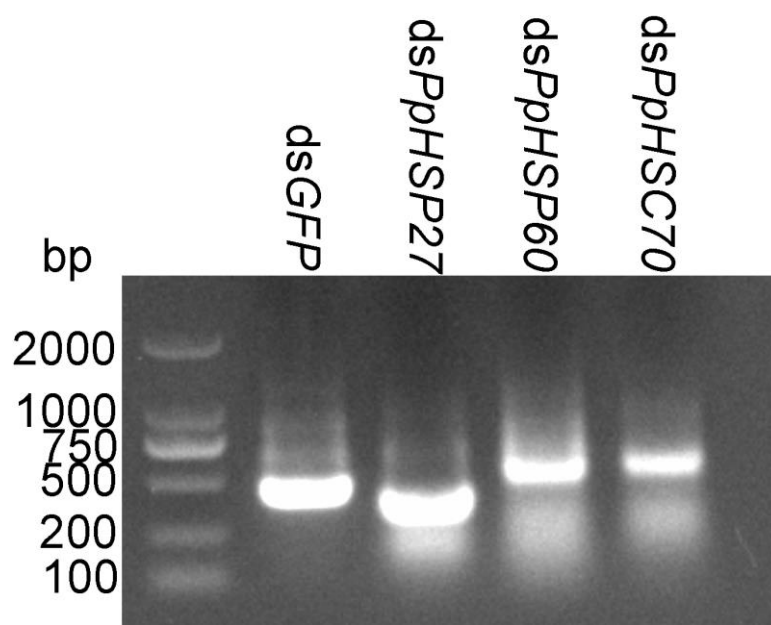


Figure S8. Agarose gel electropherogram of dsRNA.