

Table S1. Species, taxonomy, receptor abbreviations, and accession numbers of the nuclear receptor sequences used in the phylogenetic analyses.

Species Name	Common Name	Phylum	Lineage/Superphylum	Abbreviation	Accession #	Database
<i>Acropora millepora</i>	coral	Anthozoa	Cnidaria	AcrMilNR2	Q95WG3	UniPROTKB/TrEMBL
				AcrMilNR6	Q95WF8	UniPROTKB/TrEMBL
				AcrMilNR4	Q95WG1	UniPROTKB/TrEMBL
				AcrMilNR7	Q95WF7	UniPROTKB/TrEMBL
				AcrMilNR8	Q95WF6	UniPROTKB/TrEMBL
				AcrMITLL	Q95WG4	UniPROTKB/TrEMBL
<i>Amblyomma americanum</i>	tick	Arthropoda	Ecdysozoa	AmbAmeEcR	O44337	UniPROTKB/TrEMBL
				AmbAmeRXR	O61448	UniPROTKB/TrEMBL
<i>Amphimedon queenslandica</i>	sponge	Demospongia	Porifera	AmpQueNR1	ACA04755	Genbank
				AmpQueNR2	GU811658	Genbank
<i>Aplysia californica</i>	sea slug	Mollusca	Lophotrochozoa	ApCaIER	O6VU64	UniPROTKB/TrEMBL
<i>Biomphalaria glabrata</i>	blood fluke	Mollusca	Lophotrochozoa	BioGlaRXR	O8T5C6	UniPROTKB/TrEMBL
<i>Bombyx mori</i>	silkworm	Arthropoda	Ecdysozoa	BomMorGRF	O9Y1L8	UniPROTKB/TrEMBL
<i>Branchiostoma floridae</i>	amphioxus	Cephalochordata	Cephalochordata	BraFloCP	Q86GV5	UniPROTKB/TrEMBL
				BraFloNR1	Brafl1:174225	JGI
				BraFloNR2	Brafl1:124680	JGI
				BraFloNR3	Brafl1:124681	JGI
				BraFloNR4	Brafl1:128090	JGI
				BraFloNR5	Brafl1:67032	JGI
				BraFloERR	Q5XTR0	UniPROTKB/TrEMBL
				BraFloNR6	Brafl1:222287	JGI
				BraFloNR7	Brafl1:84128	JGI
				BraFloNR8	Brafl1:174611	JGI
				BraFloRAR	Q8MX80	UniPROTKB/TrEMBL
				BraFloER	EU371730	Genbank
				BraFloRXR	Q8MX78	UniPROTKB/TrEMBL
				BraFloSR	EU371729	Genbank
				BraFloTH	A7L5U9	UniPROTKB/TrEMBL
				BraFloTR24	Q8MX79	UniPROTKB/TrEMBL
<i>Capitella capitata</i>	bristle worm	Polychaeta	Lophotrochozoa	CapCapNR1	Capca1:219555	JGI
				CapCapNR2	Capca1:222512	JGI
				CapCapNR3	Capca1:226941	JGI
				CapCapNR4	Capca1:227484	JGI
				CapCapNR5	Capca1:227950	JGI
				CapCapNR6	Capca1:62897	JGI
				CapCapNR7	Capca1:224945	JGI
				CapCapNR8	Capca1:168520	JGI
				CapCapNR9	Capca1:167148	JGI
				CapCapNR10	Capca1:93472	JGI
<i>Carcinus maenas</i>	green crab	Crustacea	Ecdysozoa	CarMaeEcR	Q6RIB4	UniPROTKB/TrEMBL
<i>Celaca pugilator</i>	atlantic fiddler crab	Crustacea	Ecdysozoa	CelPugEcR	O76246	UniPROTKB/TrEMBL
				CelPugRXR	O76241	UniPROTKB/TrEMBL
<i>Ciona intestinalis</i>	transparent sea squirt	Ascidiacea	Urochordata	CioIntNR1	ci0100142690	JGI
				CioIntNR2	ci0100150442	JGI
				CioIntNR3	ci0100139008	JGI
				CioIntNR4	ci0100145000	JGI
				CioIntNR5	ci0100146308	JGI
				CioIntNR6	grail.125.34.1	JGI
				CioIntNR7	grail.343.2.1	JGI
				CioIntNR8	ci0100153345	JGI
				CioIntNR9	ci0100143297	JGI
				CioIntNR10	ci0100135919	JGI
				CioIntNR11	ci0100150561	JGI
				CioIntThR	Q4H2P4	UniPROTKB/TrEMBL
				CioIntTR2/4	Q1RPY8	UniPROTKB/TrEMBL
				CioIntNR12	ci0100135732	JGI
				CioIntNR13	ci0100152224	JGI
				CioIntNR14	ci0100147513	JGI
<i>Drosophila melanogaster</i>	fruit fly	Arthropoda	Ecdysozoa	DroMelDSF	O96680	UniPROTKB/TrEMBL
				DroMelE75	P17671	UniPROTKB/TrEMBL
				DroMelE78	P45447	UniPROTKB/TrEMBL
				DroMelEcR	P34021	UniPROTKB/TrEMBL
				DroMelERR	Q9VSE9	UniPROTKB/TrEMBL
				DroMelFAX1	Q9V112	UniPROTKB/TrEMBL
				DroMelFTZF1	P33244	UniPROTKB/TrEMBL
				DroMelGRF/HR4	Q9W539	UniPROTKB/TrEMBL
				DroMelHNF4	P49866	UniPROTKB/TrEMBL
				DroMelHR3	P31396	UniPROTKB/TrEMBL
				DroMelHR38	P49869	UniPROTKB/TrEMBL
				DroMelHR39	Q05192	UniPROTKB/TrEMBL
				DroMelHR78	Q24142	UniPROTKB/TrEMBL
				DroMelHR96	Q24143	UniPROTKB/TrEMBL
				DroMelPNR/HR51	A12A01	UniPROTKB/TrEMBL
				DroMelSVP	Q8MRP3	UniPROTKB/TrEMBL
				DroMelTLL	P18102	UniPROTKB/TrEMBL
				DroMelUSP	P20153	UniPROTKB/TrEMBL
<i>Fugu rubripes</i>	Japanese pufferfish	Euteleostomi	Vertebrata	FugRubNR1	SINFRUP00000051057	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR2	SINFRUP000000052715	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR3	SINFRUP000000054267	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR4	SINFRUP000000057192	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR5	SINFRUP000000057832	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR6	SINFRUP000000058046	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR7	SINFRUP000000059292	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR8	SINFRUP000000059880	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR9	SINFRUP000000061614 - 15	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR10	SINFRUP000000062437	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR11	SINFRUP000000062708	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR12	SINFRUP000000063957	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR13	SINFRUP000000064369	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR14	SINFRUP000000064603	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR15	SINFRUP000000064685	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR16	SINFRUP000000065825	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR17	SINFRUP000000065176	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR18	SINFRUP000000067205	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR19	SINFRUP000000069536	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR20	SINFRUP000000069756	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR21	SINFRUP000000070604	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR22	SINFRUP000000070767	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR23	SINFRUP000000070795	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR24	SINFRUP000000071164	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR25	SINFRUP000000071695	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR26	SINFRUP000000072134	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR27	SINFRUP000000072315	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR28	SINFRUP000000073157	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR29	SINFRUP000000074502	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR30	SINFRUP000000074673	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR31	SINFRUP000000076812	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR32	SINFRUP000000077845	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR33	SINFRUP000000079088	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR34	SINFRUP000000079602	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR35	SINFRUP000000080805	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR36	SINFRUP000000080916	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR37	SINFRUP000000081538	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR38	SINFRUP000000082389	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR39	SINFRUP000000085838	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR40	SINFRUP000000090296	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR41	SINFRUP000000091008	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR42	SINFRUP000000079067	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
				FugRubNR43	SINFRUP000000087448	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>
					SINFRUP000000054948	GTD; Genomic threading Database, <a href="http://bioinf.cs.ucl.ac.uk/GTD/">http://bioinf.cs.ucl.ac.uk/GTD/</a>

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<i>Platynereis dumerilli</i>	polychaete worm	Annelida	Lophotrochozoa	PlaDumER	C0IR13	UniPROTKB/TrEMBL
<i>Pocillopora damicornis</i>	bird's nest coral	Anthozoa	Cnidaria	PocDamNR6	A7L8D5	UniPROTKB/TrEMBL
<i>Polyandrocarpa misakiensis</i>		Ascidacea	Urochordata	PolMisRAR	P91779	UniPROTKB/TrEMBL
				PolMisRXR	Q9UAF1	UniPROTKB/TrEMBL
<i>Saccoglossus kowalevskii</i>	acorn worm		Hemichordata	SacKowTLL	Q7YTB9	UniPROTKB/TrEMBL
<i>Schistosoma mansoni</i>				SchManTR24	Q4KXQ1	UniPROTKB/TrEMBL
				SchManFTZF	Q9BPL0	UniPROTKB/TrEMBL
<i>Strongylocentrotus purpuratus</i>	purple sea urchin	Echinoidea	Echinodermata	StrPurNR1	UPI0000584A1E	NCBI
				StrPurNR2	XP_782295.1	NCBI
				StrPurNR3	XP_785820.1	NCBI
				StrPurNR4	XP_784483	NCBI
				StrPurNR5	XP_791919.1	NCBI
				StrPurNR6	UPI0000586F42	SMART
				StrPurNR7	UPI0000E469E4	SMART
				StrPurNR8	NP_001020384.1	NCBI
				StrPurNR9	XP_780389.1	NCBI
				StrPurNR10	XP_779997.1	NCBI
				StrPurNR11	UPI0000E4819E	SMART
				StrPurNR12	XP_786266.1	NCBI
				StrPurNR13	XP_795547.1	NCBI
				StrPurNR14	XP_780706.1	NCBI
				StrPurNR15	XP_795547	NCBI
				StrPurNR16	XP_781750.1	NCBI
				StrPurNR17	XP_784429.2	NCBI
				StrPurNR18	XP_779976.1	NCBI
				StrPurNR19	XP_784691.1	NCBI
				StrPurNR20	XP_001201896	NCBI
				StrPurNR21	XP_792757.1	NCBI
				StrPurNR22	XP_789465.1	NCBI
				StrPurNR23	XP_782884.1	NCBI
				StrPurNR24	UPI0000E4834A	SMART
<i>Suberites domuncula</i>	sponge	Demospongia	Porifera	SubDomRXR	Q8I748	UniPROTKB/TrEMBL
<i>Scyliorhinus canicula</i>	smaller spotted catshark	Elasmobranch	Vertebrata	SycCanCP	AAS49607	Genbank
				SycCanTH	ABS11251	Genbank
<i>Thais clavigera</i>	whelk	Gastropoda	Mollusca	ThaClaER	Q86B27	UniPROTKB/TrEMBL
				ThaClaRXR	Q66TQ0	UniPROTKB/TrEMBL
<i>Trichoplax adhaerens</i>			Placozoa	TriAdhCP	Triad1:21656	JGI
				TriAdhERR	Triad1:16711	JGI
				TriAdhHNF4	Triad1:50786	JGI
				TriAdhRXR	Triad1:49897	JGI
<i>Tripedalia cystophora</i>	box jelly	Cubozoa	Cnidaria	TriCysRXR	O96562	UniPROTKB/TrEMBL