

Supplementary Material

The Alliance for Cellular Signaling plasmid collection: a flexible resource for protein localization studies and signaling pathway analysis.

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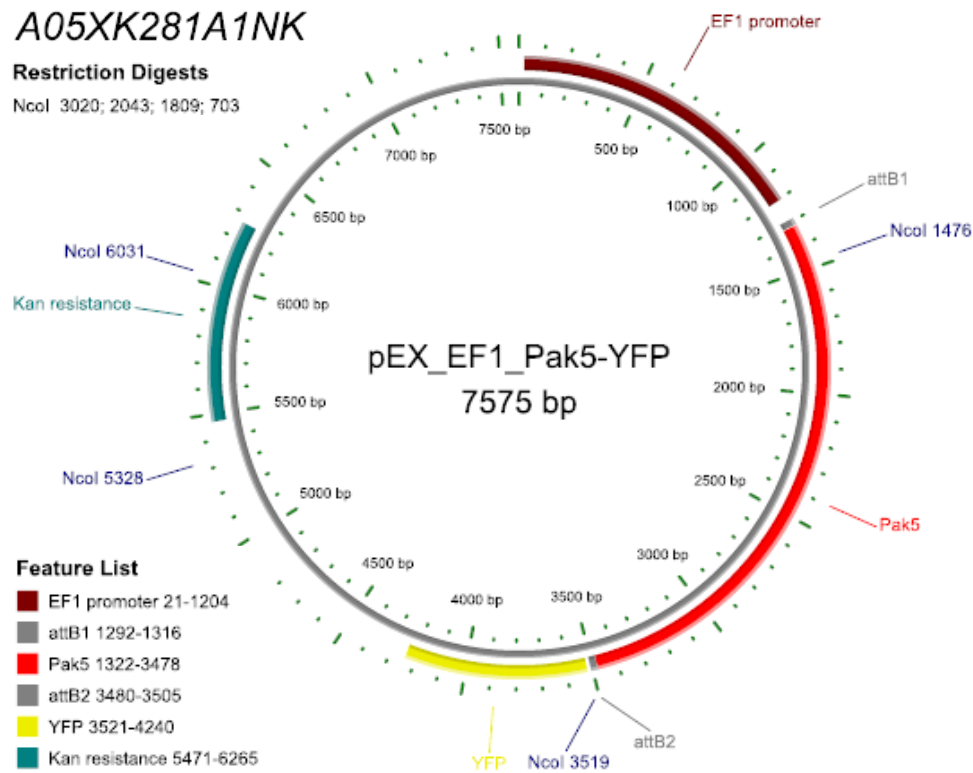
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Supplementary Figure 1

Expression vector record and plasmid map from the AfCS plasmid database. a) Plasmid map as generated by the AfCS plasmid database for the N form of Pak5 tagged with YFP at the C-terminus. Relevant features are listed in addition to predicted digest pattern with NcoI restriction enzyme. b) Construct record as generated by the AfCS plasmid database for the N form of Pak5 tagged with YFP at the C-terminus. In addition to the upper panel detailing key construct information such as barcode, sequence and feature locations, the record also carries information specific to the cloned gene (N form of Pak5) and the parent vector (EF1 promoter driven, YFP C-terminal fusion).

1A



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AfCS nature		thesignalinggateway		registration		e-alert		help		contact us		site guide		SEARCH	
PLASMID		information		browse		search		blast							
▶ plasmid map															
													construct		
construct name		pEX_EF1_Pak5-YFP													
barcode		A05XK281A1NK													
atcc id															
vector type		X (Expression vector)													
vector sequence		<view>													
vector size		7575													
feature list		EF1 promoter 21-1204; attB1 1292-1316; Pak5 1322-3478; attB2 3480-3505; YFP 3521-4240; Kan resistance 5471-6265													
restriction digests		NcoI 3020; 2043; 1809; 703													
													cloned gene		
gene alias ¹		K281													
gene name		Pak5													
synonyms		KIAA1264; p21-Activated kinase 5; PAK-5; Pak5; Serine/threonine-protein kinase PAK 5													
afcs id		A000829													
species		Mouse													
gene form ²		[N] No termination codon													
gene version		[A1] Full Length; wildtype													
version description															
RNAi target sequence															
source material		Brain cDNA													
strain		Balb/C													
output name insert		Pak5													
target orf v afcs orf															
orf source		Celera													
orf id		AfCS Assembled													
target orf		<view>													
afcs orf		<view>													
molecular weight		80950.5													
protein sequence		<view>													
													parent vector		
barcode		A05DFXBYFPNK													
atcc id		10326350													
construct name		pDS_EF1-XB-YFP													
vector type		D (Gateway destination vector)													
vector id		A05													
vector abbreviation		FXBYFP													
vector details		Mammalian Expression; EF1 promoter; C-terminal YFP; Minimal linker													
compatible gene form		N													
selection bacterial		Kanamycin													
selection mammalian		Neomycin													
vector sequence		<view>													
vector size		7067													
source vector		pDS_XB-YFP													
gateway specific information		rf cassette		B											
		rf insert sites		Ase I /Nhe I											
		linearization enzyme		Sca1											
notes															

1. Gene Alias: This is an arbitrary gene specific ID used by the AfCS to track all clones derived from the same ORF.

2. Gene Form: This allows us to differentiate between different clones derived from the same gene.

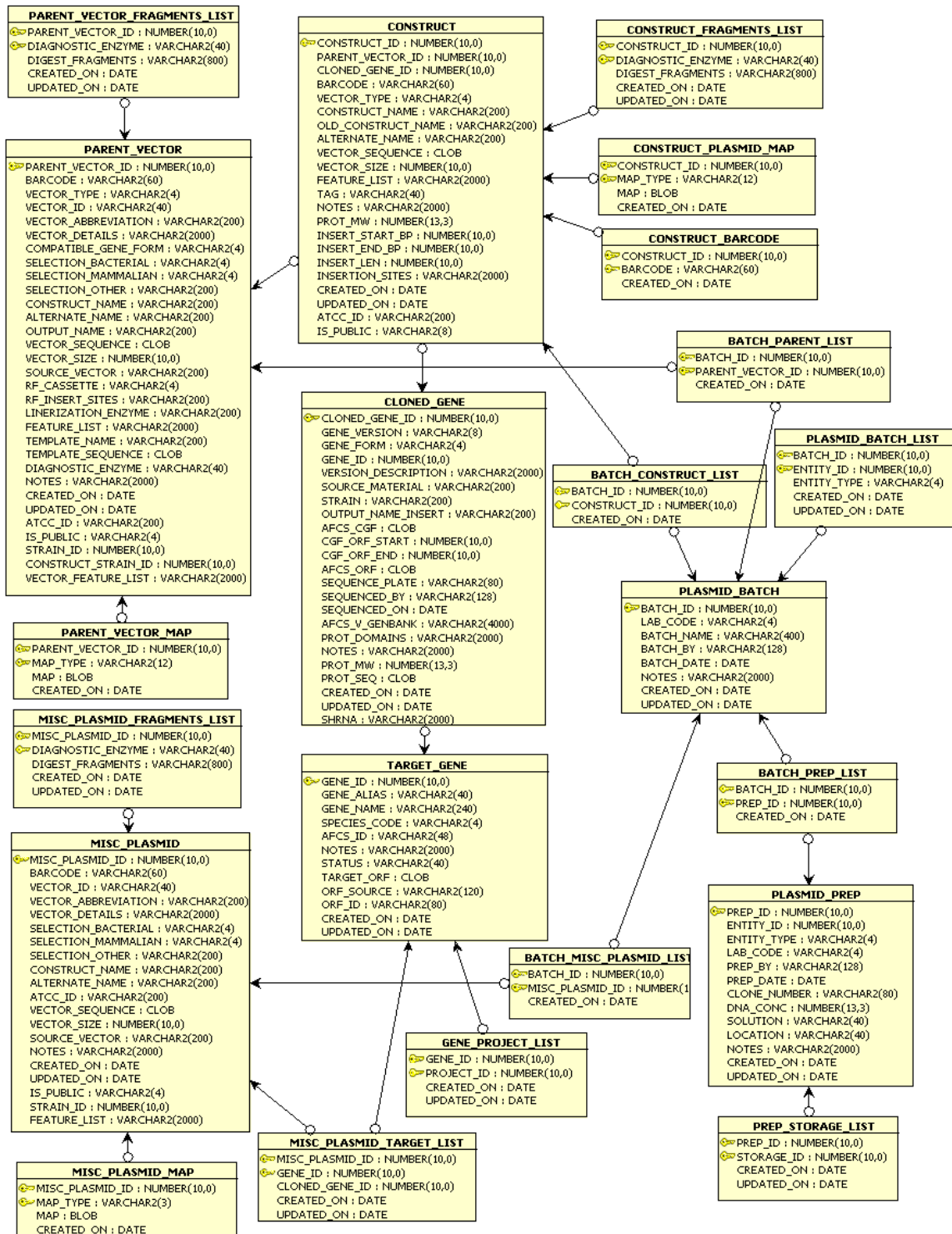
T: Clone contains a termination codon at the end of the targeted ORF and enables us to tag the protein at the N-terminus.

N: Clone does not contain a termination codon at the end of the targeted ORF and enables us to tag the protein at the C-terminus.

Supplementary Figure 2

The table structure of the AfCS plasmid database. Schematic representing the major database tables and their relationships. The five primary tables are 'parent_vector', 'target_gene', 'cloned_gene', 'construct' and 'misc_plasmid'. The various 'batch' tables are for collecting lists of 'parent_vector', 'cloned_gene', 'construct', or 'plasmid_prep' records together for common processing. The 'plasmid_prep' and 'prep_storage_list' contain information about samples created in the various AfCS laboratories and their storage locations. Note that various lookup tables are not displayed in this diagram.

Supplementary Figure 2



Supplementary Table 1

An example of cloning primer details for a subset of AfCS target genes (K050 to K059). Primers were generated using an 'in-house' Perl script (see methods) and vary in length to achieve a desired T_m of 70°C. The attB Gateway recombination sites are added prior to oligo synthesis. For 15 primers, note the presence of a consensus Kozak sequence (underlined) introduced upstream of the start codon. A total of 5 nucleotides are included to maintain the reading frame between the 5' end of the ORF and the attB1 site. Similarly, a single T nucleotide is included at the start of all T3 and NT3 primers to maintain reading frame between the 3' end of the ORF and the attB2 site.

Table 1

<u>Gene Name</u>	<u>NCBI GI number</u>	<u>AfCS ID</u>	<u>AfCS Gene Alias</u>	<u>Primer Name</u>	<u>Primer Sequence</u>
NLK	6679071	A001668	K050	STK050-I5	<u>CCACCATGGCGGCTTACAATGGCGGTACATCTGCA</u>
				STK050-T3	TTCACTCCCACACCAGAGGAGACGGCGG
				STK050-NT3	TCTCCCACACCAGAGGAGACGGCGGC
PKC β 2	6679344	A001921	K051	STK051-I5	<u>CCACCATGGCTGACCCGGCTGCGGGG</u>
				STK051-T3	TTTAGCTCTTGACTTCAGGTTTTAAAAATTCAGAGTTAACAAAGGAAAATCCTTCGA
				STK051-NT3	TGCTCTTGACTTCAGGTTTTAAAAATTCAGAGTTAACAAAGGAAAATCCTTCGA
PKC η	6679346	A001926	K052	STK052-I5	<u>CCACCATGTCGTCCGGCAGCATGAAGTTCAATGGC</u>
				STK052-T3	TCTACAGTTGCAATTCGGGTGACACATAGGAAAAGTTTCTAAACTCATCC
				STK052-NT3	TCAGTTGCAATTCGGGTGACACATAGGAAAAGTTTCTAAACTCATCC
PKC λ	6679348	A001929	K053	STK053-I5	<u>CCACCATGTCCCACACGGTCGCGTGCGG</u>
				STK053-T3	TTCAGACACACTCTTCTGCAGACATCAAGAGGGGGTTG
				STK053-NT3	TGACACACTCTTCTGCAGACATCAAGAGGGGGTTGATATACTCA
PKC μ 1	6679350	A001930	K054	STK054-I5	<u>CCACCATGAGCGTCCCTCCGCTGCTGCGA</u>
				STK054-T3	TTCAGAGGATGCTGACACGCTCACTGAGGGC
				STK054-NT3	TGAGGATGCTGACACGCTCACTGAGGGCTTTCA
PKC θ	6679352	A001933	K055	STK055-I5	<u>CCACCATGTACCCTTTCTTTCGAATCGGTTTATCCAACCTTTGACTG</u>
				STK055-T3	TTCAGGAGCAAATGAGAGTCTCCATCCCTGGGTTAATG
				STK055-NT3	TGGAGCAAATGAGAGTCTCCATCCCTGGGTTAATGAAGG
PKC ζ	6679354	A001934	K056	STK056-I5	<u>CCACCATGCCCAGCAGGACGGACCCCAAGATG</u>
				STK056-T3	TTCACACGGACTCCTCAGCAGACAGCAGAAGTGG
				STK056-NT3	TCACGGACTCCTCAGCAGACAGCAGAAGTGGG
Prkg2	6679466	A000044	K057	STK057-I5	<u>CCACCATGGGAAATGGTTTCAGTGAAGCCCAAGCATGC</u>
				STK057-T3	TTCAGAAGTCTTTATCCCAGCCTGACATTTTCATCCGGA
				STK057-NT3	TGAAGTCTTTATCCCAGCCTGACATTTTCATCCGGAGGC
Akt2	6680673	A000250	K058	STK058-I5	<u>CCACCATGAATGAGGTATCTGTTCATCAAAGAAGGCTGGCTCCACA</u>
				STK058-T3	TTCACTCTCGGATGCTGGCTGAGTAGGAGAACTGGG
				STK058-NT3	TCTCTCGGATGCTGGCTGAGTAGGAGAACTGGGG
Cdk5	6680907	A000609	K059	STK059-I5	<u>CCACCATGCAGAAATACGAGAACTGGAGAAGATTGGGGAAGGC</u>
				STK059-T3	TCTATGGGGACAGAAGTCAGAGAAGTAGGGGTGCTGC
				STK059-NT3	TTGGGGGACAGAAGTCAGAGAAGTAGGGGTGCTGC

Supplementary Table 2

An example of sequence primer details for a subset of AfCS target genes (K050 to K059).

Output of sequencing primers sequence for K050 to K059 as generated by a customized

Primer3 script (see methods). Gene-specific sequencing primers vary in length from 18- to 21-mers. Primers labeled as +1, +2, +3, etc. prime along the forward strand while those labeled as -1, -2, -3, etc. anneal to the reverse strand of the cloned gene. Primer position is relative to the ATG initiation codon.

<u>Gene Name</u>	<u>NCBI GI number</u>	<u>AfCS ID</u>	<u>AfCS Gene Alias</u>	<u>Primer Name</u>	<u>Primer Sequence</u>	<u>Primer position</u>
NLK	6679071	A001668	K050	STK050_+1	ATCCAAGAGATGGAAAGAGAG	433
				STK050_+2	AGTTACTCAGTATTACCGGGC	866
				STK050_-1	GATCAAAGACCAACATCCTG	1197
				STK050_-2	ACTCTGCATCAATTCTGTGAC	635
PKC β 2	6679344	A001921	K051	STK051_+1	TGTATGGACTTATTCACCAGG	364
				STK051_+2	GAAGTTTGAGAGAGCCAAGAT	908
				STK051_+3	CAGAGCAAGGGCATTATTTAC	1371
				STK051_-1	CATGATGACTGGAAGAGTTC	1661
				STK051_-2	AGAGTTCATCTGTACCCTTCC	1101
				STK051_-3	ATTCCACTCTGGATTGAGG	671
PKC η	6679346	A001926	K052	STK052_+1	GGTAATAACCCTAACAGGGAG	395
				STK052_+2	ATTTCTCCAACCTCGAAACT	945
				STK052_+3	CATGTTCTTACATGAGAAAGG	1400
				STK052_-1	AGTATGGCCTCAAAAAGGTC	1699
				STK052_-2	GTGCACTCTACATCATCATCC	1198
				STK052_-3	AGTGCAGGCTGTAACAATTAG	668
PKC λ	6679348	A001929	K053	STK053_+1	GGTGGAGAAAGCTGTATTGT	364
				STK053_+2	ACAGAGAAGCATGTGTTTGAG	870
				STK053_+3	AAAGCAGCAAGTGTACTGAAG	1431
				STK053_-1	CTCTGTGTTTTGGTCAGGAT	1370
				STK053_-2	CGAGCTCTTTCTTCACAAC	837
				STK053_-3	GAAAAGTGTGGCCATTG	402
PKC μ 1	6679350	A001930	K054	STK054_+1	AGGGTGATCTCATTGAAGTG	367
				STK054_+2	GATTGCAGATTCAACTGTCAC	924
				STK054_+3	CACTCTTCCAAAATGACACAG	1372
				STK054_+4	GAAAGTCAGCTTCGTAATGAG	1887
				STK054_+5	GTGGTACCTTCCCTTTTAATG	2350
				STK054_-1	GTACCACTCAGGCTCATATAG	2356
				STK054_-2	CGAAGCTGACTTTCTTGTTT	1900
				STK054_-3	CTGTGTCATTTTGGAAAGAGTG	1392
				STK054_-4	CACCTTCACCTTAGACATCAG	824
				STK054_-5	CTGGAAGTCTTCGAAGGTG	422

Gene Name	NCBI GI number	AfCS ID	AfCS Gene Alias	Primer Name	Primer Sequence	Primer position
PKC θ	6679352	A001933	K055	STK055_+1	AGGACATGAGTGAGTTTGAGA	385
				STK055_+2	CTCCTTACGAGATTCAGAACA	905
				STK055_+3	CGACTTAATGTACCACATCCA	1391
				STK055_+4	GAAGAGCTTGAAAGGAAAGAG	1917
				STK055_-1	AGCATCTCATAAACGAGCAC	1717
				STK055_-2	ATCCATCAACACCACATCTT	1256
				STK055_-3	TAGACTTGAATCTGTGTGGC	709
				STK055_-4	AGTAGAGTTCCACGGTTGTTT	270
PKC ζ	6679354	A001934	K056	STK056_+1	AAGATGGAGGAAGCTGTACC	359
				STK056_+2	GAGAAACATGTGTTTGAGCAG	897
				STK056_+3	CACTGAAGACTACCTTTTCCA	1382
				STK056_-1	TGGAAAAGGTAGTCTTCAGTG	1402
				STK056_-2	CTCCTTCTTTACCACCTTCAT	857
				STK056_-3	GTACGCTCCCCTGTAAA	428
Prkg2	6679466	A000044	K057	STK057_+1	AACCTATGACCTCAACAAACC	395
				STK057_+2	CTAACCAAGATCATTGACTGC	882
				STK057_+3	GAGTGGAGCTTGTTAAAGTGA	1396
				STK057_+4	GACATGACTTCAGTGTGGATT	1876
				STK057_-1	AGGAGCTCATAGACCAGAATC	1930
				STK057_-2	TCACTTAAACAAGCTCCACTC	1416
				STK057_-3	TAGTATCCACTTCCAAGCAG	919
				STK057_-4	GGTTTGTGAGGTCATAGGTT	415
Akt2	6680673	A000250	K058	STK058_+1	AGTGACTCTTCCACATCTGAG	381
				STK058_+2	GATCACTGACTTTGGCTTGT	869
				STK058_-1	GCCACACATCATCTCATACAT	1037
				STK058_-2	CAGGATCTTCATGGCATAAT	548
Cdk5	6680907	A000609	K059	STK059_+1	GTGCTACATAGGGACCTGAA	363
				STK059_-1	TGACCACCTCAGCAGAGTA	489

Supplementary Table 3

Details of AfCS parent vectors available from the ATCC. Both AfCS barcodes and ATCC IDs are shown for cross-reference.

Construct name	Construct barcode	ATCC ID	Parent vector details
pDS_GFP-XB	A26DCGFPXBTK	10326342	Mammalian Expression; CMV promoter; N-terminal GFP;
pDS_CFP-XB	A04DCCFPXBTK	10326343	Mammalian Expression; CMV promoter; N-terminal CFP;
pDS_YFP-XB	A03DCYFPXBTK	10326344	Mammalian Expression; CMV promoter; N-terminal YFP;
pDS_XB-GFP	A25DCXBGFPNK	10326345	Mammalian Expression; CMV promoter; C-terminal GFP;
pDS_XB-CFP	A02DCXBCFPNK	10326346	Mammalian Expression; CMV promoter; C-terminal CFP;
pDS_XB-YFP	A01DCXBYFPNK	10326347	Mammalian Expression; CMV promoter; C-terminal YFP;
pDS_EF1-GFP-XB	A28DFGFPXBTK	10326348	Mammalian Expression; EF1 promoter; N-terminal GFP;
pDS_EF1-XB-GFP	A27DFXBGFPNK	10326349	Mammalian Expression; EF1 promoter; C-terminal GFP;
pDS_EF1-XB-YFP	A05DFXBYFPNK	10326350	Mammalian Expression; EF1 promoter; C-terminal YFP;
pDS_EF1-YFP-XB	A08DFYFPXBTK	10326351	Mammalian Expression; EF1 promoter; N-terminal YFP;
pDS_EF1-CFP-XB	A07DFCFPXBTK	10326352	Mammalian Expression; EF1 promoter; N-terminal CFP;
pDS_EF1-XB-CFP	A06DFXBCFPNK	10326353	Mammalian Expression; EF1 promoter; C-terminal CFP;
pDS_FLAG-X	A38DCFLAGXTK	10326336	Mammalian Expression; CMV promoter; N-terminal Flag epitope;
pDS_X-FLAG	A37DCXFLAGNK	10326337	Mammalian Expression; CMV promoter; C-terminal Flag epitope;
pDS_HA-X	A40DC00HAXTK	10326338	Mammalian Expression; CMV promoter; N-terminal HA epitope;
pDS_X-HA	A39DC00XHANK	10326340	Mammalian Expression; CMV promoter; C-terminal HA epitope;
pDS_Myc-X	A42DC0MYCXTK	10326339	Mammalian Expression; CMV promoter; N-terminal Myc epitope;
pDS_X-Myc	A41DC0MYCNK	10326341	Mammalian Expression; CMV promoter; C-terminal Myc epitope;
pDS_MSCVmacs4-FTM-XB	A45DLMSCFXTA	10326354	Retroviral Mammalian Expression; mscv 5'LTR promoter; N-terminal Flag-TEV-Myc tag; Bicistronic CD4 expression
pDS_MSCVmacs4-XB-MTF	A52DLMSCXMNA	10326358	Retroviral Mammalian Expression; mscv 5'LTR promoter; C-terminal Myc-TEV-Flag tag; Bicistronic CD4 expression
pDS_MSCVmacs4-TAP-XB	A55DLMSCTXTA	10326361	Retroviral Mammalian Expression; mscv 5'LTR promoter; N-terminal TAP tag; Bicistronic CD4 expression
pDS_MSCVmacs4-XB-TAP	A49DLMSCXTNA	10326355	Retroviral Mammalian Expression; mscv 5'LTR promoter; C-terminal TAP tag; Bicistronic CD4 expression
pDS_LPCX-FTM-XB	A51DCLPCFXTA	10326357	Retroviral Mammalian Expression; CMV promoter; N-terminal Flag-TEV-Myc tag
pDS_LPCX-XB-MTF	A53DCLPCXMNA	10326359	Retroviral Mammalian Expression; CMV promoter; C-terminal Myc-TEV-Flag tag
pDS_LPCX-TAP-XB	A54DCLPCTXTA	10326360	Retroviral Mammalian Expression; CMV promoter; N-terminal TAP tag
pDS_LPCX-XB-TAP	A50DCLPCXTNA	10326356	Retroviral Mammalian Expression; CMV promoter; C-terminal TAP tag
pDS_MSCVIG-FTM-XB	A87DLMSGFXTA	10326365	Retroviral Mammalian Expression; mscv 5'LTR promoter; N-terminal Flag-TEV-Myc tag; Bicistronic eGFP expression
pDS_MSCVIG-XB-MTF	A89DLMSGXMNA	10326367	Retroviral Mammalian Expression; mscv 5'LTR promoter; C-terminal Myc-TEV-Flag tag; Bicistronic eGFP expression
pDS_MSCVIp-FTM-XB	A86DLMSPFXTA	10326364	Retroviral Mammalian Expression; mscv 5'LTR promoter; N-terminal Flag-TEV-Myc tag; Bicistronic puromycin expression
pDS_MSCVIp-XB-MTF	A88DLMSPMNA	10326366	Retroviral Mammalian Expression; mscv 5'LTR promoter; C-terminal Myc-TEV-Flag tag; Bicistronic puromycin expression

Supplementary Table 4

Details of AfCS cloned ORFs available from the ATCC. The Genbank accession number for each ORF is provided. ORF clones can be obtained from the ATCC by referencing the corresponding ATCC ID. Note that 'Target sequence ID' contains the Genbank identifier for the reference sequence used for cloning primer design.

<u>GenBank Accession</u>	<u>Gene Name</u>	<u>ORF size</u>	<u>AFCS ID</u>	<u>Protein category</u>	<u>ATCC ID</u>	<u>Species</u>	<u>Strain</u>	<u>Source material</u>	<u>Target sequence source</u>	<u>Target sequence ID (Genbank GI)</u>
EF043589	N-Ras	578	A000004	G protein, monomeric (non-Rab)	10627197	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7242161
EF043590	K-Ras	563	A000005	G protein, monomeric (non-Rab)	10627198	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13435531
EF043591	G protein beta 5	1187	A000018	G protein, heterotrimeric	10373546	Mouse	Balb/C	Brain+Testis cDNA	NCBI	16359360
EF043592	Arrestin2	1256	A000019	Adaptor/scaffold	10627209	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS assembled
EF043593	Rgs2	635	A000028	GTPase activating protein, RGS	10627320	Mouse	Balb/c	Brain+Testis cDNA	NCBI	31543585
EF043594	Galpha13	1133	A000029	G protein, heterotrimeric	10373467	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6754007
EF043595	C5a receptor	1055	A000037	Receptor, GPCR	10627813	Mouse	Balb/C	Spleen cDNA	NCBI	6680817
EF043596	Btk	1979	A000038	Protein kinase, tyrosine (non-receptor)	10373537	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7709993
EF043597	Galpha12	1139	A000039	G protein, heterotrimeric	10373466	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6754005
EF043598	Syk	1889	A000040	Protein kinase, tyrosine (non-receptor)	10373535	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755705
EF043599	Jik/TAO3	2696	A000042	Protein kinase, Ser/Thr (non-receptor)	10627766	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS Assembled
EF043600	cGMP-dependent protein kinase, type 2	2288	A000044	Protein kinase, Ser/Thr (non-receptor)	10374542	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679466
EF043601	Downstream of tyrosine kinase 4, dok4	977	A000053	Adaptor/scaffold	10627780	Mouse	Balb/c	Brain+Testis cDNA	NCBI	16716572
EF043602	Pak1	1631	A000070	Protein kinase, Ser/Thr (non-receptor)	10627822	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6754977
EF043603	Growth factor receptor-bound protein 7, GRB7	1607	A000071	Adaptor/scaffold	10627256	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6754065
EF043604	Rho GDI	614	A000076	Cytosolic, misc.	10374254	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12597248
EF043605	Tpl2/Cot	1403	A000092	Protein kinase, Ser/Thr (non-receptor)	10373429	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678797
EF043606	Rgs16	605	A000093	GTPase activating protein, RGS	10627331	Mouse	Balb/c	Brain+Testis cDNA	NCBI	1911240
EF043607	I kappa B alpha	944	A000097	Inhibitor protein	10373479	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1022733
EF043608	PDE4B3	2165	A000105	Phosphodiesterase	10373480	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9790150
EF043609	Casein kinase II alpha 2	1052	A000108	Protein kinase, Ser/Thr (non-receptor)	10373583	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753539
EF043610	Casein kinase II alpha 1	1175	A000109	Protein kinase, Ser/Thr (non-	10373695	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7106274

<u>GenBank Accession</u>	<u>Gene Name</u>	<u>ORF size</u>	<u>AFCS ID</u>	<u>Protein category</u>	<u>ATCC ID</u>	<u>Species</u>	<u>Strain</u>	<u>Source material</u>	<u>Target sequence source</u>	<u>Target sequence ID (Genbank GI)</u>
				receptor)						
EF043611	G protein alpha i3	1064	A000112	G protein, heterotrimeric	10373436	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12835822
EF043612	NCK	1133	A000113	Adaptor/scaffold	10374409	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2811257
EF043613	FKBP 12	326	A000115	Isomerase	10374401	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13435586
EF043614	Wasp	1562	A000118	Adaptor/scaffold	10627284	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678580
EF043615	GCRa	3173	A000119	Receptor, guanylyl cyclase	10627728	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679113
EF043616	RGS4	617	A000134	GTPase activating protein, RGS	10373454	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6677742
EF043617	Beta actin	1127	A000191	Cytoskeletal protein	10373495	Mouse	Balb/C	Brain+Testis cDNA	NCBI	49867
EF043618	ActR2a/ActR2	1541	A000203	Receptor, Ser/Thr kinase	10627911	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680631
EF043619	ActR2b	1538	A000204	Receptor, Ser/Thr kinase	10627621	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680633
EF043620	Akt1	1442	A000249	Protein kinase, Ser/Thr (non-receptor)	10373600	Mouse	Balb/C	Brain+Testis cDNA	NCBI	200641
EF043621	AKT	1442	A000249	Protein kinase, Ser/Thr (non-receptor)	10373451	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753033
EF043622	Akt2	1445	A000250	Protein kinase, Ser/Thr (non-receptor)	10373576	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680673
EF043623	Akt3	1439	A000251	Protein kinase, Ser/Thr (non-receptor)	10374289	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753031
EF043624	Alk1	1508	A000254	Receptor, Ser/Thr kinase	10627623	Mouse	Balb/C	Brain+Testis cDNA	NCBI	15679967
EF043625	Alk2	1529	A000255	Receptor, Ser/Thr kinase	10627624	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680627
EF043626	Alk3/BMPR1A	1598	A000256	Receptor, Ser/Thr kinase	10627626	Mouse	Balb/C	Brain+Testis cDNA	NCBI	577633
EF043627	Alk4	1517	A000257	Receptor, Ser/Thr kinase	10627913	Mouse	Balb/C	Brain+Testis cDNA	NCBI	25070246
EF043628	ALK7	1241	A000260	Receptor, Ser/Thr kinase	10627938	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043629	AmpKa1	1376	A000267	Protein kinase, Ser/Thr (non-receptor)	10627629	Mouse	Balb/C	Brain+Testis cDNA	NCBI	28481367
EF043630	Amp-Pk alpha2/AMPKa2	1658	A000268	Protein kinase, Ser/Thr (non-receptor)	10627945	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043631	MISR2	1706	A000283	Receptor, Ser/Thr kinase	10627940	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043632	Cytohesin 2	1202	A000330	Guanine nucleotide exchange factor, ARF	10627255	Mouse	Balb/c	Brain+Testis cDNA	NCBI	3885502
EF043633	Cytohesin 3	1199	A000332	Guanine nucleotide exchange factor, ARF	10627827	Mouse	Balb/c	Brain+Testis cDNA	NCBI	7242194
EF043634	General receptor for phosphoinositide 1	605	A000332	Guanine nucleotide exchange factor, ARF	10627808	Mouse	Balb/c	Brain+Testis cDNA	NCBI	13938145
EF043635	Arp3	1256	A000335	Cytoskeletal protein	10627172	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12835801
EF043636	M-Ras	626	A000348	G protein, monomeric (non-Rab)	10627233	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2209064
EF043637	Aurora1	1037	A000351	Protein kinase, Ser/Thr (non-receptor)	10373680	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2182131
EF043638	Aurora 2	1253	A000352	Protein kinase, Ser/Thr (non-receptor)	10627171	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2257983

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EF043639	Aurora 2	1187	A000352	Protein kinase, Ser/Thr (non-receptor)	10374291	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2979620
EF043640	Aur3	848	A000353	Protein kinase, Ser/Thr (non-receptor)	10374290	Mouse	Balb/C	Brain+Testis cDNA	NCBI	10181113
EF043641	Bad	614	A000358	Cytosolic, misc.	10627242	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6671609
EF043642	Bam32	842	A000361	Adaptor/scaffold	10627288	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6503079
EF043643	BLNK	1373	A000381	Adaptor/scaffold	10373540	Mouse	Balb/C	Brain+Testis cDNA	NCBI	3406752
EF043644	Calbindin	785	A000419	Calcium-binding protein	10373457	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753241
EF043645	Calcineurin A alpha subunit	1562	A000420	Protein phosphatase, Ser/Thr (non-receptor)	10627330	Mouse	Balb/c	Brain+Testis cDNA	NCBI	192347
EF043646	Calcineurin A gamma subunit	1541	A000422	Protein phosphatase, Ser/Thr (non-receptor)	10627318	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6679446
EF043647	Calmodulin1	446	A000452	Calcium-binding protein	10627333	Mouse	Balb/c	Brain+Testis cDNA	NCBI	34328486
EF043648	CaMK1a	1124	A000455	Protein kinase, Ser/Thr (non-receptor)	10627633	Mouse	Balb/C	Brain+Testis cDNA	NCBI	19527139
EF043649	Calmodulin-dependent protein kinase II alpha	1436	A000456	Protein kinase, Ser/Thr (non-receptor)	10373597	Mouse	Balb/C	Brain+Testis cDNA	NCBI	50416
EF043650	Calmodulin-dependent protein kinase II beta	1628	A000457	Protein kinase, Ser/Thr (non-receptor)	10373569	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6671659
EF043651	Calmodulin-dependent protein kinase II delta	1538	A000458	Protein kinase, Ser/Thr (non-receptor)	10374299	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12849627
EF043652	Calmodulin-dependent protein kinase III/EEF2K	2174	A000460	Protein kinase, Ser/Thr (non-receptor)	10627478	Mouse	Balb/C	Brain cDNA	NCBI	6681274
EF043653	CAM kinase IV	1409	A000461	Protein kinase, Ser/Thr (non-receptor)	10373658	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753251
EF043654	Calmodulin-dependent protein kinase kinase alpha	1517	A000462	Protein kinase, Ser/Thr (non-receptor)	10627868	Mouse	Balb/C	Brain cDNA	NCBI	9256524
EF043655	CAMKK2	1511	A000463	Protein kinase, Ser/Thr (non-receptor)	10627915	Mouse	Balb/C	Brain+Testis cDNA	NCBI	26336680
EF043656	Casein kinase I alpha	977	A000485	Protein kinase, Ser/Thr (non-receptor)	10627481	Mouse	Balb/C	Brain cDNA	NCBI	18043934
EF043657	Casein kinase I delta	1247	A000487	Protein kinase, Ser/Thr (non-receptor)	10627483	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043658	Casein kinase I epsilon	1250	A000488	Protein kinase, Ser/Thr (non-receptor)	10627517	Mouse	Balb/C	Brain cDNA	NCBI	7949024
EF043659	CK1g1	1268	A000489	Protein kinase, Ser/Thr (non-receptor)	10627916	Mouse	Balb/C	Brain+Testis cDNA	NCBI	27502356
EF043660	CK1g2	1247	A000490	Protein kinase, Ser/Thr (non-receptor)	10627929	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043661	Caveolin-1	536	A000519	Adaptor/scaffold	10373490	Mouse	Balb/C	Brain+Testis cDNA	NCBI	603660
EF043662	Caveolin-3	455	A000522	Adaptor/scaffold	10373505	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680851
EF043663	Cbl	2741	A000525	Adaptor/scaffold	10627213	Mouse	Balb/C	Spleen cDNA	NCBI	6680857
EF043664	GRP-1	515	A000529	Cytosolic, misc.	10373450	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680024
EF043665	p70 S6 kinase	1508	A000530	Protein kinase, Ser/Thr (non-receptor)	10373485	Mouse	Balb/C	Brain+Testis cDNA	NCBI	23512345

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EF043666	p85 S6 kinase	1577	A000530	Protein kinase, Ser/Thr (non-receptor)	10373486	Mouse	Balb/C	Brain+Testis cDNA	NCBI	23512345
EF043667	CD19	1643	A000538	Cell surface, misc.	10374252	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753337
EF043668	CD22	2606	A000542	Cell surface, misc.	10627793	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753339
EF043669	CD32	881	A000556	Cell surface, misc.	10627219	Mouse	Balb/C	Spleen cDNA	NCBI	6857782
EF043670	CD44	2384	A000566	Cell surface, misc.	10627165	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6491803
EF043671	CD79a	662	A000586	Immunoglobulin superfamily	10374296	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680891
EF043672	CD79b	686	A000587	Immunoglobulin superfamily	10373446	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680374
EF043673	CD81	710	A000591	Cell surface, misc.	10374298	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1679982
EF043674	Cdc2 kinase	893	A000604	Protein kinase, Ser/Thr (non-receptor)	10374300	Mouse	Balb/C	Brain+Testis cDNA	NCBI	192533
EF043675	Cdk2	1040	A000606	Protein kinase, Ser/Thr (non-receptor)	10373604	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2832436
EF043676	Cdk4	911	A000608	Protein kinase, Ser/Thr (non-receptor)	10374398	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753379
EF043677	Cdk5	878	A000609	Protein kinase, Ser/Thr (non-receptor)	10374302	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680907
EF043678	Cdk6	980	A000610	Protein kinase, Ser/Thr (non-receptor)	10373566	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5453258
EF043679	Cdk7	1040	A000611	Protein kinase, Ser/Thr (non-receptor)	10374303	Mouse	Balb/C	Brain+Testis cDNA	NCBI	562023
EF043680	Ched	1257	A000621	Protein kinase, Ser/Thr (non-receptor)	10627515	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043681	Chemokine receptor CXCR4	1079	A000636	Receptor, GPCR	10627210	Mouse	Balb/C	Spleen cDNA	NCBI	6753459
EF043682	Chemokine receptor CXCR5	1124	A000637	Receptor, GPCR	10373433	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680789
EF043683	Chk1	1430	A000642	Protein kinase, Ser/Thr (non-receptor)	10374271	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2367670
EF043684	Chk2	1640	A000643	Protein kinase, Ser/Thr (non-receptor)	10374305	Mouse	Balb/C	Brain+Testis cDNA	NCBI	3982841
EF043685	Stk23	1484	A000662	Cytosolic, misc.	10373606	Mouse	Balb/C	Brain+Testis cDNA	NCBI	3599506
EF043686	Clk1	1448	A000665	Protein kinase, dual-specificity	10627276	Mouse	Balb/C	Brain+Testis cDNA	NCBI	50439
EF043687	Clk2	1499	A000666	Protein kinase, dual-specificity	10373560	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2645851
EF043688	Clk3	1472	A000667	Protein kinase, dual-specificity	10374399	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2645853
EF043689	Clk4	1442	A000668	Protein kinase, dual-specificity	10627180	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2645855
EF043690	Syntrophin basic 2, SNTB2	1562	A000691	Dystrophin complex	10627781	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6678058
EF043691	Csk	1352	A000701	Protein kinase, tyrosine (non-receptor)	10373430	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6681052
EF043692	DAGk-alpha	2192	A000764	Kinase, lipid	10373523	Mouse	Balb/C	Brain+Testis cDNA	NCBI	3493665
EF043693	DAGk-beta	2387	A000765	Kinase, lipid	10374400	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS Assembled
EF043694	Drak2	1118	A000791	Protein kinase, Ser/Thr (non-receptor)	10373642	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13879223

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EF043695	Prkr/Pkr	1547	A000792	Protein kinase, Ser/Thr	10627501	Mouse	Balb/C	Brain cDNA	NCBI	6755159
EF043696	Dyrk2	1580	A000798	Protein kinase, dual-specificity	10627485	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043697	Dyrk3	1760	A000799	Protein kinase, dual-specificity	10373644	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13879450
EF043698	Pak5	2159	A000829	Protein kinase, Ser/Thr (non-receptor)	10627872	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043699	Erk1	1139	A000874	Protein kinase, Ser/Thr (non-receptor)	10374308	Mouse	Balb/C	Brain+Testis cDNA	NCBI	50858
EF043700	Erk2	1070	A000875	Protein kinase, Ser/Thr (non-receptor)	10373674	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6754631
EF043701	Erk5	2213	A000879	Protein kinase, Ser/Thr (non-receptor)	10374272	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5081464
EF043702	Erk5	2420	A000879	Protein kinase, Ser/Thr (non-receptor)	10374310	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5360520
EF043703	Ezrin	1760	A000892	Cytoskeletal protein	10373459	Mouse	Balb/C	Brain+Testis cDNA	NCBI	50880
EF043704	FAK	3206	A000900	Protein kinase, tyrosine (non-receptor)	10373470	Mouse	Balb/C	Brain+Testis cDNA	NCBI	193223
EF043705	faciogenital dysplasia protein 1A	2882	A000912	Guanine nucleotide exchange factor, Rac/Rho	10627308	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6679774
EF043706	faciogenital dysplasia protein 1B	1193	A000912	Guanine nucleotide exchange factor, Rac/Rho	10627259	Mouse	Balb/c	Brain+Testis cDNA	NCBI	15079253
EF043707	Fkhr2	2015	A000945	Transcription factor	10627228	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5348331
EF043708	Fyn	1613	A000969	Protein kinase, tyrosine (non-receptor)	10627192	Mouse	Balb/C	Brain+Testis cDNA	NCBI	193357
EF043709	Galpha11	1079	A000970	G protein, heterotrimeric	10373483	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6754003
EF043710	Galpha i1	1064	A000974	G protein, heterotrimeric	10373455	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS Assembled
EF043711	Galpha i2	1067	A000975	G protein, heterotrimeric	10373488	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680036
EF043712	G protein alpha q	1079	A000978	G protein, heterotrimeric	10373544	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680038
EF043713	G protein beta 1	1022	A000982	G protein, heterotrimeric	10373440	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680044
EF043714	G protein beta 2	1022	A000983	G protein, heterotrimeric	10373438	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13937390
EF043715	G protein beta 3	1022	A000984	G protein, heterotrimeric	10373443	Mouse	Balb/C	Brain+Testis cDNA	NCBI	11138000
EF043716	G protein beta 4	1022	A000985	G protein, heterotrimeric	10373441	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7305090
EF043717	G protein gamma 10	206	A000987	G protein, heterotrimeric	10627223	Mouse	Balb/C	Brain+Testis+Spleen cDNA	NCBI	12851842
EF043718	G protein gamma 11	221	A000988	G protein, heterotrimeric	10627236	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS assembled
EF043719	G protein gamma 2	215	A000991	G protein, heterotrimeric	10627252	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6754019
EF043720	G protein gamma 3	227	A000992	G protein, heterotrimeric	10627250	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6754021
EF043721	G protein gamma 4	227	A000993	G protein, heterotrimeric	10627251	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6754023
EF043722	G protein gamma 5	206	A000994	G protein, heterotrimeric	10627238	Mouse	Balb/C	Spleen cDNA	NCBI	12805664
EF043723	G protein gamma 7	206	A000995	G protein, heterotrimeric	10627247	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS assembled

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EF043724	G protein gamma 8	212	A000996	G protein, heterotrimeric	10627246	Mouse	Balb/C	Spleen cDNA	NCBI	6164868
EF043725	Gads	968	A001021	Adaptor/scaffold	10627196	Mouse	Balb/C	Brain+Testis cDNA	NCBI	3387866
EF043726	Ras GTPase-activating protein 3, RASA3	2504	A001026	GTPase activating protein, Ras	10627328	Mouse	Balb/c	Spleen cDNA	NCBI	7110712
EF043727	Germinal center kinase/GCK	2465	A001037	Protein kinase, Ser/Thr (non-receptor)	10374260	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678799
EF043728	Emk/MARK2	2168	A001086	Protein kinase, Ser/Thr (non-receptor)	10627201	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679642
EF043729	Grb2	653	A001088	Adaptor/scaffold	10374242	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680082
EF043730	Grk2	2069	A001094	Protein kinase, Ser/Thr (non-receptor)	10373594	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13398447
EF043731	Grk5	1772	A001097	Protein kinase, Ser/Thr (non-receptor)	10373701	Mouse	Balb/C	Brain+Testis cDNA	NCBI	3005010
EF043732	Grk6	1730	A001098	Protein kinase, Ser/Thr (non-receptor)	10373682	Mouse	Balb/C	Brain+Testis cDNA	NCBI	3319972
EF043733	Gsk3 beta	1262	A001106	Protein kinase, Ser/Thr (non-receptor)	10373592	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9790076
EF043734	Pak6	2048	A001114	Protein kinase, Ser/Thr (non-receptor)	10627498	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043735	Hipk1	2159	A001122	Protein kinase, Ser/Thr (non-receptor)	10373694	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5305332
EF043736	HIPK2	3506	A001123	Protein kinase, Ser/Thr (non-receptor)	10627187	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12751414
EF043737	Hpk1	2483	A001144	Protein kinase, Ser/Thr (non-receptor)	10627278	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1654011
EF043738	Hri	1859	A001145	Protein kinase, Ser/Thr (non-receptor)	10627512	Mouse	Balb/C	Brain cDNA	NCBI	7305014
EF043739	IkappaB-beta	1079	A001166	Inhibitor protein	10374253	Mouse	Balb/C	Brain+Testis cDNA	NCBI	699496
EF043740	IkappaB-gamma	1823	A001168	Inhibitor protein	10627229	Mouse	Balb/C	Brain+Testis cDNA	NCBI	247616
EF043741	IKKalpha	2237	A001170	Protein kinase, Ser/Thr (non-receptor)	10627232	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680941
EF043742	IKKbeta	2216	A001172	Protein kinase, Ser/Thr (non-receptor)	10627799	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5814088
EF043743	Ikk	1358	A001173	Protein kinase, Ser/Thr (non-receptor)	10627487	Mouse	Balb/C	Brain cDNA	NCBI	6754341
EF043744	Inositol 4-phosphatase type I	2768	A001185	Phosphatase (non-protein)	10627290	Mouse	Balb/c	Brain+Testis cDNA	NCBI	11875783
EF043745	In(5)-phos type II	2330	A001188	Phosphatase (non-protein)	10373521	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9945301
EF043746	Integrin alpha 4	3098	A001203	Adhesin/agglutinin	10627244	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7110656
EF043747	Integrin beta 7	2420	A001218	Adhesin/agglutinin	10627239	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7305192
EF043748	Integrin beta 1	2396	A001220	Adhesin/agglutinin	10627190	Mouse	Balb/C	Brain+Testis cDNA	NCBI	52721
EF043749	Irak1	2036	A001277	Protein kinase, Ser/Thr (non-receptor)	10627765	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680418
EF043750	IRAK2	1868	A001278	Protein kinase, Ser/Thr (non-receptor)	10627749	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	

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EF043751	JAK1	3461	A001290	Protein kinase, tyrosine (non-receptor)	10373473	Mouse	Balb/C	Brain+Testis cDNA	NCBI	399694
EF043752	Jip2	2492	A001294	Inhibitor protein	10627802	Mouse	Balb/C	Brain+Testis cDNA	NCBI	11139691
EF043753	Jip3	1853	A001295	Inhibitor protein	10374314	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5051880
EF043754	Jnk1	1154	A001296	Protein kinase, Ser/Thr (non-receptor)	10373662	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6141550
EF043755	Jnk2	1271	A001297	Protein kinase, Ser/Thr (non-receptor)	10374315	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4558392
EF043756	Jnk3	1268	A001298	Protein kinase, Ser/Thr (non-receptor)	10373649	Mouse	Balb/C	Brain+Testis cDNA	NCBI	529433
EF043757	Kkialre/CDKL1	1058	A001345	Protein kinase, Ser/Thr (non-receptor)	10627490	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043758	Stk4/MST1	1463	A001348	Protein kinase, Ser/Thr (non-receptor)	10627776	Mouse	Balb/C	Brain cDNA	NCBI	12328813
EF043759	Ksr1	2621	A001349	Adaptor/scaffold	10627492	Mouse	Balb/C	Brain cDNA	NCBI	7305214
EF043760	Lck	1529	A001394	Protein kinase, tyrosine (non-receptor)	10627216	Mouse	Balb/C	Spleen cDNA	NCBI	198763
EF043761	Lymphoid blast crisis-like 1, Lfc	1721	A001404	Guanine nucleotide exchange factor, Rac/Rho	10627810	Mouse	Balb/c	Brain+Testis cDNA	NCBI	902022
EF043762	Lfc	2957	A001404	Guanine nucleotide exchange factor, Rac/Rho	10627828	Mouse	Balb/c	Brain+Testis cDNA	NCBI	5917695
EF043763	Limk2	1916	A001408	Protein kinase, Ser/Thr (non-receptor)	10627513	Mouse	Balb/C	Brain cDNA	NCBI	2801408
EF043764	Lnk	1643	A001413	Adaptor/scaffold	10627806	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6678705
EF043765	Stk10/Lok	2900	A001414	Protein kinase, Ser/Thr (non-receptor)	10627301	Mouse	Balb/c	Brain+Testis cDNA	NCBI	2723474
EF043766	PA-phosphatase	854	A001416	Phosphatase (non-protein)	10373527	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1487872
EF043767	Lyn	1538	A001441	Protein kinase, tyrosine (non-receptor)	10373539	Mouse	Balb/C	Brain+Testis cDNA	NCBI	198940
EF043768	Mapkap kinase 3	1154	A001455	Protein kinase, Ser/Thr (non-receptor)	10627871	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043769	Mask/MST4	1250	A001457	Protein kinase, Ser/Thr (non-receptor)	10373640	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13543060
EF043770	Mek1	1181	A001505	Protein kinase, dual-specificity	10373672	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678793
EF043771	Mek2	1205	A001506	Protein kinase, dual-specificity	10373664	Mouse	Balb/C	Brain+Testis cDNA	NCBI	545202
EF043772	Mek3	944	A001507	Protein kinase, dual-specificity	10374318	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1771302
EF043773	Mek3	1043	A001507	Protein kinase, dual-specificity	10373633	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12846828
EF043774	Mek4	1190	A001508	Protein kinase, dual-specificity	10627176	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1754530
EF043775	Mek5	1346	A001509	Protein kinase, dual-specificity	10374250	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6754623
EF043776	Mek6	1004	A001510	Protein kinase, dual-specificity	10627199	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1495701
EF043777	Mek7	1175	A001511	Protein kinase, dual-specificity	10627787	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2462788
EF043778	Mek7	1040	A001511	Protein kinase, dual-specificity	10373681	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2462788
EF043779	Mek7	1406	A001511	Protein kinase, dual-specificity	10627184	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2789435

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EF043780	Mek7	1358	A001511	Protein kinase, dual-specificity	10374321	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4321767
EF043781	Mek7	1259	A001511	Protein kinase, dual-specificity	10373686	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4321769
EF043782	Mek7	1139	A001511	Protein kinase, dual-specificity	10373688	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4321771
EF043783	Mek7	1358	A001511	Protein kinase, dual-specificity	10374322	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4321771
EF043784	Mekk2	1859	A001513	Protein kinase, Ser/Thr (non-receptor)	10627302	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6754627
EF043785	Mekk3	1880	A001514	Protein kinase, Ser/Thr (non-receptor)	10627182	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1223901
EF043786	MLK1	1826	A001549	Protein kinase, Ser/Thr (non-receptor)	10627730	Mouse	Balb/C	Brain+Testis cDNA	NCBI	26343790
EF043787	MLK2	2303	A001550	Protein kinase, Ser/Thr (non-receptor)	10627731	Mouse	Balb/C	Brain+Testis cDNA	NCBI	28477843
EF043788	MLK2	2303	A001550	Protein kinase, Ser/Thr (non-receptor)	10627935	Mouse	Balb/C	Brain+Testis cDNA	NCBI	28477843
EF043789	Mlk3	2552	A001551	Protein kinase, Ser/Thr (non-receptor)	10627944	Mouse	Balb/C	Brain cDNA	NCBI	11528493
EF043790	Mnk1	1247	A001554	Protein kinase, Ser/Thr (non-receptor)	10373556	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1929058
EF043791	Mnk2	1238	A001555	Protein kinase, Ser/Thr (non-receptor)	10374408	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1929060
EF043792	Msk2	2321	A001563	Protein kinase, Ser/Thr (non-receptor)	10374323	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9910453
EF043793	T2k/TBK1	2189	A001597	Protein kinase, Ser/Thr (non-receptor)	10627877	Mouse	Balb/C	Brain cDNA	NCBI	4960037
EF043794	NAK/TBK1	2189	A001597	Protein kinase, Ser/Thr (non-receptor)	10627769	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS Assembled
EF043795	Nek2	1331	A001625	Protein kinase, dual-specificity	10374325	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6754817
EF043796	Nek3	1529	A001626	Protein kinase, dual-specificity	10373690	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4454838
EF043797	Nek4	2231	A001627	Protein kinase, dual-specificity	10627788	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2879821
EF043798	Nek4	2378	A001627	Protein kinase, dual-specificity	10373668	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4323325
EF043799	Neuroepithelial cell transforming gene 1, Net1 guanine nucle	1625	A001630	Guanine nucleotide exchange factor, Rac/Rho	10627826	Mouse	Balb/c	Brain+Testis cDNA	NCBI	13435656
EF043800	NFkappaB p65	1649	A001645	Transcription factor	10627191	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6677708
EF043801	Map4k4/NIK	3440	A001653	Protein kinase, Ser/Thr (non-receptor)	10627819	Mouse	Balb/c	Brain+Testis cDNA	NCBI	1872545
EF043802	NO synthase 3	3608	A001660	Oxidoreductase	10373462	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679089
EF043803	NLK	1547	A001668	Protein kinase, Ser/Thr (non-receptor)	10373571	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679071
EF043804	p38 alpha Map kinase	1082	A001717	Protein kinase, Ser/Thr (non-receptor)	10374424	Mouse	Balb/C	Brain+Testis cDNA	NCBI	10092598
EF043805	p38 delta Map kinase	1100	A001719	Protein kinase, Ser/Thr (non-receptor)	10373666	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4099017
EF043806	p38 gamma Map kinase	1100	A001720	Protein kinase, Ser/Thr (non-receptor)	10627185	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7305252

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EF043807	Paf receptor	1025	A001728	Receptor, GPCR	10627298	Mouse	Balb/C	Plasmid template	NCBI	1256924
EF043808	Pak3	1634	A001729	Protein kinase, Ser/Thr (non-receptor)	10373554	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1079713
EF043809	Pak4	1781	A001730	Protein kinase, Ser/Thr (non-receptor)	10627495	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043810	PCTAIRE1	1490	A001737	Protein kinase, Ser/Thr (non-receptor)	10374262	Mouse	Balb/C	Brain+Testis cDNA	NCBI	53610
EF043811	PCTAIRE2	1571	A001738	Protein kinase, Ser/Thr (non-receptor)	10627500	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043812	PCTAIRE3	1355	A001739	Protein kinase, Ser/Thr (non-receptor)	10373551	Mouse	Balb/C	Brain+Testis cDNA	NCBI	53612
EF043813	Pdpk1/PDK1	1679	A001740	Protein kinase, Ser/Thr (non-receptor)	10373692	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5052327
EF043814	PI-TP alpha	815	A001744	Transporter, facilitator	10373514	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2121247
EF043815	PI-TP beta	815	A001745	Transporter, facilitator	10373516	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9790158
EF043816	Phosphoinositide 3-kinase p101 class Ib regulatory subunit	2615	A001767	Kinase, lipid	10627816	Mouse	Balb/C	Spleen cDNA	Celera	AfCS assembled
EF043817	PI3K-p110alpha	3206	A001768	Kinase, lipid	10373550	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679316
EF043818	Phosphoinositide 3-kinase p110 beta, class Ia catalytic subu	3194	A001769	Kinase, lipid	10627194	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS assembled
EF043819	PI3K-p110delta	3134	A001770	Kinase, lipid	10374329	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679318
EF043820	PI3K-p110delta	3143	A001770	Kinase, lipid	10374330	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679318
EF043821	PI3K-p110gamma	3308	A001771	Kinase, lipid	10374413	Mouse	Balb/C	Brain+Testis cDNA	NCBI	11890407
EF043822	Phosphoinositide 3-kinase p50 alpha regulatory subunit	1274	A001772	Kinase, lipid	10627230	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS assembled
EF043823	Phosphoinositide 3-kinase p55 gamma regulatory subunit	1385	A001774	Kinase, lipid	10627195	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1050992
EF043824	Phosphoinositide 3-kinase p85 alpha regulatory subunit	2174	A001775	Kinase, lipid	10373425	Mouse	Balb/C	Brain+Testis cDNA	NCBI	200211
EF043825	PI3K-p85beta	2168	A001776	Kinase, lipid	10373513	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2181944
EF043826	Phosphoinositide 4-kinase type III alpha (230K)	3119	A001777	Kinase, lipid	10627286	Mouse	Balb/c	Spleen cDNA	Celera	AfCS assembled
EF043827	Phosphoinositide 4-kinase type III beta	2450	A001778	Kinase, lipid	10627289	Mouse	Balb/c	Brain+Testis cDNA	Celera	AfCS assembled
EF043828	PI(4)P5-K alpha	1619	A001780	Kinase, lipid	10374327	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679328
EF043829	PI(4)P5-K beta	1643	A001781	Kinase, lipid	10373519	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679330
EF043830	PI(4)P5-K gamma	1985	A001782	Kinase, lipid	10374208	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679322
EF043831	Phosphoinositide 5-phosphate 4-kinase type II-alpha	1217	A001783	Kinase, lipid	10627796	Mouse	Balb/C	Spleen cDNA	NCBI	6679324
EF043832	Phosphoinositide 5-phosphate 4-kinase type II-beta	1112	A001784	Kinase, lipid	10627234	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS assembled
EF043833	Phosphoinositide 5-phosphate 4-kinase type II-gamma	1265	A001785	Kinase, lipid	10374333	Mouse	Balb/C	Brain+Testis cDNA	NCBI	17298685
EF043834	PLA2-II-c	452	A001790	Phospholipase	10373529	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679366

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EF043835	Phospholipase A2 group V	410	A001798	Phospholipase	10627334	Mouse	Balb/c	Brain+Testis cDNA	NCBI	34328181
EF043836	PLA2-VI-a	2258	A001801	Phospholipase	10374209	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6842054
EF043837	Phospholipase C-beta1	3521	A001803	Phospholipase	10627226	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9845288
EF043838	PLC-delta1	2270	A001807	Phospholipase	10373580	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4894787
EF043839	Phospholipase C-gamma1	3872	A001809	Phospholipase	10627224	Mouse	Balb/C	Brain+Testis cDNA	Celera	AfCS assembled
EF043840	PLD-2	2801	A001812	Phospholipase	10373549	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679378
EF043841	Phosphorylase kinase gamma, testis subunit/Phkg2	1220	A001816	Protein kinase, Ser/Thr (non-receptor)	10373632	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12837720
EF043842	Pim1	941	A001822	Protein kinase, Ser/Thr (non-receptor)	10373591	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9506972
EF043843	Pim2	935	A001823	Protein kinase, Ser/Thr (non-receptor)	10374415	Mouse	Balb/C	Brain+Testis cDNA	NCBI	765065
EF043844	Pim3	980	A001824	Protein kinase, Ser/Thr (non-receptor)	10627777	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043845	Plk-1	1811	A001847	Protein kinase, Ser/Thr (non-receptor)	10373645	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13905175
EF043846	Plk-2	2048	A001848	Protein kinase, Ser/Thr (non-receptor)	10374211	Mouse	Balb/C	Brain+Testis cDNA	NCBI	200999
EF043847	PRAK/MAPKAP5	1415	A001892	Protein kinase, Ser/Thr (non-receptor)	10627169	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2911812
EF043848	Prk2	2234	A001897	Protein kinase, Ser/Thr (non-receptor)	10627734	Mouse	Balb/C	Brain+Testis cDNA	NCBI	25060554
EF043849	PKA Calpha	1055	A001914	Protein kinase, Ser/Thr (non-receptor)	10374213	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7110692
EF043850	Protein kinase A catalytic subunit beta	1055	A001915	Protein kinase, Ser/Thr (non-receptor)	10373586	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755075
EF043851	PKA RIalpha	1208	A001918	Protein kinase, Ser/Thr (non-receptor)	10373464	Mouse	Balb/C	Brain+Testis cDNA	NCBI	200356
EF043852	Protein kinase C alpha	2018	A001919	Protein kinase, Ser/Thr (non-receptor)	10374543	Mouse	Balb/C	Brain+Testis cDNA	NCBI	200362
EF043853	Protein kinase C beta2	2021	A001921	Protein kinase, Ser/Thr (non-receptor)	10374261	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679344
EF043854	Protein kinase C delta1	2024	A001922	Protein kinase, Ser/Thr (non-receptor)	10627784	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4115529
EF043855	Protein kinase C epsilon	2213	A001925	Protein kinase, Ser/Thr (non-receptor)	10627200	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755083
EF043856	Protein kinase C eta	2051	A001926	Protein kinase, Ser/Thr (non-receptor)	10627279	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679346
EF043857	Protein kinase C gamma1	2093	A001927	Protein kinase, Ser/Thr (non-receptor)	10373588	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755079
EF043858	Protein kinase C lambda	1760	A001929	Protein kinase, Ser/Thr (non-receptor)	10373574	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679348
EF043859	Protein kinase C mu1	2756	A001930	Protein kinase, Ser/Thr (non-receptor)	10627329	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6679350
EF043860	Protein kinase C zeta	1778	A001934	Protein kinase, Ser/Thr (non-receptor)	10627173	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679354

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EF043861	PKC-zeta	1778	A001934	Protein kinase, Ser/Thr (non-receptor)	10373661	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679354
EF043862	PTEN	1211	A001941	Phosphatase, lipid	10373526	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6679522
EF043863	Rac1	578	A002001	G protein, monomeric (non-Rab)	10374416	Mouse	Balb/C	Brain+Testis cDNA	NCBI	53885
EF043864	Rac3	578	A002003	G protein, monomeric (non-Rab)	10373448	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13516843
EF043865	Raf1	1946	A002008	Protein kinase, Ser/Thr (non-receptor)	10627874	Mouse	Balb/C	Brain cDNA	NCBI	18497289
EF043866	RAS guanine nucleotide releasing factor GRF beta, Rasgrf1B	536	A002032	Guanine nucleotide exchange factor, Ras	10627274	Mouse	Balb/c	Brain+Testis cDNA	NCBI	5917695
EF043867	Rgs1	590	A002040	GTPase activating protein, RGS	10627332	Mouse	Balb/c	Spleen cDNA	NCBI	7657511
EF043868	RhoA	581	A002062	G protein, monomeric (non-Rab)	10373510	Mouse	Balb/C	Brain+Testis cDNA	NCBI	5815441
EF043869	RhoB	590	A002064	G protein, monomeric (non-Rab)	10374337	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1491740
EF043870	RhoC	581	A002065	G protein, monomeric (non-Rab)	10374338	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6680727
EF043871	Human RhoC	581	A002065	G protein, monomeric (non-Rab)	10373547	Human	Balb/C	Brain+Testis cDNA	NCBI	407698
EF043872	RIPK2	1619	A002083	Protein kinase, Ser/Thr (non-receptor)	10627503	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043873	Rsk1	2207	A002099	Protein kinase, Ser/Thr (non-receptor)	10627277	Mouse	Balb/C	Brain+Testis cDNA	NCBI	556321
EF043874	Rsk2	1457	A002100	Protein kinase, Ser/Thr (non-receptor)	10627186	Mouse	Balb/C	Brain+Testis cDNA	NCBI	10946893
EF043875	Rsk 3	2201	A002101	Protein kinase, Ser/Thr (non-receptor)	10374417	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755373
EF043876	Sgk/Sgk1	1295	A002148	Protein kinase, Ser/Thr (non-receptor)	10373589	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755489
EF043877	Sh2-B ph domain containing signaling mediator 1, Sh2-B	2012	A002149	Adaptor/scaffold	10627817	Mouse	Balb/c	Brain+Testis cDNA	NCBI	3493523
EF043878	SHP-2	1793	A002157	Protein phosphatase, tyrosine (non-receptor)	10627801	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755227
EF043879	SHP-2	1781	A002157	Protein phosphatase, tyrosine (non-receptor)	10627815	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755227
EF043880	SRC-associated adaptor protein, SCAP2	1076	A002165	Adaptor/scaffold	10627818	Mouse	Balb/c	Brain+Testis cDNA	NCBI	13277601
EF043881	Smad2	1403	A002174	Transcription; coactivator/corepressor	10374419	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6754605
EF043882	Somatostatin R	1175	A002204	Receptor, GPCR	10373533	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678036
EF043883	Stat3	2312	A002232	Transcription factor	10373478	Mouse	Balb/C	Brain+Testis cDNA	NCBI	458705
EF043884	Syntrophin, Beta1, SNTB1	1613	A002246	Dystrophin complex	10627322	Mouse	Balb/c	Brain+Testis cDNA	NCBI	7710095
EF043885	TGFbR1	1511	A002272	Receptor, misc.	10627671	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678322
EF043886	TGFbR2	1703	A002273	Receptor, Ser/Thr kinase	10627924	Mouse	Balb/C	Brain+Testis cDNA	NCBI	27363475
EF043887	TOR	1550	A002302	Receptor, nuclear (transcription factor)	10627215	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1145628
EF043888	Trad	2018	A002305	Protein kinase, Ser/Thr (non-receptor)	10627737	Mouse	Balb/C	Brain+Testis cDNA	NCBI	26353809

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EF043889	Trad	701	A002305	Protein kinase, Ser/Thr (non-receptor)	10627674	Mouse	Balb/C	Brain+Testis cDNA	NCBI	28493858
EF043890	Alpha1 tubulin	1355	A002335	Cytoskeletal protein	10374256	Mouse	Balb/C	Brain+Testis cDNA	NCBI	202207
EF043891	Gamma tubulin	1355	A002344	Cytoskeletal protein	10373492	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13879227
EF043892	Vav2	2519	A002361	Guanine nucleotide exchange factor, Rac/Rho	10627214	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678554
EF043893	Vav3	2543	A002362	Guanine nucleotide exchange factor, Rac/Rho	10627206	Mouse	Balb/C	Brain+Testis cDNA	NCBI	10048435
EF043894	Vimentin	1400	A002365	Cytoskeletal protein	10373494	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755974
EF043895	Zip/Dapk3	1346	A002398	Protein kinase, Ser/Thr (non-receptor)	10373562	Mouse	Balb/C	Brain+Testis cDNA	NCBI	2911153
EF043896	Dyrk4	1898	A002403	Protein kinase, dual-specificity	10627645	Mouse	Balb/C	Brain+Testis cDNA	NCBI	26345939
EF043897	Fused	1715	A002406	Protein kinase, Ser/Thr (non-receptor)	10627933	Mouse	Balb/C	Brain+Testis cDNA	NCBI	28479131
EF043898	PDHK1	1226	A002493	Kinase (non-protein)	10627710	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043899	PDHK2	1223	A002494	Kinase (non-protein)	10627753	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043900	PDHK3	1247	A002495	Kinase (non-protein)	10627941	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043901	Slc6a3	1859	A002761	Transporter, facilitator	10373541	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753605
EF043902	Slc6a4	1892	A002762	Transporter, facilitator	10373543	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7110638
EF043903	Fast kinase	1535	A002827	Protein kinase, Ser/Thr (non-receptor)	10627775	Mouse	Balb/C	Brain cDNA	NCBI	12963588
EF043904	Syntrophin, gamma 1	728	A002866	Dystrophin complex	10627312	Mouse	Balb/c	Brain+Testis cDNA	NCBI	12855919
EF043905	FKBP 51	1370	A002917	Cytosolic, misc.	10374311	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753883
EF043906	Stk24/MST3	1295	A002992	Protein kinase, Ser/Thr (non-receptor)	10627179	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13435545
EF043907	Ptpns1	1637	A002993	Adaptor/scaffold	10627208	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6671639
EF043908	Prkx	1067	A002999	Protein kinase, Ser/Thr (non-receptor)	10374336	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13905165
EF043909	A6/Twinfilin-1	1052	A003000	Protein kinase, dual-specificity	10627926	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043910	BCKDK	1238	A003001	Enzyme, misc.	10627690	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF043911	Melk	1928	A003002	Protein kinase, Ser/Thr (non-receptor)	10627282	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12848359
EF043912	Cask	2690	A003003	Protein kinase, Ser/Thr (non-receptor)	10627303	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6753275
EF043913	Snf1lk/Msk1	2339	A003005	Protein kinase, Ser/Thr (non-receptor)	10373567	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6137751
EF043914	Mark1	2387	A003006	Protein kinase, Ser/Thr (non-receptor)	10627648	Mouse	Balb/C	Brain+Testis cDNA	NCBI	21704013
EF043915	Ccrk	1040	A003008	Protein kinase, Ser/Thr (non-receptor)	10373622	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9664925

<u>GenBank Accession</u>	<u>Gene Name</u>	<u>ORF size</u>	<u>AFCs ID</u>	<u>Protein category</u>	<u>ATCC ID</u>	<u>Species</u>	<u>Strain</u>	<u>Source material</u>	<u>Target sequence source</u>	<u>Target sequence ID (Genbank GI)</u>
EF043916	Dcamk1	1301	A003011	Protein kinase, Ser/Thr (non-receptor)	10373613	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6716521
EF043917	Mark3	2231	A003012	Protein kinase, Ser/Thr (non-receptor)	10627304	Mouse	Balb/c	Brain+Testis cDNA	NCBI	12313874
EF043918	Tesk2	1712	A003015	Protein kinase, Ser/Thr (non-receptor)	10627510	Mouse	Balb/C	Brain cDNA	Celera	AfCS Assembled
EF043919	Prp4	1490	A003016	Protein kinase, Ser/Thr (non-receptor)	10373679	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1399463
EF043920	Kist	1244	A003017	Protein kinase, Ser/Thr (non-receptor)	10627489	Mouse	Balb/C	Brain cDNA	NCBI	6754447
EF043921	Stk11/Lkb1	1310	A003018	Protein kinase, Ser/Thr (non-receptor)	10373609	Mouse	Balb/C	Brain+Testis cDNA	NCBI	4589403
EF043922	Tik2	1448	A003022	Protein kinase, Ser/Thr (non-receptor)	10373602	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1572490
EF043923	Tik2	2150	A003022	Protein kinase, Ser/Thr (non-receptor)	10627203	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755804
EF043924	Ulk2	3113	A003024	Protein kinase, Ser/Thr (non-receptor)	10627820	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7305610
EF043925	Virk2/Vrk2	1511	A003026	Protein kinase, Ser/Thr (non-receptor)	10627681	Mouse	Balb/C	Brain+Testis cDNA	NCBI	24899246
EF043926	MPSK1	821	A003028	Protein phosphatase, Ser/Thr (non-receptor)	10627650	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755677
EF043927	MPSK1	917	A003028	Protein phosphatase, Ser/Thr (non-receptor)	10627919	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755677
EF043928	Nek6	941	A003029	Protein kinase, Ser/Thr (non-receptor)	10373699	Mouse	Balb/C	Brain+Testis cDNA	NCBI	11037793
EF043929	Nek6	920	A003029	Protein kinase, Ser/Thr (non-receptor)	10373700	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12836480
EF043930	Nek8	875	A003030	Protein kinase, Ser/Thr (non-receptor)	10374326	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12852470
EF043931	Stk25/YSK1	1280	A003032	Protein kinase, Ser/Thr (non-receptor)	10627175	Mouse	Balb/C	Brain+Testis cDNA	NCBI	10946969
EF043932	Stk39/STLK3	1670	A003034	Protein kinase, Ser/Thr (non-receptor)	10374341	Mouse	Balb/C	Brain+Testis cDNA	NCBI	8394346
EF043933	Sgk2	1103	A003046	Protein kinase, Ser/Thr (non-receptor)	10373620	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7305482
EF043934	Sgk3	1490	A003047	Protein kinase, Ser/Thr (non-receptor)	10373627	Mouse	Balb/C	Brain+Testis cDNA	NCBI	11321320
EF043935	Cdkl2	1706	A003125	Protein kinase, Ser/Thr (non-receptor)	10374547	Mouse	Balb/C	Brain+Testis cDNA	NCBI	8393079
EF043936	Pf1k1/PFTAIRE1	1409	A003126	Protein kinase, Ser/Thr (non-receptor)	10373614	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6755043
EF043937	Cdk9	1115	A003128	Protein kinase, Ser/Thr (non-receptor)	10627204	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13278103
EF043938	Kiaa0936/ICK	1889	A003129	Protein kinase, Ser/Thr (non-receptor)	10374407	Mouse	Balb/C	Brain+Testis cDNA	NCBI	9910287
EF043939	Rage/MOK	1262	A003130	Protein kinase, Ser/Thr (non-receptor)	10373616	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7106390

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EF043940	Bike	3416	A003150	Protein kinase, Ser/Thr (non-receptor)	10627772	Mouse	Balb/C	Brain+Testis cDNA	NCBI	18129621
EF043941	Stk22a/TSSK1	1097	A003173	Protein kinase, Ser/Thr (non-receptor)	10627786	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678164
EF043942	Stk22b/TSSK2	1076	A003174	Protein kinase, Ser/Thr (non-receptor)	10374420	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6678166
EF043943	Stk22c/TSSK3	806	A003175	Protein kinase, Ser/Thr (non-receptor)	10373639	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12860200
EF043944	SRPK-1	1946	A003232	Protein kinase, Ser/Thr	10627504	Mouse	Balb/C	Brain cDNA	NCBI	7949138
EF043945	SRPK-2	2045	A003233	Protein kinase, Ser/Thr	10627506	Mouse	Balb/C	Brain cDNA	NCBI	6678134
EF043946	Pleckstrin, PLEK	1052	A003310	Lipid binding protein	10627265	Mouse	Balb/c	Brain+Testis cDNA	NCBI	11464970
EF043947	Pleckstrin 2, PLEK2	1058	A003311	Lipid binding protein	10627275	Mouse	Balb/c	Brain+Testis cDNA	NCBI	7305392
EF043948	SSTK	821	A003426	Protein kinase, Ser/Thr	10373646	Mouse	Balb/C	Brain+Testis cDNA	NCBI	14030780
EF043949	CAMK1g	1433	A003427	Protein kinase, Ser/Thr	10374212	Mouse	Balb/C	Brain+Testis cDNA	NCBI	14422218
EF043950	NEK7	908	A003428	Protein kinase, Ser/Thr	10373625	Mouse	Balb/C	Brain+Testis cDNA	NCBI	11037791
EF043951	Large tumor suppressor 2; LATS	3128	A003429	Protein kinase, Ser/Thr	10627792	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7657294
EF043952	DAPK2	1112	A003430	Protein kinase, Ser/Thr	10373611	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6521216
EF043953	Testes Specific Serine kinase; Tssk4	1016	A003432	Protein kinase, Ser/Thr	10373637	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12855864
EF043954	SNARK/Nuak2	1895	A003433	Protein kinase, Ser/Thr	10373629	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12836134
EF043955	IRAK4	1379	A003450	Protein phosphatase, tyrosine (non-receptor)	10627647	Mouse	Balb/C	Brain+Testis cDNA	NCBI	20219011
EF043956	NRBP1	1607	A003451	Protein kinase, Ser/Thr (non-receptor)	10627653	Mouse	Balb/C	Brain+Testis cDNA	NCBI	22219433
EF043957	PSKH1	1274	A003452	Protein phosphatase, Ser/Thr (non-receptor)	10627921	Mouse	Balb/C	Brain+Testis cDNA	NCBI	27734115
EF043958	AB1 SH3-domain binding protein 2	1679	A003454	Adaptor/scaffold	10627321	Mouse	Balb/c	Spleen cDNA	NCBI	6755495
EF043959	Rho guanine nucleotide exchange factor (GEF) 3	1574	A003459	Guanine nucleotide exchange factor, Rac/Rho	10627823	Mouse	Balb/c	Brain+Testis cDNA	NCBI	13529619
EF043960	oxysterol binding protein-like 5	2621	A003461	Cytosolic, misc.	10627821	Mouse	Balb/c	Brain+Testis cDNA	NCBI	15011888
EF043961	Ethanol decreased 4	1295	A003462	Cytosolic, misc.	10627311	Mouse	Balb/c	Brain+Testis cDNA	NCBI	16716344
EF043962	Neuronal guanine nucleotide exchange factor (Ngef)	1664	A003465	Guanine nucleotide exchange factor, Rac/Rho	10627824	Mouse	Balb/c	Brain+Testis cDNA	NCBI	9845276
EF043963	Unnamed PH and FYVE domain containing protein	839	A003468	Cytosolic, misc.	10627807	Mouse	Balb/c	Brain+Testis cDNA	NCBI	12805306
EF043964	A Novel PH domain protein gene	761	A003470	Cytosolic, misc.	10627297	Mouse	Balb/c	Brain+Testis cDNA	NCBI	12850731
EF043965	A Novel PH domain protein gene	785	A003471	Cytosolic, misc.	10627271	Mouse	Balb/c	Brain+Testis cDNA	NCBI	12847946
EF043966	Guanine nucleotide releasing protein x	494	A003472	Guanine nucleotide exchange factor, misc.	10627310	Mouse	Balb/c	Brain+Testis cDNA	NCBI	13542720
EF043967	A Novel PH domain protein gene	1082	A003473	Cytosolic, misc.	10627272	Mouse	Balb/c	Brain+Testis cDNA	NCBI	12857685
EF043968	TNF intracellular domain-interacting protein	1226	A003474	Adaptor/scaffold	10627314	Mouse	Balb/c	Brain+Testis cDNA	NCBI	12963636

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EF043969	PH domain containing protein, family B, Evec tin 2 or Plekhhb2	662	A003475	Adaptor/scaffold	10627267	Mouse	Balb/c	Brain+Testis cDNA	NCBI	6013424
EF043970	CaMK1d	1157	A003478	Protein kinase, Ser/Thr (non-receptor)	10627634	Mouse	Balb/C	Brain+Testis cDNA	NCBI	28893480
EF043971	CLIK1L	1025	A003479	Protein kinase, tyrosine (non-receptor)	10627642	Mouse	Balb/C	Brain+Testis cDNA	NCBI	22122688
EF043972	PBK	992	A003481	Protein kinase, tyrosine (non-receptor)	10627656	Mouse	Balb/C	Brain+Testis cDNA	NCBI	18043225
EF043973	PRPK	734	A003482	Protein kinase, Ser/Thr (non-receptor)	10627920	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12963836
EF043974	PRPK	734	A003482	Protein kinase, Ser/Thr (non-receptor)	10627658	Mouse	Balb/C	Brain+Testis cDNA	NCBI	12963836
EF043975	SBK	1253	A003484	Protein kinase, Ser/Thr (non-receptor)	10627664	Mouse	Balb/C	Brain+Testis cDNA	NCBI	21704179
EF043976	STLK6	1256	A003486	Protein phosphatase, Ser/Thr (non-receptor)	10627669	Mouse	Balb/C	Brain+Testis cDNA	NCBI	27477054
EF043977	VACAMKL	1532	A003488	Protein kinase, Ser/Thr (non-receptor)	10627679	Mouse	Balb/C	Brain+Testis cDNA	NCBI	21704241
EF043978	YANK1	1196	A003489	Protein kinase, Ser/Thr (non-receptor)	10627683	Mouse	Balb/C	Brain+Testis cDNA	NCBI	26331271
EF043979	VAMP1a	356	A003505	Vesicle protein	10374205	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1402872
EF043980	VAMP2	350	A003506	Vesicle protein	10373498	Mouse	Balb/C	Brain+Testis cDNA	NCBI	AF007168
EF043981	Cellubrevin	311	A003507	Vesicle protein	10373509	Mouse	Balb/C	Brain+Testis cDNA	NCBI	31340659
EF043982	VAMP4	425	A003508	Vesicle protein	10373500	Mouse	Balb/C	Brain+Testis cDNA	NCBI	AF061516
EF043983	VAMP5	308	A003509	Vesicle protein	10374422	Mouse	Balb/C	Brain+Testis cDNA	NCBI	AF035643
EF043984	VAMP7	662	A003510	Vesicle protein	10373502	Mouse	Balb/C	Brain+Testis cDNA	NCBI	13277734
EF043985	VAMP8	305	A003511	Vesicle protein	10374423	Mouse	Balb/C	Brain+Testis cDNA	NCBI	AF053724
EF043986	sec22	647	A003512	Vesicle protein	10374207	Mouse	Balb/C	Brain+Testis cDNA	NCBI	1907385
EF043987	YANK2	1244	A003596	Protein kinase, Ser/Thr	10373618	Mouse	Balb/C	Brain+Testis cDNA	NCBI	7161863
EF043988	BRSK2	1109	A003618	Protein kinase, Ser/Thr	10627631	Mouse	Balb/C	Brain+Testis cDNA	NCBI	25031982
EF043989	BRSK2	2027	A003618	Protein kinase, Ser/Thr	10627932	Mouse	Balb/C	Brain+Testis cDNA	NCBI	28482563
EF043990	CDK11	1505	A003619	Protein kinase, Ser/Thr	10627637	Mouse	Balb/C	Brain+Testis cDNA	NCBI	25051790
EF043991	CDKL3	1373	A003620	Protein kinase, Ser/Thr	10627639	Mouse	Balb/C	Brain+Testis cDNA	NCBI	23621365
EF043992	Dcamkl2	2270	A003622	Protein kinase, Ser/Thr	10627725	Mouse	Balb/C	Brain+Testis cDNA	NCBI	34784918
EF043993	DCAMKL3	1859	A003623	Protein kinase, Ser/Thr	10627644	Mouse	Balb/C	Brain+Testis cDNA	NCBI	27370431
EF043994	NRBP2	776	A003634	Protein kinase, Ser/Thr	10627654	Mouse	Balb/C	Brain+Testis cDNA	NCBI	15079263
EF043995	RPS6KC1/Rsk1	1763	A003637	Protein kinase, Ser/Thr	10627661	Mouse	Balb/C	Brain+Testis cDNA	NCBI	26336834
EF043996	RPS6KC2/Rsk2	1634	A003638	Protein kinase, Ser/Thr	10627663	Mouse	Balb/C	Brain+Testis cDNA	NCBI	20073154
EF043997	SgK496	1544	A003639	Protein kinase, Ser/Thr	10627735	Mouse	Balb/C	Brain+Testis cDNA	NCBI	20910262
EF043998	SgK496	1544	A003639	Protein kinase, Ser/Thr	10627666	Mouse	Balb/C	Brain+Testis cDNA	NCBI	20910262

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EF043999	STLK5	1184	A003641	Protein kinase, Ser/Thr	10627668	Mouse	Balb/C	Brain+Testis cDNA	NCBI	21312399
EF044000	Trb1	1118	A003642	Protein kinase, Ser/Thr	10627676	Mouse	Balb/C	Brain+Testis cDNA	NCBI	21362354
EF044001	Trb2	1031	A003643	Protein kinase, Ser/Thr	10627677	Mouse	Balb/C	Brain+Testis cDNA	NCBI	21362350
EF044002	SCYL3	2207	A003776	Protein kinase, Ser/Thr	10627761	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044003	Wee1B	1667	A003777	Protein kinase, Ser/Thr	10627763	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044004	Calmodulin-dependent protein kinase I beta	1031	A003815	Protein kinase, Ser/Thr (non-receptor)	10627170	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6753247
EF044005	Tih1	374		Cytosolic, misc.	10627295	Mouse	Balb/c	Brain+Testis cDNA	NCBI	5326875
EF044006	SMOK2	1511		Protein kinase, Ser/Thr	10627281	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6453612
EF044007	Mus musculus RIKEN cDNA 4921528G01 gene	1772		Guanine nucleotide exchange factor, misc.	10627264	Mouse	Balb/c	Brain+Testis cDNA	NCBI	13357217
EF044008	PHR1 isoform 4	569		Cytosolic, misc.	10627294	Mouse	Balb/c	Brain+Testis cDNA	NCBI	4926915
EF044009	Pleckstrin homology domain containing, family B member 1	731		Cytosolic, misc.	10627266	Mouse	Balb/c	Brain+Testis cDNA	NCBI	7305378
EF044010	SMOK1	1454		Protein kinase, Ser/Thr	10627177	Mouse	Balb/C	Brain+Testis cDNA	NCBI	6453618
EF044011	A6r/Twinfillin-2	1049		Protein kinase, Ser/Thr	10627686	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044012	ADCK1	1577		Protein kinase, Ser/Thr	10627739	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044013	ADCK2	1853		Protein kinase, Ser/Thr	10627937	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044014	ADCK3	1937		Protein kinase, Ser/Thr	10627687	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044015	ADCK4	1601		Protein kinase, Ser/Thr	10627688	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044016	ADCK5	1748		Protein kinase, Ser/Thr	10627742	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044017	CK2a1-rs	1175		Protein kinase, Ser/Thr	10627693	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044018	CYGX/CK2a	1175		Protein kinase, Ser/Thr	10627745	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044019	G11/Stk19	764		Protein kinase, Ser/Thr	10627695	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044020	H11/HSP8	590		Protein kinase, Ser/Thr	10627930	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044021	HIPK4	1625		Protein kinase, Ser/Thr	10627747	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044022	MarkmA1	1493		Protein kinase, Ser/Thr	10627698	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044023	MarkmA10	1379		Protein kinase, Ser/Thr	10627700	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044024	MarkmA2	1418		Protein kinase, Ser/Thr	10627702	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	

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EF044025	MarkmA3	1514		Protein kinase, Ser/Thr	10627704	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044026	MarkmA8	1301		Protein kinase, Ser/Thr	10627706	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044027	MarkmC1	905		Protein kinase, Ser/Thr	10627708	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044028	MarkmE3	734		Protein kinase, Ser/Thr	10627750	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044029	PINK1	1742		Protein kinase, Ser/Thr	10627756	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044030	RIOK1	1703		Protein kinase, Ser/Thr	10627758	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044031	RIOK2	1643		Protein kinase, Ser/Thr	10627759	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044032	SGK069	1088		Protein kinase, Ser/Thr	10627712	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044033	SGK196	1049		Protein kinase, Ser/Thr	10627714	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044034	SGK396/Twinfilin-2	1049		Protein kinase, Ser/Thr	10627716	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044035	SGK495	1307		Protein kinase, Ser/Thr	10627718	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044036	STK33	1475		Protein kinase, Ser/Thr	10627720	Mouse	Balb/C	Brain+Testis cDNA	http://kinase.com/mouse/	
EF044037	BetaGlcNAc beta 1,4-galactosyltransferase	1199		Galactosyltransferase	10373507	Mouse	Balb/C	Brain+Testis cDNA	NCBI	31981763

Supplementary Table 5

Details of AfCS subcellular markers available from the ATCC (MBA-91) in 96-well plate format. This set of subcellular localization markers comprises 64 expression plasmids developed by the AfCS as organelle markers for microscopy studies in mammalian cells (<http://www.signaling-gateway.org/reports/v1/DA0002/DA0002.pdf>). The plasmids encode either full-length or partial cDNAs tagged with a choice of fluorescent marker (either CFP or YFP). In many cases, the organelle markers are provided as a set of 4 to also provide a choice of promoter (CMV or EF1). ¹Species gene was isolated from. M: Mus musculus, H: Homo sapiens, Y: Yeast, V: Viral. ²Gene description- FL: full length, CT## : C-terminal ## amino acids (CT99=C-terminal 99 aa), NT## :N-terminal ## amino acids (NT31=N-terminal 31 amino acids), NLS: nuclear localization sequence. ³Form of gene. T: Clone contains a termination codon at the end of the targeted ORF. N: Clone does not contain a termination codon at the end of the targeted ORF.

<u>Well</u>	<u>Gene name</u>	<u>Spec</u> ¹	<u>Descrip</u> ²	<u>Form</u> ³	<u>Putative target organelle</u>	<u>Promoter</u>	<u>Tag</u>	<u>Vector size</u>	<u>Insert size</u>
A1	Alpha1 tubulin	M	FL	T	Microtubules	EF1	CFP	6772	1355
A2	Furin	M	CT99	T	Trans-golgi network	CMV	YFP	5212	299
A3	Alpha1 tubulin	M	FL	T	Microtubules	EF1	YFP	6772	1355
A4	Gamma tubulin	M	FL	N	Centrosome	EF1	CFP	6774	1355
A5	Gamma tubulin	M	FL	N	Centrosome	CMV	CFP	6157	1355
A6	Gamma tubulin	M	FL	N	Centrosome	EF1	YFP	6774	1355
A7	VAMP1a	M	FL	T	Exocytic and endocytic pathways	EF1	CFP	5773	356
A8	VAMP1a	M	FL	T	Exocytic and endocytic pathways	EF1	YFP	5773	356
A9	Lamin B receptor	M	FL	N	Nuclear membrane	CMV	CFP	5530	728
A10	Caveolin-1	M	FL	N	Caveolae	CMV	CFP	5335	533
A11	Caveolin-1	M	FL	N	Caveolae	EF1	CFP	5952	533
A12	Furin	M	CT99	T	Trans-golgi network	CMV	CFP	5212	299
B1	Lamin B receptor	M	FL	N	Nuclear membrane	CMV	YFP	5530	728
B2	Caveolin-1	M	FL	N	Caveolae	EF1	YFP	5952	533
B3	Caveolin-1	M	FL	N	Caveolae	CMV	YFP	5335	533
B4	Gamma tubulin	M	FL	N	Centrosome	CMV	YFP	6157	1355
B5	Alpha1 tubulin	M	FL	T	Microtubules	CMV	YFP	6155	1355
B6	Lamin B receptor	M	FL	N	Nuclear membrane	EF1	CFP	6147	728
B7	Lamin B receptor	M	FL	N	Nuclear membrane	EF1	YFP	6147	728
B8	Alpha1 tubulin	M	FL	T	Microtubules	CMV	CFP	6155	1355
B9	VAMP2	M	FL	T	Exocytic and endocytic pathways	EF1	CFP	5767	350

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B10	VAMP2	M	FL	T	Exocytic and endocytic pathways	EF1	YFP	5767	350
B11	VAMP4	M	FL	T	Exocytic and endocytic pathways	EF1	CFP	5842	425
B12	VAMP4	M	FL	T	Exocytic and endocytic pathways	EF1	YFP	5842	425
C1	VAMP5	M	FL	T	Exocytic and endocytic pathways	EF1	CFP	5725	308
C2	VAMP5	M	FL	T	Exocytic and endocytic pathways	EF1	YFP	5725	308
C3	VAMP7	M	FL	T	Exocytic and endocytic pathways	EF1	CFP	6079	662
C4	VAMP7	M	FL	T	Exocytic and endocytic pathways	EF1	YFP	6079	662
C5	VAMP8	M	FL	T	Exocytic and endocytic pathways	EF1	CFP	5722	305
C6	VAMP8	M	FL	T	Exocytic and endocytic pathways	EF1	YFP	5722	305
C7	sec22	M	FL	T	Exocytic and endocytic pathways	EF1	CFP	6064	647
C8	sec22	M	FL	T	Exocytic and endocytic pathways	EF1	YFP	6064	647
C9	Arp3	M	FL	T	Polymerizing actin	EF1	CFP	6703	1256
C10	Arp3	M	FL	T	Polymerizing actin	EF1	YFP	6703	1256
C11	K-Ras2	H	CT19	T	Plasma membrane	EF1	CFP	5507	63
C12	K-Ras2	H	CT19	T	Plasma membrane	EF1	YFP	5507	63
D1	Golgin 245	M	CT72	T	Golgi	CMV	CFP	5042	215
D2	Golgin 245	M	CT72	T	Golgi	CMV	YFP	5042	215
D3	Golgin 245	M	CT72	T	Golgi	EF1	CFP	5659	215
D4	Golgin 245	M	CT72	T	Golgi	EF1	YFP	5659	215
D5	Cyt. c oxidase-subunit VIIIa	M	NT31	N	Mitochondria	CMV	YFP	4912	92
D6	Cyt. c oxidase-subunit VIIIa	M	NT31	N	Mitochondria	CMV	CFP	4912	92
D7	Cyt. c oxidase-subunit VIIIa	M	NT31	N	Mitochondria	EF1	YFP	5529	92
D8	Cyt. c oxidase-subunit VIIIa	M	NT31	N	Mitochondria	EF1	CFP	5529	92
D9	Cyt. c oxidase-subunit IV	Y	NT12	N	Mitochondria	CMV	YFP	4855	35
D10	Cyt. c oxidase-subunit IV	Y	NT12	N	Mitochondria	CMV	CFP	4855	35
D11	Cyt. c oxidase-subunit IV	Y	NT12	N	Mitochondria	EF1	YFP	5472	35
D12	Cyt. c oxidase-subunit IV	Y	NT12	N	Mitochondria	EF1	CFP	5472	35
E1	Vimentin	M	FL	N	Intermediate filaments	CMV	YFP	6202	1400
E2	Vimentin	M	FL	N	Intermediate filaments	CMV	CFP	6202	1400
E3	Vimentin	M	FL	N	Intermediate filaments	EF1	YFP	6819	1400
E4	Vimentin	M	FL	N	Intermediate filaments	EF1	CFP	6819	1400

Well	Gene name	Spec¹	Descrip²	Form³	Putative target organelle	Promoter	Tag	Vector size	Insert size
E5	Cellubrevin	M	FL	T	Recycling endosomes	CMV	YFP	5111	311
E6	Cellubrevin	M	FL	T	Recycling endosomes	CMV	CFP	5111	311
E7	Cellubrevin	M	FL	T	Recycling endosomes	EF1	CFP	5728	311
E8	Cellubrevin	M	FL	T	Recycling endosomes	EF1	YFP	5728	311
E9	SV40 Lg T antigen NLS triplet	V	NLS	T	Nucleus	EF1	YFP	9158	81
E10	SV40 Lg T antigen NLS triplet	V	NLS	T	Nucleus	EF1	CFP	9158	81
E11	SV40 Lg T antigen NLS triplet	V	NLS	T	Nucleus	CMV	YFP	8541	81
E12	SV40 Lg T antigen NLS triplet	V	NLS	T	Nucleus	CMV	CFP	8541	81
F1	Six repeats of YFP				Cytosol	CMV	YFP	8472	
F2	Six repeats of CFP				Cytosol	CMV	CFP	8472	
F3	Six repeats of YFP				Cytosol	EF1	YFP	9089	
F4	Six repeats of CFP				Cytosol	EF1	CFP	9089	