

Figure S5.

MC5R-Human	-----MNS	3
MC5R-Mouse	MQDQSPVNRFRNSQKPPGTREESCLPLRGAEQNGKSDAKKKGHSLPAMNS	50
MC5R-Rat	-----SQKPPGTREESCLPLRGAEQNGKFEAKKWRHFLPAMNS	38
MC5R-Chicken	-----MNTS---SOLYVSELNLS	15
MC5R-Turkey	-----MNTS---SOLYVSELNLS	15
MC5R-Zebrafinch	-----	-
MC5R-Takifugu	-----MNTSHRSSDPQEGIMGNS	18
MC5R-Tetraodon	-----MNATHGSSNPQEGILGNS	18
MC5R-Sickleback	-----MNLSESSYREELLGNF	18
MC5R-Medaka	-----TAPMEVTDKTNLSLHKAQLANS	21
MC5Ra-Zebrafish	-----MNTS-ETTLPFWGMHVNS	17
MC5Rb-Zebrafish	-----MNSSEWPTLSPNSSLSQA	18

34c-MMU

		<b>TM1</b>	
MC5R-Human	SFHLHFLDLNLNATEGNLSGPNVKNKSSPCEDMGIAVEVFLTLGLVISLLE		53
MC5R-Mouse	SSTLTVLNLTNLASEDGILGSNVKNKSLACEEMGIAVEVFLTLGLVSLLE		100
MC5R-Rat	SSHLLTLLDLTLNASEDNILGQVNNKSSACEDMGIAVEVFLTLGLVSLLE		88
MC5R-Chicken	AFGS-----NFIVPTV-----KSKSPCEQVIAAEVFLTLGLVISLLE		53
MC5R-Turkey	AFGS-----NFIVPTV-----KSKSPCEQVIAAEVFLTLGLVISLLE		53
MC5R-Zebrafinch	-----SPCEQVIAAEVFLTLGLVISLLE		23
MC5R-Takifugu	TWNPLSYQPNFVTLSPPLLP----KTKTAACEQLHIAIEVFLTLGLIISLLE		64
MC5R-Tetraodon	TWNLSLFHQPNSSLSPPPLP----KNKTAACEQLHIAIEVFLTLGLIISLLE		64
MC5R-Sickleback	TLAYSYHHQNYTPVPPPLHPDKTGTSKPAACEQVHIAIEVFLTLGLIISLLE		68
MC5R-Medaka	TWN--FYQONYTIAPPSLKDKTSPSAAAACEQVHIAIEVFLTLGLVISLLE		69
MC5Ra-Zebrafish	SPAS--YILNATETP-----SHNKKPACEQLNIATEVFLTLGLVISLLE		58
MC5Rb-Zebrafish	NLS-----DESSRPK-----TSASAACEQVHIAIEVFLTLGLIISLLE		55

41a

		<b>TM2</b>	
MC5R-Human	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSMSSAWETITIIYLLNNKH		103
MC5R-Mouse	NILVIGAIVKKNLHSPMYFFVGS LAVADMLVSMSSAWETVITIIYLLNNKH		150
MC5R-Rat	NILVIGAIVKKNLHSPMYFFVGS LAVADMLVSMSSAWETITIIYLLNNKH		138
MC5R-Chicken	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNRH		103
MC5R-Turkey	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNRH		103
MC5R-Zebrafinch	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNRH		73
MC5R-Takifugu	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNASETITIIYLLNNKQ		114
MC5R-Tetraodon	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNKQ		114
MC5R-Sickleback	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNRQ		118
MC5R-Medaka	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNRQ		119
MC5Ra-Zebrafish	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNRQ		108
MC5Rb-Zebrafish	NILVIGAIVKKNLHSPMYFFVCSLAVADMLVSVSNAWETITIIYLLNNRS		105

77c

		<b>TM3</b>	
MC5R-Human	LVIADAFVRHIDNVFDSMICISVVASMCSLLAIAVDRIYITIFALRYHHI		153
MC5R-Mouse	LVIADAFVRHIDNVFDSMICISVVASMCSLLAIAVDRIYITIFALRYHHI		200
MC5R-Rat	VVIADAFVRHIDNVFDSMICISVVASMCSLLAIAVDRIYITIFALRYHHI		188
MC5R-Chicken	IIMEDAFVRHIDNVFDSLICISVVASMCSLLAIAVDRIYITIFALRYHNI		153
MC5R-Turkey	IIMEDAFVRHIDNVFDSLICISVVASMCSLLAIAVDRIYITIFALRYHNI		153
MC5R-Zebrafinch	VIMEDAFVRHIDNVFDSMICISVVASMCSLLAIAVDRIYITIFALRYHNI		123
MC5R-Takifugu	LIAEDHFIROLDNVFDSMICISVVASMCSLLAIAVDRIYITIFALRYHNI		164
MC5R-Tetraodon	LIVVEDEFIROLNVFDSMICISVVASMCSLLAIAVDRIYITIFALRYHNI		164
MC5R-Sickleback	LIVVEDEFIROMDNVFSMICISVVASMCSLLAIAVDRIYITIFALRYHNI		168
MC5R-Medaka	LIVVEDEFIROLNVFDSMICISVVASMCSLLAIAVDRIYITIFALRYHNI		169
MC5Ra-Zebrafish	LIVVEDEFIROMDNVFSMICISVVASMCSLLAIAVDRIYITIFALRYHNI		158
MC5Rb-Zebrafish	LIVIEDEFIROMDNVFSMICISVVASMCSLLAIAVDRIYITIFALRYHNI		155

140c

(Numbering according to human MC5R)

	TM4	TM5	
MC5R-Human	MTARRSGAIIAGIWFCTGCGIVFIIYSE	ESTYVILCLISMFFAMLFLLVLS	203
MC5R-Mouse	MTARRSGVIIACIWFCTGCGIVFIIYSE	SKYVVICLISMFFTMLFFMVS	250
MC5R-Rat	MTARRSGVIIACIWFCTGCGIVFIIYSE	SKYVVICLISMFFTMLFFMVS	238
MC5R-Chicken	MTVKRSGLIIACIWFCTGCGIIFIIYSE	STYVVICLITMFFTMLFLMVS	203
MC5R-Turkey	MTVKRSGLIIACIWFCTGCGIIFIIYSE	STYVVICLITMFFTMLFLMVS	203
MC5R-Zebrafinch	MTVKRSGLIIACIWFCTGCGIIFIIYSE	STYVVICLITMFFTMLFLMVS	173
MC5R-Takifugu	MTVRRAGCIIIGGIWFCTGCGIVFIIYSD	ETTPVVICLVCMFFAMLLIMAS	214
MC5R-Tetraodon	MTVRRAGCIIIGGIWFCTGCGIVFIIYSE	KTPVVICLVSMFFAMLLIMAS	214
MC5R-Sickleback	MTVRRAGCIIIGGIWFCTGCGIIFIIYSD	ETTPVVICLVSMFFAMLVIMAS	218
MC5R-Medaka	MTMRRAGCIIIGGIWFCTGCGIVFIIYSE	ETTPVVICLVSMFFAMLLIMAS	219
MC5Ra-Zebrafish	MTVRRALIIIGGIWFCTGCGIVFIIYSD	NTSVIVCLVSMFFIMLALMAS	208
MC5Rb-Zebrafish	MTVRRAGLIIIGSIWTFSTSCGIIFIIYSD	ETTPVVVCLVAMFFAMLLMMAS	205

	TM6		
MC5R-Human	LYTHMFLLRTHVKRIAALPGASS-ARQRTSMQ	GAVTVTMLLGVFIVCWA	252
MC5R-Mouse	LYTHMFLLRNTHVKRIAASPRYNS-VRQRTSMK	GAITLTMLLGIFIVCWS	299
MC5R-Rat	LYTHMFLLRNTHVKRIAASPRYNS-VRQRTSMK	GAITLTMLLGIFIVCWS	287
MC5R-Chicken	LYTHMFLLRTHVKKIAALPGYNS-VHQRTSMK	GAITLTMLLGIFIVCWA	252
MC5R-Turkey	LYTHMFLLRTHVKKIAALPGYNS-VHQRTSMK	GAITLTMLLGIFIVCWA	252
MC5R-Zebrafinch	LYTHMFLLRTHVKKIAALPG-----TSMK	GAITLTMLLGIFIVCWA	215
MC5R-Takifugu	LYSHMFLARSHVKRIAALPGSNS-IHQRTSMK	GAITLTILLGIFIVCWA	263
MC5R-Tetraodon	LYSHMFLARSHVKRIAALPGSSS-IQORANMK	GAITLTILLGIFIVCWA	263
MC5R-Sickleback	LYSHMFLARSHVKRIAALPGYNS-IHQRTSMK	GAITLTILLGIFIVCWA	267
MC5R-Medaka	LYSHMFLARSHVKRIAALPGYNS-IHQRTSMK	GAITLTILLGIFIVCWA	268
MC5Ra-Zebrafish	LYSHMFLARSHVKRIAALPGYNS-IHQRTSMK	GAITLTILLGIFIVCWA	257
MC5Rb-Zebrafish	LYSHMFLARSHVKRMAALPGYNANIRQRTSMK	GAVTLTILLGIFIVCWA	255

	TM7		
MC5R-Human	PFFLHLTLMLSCPONLYCSRFM	SHFNMYLILIMCNSVMDPLIYAFRSQEM	302
MC5R-Mouse	PFFLHLILMISCPONVYCS	CFMSYFNMYLILIMCNSVIDPLIYAFRSQEM	349
MC5R-Rat	PFFLHLILMISCPONVYCA	CFMSYFNMYLILIMCNSVIDPLIYAFRSQEM	337
MC5R-Chicken	PFFLHLILMISCPONLYC	VCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	302
MC5R-Turkey	PFFLHLILMISCPONLYC	VCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	302
MC5R-Zebrafinch	PFFLHLILMISCPONLYC	VCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	265
MC5R-Takifugu	PFFLHLILMISCPRNLYC	MCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	313
MC5R-Tetraodon	PFFLHLILMISCPRNLYC	MCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	313
MC5R-Sickleback	PFFLHLILMISCPRNLYC	VCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	317
MC5R-Medaka	PFFLHLILMISCPRNLYC	MCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	318
MC5Ra-Zebrafish	PFFLHLILMISCPRNLYC	MCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	307
MC5Rb-Zebrafish	PFFLHLILMISCPRNLYC	VCFMSHFNMYLILIMCNSVIDPLIYAFRSQEM	305

MC5R-Human	RKTFKEIICCRGFRIACS----	FPRRD	325
MC5R-Mouse	RRTFKEIVCCHGFRRPCR----	LLGGY	372
MC5R-Rat	RRTFKEIICCHGFRRTCT----	LLGRY	360
MC5R-Chicken	RKTFKEIICCYSVRMVCG----	LSNKY	325
MC5R-Turkey	RKTFKEIICCYSVRTVCG----	LSNKY	325
MC5R-Zebrafinch	RKTFKEIICCYSLR-----		279
MC5R-Takifugu	RKTFKEIIFCYSLRNTCSTICTL	PGKY	340
MC5R-Tetraodon	RKTFKEIICCYTLRNACSSFCT	TGKY	340
MC5R-Sickleback	RKTFKEIICCYSLRNACTNICAL	TGKY	344
MC5R-Medaka	RKTFKEIIFCFSLTNICTNLCA	TGKY	345
MC5Ra-Zebrafish	RKTFKEIICCYSLRNVFG----	MSR--	328
MC5Rb-Zebrafish	RKTFKEIVCCEGLRSFCN----	MVSKY	328