

Table S7. List of receptors and the organisms they were isolated from used in the phylogenetic analyses. Receptors shaded in grey are those that were additionally incorporated into the phylogeny used to reconstruct AncSR1. ERs, estrogen receptors; PRs, progesterone receptors; ARs, androgen receptors; MRs, mineralocorticoid receptors; GRs, glucocorticoid receptors; ERRs, estrogen-related receptors; SF1, steroidogenic factor 1 receptor; RXR, retinoid X receptors; COUP-TFs, chicken ovalbumin upstream promoter transcription factors.

<i>Acanthopagrus schlegelii</i>	black porgy	Vertebrata, Teleostei	AR ER <sub>α</sub>	AcaSchAR AcaSchER <sub>α</sub>	Q80057 Q80406	UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Alligator mississippiensis</i>	American alligator	Vertebrata, Crocodylidae	ER <sub>β</sub>	AclMSchER <sub>β</sub>	Q80407	UniPROTbK/tEMBL
<i>Anguilla japonica</i>	Japanese eel	Vertebrata, Teleostei	AR <sub>α</sub> AR <sub>β</sub>	AngJapAR <sub>α</sub> AngJapAR <sub>β</sub>	Q9VG9V Q9PWG5	UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Aplysia californica</i>	sea slug	Mollusca, Gastropoda	ER <sub>α</sub>	AngJapER <sub>α</sub>	Q13012	UniPROTbK/tEMBL
<i>Bos taurus</i>	cow	Vertebrata, Cetartiodactyla	ER <sub>α</sub> ER <sub>β</sub> GR	BoCauER <sub>α</sub> BoSTauER <sub>β</sub> BoSTauGR	Q13012 Q8XS85 Q865V6	UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Branchiostoma floridae</i>	amphioxus	Vertebrata, Cephalochordata	ER <sub>α</sub>	BrAFloER <sub>α</sub>	B5L586	UniPROTbK/tEMBL
<i>Capitella capitata</i>	bristle worm	Annelida, Polychaeta	ERR SR	BrAFloER <sub>α</sub> CapCapER	B6X120 B5SVV7	UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Candidia barbatus</i>	Taiwanese cyprinid fish	Vertebrata, Teleostei	ER <sub>α</sub>	CanBarER <sub>α</sub>	Q73135	UniPROTbK/tEMBL
<i>Canis familiaris</i>	dog	Vertebrata, Carnivora	AR ER <sub>α</sub> GR MR PR	CanFamAR CanFamER <sub>α</sub> CanFamGR CanFamMR CanFamPR	P01190 AAS20260 Q3HTT7 Q3HT19 Q9GLW0	UniPROTbK/tEMBL Genbank UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Carassius auratus</i>	goldfish	Vertebrata, Teleostei	AR ER <sub>α</sub> ER <sub>β</sub>	CarAurAR CarAurER <sub>α</sub> CarAurER <sub>β</sub>	Q8QFV2 Q8QWV1 Q9VW69	UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Cavia porcellus</i>	guinea pig	Vertebrata, Euarchontoglires	ER <sub>α</sub>	CarPorER <sub>α</sub>	Q9JAL9	UniPROTbK/tEMBL
<i>Clinarias garipeus</i>	African catfish	Vertebrata, Teleostei	ER <sub>α</sub>	CavPorER <sub>α</sub>	Q8CGK9	UniPROTbK/tEMBL
<i>Cnemidophorus uniparens</i>	whip-tailed lizard	Vertebrata, Squamata	ER <sub>α</sub>	CalGarER <sub>α</sub>	Q9OWH6	UniPROTbK/tEMBL
<i>Conger myxisternus</i>	conger eel	Vertebrata, Teleostei	ER <sub>α</sub>	CneUniER <sub>α</sub>	Q8UWAA	UniPROTbK/tEMBL
<i>Cottus cottus</i>	common quail	Vertebrata, Aves	ER <sub>α</sub>	CneUniPR CotMyER <sub>α</sub>	Q91425 Q762D6	UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Crossarchia japonica</i>	Asian quail	Vertebrata, Aves	ER <sub>α</sub>	CoCoER <sub>α</sub>	Q8AH40	UniPROTbK/tEMBL
<i>Crossostrea gigas</i>	Pacific oyster	Mollusca, Bivalvia	ER <sub>α</sub>	CoCoER <sub>β</sub>	Q83511	UniPROTbK/tEMBL
<i>Crocota crocata</i>	hyaena	Vertebrata, Carnivora	AR	CoJagAR	Q689V8	UniPROTbK/tEMBL
<i>Cyprinus carpio</i>	common carp	Vertebrata, Teleostei	ER <sub>α</sub>	ColGigER	AZ2413	UniPROTbK/tEMBL
<i>Danio rerio</i>	zebrafish	Vertebrata, Teleostei	AR COUP-TFII	CroCroAR CypCarER <sub>β</sub>	Q8MIK0 Q8JJB9	UniPROTbK/tEMBL UniPROTbK/tEMBL
			ERR <sub>α</sub>	DanRerER <sub>α</sub>	Q8JALS	UniPROTbK/tEMBL
			ERR <sub>β</sub>	DanRerER <sub>β</sub>	Q72U32	UniPROTbK/tEMBL
			ERR <sub>γ</sub>	DanRerER <sub>γ</sub>	Q90W59	UniPROTbK/tEMBL
			ERR <sub>δ</sub>	DanRerER <sub>δ</sub>	Q8Q6F6	UniPROTbK/tEMBL
			ERR <sub>ε</sub>	DanRerER <sub>ε</sub>	Q6Q6F5	UniPROTbK/tEMBL
			ERR <sub>ζ</sub>	DanRerER <sub>ζ</sub>	Q6Q6F4	UniPROTbK/tEMBL
			ERR <sub>η</sub>	DanRerER <sub>η</sub>	Q1XHK0	UniPROTbK/tEMBL
			ERR <sub>θ</sub>	DanRerER <sub>θ</sub>	Q90416	UniPROTbK/tEMBL
			ERR <sub>ι</sub>	DanRerER <sub>ι</sub>	Q8JAL5	UniPROTbK/tEMBL
			ERR <sub>κ</sub>	DanRerER <sub>κ</sub>	Q6Q6H9	UniPROTbK/tEMBL
<i>Dicentrarchus labrax</i>	European sea bass	Vertebrata, Teleostei	AR ER <sub>α</sub> ER <sub>β</sub>	DicLabAR DicLabER <sub>α</sub> DicLabER <sub>β</sub>	Q64497 Q8A4C2 Q8KF57	UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Enrystomops pustulosus</i>	Lepodactylid frog	Vertebrata, Anura	AR	EngPusAR	Q2PK04	UniPROTbK/tEMBL
<i>Equus caballus</i>	horse	Vertebrata, Perissodactyla	ER <sub>α</sub>	EquCabER <sub>α</sub>	Q9T198	UniPROTbK/tEMBL
<i>Eublepharis macularius</i>	leopard gecko	Vertebrata, Squamata	ER <sub>α</sub> ER <sub>β</sub>	EubMacER <sub>α</sub> EubMacER <sub>β</sub>	Q2HWK5 Q2HWK4	UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Felis catus</i>	cat	Vertebrata, Carnivora	ER <sub>α</sub>	FeCatER <sub>α</sub>	Q53AD2	UniPROTbK/tEMBL
<i>Fundulus heteroclitus</i>	killifish	Vertebrata, Teleostei	AR	FunHetAR	Q73216	UniPROTbK/tEMBL
<i>Gallus gallus</i>	chicken	Vertebrata, Aves	COUP-TFII ER <sub>α</sub> ER <sub>β</sub> ERR <sub>α</sub> MR PR SF1	GalGalCP2 GalGalER <sub>α</sub> GalGalER <sub>β</sub> GalGalERR <sub>α</sub> GalGalMR GalGalPR GalGalSF1	Q90733 P06212 Q9PTU5 Q5UKY7 Q3J9X7 C1KB94 P07812 Q9PW17	UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Gambusia affinis</i>	western mosquitofish	Vertebrata, Teleostei	AR AR <sub>α</sub>	GamAfAR GamAfAR <sub>α</sub>	Q60132 Q60GT9	UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Gasterosteus aculeatus</i>	three-spined stickleback	Vertebrata, Teleostei	AR <sub>β</sub>	GasAcuAR <sub>β</sub>	Q80122	UniPROTbK/tEMBL
<i>Halichoeres tenuispinis</i>	wrasse	Vertebrata, Teleostei	ER <sub>α</sub> ER <sub>β</sub>	HalTenAR HalTenER <sub>β</sub>	Q772K8 Q772K7	UniPROTbK/tEMBL UniPROTbK/tEMBL
<i>Halichoeres trimaculatus</i>	protogynous wrasse	Vertebrata, Teleostei	AR	HalTriAR	Q9DDJ4	UniPROTbK/tEMBL

<i>Lottia gigantea</i>	limpet	Mollusca, Gastropoda	ER	LotGigER	Lotgi1132166	JGI
<i>Manacus vitellinus</i>	gold-collared manakin	Vertebrata, Aves	ER	ManVIER	Q4U102	UniProtKB/TrEMBL
<i>Marisa cornuarietis</i>	apple snail	Mollusca, Gastropoda	ER	MarCorER	Q06422	UniProtKB/TrEMBL
<i>Mesocricetus auratus</i>	golden hamster	Vertebrata, Rodentia	ER	MCrAUR	Q05475	UniProtKB/TrEMBL
<i>Microtus ochrogaster</i>	prairie vole	Vertebrata, Rodentia	ER	MCrOChER	Q1EDB6	UniProtKB/TrEMBL
<i>Micropterus salmoides</i>	largemouth bass	Vertebrata, Teleostei	ER	MicSalERa	Q9D242	UniProtKB/TrEMBL
			ER	MicSalERb	Q6XSH2	UniProtKB/TrEMBL
<i>Micropogonias undulatus</i>	Atlantic croaker	Vertebrata, Teleostei	AR	MicUndAR	Q66VR6	UniProtKB/TrEMBL
			ER	MicUndERb	P57781	UniProtKB/TrEMBL
			ER	McUndERg	P57783	UniProtKB/TrEMBL
<i>Mus musculus</i>	mouse	Vertebrata, Rodentia	ER	MusMusERa	P19785	UniProtKB/TrEMBL
			ER	MusMusERb	Q08537	UniProtKB/TrEMBL
			ER	MusMusERR1	Q08580	UniProtKB/TrEMBL
			ER	MusMusERR2	P61539	UniProtKB/TrEMBL
			ER	MusMusERR3	P62509	UniProtKB/TrEMBL
			GR	MusMusGR	P06537	UniProtKB/TrEMBL
			MR	MusMusMR	Q8V18	UniProtKB/TrEMBL
			PR	MusMusPR	Q00175	UniProtKB/TrEMBL
			SF1	MusMusSF1	P33242	UniProtKB/TrEMBL
<i>Myxine glutinosa</i>	Atlantic hagfish	Vertebrata, Teleostei	CR	MyxGLUCR	Q1KX96	UniProtKB/TrEMBL
			ER	MyxGLUER	EU439936	Genbank
			SR	MyxGLUSR	Q1KX95	UniProtKB/TrEMBL
<i>Nucella lapillus</i>	Atlantic dogwinkle	Mollusca, Gastropoda	ER	NucLapER	AS1Y35	UniProtKB/TrEMBL
<i>Octopus vulgaris</i>	octopus	Mollusca, Cephalopoda	ER	OctVulER	Q19440	UniProtKB/TrEMBL
<i>Oncorhynchus mykiss</i>	rainbow trout	Vertebrata, Teleostei	AR	OnoMykARa2	Q93244	UniProtKB/TrEMBL
			AR	OnoMykARb2	Q93245	UniProtKB/TrEMBL
			ER	OnoMykERa	P16058	UniProtKB/TrEMBL
			ER	OnoMykERb	P57782	UniProtKB/TrEMBL
			GR	OnoMykGR	P49843	UniProtKB/TrEMBL
			GR	OnoMykGR2	Q6RQ03	UniProtKB/TrEMBL
			MR	OnoMykMR	Q5WP02	UniProtKB/TrEMBL
<i>Oryzostoma barbatula</i>	cyprinid fish	Vertebrata, Teleostei	ER	OryzBarERb2	P22D36	UniProtKB/TrEMBL
<i>Oreochromis aureus</i>	Israeli tilapia	Vertebrata, Teleostei	ER	OreAurERa	Q60240	UniProtKB/TrEMBL
<i>Oreochromis niloticus</i>	Nile tilapia	Vertebrata, Teleostei	ER	OreNilERa	Q8UWB8	UniProtKB/TrEMBL
			AR	OreNilAR	Q8UBW7	UniProtKB/TrEMBL
			ER	OreNilERa	Q9Y183	UniProtKB/TrEMBL
			ER	OreNilERb	Q73J34	UniProtKB/TrEMBL
<i>Oryctolagus cuniculus</i>	rabbit	Vertebrata, Glires	AR	OrycUnAR	P49699	UniProtKB/TrEMBL
			GR	OrycUnGR	P59687	UniProtKB/TrEMBL
			PR	OrycUnPR	P06186	UniProtKB/TrEMBL
<i>Oryzias latipes</i>	Japanese ricefish	Vertebrata, Teleostei	AR	OryLatAR	Q76L05	UniProtKB/TrEMBL
			ER	OryLatERa	M50241	UniProtKB/TrEMBL
			ER	OryLatERb	Q8UW75	UniProtKB/TrEMBL
<i>Ovis aries</i>	sheep	Vertebrata, Ruminantia	ER	OviARa	Q56113	UniProtKB/TrEMBL
			ER	OviAERb	Q27115	UniProtKB/TrEMBL
<i>Pagrus major</i>	red sea bream	Vertebrata, Teleostei	AR	PagMajAR	Q93497	UniProtKB/TrEMBL
			ER	PagMajERa	Q42132	UniProtKB/TrEMBL
<i>Paralichthys olivaceus</i>	Japanese flounder	Vertebrata, Teleostei	ER	ParOlIEAR	Q8QHL0	UniProtKB/TrEMBL
			ER	ParOlIEERb	Q930HK9	UniProtKB/TrEMBL
			GR	ParOlIGR	Q73B73	UniProtKB/TrEMBL
<i>Petromyzon marinus</i>	sea lamprey	Vertebrata, Hyperoartia	COUP-TFI1	PetMarCP2	Q42509	UniProtKB/TrEMBL
			CR	PetMarCR	Q902M7	UniProtKB/TrEMBL
			ER	PetMarER	Q902M8	UniProtKB/TrEMBL
			PR	PetMarPR	Q902M6	UniProtKB/TrEMBL
			RXR2	PetMarRXR2	Q90V01	UniProtKB/TrEMBL
<i>Pimephales promelas</i>	fathead minnow	Vertebrata, Teleostei	AR	PimProAR	Q19BF5	UniProtKB/TrEMBL
			ER	PimProERa	Q5XKP1	UniProtKB/TrEMBL
			GR	PimProGR	Q271U5	UniProtKB/TrEMBL
<i>Platyneris dumilei</i>	polychaete worm	Annelida, Polychaeta	ER	PlatDumER	EU482033	Genbank
<i>Rana caesabiana</i>	bullfrog	Vertebrata, Anura	AR	RanCaAR	Q17144	UniProtKB/TrEMBL
<i>Rana dybowskii</i>	Korean brown frog	Vertebrata, Anura	PR	RanDybPR	Q8AV12	UniProtKB/TrEMBL
<i>Rana rugosa</i>	wrinkled frog	Vertebrata, Anura	SF1	RanRugSF1	Q9Y195	UniProtKB/TrEMBL
<i>Rattus norvegicus</i>	rat	Vertebrata, Rodentia	AR	RatNovAR	P15207	UniProtKB/TrEMBL
			ER	RatNovERb	Q62686	UniProtKB/TrEMBL
			ER	RatNovERR2	P11475	UniProtKB/TrEMBL
			GR	RatNovGR	P06536	UniProtKB/TrEMBL
			GR	RatNovMR	P22199	UniProtKB/TrEMBL
			PR	RatNovPR	Q63449	UniProtKB/TrEMBL
			MR	SalBoIR	Q13186	UniProtKB/TrEMBL
<i>Saimiri boliviensis</i>	squirrel monkey	Vertebrata, Primates	GR	SalBoIR	Q4JM28	UniProtKB/TrEMBL
<i>Salmo salar</i>	Atlantic salmon	Vertebrata, Teleostei	ER	SalSalERb	Q6R754	UniProtKB/TrEMBL
<i>Salmo trutta</i>	brown salmon	Vertebrata, Teleostei	GR	SalTrUGR	Q51124	UniProtKB/TrEMBL
<i>Serinus canarius</i>	canary	Vertebrata, Aves	AR	SerCanAR	Q91445	UniProtKB/TrEMBL
<i>Sparus aurata</i>	gilthead sea bream	Vertebrata, Teleostei	ER	SpaAurERa	Q9PV29	UniProtKB/TrEMBL
			ER	SpaAurERb	Q9W6M2	UniProtKB/TrEMBL
			GR	SpaAurGR	Q1HKH3	UniProtKB/TrEMBL
<i>Spinibarbus denticulatus</i>	cyprinid fish	Vertebrata, Teleostei	ER	SpDebER	Q1GCL3	UniProtKB/TrEMBL
<i>Squalus acanthias</i>	spiny dogfish	Vertebrata, Elasmobranch	AR	SquAacAR	Q56VU2	UniProtKB/TrEMBL
			ER	SquAacERb	Q90Z66	UniProtKB/TrEMBL
<i>Sturnus vulgaris</i>	European starling	Vertebrata, Aves	ER	StuVulERb	Q9PVE2	UniProtKB/TrEMBL
<i>Sus scrofa</i>	pig	Vertebrata, Cetartiodactyl	ER	SusScERa	Q5GK47	UniProtKB/TrEMBL
			ER	SusScERb	Q29404	UniProtKB/TrEMBL
			GR	SusScERb	Q9XSW2	UniProtKB/TrEMBL
			GR	SusScGR	Q9N1U3	UniProtKB/TrEMBL
<i>Taeniopygia guttata</i>	zebrafinch	Vertebrata, Aves	AR	TaeGuAR	Q2VPH8	UniProtKB/TrEMBL
			ER	TaeGuERa	Q91250	UniProtKB/TrEMBL
			MR	TaeGuMR	Q157N1	UniProtKB/TrEMBL
			SF1	TaeGuSF1	Q90XC4	UniProtKB/TrEMBL
<i>Takifugu rubripes</i>	pufferfish	Vertebrata, Teleostei	AR	TakRuAR	NEWSINRUP0000156318	Ensemble
<i>Tetradon nigroviridis</i>	green-spotted pufferfish	Vertebrata, Teleostei	ER	TeNigERa	Q45866	UniProtKB/TrEMBL
<i>Thais clavigera</i>	whelk	Mollusca, Gastropoda	ER	ThaClAEr	Q86B27	UniProtKB/TrEMBL
<i>Trichoplax adhaerens</i>	planozoan	Placozoa	ERR	TriAdhERR	Tradi116711	JGI
<i>Tupaia glis</i>	common tree shrew	Vertebrata, Scandentia	GR	TupGlIGR	Q95267	UniProtKB/TrEMBL
			MR	TupGlIMR	Q92131	UniProtKB/TrEMBL
<i>Xenopus laevis</i>	African clawed toad	Vertebrata, Anura	AR	XenLaAR	P17048	UniProtKB/TrEMBL
			CP1	XenLaCP1	Q9W745	UniProtKB/TrEMBL
			ER	XenLaERa	P81559	UniProtKB/TrEMBL
			ERR	XenLaERR	Q6AX97	UniProtKB/TrEMBL
			GR	XenLaGR	P49844	UniProtKB/TrEMBL
			MR	XenLaMR	Q66129	UniProtKB/TrEMBL
			PR	XenLaPR	Q9D0U9	UniProtKB/TrEMBL
			RXR	XenLaERXRa	P51128	UniProtKB/TrEMBL
			RXR	XenLaERXb	Q91840	UniProtKB/TrEMBL
			RXR	XenLaERXg	P51129	UniProtKB/TrEMBL
<i>Xenopus tropicalis</i>	clawed toad	Vertebrata, Anura	AR	XenTroAR	Q9W4G8	UniProtKB/TrEMBL
			ER	XenTroERb	Q9W5C8	UniProtKB/TrEMBL
<i>Zoarces viviparus</i>	Elpout	Vertebrata, Teleostei	ER	ZoaVivERa	Q800C2	UniProtKB/TrEMBL