

Additional file 3 – Taxon and gene samplings

The taxonomic arrangement follows Carleton and Musser [3]. When sequences were not available from the same species a chimera has been built between genes of different species and is noted “sp” as species name. For Hystricidae and Physeteridae, a chimera has been built between two genera. MGF: Stem cell factor; PRKC: protein kinase C; SPTBN: β -spectrin non erythrocytic 1; THY: Thyrothropin; vWF: the exon 28 of von Willebrand factor; IRBP: exon one of the interphotoreceptor retinoid-binding protein; *CYTb*: mitochondrial cytochrome *b*; 12S rRNA: mitochondrial 12S ribosomal RNA.

* denote sequences that have been obtained for the present study and – means that no sequence is available

SUBORDER

Family	MGF	PRKC	SPTBN	THY	vWF	IRBP	CYTb	12S rRNA
<i>Genus species</i>								

SCIUROMORPHA

Sciuridae

<i>Tamiasciurus</i> sp	DQ318969	DQ318975	AJ536396	AJ536366	-	AY227622	AF147643	AY227555
<i>Glaucomys</i> sp	AM909781*	DQ318981	AJ536397	AJ536367	AJ224667	AY227598	AJ389531	AF038020

Aplodontidae

<i>Aplodontia rufa</i>	AM909782*	DQ318982	AJ536398	AJ536364	AJ224662	AJ427238	AJ389528	AJ389541
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Gliridae								
<i>Dryomys nitedula</i>	AM909780*	AM909784*	AJ536388	AJ536360	AJ224666	AJ427236	AJ225116	AJ225119
<i>Graphiurus murinus</i>	AM909779*	AM909783*	AJ536395	AJ536371	-	AY303219	AJ225115	AJ225118
MYOMORPHA								
Muridae								
<i>Mus musculus</i>	DQ318971	DQ318977	AL731792	DQ318962	AJ238390	NM_015745	EF108344	EF108344
<i>Acomys</i> sp	AM909770*	AM909789*	AM909797*	AM909818*	AJ402715	AY326074	X96996	X84387
Cricetidae								
<i>Microtus</i> sp	AM909771*	AM909790*	AM909798*	AM909819*	FM200055*	AY163593	U54488	X99464
<i>Mesocricetus auratus</i>	AM909772*	-	AM909799*	AM909820*	AJ402706	AB164047	AF119265	X84390
Spalacidae								
<i>Spalax</i> sp	AM909773*	AM909791*	AM909800*	AM909821*	U31621	U48589	AJ389537	AJ250357
Dipodidae								
<i>Jaculus jaculus</i>	-	AM909837*	AM909832*	AM909827*	AJ297765	-	AJ416890	AJ416890
<i>Dipus sagitta</i>	AM909768*	AM909787*	AM909809*	AM909825*	AJ224665	AJ427232	AM407909	AJ319807
<i>Allactaga</i> sp	AM909769*	AM909788*	AM909810*	AM909815*	AJ224661	AY326076	AJ389534	AJ389545

<i>Napaeozapus insignis</i>	AM909839*	AM909838*	AM909833*	AM909826*	-	AY326098	AJ389535	AJ389546
<i>Sicista</i> sp	AM909767*	AM909786*	AM909808*	AM909822*	AJ297764	FM200058*	-	-
ANOMALUROMORPHA								
Anomaluridae								
<i>Anomalurus</i> sp	AM909775*	AM909793*	AM909806*	AM909816*	AJ427229	AJ427240	AM159537	AJ389539
<i>Idiurus macrotis</i>	AM909774*	AM909792*	AM909807*	AM909817*	FM200056*	-	AJ389525	AJ389538
Pedetidae								
<i>Pedetes</i> sp	DQ318972	DQ318978	AM909831*	DQ318963	AJ238389	AJ427241	AJ389527	AJ389540
CASTORIMORPHA								
Castoridae								
<i>Castor</i> sp	DQ318970	DQ318976	AM909834*	DQ318961	AJ427228	AJ427239	AJ389529	AJ389542
Geomyidae								
<i>Geomys</i> sp	-	-	AM909804*	-	-	AM407914	AF158693	U67300
<i>Cratogeomys castanops</i>	-	AM909835*	AM909830*	-	-	-	L11902	U67299
<i>Thomomys</i> sp	AM909766*	AM909785*	AM909813*	-	AJ427227	AJ427234	AF215808	AF084289
Heteromyidae								

<i>Dipodomys</i> sp	-	-	AM909805*	-	AJ427226	AJ427233	AF172837	U59173
<i>Heteromys gaumeri</i>	-	AM909836*	AM909803*	AM909823*	-	FM200057*	AJ389536	AJ389547
HYSTRICOMORPHA								
Ctenodactylidae								
<i>Ctenodactylus vali</i>	AM909778*	AM909796*	AM909812*	-	AJ238387	-	AJ389532	AJ389543
<i>Massoutiera mzabi</i>	AM909777*	AM909795*	AM909811*	AM909824*	AJ238388	AJ427242	AJ389533	AJ389544
Thryonomyidae								
<i>Thryonomys</i> sp	DQ318974	DQ318980	AM909801*	DQ318965	AJ224674	AJ427243	AJ301644	AJ301644
Bathyergidae								
<i>Bathyergus</i> sp	AM909840*	DQ318983	AM909828*	DQ318968	AJ238384	AJ427251	AF012241	M63565
Caviidae								
<i>Cavia porcellus</i>	AM909776*	AM909794*	AM909802*	AM909814*	AJ224663	AJ427248	AJ222767	AJ222767
Hystricidae								
	DQ318973	DQ318979	AM909829*	DQ318964	AJ224675	AJ427245	X70674	U12448
Number of rodent sequences	25	27	30	25	24	26	29	29

OUTGROUP

Lagomorpha

<i>Oryctolagus cuniculus</i>	AY292741	AY292768	AY292810	AY292665	U31618	Z11812	AJ001588	AJ001588
<i>Lepus sp</i>	AY292756	AY292783	AY292825	AY292680	AJ224669	AJ427250	AJ421471	AJ421471
<i>Ochotona princeps</i>	AY292740	AY292766	AY292809	AY292664	AJ224672	AY057832	AJ537415	AJ537415
Primates								
<i>Homo sapiens</i>	AC024941	AC073288	AC093110	AL109660	M25851	NM_002900	AY714024	EF657704
Cetartiodactyla								
<i>Sus scrofa</i>	AF165604	AF165605	AF165606	AF165609	S78431	U48588	AY337045	AY337045
<i>Bos sp</i>	AF165716	AY029293	AF165718	AF165721	X63820	NM_174164	DQ186266	AY526085
Physeteridae	AF165644	AF165645	AF165646	AF165649	AF108834	U50818	NC_002503	NC_002503

List of chimera:

Acomys sp : *A. airensis* (Cytb) *A. dimidiatus* (MGF, PRKC, SPTBN, THY) *A. cahirinus* (VWF, 12S) *A. spinosissimus* (IRBP)

Allactaga sp: *A. elater* (MGF, PRKC, SPTBN, THY , VWF, CYTb, 12S) *A. sibirica* (IRBP)

Bathyergus sp: *B. genetta* (MGF, PRKC, SPTBN, THY, CYTb, 12S) *B. suillus* (VWF, IRBP)

Bos sp : *Bos taurus* (PRKC, VWF, IRBP, CYTb, 12S rRNA) *Bos indicus* (MGF, SPTBN, THY)

Castor sp: *C. canadensis* (MGF, PRKC, SPTBN, THY, VWF, IRBP) *C. fiber* (CYTb, 12S)

Dipodomys sp: *D. merriami* (SPTBN, VWF, IRBP, CYTb) *D. ordii* (12S)

Geomys sp: *G. bursarius* (SPTBN, CYTb, 12S) *G. breviceps* (IRBP)

Glaucomys sp : *G. sp* (MGF, PRKC, SPTBN, THY) *G. volans* (VWF, IRBP, CYTb, 12S)

Hystricidae : *Hystrix africaeaustralis* (MGF, PRKC, SPTBN, THY, CYTb, 12S) *Trichys fasciculata* (VWF, IRBP)

Lepus sp: *L. capensis* (MGF, PRKC, SPTBN, THY) *L. europeus* (CYTb, 12S) *L. crawshayi* (VWF, IRBP)

Microtus sp : *M. arvalis* (MGF, PRKC, SPTBN, THY, CYTb) *M. nivalis* (12S) *M. sikimensis* (IRBP) *M. agrestis* (VWF)

Pedetes sp: *P. capensis* (MGF, PRKC, SPTBN, THY, 12S) *P. surdaster* (VWF, IRBP, CYTb)

Physeteridae: *Kogia breviceps* (MGF, PRKC, SPTBN, THY) *Physeter catodon* (VWF, IRBP, CYTb, 12S)

Sicista sp: *S. betulina* (MGF, PRKC, SPTBN, THY) *S. kazbegica* (IRBP, VWF)

Spalax sp : *S. ehrenbergi* (CytB, 12S) *S. leucodon* (MGF, PRKC, SPTBN, THY) *S. polonicus* (VWF) *S. zemni* (IRBP)

Tamiasciurus sp : *T. hudsonicus* (MGF, PRKC, IRBP, CYTb, 12S), *T. sp* (SPTBN, THY)

Thomomys sp: *T. bottae* (12S), *T. talpoides* (MGF, PRKC, SPTBN, VWF, IRBP, CYTb)

Thryonomys sp : *T. sp* (MGF, SPTBN, THY), *T. swinderianus* (PRKC, VWF, IRBP, CYTb, 12S)