

Supplementary Table 1. Accession number of sequences used for phylogenetic analysis (Fig. 2A)

#	Source	Sequence ID ^a	Annotation	Common name
1	G	M27430	<i>Homo sapiens</i> androgen receptor protein.	Human AR
2	T	AB193190	<i>Gallus gallus</i> androgen receptor protein.	Chicken AR
3	G	AB186356	<i>Alligator mississippiensis</i> androgen receptor protein.	American alligator AR
4	G	U67129	<i>Xenopus laevis</i> androgen receptor alpha isoform protein.	African cawed frog AR
5	T	AB428795	<i>Polypterus senegalus</i> androgen receptor protein.	Gray bichir AR
6	T	AB213020	<i>Acipenser ruthenus x Huso huso</i> (bester) androgen receptor protein	Sturgeon AR
7	T	AB428796	<i>Osteoglossum bicirrhosum</i> androgen receptor protein.	Silver arowana AR
8	G	AB025361	<i>Anguilla japonica</i> androgen receptor beta protein.	Japanese eel AR β
9	G	EF440290	<i>Danio rerio</i> androgen receptor protein.	Zebrafish AR
10	T	AB252679	<i>Oryzias latipes</i> androgen receptorpr beta protein.	Medaka AR β
11	E	ENSGACP00000026868	<i>Gasterosteus aculeatus</i> androgen receptor beta 2 protein.	Stickleback AR
12	G	AB023960	<i>Anguilla japonica</i> androgen receptor alpha protein.	Japanese eel AR α
13	E	ENSGACP00000024489	<i>Gasterosteus aculeatus</i> androgen receptor protein.	Stickleback AR
14	T	AB252233	<i>Oryzias latipes</i> androgen receptor alpha protein	Medaka AR α
15	T	AB174849	<i>Gambusia affinis</i> androgen receptor alpha protein.	Western mosquitofish AR α
16	G	DQ382340	<i>Leucoraja erinacea</i> androgen receptor protein.	Little skate AR
17	T	AB213019	<i>Chiloscyllium punctatum</i> androgen receptor protein.	Brownbanded bambooshark AR
18	G	AY525610	<i>Homo sapiens</i> progesterone receptor protein.	Human PR
19	G	AF319596	<i>Xenopus laevis</i> oviduct progesterone receptor protein.	African cawed frog PR
20	G	AB032075	<i>Anguilla japonica</i> progesterone receptor protein.	Japanese eel PR
21	G	AB028024	<i>Anguilla japonica</i> progestogen receptor type 2 protein.	Japanese eel PR type 2

^aSequences were retrieved from GenBank (G),Ensembl (E), or determined in our study (T).