

Trees	-----HCFGASRAAMSSSLSPDH-AEGSTSRASTEgTDKGVLLS-----	38
Tvire	-----FEASRAAMSSSLSPDH-AEGGTSRASTEgTDKGVLLS-----	36
Tatro	-----MSSLSPDQ-IEGGASQASTEgTDKGVLLS-----	28
Vdahl	-----MASSLPSDQQGSASHARSSSAEQDNGPLSN-----	30
Moryz	-----MQSYEGS-----GGSDGGHDKSPLSS-----	21
Tterr	-----MASVSSNQPSQRSFGGGSSTTQDRPLLST-----	29
Ncras	-----MTSSLPLQP-LATYAEDPHSGPDSNPLST-----	28
Ntetr	-----MTSSLPLQP-LATYAEDPHSGPDSNPLST-----	28
Ndisc	-----MASLSFQP-LAPYAEDPHAGSDSNPLST-----	27
Foxys	-----MAAFNANLAGATERSFSSSLSPDRVVASSE-----	30
Fvert	-----MAAFNANLAGATERSFSSSLSPDRVVASSE-----	30
Fgram	-----MSVFNHLAGATERSFSSSLSPDRIIASSE-----	30
Sscle	-----MTSPSPENFDYTNRSRDRGDYASEQSEGAR-----	29
Ptrit	-----MAPTYPPPAGVNEYPSPAASRRPSECFSEMSMDSRRGSLAGFASD	46
Snodo	MSHNRYSWSEGLTMGPVYPPPGAGADYPSPAASRRASECFSDMTH--SRRGSLAGFASE	58
Chete	-----MAATIKTDPVGDSSH-----	16
Mfiji	-----MAAYTAGAHPMPHALPQPDQMRHDVSYD-----	28
Mgram	-----MTTFHA-AH-QPHGLSMSDGMSHDVGyDT-----	27
Abenh	-----	
Tverr	-----MG-----	2
Trubr	-----MASGAPQASPDANS--VPTGIDPp-----	22
Ttons	-----MASGAPQASPDANS--VPTGIDPp-----	22
Mgyps	-----MASSAPQSSPEANR--VPTGIEpAPELLIRScGGNKSA	35
Mcani	-----MGN--YPASINLGP-----	13
Cimmi	-----MEPSGTNQGIMAGQSGVPVTQTLSSNVGSAPg-----	32
Cposa	-----MEPSGTNQGIMAGQSGVPVTQTFSSNVGSAPg-----	32
Pb-01	-----MASFGQYGGGLASDK-----	14
Pb-03	-----MASFGQYGGGLASDK-----	14
Aderm	-----MASLGHNGSPSNQ-----	14
Afumi	-----MASMGGVMPVDY--GHTR-----	17
Nfisc	-----	
Aclav	-----MYT-----	3
Aflav	-----MASLNEGVLPLEA--DALNRQND-----	22
Aoryz	-----MASLNEGVLPLEA--DALNRQND-----	22
Anige	-----MTSINGGPMVDL--SAANRQTM-----	22
Aterr	-----MTAAMATMNGGVMPMDH--GTIDFNTLNG-----	27
Anidu	-----MTSISRPIPLDLNAMDSLNRQSLAQ-----	26
Pchry	-----	
Pmarn	-----MSGYPSGGHTG--GMGYNDPYAQYGAISMFR-----	30
Tstip	-----MSSYPSGNQAAGMGIGYNDQFAR-----	23

← B1

H93

Trees	-----LNLNFFKSLSD-----KKVTRTGN--PPKRRGPKP	66
Tvire	-----LNLNFFKSLSD-----KKVTRTGN--PPKRRGPKP	64
Tatro	-----LNLNFFKSLSD-----KKVTRTGN--PPKRRGPKP	56
Vdahl	-----LNLGFLKGLTE-----KKATRDGQ--PPKRRGPKP	58
Moryz	-----IPSNFLRNLT-----KRTKSDAP--APKRRGPKP	49
Tterr	-----MNLDIRLRLTE-----KRTRRDGQ--PPKRRGPKP	57
Ncras	-----LNLTLKSLSD-----KK-TRDGQ--TPKRRGPKP	55
Ntetr	-----LNLTLKSLSD-----KK-TRDGQ--PPKRRGPKP	55
Ndisc	-----LNFTILQNLAD-----KK-TRDGQ--APKRRGPKP	54
Foxys	-----DDNTAASALDPDFYKSLTD-----KRTRRDGN--PPKRRGPKP	66
Fvert	-----DDNAAASTLDPDFFKSLTD-----KRTRRDGN--PPKRRGPKP	66
Fgram	-----DDNAAA--LDPEIYKSLAD-----KRTRRDGN--PPKRRGPKP	64
Sscle	-----SPLSMGLFLKTLTER-----KSTRVDGS--TPKRRGPKP	62
Ptrit	MESAGQWQSLGSDTKSPLAQFGFFKSLT-D-----KKTRRDGQ--PPKRRGPKP	92
Snodo	MESTGQWQSIGSESKSPLAQFGFFKGLT-E-----KKTRRDGQ--PAKRRGPKP	104
Chete	-----FNcSGSESKSPLAQFGFFKSLT-D-----KKTRRDGQ--PPKRRGPKP	56
Mfiji	-----GQ-----PPKRRGPKP	39
Mgram	-----NPPGSD-RSPLHDLGFYKNITPE-----KQTKDGQ--PAKRRGPKP	66
Abenh	-----M-----KKSPSDGQGGQPKRRGPKP	20
Tverr	-----PPIVPI-KKPSLANLPFIRNFSDDL-----KKSPSDGQGGQPKRRGPKP	45
Trubr	-----PPIVPI-KKPSLANLPFIRNFSDDL-----KKLPNDGQGGQPKRRGPKP	65
Ttons	-----PPIVPI-KKPSLANLPFIRNFSDDL-----KKLPNDGQGGQPKRRGPKP	65
Mgyps	SACIGPPPTVVK-KNPSLVNLAFIGKNSLDPV-----KKIPSDGQ--QPKRRGPKP	82
Mcani	-----PPTVVK-KNPSLVNMSFLKNFNDPL-----KKV-TDEQRQPKRRGPKP	55
Cimmi	-----DMTAPVSAESSFISMPFLKALGGGL-----QKKTRDGQ--PPKRRGPKP	74
Cposa	-----DMTAPVSAESSFISMPFLKALGGGL-----QKKTRDGQ--PPKRRGPKP	74
Pb-01	-----NKKIENVVDVVDVDDF-----EKTTTRGQ--PPKRRGPKP	47
Pb-03	-----NTKNENADVVDVDD-----VGQ--PPKRRGPKP	41
Aderm	-----SSRNGAG--DQ-----EGQ--PPKRRGPKP	36
Afumi	-----GAPSQTSLKTPSTMNFFQFFGG-----QKKVTRDGQ--PAKRRGPKP	59
Nfisc	-----MSTNFFQFFGG-----QKKVTRDGQ--PAKRRGPKP	29
Aclav	-----GAPSQTSIKTPSMGANFFQFFAG-----QKKVTRDGQ--PAKRRGPKP	45
Aflav	-----LNGRQSQGLMK-ASMGTEWFRFFGSG-----QKKVTRDGQ--PAKRRGPKP	66
Aoryz	-----LNGRQSQGLMK-ASMGTEWFRFFGSG-----QKKVTRDGQ--PAKRRGPKP	66
Anige	-----PEAMPSPNSRP-STIGADFFKFFSGT-----QKKVTRDGQ--PAKRRGPKP	66
Aterr	-----TNDRQSQSSLK--GADWFKFFGGG-----QKKVTRDGQ--PAKRRGPKP	67
Anidu	-----SASPAGQDTPGMRGSIStDFKFFGAGGQ-----AKKTRRDGQ--PAKRRGPKP	73
Pchry	-----MVEEPQTPSSKGFGEIFKIFGGGSGSAASANGPKKATRDGQ--QPKRRGPKP	52
Pmarn	-----LQENAPMYAPAPEPNKFNGFLKALGAG-----TKKTKDGQ--PAKRRGPKP	75
Tstip	-----QYEAPEPEQTKFNGFLKALGAG-----TKKTKDGQ--PPKRRGPKP	63

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B2 

Trees	AHG-----SQQGFSPAG----TSHSTSMSP-----	185
Tvire	APG-----SQQGFSPVG----TSHSTSMSP-----	180
Tatro	AHG-----SQQGFSPGTG----MSQSTGMSMP-----	175
Vdahl	THG-----SRSVFTPL-----TSKSTTASVSPSY-----	180
Moryz	GGG--PA-----SSHTSAFTSP-----LASDTANSQQYSR-----	176
Tterr	MAGSYIPA-----SSNTTALTPP-----LSASNG-SHGGGG-----	188
Ncras	MLG-----SESYLPGGP-----SSQTTFPSPSS-----	178
Ntetr	MLG-----SESYLPGGP-----SSQTTFPSPSS-----	179
Ndisc	MLG-----SESYLPGGP-----SSQTTFPSPSS-----	178
Foxys	TAP-----SVGSPMN-----LPVAVNQSTAG-----	186
Fvert	TAP-----SVGSPMN-----LPVAVNQSTAG-----	183
Fgram	TAP-----SVGSPMH-----LPPAVNQFVSG-----	185
Sscl	VPT-----SSSTFSPPP-----LSHSSNSNPNSMN-----	183
Ptrit	GSA-----STGYTSPP-----TNGSASHDGMGGQ-----	217
Snodo	GSA-----STGYTSPPSFQHRGSI SHDSMGQPP-----	232
Chete	GSA-----STGYTSPP-----TRGSASHDGMSSQP-----	181
Mfiji	ASE-----STGFSPPP-----PIVPGQMPMPQ-----	164
Mgram	ASD-----SAGFSPTP-----DPIPG---MHQGG-----	187
Abenh	PQIAPDL-----GSMNYLGTPEISIS---GRSPGTTT-----	158
Tverr	PQIAPDI-----GSMNYLGTPEISIS---GRSPGTTT-----	183
Trubr	SQTAPDI-----GNMNYLGTPEASIS---GRSPGTTT-----	203
Ttons	SQIAPDI-----GNMNYLGTPEISIS---GRSPGTTT-----	203
Mgyys	SQTAPDM-----ASMNYLGTPEISIS---GRSPGTTI-----	220
Mcani	IQTAPDM-----GSMNYLGTPEISIS---GRSPGTTT-----	191
Cimmi	SAGYP-----SGTHYMTPTDTTVA---GRSPGAPG-----	209
Cposa	SAGYP-----SGTHYMTPTDTTVA---GRSPGAPG-----	209
Pb-01	S--QSHS-----QGFRGGDPPSATPSSIMS---AISPGTGS-----	191
Pb-03	S--QSHSHVPSHSHSQGFTGGGNPPTSTPSTIMS---AISPGTGS-----	193
Aderm	APSQAPSAHSHSLSQGFLGDGTYPTATP-TTYS---TVSPGTGS-----	196
Afumi	SOAP--AA-----LAASDGNNTYTPPTTVSNVSDVSPLANG-----MER	207
Nfisc	SOAP--AA-----LAASDGNNTYTPPTTVSNVSDVSPLANG-----MER	177
AcLav	SOQ---TG-----APTSNSHTATPPTTISTLSSDVSPLANG-----MER	189
Aflav	SQPTAVAQ-----SVPSTQHAYTTPPTTISAPSSLSPIVNG-----IEH	217
Aoryz	SQPTAVAQ-----SVPSTQHAYTTPPTTISAPSSLSPIVNG-----IEH	217
Anige	SQPTGVAP-----SNPSTNNMYTTPPTTVA---SLSPITTG-----IEQ	211
Aterr	SQPNQIA-----PSASNVYTPPTTVA---GVSPSVNGSTNGVDVSPTHVSN	224
Anidu	SQTG-----IASLTAHTYSTPPTTVSS---GMSPKFNG-----VEK	215
Pchry	SQT---AP-----IAHSASNHDTPATTISS---GMSPGANG-----MDH	197
Pmarn	SQSAG-----FQSQPAFLTTPSTFSS-----PHSAG-----DGDE	215
Tstip	SQSAG-----FQSQPGFLTTPSTFSS-----PHSAG-----DGDD	205

 **B3**

C236

Trees	-----DNRQLSPAA-----NGADLEQA-GIDFV	207
Tvire	-----DNRQSPAG-----SGADLEQA-GIDFV	202
Tatro	-----DNRQSPAG-----NGVDHEQA-GIDFV	197
Vdahl	-----APNSGSSHGNTPSGQQQHQPHGTSOHLPGHYGLP ^C DDGVSGSRIRQLRGTARP	235
Moryz	-----TPTGHGSLSPHPGGHHQHTNAQHHPRHGA-----QPLNPGVDYEQAGIDFV	223
Tterr	-----GMSPHSAAYSHGGHHQHPVQGNPSAGAGV---GSHPNQNLNLDYEQAGIDFV	239
Ncras	-----TTTSPAYRPLGGPRDFNTVLG---DGAG---VMVSKRDPDLDYDQAGIDFV	224
Ntetr	-----TTTTSPVYRPLGGPRDFNTVLG---DGAG---GLVSKRDPDLDYDQAGIDFV	225
Ndisc	-----TTTTSPFYRPLGGPSDFNTILG---DGAG---VLAPKRNPDLDYDQAGIDFV	225
Foxys	-----QPHGMPQPLYR-----GNPELEQA-GIDFV	210
Fvert	-----QPHGMPQPLYR-----GNPELEQA-GIDFV	207
Fgram	-----QPHGMPQPLYR-----GNPELEQA-GIDFV	209
Sscl	-----YDTESPIGGANGVYNGNDRSMAQ-----QQVRGVDYDQAGIDFV	223
Ptrit	-----MTLQQQ-----AQPNHHQH-----NGLDYDQI-GIDFV	245
Snodo	-----MALQQQ-----QVHQSGPQ-----NGLDYDQI-GIDFV	260
Chete	-----LTLQHQ-----AQQQHHHQ-----QGLDYDQI-GIDFV	210
Mfiji	-----IQNMQA-----GMVRNMAQMPS-----NRLDYDSI-GIDFV	194
Mgram	-----MAPPQS-----MPMRNMAQLPN-----NRLDYDQI-GIDFV	217
Abenh	SEMAQLPATGSNNPYFESAIPVAATGNALSSSDTG-GGSALVSSTPGVFDVDPQLGIDFV	217
Tverr	SEMAQLPATGSNNPYFESAIPVAATGNALSSSDTG-GGSALVSSTPGVFDVDPQLGIDFV	242
Trubr	SEMAQLPAVGSNNPYFESAIPVPATGNALSSSDIG-GGSALVSSTPGVFDVDPQLGIDFV	262
Ttons	SEMAQLPAAGSNNPYFESAIPVPATGNALSSSDIG-GGSALVSSTPGVFDVDPQLGIDFV	262
Mgyys	SEMAQPTAGSNNPYFESATPLPGTYNTSSNSIG-GGTALVSSTPGVFDVDPQLGIDFV	279
Mcani	SETVQPTAGSNNPYFESAAPQPGVSYQLSSNGFG-GESALVSSTPGVFDVDPQLGIDFV	250
Cimmi	SDFADAQPTSSPYSGPKTKQKSCQPAISSEISIPSGDNSTVADIPGIFDRDPQLGIDFI	269
Cposa	SDFADAQPTSSPYSGPKTKQKSCQPAISSEISIPSGDNSTVADIPGIFDRDPQLGIDFI	269
Pb-01	DSTETQPGGNMPLYSESQGHQKEQSGVLAESSWGGDGTAVDDVPGIFEKDPQLGVDFI	251
Pb-03	DSTETQPGGNMPLYSESQGHQKEQSGVLAESSWGGDGTAVDDVPGIFEKDPQLGVDFI	253
Aderm	DYTDQPGSGNIFTSYSGSQIQSEQPGVLGESSAWGGDSSVDDLPGIFEKEPELGVFEV	256
Afumi	VEISPTHEITPPPIAMT-ASSCEIPADLDL-SAIARNQEPVQAVGGVFEADPQLQIDFI	265
Nfisc	VEISPHEITPPPIAMTASSCEIPANLDL-SAIARNQEPVQAVGGVFEVDPQLQIDFI	236
AcLav	VEISPSQEIPTPP--QSHHAGSCDIPANLDL-SAIARNIEPIQALGGVFETDPQLQVDFI	246
Aflav	IDVSPTELSQPH--QNYSAAPCDALATLDR-IAPA-SRQPNQPPG-IFENDPQLQIDFI	272
Aoryz	IDVSPTELSQPH--QNYSAAPCDALATLDR-IAPA-SRQPNQPPG-IFENDPQLQIDFI	272
Anige	IDVS-SSEMSPQ--GPYQAAPCDALATLDR-IAPV-SRAPRQPSG-IFEELPQLQIDFI	265
Aterr	IDISPTQEIIPPQ--VAYNHAPCDALALDR-IAPS-NRKNQPPG-VFEEDPQLQIDFI	279
Anidu	FDSSVDPVGNP--QGATVPCDALAALD-----RRPPIQAG-IFEDNPQLQIDFI	265
Pchry	SDMSPPIGYPSHQ--QVYHANAGEHSMRMDPSCAPVDTMQMPAKGGVFESDPQLQVDFI	255
Pmarn	RSGRAGPGGG-MPIIGTTFTQGMGLSELDGSGSEKERELLPSIPGIFEDDPQLGVDFI	274
Tstip	RAGRSRGTGGAMPMTGTSFQTMNGLDLDYSASSEKD-QAIPAVPGIFEDDPQLGIDFI	264

	B3	B4		
	C272	C280		
	C303			
Trees	LTLERPCMAHMPFLVDRASDADG	-----APCGHALMAS	CPPTPFQDLTP	251
Tvire	LTLLEKPCMAHMPFLVDRASDADG	-----APCGHALMAS	CPAPFQDLTQ	246
Tatro	LTLLEKPCMAHMPFLVDRASDADG	-----APCGHALMAS	CPAPFQELTP	241
Vdahl	MTLLEKPCMNHPWLLERSSEMGG	-----EPCGHALMAS	CPPEPFELTP	279
Moryz	LAYENPHE-----KQRTGETGG	-----EACGHALMAS	CPPEPFSELTP	261
Tterr	LTLLEKPCMNHLPWMLERNSETGGR	-----EPCGHALMAS	CPQPFSQLSS	284
Ncras	LTLLEKPCMEHMTWLLERGTGTEDRA	-----QREPCGHALMAS	CPPEPFSELSP	272
Ntetr	LTLLEKPCMEHMTWLLERGTGTEDRA	-----QREPCGHALMAS	CPPEPFSELSP	273
Ndisc	LTLLEKPCMEHMTWLLERGTGTEDRA	-----QREPCGHALMAS	CPPEPFSELSP	273
Foxys	LTLLEKPCMTHIQFMVERASEPEG	-----EPCGHALMAS	CPDPAPETRTP	254
Fvert	LTLLEKPCMTHIQFMVERASEPEG	-----EPCGHALMAS	CPDPAPETRTP	251
Fgram	LTLLEKPCMTHIQFMVERASEPEG	-----EPCGHALMAS	CPDPSPESRP	253
Sscl	LTLLEKPCMDHMQLVVERSSDVG	-----EFFSGHALMAT	CPPESDMDMHP	268
Ptrit	LTLLEKPCMDHMQLMVRRAHEAD	-----DNISGHALMAT	APPDAHITNCP	289
Snodo	LTLLEKPCMDHMQLMVRRAHDAE	-----ETISGHALMAT	APPDSHIAQCP	304
Chete	LTLLEKPCMDHMQLMVRRAHDAD	-----ENISGHALMAT	APPDAHITNCP	254
Mfiji	LTLLEKPCMDHMQLMVRSYNPDGKEFNHPMENPDDTEHDHMSGHALMAT	AAAPYSHIMHKP	254	
Mgram	LTLLEKPCMDHMQLMVRRAHDAE	-----ETISGHALMAT	APPDSHIAQCP	277
Abenh	LHLEKPCNWHLEFICRR--AHDD	-----NQEAVSGHSLMAT	CPTSSVIANTE	263
Tverr	LHLEKPCNWHLEFICRR--AHDD	-----NQEAVSGHSLMAT	CPTSSVIANTE	288
Trubr	LHLEKPCNWHLEFICRR--AHDD	-----NQEAVSGHSLMAT	CPTSSVIANTK	308
Ttons	LHLEKPCNWHLEFICRR--AHDD	-----NQEAVTGHSLMAT	CPTSSVIANTE	308
Mgyys	LHLEKPCNWHMEFLCRR--AHDD	-----NQEAVSGHSLMAT	CPTSSVIANTE	325
Mcani	LHLEKPCNWHMEFLCRR--AHDD	-----NQEAVSGHSLMAT	CPTSSVIANTE	296
Cimmi	LTLLEKPCRDHIERLCRR--AHDAE	-----DQDMVAGHILMAT	CPPPSVVASAS	315
Cposa	LTLLEKPCRDHIERLCRR--AHDAE	-----DQDMVAGHILMAT	CPPPSVVASAS	315
Pb-01	LSLEQSCRDHMEFLCRR--AEDD	-----EHETISGHVLMAS	CPPPTQIVSAE	297
Pb-03	LSLEQSCRDHMEFLCRR--AEDD	-----EHETISGHVLMAS	CPPPTQIVSAE	299
Aderm	LSLEQSCRDHMEFLCRR--AEDD	-----ETETISGHVLMAS	CPPPTQIVSTE	302
Afumi	LTLLEKPCREHTDYLCRRSITTEADD	-----EDMPFSGHALMAT	CPPPSYIANTT	313
Nfisc	LTLLEKPCREHTDYLCRRSITTEADD	-----EDMPFSGHALMAT	CPPPSYIANTT	284
Aclav	LTLLEKPCREHTDYLCRRSITTEADD	-----EDMPFSGHALMAT	CPPPSYIANTT	294
Aflav	LTLLEKPCREHTDYLCRRSITTEADD	-----EDMPFSGHALMAS	CPPPSYIANTT	320
Aoryz	LTLLEKPCREHTDYLCRRSITTEADD	-----EDMPFSGHALMAS	CPPPSYIANTT	320
Anige	LTLLEKPCREHTDYLCRRSITTEADD	-----EDMPFSGHALMAT	CPPPSYIANTS	313
Aterr	LTLLEKPCREHTDYLCRRSITTEADD	-----EDMPFSGHALMAT	CPPPSYIANTT	327
Anidu	LTLLEKPCRDHTEYLCREASKDVE	-----EDMPFSGHALMAT	CPPPSYIANTT	313
Pchry	LTLLEKPCRDHTEYLCREASKDVE	-----EDMPFSGHALMAT	CPPPSYIAKTT	303
Pmarn	LKLEAPCRVHTEYLCREASKDVE	-----RDAFISGHALMAS	CPPPSHIENVP	321
Tstip	LKLEAPCRVHTEYLCREASKDVE	-----RDRFISGHALMAS	CPPPSHIENVP	311
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	B4	
Trees	DTPFGHTHTHHGD-----GDDGGEEPLTQG----	277
Tvire	ETPFNGTHTHDHG-----GEFHPQSQG----	268
Tatro	DTPFGSKHTHDHG-----GEFEK--QG----	261
Vdahl	DIPFG--YAHVNG-----DLNS-GQR----	297
Moryz	DIPFGYSN-----VKNGELDSGQR----	280
Tterr	DIPF5HHQHQL-----HQPQQQAQQQRLLDSQNNNNNT	317
Ncras	ESPFGHTNTIH-----AHAGHPPMPTSISGGGQR----	302
Ntetr	ESPFGHTNTIH-----AHGHHGPPMPTSISGGGQR----	303
Ndisc	ESPFGHNTIQNLAIIGGNSNGDGGAITPIRQQHVHTHGHDYPPMPTSISGGGQR----	329
Foxys	GLPFGKTHIPLDG-----DTNQK----	272
Fvert	GLPFGKTHIPLDG-----DTNQK----	269
Fgram	GLPFGKIHIPVDG-----EPSQK----	271
Sscl	HIPFGHCPMHNHN-----HETDGTDDGGPPKQK----	295
Ptrit	EEKYPHOMP-----	298
Snodo	EEKYPHOMP-----	313
Chete	EEKYPHOMP-----	263
Mfiji	TEKYPHOMPE-----	264
Mgram	AEPYPHOMPE-----	287
Abenh	RGQTYETKT-----	272
Tverr	RGQTYETKT-----	297
Trubr	RGQTYETKT-----	317
Ttons	RGQTYETKT-----	317
Mgyys	RGQTYVTKT-----	334
Mcani	RGQTYTTKT-----	305
Cimmi	RGYEYPVKT-----	324
Cposa	RGYEYPVKT-----	324
Pb-01	PGQMYSTRT-----	306
Pb-03	PGQMYSTRT-----	308
Aderm	PGQMPVRT-----	311
Afumi	PEQAYPHKT-----	322
Nfisc	PEQAYPHKT-----	293
Aclav	AEQTYPHKT-----	303
Aflav	HEQAYPHQT-----	329
Aoryz	HEQAYPHQT-----	329
Anige	NEQTYPHKT-----	322
Aterr	DKQVYPHKT-----	336
Anidu	SEQTYPHKT-----	322
Pchry	PEQPYPHKA-----	312
Pmarn	EGNLYPHQT-----	330
Tstip	EGNLYPHQT-----	320

		B4	(C354)
Trees	-----TWELTKADLTLLDLSQKLN-----	LDGEITPVMAWGMVLS	313
Tvire	-----TWELTKADLSTLLDLSRKLN-----	LDGEITPVMAWGMVLS	304
Tatro	-----TWELTKADLTLLDLSQKLN-----	LDGEITPVMAWRMVTS	297
Vdahl	-----TWELSKADLGTLLALSRLN-----	LDGEITPVMAWGMVMA	333
Moryz	-----TWELSKGDLNLTLLDLSKRLN-----	LDGEITPVMAWGMVLA	316
Tterr	TNDSNYNVNIDNDGSSTPGTWTLNKGDLATLLDLSRRLN-----	LDGEITPVMAWGMVLA	372
Ncras	-----TWELSKADLATLLDLSKRLD-----	LDGEITPVMAWGMILA	338
Ntetr	-----TWELSKADLATLLDLSKRLD-----	LDGEITPVMAWGMVLA	339
Ndisc	-----TWELSKADLATLLDLSKRLD-----	LDGEITPVMAWGMVLA	365
Foxys	-----TWEVPKADLATLLDLSKSID-----	LDGEVTPIMSWGMLMS	308
Fvert	-----TWEVPKADLATLLDLSKSID-----	LDGEVTPIMSWGMLMS	305
Fgram	-----TWEVPKADLATLLDLSKSID-----	LDGEVTPIMSWGILMS	307
Sscl	-----TWDLSKSDLANLLDLSKRLD-----	LNGEITPVMAWGMVLA	331
Ptrit	-----DVKMPDLMKLLDLSNRLP-----	LDGEITPIMAWAKIIQ	332
Snodo	-----DITMPDLMKLLDLSNRLP-----	LDGEITPIMAWAKIIQ	347
Chete	-----DVNMPDLMKLLDLSNRLP-----	LDGEITPIMAWAKILQ	297
Mfiji	-----DLDNPTLVKLLDLSNRLP-----	LDHQGEITPIMAWAKLIYL	300
Mgram	-----EMSPALGKLLDLSRRLPRNMYDREGIETPIMAWAMIFG		326
Abenh	-----YDLPPANLNTLLNLSKQLVT-----	DDEITPIMALQLLRN	307
Tverr	-----YDLPPANLNTLLNLSKQLVT-----	DDEITPIMALQLLRN	332
Trubr	-----YDLPPANLNTLLNLSKQLVT-----	DDEITPIMALQLLRN	352
Ttons	-----YDLPPANLNTLLNLSKQLVT-----	DDEITPIMALQLLRN	352
Mgyps	-----YDLPPANLNTLLNLSRQLVT-----	DDEITPIMALQLLRN	369
Mcani	-----YDLPPVNLNTLLNLSKQLVT-----	DDEITPIMALQLLRS	340
Cimmi	-----YDLPPANLNTLLNLSRQLVT-----	DNEITPIMALQSLKN	359
Cposa	-----YDLPPANLNTLLNLSRQLVT-----	DNEITPIMALQSLKN	359
Pb-01	-----YDLPHANLTALLNLSRQLVT-----	GGQITPIMALQYLKS	341
Pb-03	-----YDLPHANLTALLNLSRQLVT-----	GGQITPIMALQYLKS	343
Aderm	-----YDLPHSNLTRLNLSRQLVT-----	DGQITPIMALQYLKS	346
Afumi	-----YDLPHANLTLLNLSRQLVT-----	EGQITPIMALQCLKN	357
Nfisc	-----YDLPHANLTLLNLSRQLVT-----	EGQITPIMALQCLKN	328
AcLav	-----YDLPHANLTLLNLSRQLVT-----	EGQITPIMALQCLKN	338
Aflav	-----YDLPHANLTLLNLSRQLVT-----	DGQITPIMALQCLKN	364
Aoryz	-----YDLPHANLTLLNLSRQLVT-----	DGQITPIMALQCLKN	364
Anige	-----YDLPHANLSTLLNLSRQLVT-----	DGQITPIMALQCLKN	357
Aterr	-----YDLPLANLSTLLNLSRQLVT-----	DGQITPIMALQHLKN	371
Anidu	-----YDLPHANLTLLNLSRQLVT-----	EGQVTPIMALQALKN	357
Pchry	-----PDLPHANLSTLLNLSRQLVT-----	EGQITPIMALQCLKN	347
Pmarn	-----YDLPLPNLGKLLNLSKQLIT-----	EGQVTPIMILQSLKN	365
Tstip	-----YELPLPNLEKLLNLSKQLIT-----	DGQVTPIMILQSLKN	355
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		B4					
Trees	HARFAELAPD	FEKISGELLRKVRCYGF	GAVLEEFELRDAIENIFSGRPEA-----MVF 367				
Tvire	HSRFAEL	ESGDFEKLSEELLRKVRCYGF	GAVMEEFELRDAIENIFSGRPEA-----MVF 358				
Tatro	HYRFNELAP	GDLEKLSEELLRKVRCYGF	GAVMEEFELRDAIENIFSGRPEA-----MVF 351				
Vdahl	HSRIFYEM	KAEDFAKLTTEELSTKIRCYGF	GAVLEEFELRDAIENAMGAYP----- 382				
Moryz	HPRLGEM	TPKDFKFLTEELCGK	VRCYGF	GAVMEFEARDAIENVSTKPD	SFHQSYSTEY 376		
Tterr	HPRLGEL	RAEDFARLAEELLGK	VRCYGF	GAVLEEFVDRDAIENFSTK	PD-----FTGY 427		
Ncras	HPRLAEL	QLEDFARLTEELGSK	VRCYGF	GAVMEEFVDRDAIENFSTK	PDG---RVFEDF 395		
Ntetr	HPRLAEL	QLEDFARLTEELGSK	VRCYGF	GAVMEEFVDRDAIENFSTK	PDG---RVFEDF 396		
Ndisc	HPRLAEL	QLEDFARLTEELGRK	VRCYGF	GAVMEEFVDRDAIENFSTK	PDG---RVFEDF 422		
Foxys	HPRANELE	AVDFRKLSEELVRK	VRCYGF	GAVMEEFVDRDAIDNVFSGK	DTMMGE----- 362		
Fvert	HPRANELE	VDFRKLSEELVRK	VRCYGF	GAVMEEFVDRDAIDNVFSGK	DSMMGE----- 359		
Fgram	HPRANELE	AADFRLKSEDLVRK	VRCYGF	GAVMEEFVDRDAIDNVFSGK	DGMMYE----- 361		
Sscl	HPRFL	ELKEEDFKMSAELL	PKVRCYGF	GALEEFVDRDAIENFSGAEL	VHMSI----- 386		
Ptrit	NENFRTL	SKEDIELMKGELLAK	VRCYGF	GAVLEEFVSDALMTVLAKG	FSNG-ATPLA-- 389		
Snodo	DANFQD	LTKDEIEVKTTELLAK	VRCYGF	GAVLEEFVSDALMTVLAKG	YSNGNPTPTA-- 405		
Chete	HDKLRD	LTKEDFELIKGELLAK	VRCYGF	GAVLEEFELRDAITTVLAGK	FSNG-SPPIG-- 354		
Mfiji	NERVRD	LSKDFDRMKTDLATK	VRCYGF	GAVLEEFVDRDALDGLAEK	DGQMPALDQKM 360		
Mgram	HERVNE	LVEEDVERVKKGL	EGKVR	CYGF	GAVVEEFVDRDAIAAVFNDK	DSVMRG----- 380	
Abenh	HDAYPYL	TREDIAHIMS	DLAAKVRCYGF	GAVLENFEVMSLNSVLT	SKMDYAIAS-C 366		
Tverr	HDAYPYL	TREDIAHIMS	DLAAKVRCYGF	GAVLENFEVMSLNSVLT	SKMDYAIAS-C 391		
Trubr	HDAYPYL	TREDVAHIMS	DLAAKVRCYGF	GAVLENFEVMSLNSVLT	SKMDYAIAS-Y 411		
Ttons	HDAYPYL	TREDVAHIMS	DLAAKVRCYGF	GAVLENFEVMSLNSVLT	SKMDHAIAS-Y 411		
Mgyps	HEAYPYL	TREDVAHIMS	DLAAKVRCYGF	GAVLENFEVMSLNSVLT	SKMDYAIAS-Y 428		
Mcani	HEAYPYL	TREDVTNM	MDDLAAKVRCYGF	GAVLENFEVMSLNSVLT	SKMDYAFAS-P 399		
Cimmi	HEMYHLL	TKDDIRRV	MDDLVAKVR	CYGF	GAVLEEFVDRDAIENFVSD	ALMTVLAKGFSNG-A 417	
Cposa	HEMYHLL	TKDDIRRV	MDDLVAKVR	CYGF	GAVLEEFVDRDAIENFVSD	ALMTVLAKGFSNG-A 417	
Pb-01	HDTYPSL	TREDVRRH	MDDLNGKIR	CYGF	GAVMEFEFMDSFSSVLARK	MEPMDTGPDDL 401	
Pb-03	HDTYPSL	TREDVRRH	MDDLNGKIR	CYGF	GAVMEFEFMDSFSSVLARK	MEPMDTGPDDL 403	
Aderm	HDMYPSL	TREDVEN	MDDLNGKIR	CYGF	GAVLEDFEFMDSFSSVLASK	LKSLIDTAPDDP 406	
Afumi	HEL	YRTLTKDDVKII	IETLNTKVR	CYGF	GAVVEDFELMDCLSSV	LGSKVDT----- 409	
Nfisc	HEL	YRTLTKDDVKII	IETLNTKVR	CYGF	GAVVEDFELMDCLSSV	LGSKVDTR----- 380	
AcLav	HDMYRNL	TKDDVKII	IDTLNTKVR	CYGF	GAVVEDFELMDCLSSV	LGSRVGPG----- 390	
Aflav	HEMYRSL	TRDDVKII	IETLNTKVR	CYGF	GAVVEDFELMDCLSSV	VGSRVDMG----- 416	
Aoryz	HEMYRSL	TRDDVKII	IETLNTKVR	CYGF	GAVVEDFELMDCLSSV	VGSRVDMG----- 416	
Anige	HEL	YRSLTKEDVKII	IETLNTKVR	CYGF	GAVVEDFELMDCLSSV	LGSKVEGA----- 409	
Aterr	HEL	YRTLTKDDVKII	IETLNTKVR	CYGF	GAVVEDFELMDCLSSV	LGGKVDVG----- 423	
Anidu	HEMYTKL	TRDDVKII	IMDTLENKVR	CYGF	GAVLEDFELMDCLSSV	LGSKVEGSGPV----- 412	
Pchry	HEL	YPTLR	RRDDIKII	IDTLNTKVR	CYGF	GAVVEDFELIDCLSSV	LGTKVDL----- 399
Pmarn	HEQYRSL	TKEDVKI	IVETLTAKVRCYGF	GAVIEDFELRDCLQNV	LGAKLYHGR----- 419		
Tstip	HDQYRHL	TKDDVKAIV	DTLAKVRCYGF	GAVIEDFELRDCLQNV	LGTLYHGR----- 409		
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Trees	-----	
Tvire	-----	
Tatro	-----	
Vdahl	-----	
Moryz	GGGR-----	380
Tterr	-----	
Ncras	-----	
Ntetr	-----	
Ndisc	-----	
Foxys	-----	
Fvert	-----	
Fgram	-----	
Sscl	-----	
Ptrit	-----	
Snodo	-----	
Chete	-----	
Mfiji	AAQQISVH-----	368
Mgram	-----	
Abenh	SSLISPPIQSADVLDMYS	384
Tvrr	SSLISPPIQSADVLDMYS	409
Trubr	SSLISPPIQSADVLDMYS	429
Ttons	SSLISPPIQSADVLDMYS	429
Mgyys	SSLISPPIQSSEVLDMYS	446
Mcani	SSLISPPIQSAEVLDMYS	417
Cimmi	-YLPFRPAHVAEDYTMYS	434
Cposa	-YLAFRPAHVAEDYTMYS	434
Pb-01	KPLPPIL-----	408
Pb-03	KPLPPIL-----	410
Aderm	ASLPATPRQRLSDDLmys	424
Afumi	-----FSCAGDDTMYS	420
Nfisc	-----FSCAGDDTMYS	391
Aclav	-----MSLAADD----	397
Aflav	-----FSRAGDDTLYS	427
Aoryz	-----FSRAGDDTLYS	427
Anige	-----LHPGDEMmys	420
Aterr	-----FSRSEDHMLYS	434
Anidu	----GVAFSRHADETMYS	426
Pchry	-----MSGTADDSMYG	410
Pmarn	-----PPSRIGDDALYR	431
Tstip	-----PPSKVGDDALYR	421