

Table S1. Protein information of PhMYB members.

PhMYB1

MEIHSLEILETSNPVEGGSYGGDSGGEDEMLENESGSSENVVKKNKRTSGERVKGPWSPEEDAI
LSKLVSNGFARNWSLIARGIPGRSGKSCRLRWCNQLDPSVKRKPFSDDEEDRLILQAHAIHGNK
WASIAARLLPGRTDNAIKNHWNSTLRRRHNGKLRSDPSNVLEDVSAEKSASSEETQSCGDVNS
LKAIEGKDVSSQENQEDNHHEDKSEA EVQRSDAANDPPTLV RPVARISAFSVYGS LDVPEAQIQ
TPRLTPVQAPDLGISKLLEGCFDRLVPHQC GHGCCGNASQENNGSSLLGPEFVDYAEPPSFSS
HELAALATEISNVAWCKSGLENSNIEVICNPPTTRATSGTSLLPNRPF

PhMYB2

MRKACCDNKEEMHRGAWSKQEDQKLIDYITKHGAGCWRNLPKAAGLLRCGKSCRLRWMN
YLSPNLKRGNFSEDEEDLIKLHALLGNRWSLIAGRLPGRTDNEVKNYWN SHLRRKLIKMGIDP
KNHRISHYLHRKRLEYWSENSSRGTDHEVVS DAGSSCAKHQPSSLPDLNSPPSIHSSCA

PhMYB3

MGRRPCCSKEGLNKGAWTPMEDKILIDYIKVHGEKGWRNLPKAGLKRCKGKSCRLRWLN
RPDIKRGNITRDEEDLIIRLHKLLGNRWSLIAGRLPGRTDNEIKNYWNTNIGKKLQHQRAAAN
SGHAKSRPPVTTQDIVGSGSSLSSASPCLVVRTKAMRCKTVFIPTPKNTSHDNSITTNCNDDDD
DKVMAVETTALVASSSSFTLSSILSEQQPISGSSPVSLSGDQFMENSFNFMFNFDMDDPFLSELL
NAAENTTTIGGDQVGDSFNRNEKERSYFPPSSQSALFSEETQHNDLELWINGFSS

PhMYB4

MGRSPCCEKAHTNKGAWTKEEDERLIAYIKAHGEGCWRSLPKAAGLLRCGKSCRLRWINYLR
PDLKRGNFTEDEDELIKLHSLGKNKWSLIAGRLPGRTDNEIKNYWNTHIRKLLSRGIDPSTHR
IMNEPSTQKVTTISFAAGNEDIKDQKISIKAEFEQIKDDEIISKPIKEQCPDLNLELKISPPYQQHSD
RALQQSTTGSGGASTICFTCSLGLKNNKGCSCSRNRS MNVAGYDFLGLKTNGLDYRTLET RTK

PhMYB5

MGRAPCCAKEGLRKGPWSAKEDLLLTNYIKEHGEQWRSLPNKAGLLRCGKSCRLRWMNYL
KPGIKRGNLSQDEEDLILRLHSLGKNRWSLIAGRLPGRTDNEIKNYWNTHLIKLLKSAGIEPKV
NKSFSKYCSKKQATTDKPRKKQVKKKKNNKKIKDQPLVQDTSEPPQVVFIPKPIRISSGHSRNYSV
DQNVALSTSSSNSADNNNNISNNEGKQAEVSFDPLFDEVVLDGCCELSPEWSLPTDDSMLEKV
YEEYLQLISEECFLQLDDPLAENASHHPMLM

PhMYB6

MGRSPCCEKAHTNKGAWTKEEDQRLINYIRAHGEGLLRCGKSCRLRWINYLRPDLKRGNFTE
EEDDLIKLHSLGKNKWSVIAGRLPGRTDNEIKNYWNTHIKRKLISHGIDPQTHRPLNAAANPA
ATTTITTNTTKNICMDFRNNVDQKPHINIINKTNATDSSNNETKCSSVTTEETQPLELPKKNTQV
MINLELSIGLPFHAKT DHIYSSNSAESTAPYNFLAAAAAPPPTVA AVPVVAMAE LVAETACLCW
QIGFQGGQSCGKCKTTTG FYRFC

PhMYB7

MGRSPCCEKAHTNKGAWTKEEDQRLINYIRTHGEGCWRSLPKAAGLQRCGKSCRLRWINYLR
PDLKRGNFTEEEDELIKLHSLGKNKWSVIAGRLPGRTDNEIKNYWNTHIKRKLISRGLDPQTH
RPLNSTITTNTTSTKNICLDFRKN TSAATPLSQNDQKPMSSSISSLEDTKCNSSTTEEVQPLDSP
AAPPVTGEV MINLELSIGLP IFQAKMTDQSSSISSNSAKEMGGKTVCLCWQVGSQNGQQFC

PhMYB8

MGRYPCKLDNDLKKGPWTAEEDEKLKEYIQGHGHGNWQLVPKRAGLNRCGKSCRLRWTN
YLRPDIIRGGFSDDEEQMIINLHSV LGNKWSRIA AHLPGRTDNEIKNLWNTHLKKLLKAGIDP
VTHQPINDPRLLLSLSNLMNPLESVLR LQAEVTEMAKIH LIQNI IQVLT PPLIPNLQENNFPMQ
LYNLALYENIVTNVTHIDEPSISNSSDMLLSPSVVENNITGFSNVSNVNSEHSLPSLVEATPENSP
SEQNDIIPNYFGS FSETKDFDAWEKSLDDEASNSFWQDIL

PhMYB9

MGRSAESDDMSGLKKGWPTPEEDQQLLDYIHKNHGHNWRALPKLAGLNRCGKSCRLRWTN
YLRPDIKRGKFSEDEERLIKLHSL LGNKWSAIATRLPGRTDNEIKNYWNTHLRKKLLQM GIDP
VTHRPRTDHINIFNALIGNIPPQLLAAASSNFMNTDNTSINNLTNLFSDTAQQLVHQIQLLQNS
SSLVHSLFNNAATSTACPLNMEGLNQNFGLQNLCDQNQLQEYNSILMNYQQFLSNTSDSLTG
FALNSSNSTDISATNGCDQLMVMSGTCSTSSSCGNNAASVTHANDDQMKNNISKAALHHDTP
CPSSSNKMPQGNMISDIYPKQELVQPSSASMSTFEPWQGIMGDEEASDSYWRDIIE

PhMYB10

MGRYPCCCKDDEDLKKGPWAPDEDEKLMDYINKHGHNTNWQLLPKKAGLNRCGKSCRLRWSN
YLRPDIKRGKFSIEEEEEMIINLHSL LGNKWSRIAAHLPGRTDNEIKNFYNTHLRKKLLRLGIDPRT
HKPISDLNYLINLSQSFTSNNNNHLMNNPLASVLRQLAEVTEMAKIQQYLQGLFPPINTNIPF
YSSNIQENFARYSSHLFPPLLEGHVTNVTNTQFLDSWLVDCAKSPNLDNSTSCISNSSQSYHQGEL
NSKVDNFEGLNSSSKTYNDYSNLPVLAPSSPEAAH

PhMYB11

MSTSNASTSGVRKGAWTEEDLLLRECIEKYGEGKWHLPVVRAGLNRCRKSCRLRWLNLYLRP
HIKRGDFSLDEVELILRLHKLLGNRWSLIAGRLPGRTANDVKNYWNTHLRKKNNKRARASKAM
KITENNIIKPRPRTFSRPAMNHVSCWNGKSCNKNTIDKNEGDTEIHKFTDEKQKPEESIDDLQ
WWANLLANNIEIKDLANGNSPTLLHEEIAPLVNIESNLMQEGESGLSDFSVDIDGIWDLLS

PhMYB12

MGRAPCCEKVGLKRGRWTAEEDEILTKYIHANGEGSWRSLPKNAGLLRCGKSCRLRWINYLK
TDLKRGNITPEEEAIIKLRLATLGNRWSLIAEHLPGRTDNEIKNYWNSHL SRKVESLRIPSDERLP
KAVVELAKKGTQQLNKQRRGRVSRSAMQKNRNNLSSTKGTSTASTLSKPQQPPKEINTISMPST
PNIIKEVLSSTTTSSGQDASNTHLTSDNYASELDNEMLWHEELDPDFIFTCLWNEEGENLETVE
NNNSHNSNTEILSVNVD MVSPGNSKINETSTLMEDGTSLDWDWQYLSEWNEIWAEQEENMS
NNNISSRQLSNEALVEIDPVQQVDYNHSELVAWLLS

PhMYB13

MGRTPCCEKLGLNRGPWSKKEDDILINYIDKHGHPNWRQLPKLAGLLRCGKSCRLRWTNYLR
PEIKRGNFTPEEEDTIIKLHQVLGNRWSVIAAKLPGRTDNEIKNIWHTRLKKKMNQSQIQEKP
DIREQSETSKSEDSTNIQENTEISSPKPNSNNQHPSSSLRSSSITSSSEGSCSNTTTTSSHIDESRD
QMNLNLLVEDDNFVSEVLWATPADDSKDNNDLFSLSSEVKNYELDSSLNDNWLWDDLFSR
ANEFLLFPELV

PhMYB14

MQKLHNKNMGTNSKKGPWSPEEDQKLTSYIMKYRIWNWNQMPKFAGLSRTGKSCRLRWVN
YLRPDLKRGPFMSMEEVETVIRMYQSLGNRWSAISKELPGRTDNEIKNFFHHLKQFGTKVND
HVQVKRKATCKKSKKAKELEMRTGETQEKPNQSLDMSSSDITFDENHNWDFANFSETSSD
NYCVNSLGAVPIIDSMVILESNPTTSEDPDFSVQDFRDETSINSSNVDFWLELYMAAENLAG

PhMYB15

MVRAPCCEKMGLKKGWPTPNEDQILISYIRKNHGHNWRALPKQAGLLRCGKSCRLRWTNYL
RPDIKRGNFTKEEEDTIIQSHMLGNRLPGRTDNEIKNVWHTHLKRLKNYKPPHNTKRHIKN
DDSKGPTTSESIKSDFNSTQKNINSPQHSSEISTVTAESVVMTQSQAINDHDQMMIKHEEME
SSEYFPEIDESFWTDELSTDNNCNHVVTAVPFSSVREENVDMLTTRMEDDMDFWYNEFIKTD
LQELPEF

PhMYB16

MGRSPCCDKVGLKKGWPTPEEDQKLLAYIEQHGHGSWRALPIKAASSSITYTAYGFDDLQFVG
LQRCGKSCRLRWTNYLRPDIKRGKFTQQEEQTIIQLHALLGNRWSAIATHLFKRTDNEIKNYW
NTHLKKRLTKMGIDPVTHKPMNDTLLSTNDNVQSKNSANLSHIAQWESARLEAEARLVKQSK
FHSYKLDTPRTSTFFDHYSSQELLTPSSSSSHLKNLMPVTSGLQDFNFVERSTGFLLECTSADGNLS
SGGMDSDSSGNASEQCEDNNYWN SILDLVNSSPTTESTMF

PhMYB17

MGRAPCCDKKGLKKGPWAPEEDEKLIEYIKNNGHNGWRSLPKLAGLLRCGKSCRLRWTNYL
RPDIKRGPFSEEEELIQLHGILGNRWAAIAAQLPGRTDNEIKNLWNTHLKKRFLSMGIDPHIY
EPSSAPSGLVRRPPASSSTRHMAQWESARLQAEARLSKDSHLSIPSLVGKSQSDYILRIWNSEIGE
AFRNFKGVEKTTSESSSPKCGSTSSITTEMDITLTGSSVEGTNQHKDAEWKNCKLYTGNILRGSD
TSSSNDFEESSESALQLLLDVPSKYDLSFLGQSDAYSMYPAFLSESLNCSSTEHEVCYV

PhMYB18

MGCKQMDKPKQKHKRGLWSPDEDQKLKDYILRHGHGCWSSVPINAGLQRNGKSCRLRWIN
YLRPGLKRGTFSEIEEETVLT LHGVFGNKTDNEIKNHWHSYLKKRVIKKAENEGDARSGYSSPQI
GNEESSHSSMKLASQNSSLDSEFHEICSLADTDQSSSLQVDFARENCKSNLPRVLFSEWLSFDQ
LNGQDFKNSSNQESKNNFGYNNSVFQDSCMHGPLMNDINQALNRGMVDDMFQPTLEFEDH
ISADGFEELISGEFNINGDMMYI

PhMYB19

MRCKPVESPCKKHKRGLWSPDEDHKLKNYILEHGHGCWSSVPINAGLQRNGKSCRLRWINYL
RPGLKRGAFSIEEETIMTLHGMIGNKWSQMAQHLPGRTDNEIKNHWHSYLKKRVAKIAENE
AKSQNMDGLSSSSKLTSRNSSLDSFAQIEGSLTDTQSSISQIEFLKEPRESNFQKVLFAEWFTLD
QFKSQDFQNSGNSNHSRNNNFGYNKSDFDQDFIHLGFMSEGTYGADINIPGVLNNETVDDMF
QASQKFEDHMSANGFEFISDEFNITEDVMI

PhMYB20

MDEIKKGAWSPPEEDQKLKAYIKKYGIWNWSQMPKFAGLSRTGKSCRLRWMNYLSPDVKRGPF
SIDEVEIVIKTYQELGNRWSAIAARLPGRTDNEVKNFFHHTHLKKHMSLKNDDHALMKKKARSK
RVMKKTRENEKTNTGKAQERPAVEVPTKIPMIGSSSNKNSPSPNSSSSQCNSIITCQENPTDQD
CYNNISSSRVDQPVMNMESPFILSNPTESSSLGDTNCNQLIHQFDQYPHDSCTISDGSSFF
DSFDQFDMIIISLFLTSLNFMVAGLSRTGKSCRLRWVNYLRPDIKRGPFSEEEVEIVMKMY
QECGNRWSTIAANLPGRTDNEVKNFFHHTHLKMHLGVKNDVTVKTKGRSKRVKKTNKNEKKL
ADNAQERSADVAPCSSVICEENHMMDMVDFSKTYQDCYNVSSLVDQSVINMENTVILESNP
ETSETIDAANCQLHQFDYSHLCSSLFDDHFRFNSLDMNSFWSD

PhMYB21

MDKRTCNSQDVEVRKGPWTMEEDLILINYIANHGEVWNSLARSAGLKRTGKSCRLRWLN
LRPDVRRGNITPEEQLLIMELHAKWGNRWSKIAKHLPGRTDNEIKNYWRTRIQQHIKQADQN
MNKSSKCEQHNDQQAISTSQASTGPTDTIDSYSPPSYTGDTNNNMGNITFQGNFPTETNENIW
SMEDLWSLQLLNDATN

PhMYB22

MGRSPCCEKLGLKKGPWTPEEDQKLMACIEKHGCGSWRALPAKAGLKRCGKSCRLRWINYL
RPDIKRGKFSLQEEQTIIQLHALLGNRTDNEIKNYWNTHLRKRLTKMGIDPITHKPKTNIFGSSQ
LSHMAQWENARLEAEARLVRESKKQISNNNIHDFGSLANTRLAHHQLFNQSRINNIVPLQA
KVPPFLDVLKVWQDSNWTKPKITKDTSSSSVLDSVLTSMNNGSFDSPSTNNLFMAPNNNIPRL
VDNSCLVNAGSFMENPEVEIITKEEVQTDQVQINDISSINYMSITDQSSGFPSFIQGFTHLENIVGS
SEDNLEDNKYSYWNLTILNSCTSPAGSPVF

PhMYB23

MGRRPCCEKKGLKKGPWTPDEDDKLIEYINKNGHGSWRSLPKLAGLLRCGKSCRLRWTNYLR
PDIKRGPFSEEEELIQLHGILGNRWAAIAAQLPGRTDNEIKNLWNTHLKKRLLSMGIDPQTH
EPASAPNGLLRPPASLSARHMAQWESARLEAEARLSRESQLLVSPVGRSETDYFLRIWNSEIG
DAFRKFKKGAKTACHSSASQASSCTKCGSASGIKTEVELRVAAGSPVTGSNQTEFAEWRNEQP
HTEDILQGSdTSSSDAIEDSSSESALQLLLDFPSNNDMSFLGQSDSYSMYPFLTASSLICP

PhMYB24

MGRTPCCDKKGLKKGPWTPEEDEKLVEYIKKHGHTSWRSLPNLAGLDRCGKSCRLRWTNYLR
PDIKRGPFSEEEELIQLHGILGNRWAAIASQLPGRTDNEIKNLWNTHLKKRLLSMGIDPQTH

QPSTAPNGLLRPPTSSSARHMAQWEKARLEAEARLSREPQLLVPSLVGKSETDYFLRIWNSGIG
EAFRKLKKEEKTTCQSPASQESSSTKYGSDSGITTEIDLGLAGSPAAGSNQNETKWKNAQPYT
ENFLQGSDTSSSSGLEDSSSALQLLDFPSPAERLCILTPLEV

PhMYB25

MGCKIVEKTKQKHKKGLWSPDEDDKLRNYIINHGHGCWSSVPINAGLQRNGKSCRLRWINYLR
RPGCLKRGAFSLEEEDTILTLHAMFGNKWSQIAQHLPGRTDNEIKNHWHSYLKKRVAKNAENE
SQTQSGNRESLLFSKKWTPQNSSLDSFEHIEGSLADSDQSGSQVDFPKEHQKSNLPKVLFAEWL
CLDKFHGQDFQNSGTFDLTKNNFGYNNSESQHAFMHGLLMNEGSYGSCMNQEVNNGTVDD
MFQPQLKFEDSMSANGFEDFMSGEFINTDVMYI

PhMYB26

MGHHSCCNKQKVKRGLWSPEEDEKLIKYITTYGHGCWSSVPKLAGLQRCGKSCRLRWINYLR
PDLKRGSFSHQEAALIIELHSILGNRWAQIAKHLPGRTDNEVKNFVNSSIKKKLLSHGTLSDHL
SMFTNFTNPNPSPSFDNFYTLINPNNPVNLLPAINSPILQVDMNNVNEDLNANSMAPSLIPF
SFDSIPNDPSWFFNYPHSQHDLQDQNSNSIVSSNISLNYTDAAGGILMDSRNDPIKSSTHQD
LLVVPNLLPRLSPPAPLQQNFDSMVVNTSTN

PhMYB27

MAQRKESLDRIKGPWSPEEDELQRLVDQHGPWNWSLISKSVPGRSGKSCRLRWCNQLSPQVE
HRAFTPEEDETIIRAHAKFGNKWATIAARLLSGRTDNAIKNHWNSTLKRKCCSVSEDLSETPEQ
PPLKRSSSVGPGPGPSSPSGSDLSDSLSCFPQPPLVYRPVARPGPIFPPPPPVQIPNPQKPDPKPD
PVVQPDPTSLCLSLPGSENQAVQSPTTAQLPPVAPLPAQQGYEYGGATSATEKQFFTPEFLGVL
QEMIRKEVRNYMSAGFVEKNGMCMMQTDAIRNAVVKRMGISKIE

PhMYB28

MAFQLTMQEEELRKGSWHEEEDERLASIVAILGERRWDALAKASGLRRSGKSCRLRWMNYLR
PNLKHGYITADEEHLIVKLQKQLGNKWSKIAKQLPGRTDNEIKNHWRSHLRKKSLIYEQECCG
SNTSKSGQISSASKSDSINTPNNSTGDSISGKDDCSSADSNETGLSDWIPSWSYEQSQMEHHMYL
CRLNLCFCHPQCFSEDNNISTWGDTSSSIWEQ

PhMYB29

MGRKPCCSKVGMRKGAWTAEDRLLTNYIELNGEGNWRSLPMKAGLLRCGKSCRLRWVNYL
RPGIKRGNFSPEEDDLIRLHTLLGGRWSLIAGRLSGRTDNEIKNYWNTYLLKKLKAAGIEPKAK
TKKYSTNTRQNKEMKRRRAKNKTDNLLHQA EKPRGKKEDCEVVEKIQVHRPKAIRLTKGYSS
TSSSFSSSSSQSSCQDNAPKFNFLPSSEEVDNKKEEKIEDNAIYEKLQLFDKLLNGCDISTECSEQT
SSCCYMLDE

PhMYB30

MGRPPCCDKIGVKKGWPWTPEEDIILVSYIQEHGPGNWRAVPTNTGLLRCSKSCRLRWTNYLRP
GIKRGNFSEHEEKMIHLQALLGNRWAAIASYLPQRTDNDIKNYWNTHLKKKLNKKMEGHD
HENINEVGKSSSSSQSNVPKGQWERRLQTDIHMAKQALCEALSLDTPSNVDSPNNNNNPTPKI
LPVDQQPVQTSTTYASSAENIAKLLNWMKNSPKSSESRSSTTQMSSLNLSIGAVSSSSPSEG
TRNVLDVSFVSFNSSNSDVSQSMSIDEGGNFTPENNNATIFQVESKPINLPNFKEDNGIFQQVSK
PNLETQQVPLTLLEKWLLDDANAQAAQEEFMGIGMGMTLGETADLF

PhMYB31

MGRPPCCDKIGVKKGWPWTPEEDIMLVSYVQEHGPGNWRAVPNSTGLRRCSKSCRLRWTNYLR
PGIKRGSFTDQEEKMIIQLQALLGNKWAAIASYLPERTDNDIKNYWNTHLKKKLLKLEAASCG
SDLYSKDSCLSSLSSTSKGQWERTLQADINTAKLALQNALSLKPSAIQEYMATDVKPKNICYPY
IKQEGNNSTSTYASSAENIAKLLKQWTKSSSTNNSSENSKGSSSTQLSCNYYNATNDFESISNFES
FEQSKSDQFSQATTPEESKFYGESKRELDQVPLSVMLENWLFDENEDLF

PhMYB32

MSITSETDDWMTSKVDMDSPDEANGGGNVGGSPLKKGPWTS AEDAILVEYVMKHGEGNW
NAVQKHSGLARCGKSCRLRWANHLRPDLKKGAFTLEEERLIIELHAKMGNKWARMAAELPG

RTDNEIKNYWNTRIKRLQRAGLPVYPPDICFLASQNKQNEELAGLSSTDAQHPGLVATNNFDIP
PVEFKNLELNQLLCPPAHVEIPASSLLDIPASGFLAQVHSAPYSSTSLSTVHPSKRIRGSESMFSG
SNGDLFLASCQYQNGGSLIAQPLGFSSYNHNLTIDGQQSFSNVIPGSHAPLNGNSSTSEPTWAL
KVELPSLQNQTANWDSPSSPLHSLESVDTLIQSPLAGHSESVLSPRNSGLLDVAVLYGSQTMNSS
KDNSNQAKEETSADAVGNPCPDLEKGWETYGDPIPSRLPASVFTECTPTTGNSLHELQSTSR
MPGENGCNVKQENADQAPSDGKDDMLNQTFASNCSSPKTQHTKNNLALKNAFGSGFFDDY
GWDCKQVHSVATSSGQACGRDSAWDAMSAM

PhMYB33

MVAIKIRRDKDMMSSESDDMMTSKVGVDSPSVEEACGGGNTGGGLPLKKGPWTS AEDAILV
DYVTKHGEGNWNNAVQKHSGLARCGKSCRLRWANHLRPDLKKGAFTPEEERRIIELHAKMGN
KWARMAAELPGRDNEIKNYWNTRIKRRQRAGLPVYPPDICFQAISESKQNE DLGTFSTDGQY
SDFLPVNNYEIPAVEFKKLEFNEPLCPPSLLDIPAGSLLDIPARSLLAQGLNSAYYSRSLSTMHPS
KRIRGSESLFSALNGDSSPLKNEDSFPTCHQYQNDGTL LAQSLGFSSPYNQNPTSDHHPSSLGVP
GSHAPLNGNSSSSEPSWAKKLELPSLQSQMASWGLPPSPLPSLESVD TMIQSPTEHTESC NLSP
RNSGLLDVAVLYESQTM RASKDNLHQENSGDGADDSCPD LHETEW EAYGDPI SPLGHSAASEKF
DGKDDTLNPFFSRPDYLL ESNCFS PMQS

PhMYB34

MGRSPCCEKAHTNKGAWTKEEDERLVAYIRAHGEGCWRS LPKAAGLLRCGKSCRLRWINYLR
PDLKRGNFTEEEDELI IKLHSL LGNKWSLIAGRLPGRDNEIKNYWNTHIRRKLSRGIDPTTHR
PINEOPTISTQKVTTISFAADNNKDDQDQKIINIKSEFETTSKLQDEIQERCPDLNLELRISPPHDH
QQFNDQSIDELGRRNSLCFACSLGIQNSKDCSCNTNGNGCSSNVSMNIASYDFLGLKTNGLLD
YRTLES

PhMYB35

MGRSPCCEKAHTNKGAWTKEEDERLIAYIRTHGEGCWRS LPKAAGLLRCGKSCRLRWINYLRP
DLKRGNFTEEEDELI IKLHSL LGNKWSLIAGRLPGRDNEIKNYWNTHIRRKLSRGIDPTTHR
AINESSTTTQKVTTISFGAGNKNKDIEDLKMINVKAESGLSQEDENSSSSQLFQEQC PDNLNLELR
SPPYQQNQPDHQALKQSPTRGHLCFACSLGIQNSNDCNCSNGCSTNMGMNIASYDFLGLKA
NGVLDYRTLETTK

PhMYB36

MNPRGEDFFGFQKHHITHSFYLYKQVFSSNIFQPTINHFKKIPFGSKLVEGKKILKMGRAPCCD
KASVKKGPWSPEEDARLKAYIEEHGTGNNWIALPQKIGLKRCGKSCRLRWLN YLRPNIKHGGF
TEEDNIIICSLYISIGSRWSIIAAQLPGRTDNDIKNYWNTRLKKLLGKRKQSQMNRLLLAGGQ
DLKETNGLEENSL LQNLNSALERLQLHMQLSLQNLPLSFYNNPALWPKLTPLQQKMIQTLQA
TGLSIENQSSLLAQISPSANQVDQLGQKVGINEFANTMSTRFKVNNEVEKSTVNNGISSDSPID
FSNQKDVLDTNIGQENTGEIQGIQGFTQAEIDDLILINNKGLIADQFDCFKEMDGSSSRDNLAW
WSNDFDNTTSSNSWGSSSNIVQQTEGMYQDYALGYNLQ

PhMYB37

MGRAPCCDKANVKRGPWSPEEDAKLKDFIHKYGTGGNWIALPQKAGLKRCGKSCRLRWLN
YLRPNIKHGFDSDEEDRIICSLYSTIGSRWSIIAAQLPGRTDNDIKNYWNTKLKKKLMGLIPSSIIQ
RKSPYMFPTTLHATQVQPNLYTPNLSYTNNNMNFPLGATNHQYSYNFQSHHQDSLINPMQ
IYPQLKDNLLMFGGTTEASCSSSDGSCSLSFGHKEIKKEDIIMGNFSGHQISSVAFEENQNFM
WVDQKPNGYFGNNNNQSADQVLLQYDLQDEVKQQQLTSCSNGNNGTTTSECNNNSMFY

PhMYB38

MGRAPCCDKANVKKGPWSPEEDAKLKEYIEKSGTGGNWIALPHKAGLRRCGKSCRLRWLN
YLRPNIKHGFDSDEEDRVICTLYASIGSRWSIIAAQLPGRTDNDIKNYWNTKLKKKLMGLVSTSQK
IRPLHNQHQTITNYNYPQIPFHQTSSLAASSPYSTTTIPCYESTIPTLASSSFLNTASASCTSGISGS
TSGTVLQVQESYVGGPTTSSDGSYTNQMSQGRDQLEYDYGVSNGGENLDFHNYLYNNGIIGLE
DQSTSSKFLNIEAADEKPIINANSYVQQEQNPLDYSLEEIKQLISTNNVTCNSNFFLDENKIEEK

VMMYY

PhMYB39

MGRAPCCDKNSVKKGPWSPEEDAKLKAYIEQHGTCGNWIALPQKIGLKRCGKSCRLRWLNYL
RPNIKHGGFSEEDNIILSLYISIGSRTDNDIKNYWNTKLKKKLFQKQRKNLKGNNQKQGSRK
REMSSSMVMVSNENIIANPSWPELPILQPIPYSNEEPRFNDHSSIRKLLMKLGGKFSDDDNDDEK
PMNEPPSNPQYPMDNSLIQPIYDQDCINMMHSPFTNNTHYNMDAKALCWADTDTERRLGE
RMGSDTPVVPTVNDGCFINELEHMMYTNPQKLSGLEMLYVDMMLNNKHATTLGGSLEDLM
NNLVFPLPLDASNTEGHQHGTLQGGALNELRLQAMSHPPCVWLQQPGKWLSEAIMIRES
RVEGLSLNGSK

PhMYB40

MGRQPCCDRVGLKRGPTIEEDHKLNVNLLNNGIQCWRTVPKLAGLQRCGKSCRLRWINYLR
PDLKRGTLSEDEEDQIIQLHARLGNRWSKIASNFPGRTDNEIKNHNWNTRIKKRLKLMGIDPLTH
KPLEPIDHKKYKHQPDDHRTLSRTENSNDNANNDPVPNDYNNMLCGNLEVELWNKSC
KTMSSVTCYSSSTSLDADDSINLSTVSAATTESSSNLAPVEDQQDSIQQWMDSLFSCSVNQLEDD
MFFLRKYN

PhMYB41

MGKQPCCDNVGHNRGPWTVEEDHKLNTFILNNGIQNWRHVPKLAGLVRCGKSCRLRWMN
HLRPDLKKGAFTEDDEEYMLIKLQSQLGNRWSKIAAHFPGRTDNEIKNHNWNTRIKKKLYTEQTR
DIKEGSTKQKYSQQSLPSLEYLVKDQQQLKEPIEISEMGSDNVNQNSEPVETISIE

PhMYB42

MGRKPCCDKVGVKKGPWTTEEDKKLISFLVTNNIGQCCWRSVPKLAGLRRCGKSCRLRWNTY
LRPDLKRGLLTAEEENLVIDLHSLGNRWSKIAARLPGRTDNEIKNHNWNTHIKKKLLKMIDP
VTHEPLNKEEKSRDQSTKTDDIDNKQNGHDDQQVHVLESTNVTAATSLLENSSLCSSSSFS
PNENSSCITDESQMVLDTFSENNPLLSSMLHVDAPLIDFQWELSASGTTQKQNLNDNENFNWL
DCQDFGIHDFDFDCFNMEMEYFLDSIGDIKNEK

PhMYB43

MGRQPCCDKVGLKKGPWTADEDKKLINFILSNGQCCWRAVPKLAVILDDGIGAGLLRCGKSC
RLRWNTYLRPDLKRGLLSEYEEKMVIDLHAQLGNRWSKIAHLPGRTDNEIKNHNWNTHIKKK
LKKMGIDPVTHKPLSTITNDHPNKQQPKDLPVIQQENLQEIIMPPSSVNDVSEMDIETPIEQSAIS
EIKVEEDNNKNMETTSCKNNINISFDSTTVEVNNNGFCTDEVPLIEPHEILVPNSESTPSTSSSS
LSTSSSSSSSILEDLKFPLPSFDEWPSDYNNMEQNNMGLGWENDFSSSTLDLFLNDDNDINQFPRD
DESWKFDQLL

PhMYB44

MGRQPCCDKAGVKKGPWSAEEDKKLINFILNNGQCCWRALPRLAGLMRCGKSCRLRWNTY
LRPDLKRGLLSGYEETMVIELHAQLGNRWSKIAHLPGRTDNEIKNHNWNTHIKKKLLKMIDP
VTHKPITSDQPNIEQPTKDQPTSDQPTIEQPTKNQQEKQNIMPPSTVHVQEMDIDQNKELVE
TPIQSTVTVTKLEEGTSPKNMEPIQVNNGFCTDEVPLIEPHEILVPSESTPSTSSSSSSPLEDMQFL
PSFDNWQCDFNNMDNIGINWAHDFSSTLDYLLNDDNDMDKNISLQDWSQVLEV

PhMYB45

MRTSSSSSTTSNKVTPCCSKVGLKRGPTPEEDEILTNYINKEGEGRWRTLPPKAGLLRCGKSC
RLRWMNYLRPSVKGRIAPDEEDLILRLHLLGNRWSLIAGRIPGRTDNEIKNYWNTHLSKKLI
SHGIDPRTHKPLKNSNSSDDITNKLASSPSSSKANDLNPLSPTYISSFQMEEPGLKINTHPGE
ITSLDDQYQSNAILAEYGDDLNIATIEEDVEMNCCTDDVFSSFLNSLINEDMFACQNQQTNGT
FQDFDPFMASSTPSSDQYNPS

PhMYB46

MRKPEFSSSGKNGTNSNNNNINANMKLRKGLWSPEEDEKLMHYMLTNGQGCWSDVARNAG
LQRCGKSCRLRWINYLRPDLKRGAFFSQEEELIHLHSLGNRWSQIAARMPGRTDNEIKNFW
NSTLKKRLKNSSSCSTPSPNASDSSSEPCKDNLNMGINQGLIMSMQNHNLMSMFMDSTSSSSSS

MALNTIIEPLPMLEQTLINMPNGLSAPPYLTTQPCMTQGRSIVTNGSLFYGNNHGIFGGNLGME
GELYIPPLESVSIHEYQNVENGNLVERSSQNNNNPTNSMTNLTSHFNSSSNNIKVENFGGVGNY
WEGDELKVGWDLEELMKDVSPFPFLDFQVE

PhMYB47

MVRTPSIDKNGMKRGAWSEEDNKL RAYVERFGHPNWRKLPYAGLMRCGKSCRLRWMNN
LRPGLKKGNYSHEEEQLIIKLHNQLGNRWSTIAAKLPGRSDNDIKNHWHAHLKKRTKTNANS
STMEQMSTESSQSGCAEQSNSKLP ELENYCDPIDTSSPPEVSSSDLSKLFSSCSLLNGMDWIED
DQIRSMEQLSNIDSVEPLLD SFSCWTKPIDNFQTEHCFDNVWSEHFDNFWTQPFL

PhMYB48

MVRTPSVDKNGVKRGAWTEEDNKL RAYVERFGHWNWRQLPKYAGLMRCGKSCRLRWMN
YLRPGLKKGNYSNEEGQLIIKLHNELGNRWSAIAEKLPGRSNDNDIKNQWHSHLKKRAKTNYSY
STLMEQMSTESSQSGSQSEQSKLSELEACDKKEVTSA AIDRLDSVPPVSLEVSSSSLLNGIMDY
WMEEDRMFRPSMELLSIMVRTPSIDKSGMKRGSWSEEDDKLRSYVERYGHPNWRQLPRYA
GLMRCGKSCRLRWMNYLRPGLKKGKYSHEEEQLIIKLHNQLGNRWSTIAEKLPGRSNDNDIKN
HWHHAHLKKRSKSNNTSSAIMMKQLIECSQSESQDDEHSNSKFAEHDSFSPIDSVQPVSDDVSSSS
VLNGMDCWFEEEDNHIFSSMEPLPDFNF SWTKPIYNFQTEPFDHYWTEAMDNFWTEPFF

PhMYB49

MVRTPCCDENGRKKGTWTPEEDRKLAA YVTKYGCWNWRQLPKYAGENFCTIYTNIAPREG
ARCGKSCRLRWMNYLRPNVKRGNYTKEEDEIILKLHAE LGNRWSAIAAQLPGRSNDNEIKNHW
HTSLKKRANYGPNSSSESSKKCNKNSESKRKRVENQNASHETILESSHMSPKQSIGEELCSNTTD
YKQQDVASVIREEELYEEALAEISGNFWTEPFLD SFSNRFD FRAPSIDCGLVCPPSPFIGHELLS
SDFD DDSNW

PhMYB50

MVQEEIIRRGPWTEQEDFQLVFYVNLFGDRRWD FLAKVSGLKRTGKSCRLRWVNYLNPGLKR
GKMTPQEERLILELHSGYGNRWSKIARKLPGR TDNEIKNYWRTHMRKQAQDQRKNAFISPS
FSNCSSNSSANSPAVDSIPITKQNKRNLETA EEKKIYNHEEA EENQNMVYTMDEIWKNVESSQE
TETMSKLPVMASPIWDYCPDSLWMTDFNYFDN QDIPFFTG

PhMYB51

MCSRGHWRPHEDQKLRELVEKYGPHNWN AIAEKLQGRSGKSCRLRWFNQLDPRINRNPFT
EEERLLSAHRIHGNRWAIARLFPGRTDNAVKNHWHVIMARKCRERSKIYAKRATAASATTIAH
QKSTSDEQELSSLMQQDKRQISNEHTTSR FNPFVDAHQQYFFSERFAYPCNLTYNYSLYPKLLHK
DYLFFHHAKVNQDEKQRT EYDFLQVNTDSNKSEVIDHINASARIMRDDEEVEQEAVDLHRSKS
SRGFIDFLSVGDSI

PhMYB52

MCSRGHWRPHEDKRELVAKYGPHNWN AIAENLQGRSGKSCRLRWYNQLDPRINRSPFT
EEERLLASHRIHGNRWAIARLFPGRTDNAVKNHWHVIMSRRCRERSKIYSMRNINNSAQNSTT
SPQDTSQNTRRGSPNMNSIDQQLGRFNYYPNLTFNNSLYPKELYFDHLRHHLKINEDKNQEV
ECYDFLRVNTGSNKSEVIDHIARKGT DDEEVEQEAGYHYPAQSKAPVQFIDFLSVGDSS

PhMYB53

MAEGGGSGDDTRSSCPRGHWRPAEDERLRQLVEQYGPQNWNSIAEKLQGRSGKSCRLRWFN
QLDPRINRRPFTEDEEERLLAAHRVHGNK WALISRLFPGRTDNAVKNHWHVLMARKQREQSK
ICGKRSYPQDNFLSDSKSPSYGFRRRNNNNNNNTNIPKTQEGYNYGTKFSLFEFQNPTKDRVFSV
STYSSSPSWNSPDQLFRRNGSHLLKESSNFSGQSKLCQNNLSFSTHGGGGATLFPVPNNYKKT
ARNPFSYSNNGSDGMTEKVMNISNSTFSNKILRASIEQQRRQQQQHAEEAIEKKDIPFIDFLG
VGISS

PhMYB54

MVRTPCRDEYGRKKGTWTPEEDRKLAA YVTKNGCLNWRQLPKHAGLARCGKSCRLRWMNY
LRPNVKRGNYTNEEDGIILKLHTQLGNRWSAIAAHLPGRSNDNDIKNHWHTSLKKRANYESSK

KYNKNRESTNTKNQASSRRKSTVENENASSLSCSMSTHETILEGSQWSLKQSSSEEISSCTADYQ
QLDIASDIREVKVFEEEAAYVAESCGSFWTEPFVVDSSFSSRLHDCVAPSIDFELVSPSPFIGHGFISSE
NLDDYLMLSSLFD

PhMYB55

MVRAPCCEKMGLKRGPWTSSEEDQILISFIQRYGHENWRALPRQAGLLRCGKSCRLRWINYLRP
DIKRGNFSEEEETIEMHQVLGNRWSAIASRLPGRTDNEIKNFWHTHLKKKLEHNDLRATTTA
KRSPHEMIPRWKIEHHISSNYQASQNIANQYPTCHDEDLQENNSTSDTQANKEESMQPTNTQI
GHDGDASISNDM

PhMYB56

MGRSPCCDKVGLKKGPWTPPEEDQKLLAYIEEHGHGSWRALPAKAGLQRCGKSCRLRWNTNYL
RPDIKRGKFTLQEEQTIIQLHALLGNRWSAIATHLPKRTDNEIKNYWNTHLKKRLVKMGIDPVT
HKPKNDALLSHDGQSKNAANLSHMAQWESARLEAEARLVRQSKLRNSNFQNPLASQELFTCP
TPSSPLHKPIVTPTKAPGSPRCLDVLKAWNGVWTKPMNDILRADGSTSATVSVNALGLDLESPT
STLSYFENAQQISNGMIQENSTSLFEFVGNSSGSSEGGIMNEESEEDWKGFNGSSTGHLPEYKDG
INENSMSLNSTLKDLTMPMDTTWTAESLRNAEDISHGNNFVETFTDLLLSTSGDGDGGLSGN
GTDSDNNGGSGNDPSETCGDNKNYWNISIFNLVNSSPSDSAMF

PhMYB57

MEEVKATQVTYSSGMPVTVKLAEDNIEMRKGPWTLDEDSILIHYSLLGQGRWDSLAQFAGLK
RSGKSCRLRWLNLYLRPNLRGGKFTPQEQLLILLHFRFGNRNDYYLCFRWAKIAEHLPGRTDN
EVKNYWRTKVQKHANQLHCNVNSQEFRDVLRYQWLPSLAEQIRVTPSSSLHEYLMASSTA
NKTTEVKENISPFLETGIGSTSITSPNVVSSTNSSEAEPLMDNSLWSFSSSNWCSSFEDGYYLYSS
QDQCHSWASVAGSELVPANETLVSMGKDLASHGNISSEDTKTSYDEEVRRCIRP

PhMYB58

MGKGRAPCCDKSKVKKGPWSSEEDLRITFIQKHGHGNWRS LPKQAGLLRCGKSCRLRWINY
LRPDVVRGNFTPQEEATIVKLHQSGFNKWSKIASYLPGRTDNEIKNVWNTHLKKRLMKKIDG
NQAKDGRSCVSPFPSSSTSVVSHTNWSQDISTKANEVEFKDDMLAEKEPKEATKSCSPTTSYG
SNLSNLSQVEISSPKGLDMDNWILSPKVHDIHDDGVIEIPSMESDIDFWDMLDILDPSPTTTTTTS
NSDSKQDNQPVQCQGVSDSECQKWRLYLENELGLSQSTGANCYECTDAVTSQDKEAHPFTT

PhMYB59

MVQEEVRRGPWTEQEDLQLVFYVKLFGDRRWDFLAKVSGLKRTGKSCRLRWVNYLNPDLKR
GKMTPQEERLVLELHAKWGNRWSRIARKIPGRTDNEIKNYWRTHMRKKAQEQRKKTCSVPSS
SFSNCSSSSSITHEENERNFYDTGGLELLQSADGQKKVSGHEKGESMKVYSMDIWKDIELSEEN
DTITSNKLPMANVSPLWDYCPASLWISDEEESKMFPFSEHVDDHLQVYSFDKKNRTF

PhMYB60

MGRPPCCDKIGIKKGPWTPPEEDIILVSYIQEHGPGNWRSVPTNTGNSVGFTIFYILCSSLLYYFLEY
CYNEAISLFLKGLMRCSKSCRLRWNTNYLRPGIKRGNFTSHEEGMIIHLQALLGNKWAAIASYLP
QRTDNDIKNYWNTHLKKKLLKKFQATGLDSQSLAPSDSNTYQFSWNFHDSKLQQNQNSSTSSS
STLYASSTENISRLLLEGWMRSPNPSTKNIDDEILHENDQNQEVYKNCESSWLHGGRNNTIGSTS
IPKEYYKSVISEKSACDQSGGAVEKSCTNNAPPYTYLEKWLLDESAGQVEELMELPTIFT

PhMYB61

MGRHSCCYKQKLKRLWSPEEDEKLINHITKYGHGCWSSVPKLAGLQRCGKSCRLRWINYLR
PDLKRGTFSQEEENLIIELHAVLGNKWSQIAARLPGRTDNEIKNLWNSSIKKKLRQRGIDPNIHK
PLSEVEIDEKELANSKNNEKASEGSSDLNFIEVHENS NLRIATEKPKPSASLV TMDRYPNGMSSA
VPPTHEFFLNRFVTSHESSSTATCKPLDLASYLSFQQLNYGSGNIGLSMNPNTNPLLFNSNSKNSEM
VSHHQFN SNMPNDILPSISNSILTSPVAAAACSSNIELQRNSSFDDNNAFSWGAADHCGKSEKG
ANNIHSSSESDTEIKWSEYLHTQFLPGNTNIHSHQTSIQHLYSEKSGTQFTTEVSLSTTPWLPNQ
QQQPSIQ TADLYNKH FQRLPDAFGQFS

PhMYB62

MTSLKSSSSSSDDDIGLRRGPWTVEEDTLLVHYISHHGEGRWNILAKRAGLKRTGKSCRLRWL
NYLKPDVKRGNLTPQEQLLILELHSGKGNRWSKIAQYLPGRTDNEIKNYWRTRVQKQARHLKI
DSSISECSNLIPPGDGSLNTFIKAHFPLDGESYDMDTFSPATCSFKDVLYYDQMSGENNAPGDVL
ADSFWSMDEF

PhMYB63

MVLLAAAMKNMQEPYDKNVGLNSNKGAWSPPEEDQKLISYIMKYRIWNWNQIPKFADLKRGF
FSMEEVETIIRMYQSLGNRWSAISKELPGRTDNEIKNFFHHTLKKQFGTKVNDHVQVKKRASC
KKSKKAKELEMRTGETQEKPNQSLDMSSSDITFDENHNWDFTNFSETSSSEDNYCTVNSLVNQ
EAVPIIDSMVILESNPTTSENHDLYVQDFMDETGINSNKLHNKNMGTSNKKGPWSPEEDLKLT
SYIMKYRIWNWNQMPKFAGLSRTGKSCRLRWVNYLRPDLKRGPFMEEVETVIRMYQSLGNR
WSAISKELPGRTDNEIKNFFHHTLKKQFGTKVNDHVQVKKRATCKKSKKAKELEMRTGETQ
EKPNQSLDMSSSDITFDENHNWDFANFSETSSSEDNYCVNSLGAVPIIDSMVILESNPTTSEDPDFS
VQDFRDETSINSSNVDFWLELYMAAENLA

PhMYB64

MGRHSCCYKQKLRKGLWSPEEDEKLVKHITKYGHGCWSSVPKLAGLQRCGKSCRLRWINYLR
PDLKRGTFSQEEENLIVELHAVLGKNKWSQIAARLPGRTDNEIKNLWNSSIKKKLRQKGIDPNTH
KPLSEVENEKASANSNKNNEKVISSEDSNDQLNFIEAHESISKHIGIATEKSSSTLSTMTNNMDRY
PLIHETNNIVPPTHEFFTSPHDLASYFSFQQLNNYSPNSIGLSMTNSNTNNLIFNNSTNSKNSH
DMVSDQFNSCTMATDPEEIKWSEYMQTPYLLSANHHQMSQHQDLYGDAKSEAQFITQGSNLN
SNTTWLHQSSQSSQLQTADLYNKNFQRLPAAYGQYS

PhMYB65

MSEIIKKGPWKEEEDAVLIKHVKKYGPRDWSSIRSKGLLQRTGKSCRLRWVNKLRLPNLKNGVK
FSAEEERTVIELQAQFGNKWARIATYLPGRTDNDVKNFWSSRQKRLAKILRNSASQPSKPQKD
NNKEAPALQKVPSVEEPLSSPAEERSLPMSQCCSSSYMNNSDTINMVPLPELENSTSLPFEPNL
LQFEFTPNDKNYQYIGTQTSLSFPQIPLQTDGHPGLGSQELPMKLEETDFLDFFGQLSTASDIGN
VQVPLVPLCSGPDKSSEIVVKREMDSPLTQDSFIDDFPMDVFDLIDPLPSPSD

PhMYB66

MSKGIVMNSCSHEDEFELRRGPWTLEEDNLLIHYISSHGEGRWNALAKCAGLKRTGKSCRLR
WLNLYLKPDIKRGNLTPQEQLLILELHSGKGNRWSKIAQHLPGRTDNEIKNYWRTRVQKQARQ
LKVDSNSKKFVEAIKSLWMPRLLEKMEQQCSSSISSPASSSSKISIEKQSSSLPSPLINHQEPYKSHD
NTCNYDNEKTNLEHPRIYTSSSMIQEEGYHVESFNQQPDFSSQEMSISECEMGETNWFTEDEMG
GSLWNMDEFWQFRKLGDVDI

PhMYB67

MGHHCCSKQKVKRGLWSPEEDEKLIRYISNHGHNCWSSVPKLTGLQRCGKSCRLRWINYLRP
DVKRGFSFEAEERTIIDVHRILGNRWAQIAKHLPGRTDNEVKNFWNSCIKKKPISQGLDPNTHN
LLSRNSTQNNKNNASCKVKSTSVFTLETMPSSNKEVPMDMIKSSLAFLPLPHNSKTISTAAYN
DNMNSINVPRTTNNIDFPRSSLMESTSNNYLSSLTPPGYGIINYENYCMWAVSGVERHDFGPSIN
GHEEMRIVEQEGGQVVQLQEKVFQAEVYKINHDDQFNINGQKTYVDDANFSFESVDSALMMP
YGIYTSVKSIDHFAWN

PhMYB68

MGRAPCCDKANVKRGPWSPEEDAKLKAYIELHGTGGNWITLPQKVGLKRCGKSCRLRWLNLY
LRPNIKHGFEETEEEDNIICSLYISIGSRWSIIAAQLPGRTDNDIKNYWNTRLKKKLLGKQRKDRH
HHKLEMMKENENYFASQDINAYSWPPQPLLFSVLAPTNEYQQSGSSGNRHNFYSTEVSQAQF
DPSKFSQSSAFVNPLSGNTCNLSYYPISNGVITNSFQEYNNYISVGLDHDVLNVSNLQQVDQ
SVIEMVNSSSTIISTTSPEISTSWHEELSPIVFPSPSVSNFEIQQEISPYFVFEEPRYLGLLKQ

PhMYB69

MTSECVDRMTSKVGVDSSAVEEASGGGNAGGGVPLKKGPWTKAEDAILVDYITRHGEGNWS
AVRKHSGLARCGKSCRLRWANHLRPDLRKGAFTPEEERLIJELHAKMGNKWARMAAELPGRT

DNEIKNYWNTRIKRQQRAGMPMYPPDICYQAFRENKQNKELGTFSSADSHPDFSPINSFEIPAV
EFKTLELSQQRYPPALLDIAANSSLDIPATSLLAQGLNFSCNTRSFLSTMHPSKRIRGLESWFSGL
NDDFFQACHQFENDGSLFAESLGYSSPHTDNLSVHHPAFSGVFNGSHASLNGNSSSEPKWAK
KLELPSLQTQMASWGSPLPSLESYDTLIQLPPSEHIDSGSLSPGNSGLLDVLYESQAFRASKN
NLHQETCDVDDSCPDVQATWGTHSGPNSPLGHSAASVFSEYTPIFGGSLEHPRSVASLFGEN
GCKIKQEDVDLAPTDRNNDVSNHQIFAWTESCFAPTVLVPQQNRVLCLTLLPFVSPSESWAQT
LLDFPPPLLQSSSQPATILRSSD

PhMYB70

MDIITKKKGKHIDRVKGPWSPEEDELTLQLVNHKGPRNWSLISKIPGRSGKSCRLRWCNQLSPQ
VEHRAFTIEEDETIIRAHARFGNKWATIARLLNGRTDNAIKNHNSTLKRKCSSLSADEGNQL
ADQIFQNDNQPLKRSVSAGSALPVSGFNFSPGSPSGSDSDSSFHVSSSSQCCVFKVPVPRTAGVL
PPGLACPMDTSSSPEAGDPPTLLSLALPGVDSAEHSAESTQVKALLLPQATQIPPPPPPLQAVPIQ
HGEQQDKVFVPFSQELLGVMQEMIKTEVRNYMMGIEQHHPQQQRQQQQQQQQYHQQQNH
QLPNGIGLGLCIQQATDGRNTAANRI

PhMYB71

MLCQLMSSEQMGSWGVIEEGWRKGPWTAEDKLLIEYVKLHGEGRWNSVARLAGLKRNGKS
CRLRWVNYLRPDLKRGQITPHEERIILELHARWGNRWSTIARSLPGRTDNEIKNYWRTHFKKK
AKNSSANSEKSRARLWKRRQFQQQLQQQQQQQQQQQINDHIDIKKMMSLFDQENENKGQLMPQ
GKQEMAMLYPNTTNQQEQVGLFYSMNLGCASVSLPEPSSNEDTMWDGLWNLDIFYGHFINT
STTYNKATPCLQTMATIPPAFY

PhMYB72

MAEQMGNWGVIEDEWRKGPWTAEDRLLIEYVNLHGEGRWNSVARLAGLKRNGKSCRLRW
VNYLRPDLKRGQITPYEERIILELHAIWGNRWSTIARSLPGRTDNEIKNYWRTHFKKKVKKSID
NSEKTKARLLKKQQFQQHQEQQLKNQIYMKKVMSLLEGNYENEVPILPQRKQEMDFMYQNT
TEQEQGGGFFYSMLNGYATVPVPEVSSNEDMIMWDHGLWNLEDVNANFNNTAAYNKTLPCLO
PLATPFY

PhMYB73

MGRAPCCDKENVKRGPWSPPEEDATLKSIEKHGIGGNWIALPQKAGLRRCGKSCRLRWLNYL
RPNIKHGEFSDEEDRIICSLYANIGSRWSIIAAQLPGRTDNDIKNYWNTKLKKKLMALDLSSQQI
SPNYQSTPTYHSSISALQSSSHNSSLYSSPSPSLKSTAYKYTNSHFYPISTATNFPNETIISPSSKF
LNSPSYMYNGVEEKQSNSKFLITNGNDYAEKKPKGKGICYDGENSLECSLEEIKKLITTSIHNN
FNNFFSDENKIEEQVMMSTDVDHN

PhMYB74

MGRSPCCDKNGLKKGPWTPEEDHKLIQYIQVHGPGNWRNLPKNAGLQRCGKSCRLRWNTY
LRPDIRRGFRSFEEEEETIIQLHSVLGNKTDNEIKNYWNTHIRKRLRMGIDPVTHSPRLDFDLSS
LLNSTQLNLSSLLGLQALVNPEILKLANTLFLPHSENQELLLLKLQENQLLNPQHIQNSEGPEM
LLQKLLQSQLVNSPLHNQSSIFQHNTNQIHNOIPEIPNCTQQNVSCSSQSMQGNMGRYLMNG
QIFQENMMLPPQNYSHSTPDASENSTFQSLNNSNQNSQNFSDTPLSGTEEEKESYCSNFMK
FEIPESLDFDDL

PhMYB75

MGRTPCCDKNGLKKGPWTAEDQKLIDYIQKHGSGNWRTL PKNAGLQRCGKSCRLRWSNYL
RPDIKRGKFSFEEEEETIIQLHSILGNKWSAIAARLPGRTDNEIKNYWNTNIRKLLRMGIDPVTH
SPRLDLLDLTSIFNPSLYNP SHMNNMSKLLGVQPLLNPEILRLATSLSSQRQONQNFLPSNFQE
NQCDSQVQONQMTFPVQASQIQIPIQNISICTPLSTPCVPFSSEAQVMQQPNMEQFSPNLSYFSA
QNCQQNEWQLNNGIASKMNEHNFP SQNYVFSTLSTPSSSPASFNSNSTCINSSSTTSEGERESYS
SSMLNFDIPNIFDVNEFL

PhMYB76

MEGTTGDKIKGSWSPEEDNMLIKLVDQHGPRNWSLISTGIPGRSGKSCRLRWCNQLSPTVQHR

PFTPSEDAIIQLAHALHGNRWATIAARLLPGRTDNAIKNHWNSTLRRKRHGPPLSRSGSSSDQSN
SKRHCTRASQEQSSCGLDCDDLGLDGPNGLDGDELGLYGPETSLTSLPGGGSIDSPMKEDVPV
KESEPLMNSDNKVKEEKRTVEIEETCLVTIMQRMIAHEVRCYIDKLRAQGGLGIGPGVEFEVFK
NP

PhMYB77

MENFNRCSTSTSSSESSSESSLNKAERIKGPWSAEEDKILTKLVERYGARNWSLISKYIKGRSGK
SCRLRWCNQLSPNVQHRPFSHAEDETILAAHAKYGNRWATIAARLLPGRTDNAVKNHWNSTL
KRRYQQQKNHNTVIFPDMKNGSGSGSGSGSGSRSGSGSCMDYLNVDSPRGTVKVVVNNC
NSEYDDPMTESLAPPGMGDELPERKTESFSAGFWDVMDVIAKEVREYVASSFNGASTGFP

PhMYB78

MDHHHKTGVGLGRRGEDYRTSNVMNQENIREEDIMDLRRGPWTVEEDFTLINFIAHHGEGR
WNSLARCAGKSCRLRWLNYPDVRGNITLEEQLLILELHSRWGNRWSKIAQHLPGRTDNEI
KNYWRTRVQKHAKQLKCDVNSKQFKDTMKYLMWMPRLVERIQAAATTAATSTTTTNTYIQNLE
NQQSVPNMMSHMSQFLPIQLENHKKTNSINHSSMTLTLENSSTTTSSDNSIGRQVSPTSDLTDCYY
NFSINQSSNNQDYTPFNQNYGESLISATGYFPQAVDQQNSQWMDSEYVSDNSWNIEDMWFLQ
QQLNNNL

PhMYB79

MGRSPITSDKSGLKGPWTPPEEDLKLIQYIEVHGPGNWRSLPKNAGLQRCGKSCRLRWNTNYLR
PDIKRGRFSFEEEEETIIQLHSVLGNKWSAIAARLPGRTDNEIKNYWNTHIRKRLLRMGIDPVTHS
PRLDLLDSSLFNSTQLNLSSLLGLQALVNPQFLRLATTLTSTHTENNQEMLLQRLQANPTV

PhMYB80

MEGSSSTCSSSESSLASGTPKTPRDGNNNKPERIKGPWSAEEDKILTRFVERYGAKNWSLISKY
IKGRSGKSCRLRWCNQLSPEVEHRPFSPAEDDTILAAHAKYGNRWATIAARLLHGRTDNAVKNH
WNSTLKRRQQIRNNVSVVESPIIIIRNDIIVNVNNWDEVDPMTTSLAPPGCRRRVCRWSFG

PhMYB81

MGRTPCCEKNGLKKGPWTQEEDQKLIDYIQKHGYGNWRVLPKSAGLQRCGKSCRLRWNTNYLR
RPDIKRGRFSFEEEEETIIQLHSILGNKWSAIAARLPGRTDNEIKNYWNTHIRKRLLRMGIDPVTH
TPRLDLEFSSILNPSLYNSSQLKVSRLGQPLVNPEVLRILANSLSSQYTVKPSELVDQNLLMS
RNLQGNQLSNPQAQNLPLVQDISCGPCSNEAQLMQQANLEQFSSNMSNYSSQNCQLNDW
QNQEMPSHLTEDYNYHLHNYGYQQDQSIMDPPPSDASAFQSNDSNVSYQSILSTPSSSPTPLN
SNSSYINSTTTEDERESYCSNTFNFDIQNMLDANALL

PhMYB82

MKDKEVKARMKRGFWKPEEDLILKNCVETHGEGNWATISEKSGLMRSGKSCRLRWKNYLRP
NIKRGMMESEDEKDLIIRLHKLLGNRWSLIAGRLPGRTDNEVKNFWNTHLNKRSCKGKKKH
KAEEANHQRKNDREYPAETARNQEVATKTVLDSWIEEMQDFNCSLLSPLPMNSVAFLQDEPFF
PILDDIVLLEAFTSTGKEVWPDIQPFL

PhMYB83

MRKPEHGSVMKEKGNNNNKAKLRKGLWSPEEDEKLMNYMLTNGQGCWSDIARNAGLQRC
GKSCRLRWINYLRPDLKRGAFSPQEEELIVHLHSILGNRWSQIAARLPGRTDNEIKNFWNSTIK
KRLKNNNNNNNNNNSSNNNTSPNTSDSSDLRVLMGGSIFPMQGHVNVNVMAGLCMDNSS
STTSASSLQAIVPNNHFNPFQLDSTNYDIIAGAAGLYNLPPCLGQFGSSSGHDGGVVDYGVVEA
YSSMGLGSDFSVPPLESNGKGTMGENSIVNFSSNVSAVNDYSLFDKKTNGNNQQLMSSSDQ
SLKVEDYMGVFGNSHHHHWHGESLRIGFDWEGLLANVSSLPYLDQVE

PhMYB84

MGRAPCCDKNGLKKGPWTPPEEDQKLIDYIKEHGYGNWRTL PKNAGLQRCGKSCRLRWNTNYLR
RPDIKRGRFSFEEEEETIIQLHSVLGNKWSAIAARLPGRTDNEIKNYWNTHIRKRLLRMGIDPVTH
SPRLDLLDISSILNYPALYNSSHHQVNFSRLLGHVQPLVNPEVLRRLATSLSSQRQNSNFLMPN
NVQENQICISQVQNVHPMVQVTSQVQNPIQNIPTCTTSLITPSVPFYDEARLMEQFSSNLVNSS

SQNCQVNEWQSSGMASNLTDQDYFNNPLQNYGYHIELDQSIRDPPPLSDASTFQSNDSNNFSF
QSVLSNLSTPSSSPTPLNSNSTTTEDERDNSYCSNMLNFDNIPNIWDSTNEFM

PhMYB85

MGRSPCCDKNGLKKGPWTPEEDLKLIQYIQVHGPGNWRTL PKNAGLQRCGKSCRLRWNTNYL
RPDIKRGFRSFDEEETIIQLHSVLGNKWSAIAARLPGRTDNEIKNYWNTHIRKRLLRNGIDPVTH
SPRLDLLDLSSLLNSTQFNLSSLLGLQALVNPEVFRLATTLASHNNENPELLLQKLQENQLLNT
QLQQNQLLNTQLGNHLQVFQPN SQFNQIQEIPTFTPSNVPCSSSQPMQLGPVELSYLMNGQ
MLPPQYGYCASNVSDSSNLQSLNNSNNQNSSNFSLDVSLSTPLSSTEDEKESYCSNLMKFEIPAS
LNFDDFM

PhMYB86

MGRHSSFVKEKLRKGLWSPEEDEKLYNYITKFGVGCWSSVPKLAGLQRCGKSCRLRWINYLRP
DLKRGMF SQEEEDMIISLHQVLGNRTDNEIKNFWSYLLKKLIKQGIDPNTHQPLSENQVRNE
TDCKDKASTSTQIQQPFNL SKRNFNYEASRQLTEASKDQLVSKQVFDPLFLYEFQANVNPSGYN
LRPYDHNQNQIEGNTNFGFFSMPSLTNFEQGHMTETDFSESSSRMSLLYISEAKESSNSSNMIS
HHNAAGIQMNEMLENSQALSWDVDNKIDSLFQYPYDGIKNEEDFNNPLSSLEDLSGENLDV
FHQI

PhMYB87

MDHQHAKVDLRSKEAACSTNNIIQKVEEDDMDFKRGSWTVEEDFTLINHIALHGEGRWNSL
ARSSGLKRTGKSCRLRWLN YLRPDVRRGNITLEEQLLILELHSRWGNRWSKIAQHLPGRTDNEI
KNYWRTRVQKHAKQLKCDVNSKQFKDTRLRYLWMPRLVERIQASNSSKNQVIQQTSTNNNISN
NIIPMSFTQENSSTTTSSENSLGTQVISQVSDTSDCCYNYSTINQSDTLCYGESLTSPTGYFHQEG
ALDFRTVDIDDNQQTNQFLDVSDNLWNIEDMWFLQEQLN

PhMYB88

MQNLKKSGNSSGDVAAAKPKERHIVSWSQEEDDILREQIRIHGTDNWTIIASKFKDKTTTRQCRR
RWFTYLN SDFKGGWSPEEDMLLCEAQKIFGNRWTEIAKV VSGRTDNAVKNRFTTLCKKRAK
HEALAKENSNSFINLNNKRVIFPDGLSIDKITEAAAPIKKLRMSGVSDVPQDGS SKGNSFGDCG
TTHPLL RHPFAVLAQNFHNAAGNLASHQQVNNMKESTENATDSKTQGTFLKKDDPKIHALM
QQAELLSSLAMKVNTENTDQSL ENAWKILQDFLHQTKEGDMLKFQLPEMNIDLDDYKDLMA
DSRSSNEGSRPSWRQPALSEDSAGSSEYSTGSTLLSHALADKTEESQAEGCAHLQDIESELRSQ
MSDQGGIHESENGTSCRVSTTPDTLPVCDEEKANNGPATAECEFLNTDFSSPLQVTPLFRSLAET
IPTPKFSESERQFLKTLGMESITPHPGTNLSQPPSCKRALLHSL

PhMYB89

MDHHHHVKVGSSHGGGAN CNKNNQQQHDEDMDLRRGPWTVEEDFALMNYIAHHGEGR
WNSLARCAGLKRTGKSCRLRWLN YLRPDVRRGNITLEEQLLILELHSRWGNRWSKIAQHLPGR
TDNEIKNYWRTRVQKHAKQLKCDVNSKQFKDTMRYLWMPRLVERIQAAAANNTTNSNNPS
KSQMVHQ TINSNMSGMSEFVPIHDNVVSTNKPRLMSTENSSTA AASSENSFGTQVSPVNSDLT
DCCYNYPPVNQDYFQVSHHQSTTNDQLCHGESLTSPTGYFHHGTGLDQFQGM DQQQNMN
SSQWMDGGNNFSDSLWNIDDMWFLQQQLNNNNNNIV

PhMYB90

MGRSPCCTNNNLNKGAWTK EDEILGNYVKIHGA AKWNILCKKAGLNRCGKSCRLRWNTNYL
RPDIKRGNFSEEDSLIINLHSSLGNKWSKIASQLPGRTDNEIKNHWNTKLRKKLNKLGIEPQT
HKQIPNFNLFNSLQMPPLFSQQDVTQLAKLQLLHFQTLLQTINAITTTFPSNPLMPNINYPMQD
DVNGILNFSMPNFEEDDNLKGPWTEDEDEKLIDYIKQNGHTNWQSLARKAGLNRCGKSC
RLRWNNYL RPDIKRGFRSP EEEEEIIINLHSDLG NKWSKIAAHLPGRTDNEIKNFYNTHLRKKLLR
LGIDPKTHKPISKLSLVNLSHHLTSNSNYFLSLASVLSLQAQFSLLAKIQQVIQSPLPTINTINLL
SSIQGNILSNSSPQLES LRNETEMSKFLDSSLANTTTTTPCLDNTNL

PhMYB91

MRERQRWRSEEDALLRAYVRQYGPKEWHLV SQRMNTPLNRDAKSCLERWKNYLKPGIKKGSL

TEDEQRLVIQLQAKHGNKWKKIAAEVPGRTAKRLGKWWVEVFKEKQQREHKENNKVVDPVD
EGKYDHILETFAEKIVKERSVPGLLMATSNGGYLHADAPAPSPQALLPPWLSNST

PhMYB92

MGRSPCCDETGLKKGPWTPEEDQKLINYIKKHGHGSWRALPKLAGLNRCGKSCRLRWTNYLR
PDIKRGKFSQEEEQTILNLHAILGNKWSAIATHLPGRTDNEIKNFWNTHLKKKLIQMGYDPM
HRPRTDIFNSLPHLIALANLKELVEQSEVARIKYLQYLLQPSMAANLANSMSTSNTCSVANISD
MEAYNNLLNIGTNHLENSTNNIPPPSTTLQAIQDSITFSHLPQLATPNCNFQNSLNEENMVQT
HVISQGENTPTSPWQLPSSLSPENDNQPINSYINNIGGSCNPPFFGGAHPSVWPEILLEDRLFQ
DIA

PhMYB93

MGRSPCCDENGLKKGPWTPEEDKKLVYIDKHGHGSWRALPKLAGLNRCGKSCRLRWTNYL
RPDIKRGKFSEEEEQTILHLHSILGNKWSAIATHLPGRTDNEIKNFWNTHLKKKLIQMGYDPM
HRPRTDLFASLPNIIALASLLQHHPLEDHAVRLQAEAAQVAKLQYLQWLFQSSSSSSNNYPIATS
LNTTQYSNLEDFGPFNLSNSTKESTPSINLSLENQALFSNENSGSQLLHNPDTSLPLTDTQEV
PFNFQAHLNNNNNSNNTSGDNGQDFNFEICSPSSPLHNIIPSPSSRLPPLTEISISNNQGDAS
TNSNAAEGTSSYWPELFFEDHFMHEIA

PhMYB94

MGRPPCCDKVGKGPWTPEEDIMLVSYVQEHGPGNWRAVPTKTGLRRCGKSCRLRWTNYL
RPGIKRGNFTDQEEKMIIQLQALLGNKWAAIASYLPERTDNDIKNYWNTHLKKKLLKQETG
DDLFSRENGYFSSSNSTSKGQWERTLQADINMAKQALHNALTLENLSSCVKQESQVSTYAS
STE NIARLLKGWMGSSTNNSDYKTSNNVATADSSSCDGTSPAEEIGLMESFKSLFGFESFESS
SSD QFSQTASPDASKLKGEIKKEANEQMPLSVMLLENWLLDENTIQQKDDLNSNFSFDETND
LF

PhMYB95

MGRPPCCDKIGVKKGPWTPEEDIILVSYIQEHGPGNWRAVPTNTGLLRRCGKSCRLRWT
NYLRP GIKRGNFTEHEEKMIHLQALLGNRWAAIASYLPQRTDNDIKNYWNTHLQKKLKLQGH
DD QNNQKGKQSISKGQWERRLQTDIHTAKQALVDALSLDKTTNVVSPNINSSANSLPVGQT
SS YASSAENISRLQNWMKNSPKSSQTTSNSTTSQSSFNLSMVSSSSPSEVTMSATTPEGLD
SLFSF NSSYNNSDVQSMLTDEVVAGIFQDGSKQNWQNFKDESGIFQKGSQNMETQVPLTL
LENWL FDDANAQTQEELMGIGVGMWEP

PhMYB96

MGRPPCCDKIGVKKGPWTPEEDIILVSYIQQHGPNGWRAVPTNTGLLRRCGKSCRLRWT
NYLRP GIKRGNFTEHEEKMIHLQALLGNRWAAIASYLPQRTDNDIKNYWNTHLRKKLKLQ
GNDDE NSSSTSQEGISSNISKGKWERRLQTDIHMAKKALCEALSLDKPIANPTQTPVQESV
QPCTTYASS AENISRLQNWMKNSPKSSQLSQSNSESTTTQSSYNNFMSMGQVGSSSPSE
GTISVATPEGFDSL FSNSSSVDEGNAAIFQVDSKPNLPNLNAANGFFLEESKPTLESQVPL
TLLEKWLFD DAINAPA QEELMGIGMGMALGEAADLF

PhMYB97

MEGRPPSSSYHHYRYHFHHEDELGEIKKGPWKAEEGEVLLNHVKKYGPRDWSSIRSKGL
LQRT GKSCRLYWVNKLRPNLKNGVKFSAEEERTVIELQAQFGNKWARIATHLHGRTDNDAP
KFSSSA DQEEFLSKSQSCSSSYIDNSNMIYLVPLNPNSTDFEANLLQLDFTANEKKLKID
SHIQLPFTKLQN DFALPLQTHEFMPNFIDVFGQQLNGSELDNVQVPFVSTCSGPD
RSCFENPSSPDSFIDDFPLDM FDHIEPLPSQSE

PhMYB98

MEFDHSSNQNLSQLPYNNSLIRGEMDDVFCTVSKDYLLQDFHHLDTFNPHDNLLIETNGYD
SLFDPIILNEGNLSSLDHQDFNLNYEFKPFQNSASGSTLVMKNFENSMDMHTSNDENLLSLC
SE DMKPLSFVNVQDESSCITADNNYYDNKICRRKKNKKVSSKENILSPCMGKLGKGGKKS
SAKG QWTTEEDRLLIHLVEKFGVRKWSQIAQMLKGRIGKQCRERWYNHLRPDIKKDLWTE
DEDRLI EAHAEVGNKWTEIAKRLPGRTENSIKNHWNATKRRQFSRRKCRKTKWARPSCLLQ
NYIKSLNFE

KSIRSSHDTTINAPKQEPFGNIPDYDLTSEVPEFAFDDKLFDENINMDALMDQIHDRCLDLEIPY
DELPKLMQGDANKEPDSIDLISEI

PhMYB99

MSEQMDSWGMTKQGWRKGPWTSEEDRLLIEYVNLHGEGRWNSVARVAGLKRNGKSCRLRW
VNYLRPDLKKGQITPHEEKLILELHARYGNRWSTIARNLPGRTDNEIKNYWRTHFKKKTKNSR
DKSEKSKVRLVKRQQWQQQKQQQKLNTQTDSNRVVSLLNNKKNYYASILNKLGNKIVSLLDK
NENRILPLVTQKENQEMANLYSNTADQEEDDFLNSILNDYTCVSLLESSFNEDMMWDDFWNN
LDEYQCNVSTTI

PhMYB100

MAPDDRGMKNGGASTGRSNGAGSSRQVLKKGPWTA AEDSILMEYVKKHGEKNWNAVQRN
SGLMRCKGKSCRLRWANHLRPNLKKGAFTVEEERIII ELHAKLGNKWARM AQLPGRTDNEIK
NYWNTRLKRRQRA GLPIYPQELQQQNQHENNNQPHSLLSSSYDPQNSTNYNSP SLSLLDIFNP
STMKPSITQQFPINTPSLCLPSTNNNNIFRNTPKGLSLTLPSSMRNSQFSSLPNNNFTQGLSSNSIQ
VPPFQHNYPNPNINRPFTGISSNPNGLICGMGIN TINYP SGQSSMPVTASSSENTGSDFGSSDNA
NNYANTNGLSRGNSGLLEDLLEESQTLNRP GMKIEDNFLDLKEDQEADYK GKSM LWEDYGLV
EDAE EAILTEESAYSFAHGVDHVAQNKNSESSSPHSPNSSSGIFMKKEDSFHGTNQADDDIMC
LLDNFPLAVPVPEWYEDEDDKNNCNGQSSNVTNCDHIAENQAEDSKSPALTLNSGTRNHDW
EFGGCCWNNMP SFC

PhMYB101

MAPNGGGVKTSLARNISHGGTRHVLKKGPWTA AEDAILMEYVKKHGEKNWNAVQRNSGLM
RCGKSCRLRWANHLRPNLKKGA FSL EERLIVELHAKLGNKWAHNEIKNYWNTRLKRRQRA
GLPIYPQDIQPQNQHEHNISLFDHPQNSNFINPPLSLLDIFNPSTMKPSVNSQQYQFNNPSPFL
TNTNNNNNNHFKLFHDPRVSLSLTLASSIRNSQLSSLVAPVPKTF SQGLTSMQVPPLQHNYPSFS
TNTRPYTAISTNPNGLILGMGIETTTCSRSTGNDYMKATSSSDADNYNVVDPGLSRGNSGLLED
LLEESQTLTRAEKIEENCLVDENEASQGKLVWEEYGLTEESTYSFAHGGDDTTPNSSSGITTKDA
SLELANQVDDDIMRFLDNFPVAVPAPDWCD DENEQNNTCNGHYFEPRDQMD

PhMYB102

MKTCAVRDSDEKDKGMGHCCSKQKVKRGLWSPEEDEKLVRHITTHGHGCWSSVPKLAGLQ
RCGKSCRLRWINYLRLPD LRRGSFTEQEERTIIDVHRILGNRWAQIAKHLPGRTDNEVKNFWNSC
IKKKLIAQGLDPNTHNLLSTHQNKNNKTNNSSKTSYHQDSTSVFTIDTSTNKEVISMDIKATL
AALPPFLHSNNNTSSTYHYTTPIVPIIEYQNPSTFTLSENNNGSTTTQHSVLDFASNTSINSTTN
NVSSSTLTPLFEGYINENCMWAGTGLEPTTLNPATGGTEEMQVQLQGEQFPIQTKFCDQEDVY
KVNQTVENTFDNSNFD FDFVDSALVPCGLYSVNSMDQLSWDC

PhMYB103

MGHHSCCNQQKVKRGLWSPEEDEKLIRYITTHGYGCWSEVPEKAGLQRCGKSCRLRWINYL
PDIRRGRFSPEEEKLIISLHGAVGNRWAHIA SHLPGRTDNEIKNYWNSWIKKKLKKPSKPSTNTT
SCTEHQQQQR SQFSYNTTSQPEILFTQDLGVTKSQILQDSALFTSPNPLFYFDNGNSLETMTNN
VNDRSTNASL FQETSVLNSEFWQVDLQQQVHTSYTTGIHSNYLPPLLEMPHMEIPSSNNNMM
VEGQDHHQLNEWNMMDTQQCCPSYLFWDQETGTLGGDHEFVDPNNTSNNIGQILSSFPSSL

PhMYB104

MGRIPCCEKENVKRGQWTPEEDHKLSSYIAQHGTRNWRLIPKHAGLQRCGKSCRLRWTNYL
PDLKHGQFSEAE EQTIVTLH SVLGNRW SVIAAQLPGRTDNDVKNHWNTKLKKKLSGMGIDPV
THKPFSHLISEIATNLAPPQVPHLAE AALGCFKDEMLHLLTKKRIGFQFQQFGTSTAPSTSTVKV
EDNKEETIEKIKYGLSRAIKESDMLPSNKHWDPSGGARSTNLAEPSSGFPHVSDGGFQYNFASL
LHEDAAEGSPWNQSLCTGSTCTVGEQQQVHQLHKKLNSNDNCGEDNSDGAKETRNGSTTM
FHSDCILWDISSDLLNPMV

PhMYB105

MRLLRFCVLASCDFQEMNFLTQNSLVMDY NKGRHCLSNGSTDGKVLENPWIFHSMVEDENG

TKLNVETEEVDLVGRKNNGGTKLCARGHWRPHEDAKLKELVAQYGPQNWNLIAEKLGRSG
KSCRLRWFNQLDPRINRRAFSEEEEEERLLTAHKMYGNKWAMIARLFPGRTDNAVKNHWHVI
MARKHREQNSVYRRRKPSNMQQFHSMGFPHVSGSDNAIQSNNLNSDSTISSTTNNMDEHCAS
TCTDLSLTPSSSKVIFMKRLTHMQHHHHPLLEASKGFSRDAQEVKMESGVHPKFLHGKEPRAD
TVDASHQYGC GGSDTNSDISASESVANNMTNVKMYGQNHENVKLVEKQMKSKTMPAFIDFL
GVGAT

PhMYB106

MTSYSCSPMGTTTTTTSMGMFYADMNSLSITSINYVTSDGGVGENSNETIDLNASCCFNEEKQIT
MHSNFFSSGNGKEIESGQSKLCARGHWRPAEDAKLKELVAIYGPQNWNLIADKLRFNQLDP
RINRRAFTEEEEEERLMAAHRLYGNKWAMIARLFPGRTDNAVKNHWHVIMARKYREQSSAYRR
RKMGGQFVYRRTTTTSLVEEEDSSFVSSNSSSGKEVVAATMKGENPTPIISGQTAANPFASLKINND
GPSGWVVYGPNGSSHMAASAGEAAPPSTNVIVGMK

PhMYB107

MARTRCYDKSGLKKGTWTPPEEDRKLAAVTRYGCWNWRQLPKFAGLARCGKSCRLRWLNLYL
QPNIKRGNYTKEEDQIIMMLHAEIGNKWSAIAAHLPGRSDSEIKNHWHTSLKKRSTQEESTSST
NSKKRSPINSKYISSSRKKRSGSGNQISVKS NVPQLSPKQSCSEVSSCASIHVESMHVESEGYQEEY
LFEESSGISFWTEPFLVDNSSTTNDFFVPSELDHGLVSPFSPVISFDEFICSYD

PhMYB108

MGRTRCYDKSGLKKGTWTPPEEDRKLTA VTRYGSWNWRQLPKFAGLSRCGKSCRLRWLNLYLQ
PNIRRGNYTKEEDEMIMKLHAEIGNKWSVIAAHLPGRSDNEVKNHWHTSLKKRSTQEESTSST
GSERRSNNSKYISSSRNKRRENGTQISANSNIPQLSPKQSCSELSSCASVDQHVENMHAEREVFQ
EEYLFEESSLISFWTEPFIVDNFSTTSDFVTSQTDGGLVSPFSPFTRVIWVIFQFCAYHPWHLDT
PDKRDISLAALVVSKSKSLVESFDTKLKENMMNDEPKKLIELSVLKMKKLRNHCRPCARAVDP
RERSERNNGGRLEKRRAPVMNRQSNRWPPHA

PhMYB109

MEEAEQQSDFKLIDAAVNGGDTMAVDENNGGGGGGGKVKGPWSQDEDTVLSLVSKFGAR
NWSLIARGIPGRSGKSCRLRWCNQLDPSVKRKPFTEEEEDNIIIQAHAVHGNRWASIAKLLPGRT
DNAIKNHNWSTLRRRFAGLKRVPNSHFEMLDSSNIDRVKATSEETRSGDDHNQKSLEGREAS
VQQCKRTLLEDRAPVSEMFVPEKVAHLVSGSCHSTINENNPSVSRPTAKVGAFDVHNLSSASF
ASSRTVPIQGNLLQAFSPDFGICKLLEGLPDEPIIPSSCGHGCCSAHSKSSSASSLLGPEFVEYEDLP
AVSSHSELFAMATDLNNAIAWIKSGLENAGKLPDKTTSGRDHQGSSTSTPMPMPMTSFVLPAQVE
SLS

PhMYB110

MVRAPCCEKVGIKRGRWTAEEDELLLYIQANGECSWRSLPKNAGLLRCGKSCRLRWTNLYLR
PNLKRKGFTSEEDETIFKLQCSLGNRWSLMASYLPGRTDNEIKNYWNSHLRRRIYTFGMKKKPI
KTAAEMPNTIVADGLNCESLKKRGRVSRSAKKYNNNTTTTTTAYISTLKPSSGVGAGGGAI
CSEGDSIVDAGIGLDIQQHDEDHAGSAIGKPRNEETEGTNQKHINATAEKQEVNRGILSFEEQG
QQVLDEHILIGPHEKNVGD ETVHLQQPNYCLHDFGNQVSLSGVLEVDEESHENWWSTMNSD
NFLEDELWVDQCSSLDFEGSIEECDDISLPLVAYSLVELLGPCVLVAIGKIWESVGCSPSGSRKFSS
LLRLGYVQGWAVKLMHCKRKDDDDGDGDDDEDSSCISTVEFSFSTKEGFVKFRTNFCGCFG
GMFCSKVSIS

PhMYB111

MGRAPCCEKVGILKGRWTAEEDETLTNYILTNGEGSWRSLPKNAGLLRCGKSCRLRWINYLR
DLKRGNITSEENIIIKLHATLGNRWSLIAGHLPGRTDNEIKNYWNSHL SRKVESLRIP SDEKL PQ
AVVDLARKGALKQIKRKVGRTSRSTMMNRKSKNSAVSSLSMPKQLKESSEPLNATVPIMPSTP
NLEKEALSRTSTISSWLDGNNAMDSMQKEVANIAAPNPLMESREAHSSLS SDGMEWLEEIMPL
VIDDQDMDPNFIFTCLENGQGESAVKVTEEADNNFLNTSKINERDNNNRESSEAAVSINIHDE
QVHEKSNETSSLMKDEGTFDQWDWKEITHDGGKGWPWDDNNSLQLWDTTTTDDTGFFQNCI

NEATVEMDSVHFENQKHSALVAWLLS

PhMYB112

MEGGSGDGSAYQPYQNIPTNLSIFQQGPPLIAINRYLLSHQSQFSSQQSVNNQSIFSQCGLCD
FSSYSGISHANGISWSSVPEPSFVDRIFLSHEQNGLHWNNQENGIAEEMISSQQNSKEAGKKAK
EGPSSTTVLVKGQWTEEDRKLVKLVKQFGMRRWAQIAENMVGRAGKQCRERWHNHLRPDI
KKDAWSEQEELILVEAHQQIGNKWAEIAKKIPGRTENSIKNHWNATKRRQHSSRRNKFKKQEK
DGQNDISKYRSNLRDYIRSKYFSDNSPPTASTPSNSISTNATPPYSDDDSPSLLTRQTYDEEMNFM
QNLFGENSLVENNGKVAEAMEAKTRQCPFDNKSSSSSCPFNSLVAGYTKSDNQIVNDNSEYGY
NMYMADHYSKVTQQSDSDQCSGIYLSYLLDHSTANSPLPCSGSIGYGNMNAGTLVNQGSSSSK
GNKEVDLMEIVSSTLYRQQTSHTTFFN

PhMYB113

MVGMMGWGANSQQEWKGPWTPPEEDKLLSEYVNLHGEGRWSSVSRACAGLNRTGKSCRLR
WVNYLRPGLKRGHITPQEEGIIELHALWGNKWSTIARYLPGRTDNEIKNYWRTHFKKKEKASS
KQDKRKTLRQRINNQPQLQHDTNYKFSPQPEEVIMQNSDEINEHNDTLTFTYHPNMENTIVDL
PPVRTSSDISYIWTDNFVMDGLWGGLWNLDVDDHSQPASDKCKVAIQNQPTDYQ