

**Supplemental Table 1.** Oligonucleotides used for the preparation of the different constructs<sup>1</sup>.

CONSTRUCT		OLIGONUCLEOTIDES
<i>gPHF1</i>	1	GGAATTCGTTCTTGATGGGACGCGCATGGGAGTCG
	2	GGGGTACCTGACTCTGACGGTCACGCGACTCACGACG
<i>oPHF1</i>	1	CGGGATCCATGGAGATTGAAGAAGCGAGTCGTGAAAG
	2	CGAGCTCCTATAGGTCCAAGTTCCACCTACTATG
<i>PHF1:GFP</i>	1	attB1–GTTCTTGATGGGACGCGCATGGGAGTCG
	2	attB2– TCCGCCACCCCCTCC - TAGGTCCAAGTTCCACCTACTATGATCCTCAGAAG
<i>oPHF1:GFP</i>	1	attB1–TGCATGGAGATTGAAGAAGCGAGTCGTG
	2	attB2– TCCGCCACCCCCTCC - TAGGTCCAAGTTCCACCTACTATGATCCTCAGAAG
<i>PHT1;1:GFP</i>	1	attB1–AGCCGCAAGAGATGACCAAGACGGAC
	2	attB2–TTTCTCGTCATGGCTAACCTCAGCC
<i>35S:PHT1;1:GFP</i>	1	attB1–TTTATGGCCGAACAACAACACTAGGAGTG
	2	attB2–TTTCTCGTCATGGCTAACCTCAGCC
<i>35S::DsRed2::KDEL</i>	<b>SP1</b>	CATGGAAGGAGATATAACAATGAAGACTAATCTTTTTTCTC TTTTCTCATCTTTTCACTTCTCCTATCATTATCCTCGGCCG
	<b>SP2</b>	AATTCGGCCGAGGATAATGATAGGAGAAGTGAAAAGAT GAGAAAGAGAAAAAATTAGTCTTCATTGTTATATCTCCC
	<b>DR1</b>	GGAATTCGCCTCCTCCGAGAACGTCATCACCGAGTTC
	<b>DR2</b>	GAAGATCTTTAAAGCTCATCCTTCAGGAACAGGTGGTG.

<sup>1</sup> 1 and 2 correspond to oligonucleotides complementary to the 5' and 3' part of the gene, respectively. SP1 and SP2 are complementary oligonucleotides encoding a signal peptide. DS1 and DS2 amplify Ds2Red2 and introduce a KDEL motif.