

Table S1. Oligonucleotides utilized for the PCR amplifications required for the functional characterization of the *AhN4L-1* gene.

Experimental objective	Oligonucleotide sequence	Oligo size (bp) ¹
Quantitative gene expression in grain amaranths ²		
qPCR <i>AhN4L-1</i> (F)	GCCCAGGATAACAACCTA	19
qPCR <i>AhN4L-1</i> (R)	AACATCAAGGGAAACAAGC	20
<i>AhActinACT7</i> (F)	CGTGACCTGACTGATTACCTTA	22
<i>AhActinACT7</i> (R)	GCTCGTAGITCTTCTCAATGGC	22
<i>AhβTubulin</i> (F)	TCTCAGCAGTATGTCTCCCTCA	22
<i>AhβTubulin</i> (R)	TCTACTTCTTGGTGCTCATCTT	23
Overexpression in transgenic <i>Arabidopsis thaliana</i> and N-terminal GFP chimeric constructions.		
35S:: <i>AhN4L-1</i> (F)	ATGGCTGGTACACTACCAAGTGTGATAGGGTTGGGATTCA	40
35S:: <i>AhN4L-1</i> (R)	TCAAAGTTGGAAGTAGGGAGAGGTGGTTCATCATTATTAAATCTC	45
Quantitative <i>AhN4L-1</i> gene expression in transgenic <i>A. thaliana</i> (<i>At</i>)		
qPCR 35S:: <i>AhN4L-1</i> (F)	GCGAGGAACACAAACAATCC	20
qPCR 35S:: <i>AhN4L-1</i> (R)	CGTTGGTAAAGTTCGACG	20
<i>AtActin</i> (F)	AATCACAGCACCTGCACC	18
<i>AtActin</i> (R)	ATTCCCTGGACCTGCCTC	17
<i>AtEF-1α</i> (F)	TGCTGTTCTTATCATTGACTCC	22
<i>AtEF-1α</i> (R)	TTCATCGTACCTAGCCTTGG	20
Transcriptional <i>GUS</i> constructions (promoter analysis)		
<i>GUS::AhN4L-1-At</i> (F)	TATGTGCATCGTACGGTTATTATCTAGTTAATAATAATAGAACAC	47
<i>GUS::AhN4L-1-At</i> (R)	TATTCGCTCACTTATTGTTATGGGGCTAGTCATATAAT	40
Green fluorescent protein (transformation marker)		
<i>eGFP</i> (F)	CTGGTCGAGCTGGACGGCGA	20
<i>eGFP</i> (R)	CACGAACCTCAGCAGGACCA	20
Amplification of Internal transcribed spacer (ITS) <i>Fusarium oxysporum</i>		
<i>ITS1</i> (F)	CTTGGTCATTTAGAGGAAGTAA	22
<i>ITS4</i> (R)	TCCTCCGCTTATTGATATGC	20

¹bp = base pairs

²*Ah* = *Amaranthus hypochondriacus*