

**Supplementary Table 1.** Primers used to clone N-*AaKr-h1* and C-*AaKr-h1* in pGEX-6P-1.

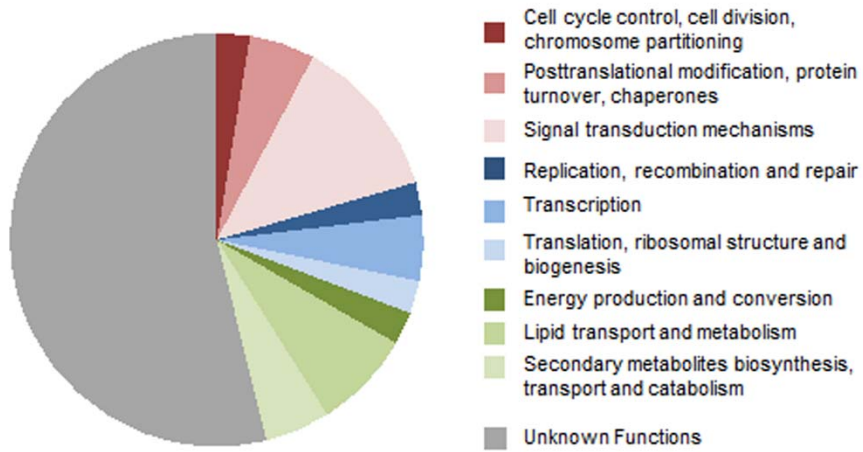
Plasmid	Primer	Sequence (5'-3')
NKrh-pGEX-6P-1	Fwd	CGCGGATCCATGGTCTACTACACG
	Rev	CCGCTCGAGTCAAACAGACTGTTC
CKrh-pGEX-6P-1	Fwd	CGCGGATCCGAAATCCCGGATGAA
	Rev	CCGCTCGAGTCACGACGCCTTGG

**Supplementary Table 2.** Primers used in qRT-qPCR

Gene	Primer	Sequence (5'-3')
<i>AAEL004444</i>	Fwd	AGCAGATCACACCGTAGTGC
	Rev	TGAAATTGCAGGGTTGTTGT
<i>AAEL005957</i>	Fwd	CATACCATTTCATGGCACGTT
	Rev	GGACGTTCCATAGCACACAC
<i>AAEL005810</i>	Fwd	AAAGATCCGATCGGTCAAAC
	Rev	AGATGAGCGTCTTGTGACG
<i>AAEL005545</i>	Fwd	GCGGCGTCAATAACTATCAA
	Rev	GTGTTGAATGGAACGCACTC
<i>AAEL013177</i>	Fwd	GACGAGCACAACTGATGAT
	Rev	GTTTCCACCAGAAGACCCAT
<i>AAEL014226</i>	Fwd	GTGCCTTTGTTTCAGGACTCA
	Rev	GACGGTAATGGAGGTGGAGT
<i>AarpS7</i>	Fwd	TCAGTGTACAAGAAGCTGACCGGA
	Rev	TTCCGCGCGCGCTCACTTATTAGATT
<i>AaKr-h1</i>	Fwd	TTCTCGCAACAACAGCAACATCCG
	Rev	TCATCAGATCCATTGACGCTGGGT
<i>AaVg</i>	Fwd	GCAGGAATGTGTCAAGCGTGA
	Rev	ACGAGGACGAAGAATCGGAAG

**Supplementary Table 3.** Primers for making DNA templates to synthesize dsRNAs.

Gene	Primer	Sequence (5'-3')
<i>AaKr-h1</i>	Fwd	TAATACGACTCACTATAGGGAGTAATGACCTCAAATGGTGCAGATCG
	Rev	TAATACGACTCACTATAGGGAGGCCTTGGCGTACTGAATGACGGAG
<i>GFP</i>	Fwd	TAATACGACTCACTATAGGGAGACGTAAACGGCCACAAGTTC
	Rev	TAATACGACTCACTATAGGGAGTGCTCAGGTAGTGGTTGTCG
<i>AaMet</i>	Fwd	TAATACGACTCACTATAGGGGCTGTTAAAAGTGGATGATGATAC
	Rev	TAATACGACTCACTATAGGGAATCGGCACCTTGGTAGAACGATC



**Supplementary Figure 1.** Clusters of Orthologous Groups functional assignments for the identified AaKr-h1 target genes.

## A.

### Sequences homologous to the KBS of the *BmBR-C* gene

<b>Locus of Cloned Fragment</b>	<b>Strand</b>	<b>Possible KBS</b>
supercont1.1044:164199-164352	+	TATGCACCGCAA
supercont1.107:238744-239418	+	AACCTACGACGA
supercont1.11:2072323-2073246	+	GACCAAACCAAA
supercont1.1131:133448-133780	-	AAGCTGCAGCAA
supercont1.119:81050-81549	-	AACCTAGCCCGA
supercont1.122:2162654-2163511	+	GACCTACGCCGA
supercont1.123:427346-427574	-	TAGCTTTGTCAA
supercont1.15:19197-19725	+	AAACTACACCAC
supercont1.15:4020480-4021282	+	GTCCTATCTGAA
supercont1.162:628545-629795	+	TGGCTGCCCTAA
supercont1.168:920752-920920	+	GACGTGCTTCAT
supercont1.175:567643-568161	+	AACATATCCAAA
supercont1.175:275807-276101	+	TACATACCTCAA
supercont1.179:1278338-1278612	+	AACCTTTCCCAT
supercont1.182:1219257-1220096	-	GAACCTTAAACAA
supercont1.201:1048528-1049084	-	AACCTTTGGCAA
supercont1.204:795129-795831	-	GAGCTGGCGCAT
supercont1.21:600701-601222	-	AACATTTCGTCAA
supercont1.221:351203-352060	-	AAGCTTGCAGCAA
supercont1.248:1494624-1495531	-	GGCCTTCCTTAG
supercont1.271:313573-314220	-	TAACCTTCGTCAA
supercont1.283:193494-193644	-	TACCGGTTCCAA
supercont1.284:490057-490399	-	GAGCTGTGCAAA
supercont1.297:121175-121372	-	GATCTTTGCCAA
supercont1.383:1005986-1006368	-	GATTTATCACAA
supercont1.454:393982-394164	+	AGCTTTCCGGAA
supercont1.50:2047109-2047800	-	GAAATGCCGCAC
supercont1.500:57637-58530	-	TTCCTATCACAA
supercont1.536:203408-204079	+	AAACTAACTCAA
supercont1.545:535344-536084	+	GAGCTTTTCCAA
supercont1.55:1040026-1040168	+	ATGCTACCTGAA
supercont1.638:463831-463996	-	CACCTTCTCCAA
supercont1.65:2535172-2536115	-	GACCATCTCTAA
supercont1.678:83033-83183	-	AGCCTATATCAA
supercont1.73:993813-993954	+	AACCAATCCCGA
supercont1.76:2041931-2042480	-	AACCTATTGCAA
supercont1.76:62379-63323	-	GACCTACCACCC
supercont1.801:206028-206193	-	ACCCTTCTCCAA
supercont1.840:185133-186485	-	GATCTTTCGGCAA

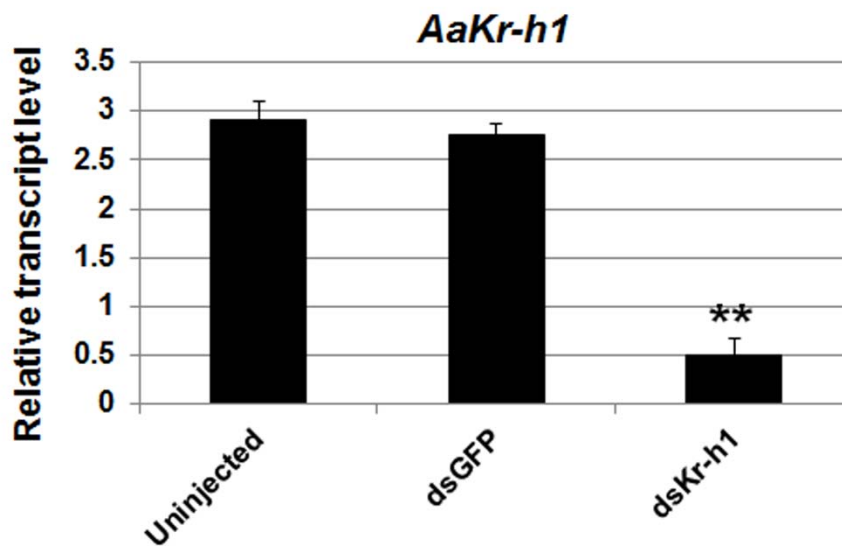
B.



KBS of *BmBR-C*

5' GACCTACGCTAA CGCTAAATAGAGTTCCGA 3'

**Supplementary Figure 2.** Potential Kr-h1 binding sequences in the regulatory regions of the identified Kr-h1 target genes. To define the consensus binding site for AaKr-h1 in the sequences isolated by ChIP-cloning, we performed pairwise-alignments with a 12-bp core sequence (GACCTACGCTAA) of the Kr-h1 binding site (KBS) in the *Bombyx mori Broad-Complex* gene. (A) The top-ranked homologous sequences were listed and extracted for motif analysis using WebLogo (<http://weblogo.berkeley.edu>). (B) Comparison of the consensus motif with the KBS of *BmBR-C*.



**Supplementary Figure 3.** *AaKr-h1* was successfully knocked down in *dsKr-h1* injected mosquitoes. Total RNA was extracted from the un-injected, *dsGFP*- and *dsKr-h1*-injected mosquitoes at 4 days after dsRNA injection. The mRNA levels of *AaKr-h1* were measured by real-time PCR. Results are the mean  $\pm$  S.D. of three replicates. Statistical analysis was conducted by a paired t-test (\*\*,  $p < 0.01$ ).