

Table S1. The main primers used in this study.

Primer name	Sequence (5'-3')*	Purpose	Length (bp)
<i>Nlix^L</i> -RNAi-F-1	T7-TTCTGGATTGAACAGTGGCAAT	<i>Nlix^L</i> -1 dsRNA synthesis	261bp
<i>Nlix^L</i> -RNAi-R-1	T7-CAATGTTTCTCTTAGTTGACCG		
<i>Nlix^L</i> -RNAi-F-2	T7-AATAATTTGGTGGACGTTGG	<i>Nlix^L</i> -2 dsRNA synthesis	318bp
<i>Nlix^L</i> -RNAi-R-2	T7-AGGGTTCTGAATGTTGTGTG		
<i>Nlix^L</i> -F	ATGTTCTGGATTGAACAGTGG	PCR for <i>Nlix^L</i> ORF	654bp
<i>Nlix^L</i> -R	AGTTGGTGGAAAGCAGCTTCA		
<i>Nlix^S</i> -F	TTCTGGATTGAACAGTGGCAAT	PCR for <i>Nlix^S</i> ORF	311bp
<i>Nlix^S</i> -R	GTTTTACATTATATTTAATAATGC		
QN <i>Nlix^L</i> -F-1	GACAACCGAATATGCCAGGACAG	RT-qPCR for <i>Nlix^L</i> -1	97bp
QN <i>Nlix^L</i> -R-1	AGTTGACCGACAAGAGATTTGACT		
QN <i>Nlix^L</i> -F-2	ACTCTCAAAACAGCGGCCA	RT-qPCR for <i>Nlix^L</i> -2	172bp
QN <i>Nlix^L</i> -R-2	TTCCTTGGTTCAGGCACTCC		
QN18S-F	CGCTACTACCGATTGAA	qRT-PCR for 18s	132bp
QN18S-R	GGAAACCTTGTTACGACTT		

*T7, 5' -TAATACGACTCACTATAGGGA-3'

Table S2: The 32 IX homologs derived from related species.

Species	GenBank accession number
<i>Trypoxylus dichotomus</i>	BBE20904.1
<i>Tribolium castaneum</i>	EFA01132.1
<i>Photinus pyralis</i>	XP_031347699.1
<i>Sitophilus oryzae</i>	XP_030765845.1
<i>Bombyx mori</i>	NP_001037105.1
<i>Papilio polytes</i>	BAM20686.1
<i>Helicoverpa armigera</i>	XP_021191665.1
<i>Bombyx mandarina</i>	XP_028038928.1
<i>Maruca vitrata</i>	ACS12898.1
<i>Drosophila melanogaster</i>	AAN37397.1
<i>Drosophila virilis</i>	AAV65894.1
<i>Culex quinquefasciatus</i>	XP_001849607.1
<i>Megaselia scalaris</i>	AAV65895.1
<i>Anopheles darlingi</i>	ETN59144.1
<i>Oncopeltus fasciatus</i>	AEM16993.1
<i>Bemisia tabaci</i>	QAB02863.1
<i>Halyomorpha halys</i>	XP_014282369.1
<i>Nilaparvata lugens</i>	XP_022205962.1
<i>Cimex lectularius</i>	XP_014249089.1
<i>Melanaphis sacchari</i>	XP_025204986.1
<i>Aphis gossypii</i>	XP_027848160.1
<i>Sipha flava</i>	XP_025417563.1
<i>Apis cerana</i>	XP_028522479.1
<i>Dufourea novaeangliae</i>	KZC13858.1
<i>Bombus impatiens</i>	XP_033180622.1
<i>Megalopta genalis</i>	XP_033334678.1
<i>Osmia lignaria</i>	XP_034175582.1
<i>Coptotermes formosanus</i>	GFG29436.1
<i>Zootermopsis nevadensis</i>	XP_021926959.1
<i>Cryptotermes secundus</i>	XP_023706449.1
<i>Thrips palmi</i>	XP_034248708.1
<i>Frankliniella occidentalis</i>	XP_026279401.1



Figure S1. The influence of *Nlix* on BPH wings development. The male individuals developed small and abnormal forewings after injection of *dsNlix* in 3rd or 4th instars. *dsGFP* was injected as a negative control for the nonspecific effects of dsRNA.