

(A)

DCT

	1				50
<i>M. rufoniger</i>	--MLKSSSGR	QEEX-----S	IGGESKFPDC	KAMRSLWWGL	LLSWLGCGML
<i>M. davidii</i>	--MLKSSSGR	QEES-----S	IGGERKFPDC	KAMRSLWWGL	LLSWLGCGML
<i>M. brandtii</i>	--MLKSSSGR	QEES-----S	KGESKFPDC	KAMRSLWWGL	LLSWLGCGML
<i>M. lucifugus</i>	--MLKSSSGR	QEES-----S	IGGESKFPDC	KAMRSLWWGL	LLSWLGCGML
<i>E. fuscus</i>	-----	-----	-----	--MRSLWWGL	LLSWLGCGML
<i>P. alecto</i>	-----	-----	-----	--MSPLRWGL	LLSCLSCGIL
<i>P. vampyrus</i>	-----	-----	-----	--MSPLRWGL	LLSCLSCGIL
<i>R. aegyptiacus</i>	-----	-----	-----	--MGPLLWGL	LLSCLGCGIL
<i>B. taurus</i>	-----	-----	-----	--MSPLGWGL	LLGCLGCALP
<i>E. caballus</i>	MNAQEPKSGR	QGERQDRSKE	WKVQESSPGY	KAMSSLRWGL	LLSCLGCGLL
<i>M. musculus</i>	-----	-----	-----	--MGLVGWGL	LLGCLGCGIL
<i>H. glaber</i>	-----	-----	-----	--MRPLQWGL	LLGCLGSCLW
<i>H. sapiens</i>	-----	-----	-----	--MSPLWWGF	LLSCLGCKIL
<i>M. domestica</i>	-----	-----	-----	-MIK QQQAGLPWWL	TLLCLGSCLL
	51				100
<i>M. rufoniger</i>	PGARAQFPRV	CMTVASLVAK	ECCPPLGVEP	TNVCGSQEGR	GQCTEVQADT
<i>M. davidii</i>	PGARAQFPRV	CMTVASLVAK	ECCPPLGVEP	ANVCGSQEGR	GQCTEVQADT
<i>M. brandtii</i>	PGAGAQFPRV	CMTVASLVAK	ECCPPLGVEP	ANICGSQEGR	GQCTEVQADT
<i>M. lucifugus</i>	PGARAQFPRV	CMTVASLVAK	ECCPPLGVEP	ANVCGSQEGR	GQCTEVQADT
<i>E. fuscus</i>	PGAWAQFPRV	CMTVASLVAK	ECCPPLGVEP	ANVCGSQEGR	GQCTEVQADT
<i>P. alecto</i>	PGVWAQFPRV	CMTMDNLVSK	ECCPPLGAEP	GNVCGSQAGR	GQCTEVQTDI
<i>P. vampyrus</i>	PGVWAQFPRV	CMTMDNLVSK	ECCPPLGVEP	GNVCGSQTGR	GQCTEVQTDI
<i>R. aegyptiacus</i>	PGVWAQFPRV	CMTVDNLVSK	ECCPPLGAEP	DNVCGSRAGR	GQCTEVQTDI
<i>B. taurus</i>	SGARAQFPRV	CMTVGSLOAK	ECCPPLGADP	ANVCGSREGR	GQCAEVQTDI
<i>E. caballus</i>	PGAWAQFPRV	CMTVDSLISK	ECCPPLGMEP	ANVCGSQEGR	GQCTEVETDI

M. musculus	LRARAQFPRV	CMTLDGVLNK	ECCPPLGPEA	TNICGFLEGR	GQCAEVQTD
H. glaber	PGAWAQFPRV	CMTLDSLGRK	ECCPPLGVEP	TNVCQSODGR	GQCLEVRADS
H. sapiens	PGAQQQFPRV	CMTVDSLUNK	ECCPRLGAES	ANVCGSQQGR	GQCTEVRADT
M. domestica	PMTWAQFPRT	CMTLESVSK	ECCPALGVDP	ANRCGMLEGR	GQCAEVQTD

Topological domain: Luminal, melanosome

101

150

M. rufoniger	RPWSGPYVLR	NQDDREWWPR	KFFNRTCNT	GNFAGFNCGD	CKFGWTGPNC
M. davidii	RPWSGPYVLR	NQDDRERWPR	KFFNRTCNT	GNFAGFNCGD	CKFGWTGPNC
M. brandtii	RPWSGPYVLR	NQDDRERWPR	KFFNRTCNT	GNFAGFNCGD	CKFGWTGPNC
M. lucifugus	RPWSGPYVLR	NQDDRERWPR	KFFNRTCNT	GNFAGFNCGD	CKFGWTGPNC
E. fuscus	RPWSGPYVLR	NQDDRERWPR	KFFNRTCNT	GNFAGFNCGD	CKFGWTGPNC
P. alecto	RPWGGPYVLR	NQDDRERWPR	KFFNRTCNT	GNFAGYNCGG	CKFGWIGLNC
P. vampyrus	RPWGGPYVLR	NQDDRERWPR	KFFNRTCNT	GNFAGYNCGG	CKFGWIGLNC
R. aegyptiacus	RPWGGPYVLR	NQDDRERWPR	KFFNRTCNT	GNFAGYNCGG	CKFGWIGLNC
B. taurus	RPWSGPYVLR	NQDDRERWPR	KFFDRTCCT	GNFAGYNCGN	CRFGWTGPKC
E. caballus	RPWSGPYILR	NQDDRERWPR	KFFDWTCKCT	GNFAGYNCGD	CKFGWTGPNC
M. musculus	RPWSGPYILR	NQDDREQWPR	KFFNRTCCT	GNFAGYNCGG	CKFGWTGPDC
H. glaber	RPWSGPYVLR	NRDDREQWPR	KFFHRTCCT	GNFAGYHCGD	CRFGWTGPNC
H. sapiens	RPWSGPYILR	NQDDRELWPR	KFFHRTCCT	GNFAGYNCGD	CKFGWTGPNC
M. domestica	RPWSGPYVLR	NQDDREQWPR	KFFNRTCCT	GNFAGYNCGD	CKFGWTGPDC

Topological domain: Luminal, melanosome

151

200

M. rufoniger	DQKKPPVIRK	NIHFLTPQER	EQFLGALDLA	KNTTHPDYVI	TTQHWLGLLG
M. davidii	DQKKPPVIRK	NIHFLTPQER	EQFLGALDLA	KNTTHPDYVI	TTQHWLGLLG
M. brandtii	DQKKPPVIRK	NIHFLTPQER	EQFLGALDLA	KNTTHPDYVI	TTQHWLGLLG
M. lucifugus	DQKKPPVIRK	NIHFLTPQER	EQFLGALDLA	KNTTHPDYVI	TTQHWLGLLG
E. fuscus	DQKKPPVIRK	NIHFLTPQER	EQFLGALDLA	KNTTHPDYVI	TTQHWLGLLG
P. alecto	DRKKPPVVRQ	NIHSLTPQER	EQFLGALDLA	KKTIHPDYVI	TTQHWLGLLG
P. vampyrus	DRKKPPVVRQ	NIHSLTPQER	EQFLGALDLA	KKTIHPDYVI	TTQHWLGLLG
R. aegyptiacus	DRKKPPVVRQ	NIHSLTPQER	EQFLGALDLA	KKTIHPDYVI	TTQHWLGLLG
B. taurus	DQKKPLVVR	DVHSLTPQER	EQFLDALDLA	KYTPHPDYVI	TTQHWLGLLG

<i>E. caballus</i>	DRKKAPVVRQ NIHSLTPQER EQFLGALDLA KNTTHPDYVI TTQHWLGLLG
<i>M. musculus</i>	NRKKPAILRR NIHSLTAQER EQFLGALDLA KKSIIHPDYVI TTQHWLGLLG
<i>H. glaber</i>	DQKKPPVVRQ NIHSLTPQER EQFLGALDLA KKTTHPDYVI TTQHWLGLLG
<i>H. sapiens</i>	ERKKPPVIRQ NIHSLSPQER EQFLGALDLA KKRVHPDYVI TTQHWLGLLG
<i>M. domestica</i>	NQKKPPVVRK NIHSLSPRER EQFLDALDLA KNTIHPDYVI TTQHWLGLLG

Topological domain: Lumenal, melanosome

201

250

<i>M. rufoniger</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>M. davidii</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>M. brandtii</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>M. lucifugus</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>E. fuscus</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>P. alecto</i>	PNRTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>P. vampyrus</i>	PNRTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>R. aegyptiacus</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>B. taurus</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>E. caballus</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>M. musculus</i>	PNGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAID FSHQGPAFVT
<i>H. glaber</i>	POGTQPQIAN CSYDFFVWL HYYSVRDTLL GPGRPYKAVD FSHQGPAFVT
<i>H. sapiens</i>	PNGTQPQFAN CSYDFFVWL HYYSVRDTLL GPGRPYRAID FSHQGPAFVT
<i>M. domestica</i>	PNGTQPQIAN CSYNYFVWL HYYSVRDTLL GPGRPFKAID FSHQGPAFLT

Topological domain: Lumenal, melanosome

251

300

<i>M. rufoniger</i>	WHRYHLLWLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLLGAARQD
<i>M. davidii</i>	WHRYHLLCLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLLGAARQD
<i>M. brandtii</i>	WHRYHLLWLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLLGAARQD
<i>M. lucifugus</i>	WHRYHLLWLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLLGAARQD
<i>E. fuscus</i>	WHRYHLLWLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLFGAARQD
<i>P. alecto</i>	WHRYHLLWLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLFGAARQD
<i>P. vampyrus</i>	WHRYHLLWLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLFGAARQD
<i>R. aegyptiacus</i>	WHRYHLLWLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLFGAARQD

B. taurus	WHRYHLLWLE RDLQRLTGNE SFALPYWNFA TGRNECDVCT DQLLGAARQD
E. caballus	WHRYHLLWLE RDLQRLTGNE SFALPYWNFA TGRNECDVCT DQLLGAARQD
M. musculus	WHRYHLLWLE RELQRLTGNE SFALPYWNFA TGKNECDVCT DELLGAARQD
H. glaber	WHRYHLLWLE RDLQRLTGNE SFALPYWNFA TGRNECDVCT DQLLGAARQD
H. sapiens	WHRYHLLCLE RDLQRLIGNE SFALPYWNFA TGRNECDVCT DQLFGAARPD
M. domestica	WHRYHLLLE RDLQRLTGNE SFALPYWNFA TGKNECDVCT DQLFGASRLE

Topological domain: Lumenal, melanosome

301

350

M. rufoniger	DPTLISQNSR FSSWEIVCDS LDDYNHRVTL CNGTYEGLLR RNQAGRNGEK
M. davidii	DPTLISQNSR FSSWEIVCDS LDDYNRRVTL CNGTYEGLLR RNQAGRNGEK
M. brandtii	DPTLISQNSR FSSWEIVCDS LDDYNRRVTL CNGTYEGLLR RNQAGRNGEK
M. lucifugus	DPTLISQNSR FSSWEIVCDS LDDYNRRVTL CNGTYEGLLR RNQAGRNGEK
E. fuscus	DPTLISQNSR FSSWEIVCDS LDDYNRRVTL CNGTYEGLLR RNQAGRNGEK
P. alecto	DPTLISQNSR FSSWEIVCNS LDDYNRRVTL CNGTYEGLLR RNRVGRNSEK
P. vampyrus	DPTLISQNSR FSSWEIVCNS LDDYNRRVTL CNGTYEGLLR RNRVGRNSEK
R. aegyptiacus	DPTLISQNSR FSSWEIVCDS LDDYNRRVTL CNGTYEGLLR RNRVGRNSEK
B. taurus	DPTLISQNSR FSSWEIVCDS LDDYNRRVTL CNGTYEGLLK RNQMGRNSEK
E. caballus	DPMLISQNSR FSSWEIVCDS LDDYNRRVTL CNGTYEGLLR RNQVGRNSEK
M. musculus	DPTLISRNSR FSTWEIVCDS LDDYNRRVTL CNGTYEGLLR RNKVGRNNEK
H. glaber	DPTLISQNSR FSSWEIVCDS LDDYNQRVTL CNGTYEGLLR RNQMGRNREK
H. sapiens	DPTLISRNSR FSSWETVCDS LDDYNHLVTL CNGTYEGLLR RNQMGRNSMK
M. domestica	DSALISQNSR FSRWEIVCNS LDDYNRQVTL CNGTNEGLLR RNQLGRTRVQ

Topological domain: Lumenal, melanosome

351

400

M. rufoniger	LPSLKDIEDC LSLKQFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVMSL
M. davidii	LPSLKDIEDC LSLKQFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVMSL
M. brandtii	LPSLKDIEGC LSLKQFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVMSL
M. lucifugus	LPSLKDIEGC LSLKQFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVMSL
E. fuscus	LPSLKDIEDC LSLKKFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVMSL
P. alecto	LPTLKEIQDC LSLKKFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQAMSL
P. vampyrus	LPTLKEIQDC LSLKKFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQAMSL

R. aegyptiacus	LPNLKDIQDC LSLTKFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVMSL
B. taurus	LPTLKDIQNC LSLKKFDSPP FFQNSTLSFR NALEGFGKAD GTLDSQVMNF
E. caballus	LPTLHDIQDC LSLKKFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVLSL
M. musculus	LPTLKNVQDC LSLQKFDSPP FFQNSTFSFR NALEGFDKAD GTLDSQVMNL
H. glaber	LPTLKDVQDC LSLQKFDNPP FFQNSTFSFR NALEGFDKAD GTLGSQVASL
H. sapiens	LPTLKDIRDC LSLQKFDNPP FFQNSTFSFR NALEGFDKAD GTLDSQVMSL
M. domestica	LPTIEDVQAC LSLEKFDNPP FFRNSSFSFR NALEGFDKAD GTFDSPVMSL

Topological domain: Lumenal, melanosome

401 450

M. rufoniger	HNLVHSFLNG TNALPHSAAN DPIFVV-----
M. davidii	HNLVHSFLNG TNALPHSAAN DPIFVV-----
M. brandtii	HNLVHSFLNG TNALPHSAAN DPIFVV-----
M. lucifugus	HNLVHSFLNG TNALPHSAAN DPIFVV-----
E. fuscus	HNLVHSFLNG TNALPHSAAN DPIFVV-----
P. alecto	HNLVHSFLNG TSALPHSAAN DPIFVV-----
P. vampyrus	HNLVHSFLNG TSALPHSAAN DPIFVV-----
R. aegyptiacus	HNLVHSFLNG TNALPHSAAN DPIFVV-----
B. taurus	HNLVHSFLNG TSALPHSAAN DPVFVV-----
E. caballus	HNLVHSFLNG TSALPHSAAN DPIFVV-----
M. musculus	HNLVHSFLNG TNALPHSAAN DPVFVV-----
H. glaber	HNLVHSFLNG TSALPHSAAN DPVFVV-----
H. sapiens	HNLVHSFLNG TNALPHSAAN DPIFVVISNR LLYNATTNIL EHVrKEKATK
M. domestica	HNLVHAFVNG TSALPHSAAN DPIFVV-----

Topological domain: Lumenal, melanosome

451 500

M. rufoniger	-----L HAFTDAIFDE WMRRFNPSXD AWPQELAPIG
M. davidii	-----L HAFTDAIFDE WMRRFNPSAD AWPQELAPIG
M. brandtii	-----L HAFTDAIFDE WMRRFNPSAD AWPQELAPIG
M. lucifugus	-----L HAFTDAIFDE WMRRFNPSAD AWPQELAPIG
E. fuscus	-----L HAFTDAIFDE WMRRFNPSAD AWPQELAPIG
P. alecto	-----L HSFTDAIFDE WMKRFNPSAN AWPQELAPIG

P. vampyrus -----L HSFTDAIFDE WMKRFNPSAN AWPQELAPIG
R. aegyptiacus -----L HCFTDAIFDE WMKRFNPSVD AWPQELAPIG
B. taurus -----L HSFTDAIFDE WMKRFNPPVD AWPRELAPIG
E. caballus -----L HSFTDAIFDE WMRRFNPPAE AWPQELAPIG
M. musculus -----L HSFTDAIFDE WLKRNNPSTD AWPQELAPIG
H. glaber -----L HSFTDSIFEE WMKRYKPAAD AWPQELAPIG
H. sapiens ELPSLHVLVT MSLGGSTQVL HSFTDAIFDE WMKRFNPPAD AWPQELAPIG
M. domestica -----L HSFTDAIFDE WMKRFNPPVN AWPPELAPIG

Topological domain: Lumenal, melanosome

501 550

M. rufoniger HNRMHNMVVPF FPSVTNQELF LTADQLGYSY AIDLVP--EE T--PSWSVTL
M. davidii HNRMYNMVVPF FPSVTNQELF LTADQLGYSY AIDLVP--EE T--PSWSVTL
M. brandtii HNRMYNMVVPF FPSVTNQELF LTADQLGYSY AIDLVP--EE T--PSWSVTL
M. lucifugus HNRMYNMVVPF FPSVTNQELF LTADQLGYSY AIDLVP--EE T--PSWSVTL
E. fuscus HNRMYNMVVPF FPSVTNQECF LTTDQLGYSY AIDLPVSVEE T--PSWSTTL
P. alecto HNRMYNMVVPF FPPVTNEEFF LTADQLGYSY VIDLPVSVEE T--PSWNTTL
P. vampyrus HNRMYNMVVPF FPPVTNEEFF LTADQLGYSY VIDLPVSVEE T--PSWNTTL
R. aegyptiacus HNRMYNMVVPF FPPVTNEEFF LTADQLGYSY VIDLPV--EE T--PSWNTTL
B. taurus HNRMYNMVVPF FPPVTNEELF LTADQLGYSY AIDLVP--EE T--PDWTTVL
E. caballus HNRMYNMVVPF FPPVTNEELF LTADQLGYSY AIDLVP--EQ T--PGWTTTL
M. musculus HNRMYNMVVPF FPPVTNEELF LTAEQLGYSY AVDLSE--EE A--PVWSTTL
H. glaber HNRMYNMVVPF FPPVTNEELF LTADQLGYSY AIDLPVSVEE T--PSWITTL
H. sapiens HNRMYNMVVPF FPPVTNEELF LTSDQLGYSY AIDLPVSVEE T--PGWPTTL
M. domestica HNRMYNMVVPF FPPVTNEEFF LTADQLGYDY SINLSASSSG KATQDQTLIL

Topological domain: Lumenal, melanosome

551 600

M. rufoniger PVVMGMLVAL VGLFVLLAFL QYRRLHKGYA PLMETQFN-K RYTEEA----
M. davidii PVVLGMLVAL VGLFVLLAFL QYRRLRKGYA PLMETHLN-K RYTEEA----
M. brandtii PVVMGMLVAL VGLFVLLAFL QYRRLRKGYA PLMETHWN-K RYTEEA----
M. lucifugus PVVMGMLVAL VGLFVLLAFL QYRRLRKGYA PLMETHLN-K RYTEEA----
E. fuscus PVVMGMLVVL VGLFVLLAFL QYRRLRKGYA PLMETHLNNK RYTEEA----

P. alecto SVVVGILVAL IGLLVLLAFL QYRRLRKGYA PLMETHLSNK RYMEEA----
 P. vampyrus SLVMGILVAL IGLLVLLAFL QYQRLRKGYA PLMETHLSNK RYMEEA----
 R. aegyptiacus SVVMGMLVAL IGLLVLLAFL QYRRLRKGYA PLMETHLSNK RYTEEA----
 B. taurus SVVTGMLVVL VVLFALLLFL QYRRLRKGYT PLVETQLSNK RYTEEA----
 E. caballus SVVMGMLVAL VGLFALLVFL QYRRLRKGYT PLMETHLSK- RYTEEA----
 M. musculus SVVIGILGAF VLLGLLAFL QYRRLRKGYA PLMETGLSSK RYTEEA----
 H. glaber SVVMGILVAL VGLFMLLIFL QYRRLRKGYT PLMETHLSNK RYTKEAERVQ
 H. sapiens LVVMGTLVAL VGLFVLLAFL QYRRLRKGYT PLMETHLSSK RYTEEA----
 M. domestica SVIGAGLVAL VALSLLLVL QYRRQRKGFA PLMETRFSNR KYTEDA----

Topological domain: Cytoplasmic

601

M. rufoniger -
 M. davidii -
 M. brandtii -
 M. lucifugus -
 E. fuscus -
 P. alecto -
 P. vampyrus -
 R. aegyptiacus -
 B. taurus -
 E. caballus -
 M. musculus -
 H. glaber A
 H. sapiens -
 M. domestica -

(B)

SLC45A2

	1				50
<i>M. rufoniger</i>	MKESEPFQP	NSLPGSKS--	----KXAHKS	EGPRRRWRAC	RQVPHPAAMG
<i>M. davidii</i>	-----	-----	-----	-----	-----MG
<i>M. brandtii</i>	MKESEPFQP	NPLPGSKS--	----KPAHKS	EGPRRRWRAG	RQVPHPVAMG
<i>M. lucifugus</i>	-----	-----	-----	-----	-----MG
<i>E. fuscus</i>	-----	-----	-----	-----	-----MG
<i>P. alecto</i>	-----	-----	-----	-----	-----
<i>P. vampyrus</i>	-----	-----	-----	-----	-----MG
<i>R. aegyptiacus</i>	-----	-----	-----	-----	-----MG
<i>B. taurus</i>	MKEFEPRQP	GRLCGPCSQA	PCQIHLGART	PGPRRRWWAC	RQVPRPVAMG
<i>E. caballus</i>	MKEFEPLQP	DHLCWLLSQA	LCQIQLEAQT	RGPPGWRWAC	RQVPHPVAMG
<i>M. musculus</i>	-----	-----	-----	-----	-----MS
<i>H. glaber</i>	-----	-----	-----	-----	-----MG
<i>H. sapiens</i>	-----	-----	-----	-----	-----MG
<i>M. domestica</i>	-----	-----	-----	-----	-----MG
	51				100
<i>M. rufoniger</i>	GNSGQPGTHX	YTSLAEDGPL	AAGEQPRRPT	GRLIMHSMAM	FGREFCYAVE
<i>M. davidii</i>	GNSGQPGTHT	YRSLAEDGPL	AAGEPPRRPT	GRLIMHSMAM	FGREFCYAVE
<i>M. brandtii</i>	GNSGQPGTHT	YTSLTEDGPL	AAGEQPRRPT	GRLIMHSMAM	FGREFCYAVE
<i>M. lucifugus</i>	GNSGQPGTHT	YTSLEEDGPL	AAGEQPRRPT	GRLIMHSMAM	FGREFCYAVE
<i>E. fuscus</i>	GNTGQPGMHS	YTSLAEDGPW	AAGEQPKRPT	GRLIMHSMAM	FGREFCYAVE
<i>P. alecto</i>	-----	-----	-----	-----MAM	FGREFCYAVE
<i>P. vampyrus</i>	GNSGQLSIHT	YTSLGEDGPF	GFVEPPKRLT	GRLIMHSMAM	FGREFCYAVE
<i>R. aegyptiacus</i>	GNSGQPSIHT	YTSLAEDGPF	GFVEAPKRPT	GRLIMHSMAM	FGREFCYAVE
<i>B. taurus</i>	DKSGQSPLRT	YKSLDEEGLF	GSAELPKRPT	GSLVMHSMAM	FGREFCYAVE
<i>E. caballus</i>	GNSGQPGVPT	YKSLAEDGPF	GSVELPKRST	GRLVMHSMAM	FGREFCYAVE

M. musculus	GSNGPTDTHT	YQSLAEDCPF	GSVEQPKRST	GRLVMHSMAM	FGREFCYAVE
H. glaber	SNGGQAGTHT	YQSLTEDALF	GSMEPPRRPT	GRLVMHSLAM	FGREFCYAVE
H. sapiens	SNSGQAGRHI	YKSLADDGPF	DSVEPPKRPT	SRLIMHSMAM	FGREFCYAVE
M. domestica	VSGTQTGNPK	YTSLATAGSL	GHAEP RRST	GRLVMHSMAM	LGREFCYAVE

101

150

M. rufoniger	AAYVTPVLLS	VGLPKSLYSV	VWLLSPILGF	LLQPVVGSAS	DYCRAGWGRR
M. davidii	AAYVTPVLLS	VGLPKSLYSV	VWLLSPILGF	LLQPVVGSAS	DYCRAGWGRR
M. brandtii	AAYVTPVLLS	VGLPKSLYSV	VWLLSPV LGF	LLQPVVGSAS	DYCRAGWGRR
M. lucifugus	AAYVTPVLLS	VGLPKSLYSV	VWLLSPV LGF	LLQPVVGSAS	DYCRAGWGRR
E. fuscus	AAYVTPVLLS	VGLPKSLYSV	VWLLSPV LGF	LLQPVVGSAS	DYCRAGWGRR
P. alecto	AAYVTPVLLS	VGLPRSLYSM	VWLLSPV LGF	LLQLVVGSAS	DHCHATWGRR
P. vampyrus	ASYVTPVLLS	VGLPKSLYSM	VWLLSPV LGF	LLQLVVGSAS	DHCHATWGRR
R. aegyptiacus	AAYVTPVLLS	VGLPRRLYSV	VWLLSPILGF	LLQPVVGSAS	DHCHAMWGRR
B. taurus	AAYVTPVLLS	VGLPKSLYSM	VWLLSPILGF	LLQPVVGSAS	DHCRARWGRR
E. caballus	AAYVTPVLLS	VGLPKRLYSV	VWLLSPV LGF	LLQPVVGSAS	DHCRARWGRR
M. musculus	AAYVTPVLLS	VGLPKSLYSM	VWLLSPILGF	LLQPVVGSAS	DHCRARWGRR
H. glaber	AAYVTPVLLS	VGLPESLYSV	VWLLSPILGF	LLQPVVGSAS	DHCQSRWGRR
H. sapiens	AAYVTPVLLS	VGLPSSLYSI	VWFLSPILGF	LLQPVVGSAS	DHCRSRWGRR
M. domestica	AAYVTPVLLS	VGLPQSLYSV	VWLISPILGF	MLQPIVGSAS	DHCRSRWGKR

151

200

M. rufoniger	RPYILALGVM	MLLGMALYLN	GDTVVSALT V	DPRRKL-VWA	ITITMMGVV V
M. davidii	RPYILALGVM	MLLGMALYLN	GDTVVSALIA	DPRRKL-IWA	ITITMMGVVL
M. brandtii	RPYILALGVM	MLLGMALYLN	GDTVVSALIA	DPRRKL-IWA	ITITMMGVVL
M. lucifugus	RPYILALGIM	MLLGMALYLN	GDTVVSALIA	DPRRKL-IWA	ITITMMGVVL
E. fuscus	RPYILALGVM	MLLGMALYLN	GDTVVSALIA	DPRRKL-IWA	ITITMMGVVL
P. alecto	RPYILTAVM	MLLGMGFYLN	GDAIVSALIA	DPRRRL-IWT	ITITMLGVVL
P. vampyrus	RPYILTAVM	MLLGMGFYLN	GDAIVSALIA	DPRRRL-IWT	ITITMIGVVL
R. aegyptiacus	RPYILTAVM	MLLGMALYLN	GDTVVSALIA	DPRRRL-IWA	ITITMIGVVL
B. taurus	RPYILTGLM	MLLGMAMYLN	GDAIISALIA	DPRRKP-IWA	ISITMIGVVL

E. caballus	RPYILALSVI	MLLGMALYLN	GDAVISALIA	DRRKKL-TWA	ITITMIGVVL
M. musculus	RPYILTAIM	MLLGMALYLN	GDAVVSALVA	NPRQKL-IWA	ISITMVGVVL
H. glaber	RPYILTLGIM	MLLGMALYLN	GDAVVSALIL	NPRRKL-VWA	ISVTMIGVVL
H. sapiens	RPYILTLGVM	MLVGMALYLN	GATVVAALIA	NPRRKL-VWA	ISVTMIGVVL
M. domestica	RPYILTLGIL	MLLGMALYLN	GDAVVSAVFT	KPSKCLTMWA	VSITMIGVVL

Transmembrane: Helical

201

250

M. rufoniger	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	YHALFTGFGG	ALGYLLGAID
M. davidii	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	YHALFTGFGG	ALGYLLGAID
M. brandtii	FDFAADFIDG	PIKAYLFDVC	SHRDKERGLH	YHALFTGFGG	ALGYLLGAID
M. lucifugus	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	YHALFTGFGG	ALGYLLGAID
E. fuscus	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	YHALFTGFGG	ALGYLLGAID
P. alecto	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLF	YHALFTGFGG	ALGYLLGAID
P. vampyrus	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLY	YHALFTGFGG	ALGYLLGAID
R. aegyptiacus	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	YHALFTGFGG	ALGYLLGAID
B. taurus	FDFAADFIDG	PIKAYLFDVC	THRDKERGLH	FHALFTGLGG	ALGYLLGAID
E. caballus	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	HHALFTGLGG	ALGYLLGAID
M. musculus	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	YHALFTGFGG	ALGYLLGAID
H. glaber	FDFAADFIDG	PIKAYLFDVC	SHRDKERGLH	YHALFTGFGG	ALGYLLGAID
H. sapiens	FDFAADFIDG	PIKAYLFDVC	SHQDKERGLH	YHALFTGFGG	ALGYLLGAID
M. domestica	FDFAADFIDG	PIKAYLFDVC	SYQDKERGLH	YHALFTGFGG	ALGYLLGAID

Transmembrane: Helical

251

300

M. rufoniger	WAHLELGRVL	GTEFQVMFFF	SALVLTLCFI	IHLCSPEAP	LRDTAKDSSL
M. davidii	WAHLKLGRVL	GTEFQVMFFF	SALVLTLCFI	IHLCSPEAP	LRDTAKDSSL
M. brandtii	WAHLKLGRVL	GTEFQVMFFF	SALVLTLCFI	IHLCSPEAP	LRDTAKDSSL
M. lucifugus	WAHLKLGRVL	GTEFQVMFFF	SALVLTLCFI	IHLCSPEAP	LRDTAKDSSL
E. fuscus	WAHLKLGRVL	GTEFQVMFFF	SALVLTLCFI	IHLCSPEAP	LRDAARDVLP
P. alecto	WAHLKLGRVL	GTEFQVMFFF	SASVLIILCFI	IHLCSPEAP	LRDVTKDIPP
P. vampyrus	WAHLKLGRVL	GTEFQVMFFF	SALVLIILCFI	IHLCSPEAP	LRDVTKDIPP
R. aegyptiacus	WAHLKLGRVL	GTEFQVMFFF	SALVLTLCFI	IHLCSPEAP	LRDVTKDIPP

<i>B. taurus</i>	WAHLELGRLL	GTEFQVMFFF	SSLVLTLCFI	IHLCSIPEAP	LRDVAKDIPP
<i>E. caballus</i>	WAHLKLGRLM	GTEFQVMFFF	SALMLTLCVV	IHLCSIPEAP	LRDVAKDIPP
<i>M. musculus</i>	WVHLDLGRLL	GTEFQVMFFF	SALVLI LCFI	THLCSIPEAP	LRDAATDPPS
<i>H. glaber</i>	WAHLELGRVL	GTEFQVMFFF	SALMLTLCFI	IHLCSIPEAP	LRDVAKDISP
<i>H. sapiens</i>	WAHLELGRLL	GTEFQVMFFF	SALVLTLCFT	VHLCSISEAP	LTEVAKGIPP
<i>M. domestica</i>	WGHELEGRLL	GTEFQVMFFF	SVLVFTICLI	IHLCSIPEAP	LCDNPEDSTL

301

350

<i>M. rufoniger</i>	QQAPQDPPLP	SDKTYEYGS	EKVKNQYVHS	ELT-----VQ	GEKNKNPAEQ
<i>M. davidii</i>	QQAPQDPPLS	SDKTYEYGS	EKVKNQYVHS	ELT-----VQ	GEKTKNPAKQ
<i>M. brandtii</i>	QQAPQDPPLS	SDKTYEYGS	EKVKNQYVHS	ELT-----VQ	GEKTKNPAEQ
<i>M. lucifugus</i>	QQAPQDPPLS	SDKAYEYGS	EKVKNQYVHS	ELT-----VQ	GEKTKNPAEQ
<i>E. fuscus</i>	QQAPQDAPLS	ADKTYEYGS	EKVKNQDVHS	ELT-----MQ	GEKDTNPAEQ
<i>P. alecto</i>	QQAPQNPLS	SDRMIEYGS	EKVKNQSVNP	ELV-----ML	GEKTKNPAEQ
<i>P. vampyrus</i>	QQAPQNPLS	SDRMIEYGS	EKVKNQSVNP	ELV-----ML	GEKNKNPAEQ
<i>R. aegyptiacus</i>	QQAPQNPLS	SDRMIEYGS	EKVKNQSVNP	ELL-----IL	GEKSQNLAEQ
<i>B. taurus</i>	QQAPQDLALS	SDKMIEYGS	EKVKNQYVNP	ELV-----LQ	GGKTKNPAEQ
<i>E. caballus</i>	QQDSQDPLS	SDRMIEYGS	EKVKNQYVNP	EMV-----LQ	GEKTTNT-QQ
<i>M. musculus</i>	QQDPQGSLS	ASGMIEYGS	EKVKNQGADT	EQP-----VQ	EWKNKKPSGQ
<i>H. glaber</i>	QQAPQDPSLS	SDRMCKYGS	EKAKNQYVNP	ELA-----MQ	GRKNKSPA EQ
<i>H. sapiens</i>	QQTPQDPLS	SDGMIEYGS	EKVKNQYVNP	ELA-----MQ	GAKKNHAEQ
<i>M. domestica</i>	QHNPHSPLM	QNGGSDYGS	ERVKNQFMKT	KQTELATAKR	GEVMENTKNO

351

400

<i>M. rufoniger</i>	VQRTMTMKS	LRLVNMPSH	YRCLCISHLI	GWTAFLSNML	FFTDFMGRIV
<i>M. davidii</i>	IQRTMTMKS	LRLVNMPSH	YRCLCISHLI	GWTAFLSNML	FFTDFMGRIV
<i>M. brandtii</i>	IQRTMTMKS	LRLVNMPSH	YRCLCISHLI	GWTAFLSNML	FFTDFMGRIV
<i>M. lucifugus</i>	IQRTMTMKS	LRLVNMPSH	YRCLCISHLI	GWTAFLSNML	FFTDFMGRIV
<i>E. fuscus</i>	IQRTMTMKS	LRLVNMPSH	YRCLCISHLI	GWTAFLSNML	FFTDFMGRIV
<i>P. alecto</i>	TQRAMTMKS	LRLVSMPSH	HRCLCISHLI	GWTAFLCNML	FFTDFMGQIV
<i>P. vampyrus</i>	TQRAMTMKS	LRLVSMPSH	YRYLCISHLI	GWTAFLCSML	FFTDFMGQIV

<i>R. aegyptiacus</i>	TRRTVTLKSL	LRALVSMPSH	YRCLCISHLI	GWTAFLSNML	FFTDFMGQIV
<i>B. taurus</i>	TQRTMTLRSL	LRALRSMPPH	YRCLCISHLI	GWTAFLSNML	FFTDFMGQIV
<i>E. caballus</i>	TRRTMTMKSL	LRALVSMPPH	YRYLCISHLL	GWTAFLSNML	FFTDFMGQIV
<i>M. musculus</i>	SQRTMSMKSL	LRALVNMPSH	YRCLCVSHLI	GWTAFLSNML	FFTDFMGQIV
<i>H. glaber</i>	AQRVMTMKSL	LRALVNMPPH	YRCLCISHLI	GWTAFLSNML	FFTDFMGQIV
<i>H. sapiens</i>	TRRAMTLKSL	LRALVNMPPH	YRYLCISHLI	GWTAFLSNML	FFTDFMGQIV
<i>M. domestica</i>	TQNKMTMRSL	LKAILSMPPH	YRYLCVSHLI	GWTAFLSNML	FFTDFMGQIV

401

450

<i>M. rufoniger</i>	YHGPNYSAHN	STEFLIYERG	VEVGCWGLCI	NAVFSSLYSY	FQKALVSYIG
<i>M. davidii</i>	YHGPNYSAHN	STEFLIYERG	VEVGCWGLCI	NAVFSSLYSY	FQKALVSYIG
<i>M. brandtii</i>	YHGPNYSAHN	STEFLIYERG	VEVGCWGLCI	NAVFSSLYSY	FQKALVSYIG
<i>M. lucifugus</i>	YHGPNYSAHN	STEFLIYERG	VEVGCWGLCI	NAVFSSLYSY	FQKALVSYIG
<i>E. fuscus</i>	YHGPNYSAHN	STEFLIYERG	VEVGCWGLCI	NAMFSSLYSY	FQKALVSYIG
<i>P. alecto</i>	YHGDPYSAHN	STEFLIYERG	VEVGCWGLCL	NSLFSSLYSY	FQKALVSYTG
<i>P. vampyrus</i>	YHGDPYSAHN	STEFLIYERG	VEVGCWGLCI	NSLFSSLYSH	FQKALVSYIG
<i>R. aegyptiacus</i>	YHGDPYSAHN	STEFLIYERG	VEVGCWGLCI	NSMFSSLYSY	FQKALVSYVG
<i>B. taurus</i>	YHGDPYGAHN	STEFLIYQRG	VEVGCWGLCI	NSMFSSLYSY	FQKVLVPCIG
<i>E. caballus</i>	YHGDPYSAHN	STEFLIYQRG	VEVGCWGLCI	NSVFSSLYSY	FQKVLVSYVG
<i>M. musculus</i>	YHGDPYGAHN	STEFLIYERG	VEVGCWGLCI	NSVFSSVYSY	FQKAMVSYIG
<i>H. glaber</i>	YRGDPYSAHN	STEFLIYERG	VEVGCWGLCI	NSVFSSLYSY	FQKALVPYIG
<i>H. sapiens</i>	YRGDPYSAHN	STEFLIYERG	VEVGCWGFCI	NSVFSSLYSY	FQKVLVSYIG
<i>M. domestica</i>	YHGDPYAPHN	STSFLIYERG	VEVGCWGLCI	NSVFSSLYSY	FQKVLLSYVG

451

500

<i>M. rufoniger</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNVYSTLA	LCASFGVMSS	TLYTVPFNL
<i>M. davidii</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNVYSTLA	LCASFGVMSS	TLYTVPFNL
<i>M. brandtii</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNVYSTLA	LCASFGVMSS	TLYTVPFNL
<i>M. lucifugus</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNVYSTLA	LCASFGVMSS	TLYTVPFNL
<i>E. fuscus</i>	LKGLYFMGYL	LFGLGTGLIG	LFPNVYSTLA	LCASFGVMSS	TLYTVPFNL
<i>P. alecto</i>	LKGLYFMGYL	LFGLGTGLMG	LFRNVYSTLA	LCASFGVMSS	TLSTIPFNLI

<i>P. vampyrus</i>	LKGLYFMGYL	LFGLGTALMG	FFRNVYSTLA	LCTLFGVMSS	TLCTIPFNLI
<i>R. aegyptiacus</i>	LKGLYFMGYL	LFGLGTGFIS	LFPNVYSALA	LCASFGVMSS	TLYTVPFNLI
<i>B. taurus</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNVYSTLA	MCTLFGVMSS	TLYTVPFTLI
<i>E. caballus</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNIYSTLV	LCTSFGVMSS	TLYTVPFNLI
<i>M. musculus</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNVYSTLV	LCSMFGVMSS	TLYTVPFNLI
<i>H. glaber</i>	LKGLYFMGYL	LFGLGTGFIG	LFPNVYSTLV	LCTLFGIMSS	TLYTVPFNLM
<i>H. sapiens</i>	LKGLYFTGYL	LFGLGTGFIG	LFPNVYSTLV	LCSLFGVMSS	TLYTVPFNLI
<i>M. domestica</i>	LKGLYIMGYL	LFGLGTGFIG	LFPNVYSTLV	LCALFGVMSS	TLYTVPFNLM

501

550

<i>M. rufoniger</i>	AEYHRKEQEE	QKQKARAG--	APDSGSRGQG	LDCATLTCMV	QLAQILVGGG
<i>M. davidii</i>	AEYHREEQEE	QKQKARAG--	APDSGGRGQG	LDCATLTCMV	QLAQILVGGG
<i>M. brandtii</i>	AEYHREEQEE	QKQKARAG--	APDSGGRGQG	LDCATLTCMV	QLAQILVGGG
<i>M. lucifugus</i>	AEYHREEQEE	QKQKARAG--	APDSGGRGQG	LDCATLTCMV	QLAQILVGGG
<i>E. fuscus</i>	AEYHREEQEE	Q-QKARAG--	APDSGGRGQG	LDCATLTCMV	QLAQILVGGG
<i>P. alecto</i>	AEYHREEQEQ	QKQQAQEG--	GPACSGRGEG	LDCATLTCMV	QLAQILVGGG
<i>P. vampyrus</i>	AEYHREEQEQ	QKQQAQEG--	GPACSGRGEG	LDCATLTCMV	QLAQILVGGG
<i>R. aegyptiacus</i>	AEYHREEQEE	QKQQAQEA--	DPASRGRGQG	LDCATLTCMV	QLAQILVGGG
<i>B. taurus</i>	AVYHHEE---	QKQRALGG--	GPDGSSRGQG	LDCAALTCMV	QLAQILVGGG
<i>E. caballus</i>	AEYHREEQEK	QRRQAQGG--	DVDSSGRGQG	LDCAALTCMV	QLAQILVGGG
<i>M. musculus</i>	AEYHREEEKE	KGQ-EAPG--	GPDNQGRGKG	VDCAALTCMV	QLAQILVGGG
<i>H. glaber</i>	AEYHLAEEKE	KRRQAPGWSS	DSSGTERGKG	VDCATLTCMV	QLAQILVGS
<i>H. sapiens</i>	TEYHREEEKE	RQ-QAPGG--	DPDNSVRGKG	MDCATLTCMV	QLAQILVGGG
<i>M. domestica</i>	AEYHHEDERQ	QATG-----	MAPSGCRGRG	IDCAALTCMV	QLAQILVGVG

551

587

<i>M. rufoniger</i>	LGFLVNMVGS	VVVVISASL	VALMGCCFVA	LFVRYVQ
<i>M. davidii</i>	LGFLVNMAGS	VVVVISASL	VALMGCCFVA	LFVRYVQ
<i>M. brandtii</i>	LGFLVNMAGS	VVVVISASL	VALMGCCFVA	LFVRYVQ
<i>M. lucifugus</i>	LGFLVNMAGS	VVVVISASL	VALMGCCFVA	LFVRYVQ
<i>E. fuscus</i>	LGLLVNMAGS	VVVVISASL	VALMGCCFVA	LFVRYVQ

P. alecto	LGFLVNMAGS	VVVVVITASA	VALIGCCFVA	LFVRCVD
P. vampyrus	LGFLVNMAGS	VVVVVITASA	VALIGCCFVA	LFVRCVD
R. aegyptiacus	LGFLVNMAGS	VVVVVITASA	VALIGCCFVA	LFVRYVD
B. taurus	LGLLVNTAGS	VVVVVITASA	VALIGCCFVA	LFVRYVD
E. caballus	LGFLVNIAGS	VVVVVITASV	VALIGCCFVW	LFVRYVA
M. musculus	LGFLVNMAGS	VVVVVITASA	VSLIGCCFVA	LFVRYVD
H. glaber	LGFLVNTAGS	VIVVVITAST	VALIGCCFVA	VFVRYVG
H. sapiens	LGFLVNTAGT	VVVVVITASA	VALIGCCFVA	LFVRYVD
M. domestica	LGVLVTSAES	VVVVVIVASA	VALFGCCFVA	LFVRCVE

Topological domain: Extracellular

(C)

TYRP1

	1			50
M. rufoniger	-----	-----	-----	-----M EVHKLLSLGY
M. davidii	-----	-----	-----	-----M EVHKLLSLGY
M. brandtii	-----	-----	-----	-----M EVHRLLSLGY
M. lucifugus	MTAFDKWHQD	NLIFLYVP--	---QSLHKGP	QNQSLASSRM EVHRLLSLGY
E. fuscus	-----	-----	-----	-----M EVHKLLPLGY
P. alecto	-----	-----	-----	-----M KDHKFLSLGC
P. vampyrus	-----	-----	-----	-----M KDNKFLSLGC
R. aegyptiacus	-----	-----	-----	-----M KDHKLLCLGC
B. taurus	MKSIL-----	-KLDFYLRAS	VSTQRAANQK	LSCILASSRM KSPTLLSLGY
E. caballus	-----	-----	-----	---MFASSRM KAHKLLSLGY
M. musculus	-----	-----	-----	-----M KSYNVLPLAY
H. glaber	-----	-----	-----	-----M STPGRPALRP
H. sapiens	-----	-----	-----	-----M SAPKLLSLGC
M. domestica	-----	-----	-----	-----MARRGHLEW
	51			100
M. rufoniger	-IFLPLLFTQ	QAGAQFPREC	ATTEALRNGV	CCPD LAPVSG PGTDPCGSSS
M. davidii	-VFLPLLFTQ	QAGAQFPREC	ATTEALRNGV	CCPD LAPVSG PGTDPCGSSS
M. brandtii	-IFLPLLFTQ	QAGAQFPREC	ATTEALRNGV	CCPD LAPVSG PGTDPCGSSS
M. lucifugus	-VFLPLLFTQ	QAGAQFPREC	ATTEALRNGV	CCPD LAPVSG PGTDPCGSSS
E. fuscus	-IFLPLLFTQ	QAGAQFPREC	ATTEALRNGV	CCPD LSPVSG PGTDPCGSSS
P. alecto	-IFLSLLFFQ	QTWAQFPREC	ATIEALRNGV	CCPD LSALSG PGTDLCGSSS
P. vampyrus	-IFLSLLFFQ	QTWAQFPREC	ATIEALRNGV	CCPD LSALSG PGTDLCGSSS
R. aegyptiacus	-IFLPLFFFQ	QTWAQFPREC	ATIEALRNGV	CCPD LSALSG PGTDLCGSSS
B. taurus	-MFLVLLFFQ	QAWAQFPREC	ATIEALRNGV	CCPD LSPLSG PGSDRCGLSS
E. caballus	-LFLPPLFFQ	QAWAQFPREC	ATVEALKNGV	CCPD LNPLSG PGTDRCGSSS

M. musculus	IS-LFLMLFY QVWAQFPREC ANIEALRRGV CCPDLLPSSG PGTDPCGSSS
H. glaber	VLLTLLLLWH LARAQFPAC ASAPALRNGE CCPDLRPAAG PGSDRCGAAS
H. sapiens	-IFFPLLLFQ QARAQFPQC ATVEALRSGM CCPDLSPVSG PGTDRCGSSS
M. domestica	-MLWPLLLLH QSDAQFPREC ATLDALRSGE CCPDLSLGPE PGTDSCGSST

Topological domain: Lumenal, melanosome

101

150

M. rufoniger	GRGRCEAVTA DSRPHGPQYP HDGRDDREGW PTRFFNRTCH CNGNFWGHNC
M. davidii	GRGRCEAVTA DSRPHGPQYP HDGQDDREGW PTRFFNRTCH CNGNFSGHNC
M. brandtii	GRGRCEAVTA DSRPHGPQYP HDGLDDREGW PTRFFNRTCH CNGNFSGHNC
M. lucifugus	GRGRCEAVTA DSRPHGPQYP HDGRDDREGW PTRFFNRTCH CNGNFSGHNC
E. fuscus	GRGRCEAVSA DFRPHSPQYP HDGRDDREGW PTRFFNRTCH CNGNFSGHNC
P. alecto	GRGRCEAVTA DFRPHSPLYP HDGRDDRERW PTRFFNRTCH CNGNFSGHNC
P. vampyrus	GRGRCEAVTA DFRPHSPLYP HDGRDDRESW PTRFFTRACH CNGNFSGHNC
R. aegyptiacus	GRGRCEAVTA DFRPHSPLYP HDGRDDREGW PTRFFNRTCH CNGNFSGHNC
B. taurus	GRGRCEVIA DSRPHSHHYP HDGRDDREGW PTRFFNRTCH CNGNFSGHNC
E. caballus	GRGRCEAVTA DSRPHSHHYP HDGRDDREAW PTRFFNRTCH CNGNFSGHNC
M. musculus	GRGRCAVIA DSRPHSRHYP HDGKDDREAW PLRFFNRTCQ CNDNFSGHNC
H. glaber	GRGRCEAVMA DSRPHSAGYP HDGRDDREAW PLRFFNRTCQ CAGNFAGHNC
H. sapiens	GRGRCEAVTA DSRPHSPQYP HDGRDDREW PLRFFNRTCH CNGNFSGHNC
M. domestica	GRGRCAVTA DSRPHGPQYP HDGRDDREAW PTRFFNRTCH CNGNFSGYNC

Topological domain: Lumenal, melanosome

151

200

M. rufoniger	GTCRPGWRGI ACDQRVLTVR RNLLD F SIEE KNYFVQALDM AKRTTHPQWV
M. davidii	GTCRPGWRGT ACDQRVLTVR RNLLDLSTEE KNYFVRALDM AKRTTHPQFV
M. brandtii	GTCRPGWRGT ACDQRVLTVR RNLLDLSTEE KNYFVRALDM AKRTTHPQFV
M. lucifugus	GTCRPGWRGN ACDQRVLTVR RNLLDLSTEE KNYFVRALDM AKRTTHPQFV
E. fuscus	GTCRPGWRGT ACDQRVLTVR RNLLDLSTEE KNYFVRALDM AKRTTHPRFV
P. alecto	GTCRPGWRGA ACDERILTVR RNLLDLSTEE KKYFVQALDM AKRTTHPQFV
P. vampyrus	GTCRPGWRGA ACDERILTVR RNLLDLSTEE KKYFVQALDM AKRTTHPQFV
R. aegyptiacus	GTCRPGWRGA ACDERILTVR RNLLDLSTEE KNYFVQALDM AKRTTHPQFV
B. taurus	GTCRPGWGA ACDQRVLTVR RNLLDLSTEE KNRFVRALDM AKRTTHPQFV

<i>E. caballus</i>	GTCRPGWRGA ACDQRVLTVR RNLLDLSTEE KSYFVRALDM AKRTTHPQFV
<i>M. musculus</i>	GTCRPGWRGA ACNQKILTVR RNLLDLSPEE KSHFVRALDM AKRTTHPQFV
<i>H. glaber</i>	GACRPGWAGP GCSQRALAVR RNLLDLSAEE KNHFVQALDM AKRTTHPQFV
<i>H. sapiens</i>	GTCRPGWRGA ACDQRVLIVR RNLLDLSKEE KNHFVRALDM AKRTTHPLFV
<i>M. domestica</i>	GTCKPGWRGS TCDQRVITVR RNLLDLSTEE RNRFIQALDM AKRTIHPHLV

Topological domain: Lumenal, melanosome

201

250

<i>M. rufoniger</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQESFGE
<i>M. davidii</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQESFGE
<i>M. brandtii</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQESFGE
<i>M. lucifugus</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQESFGE
<i>E. fuscus</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQESFGE
<i>P. alecto</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQKSFGE
<i>P. vampyrus</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQKSFGE
<i>R. aegyptiacus</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQESFGE
<i>B. taurus</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGAGQESFGE
<i>E. caballus</i>	IATRRSEEIL GPDGNTQFE NVSIYNYFVW THYYSVKKTF LGAGQESFGE
<i>M. musculus</i>	IATRLEDIL GPDGNTQFE NISVYNYFVW THYYSVKKTF LGTGQESFGD
<i>H. glaber</i>	IATRRSKEIL GEDGNTQFE NISIYNYFVW THYYSVKKTF LGPGQESFGE
<i>H. sapiens</i>	IATRRSEEIL GPDGNTQFE NISIYNYFVW THYYSVKKTF LGVGQESFGE
<i>M. domestica</i>	IATRRSEELL GTDGNTQFE NISIYNYFVW AHYYSVKKTF LGEGQESFGA

Topological domain: Lumenal, melanosome

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<i>M. rufoniger</i>	VDFSHEGPAF LTWHRYHLLQ LERDMQEMLQ NPSFSLPYWN FATGKNVCDI
<i>M. davidii</i>	VDFSHEGPAF LTWHRYHLLQ LERDMQEMLQ NPSFALPYWN FATGKNVCDI
<i>M. brandtii</i>	VDFSHEGPAF LTWHRYHLLQ LERDMQEMLQ NPSFSLPYWN FATGKNVCDI
<i>M. lucifugus</i>	VDFSHEGPAF LTWHRYHLLQ LERDMQEMLR NPSFSLPYWN FATGKNVCDI
<i>E. fuscus</i>	VDFSHEGPAF LTWHRFHLLQ LERDMQEMLQ NPSFSLPYWN FATGKNVCDI
<i>P. alecto</i>	VDFSHEGPAF LTWHRYHLLQ LERDMQEMLR NPSFSLPYWN FATGKNTCDI
<i>P. vampyrus</i>	VDFSHEGPAF LTWHRYHLLQ LERDMQEMLR NPSFSLPYWN FATGKNTCDI
<i>R. aegyptiacus</i>	VDFSHEGPAF LTWHRYHLLQ LERDMQEMLR NPSFSLPYWN FATGKNTCDI

B. taurus	VDFSHEGPAF	LTWHRYHLLQ	LERDMQEMLQ	DPSFSLPYWN	FATGKNTCDI
E. caballus	VDFSHEGPAF	LTWHRYHLLQ	LERDMQEMLQ	DPSFSLPYWN	FATGRNICDI
M. musculus	VDFSHEGPAF	LTWHRYHLLQ	LERDMQEMLQ	EPSFSLPYWN	FATGKNVCDV
H. glaber	VDFSHEGPAF	LTWHRYHLLQ	LEKDMQDMLQ	EPSFSLPYWD	FATGKNVCDV
H. sapiens	VDFSHEGPAF	LTWHRYHLLR	LEKDMQEMLQ	EPSFSLPYWN	FATGKNVCDI
M. domestica	VDFSHEGPAF	LTWHRYHLLQ	LEKDMQEMLQ	DPTFALPYWN	FATGGNTCDI

Topological domain: Lumenal, melanosome

301

350

M. rufoniger	CTDDMMGSRS	NFDPNLISPN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGAP
M. davidii	CTDDMMGSRS	NFDPNFIISPN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGAP
M. brandtii	CTDDMMGSRS	NFDPNLISAN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGAP
M. lucifugus	CTDDMMGSRS	SFDPNLISAN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGAP
E. fuscus	CTDDMMGSRS	NFDPNLISPN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGAP
P. alecto	CTDDLMSRS	NFDSNLISPN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGGP
P. vampyrus	CTDDLMSRS	NFDSNLISPN	SVFSQWRVVC	ESLEDYDILG	TLCNSTEGGP
R. aegyptiacus	CTDDLMSRS	NFDSNLISPN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGGP
B. taurus	CTDDLMSRS	NFDSTLISPN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGGP
E. caballus	CTDDLMSRS	NFDSSLISPN	SVFSQWRVVC	ESLEDYDTLG	TLCNSTEGGP
M. musculus	CTDDLMSRS	NFDSTLISPN	SVFSQWRVVC	ESLEEDYDTLG	TLCNSTEGGP
H. glaber	CTDDLMSRS	SFDSTLISPN	SVFSQWHMVC	ESLEDYDTLG	TLCNSTEGGP
H. sapiens	CTDDLMSRS	NFDSTLISPN	SVFSQWRVVC	DSLEDYDTLG	TLCNSTEDGP
M. domestica	CTDNLMSRS	NFDFSLISPN	SVFSQWRVLC	ESVEDYDTLG	TICNSTEGGP

Topological domain: Lumenal, melanosome

351

400

M. rufoniger	IRRNPAGNVA	RPMVQRLPEP	QDVAQCLEVG	LFDTPPFYSN	STNSFRNTVE
M. davidii	IRRNPAGNVA	RPMVQRLPEP	QDVAQCLEVG	LFDTPPFYSN	STNSFRNTVE
M. brandtii	IRRNPAGNVA	RPMVQRLPEP	QDVAQCLEVG	LFDTPPFYSN	STNSFRNTVE
M. lucifugus	IRRNPAGNVA	RPMVQRLPEP	QDVAQCLEVG	LFDTPPFYSN	STNSFRNTVE
E. fuscus	IRRNPAGNVA	RPMVQRLPEA	QDVAQCLEVG	LFDTPPFYSN	SSNSFRNTVE
P. alecto	IRRNPAGNVA	RPMVQRLPEP	QDVIQCLEVG	LFDTPPFYSN	STNSFRNTVE
P. vampyrus	IRRNPAGNVA	RPMVQRLPEP	QDVTQCLEVG	LFDTPPFYSN	STNSFRNTVE

R. aegyptiacus IRRNPAGNVA RPMVQRLPEP QDVARCLEVG LFDTPPFYNS STNSFRNTVE
 B. taurus IKRNPAGNVA RPMVQRLPKP QDVAQCLEVG SFDTPPFYNS STNSFRNTVE
 E. caballus IRRNPAGNVA RPMVQRLPEP QDVAQCLEVG LFDTPPFYNS STNSFRNTVE
 M. musculus IRRNPAGNVG RPAVQRLPEP QDVTQCLEVR VFDTPPFYNS STDSFRNTVE
 H. glaber IRRNPAGNVA RPMVQRLPAP QDVAQCLEVG VFDTPPFYNS STDSFRNTVE
 H. sapiens IRRNPAGNVA RPMVQRLPEP QDVAQCLEVG LFDTPPFYNS STNSFRNTVE
 M. domestica IRRNPAGNVA RPMVQRLPEP QDVAQCLEVG LFDTPPFYNS STNSFRNTVE

Topological domain: Lumenal, melanosome

401 450

M. rufoniger GYNDPMGRYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF ILLHTFTDAI
 M. davidii GYSDDPMGRYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAI
 M. brandtii GYSDDPMGRYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAI
 M. lucifugus GYSDDPMGRYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAI
 E. fuscus GYSDDPMGRYD PAVRTLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAI
 P. alecto GYSDDPTGKYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF ILLHTFTDAL
 P. vampyrus GYSDDPTGKYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAL
 R. aegyptiacus DIST-----
 B. taurus GYSHTPMGRYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAV
 E. caballus GYSDDPTGKYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAV
 M. musculus GYSAPTGKYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAV
 H. glaber GYSDDPTGKYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAI
 H. sapiens GYSDDPTGKYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAV
 M. domestica GYSDDPTGRYD PAVRSLHNLA HLFLNGTGGQ THLSPNDPIF VLLHTFTDAV

Topological domain: Lumenal, melanosome

451 500

M. rufoniger FDEWLRRYNA DISTFPLENA PIGHNRQYNM VPFWPPXTNT EMFVTAPDNL
 M. davidii FDEWLRRYNA DISTFPLENA PIGHNRQYNM VPFWPPITNT EMFVTAPDNL
 M. brandtii FDEWLRRYNA DISTYPLENA PIGHNRQYNM VPFWPPITNT EMFVTAPDNL
 M. lucifugus FDEWLRRYNA DISTFPLENA PIGHNRQYNM VPFWPPVTNT EMFVTAPDNL
 E. fuscus FDEWLRRYNA DISTFPLENA PIGHNRQYNM VPFWPPITNT EMFVTAPDNL
 P. alecto FDEWLRRYNA DISVFPLENA PIGHNRQYNM VPFWPPITNT EMFVTAPDNL

P. vampyrus FDEWLRRYNA DISAFPLENA PIGHNRQYNM VPFWPPITNT EMFVTAPDNL
R. aegyptiacus ----- ----FPLKMP LI-IDNNQIW YAFWPPITNI EMFVTAPDNL
B. taurus FDEWLRRYNA DISTYPLENA PIGHNRQYNM VPFWPPVTNI EMFVTAPDNL
E. caballus FDEWLRRYNA DISTFPLENA PIGHNRQYNM VPFWPPITNV EMFVTAPDNL
M. musculus FDEWLRRYNA DISTFPLENA PIGHNRQYNM VPFWPPVTNT EMFVTAPDNL
H. glaber FDEWLRRYNA DISTFPLENA PIGHNRQFNM VPFWPPVTNT EMFVTAADNL
H. sapiens FDEWLRRYNA DISTFPLENA PIGHNRQYNM VPFWPPVTNT EMFVTAPDNL
M. domestica FDEWLRRYNP DISIFPLENA PIGHNRQYNM VPFWPPVTNT EMFVTAPDNL

Topological domain: Lumenal, melanosome

501

550

M. rufoniger GYTYEQWPG -RSFHISEII TIAVVAALLL VA---VI--- -FVGASCLIR
M. davidii GYTYEQWPG -RSFHISEII TIAVVAALLL VA---VI--- -FVGASCLIR
M. brandtii GYTYEQWPG -RSFRISEII TIAVVAALLL VA---VI--- -FVGASCLIR
M. lucifugus GYTYEQWPG -RSFRISEII TIAVVAALLL VA---VI--- -FVGASCLIR
E. fuscus GYTYEQWPG -RSFHISEII TIAVVAALLL VA---VI--- -FVGASCLIR
P. alecto GYTYEQWPS -RNFSISEIV TIAVIAALLL VA---VI--- -FGGASCLIR
P. vampyrus GYTYEQWPS -RNFSISEIV TIAVIAALLL VA---VI--- -FGGASCLIR
R. aegyptiacus GYTYEQWPS -RNFSISEIV TIAVVAALLL VA---VV--- -FVGASCLIR
B. taurus GYTYEQWPS -RSFSISEIV TIAVVAALSL VA---VI--- -FAGASCLIR
E. caballus GYTYEQWPG -RDFSISEIV TIAVVAALLV VA---VI--- -FVGASCLIH
M. musculus GYAYEQWPE APRMKPTSLS SLITINAMLR TMRSSRILTT PWSDSLPIPI
H. glaber GYTYEQWPT GQNFISEIV TIAVVAALLL VG---LI--- -FLGISCLIR
H. sapiens GYTYEQWPS -REFSVPEII AIAVVGALLL VA---LI--- -FGTASYLIR
M. domestica GYAYEQWPR -RAFNVTEII TMTVVAALIL VA---IV--- -FVVTCLIR

Topological domain: Lumenal, melanosome

551

596

M. rufoniger ARRNMDANQ PLLTDQYRHY ---AEEYEK- ----IP-NPX QSMV--
M. davidii ARSNMDEANQ PLLTDQYRHY ---AEEYEK- ----IP-NPN QSMV--
M. brandtii ARSNMDEANQ PLLTDQYRHY ---AEEYEK- ----VP-NPN QSMV--
M. lucifugus ARSNMDEANQ PLLTDQYRHY ---AEEYEK- ----VP-NPN QSMV--
E. fuscus ARSNMDEANQ PLLTDQYRHY ---AEEYEK- ----IP-NPN QSMV--

<i>P. alecto</i>	AKNKRDEANQ PLLTDQYRHY ---AEEYET- ----IQ-NHN QSMV--
<i>P. vampyrus</i>	AKNKRDEANQ PLLTDQYRHY ---AEEYET- ----IQ-NHN QSMV--
<i>R. aegyptiacus</i>	AKSNMDEANQ PLLTDQYRDY ---AEEYEK- ----IQ-NPN QSMV--
<i>B. taurus</i>	ARSNMDEANQ PLLTDQYQHY ---IEEYEK- ----IH-NPN QSVV--
<i>E. caballus</i>	ARSNRDEATQ PLLTDQYQHY ---AAEYEK- ----LP-DPN QSMV--
<i>M. musculus</i>	ARSRLGS--- NLIETQLSTV FPLASFFSSQ DRCGLELKHC SPVMTV
<i>H. glaber</i>	ARSKMDEASQ PLLIDQYQHY ---DEGYEK- ----VQ-NPN QPTV--
<i>H. sapiens</i>	ARRSMDEANQ PLLTDQYQCY ---AEEYEK- ----LQ-NPN QSVV--
<i>M. domestica</i>	ARRNKDESQ PLLSDQYQRY ---AEEYEK- ----LS-NPS QSMV--

(D)

OCA2

	1	50
<i>M. rufoniger</i>	-----MH LEEEGGRVS- SGKLEVELHQ TSA---SP--	-----
<i>M. davidii</i>	-----MH LEKEGGRLS- SDKLEVELHQ TSA---SPRA	GLGL-----
<i>M. brandtii</i>	-----MH LEKEGGRLS- SGKLEVELHQ TSA---SP--	-----
<i>M. lucifugus</i>	-----MH LEKEGGRLS- SGKLEVELHQ TSA---SPRA	GLGL-----
<i>E. fuscus</i>	-----MH LEKAGGRPSS GKKLEVELHQ TSA---APRA	GLGP-----
<i>P. alecto</i>	-----MH LECRDGRLA- SGVLETTELHR SSA---PVSA	RLGGPEGRAT
<i>P. vampyrus</i>	-----MH LECRDGRLA- SGVLETTELHR SSA---PVSA	RLGGTEGRAT
<i>R. aegyptiacus</i>	-----MH LERRDGRLS- SGVLETTELHR SSA---PASA	GLGGPEGRAT
<i>B. taurus</i>	-----MH LENKDGRLA- SGRLEMELHQ TSA---PTSA	GLGGSGLVEL
<i>E. caballus</i>	-----MH LESKDGGLT- SGTLEMELHQ TSA---PTCA	GLGGPGLVRH
<i>M. musculus</i>	-----MR LENKDIRLA- SAVLEVELHQ TSALSVPTCP	DPGRLLTVKP
<i>H. glaber</i>	-----MH LESKDSRAA- PAVQEVLEQR TSN---PSGA	DPGGLEPPRP
<i>H. sapiens</i>	MREDWQSMH LEGRDGRRY- PGAPAVELLQ TSV---PSG-	-----LAEL
<i>M. domestica</i>	-----MY VENKGGVI- SRELEMELNQ TSALVHTNVH	GHMGAESITD
	51	100
<i>M. rufoniger</i>	-----	---PYPQAT RQSCWAPVDQ DFGSFLTEQR
<i>M. davidii</i>	AAISRRP--- --QLGGRGX- -----KQAA	GQSCWAPVDQ DFGSFLTEQR
<i>M. brandtii</i>	-----	---PYPQAA GQSCWAPVDQ DFGSFLTEQR
<i>M. lucifugus</i>	AAITRRP--- --QLGVRGAD PQGPYPQAAA	GQSCWAPVDQ DFGSFLTEQR
<i>E. fuscus</i>	AASSRRP--- --QLGAGGAD PESPYPREAA	GQSCWAPGDQ DCGSFLTEQR
<i>P. alecto</i>	--GSFGP--- --QYGASRTA PPGSYPSAAA	QQNFGAPEDQ GLASFPMEQR
<i>P. vampyrus</i>	--GSFGP--- --QYRASKTA PPGSCPSAAA	QQNFGAPEDQ GLASFPMEQS
<i>R. aegyptiacus</i>	--GILGP--- --QHGASRAA PPDPCPSAEA	KQSFVRPEDQ SFASFLMERR
<i>B. taurus</i>	NTSNRRP--- --QQGVGRAD SLSPYHNGAA	GQSCWATVDQ DFGSFLKERR
<i>E. caballus</i>	VMSNCRP--- --QPGVSRAD PPSPCSSRAA	RWSHWAPVDQ ELGPFLTEGR

M. musculus	ATSN-----	---YKLGQAD	PCIPYAGEAA	GKSVCVPEHT	EFGSFLVKGS
H. glaber	SSCEH-----	---RG-HGAR	LPGPRAGWAA	GQSPWTAGRK	DVGSFLTERR
H. sapiens	VAGKRRL---	--PRGAGGAD	PSHSCPRGAA	GQSSWAPAGQ	EFASFLTGR
M. domestica	NFNELRLLKK	FHRIA AVHGE	PQESSPSGTE	ENDCC IPLDD	DFG PLLMQER

101

150

M. rufoniger	SHLPFTGFCS	SGPRDPCLTE	STPLLGGPSQ	ERGTRCLPVC	HPELITA-ES
M. davidii	SRLPFTGFCS	SGPGDPCLTE	STPLLGRPSQ	ERGVRCPLVC	HPELITA-ES
M. brandtii	SHLPFTGFCS	SGPREACCTE	STPLLGGPSQ	ERGARCLPVY	HPELITA-ES
M. lucifugus	SHLPFTGFCS	SGPREACCTE	STPLLGGPSQ	ERGARCLPVC	HPELITA-ES
E. fuscus	-----	-----	-----	---ARCLPVC	RPELITA-ES
P. alecto	SHAPFLQAFS	-----PSLTE	NTPLL RNASQ	GKG-----	-----
P. vampyrus	SVKSVIATSI	-----D---I	EL-----	---DLRIALG	STEFKI--LK
R. aegyptiacus	SHSPFLQAFS	-----PSLTE	NTPLL RNASQ	GKGSRRMPAG	GPEPAGPGAS
B. taurus	SHPPFSQVFS	SRSKEPCFTE	NTPLL RNFSQ	EKGSWCMPVC	HPEFITGEES
E. caballus	SHSPFIQFFS	SGSKDLCFTE	NTPLL RNSSQ	EKGSRCMPVY	HPEFI IAEES
M. musculus	-----	SSLKDL SFKE	DTPLLWNSSQ	KKRSQ LMPVH	HPEFIATEGS
H. glaber	SHSPLPQFLG	SRTKDSCFTE	NTPLLWNSSQ	EKGSHCMPAY	HPEFMPEEES
H. sapiens	SHSSLPQMSS	SRSKDSCFTE	NTPLL RNLSQ	EKGSRCIPVY	HPEFITAEES
M. domestica	SHFPSSKFFN	SRSKDNCFTE	KTPLLKTFSE	ENGLQCRTIP	HSDFIMEDES

151

200

M. rufoniger	WDLSSAKWEG	TSLLGGEVAG	SSRSTSSDRG	DV-----	---LEGAPVP
M. davidii	WDLSSAEWEG	TSLLGSEATG	SSRSASSDRG	DL-----	---LEGAPV-
M. brandtii	WDLSSAEWEG	TSLLGSEAAG	SSRSASSDRG	DL-----	---LEGAPVP
M. lucifugus	WDLSSAEWEG	TSLLGSEAAG	SSRSASSDRG	DL-----	---LEGAPVP
E. fuscus	WDLGSAEWEG	RSLLGSEAAG	SSRSASSDRG	DL-----	---LEGAPVP
P. alecto	-----	-----	-----	-----	-----
P. vampyrus	YD-----	-----	-----	-----VS	CGF-----
R. aegyptiacus	WESGCAEWDA	DARALPVGVP	GRRGRTPPQG	RCAPRLQPRV	CSWKRLLAGQ
B. taurus	WEDSSTEWEW	RSLLSRELAG	SSES AFLEKG	EL-----	---LDSAHR

<i>E. caballus</i>	WENSSAEWEP RSLLSRESTG SSGSTSLEKG EL----- ---LDGAFIR
<i>M. musculus</i>	WENGLTAWEQ KCMLGKEVAD LSALASSEKR DL----- ---AGSVHLR
<i>H. glaber</i>	WENSLAEWEP RCTLTGEGAG WSTPASSHKE EP----- ---TEGTHLR
<i>H. sapiens</i>	WEDSSADWER RYLLSREVSG LSASASSEKG DL----- ---LDSPHIR
<i>M. domestica</i>	WDSTSSEWEQ RCLLGNEIVS FSTSASSEKS EF----- ---LDSFHVK

201

250

<i>M. rufoniger</i>	FRLSKLRRCA RRLKVTGLFV FVMFVSFS LYPDEGKLWQ LLAVSPLESY
<i>M. davidii</i>	-----SFS LYPDEGKLWQ LLAVSPLESY
<i>M. brandtii</i>	FRLSKLRRCA RRLKVTGLFV FVMCSVSFS LYPDEGKLWQ LLAVSPLESY
<i>M. lucifugus</i>	FRLSKLRRCA RRLKVTGLFV FVMCSVSFS LYPDEGKLWQ LLAVSPLESY
<i>E. fuscus</i>	FRLSKLSPCW SL----- ----QVSFS LYPDEGRLWQ LLAVSPLESY
<i>P. alecto</i>	-----RCM QWLKVTGLFV FVVCTVSFS LYPDQGKSWQ LVAVSQLESY
<i>P. vampyrus</i>	----- ---ATYG--- -YYYVEVSFS LYPDQGKSWQ LVAVSQLESY
<i>R. aegyptiacus</i>	ARPKASRRCV QWLKVTGLFV FVVCTVSFS LYPDQGKSWQ LVAVSQLESY
<i>B. taurus</i>	FRLAKLRCCV QWLKVTGLFV FVVLCSILFS LYPDQGKLWQ LLAVSPLESY
<i>E. caballus</i>	FRLSKLRRCV QWLKVAGLFA FVVCSILFS LYPDQGFQWQ LLAVSPLESY
<i>M. musculus</i>	AQVSKLGCCV RWIKITGLFV FVVLCSILFS LYPDQGFQWQ LLAVSPLENY
<i>H. glaber</i>	VPVLKLKCCA RWLKVAGLFA FVVLCSILFS LYPDQGKSWQ LLAVSPLESY
<i>H. sapiens</i>	LRLSKLRRCV QWLKVMGLFA FVVLCSILFS LYPDQGKLWQ LLALSPLENY
<i>M. domestica</i>	FNLSKLRSCV RCLKVTGLFI FGVVCSILFS TYPDHGKSWQ MLAVSPLESY

Topological domain: Extracellular

251

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<i>M. rufoniger</i>	SVNLSSRSDS TLLQVDLAGA LVAGGSSRPG REEHVVEVT QASAPGSR-R
<i>M. davidii</i>	SANLSSRSDS TLLQVDLAGA LMPGSPSRPG REEHVVEVT QAGAPSSR-R
<i>M. brandtii</i>	SANLSSRSDS TLLRVDLAGA LVAGGSPSRPG REEHVVEVT QAGAPGSR-R
<i>M. lucifugus</i>	SANLSSRSDS TLLRVDLAGA LVAGGSPSRPG REERVVEVT QAGAPGSR-R
<i>E. fuscus</i>	SANLSSRSDS TLLRVDLAGA LVAGGSPSRPG REEHVVEVT QASAPGSR-R
<i>P. alecto</i>	SANLSGHPVL VTWGLSLT-- -----
<i>P. vampyrus</i>	SANLSGHADS TLLQVDLAGA LAAGGPR-PE SAERVVEVT RTDAPGSRRR
<i>R. aegyptiacus</i>	SANLSGHVDS TLLQVDLAGA LAAGGPG-PE NAERVVEVT WTDAPGSRRR

B. taurus	SVNLSSHADS	MLLQVGLAGA	LVAGSPSHLG	REEHVMVEVT	QANTPGSRRR
E. caballus	SVNLSSHVDS	ALLQVDLAGA	LVAGSSSRPG	REEHIVVEVT	QVDAPGSRWR
M. musculus	SVNLSGHADS	MILQLDLAGA	LMAGGPSGSG	KEEHVVVVVT	QTDAAGNRRR
H. glaber	SVNLSGHADS	TLLQLNLAGA	LAASGPSRSG	REEHVVEVT	QRSALNSRWQ
H. sapiens	SVNLSSHVDS	TLLQVDLAGA	LVASGPSRPG	REEHIVVELT	QADALGSRWR
M. domestica	SVNLTDVGDS	ALLKLELAGS	LIAGVVRPQ	SEEVIVVEVI	LREELGFRRR

Topological domain: Extracellular

301

350

M. rufoniger	RPQ-QVTHNW	TVFLNPRRSE	HVVVSRTFEV	PSRDGVSISV	RAALQQPRAV
M. davidii	WPQ-QVTHNW	TVFLDPRRSE	HVVVSRTFEV	PSRDGVSISV	RAALQQPRAV
M. brandtii	RPQ-QVTHNW	TVFLDPRRSE	HVVVSRTFEV	PSRDGVSISV	RAALQQPRAV
M. lucifugus	RPQ-QVTHNW	TVFLNPRRSD	HVVVSRTFEV	PSRDGVSISV	RAALQQPRAV
E. fuscus	RPQ-QVTHNW	TVFLSPRRGE	HVVASRTFEV	PSRDGVSISV	RAALQQPRAV
P. alecto	-----	-----	---RAKAVAL	LCRETVSIRI	RASLQQTQLV
P. vampyrus	RPQ-QVTQNW	TVFLNPRRRD	RLVVSRIFEV	PSRETVSIRI	RASLQQTQLV
R. aegyptiacus	RPQ-QATQNW	TVFLNPRRSD	RLVVSRTFEV	PSRETVSIRI	RASLQQTQLV
B. taurus	RPQ-QVTHNW	TIFLNPSGSE	HVVVSRTFEV	LSREPVSISI	RASLQQTQIV
E. caballus	RPQ-QVTHNW	TIFLNPRRNE	RSVVSRTFEV	LSRDTVSISI	RASLQQTPAI
M. musculus	RPQ-QLTYNW	TVLLNPR-SE	HVVVSRTFEI	VSREAVSISI	QASLQQTRLV
H. glaber	QPQ-QVTHNW	TVLLNPRRSE	HLEVSRTFTI	LSREAVSIRV	RTSFPQTRVV
H. sapiens	RPQ-QVTHNW	TVYLNPRRSE	HSVMSRTFEV	LTRETVSISI	RASLQQTQAV
M. domestica	RPQQQVIYNW	TIFLNSRRNE	RAVTSRTFEI	ITRETISINI	QAFLQENKVI

Topological domain: Extracellular

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M. rufoniger	PLLLAH ^H HLR	ASVEAQVTAA	AAILAGVYVL	IIFEIVHRTL	AAMLGSLAAL
M. davidii	PLLLAHQHLR	ASVEAQVTAA	AAILAGVYVL	IIFEIVHRTL	AAMLGSLAAL
M. brandtii	PLLLAHQHLR	ASVEAQVTAA	AAILAGVYVL	IIFEIVHRTL	AAMLGSLAAL
M. lucifugus	PLLLAHQHLR	ASVEAQVTAA	AAILAGVYVL	IIFEIVHRTL	AAMLGSLAAL
E. fuscus	PLLLAHQHLR	ASVEAQVTMA	AVILAGVYVL	IIFEIVHRTL	AAMLGSLAAL
P. alecto	PLMAHQHLR	ASVGAQVTAA	AAILAGVYAL	IIFEIVHRTL	AAMLGALAAL
P. vampyrus	PLLLAHQHLR	ASVGAQVTAA	AAILAGVYAL	IIFEIVHRTL	AAMLGALAAL

R. aegyptiacus	PLLMAHQHLR	ASVGAQVTAA	AAILAGVYAL	IIFEIVHRTL	AAMLGSLAAL
B. taurus	PLLMTHQYLR	ASVEAQVTIA	AVILAGVYVL	IIFEIVHRTL	AAMLGSLSAL
E. caballus	PLLMAHQYLR	ASVEAQVTIA	AVILAGVYVL	IIFEIVHRTL	AAMLGSLAAL
M. musculus	PLLLAHQFLG	ASVEAQVASA	VAILAGVYTL	IIFEIVHRTL	AAMLGALAAL
H. glaber	PLLLSLQYLR	ISFEAQVTMA	AAILAGVYTL	IIFEIVHRTL	AAMLGALAAL
H. sapiens	PLLMAHQYLR	GSVETQVTIA	TAILAGVYAL	IIFEIVHRTL	AAMLGSLAAL
M. domestica	PLSMTHQYLH	ADIETQVTIA	SVILAGVYML	IIFEIVHRTL	AAMLGSLAAL

Topological domain: Extracellular

401

450

M. rufoniger	AALAVTGDRP	SETQVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
M. davidii	AALAVTGDRP	SLTHVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
M. brandtii	AALAVTGDRP	SLTHVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
M. lucifugus	AALAVTGDRP	SLNPRGEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
E. fuscus	AALAVTGDRP	SLTHVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
P. alecto	AVLAVMGDRP	SLARVVEWID	FETLALLFGM	MVLVAIFSET	GFFDYCAVKA
P. vampyrus	AVLAVMGDRP	SLARVVEWID	FETLALLFGM	MVLVAIFSET	GFFDYCAVKA
R. aegyptiacus	AALAVMGDRP	SLARVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
B. taurus	AALAVIGDRP	SLTHVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKV
E. caballus	AVLAVIGDRP	SLTHVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
M. musculus	AALAVGDRP	SLTHVVEWID	FETLALLFGM	MILVAVFSET	GFFDYCAVKA
H. glaber	AALAVIGDRP	SLTQVVEWID	FETLTLFGM	MILVAIFSET	GFFDYCAVKA
H. sapiens	AALAVIGDRP	SLTHVVEWID	FETLALLFGM	MILVAIFSET	GFFDYCAVKA
M. domestica	AALAVIGDRP	SLVRVVEWID	YETLALLFGM	MILVAIFSET	GFFDYCAVKA

Topological domain: Extracellular

451

500

M. rufoniger	YRLSRGRVWA	MIIMLCLFAA	VLSAFLDNVT	TALLFTPVTI	RLCEVLNLDP
M. davidii	YRLSRGRVWA	MIIMLCLFAA	VLSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP
M. brandtii	YRLSRGRVWA	MIIMLCLFAA	VLSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP
M. lucifugus	YRLSRGRVWA	MIIMLCLFAA	VLSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP
E. fuscus	YRLSRGRVWA	MIIMLCLIAA	VLSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP
P. alecto	YRLSRGRVWA	MTIMLCLVAA	TLSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP

<i>P. vampyrus</i>	YRLSRGRVWA	MTIMLCLVAA	TLSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP
<i>R. aegyptiacus</i>	YRLSRGRVWA	MTIMLCLVAA	TLSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP
<i>B. taurus</i>	YQLSRGRVWT	MIFMLCLVAA	VLSAFLDNVT	TVLLFTPVTI	RLCEVLNLDP
<i>E. caballus</i>	YQLSRGRVWA	MIIMLCLIAA	ILSAFLDNVT	TSLLFTPVTI	RLCEVLNLDP
<i>M. musculus</i>	YQLSRGRVWA	MIFMLCLMAA	ILSAFLDNVT	TMLLFTPVTI	RLCEVLNLDP
<i>H. glaber</i>	YRLSRGRVWA	MIIMLCLIAA	VLSAFLDNVT	TMLLFTPVTI	RLCEVLNLDP
<i>H. sapiens</i>	YRLSRGRVWA	MIIMLCLIAA	VLSAFLDNVT	TMLLFTPVTI	RLCEVLNLDP
<i>M. domestica</i>	YRLSRGRVWA	MIILCLFAA	FLSAFLDNVT	TMLLFTPVTI	RLCEVLNLDP

501

550

<i>M. rufoniger</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVMIVS	NQELRKTGLD	FAG--FTAHM
<i>M. davidii</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVMIVS	NQELRKMGLD	FAG--FTAHM
<i>M. brandtii</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVMIVS	NQELRKMGLD	FAG--FTAHM
<i>M. lucifugus</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVMIVS	NQELRKMGLD	FAG--FTAHM
<i>E. fuscus</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVIIS	NQELRKMGLD	FAG--FTAHM
<i>P. alecto</i>	RHVLIAEVIF	TNIGGAATAI	GDPPNVIIVS	NQELREAGLD	FAS--FTAHM
<i>P. vampyrus</i>	RHVLIAEVIF	TNIGGAATAI	GDPPNVIIVS	NQELREAGLD	FAS--FTAHM
<i>R. aegyptiacus</i>	RHVLIAEVIF	TNIGGAATAI	GDPPNVIIVS	NQELREAGLD	FAG--FTAHM
<i>B. taurus</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVLIVS	NQELRKMVCI	TIIRLFPINI
<i>E. caballus</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVIIVS	NQELRKMGLD	FAG--FTAHM
<i>M. musculus</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVIIVS	NQELRKMGLD	FAG--FTAHM
<i>H. glaber</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVIIVS	NQELRKMGLD	FAR--FTAHM
<i>H. sapiens</i>	RQVLIAEVIF	TNIGGAATAI	GDPPNVIIVS	NQELRKMGLD	FAG--FTAHM
<i>M. domestica</i>	RHVLIAEVIF	TNIGGAATAV	GDPPNVIIVS	NQELRKTGMD	FAG--FTAHM

551

600

<i>M. rufoniger</i>	FVGICFVLLF	SF--PLLRL	YWN-----	-----	-----
<i>M. davidii</i>	FVGICFVLLF	SF--PLLRL	YWN-----	-----	-----
<i>M. brandtii</i>	FVGICFVLLF	SF--PLLRL	YWN-----	-----	-----
<i>M. lucifugus</i>	FVGICFVLLF	SF--PLLRL	YWN-----	-----	-----
<i>E. fuscus</i>	FVGICFVLLF	SF--PLLRL	FWN-----	-----	-----

P. alecto	FVGICLVLLF	CF--PLLRL	YWN-----	-----	-----
P. vampyrus	FVGICLVLLF	CF--PLLRL	YWN-----	-----	-----
R. aegyptiacus	FVGICFVLLF	CV--PLLRL	YWN-----	-----	-----
B. taurus	EPSL-LAHLV	TFYQHGYHFL	LWSVLGHLES	GRLGRQHAIQ	TKEDPELRDH
E. caballus	FVGICFVLLF	SF--PLLRL	YWN-----	-----	-----
M. musculus	FLGICLVLLV	SF--PLLRL	YWN-----	-----	-----
H. glaber	FVGICLVLLV	SF--PLLRL	YWN-----	-----	-----
H. sapiens	FIGICLVLLV	CF--PLLRL	YWN-----	-----	-----
M. domestica	FIGICLILLV	SF--PFLRL	YCN-----	-----	-----

Topological domain: Extracellular

	601	650
M. rufoniger	-----	-----R KLYNKEPSEI
M. davidii	-----	-----R KLYNKEPSEI
M. brandtii	-----	-----R KLYNKEPSEI
M. lucifugus	-----	-----R KLYNKEPSEI
E. fuscus	-----	-----R KLYNKEPSEI
P. alecto	-----	-----E KLYNKEPSDI
P. vampyrus	-----	-----E KLYNKEPSDI
R. aegyptiacus	-----	-----K KLYNKEPSEV
B. taurus	MSHNHSHMGK	HRKHLGGQAM RVACITTGST WTAVTQGTLG KLLKPQLSFP
E. caballus	-----	-----K KLYNKEPSEI
M. musculus	-----	-----K KLYNKEPSEI
H. glaber	-----	-----K KLYNKEPSEI
H. sapiens	-----	-----R KLYNKEPSEI
M. domestica	-----	-----K KLYNKEPSEI

Topological domain: Extracellular

	651	700
M. rufoniger	VELKHESVSV	-----FHF
M. davidii	VGECAS----	-----SFCF
M. brandtii	VELKHESVSF	-----FHF
M. lucifugus	VELKHEIHVW	RLTAQRISPA SREETAVRGL LLGKVLALER LLARRLHTFH

E. fuscus	VELKHEIHVW RLTAQRISPA SREETAVRGL LLGKVLALER LLARRLHSFH
P. alecto	VELKHEIHVW RLTAQRISPA SREETAVRGL LLQKVLALEH LLARRLRTFH
P. vampyrus	VELKHEIHVW RLTAQRISPA SREETAVRGL LLHKVLALEH LLARRLRTFH
R. aegyptiacus	VELKHEIHVW RLTAQRISPA SREETAVREL LLRKVLALEH LLARRLRTFH
B. taurus	AELKHEIHVW RLTAQHISPA SREETAVRGM LLEKVLTLLEH LLAQRLHSFH
E. caballus	VELKHEIHVW RLTAQRISPA SREETAVRDL LLGKVLALER LLACRLRTFH
M. musculus	VELKHEIHVW RLTAQRISPA SREETAVRGL LLEKVLALEH LLAQRLHTFH
H. glaber	VELKHEIHVW RLTAQRISPA SREETAVRSL LLQKVLALEH LLARRLHTFR
H. sapiens	VELKHEIHVW RLTAQRISPA SREETAVRRL LLGKVLALEH LLARRLHTFH
M. domestica	VELKHEIHVW KLTAQRINPA SREETAVKCL LMQKVLTLLEF LLKKKLTQFQ

Topological domain: Extracellular

701

750

M. rufoniger	RQISQEDKNW ETNIQELQKK HRIADRVLLA KCLMVLGFVI CMFFLNSFVL
M. davidii	RQISQEDKNW ETNIQELQKK HRIADRVLLA KCLMVLGFVI CMFFLSSFVP
M. brandtii	RQISQEDKNW ETNIQELQKK HRISDRVLLA KCLMVLGFVI CMFFLNSFVP
M. lucifugus	RQISQEDKNW ETNIQELQKK HRISDRVLLA KCMVVLGFVI CMFFLNSFVP
E. fuscus	RQISQEDKNW ETNIQELQKK HRISDGILLA KCLVVLGFVI FMFFLNSFVP
P. alecto	RQISREDKNW ETNIQELQRK HRVSDGVLLA KCLLVGLVI LMFFFSSFVP
P. vampyrus	RQISREDKNW ETNIQELQRK RRKRI----- -CT
R. aegyptiacus	RQISREDKNW EANIQELQRK HRISDGALLA KCLLVGLVI LMFFLSSLVP
B. taurus	RQISQEDKNW ETNIQELQRK HRISDKILLA KCLTVLVFVI FMFFLNSFVP
E. caballus	RQISQEDKNW ETNIQELQKK HRISNRILLA KCLMVLGFVI FMFFLNSFVP
M. musculus	RQISQEDKNW ETNIQELQRK HRISDRSLLV KCLTVLGFVI SMFFLNSFVP
H. glaber	RQISQEDKNW ETNIQELQRK HRISDRILLV KCLTVLGFVI FTFFLSSFVP
H. sapiens	RQISQEDKNW ETNIQELQKK HRISDGILLA KCLTVLGFVI FMFFLNSFVP
M. domestica	RQISQEDKNW ETNIQELQKK HRIADKILLI KCLTVLGFVI FMFFLNSFVP

Topological domain: Extracellular

751

800

M. rufoniger	AVHLDLGWIA MLGAIWLLIL ADIHDFEVIL HRVEWATLLF FAALFVLM EA
M. davidii	AVHLDLGWIA ILGAIWLLIL ADVHDFEVIL HRVEWATLLF FAALFVLM EA
M. brandtii	AVHLDLGWIA ILGAIWLLIL ADVHDFEVL HRVEWATLLF FAALFVLM EA

M. lucifugus	AVHLDLGWIA	ILGAIWLLIL	ADVHDFEVVL	HRVEWATLLF	FAALFVLMEA
E. fuscus	AVHLDLGWIA	ILGAIWLLIL	ADIHDFEII	HRVEWATLLF	FAALFVLMEA
P. alecto	GVHLGLGWIA	VLGAIWLLIL	ADIHEFEIVL	HRVEWATLLF	FAALFVLMEA
P. vampyrus	RISRSPGWIA	VLGAIWLLIL	ADIHEFEIVL	HRVEWATLLF	FAALFVLMEA
R. aegyptiacus	GVHLGLGWIA	VLGAIWLLIL	ADIHEFEIIL	HRVEWATLLF	FAALFVLMEA
B. taurus	GVHLDLGWIA	ILGAIWLLIL	ADIHDFEII	HRVEWATLLF	FAALFVLMEA
E. caballus	GVHLDLGWIA	ILGAIWLLIL	ADIHDFEII	HRVEWATLLF	FAALFVLMEA
M. musculus	GIHLDLGWIA	ILGAIWLLIL	ADIHDFEII	HRVEWATLLF	FAALFVLMEA
H. glaber	GIHLDLGWIA	ILGAIWLLIL	AEVHDFEII	HRVEWATLLF	FAALFVLMEA
H. sapiens	GIHLDLGWIA	ILGAIWLLIL	ADIHDFEII	HRVEWATLLF	FAALFVLMEA
M. domestica	GIHLDLGWIA	ILGAIWLLVL	ADIHDFEII	HRVEWATLLF	FAALFVLMEA

Transmembrane: Helical

801

850

M. rufoniger	LGHLHLIEYV	GEQTSLIKM	VPEDRRLAAA	IVLVVWVSAI	ASSLIDNIPF
M. davidii	LGHLHLIEYV	GEQTSLIKM	VPEDQRLAAA	IVLVVWVSAI	ASSLIDNIPF
M. brandtii	LGHLHLIEYV	GEQTSLIKM	VPEDRRLAAA	IVLVVWVSAI	ASSLIDNIPF
M. lucifugus	LGHLHLIEYV	GEQTSLIKM	VPEDRRLAAA	IVLVVWVSAI	ASSLIDNIPF
E. fuscus	LGHLHLIEYV	GEQTSLIKM	VPEDRRLAAA	IVLVVWVSAI	ASSLIDNIPF
P. alecto	LAHLHLIEYV	GEQTSLIKM	VPEDRRLAAA	IVLVWVSAT	ASSLIDNIPF
P. vampyrus	LAHLHLIEYV	GEQTSLIKM	VPEDRRLAAA	IVLVWVSAT	ASSLIDNIPF
R. aegyptiacus	LAHLHLIEYV	GEQTLLIKM	VPEDRRLAAA	IVLVWVSAA	ASSLIDNIPF
B. taurus	LAHLHLIEYV	GEQTALLIKM	VPEDQRLTAA	IILVVWVSGI	TSSLIDNIPF
E. caballus	LAHLHLIEYV	GEQTALLIKM	VPEDRRLAAA	IILVIWVSAI	ASSLIDNIPF
M. musculus	LTHLHLVEYV	GEQTALLIKM	VPEDQRFAAA	IVLIVWVSAL	ASSLIDNIPF
H. glaber	LAHLHLIEYV	GEQTALLIKM	VPEDRRLAAA	MVLVMWVSAL	ASSLIDNIPF
H. sapiens	LAHLHLIEYV	GEQTALLIKM	VPEEQRLIAA	IVLVWVSAL	ASSLIDNIPF
M. domestica	LAHLHLIEYI	GEQTALLIKM	VPEDQRLTAA	IILVVWISAL	ASSLIDNIPF

851

900

M. rufoniger	TATM-----	-----IP	VLLNLSQDPE	VSLPAPPLMY	ALALGACLGG
M. davidii	TATM-----	-----IP	VLLNLSQDPE	VSLPAPPLMY	ALALGACLGG

M. brandtii TATM-----IP VLLNLSQDPE VSLPAPPLMY ALALGACLGG
M. lucifugus TATM-----IP VLLNLSQDPE VSLPAPPLMY ALALGACLGG
E. fuscus TATM-----IP VLLNLSQDPE VSLPAPPLMY ALALGACLGG
P. alecto TATM-----VP VLLNLSRDPE VSLPAPPLMY ALAFGACLGE
P. vampyrus TATM-----KS PP-----S QALSVT-----
R. aegyptiacus TATM-----VP VLLSLSRDPE VRLPTPPLMY ALALGACLGG
B. taurus TATM-----IP VLLNLSRDPE VSLPAPPLMY ALALGACLGG
E. caballus TATM-----IP VLLNLSQDPE VSLPAPPLMY ALALGACLGG
M. musculus TATM-----IP VLLNLSQDPE ISLPALPLMY ALALGACLGG
H. glaber TATM-----IP VLLSLSQDPE VSLPALPLMY ALALGACLGG
H. sapiens TATMIDTSYL RIHQLVLKIP VLLNLSHDPE VGLPAPPLMY ALAFGACLGG
M. domestica TATM-----IP VLLNLSQDPE VSLPVKPLIF SLAIGACLGG

901

950

M. rufoniger NGTLIGASA-----NVVCAG-
M. davidii NGTLIGASA-----NVVCAG-
M. brandtii NGTLIGASA-----NVVCAG-
M. lucifugus NGTLIGASA-----NVVCAG-
E. fuscus NGTLIGASA-----NVVCAG-
P. alecto LFVVVDAQVF VGQKQTENRL NVHWQNVETE KDGHGPEHAR RPRRVCRRG
P. vampyrus -----
R. aegyptiacus NGTLIAASA-----NVVCAG-
B. taurus NGTLIGASA-----NVVCAG-
E. caballus NGTLIGASA-----NVVCAG-
M. musculus NGTLIGAST-----NVVCAG-
H. glaber NGTLIGASA-----NVVCAG-
H. sapiens NGTLIGASA-----NVVCAG-
M. domestica NGTLIGASA-----NVVCAG-

951

1000

M. rufoniger -----

M. davidii -----
M. brandtii -----
M. lucifugus -----
E. fuscus -----
P. alecto GPGGTRRPSD LSSPFGQLSF VLGDGPAPPE PRLPSSFLTL AGATRSQITI
P. vampyrus -----
R. aegyptiacus -----
B. taurus -----
E. caballus -----
M. musculus -----
H. glaber -----
H. sapiens -----
M. domestica -----

1001

1046

M. rufoniger --IAEQHGYG FSFMQFFRLG FPMMVVSCMV ATCYLLVVHV VMGWN-
M. davidii --IAEQHGYG FSFVQFFRLG FPMMVVSCMV AMCYLLVVHV VMGWN-
M. brandtii --IAEQHGYG FSFMQFFRLG FPMMVVSCMV AMCYLLVVHV VMGWS-
M. lucifugus --IAEQHGYG FSFMQFFRLG FPMMVVSCTV AMCYLLVVHV VMGWS-
E. fuscus --IAEQHGYG FSFVEFFRLG FPMMVVSCMV AMCYLLVVHV VMGWN-
P. alecto GYPPSQALSV TPGQFLFWLG FPMVVVSCTV GMCYLLVVHV VMGWS-
P. vampyrus ----- -PGQFLFWLG FPMVVVSCTV GMCYLLVVHV VMGWS-
R. aegyptiacus -I-AEQRYG FSFLQFFRLG FPMVIVSCTV GMCYLLVVHV VMGWS-
B. taurus --IAEQHGYG FSFMEFFRLG FPMMVVSCMV GMCYLLVAHI VMGWN-
E. caballus --IAEQHGYG FSFMEFFRLG FPMMVVSCTV GMCYLLVAHV VLGWN-
M. musculus --IAEKHGYG FSFMEFFRLG FPMVMSCTI GMCYLLIAHI VVGWN-
H. glaber --IAEQHGYG FSFMEFFRLG FPMVIVSCTV GMCYLLVVHV VMGWN-
H. sapiens --IAEQHGYG FSFMEFFRLG FPMVVSCTV GMCYLLVAHV VVGWN-
M. domestica --IAEQHGYG FSFMEFFRLG FPMMLVSCTI GMCYLLVAHV VVGWNS

Transmembrane: Helical