

Additional file 4. Compilation of information regarding 5S rDNA nucleotide sequence in vertebrates. 5S rDNA information of several vertebrate groups (except stingrays sequences) were retrieved from GenBank/EMBL/DDBJ and used in the present study.

Major groups and taxa	Species	GenBank Accession Number	References
Fishes			
Petromyzontiformes	<i>Lethenteron japonicum</i>	D00076, X04308, X04309	Komiya et al (1986)
	<i>Lethenteron reissneri</i>	X13038	Qi et al (1988)
Carcharhiniformes	<i>Rhizoprionodon lalandii</i> class II	FJ517177-FJ517195	Pinhal et al. (2009a)
	<i>Rhizoprionodon porosus</i> class II	FJ517196-FJ517211	Pinhal et al. (2009a)
	<i>Rhizoprionodon lalandii</i> class I	FJ517166-FJ517172	Pinhal et al. (2009a)
	<i>Rhizoprionodon porosus</i> class I	FJ517173-FJ517176	Pinhal et al. (2009a)
	<i>Scyliorhinus caniculus</i>	M24954	Wegnez et al. (1978)
	<i>Galeocerdo cuvier</i>	FJ539130	Pinhal et al. (2009a)
Lamniformes	<i>Alopias superciliosus</i>	FJ539131	Pinhal et al. (2009a)
Rajiformes	<i>Dipturus oxyrinchus</i>	DQ020573	Pasolini et al. (2006)
	<i>Raja miraletus</i>	DQ020567	Pasolini et al. (2006)
	<i>Raja polystigma</i>	DQ020563	Pasolini et al. (2006)
	<i>Raja clavata</i>	DQ020559	Pasolini et al. (2006)
	<i>Raja asterias</i> type II	DQ020553	Pasolini et al. (2006)
	<i>Raja asterias</i> type I	DQ020547	Pasolini et al. (2006)
	<i>Taeniura lymma</i>	AY278251	Pasolini et al. (2006)
	<i>Raja montagui</i> (polystigma)	AY278250	Pasolini et al. (2006)
Acipenseriformes	<i>Acipenser baerii</i>	AJ744968-AJ744977	Robles et al. (2005)
	<i>Acipenser brevirostrum</i>	AJ745060-AJ745070	Robles et al. (2005)
	<i>Acipenser fulvescens</i>	AJ745057-AJ745059	Robles et al. (2005)
	<i>Acipenser gueldenstaedtii</i>	AJ745033-AJ745037	Robles et al. (2005)
	<i>Acipenser naccarii</i>	AJ744955-AJ744967	Robles et al. (2005)
	<i>Acipenser oxyrinchus</i>	AJ744991-AJ744996	Robles et al. (2005)
	<i>Acipenser ruthenus</i>	AJ745038-AJ745047	Robles et al. (2005)
	<i>Acipenser sinensis</i>	AJ745017-AJ745028	Robles et al. (2005)
	<i>Acipenser stellatus</i>	AJ745048-AJ745056	Robles et al. (2005)
	<i>Acipenser transmontanus</i>	AJ745003-AJ745016	Robles et al. (2005)
Cypriniformes	<i>Acheilognathus melanogaster</i>	AB072205, AB072206	Fujiwara et al. (2009)
	<i>Acheilognathus rhombeus</i>	AJ745003-AJ745016, AB072197, AB072198	Inafuku et al. (2000); Fujiwara et al. (2009)
	<i>Acheilognathus tabira</i>	AB015591, AB072193, AB072194, AB072201, AB072202	Inafuku et al. (2000); Fujiwara et al. (2009)
	<i>Acheilognathus typus</i>	AB072204	Fujiwara et al. (2009)
	<i>Rhodeus ocellatus</i>	AB072199, AB072203	Fujiwara et al. (2009)
	<i>Rhodeus sericeus</i>	AB072195, AB072196	Fujiwara et al. (2009)
	<i>Tanakia tanago</i>	AB072200	Fujiwara et al. (2009)
	<i>Cyprinus carpio</i>	AB015590	Inafuku et al. (2000)

	<i>Carassius auratus langsdorfi</i>	AB001492-AB001503, AB007776-AB007784	Marukami and Fujitani (1998)
	<i>Misgurnus fossilis</i>	V00647-V00648, X56631-X56642	Mashkova et al. (1981); Sedman et al. (1989) Tigano et al. (2004)
Cyprinodontiformes	<i>Lebias fasciata</i>	AY302496-AY302498	Unpublished
Gadiformes	<i>Arctogadus glacialis</i>	AY955254	direct submission
	<i>Gadus morhua</i>	AY150824	direct submission
	<i>Merlangius merlangus</i>	AY150825	direct submission and Campo et al. (2009)
	<i>Merluccius gayi</i>	AF335600, FJ196631	direct submission and Campo et al. (2009)
	<i>Merluccius merluccius</i>	AF335598, FJ196634	direct submission and Campo et al. (2009)
	<i>Merluccius paradoxus</i>	AF335597, AF335597, FJ196635, FJ196636	direct submission and Campo et al. (2009)
	<i>Merluccius polli</i>	AF335599, FJ196637, FJ196638	direct submission and Campo et al. (2009)
	<i>Merluccius senegalensis</i>	FJ196640	Campo et al. (2009)
	<i>Merluccius capensis</i>	FJ196630	Campo et al. (2009)
	<i>Merluccius angustimanus</i>	FJ196625	Campo et al. (2009)
	<i>Merluccius australis</i>	FJ196626	Campo et al. (2009)
	<i>Merluccius productus</i>	FJ196639	Campo et al. (2009)
	<i>Merluccius albidus</i>	FJ196623, FJ196624	Campo et al. (2009)
	<i>Merluccius hubbsi</i>	FJ196632, FJ196633	Campo et al. (2009)
	<i>Merluccius bilinearis</i>	FJ196627-FJ196629	Campo et al. (2009)
	<i>Micromesistius poutassou</i>	AY150820	direct submission
	<i>Molva dipterygia</i>	AY150828	direct submission
	<i>Molva molva</i>	AY150827	direct submission
	<i>Pollachius pollachius</i>	AY150826	direct submission
	<i>Synbranchus marmoratus</i>	AY271269	Messias et al. (2003)
	<i>Trisopterus esmarkii</i>	AY150822	direct submission
	<i>Trisopterus luscus</i>	AY150823	direct submission
	<i>Trisopterus minutus</i>	AY150821	direct submission
Gasterosteiformes	<i>Gasterosteus aculeatus</i>	n.p.	Rocco et al. 1999
Perciformes	<i>Danio rerio</i>	AF213516, AF213517	Gornung et al. (2000)
	<i>Liza ramada</i>	AY695111	Rossi et al. (2005)
	<i>Micropterus salmonoides</i>	L49397	Deiana et al.(2000)
	<i>Oreochromis niloticus</i>	AF176349, AF176497-AF176505, AF478461-AF478462, AY763289-AY763351	Martins et al. (2000); Martins et al. (2002)
	<i>Sparus aurata</i>	AY330701-AY330702	Sola et al. (2003)
Pleuronectiformes	<i>Lepidorhombus whiffianogis</i>	AF335601	direct submission
	<i>Paralichthys olivaceus</i>	AB154836-AB154839	direct submission
	<i>Reinhardtius hippoglossoides</i>	n.p.	Céspedes et al. (1999)
	<i>Solea solea</i>	n.p.	Céspedes et al. (1999)
Salmoniformes	<i>Salmo gairdnerii</i>	J01861	Komiya & Takemura (1979)
	<i>Salmo salar</i>	S73106, S73107	Pendas et al. (1994)
	<i>Coregonus artedii</i>	U84590-U84605	Sajdak et al. (1998)
	<i>Coregonus zenithicus</i>	U84606-U84614	Sajdak et al. (1998)
Siluriformes	<i>Ictalurus punctatus</i>	L49398	Unpublished
Anguilliformes	<i>Anguilla Anguilla</i>	DQ339039-DQ339041	Pichiri et al. (2006)

Tetraodontiformes	<i>Anguilla rostrata</i>	DQ323734	Pichiri et al. (2006)
	<i>Tetraodon nigroviridis</i>	AJ245808	Roest Crollius et al. (2000)
Characiformes	<i>Brycon cephalus type I</i>	AF250529	Wasko et al. (2001)
	<i>Brycon SP. type II</i>	AF250536	Wasko et al. (2001)
	<i>Leporinus obtusidens</i>	AF284747	Martins and Galleti (2001b)
	<i>Leporinus cf. elongatus</i>	AF284737-AF284742	Martins and Galleti (2001b)
	<i>Leporinus elongatus</i>	AF284728-AF284731	Martins and Galleti (2001b)
	<i>Leporinus friderici</i>	AF284743-AF284746, AF284748	Martins and Galleti (2001b)
	<i>Leporinus obtusidens</i>	AF284732-AF284736, AF284747	Martins and Galleti (2001b)
Amphibians	<i>Hoplias malabaricus</i>	AY624052-AY624061	Martins et al. (2006)
	<i>Cryptobranchus alleganiensis</i>	AB066113	Fujiwara et al. (2006)
	<i>Andrias davidianus</i>	AB066110	Fujiwara et al. (2006)
	<i>Andrias japonicus</i>	AB066108	Fujiwara et al. (2006)
	<i>Xenopus tropicalis(s)</i>	X12622	Nietfeld et al. (1998)
	<i>Xenopus tropicalis(o)</i>	X12624	Nietfeld et al. (1998)
	<i>Gastrotheca riobambae</i>	M74438	Del Pino et al. (1992)
	<i>Notophtalmus viridescens</i>	M13611	Kay and Gall (1981)
	<i>Iguana iguana</i>	M10817	Roy and Enns (1976)
	<i>Gallus gallus</i>	X01309	Pace et al. (1974)
Reptiles			
Avian			
Mammals	<i>Macaca fascicularis</i>	AF193591	Jensen and Frederiksen (2000)
	<i>Rattus norvegicus</i>	X83746	Frederiksen et al. (1997)
	<i>Mus musculus</i>	X71804	Hallenberg et al. (1994)
	<i>Homo sapiens</i>	V00589	Forget and Weissman (1967)
	<i>Syrian hamster</i>	J00063	Hart and Folk (1982)
	<i>Bos taurus</i>	X57170	Szymanski et al. (1992)
