

**Supplemental Table S1.** Primers used in this study.

Oligo Name	DNA Sequence
For site-directed mutagenesis	
Y268V-AsphyA	5'-CCTTATCTAGGCTTGCACGTTCCAGCCACTG-3' (Forward) 5'-CAGTGGCTGGAACGTGCAAGCCTAGATAAGG-3' (Reverse)
Y268F-AsphyA	5'-CCTTATCTAGGCCTGCACTTTCCAGCCACTGATATCCCT-3' (Forward) 5'-AGGGATATCAGTGGCTGGAAAGTGCAGGCCTAGATAAGG-3' (Reverse)
Y303V-AtphyB	5'-CCTTATATTGGACTGCATGTTCTGCTACTGATATTCCTC-3' (Forward) 5'-GAGGAATATCAGTAGCAGGAACATGCAGTCCAATATAAGG-3' (Reverse)
Y276H-AtphyB	5'-GGTTATGATCGTGTATGGTTCATAAGTTTCATGAAGATG-3' (Forward) 5'-GCTCATCTTCATGAACTTATGAACCATAACACGATCATAACC-3' (Reverse)
Y269A-AtphyA	5'-CTTGGGCTGCATGTTCTGCCACCGAC-3' (Forward) 5'-GTCGGTGGCAGGAACATGCAGCCCAAG-3' (Reverse)
Y326V-AsphyA	5'-CAGTTGTCAACCTGCAGGTTATGGAGAACATG-3' (Forward) 5'-CATGTTCTCCATAACCTGCAGGTTGACAACCTG-3' (Reverse)
Y326F-AsphyA	5'-CAGTTGTCACCTGCAGTTTATGGAGAACATG-3' (Forward) 5'-CATGTTCTCCATAACCTGCAGGTTGACAACCTG-3' (Reverse)
For the cloning into pBI121-eGFP vector	
Y268V-AsphyA	5'-GCGTCGACATGTCTTCTCAAGGCCTGCTTCC ( <i>Sall</i> , Forward) 5'-GGGGATTCCTGTCCCATTGCTGTTGGAGCGG ( <i>Bam</i> HI, Reverse)
Y303V-AtphyB	5'-GCTCTAGAATGGTTTTCCGGAGTC ( <i>Xba</i> I, Forward) 5'-GGGGTACCATATGGCATCATCAGCATCATGTCAC ( <i>Kpn</i> I, Reverse)
Y269V-AtphyA	5'-GCGTCGACATGTCAGGCTCTAGGCCGACTCAG ( <i>Sall</i> , Forward) 5'-CGGGATCCCTTGTGTTGCTGCAGCGAGTTCCGC ( <i>Bam</i> HI, Reverse)
For the NLS- or NES-fused constructs	
CsVMVpro	5'-CCC <u>AAGCTT</u> ATCCATTCCAGAAGGTAATTATCCAAG-3' ( <i>Hind</i> III, Forward)
NLS-1st	5'-CTTTCTCTTCTTCTTAGGCTGCAGCTTGTACAGCTCGTCCATGCCGAGAGTG-3' (Reverse)
NLS-2nd	5'-CGAGCTCCTATCCTCCAACCTTCTCTTCTTCTTAGGCTGCAG-3' ( <i>Sac</i> I, Reverse)
NES-1st	5'-CAGCCAACTTAAGAGCAAGCTCGTTCTGCAGCTTGTACAGCTCGTCCATGCCGA GAGTGATC-3' (Reverse)
NES-2nd	5'-CGAGCTCCTATCCTCCAGTCTTGTTAATATCAAGTCCAGCCAACTTAAGAGCAA GCTCGTTCTGCAG-3' ( <i>Sac</i> I, Reverse)
For the site-directed mutagenesis of Cph1	
Y176H-Cph1	5'-GACCGGGTGATGCTAGTCCGCTTTGATGAAAATAAC-3' (Forward) 5'-GTTATTTTCATCAAAGCGGACTAGCATCACCCGGTC-3' (Reverse)
Y203V-	5'-CTATTTGGGCCTGCACGTTCCCGAATCGGATATTC-3' (Forward)

Cph1	5'-GAATATCCGATTCGGGAACGTGCAGGCCCAAATAG-3' (Reverse)
Y203H- Chp1	5'-CTATTGGGCCTGCACCATCCCGAATCGGATATTC-3' (Forward) 5'-GAATATCCGATTCGGGATGGTGCAGGCCCAAATAG-3' (Reverse)