

Supplementary Figure 1., Suzuki *et al.*

Hsapiens	1	-----MAAAPFLKHWRITTLERVEKVFSPYIYFTDNLGRRLFGDSCPVYIYSSFLTPERLPYEAQRDRFPAQVGDSPGPTWWTWCFRVELITPEAVWQGEVHLWESDGEGLVWRDGEVQGLTKEGKTSYLLDRLEGRDPR
Mmusculus	1	-----MAAAPFLKHWRITTLERVEKVFSPYIYFTDNLGRRLFGDSCPVYIYSSFLTPERLPYEAQRDRFPAQVGDSPGPTWWTWCFRVELITPEAVWQGEVHLWESDGEGLVWRDGEVQGLTKEGKTSYLLSERLNASDPR
Rnorvegicus	1	-----MAAAPFLKHWRITTLERVEKVFSPYIYFTDNLGRRLFGDSCPVYIYSSFLTPERLPYEAQRDRFPAQVGDSPGPTWWTWCFRVELITPEAVWQGEVHLWESDGEGLVWRDGEVQGLTKEGKTSYLLSERLNAADPR
Gallus	1	-----MRSSGVAALVLRRTTLERVEKVFSAIYFTDNLGRRLFGDSCPVYIYSSFLTPERLPYEAQRDRFPAQVGDSPGPTWWTWCFRVELITPEAVWQGEVHLWESDGEGLVWRDGEVQGLTKEGKTSYLLSSKKEIPEH
Xlaevis	1	MDVSPNIQSSRSDFSYSSFFLQNRRTTLERVEKVFSEIYFTDNLGRRLFGDSCPVYIYSSFLTPERLPYEAQRDRFPAQVGDSPGPTWWTWCFRVELITPEAVWQGEVHLWESDGEGLVWRDGEVQGLTKEGKTSYLLTERKSDQDQ
Tnigroviridis	1	-----MFCQPLVKNRRTTLERVEKVFSAIYFTDNLGRRLFGDSCPVYIYSSFLTPERLPYEAQRDRFPAQVGDSPGPTWWTWCFRVELITPEAVWQGEVHLWESDGEGLVWRDGEVQGLTKEGKTSYLLSERLKEIPEH
consensus	1	maaapmLKh RTtLERvEKVFSpiYFTdCNLRGrLfg scpvtvss fLtperlpye avq f paqvqdsfgptwwtwcfRvEl ipedWvGkEVHLwEsdGEGLVWRDgePVQGLtKEGkTSyLLserLkeIpeH
Hsapiens	146	SLTYVEVACNGLGAGGSMIAADPEKMFQLSKAEVYFHRDVFHLLVDLELLGLAKGLGDNQRSFQALYANQMNVCDAQPETPAAALASIFFGQGGESQHTIHAMGHCHIDTAWLWPFKTVRKCARSWITAVQLMER---NPE
Mmusculus	145	SLTYVEVACNGLGAGGSMIAADPEKMFQLSKAEVYFHRDVFHLLVDLELLGLAKGLGEDNQRSFQALYANQMNVCDAQPETPAAALASIFFGQGGESQHTIHAMGHCHIDTAWLWPFKTVRKCARSWITAVQLMER---NPE
Rnorvegicus	145	SLTYVEVACNGLGAGGSMIAADPEKMFQLSKAEVYFHRDVFHLLVDLELLGLAKGLGEDNQRSFQALYANQMNVCDAQPETPAAALASIFFGQGGESQHTIHAMGHCHIDTAWLWPFKTVRKCARSWITAVQLMER---NPE
Gallus	108	SLTYVEVACNGLGAGGSMIAADPEKMFQLSKAEVYFHRDVFHLLVDLELLGLAKGLGEDNQRSFQALYANQMNVCDAQPETPAAALASIFFGQGGESQHTIHAMGHCHIDTAWLWPFKTVRKCARSWITAVQLMER---NPE
Xlaevis	162	SLTYVEVACNGLGAGGSMIAADPEKMFQLSKAEVYFHRDVFHLLVDLELLGLAKGLGEDNQRSFQALYANQMNVCDAQPETPAAALASIFFGQGGESQHTIHAMGHCHIDTAWLWPFKTVRKCARSWITAVQLMER---NPE
Tnigroviridis	132	SLTYVEVACNGLGAGGSMIAADPEKMFQLSKAEVYFHRDVFHLLVDLELLGLAKGLGEDNQRSFQALYANQMNVCDAQPETPAAALASIFFGQGGESQHTIHAMGHCHIDTAWLWPFKTVRKCARSWITAVQLMER---NPE
consensus	162	SltTYvEvACnGL GaG GSMIAAdDpekMfQlsrAeL vFHRDvHvLlVdLeLlLl iakGLgednQRsFQALyANqMnVnCDAQ PetfPaakaLasrFfGqH GeSQHtIhAmGHCHIDTawLwPfkTvrKcArSwitAvQLmer ---npd
Hsapiens	293	FIFACS-----QAQQLWIKSWYPLGYSRTOEACRGGQFVPGGTWEMDGNLPSGEMVRFQLOGNQFLQEQGKMCSEFWLPTDFGYSQAQLPQIMQGGCIKRFLTKLWSLWNSFPFHHTFWEGLDGSRLVLIHFP
Mmusculus	292	FIFACS-----QAQQLWIKSWYPLGYSRTOEACRGGQFVPGGTWEMDGNLPSGEMVRFQLOGNQFLQEQGKMCSEFWLPTDFGYSQAQLPQIMQGGCIKRFLTKLWSLWNSFPFHHTFWEGLDGSRLVLIHFP
Rnorvegicus	292	FIFACS-----QAQQLWIKSWYPLGYSRTOEACRGGQFVPGGTWEMDGNLPSGEMVRFQLOGNQFLQEQGKMCSEFWLPTDFGYSQAQLPQIMQGGCIKRFLTKLWSLWNSFPFHHTFWEGLDGSRLVLIHFP
Gallus	259	FCATTO-----LAQQFEWISWYPLGYSRTOEACRGGQFVPGGTWEMDGNLPSGEMVRFQLOGNQFLQEQGKMCSEFWLPTDFGYSQAQLPQIMQGGCIKRFLTKLWSLWNSFPFHHTFWEGLDGSRLVLIHFP
Xlaevis	309	FKFICS-----QAQQLWIKSWYPLGYSRTOEACRGGQFVPGGTWEMDGNLPSGEMVRFQLOGNQFLQEQGKMCSEFWLPTDFGYSQAQLPQIMQGGCIKRFLTKLWSLWNSFPFHHTFWEGLDGSRLVLIHFP
Tnigroviridis	279	FVFCQVTSHTSVCIQSPVCFVCSQQAQQLWIKSWYPLGYSRTOEACRGGQFVPGGTWEMDGNLPSGEMVRFQLOGNQFLQEQGKMCSEFWLPTDFGYSQAQLPQIMQGGCIKRFLTKLWSLWNSFPFHHTFWEGLDGSRLVLIHFP
consensus	336	Fifacs qAQQLeWksWYPLgYsRtoEacRgGqFvPggTWEmdGNLpSGEMvRFQlogNQfLqEQgKmcSEfWlPdTfGysaQLPQImqGgCIKRfLTKLWSLWnsFPFHtFWEGLDGSrLVLIHfP
Hsapiens	426	PGDSYGMQGSVEEVKLVKYNRDKGRVNHSAFLFGDGGGGPTQMLDRLKRLSDTGLPRVQLSSPQLFSALESQSLCTWGWLFLELHNGTYTTAQQIKK-----GNRECEQLHDVEVLSLALARSAQFLYPAALQHLWRLLLLNQF
Mmusculus	425	PGDSYGMQGSVEEVKLVKYNRDKGRVNHSAFLFGDGGGGPTQMLDRLKRLSDTGLPRVQLSSPQLFSALESQSLCTWGWLFLELHNGTYTTAQQIKK-----GNRECEQLHDVEVLSLALARSAQFLYPAALQHLWRLLLLNQF
Rnorvegicus	425	PGDSYGMQGSVEEVKLVKYNRDKGRVNHSAFLFGDGGGGPTQMLDRLKRLSDTGLPRVQLSSPQLFSALESQSLCTWGWLFLELHNGTYTTAQQIKK-----GNRECEQLHDVEVLSLALARSAQFLYPAALQHLWRLLLLNQF
Gallus	389	PGDSYGMQGSVEEVKLVKYNRDKGRVNHSAFLFGDGGGGPTQMLDRLKRLSDTGLPRVQLSSPQLFSALESQSLCTWGWLFLELHNGTYTTAQQIKK-----GNRECEQLHDVEVLSLALARSAQFLYPAALQHLWRLLLLNQF
Xlaevis	439	PGDSYGMQGSVEEVKLVKYNRDKGRVNHSAFLFGDGGGGPTQMLDRLKRLSDTGLPRVQLSSPQLFSALESQSLCTWGWLFLELHNGTYTTAQQIKK-----GNRECEQLHDVEVLSLALARSAQFLYPAALQHLWRLLLLNQF
Tnigroviridis	432	PGDSYGMQGSVEEVKLVKYNRDKGRVNHSAFLFGDGGGGPTQMLDRLKRLSDTGLPRVQLSSPQLFSALESQSLCTWGWLFLELHNGTYTTAQQIKK-----GNRECEQLHDVEVLSLALARSAQFLYPAALQHLWRLLLLNQF
consensus	466	PGDSYGMqGsVeevKlVtKYNrDKGRvNhSAfLFGdGGGGpTqMLdRlKRLs TDGLPRvQLSSpQLFsaLeSdSCLtWGWLFleLhNgTYTTaQIKK gNreCEqLHDVEVLSlAlArSa QFLYpAaLqHlWRLlLLnQf
Hsapiens	577	HDVITGSCIQVAEDAMYYEYDIRSHGNLISAAAAALCAGEPGPK-----GLLVTNLPWERTVMAIAPKPKG-AHSLALVTVPMSGYAPVPPTSLQPLLPQPVFVQETDGSVTLDNGLIIRVLDPTGQLTSLVVASGREATAEAGLGNQF
Mmusculus	576	HDVITGSCIQVAEDAMYYEYDIRSHGNLISAAAAALCAGEPGPK-----GLLVTNLPWERTVMAIAPKPKG-AHSLALVTVPMSGYAPVPPTSLQPLLPQPVFVQETDGSVTLDNGLIIRVLDPTGQLTSLVVASGREATAEAGLGNQF
Rnorvegicus	576	HDVITGSCIQVAEDAMYYEYDIRSHGNLISAAAAALCAGEPGPK-----GLLVTNLPWERTVMAIAPKPKG-AHSLALVTVPMSGYAPVPPTSLQPLLPQPVFVQETDGSVTLDNGLIIRVLDPTGQLTSLVVASGREATAEAGLGNQF
Gallus	543	HDVITGSCIQVAEDAMYYEYDIRSHGNLISAAAAALCAGEPGPK-----GLLVTNLPWERTVMAIAPKPKG-AHSLALVTVPMSGYAPVPPTSLQPLLPQPVFVQETDGSVTLDNGLIIRVLDPTGQLTSLVVASGREATAEAGLGNQF
Xlaevis	593	HDVITGSCIQVAEDAMYYEYDIRSHGNLISAAAAALCAGEPGPK-----GLLVTNLPWERTVMAIAPKPKG-AHSLALVTVPMSGYAPVPPTSLQPLLPQPVFVQETDGSVTLDNGLIIRVLDPTGQLTSLVVASGREATAEAGLGNQF
Tnigroviridis	591	HDVITGSCIQVAEDAMYYEYDIRSHGNLISAAAAALCAGEPGPK-----GLLVTNLPWERTVMAIAPKPKG-AHSLALVTVPMSGYAPVPPTSLQPLLPQPVFVQETDGSVTLDNGLIIRVLDPTGQLTSLVVASGREATAEAGLGNQF
consensus	625	HdVv GScIqV edAmMyYedIrshGn LlSaaaalCagepgpk gllvntlpwertvmaItg gg sLaLVtVpSMgyapvp pTslqPlLPqPvFvqEtDgsVtLdNgIiRvLdPtGQLTSLVvASgREatAeG lGnQf
Hsapiens	727	VLFDVPLYNDAWDMYHLERTRKPVLGAGTLAGVTEGGLRGSAWFLLQISPNLSQEVLDVGCPCYRFHTEVHWHAEHFLKVEFPARVRSQAATYEQFGLQRPHTNWSWDNARFEVWHRWMDLSEHFGALALNDCKYGASVRSGL
Mmusculus	726	VLFDVPLYNDAWDMYHLERTRKPVLGAGTLAGVTEGGLRGSAWFLLQISPNLSQEVLDVGCPCYRFHTEVHWHAEHFLKVEFPARVRSQAATYEQFGLQRPHTNWSWDNARFEVWHRWMDLSEHFGALALNDCKYGASVRSGL
Rnorvegicus	727	VLFDVPLYNDAWDMYHLERTRKPVLGAGTLAGVTEGGLRGSAWFLLQISPNLSQEVLDVGCPCYRFHTEVHWHAEHFLKVEFPARVRSQAATYEQFGLQRPHTNWSWDNARFEVWHRWMDLSEHFGALALNDCKYGASVRSGL
Gallus	693	VLFDVPLYNDAWDMYHLERTRKPVLTLLKPEITLAGGLRGSASFSLRSGESSTLQETLLDAMPYICFRTVWQKESHKFLKVEFPVQVRSNATYEQFGLQRPHTNWSWDNARFEVWHRWMDLSEHFGALALNDCKYGASVRSGL
Xlaevis	743	VLFDVPLYNDAWDMYHLERTRKPLTSSYS-KLQISONGGLRVAFTLQISENSTHDEIILDASCPYIRFTKVMNWHAEHFLKVEFPARVRSQAATYEQFGLQRPHTNWSWDNARFEVWHRWMDLSEHFGALALNDCKYGASVRSGL
Tnigroviridis	732	VLFDVPLYNDAWDMYHLERTRKPVLEVQPARYASEKPRGVVSTLRLSDKSTFQETLLDAMPYICFRTVWQKESHKFLKVEFPVRSQAATYEQFGLQRPHTNWSWDNARFEVWHRWMDLSEHFGALALNDCKYGASVRSGL
consensus	781	vLFdDvPLyNDawDMYHlERtRkPvLgagTlAgvtEgglRgsaWfLlQIsPnLSqEvLdVgcPcyRfHteVhWHAeHfLkVefParvRSqaATyEQfGHLQrPhTnWSwDnARfEwHrWMDLSEhFGAlALnDcKYgASvRsgVl
Hsapiens	883	SLSLLRAPKAPDATADMRHEFTYALMPHKG-----SFDQAGVIAQAYLNFLPALPAPAPATWSAFSVPVAVLETTKQAEKSHQIRTLVRLRYEAHGSHVDCWLHSLPVQEAHLCDLLERPDPAQHLS
Mmusculus	882	SLSLLRAPKAPDATADMRHEFTYALMPHKG-----SFDQAGVIAQAYLNFLPALPAPAPATWSAFSVPVAVLETTKQAEKSHQIRTLVRLRYEAHGSHVDCWLHSLPVQEAHLCDLLERPDPAQHLS
Rnorvegicus	882	SLSLLRAPKAPDATADMRHEFTYALMPHKG-----SFDQAGVIAQAYLNFLPALPAPAPATWSAFSVPVAVLETTKQAEKSHQIRTLVRLRYEAHGSHVDCWLHSLPVQEAHLCDLLERPDPAQHLS
Gallus	849	SLSLLRAPKAPDATADMRHEFTYALMPHKG-----SFDQAGVIAQAYLNFLPALPAPAPATWSAFSVPVAVLETTKQAEKSHQIRTLVRLRYEAHGSHVDCWLHSLPVQEAHLCDLLERPDPAQHLS
Xlaevis	898	SLSLLRAPKAPDATADMRHEFTYALMPHKG-----SFDQAGVIAQAYLNFLPALPAPAPATWSAFSVPVAVLETTKQAEKSHQIRTLVRLRYEAHGSHVDCWLHSLPVQEAHLCDLLERPDPAQHLS
Tnigroviridis	888	SLSLLRAPKAPDATADMRHEFTYALMPHKG-----SFDQAGVIAQAYLNFLPALPAPAPATWSAFSVPVAVLETTKQAEKSHQIRTLVRLRYEAHGSHVDCWLHSLPVQEAHLCDLLERPDPAQHLS
consensus	937	sLSllRAPKaDatADmGrHeFYAlMPHkG sFDQAgVIAqAYlnFlPalpap pap tWSAFsVpAVLEtTKQAE qrrsLVRLRYEahGshvdcwLtslPVqEAHLCDLLErpd ghls
Hsapiens	1014	LQNRKLKTFSPFQVLSLLVLQPPPH
Mmusculus	1013	LQNRKLKTFSPFQVLSLLVLQPPPN
Rnorvegicus	1014	LQNRKLKTFSPFQVLSLLVLQPPAN
Gallus	977	LEQGRKLSFPFQVLSLLVLQ---
Xlaevis	1026	LKQGRKLSFPFQVLSLLVLQRR---
Tnigroviridis		
consensus	1093	l dnrKlKtfsPfqVlSllVlQppH

Supplementary Figure 1: Sequence Comparison of various Man2C1 orthologues:

Using the protein sequence of human Man2C1, the NCBI sequence database was surveyed to identify Man2C1 orthologues. Among the sequences obtained, sequences from the mouse (Gene Accession No. NP_082912), rat (P21139), chicken (XP_413694), frog (AAH70781) and puffer fish (CAF98334) were used for a multiple sequence alignment analysis using Clustal W program (<http://clustalw.genome.jp/>) and the results were formatted with Boxshade 3.21 (http://www.ch.embnet.org/software/BOX_form.html). Hsapiens; human (BC050550), Mmusculus; mouse (NP_082912), Rnorvegicus; rat (P21139), Ggallus; chicken (XP_413694), Xlaevis; frog (AAH70781), and Tnigroviridis; pufferfish (CAF98334) Man2C1 orthologues.