

Additional file 2: Amino acid sequence of 173 SWEETs from 13 species

>GmSWEET1

MVSISDHELVLIFGLLGNIVSFMVFLAPLPTFYTIYKKKSSEGFQSIPYAVALLSALLLLYYGFIK
TNATLIITINCIGCVIEVSYLTMYIYAPRKQKISTLVMILIADIGGFGLTMLITTFVKGINRVHA
VGWICAIFNIAVFAAPLSIMRRVIKTKSVEFMPFSLSLFLTLCATMWFFYGFFDKDDFIMFPNVL
GFIFGISQMILYMIYKNSKKNGETNCTEQQESEGTVNSKQHSCDGNKLDFPSLVEMKENQLNQ
V

>GmSWEET2

METHHDVFLVFGVLGNIVNSLIYLAPMVTIYDTFQEQTQHYNAIPYSLSLFTASLMLYYAH
LKGNEEALLITINSIGCTMEVAYLIICYIYANFRAKTIVVRWVFLFNGATYLVILFTSLVSPLS
NRLKVVGWICATFSVGVYVTSLINPMMRTVVRTKCISMPLLISLTLSSIVWFFYGFFSHDYFIV
MPNVLHFWLGVAQMILCFIYRNGGADERERVQSETGEINNEDEILETIEMQIAEAKNTNVDH
QTDNDDIKKENGSSSRVELEPCEIVHLQNNIVVTRNGTRIVCNEIQSVAEPEIVEIPG

>GmSWEET3

MASLTFAVGIIGNKTFRCRVVKKKSTENYKGAPYITTFLLCTSLWTSYGVLKPGGFQIAIVNGAGA
VFRCMYIILFLVYSPQDQKVKTALLVAILDVGFLGTVISVTLFRSPWSDPAYKMVIQTKSVEYM
PFLSFFMFLNWRLDIVFFPRQRFLHW

>GmSWEET4

MAISHETWAFIFGLLGNIVISFMVFLAPLPTFYQIYKKKSSEGFQSLPYVVALFSSMLWIYYALV
KKDASLLLITINSFGCVIETIYLAIFLVYAPSKTRLWTIKLLLMLNVFGFGGMLLSTLYLTTGSK
RLSVIGWICLVFNISVFAAPLCIMKRVIKTRSVFMPFSLSLSLTINAVMWFFYGLLLKDYYIAL
PNTLGFLFGIIQMVLVLYRNAKPQTLEPTKVQELNGHIIDVVKPNHATKNGHVPVIEIASSV

>GmSWEET5

MAIHETWAFVFGLLGNVISFMVFLAPLPTFYQIYKKKSSEGFQSLPYVVALFSSMLWIYYAFV
KKDASLLLITINSFGCVIETIYLAIFLVYAPSKTRLWTIKLLLMLNVFGFGGAMLLSTLYLTTGSK
RLTVIGWICLVFNISVFAAPLCIMKRVIKTKSVEFMPFSLSFSLTINAVMWFFYGLLLKDYYIAL
PNTLGFLFGIIQMVLVLIYRNAKKDEPMKLEELNSHIINVGKLSRMEPSEPNNHATKNGTVTEITI
EDPNGKETEEGNLKNIMNSASNV

>GmSWEET6

MSSHSHLSFAFGVLGNIAFVCFLAPLPTFYRVCKKKSTEGFQSIPYVAALFSAMLWIFYAYVK
TGEMLLITINAFGCVIETIYLAIFVITYCPKKARTNRGCMVNFVKKFQRVVIRTKSVEFLPFPLSL
LLLISAIMWLLYGISLKDIYVTLPNVVGLTFGVIQIGLYAMYRNNKPKVDQKLPEHKGDIVDNN
NESVIAPTNGEKQEVEVKPQGGIETGEKKEENNKQDQQQPEENKKFDQVVHEQTKLNNKN
TNNINDDDNKTGERVISCEV

>GmSWEET7

MAETIRLGVAVLGNAASVALYAAPMVTFRRVIRKKSTEEFSCFPYIIGLLNCLLFTWYGLPIVS
YKWFENPLVTVNGVGILLELSYVLIYFWYASAKGKVKVAMTAIPVLLVFSIIAAVSAFAFHDN
HHRKLLVGSIGLGVSVAMYGSPLIVMKKVIQTKSVEFMPLPLSMCSF

>GmSWEET8

MDVAHFLFGIFGNASALFLAPVITFKRIIKNRSTEFSGIPYVMTLLNCLLSAWYGLPFVSPH
NILVSTVNGTGLSIEIYVLIFVLAPRKEKAKILGLFTFVLSVFSVAVFVSLFALHGNSRKLFCGF
AAAFISIIMYGSPLSIMRLVIKTKSVEFMPFSLSLFVFLCGTSWFIIFGLGRDPFVAVPNGVGSAL
GTTQLILYFIYRDNKGVTGKQAPTEESMEIGDVKPQQGKQSNANGIQG

>GmSWEET9

MVDTGAIRTVIGVIGNVISFCLFMSPVPTFISIWKSKSVQNFKPDPIATILNCGMWISIYGMPFV
TEDNTLVVTINGFGFFLEIFYALIFFVYSTWSKRRKIILIFLGELVFLAVVIFLIMTFLHSAKQRKV
IVGPICIVFNILMYFAPLTVMRQVIRTKSVKYMPFLLSFANFANGVIWTTYALLKWDPFIVIPNG
IGTVSGLVQLILYAMYYRTTKWDEEIDSV

>GmSWEET10

MAIFNGHNHLALGFGMLGNVISFMVYLAPLPTFYRIYKKKSTEGFQSLPYLVALFSSMLWLYY
ASLKPADATLLITINSLGCVIEIVYIIMFTIYATKDARNLTVKLFMVMNVGSFALIFLVITYFAMH
GSLRVQVVGWVCVSIAGVFAAPLSIVAQVIRTKNVEFMPFNLSFLTISAVMWFFYGLLLKDI
CIAIPNILGFTLGLLQMLLYAIYRNGKTNNKEVVTKEEHALEAMKNVNVNPLGTCEVYPVIG
KEINNNGQGIEGAEKEKEKGVELGKECPV

>GmSWEET11

MTMHRESWAFVFGVMGNIISFGVFLAPLPTFYQIYKKKSTEGFQSLPYVVALFSAMLWIYYAF
VKREAALLITINTFGIVVESIYLAIFLLYAPRKPRLLTIKLLLLLVFGFGAMLLSTLYLSKGAK
RLAIIGWICLVFNISVFAAPLFIIRRVIKTRSVYMPFTLSMFLTINAVMWFFYGLLLRDYYVALP
NTLGFVFGIIMQMGMYLMYRNATPVALEEPVKAQELNGHIIDVGKMGTMPEPNHAATAGAVGK
V

>GmSWEET12

PTFYRVCKKKTTTEGFQSLPYVAALFTSMLWIFYAYIKTGEILLITINAFGCFIETVYLVIIYCPK
KARMIFLNVGVIFLVLLTHVLAKERTARIELLGWICVVLSTSVFAAPLSIIKVVIRTKSVEFM
PITLSLLTVSATMWMAYGILLRDIYVTLPNFVGITFGTIQIVLYLIYRKSQPKVDQKLPEHKNH
VVNDENASTAVSELVPKSYSKVLLHEPIESARIVSIFLVNKKSEKKIGLQLTRWEVVDMDRVH
GNGGPETETIATSL

>GmSWEET13

MDVAHFLFGIFGNASALFLFLAPVYALHSCFLPSLITFKRIIKNRSTEFSGIPYVMTLLNCLLSA
WYGLPFVSPHNILVSTVNGTGSFIEIYVLIFIVLAPRKEKAKILGLFTFVLSVFSAVVFSVLFALH
GNSRKLFCGFAAAIFSIIMYGSPLSIMRLVIKTKSVEFMPFFLSLFVFLCGTSWFIFGLLGRDPFV
AVPNGVGSALGTMQLILYFIYRDNKGVPKQAPTEEESMEMGDAKPQQGKQSNANGIQG

>GmSWEET14

MAETIRLAVAVLGNAAASVALYAAPMVTFRRVIRKKSTEEFSCFPYIIGLLNCLLFTWYGLPVVS
YKWENFPLVTVNGVGIVLELSYVLIYFWYASAKGKVKVAMTAIPVLLVFSIIAAVSAFAFHDN
HHRKLLVGSIGLGVSVTMYGSPLIVMKKVIQTKSVEFMPLPLSMCSFLATVLWLIYGLLIRDIF
VAGPSAVGTPLGILQLVLYCKYRKGSVVEDPSKGDLEKGNLEKVEMEIGKVEMNVTNHMNG
HS

>GmSWEET15

MSHSHLSFAFGILGNIASFVCFLAPLPTFYRVCKKKSTEGFQSIPIYVAALFSAMLWIFYAYVKT
GETLLITINAFGCVIETIYLAVFITYCPKKARMSTLRMIVLLNFGGFCTIVLLTHLLAKGEEARV
KLLGWICVVFATSVFAAPLSIIRVVIRTKSVEFLPFPLSLLLLISAIMWLLYGISLKDIYVTLPNV
GLTFGVIQIGLYAMYRNNKPIKDQKLPEHKGDIVESENVIAPTGNKEKQEEEVKPPQGGDIEIGE
KKEENNKQDQQQSVENKKLDQVAHDQTELNKNNINKNNNKTEERVSCV

>GmSWEET16

MAINHETWAFVFGLLGNVISFMVFLAPLPTFYQIYKKKSTEEFQSLPYVVALFSSMLWIYYALV
KKDASLLLITINSFGCVIETIYLAIFLIYAPSKTRLWTIKLLLMLNVFGFGAMLLSTLYLTGSKR
LTVIGWICLVFNISVFAAPLCIIKRVIKTKSVEFMPFSLSFFLTINAVMWFFYGLLLKDYVALP
NTLGLFHSIIQMVLVLIYRNAKTPDLPMLKLQELNSHTIDVGKLSRMPEPSEPNHLTKNGTLTEREI

>GmSWEET17

MAINHETWAFIFGLLGNVISFMVFLAPLPTFYQIYKKKSTDGFQSLPYIVALFSSMLWIYYALV
KKDASLLLITINSFGCVIETIYLAIFLIYAPSKTRLWTIKLLLMLNVFGFGAMLLSTLYLTGSKR
LSVIGWICLVLNISVFAAPLCIMKRVIKTKSVEFMPFSLSFFLTINAVMWFFYGLLLKDYIALP
NTLGLFLFGIIMVLYLIYRNAKPQGLEEPTKVQELNGHIIDVVKPNHVTKNGPVPVIETASNV

>GmSWEET18

MADASFFVGVIGNIISILMFLSPVIDYSWKNMIYPCLQIHVLSLVRPHQKLPHLFYHLEAPAHHK
IKKHGSTEDFSSLPYICTLLNCSLWTYYGIIKAREYL VATADGFGIVVETIYVILFLIYAPKGIRQ

RKSICRTVILVVILDVAISTIAVVTTQLALQREARGGVGVGMGAGLNIVMYFSPLSCHGKYIIYL
LSDKMLMCNLVCVSFRLVCVDSVYGLVLIRFSFLYSLCHLLKHCLYH

>GmSWEET19

PTFWKIKKHGSTEDFSSLPYICTLLNCSLWTTYGIIKAREYLVATVDGFGIVVETIYVILFLIYAP
KGIRGRTVILAVILDVAISTVAVVTTQLALQREARGTQLALQREAHGGGVGVGMGACLNIVMY
FSPLSAMCLCRKLSFKKQGIFSRTLQTIIFRLVCADSVYGLVLIRFSFLYSLCHLLKHCLYH

>GmSWEET20

MAHANPMIFVVGILGNLVSFCCFLAPVPTFYRVCKKKKTTEGFQSLPYVAALFTSMLWIFYAYI
KTGEILLITINAFGCFIETVYLYIYITYCPKKARFFTFKMIFLFNVGVIFLVVLLTHVLAKERTARI
ELLGWICVVLSTSVFAAPLSIIKVVIRTKSVEFMPITLSLLLTVSAMMWMAYGILLRDIYVTLPN
FVGITFGTIQIVLYLIYRKNKPKVDQKLPEHKDDVANDENVNTAVSGENRGANATGFVDIEIGE
KKQVQEADKKQDQQAVERNARDQTEHNNNSNKTREG

>GmSWEET21

MTMHRESWAFVFGVGMGNIISFGVFLAPLPTFYQIYKKKSTEGFQSLPYVVALFSAMLWIIYAF
VKRETALLITINTFGIVVESIYLSIFLIYAPRKPRLTITKLLLLLVFGFGAMLLSTLYLSKGAKR
LAHGWICLVFNISVFAAPLFIIRRVIKTRSVEYMPFTLSMFLTINAVMWFFYGLLLRDYYVALP
NTLGFVFGIIMVMYLMYRNATPVALEEPVKAQELNGHIIDVVKIGTMEPNHGGAVGKV

>GmSWEET22

MALNSHNLALAFGMLGNVISFMVYLAPLPTFYRIYKKKSTEGFQSLPYLVALFSSMLWLYY
ASLKPADATLLITINSLGCVIEIVYIVMFTIYATKDARNLTVKLFMVMNVGFSALIFLVITYFAIH
GSLRVQVVGWVCVSIAGVFAAPLSIVAQVIRTKNVEFMPFNLSLFTLSAVMWFFYGLLLKD
ICIAIPNILGFTLGLLQMLLYAIYRNGKTNKEVATKEEKALEAIMKNVVVVNPLGTCEVYPVI
NKENNNGQGIEGAKEKECPV

>GmSWEET23

NVISFMVYLAPLPTFYRIYKKKSTEGFQSLPYLVALFSSMLWLYYASLKPADATLLITINSLGCV
IEIVYIVMFTIYATKDARNLTVKLFMVMNVGFSALIFLVITYFAIHGSLRVQVVGWVCVSIAGV
VFAAPLSIVAQVIRTKNVEFMPFNLSLFTLSAVMWFFYGLLLKDICIAIPNILGFTLGLLQMLL
YAIYRNGKTNKEVATKEEKALEAIMKNVVVVNPLGTCEVYPVINKENNNGQIEVTSNCTM
ARSF

>GmSWEET24

MGSHNALAATFGILGNIISVMVYLAPVPTFYRIYKKKCTDGFHSLPYLLSLMSSMLWLYYAFL
KIHDGVVPLITINSIGCVIELIYILTYIKYAHKDARNLTYTLFAAMNIGFLALVLSSRFALNGSHR
VKVIGWICDAVSLSVFASPLSIMAKVIRTCSVQFMPFYLSFLLTNAITWFFVYGLSMQDKCIYIP
NVGGFALGLVQMVLYGIYRKGSESEKEQGLGEGVINIVVNPLGPAEVFPIAVDDNKVKDLV
VVDDVTVSQQEKEKNVEAKDDCPV

>GmSWEET25

MVITHHTLAFTFGMLGNVISFLVFLAPVPTFYRIYKKKSTESFQSLPYLVALFSSMLWLYYALL
KRDAVLLITINSFGCVIEIYIVLYITYATRDARNLTIKLFAMNMTSFAVILLVTHFGVHGPLRV
QVLGWICVSISSVFAAPLSIVAQVVRTKSVEFMPFNLSFTLTLsAIMWFGYGLFLKDICIALPN
VLGFVLGLLQMLLYTIYRKGKNKKTNTNEKSLSVKPLKNIAVVNPLGTGEVFPVEEDEQAACKS
QGDGEDKKAEDCLV

>GmSWEET26

MAISHSTLAFAGMLGNVISFLVFLAPITTFYRIFKKKSTEGFQSLPYLVALFSSMLWLYYALLK
KDAMLLLTINSFGCVIEIYIILYITYATGDARNLTLKLFFAMNVGAFALILLVTHFAVHGSLRV
QVLGWICVSLSSVFAAPLSIVAQVVRTKSVEFMPFNLSFTLTLsAIMWFGYGLFLKDICIALPN
VLGFALGLLQMLLYAIYRNGNKKVDKILEKKAPLEPLKSVVIETGEVFLVEEKQQGKSKESS
EEKEKSDEPNNDCAV

>GmSWEET27

QSIPYVVALLSALLLLYYGFIKTNATLIITINCIGCVIEVSYLSMCIHYAPRKQKISTLVMILIADIG
GLALTMLIIITFAVKAINRVHAVGWICAISIAVFAAPLSKMRRVIKTSSVEFMPFSLSLFLTLCP
MWFFYGFDDKDDFIMPNVLGFLFGISQMILYMIYKNAKKNGETNCTEPARKGGHSELQTAQL
QWQQIRFPISGGNERESTQSSMLC

>GmSWEET28

MAEASFFVGVIGNIISILMFLSPVPTFWKIKKHGSTEDFSSLPYICTLLNCSLWTYYGIIKAGEYL
VATVNGFGILMETIYIILFLIYAPKGIRGRTAILALILDVVILTAIIITQLALEGETRSGAVGVMGA
GLNIVMYSSPLSVMKTVVTTKSVEYMPFLLSFFFFFNGAVWLLYAVLVRDVILGVPNGTGFL
GAMQLVLYAIYRNGKRVSNNRLEEGLQHEPLISEPNNEHQSEDRPI

>GmSWEET29

MSLFAAFSICKVAKDAAGVAGNVFAFGLFVSPIPTFRRIIRNGSTEMFSGLPYIYSLNCLICMW
YGTPLISADNLLVTTVNSIGAVFQFVYTIIFLMYAEKAKKVRMVGLLLAVLGMFAIVLVGSLQI
DDVIMRRFFVGFLSCASLISMFASPLFIIKLVIQTKSVEFMPFYLSTFLMSTSFLLYGLFNDDA
FIYVPNGIGTILGMIQLILYFYFESKSRESSREPLIVSYA

>GmSWEET30

MAETLRMVAVIGNVASVSLYAAPTVTFRKRVIRKKSTEEFSCIPYIIALLNCLLFTWYGLPVVS
NKWENFPLVTVNGVGILFELSYVLIYFWFSTPKGKVKVAMTAVPVLIVFCVIAVVSFAVFPDH
RHRKLLVGSIGLGVSIAMYASPLVVMKKVIQTKSVEFMPLPLSFCFLASVLWLTYGLLIRDIF
VAGPSVIGTPLGILQLVLHCKYWKRRVTEPTKVELQKGNNAEKLDLENGHGKECVTPVPSNF
NS

>GmSWEET31

MDVAHFIFGIFGNASGLFLFLAPIVTFWRIVSNKSTEFSGVPYPMITLLNCLLSAWYGLPFVSPN
NLLVTIINGTGAGIEIYVFIFYFAPKKEKTKIIGLFSFVAVFSVVVLVSLFALQGNARKLFCGF
AAAFSIVMYGSPLSIMRLVIKTKSVEFMPFLLSLFVFLCGTSWFIYGLLGRDPFVAVPNGVGS
ALGTAQLILYFIYRDNKSDPKKIPRTEEEAMEMGTANKNPISNSNGIQEGRV

>GmSWEET32

MVTADIARTVVGIIGNISGCLFLSPVPTFVRIWKKGSVEQYSAVPYLATLMNCMVWTLYGLP
MVHPHSLLVVTINGAGCVIEIYVTLFLLYSDRTKRLRVFLCLFSELIFITLLTLLTFTLIHSIKHRS
AIVGTICMLFNIAMYASPLSVMKLVITTKSVEYMPFLLSLASFGNGVSWTTYALIPFDPFIAIPN
GIGTTFSVAQLILYATYYKSTKKQIAAARNAKEVNLSEVVVGNSTVQDPNNNKISAAPYGL

>GmSWEET33

MVSAAIARNVVGIGNISFGLFFSPAPTFYGIVKKKTVEEFKPDPIATVLNCAFWVVFYGMFP
VHPNSILVVTINSVGLAFEFVYLTIIYVYATSKGRKKLLIFLLIEAVFFAAVVLITMLALHGTRQ
RSLVVGVLSDIFNVMMYVSPLTIMAKVIKTKSVKYPFWLSLANFLNGVSWTTYALIHFPDL
VLISNGIGAIISGLIQLILYACYCCKSENDEGGDQDLKPSGVQLSNLNGRAAV

>GmSWEET34

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YGTPLISADNLLVTTVNSIGAVFQFVYIIIFLMYAEKAKKVRMIGLSLAVLGIFAIILVGSQIDDI
IMRRFFVGFLSCASLISMFASPLFIIKLVIQTKSVEFMPFYLSTFLMSTSFLLYGLFNDDAFIYV
PNGIGTILGLIQLILYFYFEGKSRVNSREPLIVSYA

>GmSWEET35

MVSFSDHELVLIFGLLGNIVSFMVFLAPLSNFYTIYKKKSSEGFQSIPYVVALLSALLLLYYDFIK
TKATLIITINCIGCVIEVLYLTMYIYAPRKQKAINRVHAVGWSAIFNIAVFAVAPLSIMLHSIFNY
SLFMPFSLSLFLTLCAIMWFLYGFFDKDDFIMGAANTAMLSDANEVKN

>GmSWEET36

MDVAHFIFGIFGNVSGFLFLFLAPIVTFWRIKKNKSTEFSGVPYPMITLLNCLLSAWYGLPFVSPN
NILVTIINGTGAGIEIYVFIFYFAPKKEKAKILGLFSFVAVFSVVVLVSLFALHGNARKLFCGF
AAAFSIIIMYGSPLSIMRLVIKTKSVEFMPFLLSLFVFLCGTSWFIYGLLGRDPFVAVPNGVGSAL
GTAQLILYFIYRDKKGDQKKKPRTEEEAMEMGTANKNPISNSKGAQEGHV

>GmSWEET37

MAISLRMVAVLGNVASMSLYAAPSVTFRVIRKKSTEEFSSIPYIIALLNSLLYTWYGLPIISN
KWENFPLVTVNGAGIPFELS YVLIYFWFSSPKGKAIVMCSVSHASHHYMVAITTVTILAVFCFI
AFVSAFAIPGHRYRKLLVGSIGLAVSIALYASPLVAMKKVIQTKSVEFMPLPLSLSSLLASLLW
MTYGLLIGDIFVAGPNVVGTPLGILQIVLYCKYWKKIVTEEPNKVELQKGNTEK

>GmSWEET38

MAETLRMVAVAVIGNVASVSLYAAPTVTFRVIRKKSTEEFSCMPYIIALLNCLLFTWYGLPVV
SNKWENLPLVTVNGVGILFELS YVLIYIWFSTPKGKVKVAMTAVPVLIVFCVIAIVSAFVFPDH
RHRKLLVGSIGLGVSIAMYGSP LVMMKKVIQTKSVEFMPLPLSFCFLASVLWLTYGLLIRDIF
VAGPSLIGTPLGILQLVLHCKYWKRRVMEEP NKVELQKGNTEKLDLEMGHGKECVTVPSNC
N

>GmSWEET39

MPTHHASAAIFGIIGNMISVMVYLAPVPTFYQIYKKKCTDGFHSLPYLLSLMSSMLWLYYAFL
KIHDGVVPLITINSIGCVIELIYILTYIKYAHKDARNLT YTLFAAMNIAFLTLVLSSHFAHLSHR
VKVIGWICDAVSLSVFASPLSIMAKVIRTKSVQFMPFYLSFFLTLNAITWFFVYGLSIQDKCIYVP
NVGGFGLGLVQMVL YGIYRNGGESEKEQALAEAINIVVNPLGPAEVFNRRGSG

>GmSWEET40

MADASFFVGVIGNIISILMFLSPVPTFWKIKKQGSTEDFSSLPYICTLLNCSLWTTYGGIINAREYL
VATVNGFGIVVETIYVILFLIYAPKGRRGR TAILAVILDVAILAAAVVITQLAFQGKARSGAVGV
MGAGLNIVMYFSPLSAMKTVVKTKSVEYMPFLLSFFFFLNGGVWLLYAVLVRDVILGVPNGT
GFLLGAMQLVLYAIYRNGKPSSNNRLEEGLQHEPLISQPNKESHQIREDRPI

>GmSWEET41

MEHLCFWVVCVLKSFGSNSKITLQSHLKSNNFFFFYIQMISANNLIPKTTEIWHLSMSPIPIFRRII
KNGSTKMFSGLPYIYSLNCLICLWYGTP LISPDNLLVTTVNSIGAAFQLVYILFLMYAEKARK
VRMVGLLLTVLGIFV IILVGS LQVDDSTMRGMFVRFLSCASLISTFASPLFIKLV IQTKSVEFMP
FYLSISTFLMSISFFLYGFLSDDAFIYVPNGIGTVLGM IQLVLYFY YKGSTSEECREPLIVSYE

>GmSWEET42

MSLFGAYSICEVGKDAAGVAGNIFAFGLFVSP IPTFRRIIRNGSTEMFSGLPYIYSLNCMICLW
YGTPLISPDNLLVTTVNSIGAAFQLVYIILFLMYAEKARKVRMVGLLLAVLGIFV IILVGS LQID
DSAMRRMFVGF LSCASLISMFASPLFIKLV IRTKSIEFMPFYLSLSTFLMSFSFFLYGLLSDDAFI
YVPNGIGTVLG IQLVLYFY YKGSSEECREPLIVSYE

>GmSWEET43

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TEDNTLVVTINGFGFFLEMFYTLIFFIYSTW SKRRKILLIFLGEIVFLALVVILLMTFLHSAKQRK
VIVGPICIVNILMYFAPL TVMRRVIQTKSVKYMPFLLSFANFANGIHWTTYALLKWDPFIVIPNS
IGAVSGLTQLVLYAMYYKTTNWDEEIEQV

>GmSWEET44

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KT NATLIITINCIGCVIEVSYLAMYIYAPRKQKISTLVMILIADIGGFGLTMLITTF AVKGINRVH
AVGWICAIFNIAVFAAPLSIMRRVIKTKSVEFMPFSLSLFLTL CATMWFFYGFDFKDNFIMLPNV
LGFLFGISQMILYMIYKNAKKNGEINCTEQQERDGTVNSKQHSCNGNKLD FSSLVEMKENQLN
QV

>GmSWEET45

MAISHSTLAFAGMLGNVISFLVFLAPMTTFYRIFKKKSTEGFQSLPYLV ALFSSMLWLYYALL
KKDAMLLLTINSFGCVIEVIYIILYITYATRDARDL TLKLFFAMNVGAFALILLVTHFAVHGSLR
VQVLGWICVSL SISVFAAPLSIVAQVVRTKSVEFMPFNLSFTLTL SAIMWFGYGLFLKDICIAPV
NVLG FALGLLQMLLYAIYRNGNKKVDKIMEKKAPLEPLKTVVIETGLEEKQQGKSKENSEE
KEKSDEPNDCAV

>GmSWEET46

MVISHHTLAFTFGMLGNLISFLVFLAPVPTFYRIYKKKSTESFQSLPYLVALFSSMLWLYYAML
KRDAVLLITINSFGCVIEIIVLYITYATRDARDLTIKLFSAMNMSSFALILLVTHFAVHGPLRV
QVLGWICVSISVSVFAAPLSIVAQVVRTKSVEFMPFNLSFTLTL SAIMWFGYGLFLKDICIAVPN
VLGFLVGLLQMLLYTIYRKGNKKTNEKSPVEPLKSI VVNPLGTGEVFPVEEDEQAAKKSQ
GDGDDKKGQDCLV

>GmSWEET47

MVSAAIARNVVGIIGNVISFGLFLSPAPTFYKIIKNKAVEEFKPDPIATVLNCAFWVFYGMPI
HPHSILVVTINGIGLVFEFVYLTIFTTYATNKGRKKLLICLLIEAIFFAAIVLITMLAVHGKHRSL
MIGVICDFNIMMYVSPLTIMFKVIKTSVKYMPFWLSLTNFLNGACWTTYALIHFPDLFVLIS
NSVGVSFGVQLILYACYCCRENDDGDDGAVQKKTGVPVSESPRDVEA

>GmSWEET48

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RSLVVGVLSDIFNVMMYVSPLTIMAKVIKTSVKYMPFWLSLANFLNGACWTTYALIHFPDL
YVLISNGIGAI SGLIQLILYACYCCKSKNDEDGDQDLKPSGFQLSNLNGRAAVV

>GmSWEET49

MSNSSMASLTFVGIIGTVLSLLVFASPIKTFCRVVKKKSTENYKGAPYITTFCTSLWTSYGV
KPGGFQIAIVNGAGAVFHCTYIILFLVYSPQDQKVKTALWVAILDVGFLGTVISVTLFALHGTIQ
LSVLGMFCSGLTIIMYASPLLSMKMVIQTSVEYMPFLLSFFMFLNAGVWALYSFLVKDFFIGI
PNLIGLILGSTQLTVYVVYKKKQPEATKGPRVGLSLGKGASNYEEAQLKDETVKVVVVEKAL
KKVKSLPKPVLNHEHILKKTLSFGVNNLPSTFWSTKPPQEDVAVDAAEEAQV

>GmSWEET50

MRPTFWKIKKHSTEDFSSLPYICTLLNCSLWTTYGIIKAREYLVATVNGFGIVVETIYVILFLIY
APKGIRDCHFGCDFGCRNFRSSNYFSISIARRSSWWCCWCYGSRLKHCHVFLTSLCHDIIWK
DRTRKYRLIIFVEGDYQFRVVACVEMLEPS

>GmSWEET51

MVTADIARTVVGIIGNISGCLFLSPVPTFVRIWKKGSVEQYSAVPYLATLMNCMVWTLYGLP
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KRSVVGTICMLFNVMYASPLSVMKLVITTKSVEYMPFLLSLASFGNGVSWTTYALIPFDPFI
AIPNGIGTTFVSAQLILYATYYKSTKKQIAARNAKEVNLSEVVVG NSTVQDPNNNKISAAPNGL

>GmSWEET52

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>AtSWEET6

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>AtSWEET9

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>AtSWEET2

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>AtSWEET4

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