

**Additional file 1. Names of the 56 mammalian species used in this study.**

Preferred common names, scientific names, families, orders and references in GenBank for the 56 mammalian species, from which *AMBN* sequences were used in our study. Alphabetical order of common names. The *AMBN* sequence of the crocodylian *Caiman crocodylus* was used as an outgroup.

Common name	Genus and species	Family	Order	Source
Aardvark	<i>Orycteropus afer</i>	Orycteropodidae	Tubulidentata	XM_007942818.1
Alpaca	<i>Vicugna pacos</i>	Camelidae	Cetartiodactyla	ENSVPAG00000011879
Armadillo	<i>Dasybus novemcinctus</i>	Dasyopodidae	Cingulata	ENSNDNOG00000010874
Aye-Aye	<i>Daubentonia madagascariensis</i>	Daubentoniidae	Primates	DauMad_1.0
Baboon	<i>Papio anubis</i>	Cercopithecidae	Primates	ENSPANG00000014745
Big brown bat	<i>Eptesicus fuscus</i>	Vespertilionidae	Chiroptera	XM_008157477.1
Bushbaby	<i>Otolemur garnettii</i>	Galagidae	Primates	ENSOGAG00000033618
Cat	<i>Felis catus</i>	Felidae	Carnivora	ENSFCAG00000009206
Chimpanzee	<i>Pan troglodytes</i>	Hominidae	Primates	ENSPTRG00000023351
Chinchilla	<i>Chinchilla lanigera</i>	Chinchillidae	Rodentia	XM_005392786.1
Chinese hamster	<i>Cricetulus griseus</i>	Cricetidae	Rodentia	XM_007624123.1
Cow	<i>Bos taurus</i>	Bovidae	Cetartiodactyla	NM_173988
Degu	<i>Octodon degus</i>	Octodontidae	Rodentia	XM_004646538.1
Dog	<i>Canis familiaris</i>	Canidae	Carnivora	ENSCAFG00000002904
Dolphin	<i>Tursiops truncatus</i>	Delphinidae	Cetartiodactyla	ENSTTRG00000008661
Elephant	<i>Loxodonta africana</i>	Elephantidae	Proboscidea	ENSLAFG00000016997
Elephant shrew	<i>Elephantulus edwardii</i>	Macroscelididae	Macroscelidea	XM_006896844.1
Ferret	<i>Mustela putorius furio</i>	Mustelidae	Carnivora	ENSPMUG00000009583
Golden mole	<i>Chrysochloris asiatica</i>	Chrysochloridae	Afrosoricida	XM_006873792.1
Gibbon	<i>Nomascus leucogenys</i>	Hylobatidae	Primates	ENSNLEG00000007704
Gorilla	<i>Gorilla gorilla</i>	Hominidae	Primates	ENSGGOG00000013657
Guinea pig	<i>Cavia porcellus</i>	Caviidae	Rodentia	AJ537436
Hedgehog	<i>Erinaceus europaeus</i>	Erinaceidae	Erinaceomorpha	ENSEEUG00000011188
Horse	<i>Equus caballus</i>	Equidae	Perissodactyla	ENSECAG00000021532
Human	<i>Homo sapiens</i>	Hominidae	Primates	NM_016519
Hyrax	<i>Procavia capensis</i>	Procaviidae	Hyracoidea	ENSPCAG00000003170
Jerboa	<i>Jaculus jaculus</i>	Dipodidae	Rodentia	XM_004665362.1
Kangaroo rat	<i>Dipodomys ordii</i>	Heteromyidae	Rodentia	ENSĐORG00000016295
Macaque	<i>Macaca mulatta</i>	Cercopithecidae	Primates	ENSMMUG00000022099
Manatee	<i>Trichechus manatus</i>	Trichechidae	Sirenia	XM_004383356.1
Marmoset	<i>Callithrix jacchus</i>	Cebidae	Primates	ENSCJAG00000014634
Megabat	<i>Pteropus vampyrus</i>	Pteropodidae	Chiroptera	ENSPVAG00000004326
Microbat	<i>Myotis lucifugus</i>	Vespertilionidae	Chiroptera	ENSMUG00000012042
Mouse lemur	<i>Microcebus murinus</i>	Cheirogaleidae	Primates	ENSMICG00000005341
Mouse	<i>Mus musculus</i>	Muridae	Rodentia	NM_009664
Naked mole rat	<i>Heterocephalus glaber</i>	Bathyergidae	Rodentia	XM_004871725.1
Opossum	<i>Monodelphis domestica</i>	Didelphidae	Didelphimorphia	ENSMDG00000012395
Orangutan	<i>Pongo pygmaeus</i>	Hominidae	Primates	ENSPPYG00000014807
Panda	<i>Ailuropoda melanoleuca</i>	Ursidae	Carnivora	ENSAMEG00000005828
Pig	<i>Sus scrofa</i>	Suidae	Cetartiodactyla	NM_214037
Pika	<i>Ochotona princeps</i>	Ochotonidae	Lagomorpha	ENSOPRG00000010951
Platypus	<i>Ornithorhynchus anatinus</i>	Ornithorhynchidae	Monotremata	ENSOANG00000013691
Rabbit	<i>Oryctolagus cuniculus</i>	Leporidae	Lagomorpha	ENSOCUG00000022916
Rat	<i>Rattus norvegicus</i>	Muridae	Rodentia	NM_012900
Rhinoceros	<i>Ceratotherium simum</i>	Rhinocerotidae	Perissodactyla	XM_004419143.1
Sheep	<i>Ovis aries</i>	Bovidae	Cetartiodactyla	ENSÖARG00000011393
Shrew	<i>Sorex araneus</i>	Soricidae	Soricomorpha	ENSARG00000009204
Sloth	<i>Choloepus hoffmanni</i>	Megalonychidae	Pilosa	ENSCHOG00000011594
Squirrel	<i>Ictidomys tridecemlineatus</i>	Sciuridae	Rodentia	ENSSTOG00000007952
Squirrel monkey	<i>Saimiri boliviensis</i>	Cebidae	Primates	XM_003931927.1
Star-nosed mole	<i>Condylura cristata</i>	Talpidae	Soricomorpha	XM_004681235.1
Tarsier	<i>Tarsius syrichta</i>	Tarsiidae	Primates	ENSTSYG00000014624
Tasmanian devil	<i>Sarcophilus harrisii</i>	Dasyuridae	Dasyuromorphia	ENSSHAG00000018085
Tenrec	<i>Echinops telfairi</i>	Tenrecidae	Afrosoricida	ENSETEG00000002140
Tree shrew	<i>Tupaia chinensis</i>	Tupaiaidae	Scandentia	ENSTBEG00000017478
Wallaby	<i>Macropus eugenii</i>	Macropodidae	Diprotodontia	ENSMEUG00000002847
Crocodile	<i>Caiman crocodylus</i>	Crocodylidae	Archosauria	AY043290