

Supplementary Information

Table S1. Primers used for RT-PCR, qRT-PCR and diagnostic PCR in *TciRyR*.

Description (cDNA Position)	Primer Name	Sequence (5' to 3')
RT-PCR product Tci1 (1–237)	TciRyR1.F	TATTCGCAAACGGACAGAGAC
	TciRyR1.R	TGCTCCACGTCGACGGTAT
RT-PCR product Tci2 (206–659)	TciRyR2.F	CAGTAGAATGAAATACGTTGGTT
	TciRyR2.R	TTCGATAAACGGCAGATCCAC
RT-PCR product Tci3 (616–1240)	TciRyR3.F	TGTAGCCGTAAGAAGTTCACA
	TciRyR3.R	CGTAAACATGAAGAGACCGGTAA
RT-PCR product Tci4 (1190–1641)	TciRyR4.F	TCAAGGAGAAGGATTTGTACC
	TciRyR4.R	GTAAATGACATCACTCCAGTAGC
RT-PCR product Tci5 (1600–2059)	TciRyR5.F	AAAGCTGTTACATGGTTCGATC
	TciRyR5.R	AGGTGGACATCGGAACCTCTCTC
RT-PCR product Tci6 (1966–2581)	TciRyR6.F	GAAACTTGGGATCCTGAATTTCA
	TciRyR6.R	AGGGCATATCACTCTTTGGTCG
RT-PCR product Tci7 (2553–3105)	TciRyR7.F	ACTTGAAGATCTACACGGTGTT
	TciRyR7.R	CTAACGGTAGTACAACCTTTGGAG
RT-PCR product Tci8 (3063–3731)	TciRyR8.F	TGATTcATTATATTGACAGAGCG
	TciRyR8.R	ATAAGTCGCCTTGCTTTGAAG
RT-PCR product Tci9 (3700–4406)	TciRyR9.F	AGTTGATGAGGTAGCGGATAGAA
	TciRyR9.R	AGCCTGTATGCCTCTTTCGAAT
RT-PCR product Tci10 (4386–5101)	TciRyR10.F	CTTATCTTGCAGACGACGAA
	TciRyR10.R	ATATGATTTCGCTTCTACTGAG
Diagnostic PCR for exon AS	AS.F	ATTACGATCGATGTGCAAAGTAC
	AS.R	TTCTGTTTCGAACCATAACCACTC
qRT-PCR	qRyR.F	GATCTCCGCCAAGTCGTTTC
	qRyR.R	TCGTGACTCCAGCTTTCCAT
Elongation factor-1alpha	EF-1 α .F	GATGCACCTGGTCACAGAGA
	EF-1 α .R	CCATCTTGTTACACCAACG

Table S2. RyRs used in phylogenetic analysis.

RyR	Species	GenBank Accession Number	Length (bp)	PI	Molecular Weight (kDa)
DmRyR	<i>Drosophila melanogaste</i>	BAA41470	5126	5.14	580.46
DgRyR	<i>Drosophila grimshaw</i>	XP_001995333	5174	5.38	585.68
CcyRyR	<i>Ceratitis capitata</i>	XP_004527515.1	5117	5.38	579.74
BdRyR	<i>Bactrocera dorsalis</i>	AHY02115.1	5140	5.38	582.29
MdRyR	<i>Musca domestica</i>	XP_005177534.1	5111	5.42	579.39
DmoRyR	<i>Drosophila mojavensis</i>	XP_002005714	5175	5.38	586.16
AgRyR	<i>Anopheles gambiae</i>	XP_318561	5109	5.33	577.54
AdRyR	<i>Anopheles darling</i>	ETN61080.1	5004	5.33	565.87
AaRyR	<i>Aedes aegypti</i>	XP_001657320	5118	5.33	578.55
sRyR	<i>Bombyx mori</i>	DJ085056	5105	5.44	577.20
PxRyR	<i>Plutella xylostella</i>	AET09964.1	5164	5.48	583.73
HaRyR	<i>Helicoverpa armigera</i>	AHB33498.1	5142	5.47	581.09
PrRyR	<i>Pieris rapae</i>	AGI62938.1	5106	5.46	578.12

Table S2.Cont.

RyR	Species	GenBank Accession Number	Length (bp)	PI	Molecular Weight (kDa)
OfRyR	<i>Ostrinia furnacalis</i>	AGH48757.1	5108	5.42	577.49
CsRyR	<i>Chilo suppressalis</i>	AFN70719.1	5128	5.43	580.32
BtRyR	<i>Bemisia tabaci</i>	AFK84957	5142	5.47	580.82
NIrRyR	<i>Nilaparvata lugens</i>	KF306296	5135	5.36	579.78
LsRyR	<i>Laodelphax striatellus</i>	AFK84959	5115	5.36	578.65
SfRyR	<i>Sogatella furcifera</i>	AHW99829.1	5128	5.36	579.14
MpRyR	<i>Myzus persicae</i>	AJA41114.1	5101	5.48	579.98
ApRyR	<i>Acyrtosiphon pisum</i>	XP_003246190	5101	5.46	579.96
TiRyR	<i>Triatoma infestans</i>	JAC16718.1	5065	5.38	572.40
AmRyR	<i>Apis mellifera</i>	XP_392217	5102	5.38	578.67
AdRyR	<i>Apis dorsata</i>	XP_006622367.1	5106	5.38	579.17
AfRyR	<i>Apis florea</i>	XP_003696991.1	5023	5.44	570.27
NvRyR	<i>Nasonia vitripennis</i>	XP_008202582.1	5130	5.36	582.32
BiRyR	<i>Bombus impatiens</i>	XP_003393894.1	5108	5.37	579.49
MrRyR	<i>Megachile rotundata</i>	XP_003701507	5084	5.42	576.86
HsaRyR	<i>Harpegnathos saltator</i>	EFN78897.1	5080	5.42	575.94
CbRyR	<i>Cerapachys biroi</i>	EZA52107.1	5061	5.47	573.89
AeRyR	<i>Acromyrmex echinator</i>	XP_011054963.1	5096	5.43	577.97
LdRyR	<i>Leptinotarsa decemlineata</i>	AHW99830.1	5128	5.53	581.61
TcRyR	<i>Tribolium castaneum</i>	AIU40166.1	5094	5.39	577.09
DpRyR	<i>Dendroctonus ponderosae</i>	ENN70900.1	4928	5.39	559.55
TuRyR	<i>Tetranychus urticae</i>	BAK26392.1	5180	5.54	583.55
MoRyR	<i>Metaseiulus occidentalis</i>	XP_003748443.1	5162	5.33	581.54
CsaRyR	<i>Cupiennius salei</i>	JAA92932.1	5056	5.27	570.77
DpuRyR	<i>Daphnia pulex</i>	EFX89429.1	5119	5.45	577.95
CbriRyR	<i>Caenorhabditis briggsae</i>	XP_002637345	4183	5.47	476.29
CeRyR	<i>Caenorhabditis elegans</i>	BAA08309	5071	5.48	576.36
CrRyR	<i>Caenorhabditis remanei</i>	EFP05547	5220	5.59	593.20
CbreRyR	<i>Caenorhabditis brenneri</i>	EGT47004	5370	5.61	610.85
AmRyR1	<i>Ailuropoda melanoleuca RyR1</i>	XP_002925900	4841	5.20	545.98
AmRyR2	<i>Ailuropoda melanoleuca RyR2</i>	XP_002923703	4914	5.73	558.09
AmRyR3	<i>Ailuropoda melanoleuca RyR3</i>	XP_002925256	4855	5.67	550.31
HsRyR1	<i>Homo sapiens RyR1</i>	NP_000531	5038	5.18	565.18
HsRyR2	<i>Homo sapiens RyR2</i>	NP_001026	4967	5.73	564.57
HsRyR3	<i>Homo sapiens RyR3</i>	NP_001027	4870	5.47	552.04
OcRyR1	<i>Oryctolagus cuniculus RyR1</i>	NP_001095188	5037	5.16	565.25
OcRyR2	<i>Oryctolagus cuniculus RyR2</i>	NP_001076226	4968	5.70	565.09
OcRyR3	<i>Oryctolagus cuniculus RyR3</i>	NP_001076231	4872	5.58	551.93