

Figure S1.

MC1R-Human	-----MAVQG----	5
MC1R-Mouse	-----MSTQE----	5
MC1R-Rat	-----MPTQG----	5
MC1R-Opossum	-----MPMPG----	5
MC1R-Chicken	-----MSMLA----	5
MC1R-Zebrafinch	-----MATLA----	5
MC1R-AnoleLizard	-----NATLA----	5
MC1R-Xenopus	-----	-
MC1R-Takifugu	-----YSTLT----	5
MC1R-Tetraodon	-----MEISNRSLHGS	11
MC1R-Medaka	-----LFE	3
MC1R-Sickleback	-----MELTNRSL	9
MC1R-Zebrafish	-----MNDSSRHHF	9
MC1R-Callorhinchus	-----	-
MC2R-Human	-----	-
MC2R-Mouse	-----	-
MC2R-Rat	-----MKHIIN----	6
MC2R-Opossum	-----	-
MC2R-Chicken	-----MSTEK----	5
MC2R-Zebrafinch	-----MSTER----	5
MC2R-Turkey	-----	-
MC2R-AnoleLizard	-----	-
MC2R-Takifugu	-----	-
MC2R-Tetraodon	-----	-
MC2R-Sickleback	-----	-
MC2R-Medaka	-----	-
MC2R-Zebrafish	-----	-
MC3R-Human	-----MNASCC----	6
MC3R-Mouse	-----MNSSCC----	6
MC3R-Rat	-----MNSSCC----	6
MC3R-AnoleLizard	-----	-
MC3R-Xenopus	-----MNTTN----	5
MC3R-Zebrafinch	-----	-
MC3R-Turkey	-----MNSTHF----	6
MC4R-Xenopus	-----MNFTHH---H	7
MC3R-Zebrafish	-----MNDSHL----	6
MC3R-Callorhinchus	-----MNSTHF----	6
MC4R-Human	-----MVNSTH-RGM	9
MC4R-Mouse	-----MNSTHH-HGM	9
MC4R-Rat	-----MNSTHH-HGM	9
MC4R-Opossum	-----MNSTHYHGM	10
MC4R-Chicken	-----MNFTQH-RGT	9
MC4R-Turkey	-----MNFTQH-RGT	9
MC4R-Zebrafinch	-----MNFTQH-RGT	9
MC4R-AnoleLizard	-----MNFTYH-YRV	9
MC4R-Takifugu	-----	-
MC4R-Tetraodon	-----MNATD----	5
MC4R-Sickleback	-----MNSTQS--GG	8
MC4R-Medaka	-----MNSTLP----	6
MC4R-Zebrafish	-----MNTSHH----	6
MC5R-Human	-----MNSSFH----	6
MC5R-Mouse	MQDQSPVNRNFNSQKPPGTREESCLPLRGAEQNGKSDAKKWHGSLPAMNS	50
MC5R-Rat	-----SQKPPGTREESCLPLRGAEQNGKFEAKKWRHFLPAMNS	38
MC5R-Opossum	-----MNSSIF----	6
MC5R-Chicken	-----MNTSSQ----	6
MC5R-Zebrafinch	-----	-
MC5R-Turkey	-----MNTSSQ----	6
MC5R-Takifugu	-----MNTSHRSSDPQEG----	13
MC5R-Tetraodon	-----MNATHGSSNPQEG----	13
MC5R-Sickleback	-----MNLSESSYREELLGN	17
MC5R-Medaka	-----TAPMEVTDKTNLSLHKAQL	18
MC5Rb-Zebrafish	-----MNSSEW----	6
MC5Ra-Zebrafish	-----MNTSET----	6
MC5R-Callorhinchus	-----	-
MCAR-Lampetra	-----MNLSEA----	6
MCAR_Lamprey	-----	-
MCBR-Lampetra	-----MTFSAGGVGGV	11
MCBR_Lamprey	-----	-
MCRL-Branchiostoma	-----	-

MC1R-Human	-SQRRLLGSLNSTPTAI---PQLGLAANOTGARC-LEVSI	SDGLFSLGL	50			
MC1R-Mouse	-PQKSLGSLNSNA--T---SHLGLATNQSEPW	-LYVSI	PDGLFSLGL	48		
MC1R-Rat	-PPKRLGSLNSTSITT---SHLGLATNQGSWC-	LHVSIP	PDGLFSLGL	50		
MC1R-Opossum	-QQKRLFNSLNSTSPDT---LHQAVPTNQTDIS	C-OGLF	IPDEL	FLLTGL	50	
MC1R-Chicken	--PLRLLREPWNASE-G---NQSNATAGAGGAW	C-OGLD	IPNEL	FLLTGL	48	
MC1R-Zebrafinch	--PLRLLREPSNASE-G---NQSNATVGASAGR	C-OGLD	IPNEL	FLLTGL	48	
MC1R-AnoleLizard	-----G---NLSVNGTEGGNCSTDNPLMIPHE	VFLILGA	36			
MC1R-Xenopus	-----MLHSTVNSTNAT---INVGTELKPTNTSD-	TVMDVPE	ELFLLCV	41		
MC1R-Takifugu	---HTLLCPLIEFMDD---NETNITNGEQNLG	C-VOIL	IPEL	FLLTGL	48	
MC1R-Tetraodon	NILHMEFSPLIEFMEDN---ETNITNGDONTL	G-C-VOTR	IPEL	FLLTGL	57	
MC1R-Medaka	LKPLKILSQCFLEKYN---ETNSTAGERNLLG	C-FOIR	IPEL	FLLTGL	49	
MC1R-Sickleback	GPSIYHMELSPQDYFME---DNETNSTAGERNG	C-VOIR	IPEL	FLLTGL	55	
MC1R-Zebrafish	SMKHMDYMYNADNNITL---NSNSTASDINVT	GI-AQIM	IPEL	FLLTGL	55	
MC1R-Callorhinchus	-----MSAVAC-QHVS	VPE	EVFLSLGI	21		
MC2R-Human	--MKHIINS-----YENINNTARNNSD	C-PRVV	LPE	EFFI	ISI	36
MC2R-Mouse	--MKHIINS-----YEHTNDTARNNSD	C-PDVV	LPE	EFFI	ISV	36
MC2R-Rat	-----S---YEHTNNTARNNSD	C-PDVV	VPE	EFFI	ISI	36
MC2R-Opossum	-ERASELIKILGHNGNP---PENITDNATNNTD	C-IOVV	VPE	EVFFA	ISI	45
MC2R-Chicken	PFNLILSAHAGQTSIPS---LENITDFSLNITD	C-NOVV	VPE	EVFFV	VAA	51
MC2R-Zebrafinch	--PSILIKHPGQTSIPS---LENISDFSLNITD	C-TOVV	VPE	EVFFV	VAA	49
MC2R-Turkey	-----IKHAGQTSIPS---LENITDFSLNITD	C-NOVV	VPE	EVFFV	VAA	40
MC2R-AnoleLizard	-----VPE	EFFI	IAT	11		
MC2R-Takifugu	-----SSKLQVLKFT---SLAMNATTVNRSD	C-PEVN	VPI	HEFFI	IGF	39
MC2R-Tetraodon	-----MDTAAANRSD	C-PEVR	VPVPL	EFFI	IGV	26
MC2R-Sickleback	-----SN---FEVMNTNSVNRTD	C-PEVK	VPFL	EFFI	IGI	31
MC2R-Medaka	-----M---NPSAESPSSIHTD	C-AEVO	VP	GOVFL	VIAV	30
MC3R-Human	--LPSVQPTLPNGSEHL---QAPFFSNQSSSAF	C-EQVF	IKPE	EVFLSLGI	50	
MC3R-Mouse	--LSSVSPMLPNLSEHP---AAPASNRSGSGF	C-EQVF	IKPE	EVFLALGI	50	
MC3R-Rat	--PSSSYPTLPNLSQHP---AAPSASNRSGSGF	C-EQVF	IKPE	EVFLALGI	50	
MC3R-AnoleLizard	-----GVC-ELVFIKADVFLSLGI	18				
MC3R-Xenopus	VFSVQAVLANATLDP-N---ETLFLSNLSRIGF	C-EQVL	IKTE	EVFLTGLI	50	
MC3R-Zebrafinch	-----TNRSGDGF	C-EQVF	IKAE	EVFLTGLI	24	
MC3R-Turkey	--AFSQPVLLNVTEDA---NDSILNRRSSDGF	C-EQVF	IKAE	EVFLALGI	50	
MC4R-Xenopus	EPHHLHYRNHSRTVGAG---ANDTKEKGHSGG	CYEOL	FVSP	EVFVILGI	54	
MC3R-Zebrafish	--QFLKGQKSVNSTSLP---PNGSLADSPAGT	L-C-EQVO	IQAE	EVFLTGLI	50	
MC3R-Callorhinchus	-----LFDLQLNGSGDL---NKSSILNRSNPGF	C-EQVP	IKS	EVFLTGLI	47	
MC4R-Human	HTSLHLWNRSSYRLHSN---ASESLGKGYSDGG	CYEOL	FVSP	EVFVTLGV	56	
MC4R-Mouse	YTSLHLWNRSSYGLHGN---ASESLGKHPDGG	CYEOL	FVSP	EVFVTLGV	56	
MC4R-Rat	YTSLHLWNRSSHGLHGN---ASESLGKHSDDG	CYEOL	FVSP	EVFVTLGV	56	
MC4R-Opossum	HPTLHFWNHNSYVLHS-S---ANDTIGKGYLDGG	CYEOL	FVSP	EVFVTLGI	56	
MC4R-Chicken	LQPLHFWNHNSGLHR-G---ASEPSAKGHSSGG	CYEOL	FVSP	EVFVTLGI	55	
MC4R-Turkey	LQPLHFWNHNSGLHR-G---ASEPSAKGHSSGG	CYEOL	FVSP	EVFVTLGI	55	
MC4R-Zebrafinch	LQPLHFWNHNSYRLHG-G---ASERTVKGHSSGG	CYEOL	FVSP	EVFVTLGI	55	
MC4R-AnoleLizard	HQHLDLWNHNSYRLRGA---MNRSLGKSYTSEG	CYEOL	FVSP	EVFVTLGF	56	
MC4R-Takifugu	-----ESSTG	CYEOL	LISTE	EVFLTGLI	22	
MC4R-Tetraodon	PPGLIQDYNNGSQTLEA---DFPDEEKESAG	CYEOL	LISTE	EVFLTGLI	52	
MC4R-Sickleback	LIQGYHNRSASGVSPD---NDLAAEGKASAG	CYEOL	LISTE	EVFLTGLI	55	
MC4R-Medaka	---YGSVPNRSLSSATL---PPDLGGQKDSAG	CYEOL	LISTE	EVFLTGLI	50	
MC4R-Zebrafish	HGLHHSFRNHSQALPV---GKPSHGDRGSAG	CYEOL	LISTE	EVFLTGLI	53	
MC5R-Human	----LHFLDLNLNATEG---NLGPNVKNKSSP	C-EDMG	IAVE	EVFLTGLV	48	
MC5R-Mouse	SSTLTVLNLTLNASE-D---GILGSNVKNKSLA	C-EEMG	IAVE	EVFLTGLI	95	
MC5R-Rat	SSHTLLDLTLNASE-D---NILGQNVNKNSSA	C-EDMG	IAVE	EVFLTGLI	83	
MC5R-Opossum	----LHTLDLNLSSLGG---NMSGPMIKSSP	C-EQV	IAVE	EVFLTGLI	48	
MC5R-Chicken	----LYVSELNLSAFGS---NFTVPTVKSSP	C-EQV	VIAA	EVFLTGLI	48	
MC5R-Zebrafinch	-----SPC-EQV	VIAA	EVFLTGLI	18		
MC5R-Turkey	----LYVSELNLSAFGS---NFTVPTVKSSP	C-EQV	VIAA	EVFLTGLI	48	
MC5R-Takifugu	IMGNSTWNPLSYQPNFT---LSPPLPKTKTAA	C-EOL	HIAI	EVFLTGLI	59	
MC5R-Tetraodon	ILGNSTWNLSFHQPNS---LSPPLPKTKTAA	C-EOL	HIAI	EVFLTGLI	59	
MC5R-Sickleback	FTLAYSYHHQNYTPVPP---LHPDKTGTSPAA	C-EQV	HIAI	EVFLILGI	63	
MC5R-Medaka	ANSTWNFYQONYTIAPP---SLKDKTSPSAAA	C-EQV	HIAI	EVFLILGI	64	
MC5Rb-Zebrafish	--PTLSPNSSLSQANLS---DESSRPKTSASA	C-EQV	HIAI	EVFLTGLI	50	
MC5Ra-Zebrafish	--TLFPWGMHVNSSPASYILNATEPSSHNKPK	A-C-EOL	NIAI	EVFLILGI	53	
MC5R-Callorhinchus	-----LANVTAV---MNTSGFMNGSGG	C-ROLE	IPL	EVFLILGG	37	
MCAR-Lampetra	LFPNPFVGTSGPDDN-G---TASASANRTRF	S-C-HNFS	IPT	EVFLALGI	51	
MCAR_Lamprey	-----N-G---TAVASANRTRF	S-C-HNFS	IPNE	EVFLTGLI	31	
MCBR-Lampetra	VNNHHGANHQGGGNHS---GHGNATGGGHGR	P-C-EQV	LIP	EVFLILGV	57	
MCBR_Lamprey	-----C-EQV	LIP	EVFLILGV	16		
MCRL-Branchiostoma	-----VGA	3				

	TM1	TM2	
MC1R-Human	VSLVENALVVAITAKNRNLHSPMYCFICCLALS	DLVSGSNVLETTAV-IL	99
MC1R-Mouse	VSLVENVLVVAITAKNRNLHSPMYCFICCLALS	DLMVSIVLETTI-IL	97
MC1R-Rat	VSLVENVLVVAITAKNRNLHSPMYCFICCLALS	DLMVSIVLETTI-IL	99
MC1R-Opossum	VSLVENMMVVAITAKNRNLHSPMYCFICCLALS	DLVSVSNLLETISV-ML	99
MC1R-Chicken	VSLVENLLVVAITAKNRNLHSPMYCFICCLALS	DMLVSVSNLAKTLF-ML	97
MC1R-Zebrafinch	VSLVENLLVVAITAKNRNLHSPMYCFICCLALS	DMLVSVSNLAKTLF-ML	97
MC1R-AnoleLizard	ISFVENLLVVAITAKNRNLHSPMYCFICCLALS	DMLVSVSNVVEITFF-ML	85
MC1R-Xenopus	FSLLENILVVAITAKNRNLHSPMYCFICCLALS	DMLVSSSNLGETLI-IF	90
MC1R-Takifugu	ISLVENILVILAITAKNRNLHSPMYCFICCLALS	DMLVSVSNVVEITVF-ML	97
MC1R-Tetraodon	ISLVENILVILAITAKNRNLHSPMYCFICCLALS	DMLVSVSNVVEITVF-ML	106
MC1R-Medaka	ISLVENILVILAITAKNRNLHSPMYCFICCLALS	DMLVSVSNVVEITVF-ML	98
MC1R-Sickleback	ISLVENILVILAITAKNRNLHSPMYCFICCLALS	DMLVSVSNVVEITVF-ML	104
MC1R-Zebrafish	ISLVENILVVAITAKNRNLHSPMYCFICCLALS	DMLVSVSNVVEITVF-ML	104
MC1R-Callorhinchus	VSLVENILVVAITAKNRNLHSPMYCFICCLALS	DMLVSVSNMVEITVF-LI	70
MC2R-Human	VGVLLENLIVLLAVFKNKNLQAPMYFFICSLAIS	DMLGSLYKILENLI-II	85
MC2R-Mouse	IGLLENLIVLLAVIKNKNLQSPMYFFICSLAIS	DMLGSLYKILENLI-IM	85
MC2R-Rat	IGVLENLIVLLAVIKNKNLQSPMYFFICSLAIS	DMLGSLYKILENLI-IM	85
MC2R-Opossum	IGVLENLIVLLAVIKNKNLHSPMYFFICSLAIS	DMLGSLYKILENLI-II	94
MC2R-Chicken	AGLLENLIVLLAVIRNKNLHSPMYFFICSLAIS	DMLGSLYKILENLI-II	100
MC2R-Zebrafinch	AGLLENLIVLLAVIRNKNLHSPMYFFICSLAIS	DMLGSLYKILENLI-II	98
MC2R-Turkey	AGLLENLIVLLAVIRNKNLHSPMYFFICSLAIS	DMLGSLYKILENLI-II	89
MC2R-AnoleLizard	LGLLENLIVLLAVGRNKNLHSPMYFFICSLAIS	DMLGSLYKAVENIFYII	61
MC2R-Takifugu	VSLLLENLIVIGAVSWNRNLHSPMYCFIGSLA	AFNTVASVTKTWENLM-IT	88
MC2R-Tetraodon	-----	-----VM-IM	4
MC2R-Sickleback	VSLAENLLVVAIVIRNRNLHSPMYCFICSLA	AFNTIASLTKTWENLM-IV	75
MC2R-Medaka	VSLAENLLVVAIVIRNRNLHSPMYCFICSLA	AFNTIASLTKTWENLM-IV	80
MC2R-Zebrafish	ASLSENLLVVAIVIKNKNLHSPMYCFICNLA	VNTISSFSKALENLI-LL	79
MC3R-Human	VSLLLENLIVLAVVRNKNLHSPMYFFICSLA	ADMLVSVSNALETIM-IA	99
MC3R-Mouse	VSLMENILVILAVVRNKNLHSPMYFFICSLA	ADMLVSVSNALETIM-IA	99
MC3R-Rat	VSLMENILVILAVVRNKNLHSPMYFFICSLA	ADMLVSVSNALETIM-IV	99
MC3R-AnoleLizard	VGLLENLIVLAVIKNKNLHSPMYFFICSLA	ADMLVSVSNALETIM-IV	67
MC3R-Xenopus	ISLLENLIVLAVIKNKNLHSPMYFFICSLA	ADMLVSVSNALETIV-IA	99
MC3R-Zebrafinch	ISLLENLIVLAVIKNKNLHSPMYFFICSLA	ADMLVSVSNALETIV-IA	73
MC3R-Turkey	ISLLENLIVLAVIKNKNLHSPMYFFICSLA	ADMLVSVSNALETIV-IA	99
MC4R-Xenopus	VSLMENILVIAAIVSRNKNLHSPMYFFICSLA	ADMLVSVSNGFETIV-IT	103
MC3R-Zebrafish	VSLLENLIVIAAIVKKNLHSPMYFFICSLA	ADMLVSVSNALETIV-IA	99
MC3R-Callorhinchus	ISLLENLIVLAVIKNKNLHSPMYFFICSLA	ADMLVSVSNALETIV-MA	96
MC4R-Human	ISLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	105
MC4R-Mouse	ISLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	105
MC4R-Rat	ISLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	105
MC4R-Opossum	ISLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	105
MC4R-Chicken	ISLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	104
MC4R-Turkey	ISLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	104
MC4R-Zebrafinch	ISLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	104
MC4R-AnoleLizard	VSLLLENLIVIAAIAKKNLHSPMYFFICSLA	ADMLVSVSNGSETIV-IT	105
MC4R-Takifugu	ISLLENLIVIAAIVKNLHSPMYFFICSLA	ADMLVSVSNASETIV-IA	71
MC4R-Tetraodon	VSLLLENLIVIAAIVKNLHSPMYFFICSLA	ADMLVSVSNASETIV-IA	101
MC4R-Sickleback	ISLLENLIVIAAIVKNLHSPMYFFICSLA	ADMLVSVSNASETIV-IA	104
MC4R-Medaka	ISLLENLIVIAAIVKNLHSPMYFFICSLA	ADMLVSVSNASETIV-IA	99
MC4R-Zebrafish	VSLLLENLIVIAAIVKNLHSPMYFFICSLA	ADMLVSVSNASETIV-MA	102
MC5R-Human	ISLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSMSSAWETIT-IY	97
MC5R-Mouse	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSMSSAWETIT-IY	144
MC5R-Rat	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSMSSAWETIT-IY	132
MC5R-Opossum	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNAWETIT-IY	97
MC5R-Chicken	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNAWETIT-IY	97
MC5R-Zebrafinch	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNAWETIT-IY	67
MC5R-Turkey	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNAWETIT-IY	97
MC5R-Takifugu	ISLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNASETII-IY	108
MC5R-Tetraodon	ISLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNASETII-IY	108
MC5R-Sickleback	ISLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNASETIV-IY	112
MC5R-Medaka	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNASETII-IY	113
MC5Rb-Zebrafish	ISLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNASETIV-IH	99
MC5Ra-Zebrafish	VSLLLENLIVIGAVKKNLHSPMYFFVCSLA	ADMLVSVSNASETIV-IY	102
MC5R-Callorhinchus	VGMLENLIVIAAVVNRNLHSPMYFFICSLA	ADMLVSVGKASAVI-IF	86
MCAR-Lampetra	VSLVENALVIAAIAARNRNLHSPMYCFICSLA	ADMLVCLSNAWETIA-IA	100
MCAR_Lamprey	VSLVENALVIAAIAARNRNLHSPMYCFICSLA	ADMLVCLSNAWETIA-IA	80
MCBR-Lampetra	ISLLENLIVITAILKKNLHSPMYCFICSLA	ADMLVSVSNAWETII-MA	106
MCBR_Lamprey	ISLLENLIVITAILKKNLHSPMYCFICSLA	ADMLVSVSNAWETII-MA	65
MCRL-Branchiostoma	ASILMNGLVLSCHFRNPHLKEPMYFFVANLA	ADCVAGLFSFFFCAT---	50

TM3

MC1R-Human	PLEAGALVARAAVLQQLDNVIDVITCS---SMLSSLCFLGAIIVDRYISI	146
MC1R-Mouse	PLEAGILVARVALVQQLDNLIDVLCG---SMVSSLCFLGIIAIDRYISI	144
MC1R-Rat	PLEAGILVARAAVLQQLDNVIDVLCG---SMVSSLCFLGVIAIDRYISI	146
MC1R-Opossum	PLEKGVLMIQMPMLQQLDNVIDVLCG---SMMSSISFLGAIIVDRYISI	146
MC1R-Chicken	PMHEGVLIVIRASIVRHMDNVIDMLTCS---SVVSSLSFLGVIAVDRYITI	144
MC1R-Zebrafinch	PLEHGVLVMPRSIVRHMSVIDTLTCS---SVVSSLSFLGVIAVDRYITI	144
MC1R-AnoleLizard	PNDHGLLLGKSTIKHMDIIMDLTCS---SLLSSLSFLSVIAIDRYITI	132
MC1R-Xenopus	MLKQGIKSEPLLVKKMDYIFDTMTC---SLVTSLSFLGAIADRYITI	137
MC1R-Takifugu	PNDHGLMDMYPGMLRHLDNVIDVMTC---SVVSSLSFLCTIAADRYITI	144
MC1R-Tetraodon	PNDHGLMDMYPGMLRHLDNVIDAMTCS---SVVSSLSFLCTIAADRYITI	153
MC1R-Medaka	PNDHGLLDVHPGMLRHLDNVIDVMTC---SVVSSLSFLCTIAADRYITI	145
MC1R-Sickleback	PNDHGLMDVHPGMLRHLDNVIDVMTC---SVVSSLSFLCTIAADRYITI	151
MC1R-Zebrafish	PEHGLLLVTAKMLQHLIDMIMTCS---SVVSSLSFLCTIAADRYITI	151
MC1R-Callorhinchus	PMERGVMMVVQNYLLKQIDNLDMMTCS---SMVSSLSFLGAIADRYITI	117
MC2R-Human	FRNMGYLLKPRGSFETTADDIDSLFVL---SLLGSIFSLSVIAADRYITI	132
MC2R-Mouse	FRNMGYLLKPRGSFESTADDIDCMFIL---SLLGSIFSLSVIAADRYITI	132
MC2R-Rat	FRNMGYLLKPRGSLESTADDIDCMFVL---SLLGSIFSLSVIAADRYITI	132
MC2R-Opossum	FRNTGYLLKPRGDFETTADDIVDSLFI---SLLGSIFSLSVIAADRYITI	141
MC2R-Chicken	FCCKMGYLLTRRGDFEKKLDDAMDSMFI---SLLGSIFSLLAIAADRYITI	147
MC2R-Zebrafinch	FCCKMGYLLTRHGDFEKKLDDAMDSMFI---SLLGSIFSLLAIAADRYITI	145
MC2R-Turkey	FCCKMGYLLTRRGDFEKKLDDAMDSMFI---SLLGSIFSLLAIAADRYITI	136
MC2R-AnoleLizard	FCKMQYVKCRGKLAKTMDIDLDMFVL---SLLGSIFSLSAIAADRYITI	108
MC2R-Takifugu	FAEVGHLRKGVSERKADDVDSLFCM---SFLGSIFSFLAIAVDRYITI	135
MC2R-Tetraodon	FADVGLRKGVYLEKLDDVDSLFCM---SFLGSIFSFLAIAVDRYITI	51
MC2R-Sickleback	FANIGLEKKGPSSETNDDVDSLFCM---SFGVSIVSFLAIAVDRYISI	122
MC2R-Medaka	FADVGOLEKRGPSSETKLDMMDSLFCM---SFGVSIVSFLAIAVDRYITI	127
MC2R-Zebrafish	FKDAGRLNSRGPPELKIIDDIMDSLFCM---CFLGSIFSILAIAVDRYISI	126
MC3R-Human	IVHSDYLLTFEDQFIQHMDNIFDSMTCI---SLVASTCNLLAIAVDRYVTI	146
MC3R-Mouse	VINSDSLTLLEDQFIQHMDNIFDSMTCI---SLVASTCNLLAIAVDRYVTI	146
MC3R-Rat	VINSDSLTLLEDQFIQHMDNIFDSMTCI---SLVASTCNLLAIAVDRYVTI	146
MC3R-AnoleLizard	VLEKGYLNINSRYIQPMDNIFDSMTCI---SLIGSTCNLLVIAIDRYITI	114
MC3R-Xenopus	I-QNKYLVIGDYLLQHLDDVFDMSMTCI---SLVASTCNLLVIAIDRYITI	145
MC3R-Zebrafinch	ILSNGYLLIADHFIQHMDNIFDSMTCI---SLVASTCNLLVIAIDRYITI	120
MC3R-Turkey	ILSSGYLLIIDDHFIQHMDNIFDSMTCI---SLVASTCNLLVIAIDRYITI	146
MC4R-Xenopus	PLFNTTDKNTQ-HIIVNVNIDNSVICI---SLLASICSLLSIAVDRYFTI	149
MC4R-Zebrafish	PLNLSLVASDQFVRLMDNVCDSMTCI---SLVASTCNLLAIAVDRYVTI	146
MC3R-Callorhinchus	PLNNGYLVANDQFIQIMDNVFDMSLICI---SLVASTCNLLVIAIDRYITI	143
MC4R-Human	PLNSTDTDAQ-SFTVNIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	151
MC4R-Mouse	PLNSTDTDAQ-SFTVNIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	151
MC4R-Rat	PLNSTDTDAQ-SFTVNIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	151
MC4R-Opossum	PLNSTDTDAQ-SFTVNIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	151
MC4R-Chicken	PLNNTDTDAQ-SFTINIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	150
MC4R-Turkey	PLNNTDTDAQ-SFTINIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	150
MC4R-Zebrafinch	PLNNTDTDAQ-SFTINIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	150
MC4R-AnoleLizard	PLNNTDVGGH-SFTVSIIDNVIDNSVICI---SLLASICSLLSIAVDRYFTI	151
MC4R-Takifugu	PLNSGTLTIPATLIKSMDNVFDMSMTCI---SLLASICSLLAIAVDRYITI	118
MC4R-Tetraodon	PLNGGTLTIPARLIKSMDNVFDMSMTCI---SLLASICSLLAIAVDRYITI	148
MC4R-Sickleback	PLIAGGTLTIPVALIRKSMDNVFDMSMTCI---SLLASICSLLAIAVDRYITI	151
MC4R-Medaka	PLNGGNLSIPVRLIKSMDNVFDMSMTCI---SLLASICSLLAIAVDRYITI	146
MC4R-Zebrafish	PLITGGNLTNRESIKNMDNVFDMSMTCI---SLLASISLLAIAVDRYITI	149
MC5R-Human	PLNKNKHLVIADAFVRHIDNVFDMSMTCI---SVVASMCSLLAIAVDRYVTI	144
MC5R-Mouse	PLNKNKHLVIADTFVRHIDNVFDMSMTCI---SVVASMCSLLAIAVDRYITI	191
MC5R-Rat	PLNKNKHVVIADTFVRHIDNVFDMSMTCI---SVVASMCSLLAIAVDRYITI	179
MC5R-Opossum	PLNKNKHLVMEADAFVRHIDNVFDMSMTCI---SVVASMCSLLAIAVDRYVTI	144
MC5R-Chicken	PLNNRHIIMEDAFVRHIDNVFDMSLICI---SVVASMCSLLAIAVDRYITI	144
MC5R-Zebrafinch	PLNNRHVIMEDAFVRHIDNVFDMSMTCI---SVVASMCSLLAIAVDRYITI	114
MC5R-Turkey	PLNNRHIIMEDAFVRHIDNVFDMSLICI---SVVASMCSLLAIAVDRYITI	144
MC5R-Takifugu	PLNKNKQLIAEDHLIRQLDNVFDMSMTCI---SVVASMCSLLAIAVDRYVTI	155
MC5R-Tetraodon	PLNKNKQLVVEDHFIRQLDNVFDMSMTCI---SVVASMCSLLAIAVDRYVTI	155
MC5R-Sickleback	PLNKNRQLVVEDHFIRQMDNVFDMSMTCI---SVVASMCSLLAIAVDRYVTI	159
MC5R-Medaka	PLNKNRQLVVEEHFIRQLDNVFDMSMTCI---SVVASMCSLLAIAVDRYVTI	160
MC5Rb-Zebrafish	PLANRSIVIEDHFIRQMDNVFDMSLICI---SVVASMCSLLAIAVDRYVTI	146
MC5Ra-Zebrafish	PLTNRQLVVEDHFIRQMDNVFDMSMTCI---SVVASMCSLLAIAVDRYVTI	149
MC5R-Callorhinchus	PLDQNSHLLTE-TLIDHLDVLFDSMTCI---SLIASISLGAIAVDRYVTI	132
MCAR-Lampetra	PLVHGRHVHIPARILQHVNDVDFSFICI---SVVASMCSLLAIAVDRYVTI	147
MCAR_Lamprey	PLVHGRHVHIPAPILQHVNDVDFSFICI---SVVASMCSLLAIAVDRYVTI	127
MCBR-Lampetra	PLQNGSLAMQEDTLKQMDNIMDSMTCI---SVVASMCSLLAIAVDRYVTI	153
MCBR_Lamprey	PLQNGSLAMQEDTLKQMDNIMDSMTCI---SVVASMCSLLAIAVDRYVTI	112
MCRL-Branchiostoma	-----FYGEIMRPITVL--SLFCLFFVVLVLSAVGVILLSVDRYLAI	90

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	TM4	
MC1R-Human	FYALRYHSIVTLPRARRAVAAIIVVASVVFSTLFIAVYDHVAVLL--	CLVV 194
MC1R-Mouse	FYALRYHSIVTLPRARRAVVGIWMVSISSSTLFITYYKHTAVLL--	CLVT 192
MC1R-Rat	FYALRYHSIVTLSPARRAVVGIWVSVISSTLFITYYKHTAVLL--	CLVT 194
MC1R-Opossum	FYALRYHSIVTPCRAGKVLGIWVSSAFSGTLFISYYNHNAVLL--	CLIG 194
MC1R-Chicken	FYALRYHSIMTLQRAVVMTASVWLASTVSSTVLITYYRNNAILL--	CLIG 192
MC1R-Zebrafinch	FYALRYHSIMTLQRAVVMTASVWLASTASSTVLITYYHSNTIRL--	CLIG 192
MC1R-AnoleLizard	FYALRYHNIMTFORALALILSIIWAVCFVASIVFLL-NDSPAVIT--	CLVV 179
MC1R-Xenopus	FYALRYHSIMTLRRVVIAGVIWVSVSLVCAAIFIVYHESRAVIL--	CLIV 185
MC1R-Takifugu	FYALRYHSIMTTPRAITIIIVIVWCASIASSILFIVYHTDNAIVV--	CLVT 192
MC1R-Tetraodon	FYALRYHSIMTQRAIAIIVTVWCASITSSSTLFIVYHTDNAIVV--	CLVA 201
MC1R-Medaka	FYALRYHSIMTSORAVIIIVLVWLASLISSILFIVHDTDHAVIV--	CLIT 193
MC1R-Sickleback	FYALRYHNIMTQRAVIIIGLVWLASITSSILFIVYHTDIAVIV--	CLVT 199
MC1R-Zebrafish	FYALRYHSIMTQRAVGIILVWLASITSSSLFIVYHTDNAVIA--	CLVT 199
MC1R-Callorhinchus	FYALRYHTIMTTRRAVGVMIWVVSITSSAIFIVYSENSAVVI--	CLIS 165
MC2R-Human	FHALRYHSIVTMRRTVVVLTVIWTFCTGTGITMVFSSHVPTVI--	TFTS 180
MC2R-Mouse	FHALQYHSIVTMRRTIITLTIWIMFCTGSGITMVFSHHIPTVL--	TFTS 180
MC2R-Rat	FHALQYHSIVTMRRTVITLTVIWMFCTGSGITMVFSHHIPTVL--	TFTS 180
MC2R-Opossum	FHALQYHNIMTMRRAISILAIWVAFCTGSGITMVFSHDVPTVI--	SFTS 189
MC2R-Chicken	FYALRYHNIMTLQRALVILAIWTFCTGSSIAIALFSHEVATVI--	PFTI 195
MC2R-Zebrafinch	FYALRYHNIMTLRRALVILAIWVAFCTGSSIAIALFSYEAATVI--	PFTI 193
MC2R-Turkey	FYALRYHNIMTVRRALVILAIWVAFCTGSSIAIALFSHEIATVI--	PFTI 184
MC2R-AnoleLizard	FYALRYHNIMTLKRALVMLGVIWVAFCTGSGIAMVLFYSYEAATV--	SFTV 156
MC2R-Takifugu	FHALRYHNIMTMORTGAILGLIWTTCGVSAMLMVRFSDSNLIMS--	CFVV 183
MC2R-Tetraodon	FHALRYHNDIMTLQRTGAILGLIWTTCGVSAMLMVRFSDSNLIMS--	CFVV 99
MC2R-Sickleback	FHALRYHNIMTMRTRAVLGIWVTLGVSAMLMVRFSDSNFIMI--	CFVV 170
MC2R-Medaka	FHALRYHNIMTMORTGGILVVIWTTCGVSAMLMVRFDFKFI--	CFVV 175
MC2R-Zebrafish	FHALRYHMLMTRRVLIIILFTIIVLWCGTSGALMVGFFEAATVKI--	FFIV 174
MC3R-Human	FYALRYHSIMTVRKALTLIIVAVVCCGVCVGVFIVYSESKMVI--	CLIT 194
MC3R-Mouse	FYALRYHSIMTVRKALTLIGVIWVCCGICGVMFIVYSESKMVI--	CLIT 194
MC3R-Rat	FYALRYHSIMTVRKALSLIIVAVVCCGICGVMFIVYSESKMVI--	CLIT 194
MC3R-AnoleLizard	FYALRYHSIMTVKRALVILAIWVAFCTGSSIAIALFSYEAATVI--	CLIA 162
MC3R-Xenopus	FYALRYHSIMTVKKAIALIIVVITSCIIICGIVFIVYSESKTVI--	CLIT 193
MC3R-Zebrafinch	FYALRYHSIMTVKKAIALIIVLWVACIIICGIFIVYSESKTVI--	CLIT 168
MC3R-Turkey	FYALRYHSIMTVKKAIALIIVLWVACIIICGIFIVYSESKTVI--	CLIT 194
MC4R-Xenopus	FYALQYHNIMTVRRAVVVIISCIWVAFCTGSSIAIALFSYEAATVI--	CLIS 197
MC3R-Zebrafish	FYALRYHSIMTVRRALVIAIIVLWVACIIICGIFIVYSESKTVI--	CLIT 194
MC3R-Callorhinchus	FYALRYHSIMTVKRALLLIIVVWVACIFCGIIFIVYSNKTVI--	CLIT 191
MC4R-Human	FYALQYHNIMTVKRVGIIITCIWAACTVSGILFIVYSDSSAVI--	CLIT 199
MC4R-Mouse	FYALQYHNIMTVRRVGIITCIWAACTVSGVLFIVYSDSSAVI--	CLIS 199
MC4R-Rat	FYALQYHNIMTVRRVGIITCIWAACTVSGVLFIVYSDSSAVI--	CLIT 199
MC4R-Opossum	FYALQYHNIMTVRRVGIITCIWAACTVSGILFIVYSDSSAVI--	CLIT 199
MC4R-Chicken	FYALQYHNIMTVKRVGIIITCIWAACTVSGILFIVYSDSSVVI--	CLIS 198
MC4R-Turkey	FYALQYHNIMTVKRVGIIITCIWAACTVSGILFIVYSDSSVVI--	CLIS 198
MC4R-Zebrafinch	FYALQYHNIMTVKRVGIIITCIWAACTVSGILFIVYSDSSVVI--	CLIS 198
MC4R-AnoleLizard	FYALQYHNIMTVRRVGIITCIWAACTVSGILFIVYSDSSVVI--	CLIS 199
MC4R-Takifugu	FYALRYHNIMTVLRRASLVISSIWTCCIVSGVLFIVYSESTTVLI--	CLIT 166
MC4R-Tetraodon	FYALRYHNIMTVLRRASLVISSIWTCCIVSGVLFIVYSESTTVLI--	CLIT 196
MC4R-Sickleback	FYALRYHNIMTVLRRATLVIISIIWTCCIVSGVLFIVYSESTTVLI--	CLIT 199
MC4R-Medaka	FYALRYHNIMTVLRRAAVVISSIWTCCIVSGVLFIVYSESTTVLI--	CLIT 194
MC4R-Zebrafish	FYALRYHNIMTVRRAGTIITCIWTFCTVSGVLFIVYSESTTVLI--	CLIS 197
MC5R-Human	FYALRYHHIMTARRSGAIIAGIWFCTGCGIVFIVYSESTYVIL--	CLIS 192
MC5R-Mouse	FYALRYHHIMTARRSGVIIACIWFCTGCGIVFIVYSESTYVIL--	CLIS 239
MC5R-Rat	FYALRYHHIMTARRSGVIIACIWFCTGCGIVFIVYSESTYVIL--	CLIS 227
MC5R-Opossum	FYALRYHNIMTVKRSGLIITACIWFCTGCGIIFIVYSESTYVVI--	CLIT 192
MC5R-Chicken	FYALRYHNIMTVKRSGLIITACIWFCTGCGIIFIVYSESTYVVI--	CLIT 192
MC5R-Zebrafinch	FYALRYHNIMTVKRSGLIITACIWFCTGCGIIFIVYSESTYVVI--	CLIT 162
MC5R-Turkey	FYALRYHNIMTVKRSGLIITACIWFCTGCGIIFIVYSESTYVVI--	CLIT 192
MC5R-Takifugu	FYALRYHNIMTVRRAGCIIGGIWTFCTGCGIVFIVYSDTTPVII--	CLVC 203
MC5R-Tetraodon	FYALRYHNIMTVRRAGCIIGGIWTFCTGCGIVFIVYSEKTPVII--	CLVS 203
MC5R-Sickleback	FYALRYHNIMTVRRAGCIIGGIWTFCTGCGIIFIVYSDTTPVII--	CLVS 207
MC5R-Medaka	FYALRYHNIMTVRRAGCIIGGIWTFCTGCGIVFIVYSETTPVII--	CLVS 208
MC5Rb-Zebrafish	FYALRYHNIMTVRRAGILIGSIWTFSTSCGIIFIVYSDTTPVVV--	CLVA 194
MC5Ra-Zebrafish	FYALRYHNIMTVRRALIIIGGIWTFCTGCGIVFIVYSDNTSPVII--	CLVS 197
MC5R-Callorhinchus	FHALRYHOIMTVKRAALIIISALWTFCTFSGSFIKFNKNAFPG--	SLIT 180
MCAR-Lampetra	FYALQYHSIVTMRRAAVVIACVWAAACVVSGLFIVYWDHRTVIV--	CLIA 195
MCAR_Lamprey	FYALQYH-----	134
MCBR-Lampetra	FYALRYHNIMTVRRASIIIGAIWGTCTLCGVIFIVYSDSTAVII--	CLIT 201
MCBR_Lamprey	FYALRYHNIMTVRRASIIIGAIWGTCTLCGVIFIVYSDSTAVII--	CLIA 160
MCRL-Branchiostoma	LHPIFYQTRISQHAAVSLGIAIPVCAIACLSPLMGWNCIEIETEDCMTN	140

TM5

MC1R-Human	FFLAMLVLMVLYVHMLARCOHAQGIARLH----	KRORP-VHOGFGLKG	239
MC1R-Mouse	FFLAMLALMAILYAHMFTRACOHAQGI AOLH----	KRRRS-IROGFCLKG	237
MC1R-Rat	FFLAMLALMAILYVHMLSRACOHAQGIARLH----	KRRHS-IROGFCLKG	239
MC1R-Opossum	FFLSMLGLMVLYIHMFIQACOHAARRIARLH----	KRHA-IHQLSTLKG	238
MC1R-Chicken	FFLFMLVLMVLYIHMFFALARHVSRISSQO-----	KOPTIYRTSSSLKG	236
MC1R-Zebrafinch	FFLFMLVLMVLYIHMFFALARHLSISSQO-----	KPTT-AYRGGSLKG	236
MC1R-AnoleLizard	FFVAVVTLLILALYIHMFFILARHARRMSHIP----	KKON--SPOMSSMKG	223
MC1R-Xenopus	FFLFMLALMVALYIHMFFALARHARSISALOKGKSRRITP-HQARANMKG		234
MC1R-Takifugu	FFCITLVFNVALYVHMFVLAHVHSSRRIMAFH-----	KN-RRQSTSMKG	234
MC1R-Tetraodon	FFCITLVFNVALYVHMFLLAHVHSSRRIMAFH-----	KN-RRQSTSMKG	243
MC1R-Medaka	FFFTTLVFNVALYVHMFILAHVHSSRRITAFH-----	KS-RRPSTSMKG	235
MC1R-Sickleback	FFCATLVFNVALYVHMFLLAHVHSSRRITAFN-----	KN-RRQSTSMKG	241
MC1R-Zebrafish	FFGVTLVFTAVLYVHMFILAHVHSSRRITAH-----	KS-RRQSTSMKG	241
MC1R-Callorhinchus	FFEVVVFIMGALYVHMFLLARHAKRIMAQH-----	KKRT-LHQATSMKG	209
MC2R-Human	LFPLMLVFI LCYVHMFLLARSHTRKISTLP-----	RANMKG	217
MC2R-Mouse	LFPLMLVFI LCYVHMFLLARSHARKISTLP-----	RTNMKG	217
MC2R-Rat	LFPLMLVFI LCYVHMFLLARSHARKISTLP-----	RANMKG	217
MC2R-Opossum	LFPLMLVFI LCYVHMFLLARSHAKKISTLP-----	SSR-VQPRANMKG	232
MC2R-Chicken	LFPLMMIFILCYVHMFLLARSHAKKIASLP-----	TSA-VHQRTNMKG	238
MC2R-Zebrafinch	LFPLMMFFILCYVHMFLLARSHAKKIASLP-----	STIHHRTNMKG	235
MC2R-Turkey	LFPLMMFFILCYVHMFLLARSHAKKIASLP-----	TGA-VHQRTNMKG	227
MC2R-AnoleLizard	LF CFMILILICYVHMFLLARSHAKKIALMT-----	TSSVH-Q--GANMKG	199
MC2R-Takifugu	FFIISLAI IYLYVYMFILARSHAKKIAALP	NGSGKHQHQ-RRWGHGMRG	232
MC2R-Tetraodon	FFIISLVIIYLYVYMFILARSHAKKIAALP	GGSGKHQHL-RRWGNMGRG	148
MC2R-Sickleback	FFVVS LAIICFLYVYMFILARSHAKKIAALP		208
MC2R-Medaka	FFIVSLAIICFLYVYMFLLARSHAKSIAALP		206
MC2R-Zebrafish	LF FTALLLILLYVHMFLLARSHANRIASMP-----	GAQA-QHRKSGLRG	218
MC3R-Human	MFFAMLLMGTLYVHMFLLARSHVVKRIAALP	PADGVAPOQHSCMKG	240
MC3R-Mouse	MFFAMVLLMGTLYVHMFLLARSHVQRIAALP	PAGVVAPOQHSCMKG	240
MC3R-Rat	MFFAMVLLMGTLYVHMFLLARSHVQRIAALP	PADGVAPOQHSCMKG	240
MC3R-AnoleLizard	MFFTMLFLMASLYVHMFLLARSHIKRIAALP	VDDV-POORTCMKG	206
MC3R-Xenopus	MFFTMLVLMATLYVHMFLLARSHVVKRIAALP	VDGV-VQORTCMKG	237
MC3R-Zebrafinch	MFFTMLLLMASLYVHMFLLARSHVVKRIAALP	VEGV-PPORTCMKG	212
MC3R-Turkey	MFFTMLFLMASLYVHMFLLARSHVVKRIAALP	VDGV-PSORTCMKG	238
MC4R-Xenopus	MFFTMLALMASLYVHMFLLARSHIKRIAALP	GTNS-VROVTNMKG	241
MC3R-Zebrafish	MFFAMVLMATLYVHMFLLARSHVQRIAALP	PAAPGAGNAPRORSCMKG	244
MC3R-Callorhinchus	MFFTMLVLMATLYVHMFLLARSHIKRIAALP	V DGI-VRPRTCMKG	235
MC4R-Human	MFFTMLALMASLYVHMFLLARSHIKRIAALP	GTGA-IROGANMKG	243
MC4R-Mouse	MFFTMLVLMASLYVHMFLLARSHIKRIAALP	GTGT-IROGTNMKG	243
MC4R-Rat	MFFTMLVLMASLYVHMFLLARSHIKRIAALP	GTGT-IROGANMKG	243
MC4R-Opossum	MFFTMLALMASLYVHMFLLARSHIKRIAALP	GTGT-IROGANMKG	243
MC4R-Chicken	MFFTMLILMASLYVHMFMMARSHIKKIAALP	GTGP-IROGANMKG	242
MC4R-Turkey	MFFTMLILMASLYVHMFMMARSHIKKIAALP	GTGP-IROGANMKG	242
MC4R-Zebrafinch	MFFTMLILMASLYVHMFMMARSHIKKIAALP	GTGP-VROGANMKG	242
MC4R-AnoleLizard	MFFTMLVLMASLYVHMFLLARSHIKKIAALP	GTGP-ICORANMKG	243
MC4R-Takifugu	MFFTMLVLMASLYVHMFLLARSHMKRIAALP	GNAP-IHORANLKG	210
MC4R-Tetraodon	TFFTMLVLMASLYVHMFLLARSHMKRIAALP	GNAP-IHORANMKG	240
MC4R-Sickleback	MFFTMLVLMASLYVHMFLLARSHMKRIAALP	GHAP-IHORANMKG	243
MC4R-Medaka	MFFTMLVLMASLYVHMFLLARSHMKRIAALP	GNAP-IHORANMKG	238
MC4R-Zebrafish	MFFTMLALMASLYVHMFLLARSHMKRIAALP	GNGP-IWOAANMKG	241
MC5R-Human	MFFAMLFLVSLYIHMFFLLARSHVVKRIAALP	GASS-ARORTSMQO	236
MC5R-Mouse	MFFTMLFFMVSLYIHMFFLLARSHVVKRIAALP	RYNS-VRORTSMKG	283
MC5R-Rat	MFFTMLFFMVSLYIHMFFLLARSHVVKRIAALP	RYNS-VRORTSMKG	271
MC5R-Opossum	MFFTMLFLMVSLYIHMFFLLARSHVVKRIAALP	GYSS-VRORTSMKG	236
MC5R-Chicken	MFFTMLFLMVSLYIHMFFLLARSHVVKRIAALP	GYNS-VHRTSMKG	236
MC5R-Zebrafinch	MFFTMLFLMVSLYIHMFFLLARSHVVKRIAALP	GTSMKG	199
MC5R-Turkey	MFFTMLFLMVSLYIHMFFLLARSHVVKRIAALP	GYNS-VHRTSMKG	236
MC5R-Takifugu	MFFAMLLIMASLYSHMFLLARSHVVKRIAALP	GSNS-IHORASMKG	247
MC5R-Tetraodon	MFFAMLLIMASLYSHMFLLARSHVVKRIAALP	GSSS-IQORANMKG	247
MC5R-Sickleback	MFFAMLVIMASLYSHMFLLARSHVVKRIAALP	GYNS-IHORASMKG	251
MC5R-Medaka	MFFAMLLIMASLYSHMFLLARSHVVKRIAALP	GYNS-IHORASMKG	252
MC5Rb-Zebrafish	MFFAMLLIMASLYSHMFLLARSHVVKRIAALP	GYNANIRORASMKG	239
MC5Ra-Zebrafish	MFFIMLALMASLYSHMFLLARSHVVKRIAALP	GYNS-IHORASMKG	241
MC5R-Callorhinchus	MYFTTLFVIVSLYVYMFLLARSHAQCIIRSLP	GQR-VHOGTSLKG	223
MCAR-Lampetra	LFVTMLVLMASLYAHMFALARSHAQRI SAOP	RSSRQGO-QNGAASLKG	242
MCAR_Lamprey		RRISAOP--RSSRQGO-QHGAASLKG	157
MCBR-Lampetra	MFFTMLVLMASLYVHMFLLARSHAKRIAALP	ASGI-IQHKTSMRG	245
MCBR_Lamprey	MFFTMLVLMASLYVHMFLLARSHAKRIAALP	ASGI-IQHKTSMRG	204
MCRL-Branchiostoma	APVNYLILINATAENLPAARRRQORVAARE	QRQL-----KLSLKT	181

	TM6	
MC1R-Human	AVTLTILLGIFFLCWGPFLLHLTLIVLCPQHPPTCCIFKKNFLFLALIIIC	289
MC1R-Mouse	AATLTILLGIFFLCWGPFLLHLTLIVLCPQHPPTCCIFKKNFLFLILLIVL	287
MC1R-Rat	AATLTILLGIFFLCWAPFFLHLTLIVLCPQHPPTCCIFKKNFLFLILLIIL	289
MC1R-Opossum	ATTLMILLGIFFLCWAPFFLHLTLIVLCPKHPPTCCYFONFNFFLIIIC	288
MC1R-Chicken	AVTLTILLGVFFLCWGPFLLHLTLIVTCTNPFCCTFFSYFNLFILIIIC	286
MC1R-Zebrafinch	AVTLTILLGVFFLCWGPFLLHLTLIVTCTNPFCCTFFSYFNLFVLMIC	286
MC1R-AnoleLizard	ATTLTILLGVFLICWGPFLLHLTLIIICPFR--CAYFNYSLYLIIIC	271
MC1R-Xenopus	AITLTILLGVFFLCWGPFLLHLTLIVSCPGHHICNSYFYFNLYILLVIC	284
MC1R-Takifugu	AITLTILLGVFFLCWGPFLLHLTLILTCTPSVFCNCYFRNFNLFLIIIC	284
MC1R-Tetraodon	AITLTILLGVFIVCWGPFLLHLTLILTCPNPNLCNCYFRNFNLFLIIIC	293
MC1R-Medaka	AITLTILLGVFFLCWGPFLLHLTLILTCTPSVFCNCYFRNFNLFLIIIC	285
MC1R-Sickleback	AMTLTILLGVFIVCWGPFLLHLTLILTCTPSVFCNCYFRNFNLFLIIIC	291
MC1R-Zebrafish	MC1R-Zebrafish	291
MC1R-Callorhinchus	AITLTILLGVFLICWSPFFLHLTLIIICLPTNPYCCFTSHFNMFILIIIC	259
MC2R-Human	AITLTILLGVFIFCWAPFVHLVLMTFCPNSPYCACYMSLFOVNGMLIMC	267
MC2R-Mouse	AMTLTILLGVFIFCWAPFVHLVLMTFCPNPNPYCVGYMSLFOVNGMLIMC	267
MC2R-Rat	AMTLTILLGVFIFCWAPFVHLVLMTFCPNPNPYCVGYMSLFOVNGMLIMC	267
MC2R-Opossum	AITLTILLGVFLICWAPFVHLVLMTFCPNPNPYCACYLSIFOVNGMLIMC	282
MC2R-Chicken	AITLTIFLGVFLICWAPFVHLVLMTFCPNPNPYCACYMSIFHVNGTLMC	288
MC2R-Zebrafinch	AITLTIFLGVFLICWAPFVHLVLMTFCPNPNPYCACYMSIFHVNGTLMC	285
MC2R-Turkey	AITLTIFLGVFLICWAPFVHLVLMTFCPNPNPYCACYMSIFHVNGTLMC	277
MC2R-AnoleLizard	AITLTIVLVAVFLICWSPFFVHLVLMTFCPONPYCICYGSIFHVHGMIMC	249
MC2R-Takifugu	ILTLTILFGAFMVCWAPFFLHLIFLMACPMNPYCECYRSMFQLHVVLLMS	282
MC2R-Tetraodon	IMTLTILFGAFMVCWAPFFLHLIILMVCPMNPYCECYRSLFELHVVLLMS	198
MC2R-Sickleback	AMTLTILFGAFMVCWAPFFLHLIIMLCPNPNPYCECYRSLFQLHVVLLMS	258
MC2R-Medaka		-
MC2R-Zebrafish	AMTLTILIGVFLICWAPFSLHLLIMMIPCENPYCECYRSLFQLHVVLLVS	268
MC3R-Human	AVTLTILLGVFIFCWAPFFLHLVLIITCPTNPYCICTAHFNNTYLVLMC	290
MC3R-Mouse	AVTLTILLGVFIFCWAPFFLHLVLIITCPTNPYCICTAHFNNTYLVLMC	290
MC3R-Rat	AVTLTILLGVFIFCWAPFFLHLVLIITCPTNPYCICTAHFNNTYLVLMC	290
MC3R-AnoleLizard	AVTLTILLGVFIVCWGPFLLHLIILISCPNPHCFYIISHFNNTYLVLMC	256
MC3R-Xenopus	AITLTILLGVFVVCWAPFFLHLIILISCPNSNYCVYTSYFNNTYLVLMC	287
MC3R-Zebrafinch	AVTLTILLGVFIVCWAPFFLHLIILISCPNPNYCICTAHFNNTYLVLMC	262
MC3R-Turkey	AVTLTILLGVFIVCWAPFFLHLIILISCPMNSYCVYTSYFNNTYLVLMC	288
MC4R-Xenopus	AITLTILLGVFVACWSPFFLHLIFVYSCPRNPYCVCFMESHFNNTYLVLMC	291
MC3R-Zebrafish	AVTISILLGVFVVCWAPFFLHLIILVSCPHHPLCIYMSHFNNTYLVLMC	294
MC3R-Callorhinchus	AITLTILLGIFFLICWAPFFLHLIILISCPKNAYCICYTSHFNNTYLVLMC	285
MC4R-Human	AITLTILIGVFLVVCWAPFFLHLIFYISCPONPYCVCFMESHFNNTYLVLMC	293
MC4R-Mouse	AITLTILIGVFLVVCWAPFFLHLIFYISCPONPYCVCFMESHFNNTYLVLMC	293
MC4R-Rat	AITLTILIGVFLVVCWAPFFLHLIFYISCPONPYCVCFMESHFNNTYLVLMC	293
MC4R-Opossum	AITLTILIGVFLVVCWAPFFLHLIFYISCPONPYCVCFMESHFNNTYLVLMC	293
MC4R-Chicken	AITLTILIGVFLVVCWAPFFLHLIFYISCPYNPYCVCFMESHFNNTYLVLMC	292
MC4R-Turkey	AITLTILIGVFLVVCWAPFFLHLIFYISCPYNPYCVCFMESHFNNTYLVLMC	292
MC4R-Zebrafinch	AITLTILIGVFLVVCWAPFFLHLIFYISCPYNPYCVCFMESHFNNTYLVLMC	292
MC4R-AnoleLizard	AITLTILIGVFLVVCWAPFFLHLIFYISCPHNPYCICTFMSHFHNTYLVLMC	293
MC4R-Takifugu	AITLTILLGVFLVVCWAPFFLHLIIMITCPKNPYCTCFMESHFNNTYLVLMC	260
MC4R-Tetraodon	AITLTILLGVFLVVCWAPFFLHLIIMITCPKNPYCTCFMESHFNNTYLVLMC	290
MC4R-Sickleback	AITLTILLGVFLVVCWAPFFLHLIIMITCPNPNYCTCFMESHFNNTYLVLMC	293
MC4R-Medaka	AITLTILLGVFLVVCWAPFFLHLIIMITCPNPNYCTCFMESHFNNTYLVLMC	288
MC4R-Zebrafish	AITLTILLGVFLVVCWAPFFLHLIIMISCPNPNYCVCFMESHFNNTYLVLMC	291
MC5R-Human	AVTIVMILLGVFIVCWAPFFLHLIIMISCPONLYCSRFSHFNMNTYLVLMC	286
MC5R-Mouse	AITLTMLLGFIVCWSPFFLHLIIMISCPONVYCSCFMSYFNNTYLVLMC	333
MC5R-Rat	ATTLTMLLGFIVCWSPFFLHLIIMISCPONVYCACFMSYFNNTYLVLMC	321
MC5R-Opossum	AITLTMLLGVFIVCWAPFFLHLIIMISCPONLYCICFMSHFNMNTYLVLMC	286
MC5R-Chicken	AITLTMLLGFIVCWAPFFLHLIIMISCPONLYCICFMSHFNMNTYLVLMC	286
MC5R-Zebrafinch	AITLTMLLGFIVCWAPFFLHLIIMISCPONLYCICFMSHFNMNTYLVLMC	249
MC5R-Turkey	AITLTMLLGFIVCWAPFFLHLIIMISCPONLYCICFMSHFNMNTYLVLMC	286
MC5R-Takifugu	AITLTILLGIFFLICWAPFFLHLIIMISCPNLYCMCFMSHFNMNTYLVLMC	297
MC5R-Tetraodon	AITLTILLGIFFLICWAPFFLHLIIMISCPNLYCICFMSHFNMNTYLVLMC	297
MC5R-Sickleback	AITLTILLGIFFLICWAPFFLHLIIMISCPNLYCICFMSHFNMNTYLVLMC	301
MC5R-Medaka	AITLTILLGIFFLICWAPFFLHLIIMISCPNLYCICFMSHFNMNTYLVLMC	302
MC5Rb-Zebrafish	AVTLTILLGIFFLICWAPFFLHLIIMISCPNLYCICFMSHFNMNTYLVLMC	289
MC5Ra-Zebrafish	AVTLTILLGIFFLICWAPFFLHLIIMISCPNLYCICFMSHFNMNTYLVLMC	291
MC5R-Callorhinchus	AITLTILLGIFFLICWAPFFLHLIIVLACPSNPYCTCYMSLFOVDLIIIMC	273
MCAR-Lampetra	AVTLSILLGVFVFCWAPFFLHLTFIISCPANPYCAYIAYFPLVLLIMI	292
MCAR_Lamprey	AVTLSILLGVFVFCWAPFFLHLTFIISCPANPYCAYIAYFPLVLLIMI	207
MCBR-Lampetra	AITLTILLGVFIVCWAPFFLHLIIVS CPRSPYCVGYMSHFNLVLIIML	295
MCBR_Lamprey	AITLTILLGVFIVCWAPFFLHLIIVS CPRSPYCVGYMSHFNLVLIIML	254
MCRL-Branchiostoma	AVTVVMIAAMFIVVWLPICIGVVRGISCHADENCETEARPY-WGLLIIFAC	230

	TM7	
MC1R-Human	NAIDPLIYAFHSOELRRTLKEVL-TC-SW-----	317
MC1R-Mouse	SSIVDPLIYAFRSOELRMTLKEVL-LC-SW-----	315
MC1R-Rat	SSIVDPLIYAFRSOELRMTLKEVL-LC-SW-----	317
MC1R-Opossum	NSIIDPLIYAFRSOELRRTFKEVI-LCSC-----	316
MC1R-Chicken	NSVIDPLIYAFRSOELRRTLREVV-LC-SW-----	314
MC1R-Zebrafinch	NSVIDPLIYAFRSOELRRTLREVV-TC-SW-----	314
MC1R-AnoleLizard	NSVVDPIYAFRSOELKRTLKMDL-FL-VW-----	299
MC1R-Xenopus	NSVIDPLIYAFRSOELRKT-----	303
MC1R-Takifugu	NSIIDPLIYAFRSOELRKTLOELV-LC-SW-----	312
MC1R-Tetraodon	NSIIDPLIYAFRSOELRKTLOELL-LC-SWCLGL-----	325
MC1R-Medaka	NSIIDPLIYAFRSOELRKTLOEML-MC-SF-----	313
MC1R-Sickleback	NSIIDPLIYAFRSHELRRTLRELV-LC-SWCFGV-----	323
MC1R-Zebrafish	NSIIDPLIYAFRSOELRKTLELI-FC-SWCFV-----	323
MC1R-Callorhinchus	NSVIDPII-----	267
MC2R-Human	NAVIDPIYAFRSPELRDAFKKMFCSRYW-----	297
MC2R-Mouse	NAVIDPIYAFRSPELRDAFKRML-FCNRY-----	296
MC2R-Rat	NAVIDPIYAFRSPELRDAFKML-FCNRY-----	296
MC2R-Opossum	NAIDPMIYAFRSPELRSTFKMF-CCSGYK-----	312
MC2R-Chicken	NAIDPMIFAFRSPELRSTFKMF-CCARYNWNWKLNEGEYRSTPMQH-----	337
MC2R-Zebrafinch	NAIINPMIFAFRSPELRSTFKMF-YCSRSNCV-----	318
MC2R-Turkey	NAIDPMIFAFRSPELRSTFKMF-CCARHNW-----	308
MC2R-AnoleLizard	NAVIDPMIYAFRSPELRSTFRFI-SC-SY-----	277
MC2R-Takifugu	HALIDPIYAFRIPELRHTFRML-PCLNWR-----	312
MC2R-Tetraodon	HALIDPGIYAFRIPELRHTFRML-LCLNWRSLT-----	232
MC2R-Sickleback	HAFIDPAIYAFRSVELRHTFRML-LCSDWKRC-----	291
MC2R-Medaka	-----	-
MC2R-Zebrafish	HAVIDPAIYAFRSVELRNTYKML-LSSASRICKRCA-----	304
MC3R-Human	NSVIDPLIYAFRSLELRNTFKEILCGCNGMNLG-----	323
MC3R-Mouse	NSVIDPLIYAFRSLELRNTFKEILCGCNSMNLG-----	323
MC3R-Rat	NSVIDPLIYAFRSLELRNTFKEILCGCNGMNVG-----	323
MC3R-AnoleLizard	NSVIDPIIYAFRSLEMRKTFKEI-MVCCCFGLSSG-----	289
MC3R-Xenopus	NSIIDPLIYAFRSLEMRKTFKEI-CYGLDLLIGWGGRY-----	326
MC3R-Zebrafinch	NSVIDPLIYAFRSLEMRKTFKEIMCCCYGMSVG-----	295
MC3R-Turkey	NSVIDPLIYAFRSLEMRKTFKEIVCCCYGVSVG-----	321
MC4R-Xenopus	NSVIDPLIYAFRSOELRKTFKEMM-CCYCMSMGKTF-----	327
MC3R-Zebrafish	NSVIDPLIYAFRSLEMRKTFKEIL-CCFGCQP---AL-----	327
MC3R-Callorhinchus	NSVIDPMIYAFRSOEMRKTFKEI-CCYGMNLNSRCKY-----	322
MC4R-Human	NSIIDPLIYAFRSOELRKTFKEI-CYPLGG---LCD---LSSRY---	332
MC4R-Mouse	NAVIDPLIYAFRSOELRKTFKEI-CFYPLGG---ICE---LSSRY---	332
MC4R-Rat	NAVIDPLIYAFRSOELRKTFKEI-CFYPLGG---ICE---LPGRY---	332
MC4R-Opossum	NSIIDPLIYAFRSOELRKTFKEI-CYTLGG---PCD---LAGRY---	332
MC4R-Chicken	NSIIDPLIYAFRSOELRKTFKEI-CCNLRG---LCD---LPGKY---	331
MC4R-Turkey	NSIIDPLIYAFRSOELRKTFKEI-CCSLRG---LCD---LPGKY---	331
MC4R-Zebrafinch	NSIIDPLIYAFRSOELRKTFKEI-CCSLRG---LCD---FPGKY---	331
MC4R-AnoleLizard	NSIIDPLIYAFRSOELRKTFKEI-CCYSLRE---LCD---FSSKY---	332
MC4R-Takifugu	NSVIDPIIYAFRSOEMRKTFKEIF-CCSQMLMNTCTEFCNGYDSKY---	306
MC4R-Tetraodon	NSVIDPIIYAFRSOEMRKTFKEIF-CCSQALL---CM-----	323
MC4R-Sickleback	NSVIDPIIYAFRSOEMRKTFKEIF-CCSHALL---FV-----	326
MC4R-Medaka	NSVIDPIIYAFRSOEMRKTFKEIF-CCSNALV---CF-----	321
MC4R-Zebrafish	NSVIDPLIYAFRSOEMRKTFKEIC-CC--WYGLASLCV-----	326
MC5R-Human	NSVMDPLIYAFRSOEMRKTFKEI-CCRGFRI---ACS---FPRRD---	325
MC5R-Mouse	NSVIDPLIYAFRSOEMRRTFKEIV-CCHGFRR---PCR---LLGGY---	372
MC5R-Rat	NSVIDPLIYAFRSOEMRRTFKEII-CCHGFRR---TCT---LLGRY---	360
MC5R-Opossum	NSVIDPLIYAFRSOEMRKTFKEI-CCYGLRM---TCG---FPIKY---	325
MC5R-Chicken	NSVIDPLIYAFRSOEMRKTFKEI-CCYSVRM---VCG---LSNKY---	325
MC5R-Zebrafinch	NSVIDPLIYAFRSOEMRKTFKEI-CCYSLR-----	279
MC5R-Turkey	NSVIDPLIYAFRSOEMRKTFKEI-CCYSVRT---VCG---LSNKY---	325
MC5R-Takifugu	NSVIDPLIYAFRSOEMRKTFKEI-FCYSLRN---TCSTICTLPGKY---	340
MC5R-Tetraodon	NSVIDPLIYAFRSOEMRKTFKEI-CCYTLRN---ACSSFCTFTGKY---	340
MC5R-Sickleback	NSVIDPLIYAFRSOEMRKTFKEI-CCYSLRN---ACTNICALTGKY---	344
MC5R-Medaka	NAVIDPLIYAFRSOEMRKTFKEI-FCFSLTN---ICTNLCAITGKY---	345
MC5Rb-Zebrafish	NSVIDPLIYAFRSOEMRKTFKEIV-CCEGLRS---FCN---MVSRY---	328
MC5Ra-Zebrafish	NSVIDPLIYAFRSOEMRKTLEI-CCYSLRN---VFG---MSR---	328
MC5R-Callorhinchus	NSIIDPLIFAFRSPELRNTFKKMC-IC-----	299
MCAR-Lampetra	NSVIDPLIYAFRSPELRVIIRDTLRKCGRGRGRGANGTRGSSCCCVQVR-----	341
MCAR_Lamprey	NSVIDPLIYAFRSPELRVIIRDTLRKCGR-----	236
MCBR-Lampetra	SSVIDPIIYAFRSHEMRHTFKEIV-CCYSGSL---YCA--LPATWKY---	336
MCBR_Lamprey	SSVIDPIIYAFRSHEMRHTFKEIV-CCYSGSL---Y-----	286
MCRL-Branchiostoma	GSVVNPIYAFRMKKIRE-----	248

MC1R-Human	-----	-
MC1R-Mouse	-----	-
MC1R-Rat	-----	-
MC1R-Opossum	-----	-
MC1R-Chicken	-----	-
MC1R-Zebrafinch	-----	-
MC1R-AnoleLizard	-----	-
MC1R-Xenopus	-----	-
MC1R-Takifugu	-----	-
MC1R-Tetraodon	-----	-
MC1R-Medaka	-----	-
MC1R-Sickleback	-----	-
MC1R-Zebrafish	-----	-
MC1R-Callorhinchus	-----	-
MC2R-Human	-----	-
MC2R-Mouse	-----	-
MC2R-Rat	-----	-
MC2R-Opossum	-----	-
MC2R-Chicken	HFAELKILTQNDTTLAGNCQ	357
MC2R-Zebrafinch	-----	-
MC2R-Turkey	-----	-
MC2R-AnoleLizard	-----	-
MC2R-Takifugu	-----	-
MC2R-Tetraodon	-----	-
MC2R-Sickleback	-----	-
MC2R-Medaka	-----	-
MC2R-Zebrafish	-----	-
MC3R-Human	-----	-
MC3R-Mouse	-----	-
MC3R-Rat	-----	-
MC3R-AnoleLizard	-----	-
MC3R-Xenopus	-----	-
MC3R-Zebrafinch	-----	-
MC3R-Turkey	-----	-
MC4R-Xenopus	-----	-
MC3R-Zebrafish	-----	-
MC3R-Callorhinchus	-----	-
MC4R-Human	-----	-
MC4R-Mouse	-----	-
MC4R-Rat	-----	-
MC4R-Opossum	-----	-
MC4R-Chicken	-----	-
MC4R-Turkey	-----	-
MC4R-AnoleLizard	-----	-
MC4R-Zebrafinch	-----	-
MC4R-Takifugu	-----	-
MC4R-Tetraodon	-----	-
MC4R-Sickleback	-----	-
MC4R-Medaka	-----	-
MC4R-Zebrafish	-----	-
MC5R-Human	-----	-
MC5R-Mouse	-----	-
MC5R-Rat	-----	-
MC5R-Opossum	-----	-
MC5R-Chicken	-----	-
MC5R-Zebrafinch	-----	-
MC5R-Turkey	-----	-
MC5R-Takifugu	-----	-
MC5R-Tetraodon	-----	-
MC5R-Sickleback	-----	-
MC5R-Medaka	-----	-
MC5Rb-Zebrafish	-----	-
MC5Ra-Zebrafish	-----	-
MC5R-Callorhinchus	-----	-
MCAR-Lampetra	-----	-
MCAR_Lamprey	-----	-
MCBR-Lampetra	-----	-
MCBR_Lamprey	-----	-
MCRL-Branchiostoma	-----	-