

**Table S1. Gene assignment of possible Mex3b target genes**

Accession number	Method	Xenopus RefSeq ID	Xenopus symbol	Mouse_RefSeq ID	Mouse symbol	Definition
AB012615	1	NM_001090297	XFGF-20	NM_030610	Fgf20	Mus musculus fibroblast growth factor 20 (Fgf20), mRNA.
AB014611	1	NM_001085557	foxd3-A	NM_010425	Foxd3	Mus musculus forkhead box D3 (Foxd3), mRNA.
AB211545	1	NM_001095626	esr3/7b	NM_010419	Hes5	Mus musculus hairy and enhancer of split 5 (Drosophila) (Hes5), mRNA.
AF183571	1	NM_001085702	six3-A	NM_011381	Six3	Mus musculus sine oculis-related homeobox 3 homolog (Drosophila) (Six3), mRNA.
AF245221	1	NM_001086401	MGC69051	NM_023053	Twsg1	Mus musculus twisted gastrulation homolog 1 (Drosophila) (Twsg1), mRNA.
AF297867	1	NM_001088572	LOC398192	NM_175554	Clspn	Mus musculus claspin homolog (Xenopus laevis) (Clspn), mRNA.
AF308152	1	NM_001088598	LOC398206	NM_011026	P2rx4	Mus musculus purinergic receptor P2X, ligand-gated ion channel 4 (P2rx4), mRNA.
AF353715	1	NM_001088664	LOC398243	NM_008452	Klf2	Mus musculus Kruppel-like factor 2 (lung) (Klf2), mRNA.
AF368043	1	NM_001088649	LOC398235	NM_011415	Snai2	Mus musculus snail homolog 2 (Drosophila) (Snai2), mRNA.
AI031267	1	NM_001085592	dkk1-A	NM_010051	Dkk1	Mus musculus dickkopf homolog 1 (Xenopus laevis) (Dkk1), mRNA.
AJ243591	1	NM_001090795	pcbp2	NM_011042	Pcbp2	Mus musculus poly(rC) binding protein 2 (Pcbp2), transcript variant 2, mRNA.
AJ298866	1	NM_001085609	foxd3b-A	NM_010425	Foxd3	Mus musculus forkhead box D3 (Foxd3), mRNA.
AW148041	1	NM_001093895	MGC85582	NM_007749	Cox7c	Mus musculus cytochrome c oxidase, subunit VIIc (Cox7c), mRNA.
AW646621	1	NM_001087406	flj38101	NM_029074	Tmem188	Mus musculus transmembrane protein 188 (Tmem188), mRNA.
AY260733	1	NM_001089226	LOC398661	NM_021391	Ppp1r1a	Mus musculus protein phosphatase 1, regulatory (inhibitor) subunit 1A (Ppp1r1a), mRNA.
AY519474	1	NM_001092981	Arx2	NM_007492	Arx	Mus musculus aristaless related homeobox gene (Drosophila) (Arx), mRNA.
AY796186	1	NM_001095665	cr2	XM_906462	EG620395	PREDICTED: Mus musculus predicted gene, EG620395 (EG620395), mRNA.
BC041200	1	NM_001086595	hspa5	NM_022310	Hspa5	Mus musculus heat shock protein 5 (Hspa5), mRNA.
BC041259	1	NM_001085915	MGC52818	NM_207217	Itfg3	Mus musculus integrin alpha FG-GAP repeat containing 3 (Itfg3), mRNA.
BC042245	1	NM_001086672	gldc	NM_138595	Gldc	Mus musculus glycine decarboxylase (Gldc), mRNA.
BC042337	1	NM_001086588	arf2	NM_007476	Arf1	Mus musculus ADP-ribosylation factor 1 (Arf1), mRNA.
BC043635	1	NM_001086948	arg1	NM_007482	Arg1	Mus musculus arginase 1, liver (Arg1), mRNA.
BC043775	1	NM_001086011	MGC52980	NM_013862	Rabgap1l	Mus musculus RAB GTPase activating protein 1-like (Rabgap1l), transcript variant 1, mRNA.
BC043809	1	NM_001087014	gfpt1	NM_013528	Gfpt1	Mus musculus glutamine fructose-6-phosphate transaminase 1 (Gfpt1), mRNA.
BC044126	1	NM_001086130	MGC53808	NM_146057	Dap	Mus musculus death-associated protein (Dap), mRNA.
BC044262	1	NM_001086082	MGC52561	NM_007865	DII1	Mus musculus delta-like 3 (Drosophila) (DII3), mRNA.
BC044298	1	NM_001087175	flj14281	XM_001473173	Dnajb14	PREDICTED: Mus musculus Dnaj (Hsp40) homolog, subfamily B, member 14 (Dnajb14), mRNA.
BC044320	1	NM_001086092	MGC52743	NM_008409	Itm2a	Mus musculus integral membrane protein 2A (Itm2a), mRNA.
BC044672	1	NM_001086834	ptk9l	NM_011876	Twf2	Mus musculus twinfilin, actin-binding protein, homolog 2 (Drosophila) (Twf2), mRNA.
BC045027	1	NM_001087237	tes	NM_207176	Tes	Mus musculus testis derived transcript (Tes), transcript variant 2, mRNA.
BC045036	1	NM_001086732	cg2107	NM_009949	Cpt2	Mus musculus carnitine palmitoyltransferase 2 (Cpt2), mRNA.
BC045241	1	NM_001086156	MGC53732	NM_026772	Cdc42ep2	Mus musculus CDC42 effector protein (Rho GTPase binding) 2 (Cdc42ep2), mRNA.
BC045268	1	NM_001101757	XenCK55(5/6)	NM_177717	4732456N10Rik	Mus musculus RIKEN cDNA 4732456N10 gene (4732456N10Rik), mRNA.
BC046657	1	NM_001086171	MGC52896	NM_001081211	Ptafr	Mus musculus platelet-activating factor receptor (Ptafr), mRNA.
BC046708	1	NM_001086623	mthfr	NM_010840	Mthfr	Mus musculus 5,10-methylenetetrahydrofolate reductase (Mthfr), mRNA.
BC047262	1	NM_001086632	pold2	NM_008894	Pold2	Mus musculus polymerase (DNA directed), delta 2, regulatory subunit (Pold2), mRNA.

BC047957	1	NM_001086759	atp1b1a	NM_009721	Atp1b1	Mus musculus ATPase, Na+/K+ transporting, beta 1 polypeptide (Atp1b1), mRNA.
BC048018	1	NM_001086235	MGC52622	NM_016807	Sdcbp	Mus musculus syndecan binding protein (Sdcbp), transcript variant 2, mRNA.
BC049827	1	NM_001087641	add1-a	NM_001024458	Add1	Mus musculus adducin 1 (alpha) (Add1), transcript variant 1, mRNA.
BC053765	1	NM_001086256	MGC64275	NM_025921	2610002M06Rik	Mus musculus RIKEN cDNA 2610002M06 gene (2610002M06Rik), mRNA.
BC053795	1	NM_001086268	MGC64413	NM_144902	Slc35a3	Mus musculus solute carrier family 35 (UDP-N-acetylglucosamine (UDP-GlcNAc) transporter), member 3 (Slc35a3), mRNA.
BC054207	1	NM_001087376	degs	NM_027299	Degs2	Mus musculus degenerative spermatocyte homolog 2 ( <i>Drosophila</i> ), lipid desaturase (Degr2), mRNA.
BC055959	1	NM_001087397	bmp7	NM_007557	Bmp7	Mus musculus bone morphogenetic protein 7 (Bmp7), mRNA.
BC055996	1	NM_001086376	MGC68905	NM_016958	Krt14	Mus musculus keratin 14 (Krt14), mRNA.
BC057702	1	NM_001086465	MGC68434	NM_007557	Bmp7	Mus musculus bone morphogenetic protein 7 (Bmp7), mRNA.
BC059984	1	NM_001089781	MGC68691	NM_008390	Irf1	Mus musculus interferon regulatory factor 1 (Irf1), mRNA.
BC060012	1	NM_001089657	MGC68616	NM_179203	Atad3a	Mus musculus ATPase family, AAA domain containing 3A (Atad3a), mRNA.
BC060329	1	NM_001089653	MGC68457	NM_009427	Tob1	Mus musculus transducer of ErbB-2.1 (Tob1), mRNA.
BC060401	1	NM_001089883	MGC68523	NM_009005	Rab7	Mus musculus RAB7, member RAS oncogene family (Rab7), mRNA.
BC063270	1	NM_001088619	LOC398218	NM_133188	Dazap1	Mus musculus DAZ associated protein 1 (Dazap1), mRNA.
BC070561	1	NM_001091316	MGC80010	NM_019490	Uso1	Mus musculus USO1 homolog, vesicle docking protein (yeast) (Uso1), mRNA.
BC070608	1	NM_001091469	MGC81319	NM_133832	Rdh10	Mus musculus retinol dehydrogenase 10 (all-trans) (Rdh10), mRNA.
BC070622	1	NM_001091368	MGC81391	NM_020022	Rfc2	Mus musculus replication factor C (activator 1) 2 (Rfc2), mRNA.
BC070627	1	NM_001091465	MGC81419	NM_009678	Ap1m2	Mus musculus adaptor protein complex AP-1, mu 2 subunit (Ap1m2), transcript variant 2, mRNA.
BC070650	1	NM_001091365	MGC82200	NM_019727	Snx1	Mus musculus sorting nexin 1 (Snx1), mRNA.
BC070748	1	NM_001087915	LOC397806	NM_022653	Thop1	Mus musculus thimet oligopeptidase 1 (Thop1), mRNA.
BC070856	1	NM_001091411	MGC84607	NM_011249	Rbl1	Mus musculus retinoblastoma-like 1 (p107) (Rbl1), mRNA.
BC070966	1	NM_001091579	MGC78769	XM_001474389	LOC100045490	PREDICTED: Mus musculus similar to H3 histone, family 3A (LOC100045490), mRNA.
BC071053	1	NM_001095982	MGC114680	NM_139147	Rab40b	Mus musculus Rab40b, member RAS oncogene family (Rab40b), mRNA.
BC071096	1	NM_001091865	MGC81116	NM_026197	Mett10d	Mus musculus methyltransferase 10 domain containing (Mett10d), mRNA.
BC072047	1	NM_001091764	MGC78906	NM_008409	Itm2a	Mus musculus integral membrane protein 2A (itm2a), mRNA.
BC072063	1	NM_001091918	MGC78940	NM_011787	Amfr	Mus musculus autocrine motility factor receptor (Amfr), mRNA.
BC072158	1	NM_001091686	MGC80171	NM_001082553	Rab27b	Mus musculus RAB27b, member RAS oncogene family (Rab27b), transcript variant 2, mRNA.
BC072181	1	NM_001091735	MGC80316	NM_033571	Fkbp6	Mus musculus FK506 binding protein 6 (Fkbp6), mRNA.
BC072273	1	NM_001091615	prkar1a	NM_021880	Prkar1a	Mus musculus protein kinase, cAMP dependent regulatory, type I, alpha (Prkar1a), mRNA.
BC072274	1	NM_001091937	MGC82408	NM_016900	Cav2	Mus musculus caveolin 2 (Cav2), mRNA.
BC072281	1	NM_001091585	MGC82425	NM_025359	Tspan13	Mus musculus tetraspanin 13 (Tspan13), mRNA.
BC072376	1	NM_001095980	MGC114659	NM_007456	Ap1m1	Mus musculus adaptor-related protein complex AP-1, mu subunit 1 (Ap1m1), mRNA.
BC073017	1	NM_001092142	MGC82614	NM_174875	Atg4a	Mus musculus autophagy-related 4A (yeast) (Atg4a), mRNA.
BC073206	1	NM_001092224	MGC80481	NM_054089	Tgs1	Mus musculus trimethylguanosine synthase homolog (S. cerevisiae) (Tgs1), mRNA.
BC073292	1	NM_001092282	MGC80672	NM_019584	Becln1	Mus musculus beclin 1 (coiled-coil, myosin-like BCL2-interacting protein) (Becln1), mRNA.
BC073382	1	NM_001092343	MGC80815	NM_025859	Arl1	Mus musculus ADP-ribosylation factor-like 1 (Arl1), mRNA.
BC073398	1	NM_001092359	MGC80850	NM_026524	Mid1ip1	Mus musculus Mid1 interacting protein 1 (gastrulation specific G12-like (zebrafish)) (Mid1ip1), mRNA.

BC073466	1	NM_001092411	MGC80980	NM_029362	Chmp4b	Mus musculus chromatin modifying protein 4B (Chmp4b), mRNA.
BC073467	1	NM_001092412	MGC80982	NM_007725	Cnn2	Mus musculus calponin 2 (Cnn2), mRNA.
BC073490	1	NM_001092425	MGC81015	NM_027406	Aldh1l1	Mus musculus aldehyde dehydrogenase 1 family, member L1 (Aldh1l1), mRNA.
BC073498	1	NM_001092432	MGC81029	NM_172399	A930038C07Rik	Mus musculus RIKEN cDNA A930038C07 gene (A930038C07Rik), mRNA.
BC074133	1	NM_001090789	nedd4	NM_031881	Nedd4l	Mus musculus neural precursor cell expressed, developmentally down-regulated gene 4-like (Nedd4l), mRNA.
BC074149	1	NM_001092597	MGC81892	NM_010007	Cyp2j5	Mus musculus cytochrome P450, family 2, subfamily j, polypeptide 5 (Cyp2j5), mRNA.
BC074159	1	NM_001092606	MGC81925	NM_175187	Tmem161b	Mus musculus transmembrane protein 161B (Tmem161b), mRNA.
BC074160	1	NM_001092607	MGC81929	NM_183089	2600005O03Rik	Mus musculus RIKEN cDNA 2600005O03 gene (2600005O03Rik), mRNA.
BC074162	1	NM_001092608	MGC81939	NM_019657	Hsd17b12	Mus musculus hydroxysteroid (17-beta) dehydrogenase 12 (Hsd17b12), mRNA.
BC074180	1	NM_001092624	MGC82017	NM_018861	Slc1a4	Mus musculus solute carrier family 1 (glutamate/neutral amino acid transporter), member 4 (Slc1a4), mRNA.
BC074207	1	NM_001092646	MGC82133	NM_027891	Lrwd1	Mus musculus leucine-rich repeats and WD repeat domain containing 1 (Lrwd1), mRNA.
BC074305	1	NM_001092720	MGC84110	NM_011361	Sgk	Mus musculus serum/glucocorticoid regulated kinase (Sgk), mRNA.
BC074397	1	NM_001092793	MGC84373	NM_029341	Capsl	Mus musculus calyphosine-like (Capsl), mRNA.
BC074462	1	NM_001092838	MGC84750	NM_010902	Nfe2l2	Mus musculus nuclear factor, erythroid derived 2, like 2 (Nfe2l2), mRNA.
BC074492	1	NM_001090564	Dlx5	NM_010056	Dlx5	Mus musculus distal-less homeobox 5 (Dlx5), transcript variant 1, mRNA.
BC075230	1	NM_001092928	MGC84421	NM_001039554	Angptl7	Mus musculus angiopoietin-like 7 (Angptl7), mRNA.
BC075239	1	NM_001092935	MGC84452	NM_172595	Arl15	Mus musculus ADP-ribosylation factor-like 15 (Arl15), mRNA.
BC076836	1	NM_001095727	MGC83873	NM_013885	Clic4	Mus musculus chloride intracellular channel 4 (mitochondrial) (Clic4), mRNA.
BC077245	1	NM_001091129	MGC80016	NM_001082553	Rab27b	Mus musculus RAB27b, member RAS oncogene family (Rab27b), transcript variant 2, mRNA.
BC077590	1	NM_001093405	MGC83946	NM_145940	Wipi1	Mus musculus WD repeat domain, phosphoinositide interacting 1 (Wipi1), mRNA.
BC077608	1	NM_001092680	MGC84016	NM_030692	Sacm1l	Mus musculus SAC1 (suppressor of actin mutations 1, homolog)-like (S. cerevisiae) (Sacm1l), mRNA.
BC077779	1	NM_001085595	timp3-A	NM_011595	Tim3	Mus musculus tissue inhibitor of metalloproteinase 3 (Tim3), mRNA.
BC077782	1	NM_001095731	MGC80142	NM_010054	Dlx2	Mus musculus distal-less homeobox 2 (Dlx2), mRNA.
BC077805	1	NM_001093475	MGC80418	NM_176902	1110014K08Rik	Mus musculus RIKEN cDNA 1110014K08 gene (1110014K08Rik), mRNA.
BC077831	1	NM_001093495	pitpn	NM_019640	Pitpn	Mus musculus phosphatidylinositol transfer protein, beta (Pitpn), mRNA.
BC077853	1	NM_001093510	MGC80563	NM_007569	Btg1	Mus musculus B-cell translocation gene 1, anti-proliferative (Btg1), mRNA.
BC077862	1	NM_001093518	kctd15	NM_146188	Kctd15	Mus musculus potassium channel tetramerisation domain containing 15 (Kctd15), mRNA.
BC077875	1	NM_001093528	napb	NM_025898	Napa	Mus musculus N-ethylmaleimide sensitive fusion protein attachment protein alpha (Napa), mRNA.
BC077877	1	NM_001093530	atf5	NM_030693	Atf5	Mus musculus activating transcription factor 5 (Atf5), mRNA.
BC077884	1	NM_001093537	rab7	NM_009005	Rab7	Mus musculus RAB7, member RAS oncogene family (Rab7), mRNA.
BC077913	1	NM_001093556	MGC80820	NM_133832	Rdh10	Mus musculus retinol dehydrogenase 10 (all-trans) (Rdh10), mRNA.
BC078022	1	NM_001097845	LOC100037140	NM_201529	Lmo7	Mus musculus LIM domain only 7 (Lmo7), mRNA.
BC078104	1	NM_001093693	slc30a9	NM_178651	Slc30a9	Mus musculus solute carrier family 30 (zinc transporter), member 9 (Slc30a9), mRNA.
BC078553	1	NM_001093851	MGC85425	NM_144761	Crygb	Mus musculus crystallin, gamma B (Crygb), mRNA.
BC079781	1	NM_001093965	MGC86295	NM_025360	Tmed3	Mus musculus transmembrane emp24 domain containing 3 (Tmed3), mRNA.
BC079920	1	NM_001093998	MGC78858	NM_001029983	Man1b1	Mus musculus mannosidase, alpha, class 1B, member 1 (Man1b1), mRNA.
BC080165	1	NM_001095984	MGC114682	NM_144514	Commd1	Mus musculus COMM domain containing 1

BC081029	1	NM_001094170	MGC81684	NM_010496	Id2	(Commd1), mRNA. Mus musculus inhibitor of DNA binding 2 (Id2), mRNA.
BC081061	1	NM_001094198	MGC81923	NM_008756	Ocln	Mus musculus occludin (Ocln), mRNA.
BC081127	1	NM_001094244	MGC83866	NM_023668	Ndel1	Mus musculus nuclear distribution gene E-like homolog 1 (A. nidulans) (Ndel1), mRNA.
BC081128	1	NM_001094245	MGC83926	NM_028334	Nup37	Mus musculus nucleoporin 37 (Nup37), mRNA.
BC081219	1	NM_001094314	MGC85240	NM_146090	Zadhl2	Mus musculus zinc binding alcohol dehydrogenase, domain containing 2 (Zadhl2), mRNA.
BC082362	1	NM_001094370	MGC81567	NM_009346	Tead1	Mus musculus TEA domain family member 1 (Tead1), mRNA.
BC082367	1	NM_001094375	MGC81584	NM_013469	Anxa11	Mus musculus annexin A11 (Anxa11), mRNA.
BC082400	1	NM_001094403	MGC81945	NM_021522	Usp14	Mus musculus ubiquitin specific peptidase 14 (Usp14), transcript variant 1, mRNA.
BC082437	1	NM_001094422	MGC83628	NM_133766	Efr3a	Mus musculus EFR3 homolog A ( <i>S. cerevisiae</i> ) (Efr3a), mRNA.
BC082657	1	NM_001095361	LOC496106	NM_001013756	Grhl3	Mus musculus grainyhead-like 3 ( <i>Drosophila</i> ) (Grhl3), mRNA.
BC082678	1	NM_001094529	LOC494687	NM_029861	1500041B16Rik	Mus musculus RIKEN cDNA 1500041B16 gene (1500041B16Rik), mRNA.
BC082698	1	NM_001094563	LOC494724	NM_026004	Nt5c3	Mus musculus 5'-nucleotidase, cytosolic III (Nt5c3), mRNA.
BC082839	1	NM_001094580	LOC494743	NM_011396	Slc22a5	Mus musculus solute carrier family 22 (organic cation transporter), member 5 (Slc22a5), mRNA.
BC084238	1	NM_001087532	myd88-A	NM_010851	Myd88	Mus musculus myeloid differentiation primary response gene 88 (Myd88), mRNA.
BC084288	1	NM_001094811	LOC495113	NM_029797	Mnd1	Mus musculus meiotic nuclear divisions 1 homolog ( <i>S. cerevisiae</i> ) (Mnd1), mRNA.
BC084344	1	NM_001094839	LOC495144	NM_001083114	Pphln1	Mus musculus periphilin 1 (Pphln1), transcript variant 3, mRNA.
BC084396	1	NM_001095573	XMax2	NM_008558	Max	Mus musculus Max protein (Max), mRNA.
BC084410	1	NM_001090457	xbc8	NM_010423	Hey1	Mus musculus hairy/enhancer-of-split related with YRPW motif 1 (Hey1), mRNA.
BC084431	1	NM_001087534	ctk2-A	NM_053173	Kifc1	Mus musculus kinesin family member C1 (Kifc1), mRNA.
BC084599	1	NM_001087002	fam3a	NM_025473	1810037C20Rik	Mus musculus RIKEN cDNA 1810037C20 gene (1810037C20Rik), mRNA.
BC084796	1	NM_001095000	LOC495334	NM_026580	Otub2	Mus musculus OTU domain, ubiquitin aldehyde binding 2 (Otub2), mRNA.
BC084931	1	NM_001095512	LOC496362	NM_021542	Kcnk5	Mus musculus potassium channel, subfamily K, member 5 (Kcnk5), mRNA.
BC084950	1	NM_001095087	LOC495432	NM_021720	Donson	Mus musculus downstream neighbor of SON (Donson), mRNA.
BC085025	1	NM_001095114	LOC495462	NM_080556	Tm9sf2	Mus musculus transmembrane 9 superfamily member 2 (Tm9sf2), mRNA.
BC085209	1	NM_001095145	LOC495510	NM_172921	D930028F11Rik	Mus musculus RIKEN cDNA D930028F11 gene (D930028F11Rik), mRNA.
BC087465	1	NM_001095378	LOC496157	NM_009228	Snta1	Mus musculus syntrophin, acidic 1 (Snta1), mRNA.
BC087619	1	NM_001095361	LOC496106	NM_001013756	Grhl3	Mus musculus grainyhead-like 3 ( <i>Drosophila</i> ) (Grhl3), mRNA.
BC088945	1	NM_001095498	LOC496347	NM_144853	Cyrr1	Mus musculus cysteine and tyrosine-rich protein 1 (Cyrr1), mRNA.
BC088971	1	NM_001088963	LOC398464	NM_010661	Krt12	Mus musculus keratin 12 (Krt12), mRNA.
BC089129	1	NM_001096509	MGC85174	NM_024472	BC002216	Mus musculus cDNA sequence BC002216 (BC002216), mRNA.
BC089147	1	NM_001095748	MGC85058	NM_028189	B3gnt3	Mus musculus UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 3 (B3gnt3), mRNA.
BC089251	1	NM_001087943	Xmcm3	NM_008563	Mcm3	Mus musculus minichromosome maintenance deficient 3 ( <i>S. cerevisiae</i> ) (Mcm3), mRNA.
BC091722	1	NM_001095843	MGC98956	NM_007741	Col9a2	Mus musculus collagen, type IX, alpha 2 (Col9a2), mRNA.
BC094124	1	NM_001095925	ptpra	NM_008980	Ptpra	Mus musculus protein tyrosine phosphatase, receptor type, A (Ptpra), mRNA.
BC097539	1	NM_001093929	MGC82645	NM_178626	Cdc42se2	Mus musculus CDC42 small effector 2 (Cdc42se2), mRNA.
BC097543	1	NM_001088963	LOC398464	NM_010661	Krt12	Mus musculus keratin 12 (Krt12), mRNA.
BC097557	1	NM_001090346	VgRBP60	NM_001077363	Ptbp1	Mus musculus polypyrimidine tract binding protein 1 (Ptbp1), transcript variant 1, mRNA.
BC097753	1	NM_001096038	MGC115442	NM_175450	Wdr18	Mus musculus WD repeat domain 18 (Wdr18), mRNA.
BC097898	1	NM_001096590	MGC115690	NM_028643	Efha1	Mus musculus EF hand domain family A1 (Efha1),

						mRNA.
BC098966	1	NM_001096103	MGC114707	NM_026899	Ssu72	Mus musculus Ssu72 RNA polymerase II CTD phosphatase homolog (yeast) (Ssu72), mRNA.
BC099281	1	NM_001096148	MGC116473	NM_028419	Glx5	Mus musculus glutaredoxin 5 homolog (S. cerevisiae) (Glx5), mRNA.
BC100225	1	NM_001090485	TFIIAa/b-2	NM_031391	Gtf2a1	Mus musculus general transcription factor II A, 1 (Gtf2a1), transcript variant 1, mRNA.
BC100235	1	NM_001096618	MGC115462	NM_011504	Stxbp3a	Mus musculus syntaxin binding protein 3A (Stxbp3a), mRNA.
BC108517	1	NM_001096663	MGC130921	NM_011265	Rfx3	Mus musculus regulatory factor X, 3 (influences HLA class II expression) (Rfx3), mRNA.
BC108522	1	NM_001096664	MGC130946	NM_019405	Cetn2	Mus musculus centrin 2 (Cetn2), mRNA.
BC108596	1	NM_001096486	MGC130987	NM_009880	Cdx1	Mus musculus caudal type homeo box 2 (Cdx2), mRNA.
BC108773	1	NM_001091630	MGC78986	NM_026524	Mid1ip1	Mus musculus Mid1 interacting protein 1 (gastrulation specific G12-like (zebrafish)) (Mid1ip1), mRNA.
BC108783	1	NM_001086200	MGC52924	NM_019437	Rfk	Mus musculus riboflavin kinase (Rfk), mRNA.
BC108848	1	NM_001088415	C3H-1	NM_011756	Zfp36	Mus musculus zinc finger protein 36 (Zfp36), mRNA.
BG159870	1	NM_001091716	MGC82618	NM_009030	Rbbp4	Mus musculus retinoblastoma binding protein 4 (Rbbp4), mRNA.
BG161849	1	NM_001095164	LOC495685	NM_008786	Pcmt1	Mus musculus protein-L-isoaspartate (D-aspartate) O-methyltransferase 1 (Pcmt1), mRNA.
BI312824	1	NM_001096453	MGC130926	NM_013862	Rabgap1l	Mus musculus RAB GTPase activating protein 1-like (Rabgap1l), transcript variant 1, mRNA.
BI446938	1	NM_001093937	MGC84006	NM_198410	Paqr6	Mus musculus progestin and adiponectin receptor family member VI (Paqr6), mRNA.
BJ052734	1	NM_001087429	slc22a5	NM_011396	Slc22a5	Mus musculus solute carrier family 22 (organic cation transporter), member 5 (Slc22a5), mRNA.
BJ053280	1	NM_001093303	tax1bp3	XM_001475037	LOC100045937	PREDICTED: Mus musculus similar to Tax1 (human T-cell leukemia virus type I) binding protein 3
BJ057306	1	NM_001086207	frmd8	NM_026169	1200004M23Rik	Mus musculus RIKEN cDNA 1200004M23 gene (1200004M23Rik), mRNA.
BJ059247	1	NM_001097747	LOC100036990	XM_620516	Rkh3	PREDICTED: Mus musculus ring finger and KH domain containing 3 (Rkh3), mRNA.
BJ060840	1	NM_001091822	LOC443651	NM_001033277	Spryd3	Mus musculus SPRY domain containing 3 (Spryd3), mRNA.
BJ082397	1	NM_001088815	NUP153	NM_175749	Nup153	Mus musculus nucleoporin 153 (Nup153), mRNA.
BJ083737	1	NM_001094392	MGC81827	NM_027464	5730469M10Rik	Mus musculus RIKEN cDNA 5730469M10 gene (5730469M10Rik), mRNA.
BJ092482	1	NM_001095905	MGC115132	NM_133835	Ubac1	Mus musculus ubiquitin associated domain containing 1 (Ubac1), mRNA.
BJ097883	1	NM_001097125	LOC100036837	NM_145594	Fgl1	Mus musculus fibrinogen-like protein 1 (Fgl1), mRNA.
BJ097926	1	NM_001093918	MGC81930	XM_001475803	LOC100046051	PREDICTED: Mus musculus similar to Flavin containing monooxygenase 5, transcript variant 1, mRNA.
BJ630190	1	NM_001092184	MGC83556	NM_022999	Prrg2	Mus musculus proline-rich Gla (G-carboxyglutamic acid) polypeptide 2 (Prrg2), mRNA.
BJ643204	1	NM_001094934	LOC495258	NM_017475	Rragc	Mus musculus Ras-related GTP binding C (Rragc), mRNA.
BP679243	1	NM_001096886	nkx6-2	NM_183248	Nkx6-2	Mus musculus NK6 transcription factor related, locus 2 (Drosophila) (Nkx6-2), mRNA.
BP688149	1	NM_001090983	LOC403394	NM_028227	Brap	Mus musculus BRCA1 associated protein (Brap), mRNA.
BP704424	1	NM_001087104	prdml	NM_007548	Prdm1	Mus musculus PR domain containing 1, with ZNF domain (Prdm1), mRNA.
BP707288	1	NM_001090795	pcbp2	NM_011042	Pcbp2	Mus musculus poly(rC) binding protein 2 (Pcbp2), transcript variant 2, mRNA.
BP732832	1	NM_001090405	Cetn3	NM_007684	Cetn3	Mus musculus centrin 3 (Cetn3), mRNA.
BP736260	1	NM_001096748	MGC78810	NM_011722	Dctn6	Mus musculus dynein 6 (Dctn6), mRNA.
BU909480	1	NM_001097933	LOC100049091	NM_019586	Ube2j1	Mus musculus ubiquitin-conjugating enzyme E2, J1 (Ube2j1), mRNA.
BX845120	1	NM_001093851	MGC85425	NM_144761	Crygb	Mus musculus crystallin, gamma B (Crygb), mRNA.
BX845808	1	NM_001085953	MGC53635	NM_025575	Sys1	Mus musculus SY51 Golgi-localized integral membrane protein homolog (S. cerevisiae) (Sys1), mRNA.
BX846071	1	NM_001097758	LOC100037010	NM_178396	Car12	Mus musculus carbonic anhydrase 12 (Car12), mRNA.
BX850413	1	NM_001091364	MGC82210	NM_025861	Pqlc1	Mus musculus PQ loop repeat containing 1

BX851648	1	NM_001087379	flj13576	NM_028990	Tmem168	(Pqlc1), mRNA. Mus musculus transmembrane protein 168 (Tmem168), mRNA.
BX851874	1	NM_001095967	MGC99260	NM_019571	Tspan5	Mus musculus tetraspanin 5 (Tspan5), mRNA.
BX852927	1	NM_001096286	MGC131207	NM_025468	Sec11c	Mus musculus SEC11 homolog C ( <i>S. cerevisiae</i> ) (Sec11c), mRNA.
CA983123	1	NM_001091338	MGC84630	NM_026660	0610009O03Rik	Mus musculus RIKEN cDNA 0610009O03 gene (0610009O03Rik), mRNA.
CB560275	1	NM_001095902	MGC115109	NM_013681	Syn2	Mus musculus synapsin II (Syn2), transcript variant IIb, mRNA.
CD252878	1	NM_001086062	MGC53394	NM_027430	Brp44	Mus musculus brain protein 44 (Brp44), mRNA.
CD255470	1	NM_001096103	MGC114707	NM_026899	Ssu72	Mus musculus Ssu72 RNA polymerase II CTD phosphatase homolog (yeast) (Ssu72), mRNA.
CD325980	1	NM_001097761	LOC100037021	NM_009768	Bsg	Mus musculus basigin (Bsg), transcript variant 1, mRNA.
CD326022	1	NM_001096476	MGC131332	NM_011485	Star	Mus musculus steroidogenic acute regulatory protein (Star), mRNA.
CK798751	1	NM_001097685	LOC100036909	NM_172883	Mfsd7	Mus musculus major facilitator superfamily domain containing 7 (Mfsd7), mRNA.
CN318704	1	NM_001094475	LOC494587	NM_017472	Snx3	Mus musculus sorting nexin 3 (Snx3), mRNA.
CV523443	1	NM_001096886	nkx6-2	NM_183248	Nkx6-2	Mus musculus NK6 transcription factor related, locus 2 ( <i>Drosophila</i> ) (Nkx6-2), mRNA.
CX131254	1	NM_001086659	tceb1	XM_001475337	LOC100045866	PREDICTED: Mus musculus similar to elongation factor SII p15 subunit (LOC100045866), mRNA.
D83649	1	NM_001085868	sox7-A	NM_011446	Sox7	Mus musculus SRY-box containing gene 7 (Sox7), mRNA.
DQ096984	1	NM_001085559	bra3-a	NM_009309	T	Mus musculus brachyury (T), mRNA.
DR730200	1	NM_001091294	MGC83900	NM_026417	Yipf4	Mus musculus Yip1 domain family, member 4 (Yipf4), mRNA.
DT075664	1	NM_001090246	nherf-2	NM_023055	Slc9a3r2	Mus musculus solute carrier family 9 (sodium/hydrogen exchanger), isoform 3 regulator 2 (Slc9a3r2)
L09730	1	NM_001097046	dlx3	NM_010055	Dlx3	Mus musculus distal-less homeobox 3 (Dlx3), mRNA.
L19566	1	NM_001087722	LOC397703	NM_010132	Emx2	Mus musculus notochord homolog ( <i>Xenopus laevis</i> ) (Noto), mRNA.
L29057	1	NM_001095576	xb-cad	NM_009864	Cdh1	Mus musculus cadherin 1 (Cdh1), mRNA.
L39213	1	NM_001088313	LOC398047	NM_009170	Shh	Mus musculus sonic hedgehog (Shh), mRNA.
U62807	1	NM_001087993	LOC397850	NM_022310	Hspa5	Mus musculus heat shock protein 5 (Hspa5), mRNA.
U76752	1	NM_001086198	MGC52564	NM_207531	Agr3	Mus musculus anterior gradient homolog 3 ( <i>Xenopus laevis</i> ) (Agr3), mRNA.
X65513	1	NM_001092654	MGC83403	NM_018864	Impa1	Mus musculus inositol (myo)-1(or 4)-monophosphatase 1 (Impa1), mRNA.
BJ637187	2			NM_025817	1200009O22Rik	Mus musculus RIKEN cDNA 1200009O22 gene (1200009O22Rik), mRNA.
BP684235	2			XM_620516	Rkh3d	PREDICTED: Mus musculus ring finger and KH domain containing 3 (Rkh3d), mRNA.
BP713579	2			NM_009146	Frrs1	Mus musculus ferric-chelate reductase 1 (Frrs1), mRNA.
BP729816	2			NM_008059	G0s2	Mus musculus G0/G1 switch gene 2 (G0s2), mRNA.
BX849722	2			NM_027251	2010107G23Rik	Mus musculus RIKEN cDNA 2010107G23 gene (2010107G23Rik), mRNA.
BX851419	2			NM_022986	Irak1bp1	Mus musculus interleukin-1 receptor-associated kinase 1 binding protein 1 (Irak1bp1), mRNA.
CB200829	2			NM_001024617	Inpp4b	Mus musculus inositol polyphosphate-4-phosphatase, type II (Inpp4b), mRNA.
CB207408	2			NM_178768	C230095G01Rik	Mus musculus RIKEN cDNA C230095G01 gene (C230095G01Rik), mRNA.
CB560998	2			XM_925654	BC023892	PREDICTED: Mus musculus cDNA sequence BC023892, transcript variant 3 (BC023892), mRNA.
CF283382	2			NM_028234	Prr8	Mus musculus proline rich 8 (Prr8), mRNA.
DR728535	2			NM_024284	Hagh	Mus musculus hydroxyacyl glutathione hydrolase (Hagh), mRNA.

**Mex3 family**

Mex3b	this work	XM_912460	Mex3b	PREDICTED: Mus musculus ring finger and KH domain containing 3 (Rkh3d), mRNA.
Mex3c	NM_001097101	NM_001039214	Mex3c	Mus musculus mex3 homolog C ( <i>C. elegans</i> ), mRNA (cDNA clone IMAGE:30361754), partial cds.

Mex3d	NM_001095650	NM_198615	Mex3d	Mus musculus mex3 homolog D (C. elegans), mRNA (cDNA clone IMAGE:6414834), complete cds.
-------	--------------	-----------	-------	--

#### FGF signaling components

ets1b	NM_001088152	NM_011808	Ets1	Mus musculus E26 avian leukemia oncogene 1, 5' domain (Ets1),
syndecan-2	NM_001087471	NM_008304	Sdc2	Mus musculus syndecan 2 (Sdc2), mRNA.

Among 333 gene tags, which were satisfied with the two criteria (a more than 1.5-fold difference in set 1 and a more than 1.2-fold difference in set 2; see the text), 221 genes were assigned using Method 1 and Method 2 described below. In addition to the 221 genes, we have added *sdc2*, *ets1*, *mex3c* and *mex3d* to Mex3b targets based on the following reasons. The *ets1* gene has *Xenopus* paralogs, *ets1a* and *ets1b*, which were satisfied with criteria from set 2 and set 1, respectively. *sdc2* was satisfied with set 1, and both *sdc2* and *ets1* mRNAs were shown to destabilize reporter mRNAs by the Mex3b protein (see Fig. 7). *mex3c* and *mex3d* genes, which were not included in the microarray, belong to the *mex3* gene family and show substantial sequence similarity to the 3'LCU.

Method 1: Blastn search was performed against *X. laevis* RefSeq sequence library using each sequence tag (60 bases) as a query. When a top hit showed sequence identity of 95% or higher, this RefSeq ID was assigned to the query. When the obtained RefSeq ID has its protein sequence, blastp search was performed using this as a query against mouse RefSeq protein sequence library to determine the top hit, which possessed at least an amino acid sequence identity of 35% and a coverage (a ratio of the alignment length to the query length) of 60%, as a putative mouse ortholog. Later, each putative ortholog was inspected manually.

Method 2: If tag sequences were from the 3' sequences of IMAGE clones, the 5' sequence of the same clone was obtained using the GI number. Using this 5' sequence as a query, a blastx search was performed against the mouse RefSeq protein sequence library. When a mouse protein sequence had a sequence identity of 60% or greater and an E-value of  $1 \times 10^{-10}$  or less, the query was assigned as the *Xenopus* ortholog of the mouse gene carrying the RefSeq ID.

**Table S2. Significantly rich or rare GO terms in possible Mex3b target genes**

GO number	Number of downregulated genes	GO description	P-value
<b>Biological process</b>			
GO:0015031	19	Protein transport	9×10 <sup>-4</sup>
GO:0045184	19	Establishment of protein localization	0.001
GO:0008104	19	Protein localization	0.005
GO:0007186	1	G-protein coupled receptor protein signaling	-0.005
GO:0033036	19	Macromolecule localization	0.006
GO:0007275	40	Multicellular organismal development	0.007
GO:0009790	15	Embryonic development	0.007
GO:0048513	28	Organ development	0.009
<b>Molecular function</b>			
GO:0005515	79	Protein binding	2×10 <sup>-4</sup>
GO:0004888	2	Transmembrane receptor activity	-0.002
GO:0004930	1	G-protein coupled receptor activity	-0.004
GO:0004871	11	Signal transducer activity	-0.008
GO:0060089	11	Molecular transducer activity	-0.008
GO:0001584	1	Rhodopsin-like receptor activity	-0.008
GO:0004872	10	Receptor activity	-0.01
<b>Cellular component</b>			
GO:0044424	119	Intracellular part	4×10 <sup>-4</sup>
GO:0043229	102	Intracellular organelle	4×10 <sup>-4</sup>
GO:0043226	102	Organelle	4×10 <sup>-4</sup>
GO:0005622	120	Intracellular	4×10 <sup>-4</sup>
GO:0005794	16	Golgi apparatus	8×10 <sup>-4</sup>
GO:0005737	79	Cytoplasm	0.003
GO:0043231	87	Intracellular membrane-bound organelle	0.009
GO:0043227	87	Membrane-bound organelle	0.009

Positive and negative P-values indicated the significance of over-representing and under-representing, respectively, gene ontology (GO) terms in the group of putative Mex3b target genes compared with the all MGI gene set. The list presents GO terms that showed the absolute P-value of 0.1 or less. Note that when the candidate genes were compared with the group 2 and group 3 genes, such results were not found, suggesting that the genes selected for the experiments were already biased to the GO terms shown in Table 2. Thus, we concluded that there were no GO terms that could characterize the Mex3b target genes.