

## Supplemental Figure 1

Excerpts from DGKε sequence alignment from different Vertebrate and some invertebrate species showing the conservation of Proline residue at position 33 (highlighted) in the sequence.

		25	41
Primates	Homo sapiens	5616188	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Gorilla gorilla gorilla	426347426	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Pan troglodytes	694968683	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Pan paniscus	675742782	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Pongo abelii	686753387	WTLC <span style="background-color: #e0f0ff;">SVLLPXV</span> ITFWCS
	Macaca fascicularis	67972066	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Macaca mulatta	297272634	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Macaca nemestrina	795620848	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Chlorocebus sabaeus	635089833	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Cercocebus atys	795571756	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Rhinopithecus roxellana	724909225	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Colobus angolensis palliatus	795243343	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Papio anubis	685597505	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Callithrix jacchus	296202403	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Aotus nancymae	817291140	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Saimiri boliviensis boliviensi	403279700	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Otolemur garnettii	395845794	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Tarsius syrichta	640826139	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITCWCS
	Propithecus coquereli	826274413	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Rodents	Microcebus murinus	29719269
Mesocricetus auratus		24951727	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Nannospalax galili		74060070	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Cricetulus griseus		44243468	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Peromyscus maniculatus bairdii		89917547	WTLC <span style="background-color: #e0f0ff;">SVLLPVL</span> ITLWCS
Cricetulus griseus		25188058	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Mus musculus		6336623	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITLWCS
Microtus ochrogaster		32013590	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Rattus norvegicus		49053838	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITLWCS
Chrysochloris asiatica		86449525	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Elephantulus edwardii		85671592	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Dasytus novemcinctus		21140633	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Other Mammals	Tupaia chinensis	47277591	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> VTFWCS
	Loxodonta africana	44285375	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Orycteropus afer afer	34872742	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Trichechus manatus latirostris	71380322	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Monodelphis domestica	11990756	WTLC <span style="background-color: #e0f0ff;">SVLLPVL</span> ITLWCS
	Sarcophilus harrisii	21480855	WTLC <span style="background-color: #e0f0ff;">SVLVPVL</span> ITLWCN
	Ornithorhynchus anatinus	20985162	WTLC <span style="background-color: #e0f0ff;">SVLLPVL</span> LTLWCS
	Equus caballus	545179273	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Chinchilla lanigera	533160536	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Heterocephalus glaber	512996527	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Fukomys damarensis	676281227	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Dipodomys ordii	852732227	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Leptonychotes weddellii	585194198	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Ailuropoda melanoleuca	301759659	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Mustela putorius furo	511846013	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Octodon degus	507704592	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Ceratotherium simum simum	478521197	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Panthera tigris altaica	591321210	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Felis catus	410980673	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
	Canis lupus familiaris	73966623	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS
Ovis aries	803112718	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Capra hircus	926715761	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Bubalus bubalis	594106732	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Bos taurus	300793691	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Bison bison bison	742175154	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Bos mutus	555987838	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Camelus ferus	560910323	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Vicugna pacos	560988630	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Physeter catodon	593727630	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	
Orcinus orca	466019059	WTLC <span style="background-color: #e0f0ff;">SVLLPVF</span> ITFWCS	

Other Mammals	Lipotes vexillifer	602707331	WTLCSVLLPVFITFWCS
	Balaenoptera acutorostrata sca	594655682	WTLCSVLLPVFITFWCS
	Pteropus alecto	586540170	WTLCSVLLPVFITFWCS
	Cavia porcellus	348562564	WTLCSVLLPVFITFWCS
	Ursus maritimus	671005957	WTLCSVLLPVFITFWCR
	Sorex araneus	505802581	WTLCSVLLPVFITFWCS
	Sus scrofa	264681444	YTLCSVLLPVFITFWCS
	Myotis brandtii	554556336	WTLCSVLLPVFITFWCS
	Eptesicus fuscus	641713396	WTLCSVLLPVFITFWCS
	Jaculus jaculus	507572892	WTLCSVLLPVFITLWCS
	Erinaceus europaeus	617618893	WTLCSVLLPVLITCWCS
	Oryctolagus cuniculus	291405752	WTLCSVLLPVAVTLWCS
	Ochotona princeps	504168622	WTLCSVLLPVAVTLWCS
	Alligator sinensis	557263924	WTLCSVVVPLITLWCS
	Alligator mississippiensis	950994220	WTLCSVVVPLITLWCS
	Chelonia mydas	591360518	WTLCSVILPVVITLWCS
	Chrysemys picta bellii	641760021	WTLCSVILPVVITLWCS
	Condylura cristata	830038813	WTLCSVLLPVFITFWCS
	Reptiles	Chaetura pelagica	701422173
Calypte anna		663263247	WTLCSVLLPVLITLWCS
Opisthocomus hoazin		700392595	WTLCAVLLPVLITLWCS
Picoides pubescens		678196712	WTLCSVLLPVLITLWCS
Birds	Serinus canaria	683924150	WTLCSVLLPVLITAWCS
	Tauraco erythrolophus	701327655	WTLCAIILPVLITVWCS
	Anser cygnoides domesticus	902889883	WTLCSVIVPVLITLWCS
	Balearica regulorum gibbericeps	723547949	WTLCSVLLPVLITLWCS
	Gavia stellata	698449606	WTLCSVILPVLITLWCS
	Amazona aestiva	944212817	WTLCSVLLPVLITVWCS
	Nipponia nippon	694848337	WTLCSVILPVLITLWCS
	Columba livia	543723927	WTLCAVILPVLITLWCS
	Aptenodytes forsteri	686617944	WTLCSVILPVLITLWCS
	Haliaeetus leucocephalus	729760143	WTLCSVILPVLITLWCS
	Phalacrocorax carbo	XP_009505860	WTLCSVLLPVLITLWCS
	Chaetura pelagica	XP_010000988	WTLCSVLLPVLITLWCS
	Gavia stellata	XP_009818613	WTLCSVILPVLITLWCS
	Aquila chrysaetos canadensis	XP_011585227	WTLCSVILPVLITLWCS
Fishes	Pygocentrus nattereri	XP_017548559	WTGLAVLLPILITLWCS
	Sinocyclocheilus rhinoceros	XP_016370480	WTTVAVLVPVLITLWCS
	Astyanax mexicanus	XP_007234459	WTSIAILLPVLITLWCS
	Danio rerio	XP_001920687	WTTFAVLVPVLITLWCS
Arthropoda	Ictalurus punctatus	XP_017337227	WTGLAVLLPVLITLWCS
	Papilio polytes	XP_013141971	CQLCDTYFPVYQMEWCS
	Papilio xuthus	XP_013167633	CQLCDTYFPVYQMEWCS
	Papilio machaon	XP_014363046	CQLCDTYFPVYQMEWCS