1 GGTACC**ATG**GAGCAGGATGCCGCAGCAGGTCCTGCAAAGAAAAGCGGCACCACCCTATCCGTCG
2 ACCGGGCCGCCTTCCTTTTGCTGCGCGTCAGGAAAGTGTTCAAGAAGAAGCGACAGCAGCGCAA
3 GGAGCGACAAGCCCAGCAAAGTGCCGCCGCAGCGGCGAGTGGTGCCGGCGGTGCGGGTGGTGCC
4 GGTGGTGGTGGCGGTGGCTCCGGGTCACAATCGCGACCAGGCAGCCGGAAGCTGCCGCCGCCAT
5 TGTTACGGTCGCGCACACTGCCCGCCATCATTGTGCCAGGACTTCCGGTCGTCTCGCTGCACAC
6 GGATAAGCAAACATTTCAGCTGGACGAACGTTTGTTGGGCAGCAAAAGCCGCAGTGGCAGCGCC
7 AGTGGCCATCGATGGTCGCTGCTCACACGTGCCACCAACAGCAGCAGCATGTGCAGCAACAACA
8 ACCCGGCCAGCAGTAGCAGCAGCAGCAGCAACAACAATAACAATTTACACATGGCCAACAACAA
9 TAACACACTGATGGTGAAATCATTGAATTTGCCCAAAGACGATAGCAATTTGGTCTATCGCCGC
10 AAATCCTCGGGCAGCACGCCCCACCAACATCAGAATGCGCACCATCATCATCAACAGCATCATC
11 ACCTGCAGCAGCAGCAGCAACAGCAGCAGCAGCATCAGCAGCAGCAACTGCAACAGCAGCAGAT
12 GCTGCAGCATCTGGGGGACAGCTCGCTGTTTCAGCTGTCCGACGATTTCGAGTGCCACGCGGAT
13 GGTTCCCTGCTCCTCAGAATTCCAGCTCCTCATGTGGTCGCCGCACGAGCCTATCGACTGGCAG
14 CTCGAAAGCGAGCTGCCGCCTCCTCGGAGGCCTCCACACCGATGACCCGTGAGCACACGCTCCA
15 CGAGATGCCGCTGGCGGAGTCGGCCTGCTCCGGATCTGCCACTGGTTCGGGCACGACCTTCACG
16 CGTCTGGCCAAATTGCTGCATCAATCAAGCACGCTGGCGGGCAGGTCCAATCTGCAGCCACCGC
17 CCATGGCTGACAATGCGGTCCAGAGCCTGGGCAGAGGATTGGGCCTGGGACTGGGCGAGGAGGC
18 GCCACGTCGTCTGTCCTGGGAGAGGCGCAAGGACAGCAGTGCTCTGCAGCGTTCGGCCAGCATT
19 GATTCCTTTGCCGAGATTGTGTTTAGTGAGTCGCCACGCCCCTCGCTGGCTGTCACGGGACCAG
20 GTGCCTGCGCCTCCGCATCCGGCGGCCCTTCGCCATTCAGCAAACGTCCTTCGGCCAGCAGCCT
21 GTACTCCACCTCAACGTCCAGCTCCTTCGCATCGCAGATGCAGGCCCAGCTGAATGTCAATTAC
22 GGCGACTCGGCACTGGGATCCGGATCAGCAACGGGTGGACCGGGCTCGGGTCACCACCATGGGG
23 CATCTGGTGGCGGCAACGGGGGCAGCAGTGCCAGCAGCAGTCGGCGCGAAAGCATGCTCAGCCC
24 CTCATCCACGCGCCGCTCCAAGCTGACCAGAATCATAAACGCTCTCTTCTCGGCAGTGGAGCAT
25 GGTCACCTGGAGAAGGCGCGCACTATTCTAGAGTCCACCGACGTAGATGTAAACAGCATCAATA
26 ACGATGGACTATCTGCTCTGGACTTGGCGGTGTTAAGCAATAATCGCTCCATGACCAGGATGCT
27 GCTTCAGCATGGCGCTGTGGAGGGCTCTCAGTTCTCTGTGGACACCATTGGCACCAAACTGAAC
28 GGCTTGCTCAAGGACGCCGAGTCAAGAATTCACGATCTAAGTGGACCGGAGGGCCTCTGTCCGC
29 CGGTGTTTGCATCGCGTCCCTCCATCTCGAGCATCATAATTGGCAATTCCAGTGCATCGGTAAC
30 TGGCTGCACGGGCAGCGAGGTGGAAAAACAGATAGGCATCTGGGAGCGCCGAGTTAAGGGACTG
31 CGTCGCTTGCAGCTCGGTTGGGATCAGGCCAGGCCGCCAGATGCACCCGCCTCCGTGGTCGTCG
32 ACGTCACTGGCGACAATTCCATCAGCGTACAAATCCTAGAGCCCTTCGAGGGGGCCATCGGCAC
33 GAAATTTAAAGTACAATGGTCGACCCGCGCGGATTTCAACAACGTTGTGGGCGAGAGTGAGCTA
34 CTGGAATGGATCAGCTTCCATGGCACGATGGGTGCCCAGTGTCACATATCGGGCCTCACCCAGG
35 GTCGTCGCTACTTCCTGCGAGCCGCGTGCGGCAATGTGAAGGGATGGGGCACCTATCGAACCTC
36 TGTGCCGGCTAGTGTAGTGCCCTCAACTTGGCGGGATTTAGACAATCGAGAGGACCGATTCGTG
37 GGTCGTCACCGAATCCTGGACAATCTATTTACCGCCGTGCGTTTGGCAAGACCCGCCGACGTAT
38 CCGAGCTGACTTTGGATCCTGCGAGCGCCCAACGACGTAATCCCAAAAAGAAGACTACCATTAA
39 GCAGTTGTTCTCGGTAACCACCAAGTTTCAAAAGACACTGAGACGCGGCATTTACTTCTCTTGT
40 ATTATTCATTGCGATGATAAAGTGCTGGTCACCAGCGAAGACTTTCCACCGGTCATCGAGGTGG
41 ATGAATCCTATCCGAGTGCTTTGCACATGGATTACTACTGGCTCATGAAAGTTGCCTGCACCTG
42 GGAGGATGTTAAGTCTCTACGTTCGGATATGGAGCGCAATCTTACCTCCGCTGTTCACTTCCGC
43 ACTAAGCTTCTATCGGCGGTCTGTCAGATGCAATCGGCACTAGGCATTACGGACTTGGGCCAAC
44 TTTACTATAAACCATTGCGGGATGCTCAGGGCACTGTGGTCCTAACCTGTGTGCAGTCGGTAAA
45 GAGCCAAAAGGCCGTCTCCATCTTAAACTCGAGATGGGTTCCAGTCAGCAAGCTGCAAAAGAAG
46 CTAGGTGCTCTACACGAGGACTACACCATTAACGAGCTGCTCATCTCCTCGATTGGAGATCAAT
47 TGCACTATCAACAGGCGGCGCTGCAGCGTTTGGAGCCCGGTCTTTACCTGGGCTACCTAAAGAT

GCAATGCTCCATAGACCAGATCCAGGTGGTTGTGCCCGTGAAAACGCCGAATGTCTTGCCCCAC
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AGCTACTACGGAGGTGCAACGCCTATTTTTATACGATCTCACCAATGCAATGCACAAACTGTTT
GCCAGTATGAACATCAAAATCGCTGATGCAACCACTCACCGCTTGTACGACGTGGAGGTGATTG
AGCATAGTCCGGATATTAGTTTCCTCGTGGTGTGTCCATCCGCCGAGTCCTCATGCGCTGTGCC
CGGTCAGTCTGAGTTACTGCTACAGCGAGATGACTTGGCCAGCTTGAGTATCCAGGCCTTTGAG
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AGTGTGCGATGGCTAATGGATGTGGTGGCATATGCGCGAAACAAAAACGCTCAACCCTCGTTGG
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CAGGGAAGAGGCAGTTGGCCGGGACCGGGAACTAGTGAAGATCAATCGCAGAACAAGCCGGAGC
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AGTTCCTACACAGCAGCAGCAGCCGCAGCAGCAATCGCAGCAACAGCAACTCTTACAAGTTTCC
AACATCAGCGAATACGCGGGATCGATTTGCTCAGAAGTATCATTTAGGAAGAATAGTGGCGATT
CCATGAGCTCCACCTACACGTCCCGGAGCTTCTACTCTGCCGTGGACTCAGCCTCAGATGGAAA
TAGCACAAACAGTGTGTTTGCCATTCCGCCCTCTCGTTCCGACGACACTCTGGCGGATGCACTG
CGCCACTCGCAAGCGGTAGCTGCGCAACGCAAACGAACCAGCTCTAATATCGCATCTCATACCA
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GCTGCATCTAGTGCAAACCTGCGCGAAGGTGGACCCTATTTGAAAAGCACGTTAGCTGAACTAC
GAGCTGTTGGAGGTGAGGAGCCGGTGGCCAGTACTTCAAAGGCCTCTTCGATGAAGAGCTTGTC
GCGGCAGAGCAGCGAAGAGGATTCCGCCAGCTGTTCCAGTCTCAACGCAGAGCAGACATCGGGG
ATCATTCAAGTCTATACCGCCTACAGTACGGGTCTGGCCAGTGGAACCAGCTTAAAGATTCACG
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GCGGTGATTGGAGCAAGGGAACGCTGCCTGCGAGATGACTTCAAACCGCTGCAACTGCAGAATC
CCTGGAAGAAGGGCCGTCTGTACGTCCGCAAGAAGCATGAGCTGCTGGCGGCCATCGAACACTC
GAATCGGAAATCGCATTTGTACCCTTACGACGTGCCTGACTACGCAATC**TGA**GGTACC

Supplementary Data 3. DNA sequence synthesized for *UAS-wake-RG$_{HA}$* generation. *Kpn*I restriction sites are indicated using boxes. The HA epitope tag coding region is underlined, and the start and stop codons are indicated in bold.