

# Additional file 4

gene	species	GenBank source	
<i>POU2</i> ( & avian <i>POUV</i> )	tammar wallaby ( <i>Macropus eugenii</i> )	FJ998420	
	grey short-tailed opossum ( <i>Monodelphis domestica</i> )	NM_001242727	
	chicken ( <i>Gallus gallus</i> )	partial Exon 1: WGS trace archives Ti:224571611 (62-8, adjusted from chromatogram); DR410403	
	alligator ( <i>Alligator mississippiensis</i> )	partial Exon 1: AKHW01037339 (17977-18192); Exons 2-5: AKHW01037340 (6299-6410, 7612-7742, 11209-11377, 11884-12129)	
	painted turtle ( <i>Chrysemys picta bellii</i> )	AHGY01090879 (23030-23629, 30326-30440, 31140-31270), AHGY01090878 (4146-4310), AHGY01090877 (649-903)	
	axolotl ( <i>Ambystoma mexicanum</i> )	kindly provided by Natalia Tapia	
	African clawed frog ( <i>Xenopus laevis</i> ) (OCT91)	NM_001087873	
	coelacanth ( <i>Latimeria chalumnae</i> )	JH126767 (739970-739293, 735489-735378, 725094-724964, 718795-718631, 713786-713511)	
	zebrafish ( <i>Danio rerio</i> )	NM_131112	
	spotted gar ( <i>Lepisosteus oculatus</i> )	AHAT01021728 (2445-1807, 595-484, 372-242), AHAT01021727 (2103-1939, 1785-1519)	
	sturgeon ( <i>Acipenser sinensis</i> )	JN099311	
	<i>POU5F1</i>	human ( <i>Homo sapiens</i> )	NM_002701
		mouse ( <i>Mus musculus</i> )	NM_013633
cow ( <i>Bos taurus</i> )		NM_174580	
elephant ( <i>Loxodonta africana</i> )		AAGU03089405 (39093-39485, 42778-42898, 43187-43317, 43645-43806, 43989-44255)	
armadillo ( <i>Dasypus novemcinctus</i> )		AAGV03091916 (6753-6349-, 4495-4375, 4263-4133, 3996-3835, 3749-3483)	
tammar wallaby ( <i>Macropus eugenii</i> )		FJ998419	
platypus ( <i>Ornithorhynchus anatinus</i> )		NM_001242727	
green anole ( <i>Anolis carolinensis</i> )		AAWZ02031141 (14055-13444, 303-195), AAWZ02031140 (50510-50380, 48892-48731, 47207-46932)	
Indian python ( <i>Python molurus</i> )		partial Exon 1: AEQU010514509 (1-247); Exons 2-5: AEQU010362508 (1527-1416, 566-436), AEQU010743304 (240-126), AEQU010331488 (1-285)	
painted turtle ( <i>Chrysemys picta bellii</i> )		AHGY01526669 (432-995), AHGY01303135 (1193-1082, 623-493), AHGY01303134 (178-17), AHGY01303133 (2081-1811)	
axolotl ( <i>Ambystoma mexicanum</i> )		AY542376	
coelacanth ( <i>Latimeria chalumnae</i> )		AFYH01090867 (17555-18199), BAH001146254 (698-809, 2975-3105, 3982-4143, 4560-4850)	
Chondrichthyes <i>POU2/POU5F1</i> homologues		elephantfish ( <i>Callorhynchus milii</i> ) Exons 2-3	AAVX01321389 (1557-1446, 565-435)
	elephantfish ( <i>Callorhynchus milii</i> ) Exon 5	AAVX01195994 (437-192)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 1 (partial)	AESE011687962 (1-375)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 2	AESE010288213 (446-557)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 3	AESE010985795 (230-100)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 3	AESE010336936 (802-672)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 4	AESE011193964 (297-133)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 4	AESE010439781 (180-16)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 5 (partial)	AESE012470268 (1-220)	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 5	AESE011616827 (692-438)	
	<i>NPDC1</i> (Exons 5-9)	coelacanth ( <i>Latimeria chalumnae</i> )	AFYH01056513 (9699-9633, 8270-8186, 6195-6116, 4750-4651), AFYH01056512 (9547-9470)
spotted gar ( <i>Lepisosteus oculatus</i> )		AHAT01021729 (5684-5618, 4889-4805, 4688-4609, 4472-4373, 3219-3148)	
zebrafish ( <i>Danio rerio</i> )		NM_001128783	
medaka ( <i>Oryzias latipes</i> )		AM301011	
salmon ( <i>Salmo salar</i> )		NM_001173856	
painted turtle ( <i>Chrysemys picta bellii</i> ) (Exons 5-9)		AHGY01090880 (17417-17482, 18922-19000, 19260-19339, 19642-19738), AHGY01090879 (503-580)	
chicken ( <i>Gallus gallus</i> )		XM_001233958	
platypus ( <i>Ornithorhynchus anatinus</i> ) (Exons 5-7)		AAPN01166064 (2178-2112, 1875-1791, 687-608)	
tammar wallaby ( <i>Macropus eugenii</i> )		FY568867	
grey short-tailed opossum ( <i>Monodelphis domestica</i> )		XM_001374335	
elephant ( <i>Loxodonta africana</i> )		AAGU03092129 (4108-4174, 4253-4337, 4418-4497, 4742-4838)	
mouse ( <i>Mus musculus</i> )		NM_008721	
human ( <i>Homo sapiens</i> )		NM_015392	
elephantfish ( <i>Callorhynchus milii</i> ) Exons 5-6		AAVX01002865 (2746-2812, 3205-3293)	
elephantfish ( <i>Callorhynchus milii</i> ) Exons 7-8		AAVX01174269 (965-886, 570-471)	
elephantfish ( <i>Callorhynchus milii</i> ) Exons 9		AAVX01063171 (561-638)	
little skate ( <i>Leucoraja erinacea</i> ) Exon 5		AESE010638003 (205-271)	
little skate ( <i>Leucoraja erinacea</i> ) Exon 6		AESE011694600 (587-500)	
little skate ( <i>Leucoraja erinacea</i> ) Exon 8		AESE012042833 (107-206)	
little skate ( <i>Leucoraja erinacea</i> ) Exon 9	AESE011485742 (1535-1464)		
<i>NPDC1L</i> (Exons 5-9)	Japanese gecko ( <i>Gekko japonicus</i> )	EB172012 (1-523)	
	Indian python ( <i>Python molurus</i> ) (Exons 5-7)	AEQU010264385 (1694-1628, 1356-1272, 828-752)	
	green anole ( <i>Anolis carolinensis</i> )	WGS trace archives Ti:1411938372 (339-405), AAWZ02031143 (3431-3347, 1639-1563), AAWZ02037787 (11785-11692, 7770-7705)	
	painted turtle ( <i>Chrysemys picta bellii</i> ) (Exons 6-8)	AHGY01303137 (1423-1339, 1069-993, 262-172)	
	coelacanth ( <i>Latimeria chalumnae</i> )	AFYH01090867 (3719-3785, 5136-5211, 6685-6764, 8172-8268, 9231-9308)	
	dogfish ( <i>Squalus acanthias</i> )	EE298588, EE627674, ES324472, CX196534, EE298992, EE886600	
	little skate ( <i>Leucoraja erinacea</i> ) Exon 5	AESE012086843 (111-45)	
little skate ( <i>Leucoraja erinacea</i> ) Exon 8	AESE011734244 (193-94)		
tunicate <i>NPDC1/NPDC1L</i> homologue	tunicate ( <i>Ciona savignyi</i> ) (Exons 5-9)	AACT01015729 (12830-12896, 14325-14415, 15427-15506, 15995-16103, 16335-16481)	