

Supplementary Data 1

Amino acids sequences for Phylogenetic analysis (Fig. 2b)

>tomato UGT91R2

MAENGKKLHIAVFPWLAFGHMIPYLELSKLIAQKGHKISFISTPRNIDRLPKLPPSLIPFF
NFVKLPMPHVEKLPENAEATIDLPEYQVKHLKLAHDALQESIAKFLEDSIDFILDFV
SYWLPSIASKFNIPTGYFSIFVAAYLGFTGPVPGLNNNYEIRMTLEELTVSPKWVPFETA
VAFKEFELLRIYEGCKEGEEENFYDISRMKYTFENCDFLLVRSCLEFEPEWLKVVEDIH
PKPVIPVGQLPTTSYEDDNTDIDAWREIKLWLDKQEKKGVIYVAFGSEAKLSQNELTE
LSLGLELSGLPFFWVLRTKRGESDNEILQLPEGFGERTKERGIVYTSWVPQLKILSHDS
VGGFLTHAGWSSIVEAIQFEKPLLLLTFLADQGINARLLEKKVAYLIPRNDWDGSFT
HNAVVESLYLVLLEKEGEIYRKKIKEVKNLCCDKKRQDDYVENLLRFLQNYKKIKV

>tomato UGT91R3

MAENSKKLHIAVFPWLAFGHMIPYLELSKLIAQKGHKISFISTPRNIDRLPKLPPSLAPF
LNFVKIPLPYVEKLPKNAEATTDLPYEQVKYLKLAHDALKEPMAKFLEDSAPDFILDFD
TSYWLPSIASKFNIPTGYFSIFVAAYLGFTGPVPGLNNNYENRMTLEELTVSPKWVPFE
TAVAFKEFELLRIYEGCKEGEEENFYDISRMKYTFENCDFLLVRSCLEFEPEWLKVVEDI
HPKPVIPVGQLPTTSYEDDNTDIDAWREIKLWLDKQEKKGVIYVAFGSEAKLSQNELT
ELSLGLELSGLPFFWVLRTKRGESDNEILQVPEGFEERTKERGIVYTSWVPQLKILSHD
SVGGFLTHAGWSSIVEAIQFEKPLLLLTFLADQGINARLLEKKVAYLIPRNDWDGSFT
HKAVVESLYLVLLEKEGEIYQKKIKEVKNLCCDKKRQDDYVENLIRFLQNYKKIKV

>tomato UGT91R1

MAENGKKLHIAVFPWLAFGHMIPYLELSKLIAQKGHKISFISTPRNIDRLPKLPPNLTPF
LNFVKLPMPHVEKLPENAEATIDLPEYQVKYLKLAQDALQESMSKFIEDSIDFILDFD
TSYWVPSIASKFNIPSGYFSIFIAAFLGFTGPVPGLNNDYEIRMTPEEYTVTPKWVPFET
TVAFKLFEVSRIFEASKMGEEENIADIVRYRSVENCDFLLVRSCSEFEPEWLKVVGDIH
RKPVPFVGQLPTTPYEDDSTKIDAWREIKLWLDKQEKKGVIYVAFGSEAKPSQNELTE
LSLGLELSGLPFFWVLRIKRGESDDEILQLPEGFEERTKGRGIVCTSWAPQLKILSHDS
VGGFLTHSGWSSVVEAIQFEKSLVLLTFLADQGINARLLEKKMAYSIPRNDQDGSFT
RDSVAESLNLVLVKEEGFIYREKIKEMKDLFCDKKRQNNYVENLLSFLQDYEKIKA

>Arabidopsis UGT91A1

MTNFKDNDGDGTKLHVVMFPWLAFGHMVPYLELSKLIAQKGHKVSFISTPRNIDRLL
PRLPENLSSVINFVKLSLPVGDNKLPEEDGEATTDVPFELIPYLKIAYDGLKVPVTEFLES
SKPDWVLQDFAGFWLPPISRRLGIKTGFFSAFNATLGILKPPGFEEYRTSPADFMKP
PKWVPFETSAFKLFECRFIFKGFMAETTEGNVPDIHRVGGVIDGCDVIFVRSCYEYEA
EWLGLTQELHRKPVIPVGVLPPKPDEKFEDTDTWLSVKKWLDNRKSKSIVYVAFGSEA

KPSQTELNEIALGLELSGLPFFWVLKTRRGPWDTEPVELPEGFEERTADRGMVWRG
WVEQLRTLSHDSIGLVLTHPGWGTHIEAIRFAKPMAMLVFVYDQGLNARVIEKKIGY
MIPRDETEGFFTKESVANSLRLVMVEEEGKVYRENVKEMKGVFGDMDRQDRYVDSF
LEYLVTNR

>Arabidopsis UGT91B1

MAEPKPKLHVAVFPWLALGHMIPYLQLSKLIARKGHTVSFISTARNISRLPNISSDLSVN
FVSLPLSQTVDHLPENAEATTDPETHIAYLKKAFFDGLSEAFTEFLEASKPNWIVYDIL
HHWVPPIAEKLGVRRRAIFCTFNAASIIIGGPASVMIQGHDPKTAEDLIVPPPWWVPFET
NIVYRLF EAKRIMEYPTAGVTGVELNDNCRLGLAYVGSEVIVIRSCMELEPEWQLLSK
LQGKPIPIGILLPATPMDDADDEGTWLDIREWLDRHQAKSVVYVALGTEVTISNEEI
QGLAHGLELCRLPFFWTLRKRTRASMLLPDGFKERVKERGVIWTEWVPQTKILSHGS
VGGFVTHCGWGS AVEGLSFGVPLIMFPCNLDQPLVARLLSGMNIGLEIPRNERDGLF
TSASVAETIRHVVEEEGKIYRNNAASQQKKIFGNKRLQDQYADGFIEFLENPIAGV

>Arabidopsis UGT91C1

MVDKREEVMHVMFPWLAMGHLLPFLRLSKLLAQKGHKISFISTPRNLERLPKLQSNL
ASSITFVSFPLPPISGLPPSSESSMDVPYNKQQSLKAAFDLLQPPLKEFLRRSSPDWIIYD
YASHWLPSIAAELGISKAFFSLFNAATLCFMGPSSSLIEEIRSTPEDFTVVPWVPFKSNI
VFRYHEVTRYVEKTEEDVTGVSDSVRFGYSIDESDAVFVRSCPEFEPEWFGLLKDLR
KPVFPIGFLPPVIEDDDAVDTTWVRIKKWLDKQRLNSVVYVSLGTEASLRHEEVTALA
LGLEKSETPFFWVLRNEPKIPDGFKTRVKGRGMVHVGVWPQVKILSHESVGGFLTHC
GWNSVVEGLGFGKVPIFFPVLNEQGLNTRLLHGKGLGVEVSRDERDGSFSDSDSVADS
IRLVMIDDAGEEIRAKAKVMKDLFGNMDENIRYVDELVRFMRSKGSSSSS

>tomato UGT91A6

METQLVKS IANGDESNTKKLHIVMFPWLAFGHIIPFLELSKFIARKGHKISFISSPRNIDR
LPKIPSEFSNSITFVKIPLAKIDGLPKDAEATIDIITSEEMTYLKKAMDGMEKDVNTFLE
NSCPDWIIQDFAQYWLAPISTRLGISRIFYSIINAWFLSFLGSFENMINTNNTSPPKLE
DFLVPPKWIPFETKATYRLHEARWMVESSQKNVSGVSDMYRNGVTIEGADAIIRHCH
EFEGQWLKLLDLHHMPVLPTGLMPPIVESSSHEKNESWISIKDWLDEKPKGSVVYVA
LGSEVTVGQNEINELARGLELSGSPFFWVLRKSSGLGSIDPIVLPDGFEERTKDRGIVW
KSWAPQLKILSHESVGGLLTHCGWSSII EGLIFGHPLIMLPFLVDQGLNARILQDKGV
GVEVPRNEEGGTYTSDSVVNSVKLVMVENDGKIIREKAKEMSAIFGNKELHDKYIENL
INFLENQLIDS

>tomato UGT91A7

MANGDENTTKKLHIVMFPWLAFGHIIPFLELSKFLALKGHKISFISTPRNIDRLPKIPSE
FSNSITFVKIPLPKIDGLPKDAEATMDITSEEMTYLKKAMDGMENEVTNFLENNCPD
WIIQDFAQYWLAPISTRLGISRIFYSIINAWFLSFLGSFENMINTNNTSPPKLEDFLVPP
KWIPFETKATYRLHEARWMVESSQKNVSGVSDMYRNGVTIEGADAIIRHCHFEFEGQ
WLKLEDLHHMPVLPTGLMPPIVESSSHEKNESWISIKEWLDEKPKGSVVYVALGSEV
TVGQNEINELARGLELSGSPFFWVLRKSSGLGSIDPIVLPDGFEERTKDRGIVWKSWARE
QLKILSHESVGGFLTHCGWSSIIEGLMFGHSLIMLPFLVDQGLNARIIEDKGVGIEVPR
NEEDGSYTSNSVANSVKLVMMVKNDGKLIREKAKELSSIFSNNKELHDKYIENLINFLEDY
KKSQ

>Petunia PhA3G6RT

MENEMKHSNDALHVVMFPFFAFGHISPFVQLANKLSSYGVKVSFFTASGNASRVKSM
LNSAPTTTHIVPLTLPHVEGLPPGAESTAELTPASAELLKVALDLMQPQIKTLLSHLKP
HFVLFDFAQEWLPKMANGLGIKTVYYSVVVALSTAF LTCPARVLEPKKYP SLED MKK
PPLGFPQTSVTSVRTFEARDFLYVFKSFHNGPTLYDRIQSGLRGCSAILAKTCSQMEG
PYIKYVEAQFNKPVFSNRTRSSGPASGKLEEKWATWLNKFEGGTVIYCSFGSETFLTD
DQVKELALGLEQTGLPFFLVNFPANVDVSAELNRALPEGFLERVKDKGIIHSGWVQ
QQNILAHSSVGCYVCHAGFSSVIEALVNDCQVVMLPQKGDQILNAKLVS GDMEAGV
EINRRDEDGYFGKEDIKEAVEKVMVDVEKDPGKLIRENQKKWKEFLLNKDIQSKYIGN
LVNEMTAMAKVSTT

>morning glory UGT79G16

MGSQATTYHMAMYPWFGVGHLTGFFRLANKLAGKGHRISFLIPKNTQSKLESFNLH
PHLISFVPIVVPSIPGLPPGAETTS DVPFPSTHLLMEAMDKTQNDIEIILKDLKVDVVFY
DFTHWLPSLARKIGIKSVFYSTISPLMHGYALSPERRVVGKQLTEADMMKAPASFPDP
SIKLHAHEARGFTARTVMKFGGDITFFDRIFTAVSESDGLAYSTCREIEGQFCDYIETQ
FQKPVLLAGPALPVPSKSTMEQKWSDWLKGKKEGSVIYCAFGSECTLRKDKFQELLW
GLELTGMPFFAALKPPFETESVEAAIPEELKEKIQGRGIVHGEWVQQQLFLQHPSVGC
FVSHCGWASLSEALVNDCQIVLLPQVGDQIINARIMSVSLKVGVEVEKGEEDGVFSRE
SVCKAVKAVMDEKSEIGREVRGNHDKLRGFLMNADLDSKYMDSFNQKLQDLLG

>Arabidopsis UGT79B1

MGVFGSNESSMSIVMYPWLAFGHMTPFLHLSNKLAEKGHKIVFLLPKKALNQLEPL
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LVFYDSAHWIPEIAKPIGAKTVCFNIVSAASIALSLVPSAEREVIDGKEMSGEELAKTPL

GYPSSKVLRPHEAKSLSFVWRKHEAIGSFDDGKVTAMRNCDAIAIRTCRETEGKFCD
YISRQYSKPVYLTGPVLPGSQPNQPSLDPQWAEWLAKFNHGSVVFCAFGSQPVVNI
DQFQELCLGLESTGFPFLVAIKPPSGVSTVEEALPEGFKERVQGRGVVFGGWIQQPLV
LNHPSVGCFCVSHCGFGSMWESLMSDCQIVLVPQHGEQILNARLMTTEMEVAVEVER
EKKGWFSRQSLNAVKSVMEEGSEIGEKVRKNHDKWRCVLTDSGFSDGYIDKFEQNL
IELVKS

>Arabidopsis UGT79B2

MGGLKFHVLMYPWFATGHMTPFLFLANKLAEKGHTVTFLIPKKALKQLENLNLFP
NIVFRSVTVPHVDGLPVGTTETVSEIPVTSADLLMSAMDLTRDQVEGVVRAVEPDLIF
DFAHWIPEVARDFGLKTVKYVVVSASTIASMLVPGGELGVPPPGYPSSKVLLRKQDAY
TMKNLESTNTINVGNLLERVTTSLMNSDVIAIRTAREIEGNFCDYIEKHCRKKVLLT
GPVFPEPDKTRELEERWVKWLSGYEPDSVVFALGSQVILEKDQFQELCLGMELTGS
PFLVAVKPPRGSSSTIQEALPEGFEERVKGGRGVVWGEWVQQPLLLSHPSVGCFCVSHCG
FGSMWESLLSDCQIVLVPQLGDQVLNTRLLSDELKVSVEVAREETGWFSKESLFDAIN
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>Arabidopsis UGT79B3

MGGLKFHVLMYPWFATGHMTPFLFLANKLAEKGHTVTFLLPKKSLKQLEHFNLFP
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TMKKLEPTNTIDVGNLLERVTTSLMNSDVIAIRTAREIEGNFCDYIEKHCRKKVLLT
GPVFPEPDKTRELEERWVKWLSGYEPDSVVFALGSQVILEKDQFQELCLGMELTGS
PFLVAVKPPRGSSSTIQEALPEGFEERVKGRLVWGGWVQQPLILSHPSVGCFCVSHCG
GSMWESLLSDCQIVLVPQLGDQVLNTRLLSDELKVSVEVAREETGWFSKESLCDAVN
SVMKRDSELGNLVRKNHTKWRETVASPGLMTGYVDAFVESLQDLVSGTTHD

>Arabidopsis UGT79B5

MGSKFHAFMYPWFGFGHMIPYLHLANKLAEKGHRVTFFLPKKAHKQLQPLNLPDSI
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HWVPEMAEEFGIKSVNYQIISAACVAMVLAPRAELGFPPPDYPLSKVALRGHEANVCS
LFANSHELFLITKGLKNCDVVSIRTCVELEGKLCGFIEKECQKKLLLTGPMLPEPQN
KSGKFLEDRWNHWLNGFEPGSVVFCAFGTQFFFEKDQFQEFCLGMELMGLPFLISV
MPPKGSPTVQEALPKGFEERVKKHGIVWEGWLEQPLILSHPSVGCFCVNHCGFGSMW
ESLVSDCQIVFIPQLADQVLITRLLTEELVSVKVQREDSGWFSKEDLRDTVKSVM
DI
DSEIGNLVKRNHKKLKETLVSPGLLSGYADKFEALEIEVNNTKFS

>Arabidopsis UGT79B6

MGSKFHAFMFPWFQFGHMTAFLHLANKLAEKDHKITFLLPKKARKQLESLNLPDCI
VFQTLTIPSVDGLPDGAETTS DIPISLGSFLASAMDRTRI QVKEAVSVGKPD LIFFDFA
HWIPEIAREYGVKSVNFITISAACVAISFVPGRSQDDL GSTPPGY PSSKVLLRGHETNSL
SFLSYFPGDGTSFYERIMIGLKNCDVISIRTCQEMEGKFCDFIENQFQRKVLLTG PMLP
EPDNSKPLEDQWRQWLSKFDPGSVIYCALGSQIILEKDQFQELCLGMELTGLPFLVAV
KPPKGSSTIQEALPKGFEERVKARGVWGGWVQQPLILAHPSIGCFVSHCGFGSMWE
ALVND CQIVFIPHLGEQILNTRL MSEELKVSVEVKREETGWFSKESLSGAVRSVMDRD
SELGNWARRNHVKWKESLLRHGLMSGYLNKFVEALEKLVQNINLE

>Arabidopsis UGT79B7

MEPKFHAFMFPWFAFGHMIPFLHLANKLAEKGHRVTFLLPKKAQKQLEHHNLPDSI
VFHPLTVPPVNGLPAGAETTS DIPISLDNLLSKALDLTRDQVEAAVRALRPDLIFFDFA
QWIPDMAKEHMIKSVSYIIVSATTIAH THVPGGKLGVRPPGY PSSKVMFRENDVHALA
TLSIFYKRLYHQITTGLKSCDVIALRTC KEVEGMFCDFISRQYHKKVLLTG PMFPEPDT
SKPLEERWNHFLSGFAPKSVVFCSPGSQVILEKDQFQELCLGMELTGLPFLAVKPPR
GSSTVQEGPPEGFEERVKDRGVWGGWVQQPLILAHPSIGCFVNHCGPGTIWESLVS
DCQMVLIPFLSDQVLFTRLMT EEFVSVEVPREKTGWFSKESLSNAIKSVMDKDS DIG
KLVR SNHTKLKEILVSPGLLTGYVDHFVEGLQENLI

>Arabidopsis UGT79B8

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VFHPLTIPHVNGLPAGAETTS DISISMDNLLSEALDLTRDQVEAAVRALRPDLIFFDFA
HWIPEIAKEHMIKSVSYMIVSATTIAYTFAPGGVLGVPPP GYPSSKVLYRENDAHALAT
LSIFYKRLYHQITTGFKSCDI ALRTCNEIEGKFCDYISSQYHKKVLLTG PMLPEQDTSK
PLEEQLSHFLSRFP PRSVVFCALGSQIVLEKDQFQELCLGMELTGLPFLIAVKPPRGSS
TVEEGLPEGFQERVKGRGVWGGWVQQPLILDHPSIGCFVNHCGPGTIWECLMTD
CQMVL LPFLGDQVLFTRLMT EEFKVSVEVSREKTGWFSKESLSDAIKSVMDKDS DLG
KLVR SNHAKLKETLGSHGLLTGYVDKFVEELQEYLI

>Arabidopsis UGT79B9

MGQNFHAFMFPWFAFGHMTPYLHLANKLAAKGHRVTFLLPKKAQKQLEHHNLPD
RIIFHSLTIPHDGLPAGAETAS DIPISLGKFLTAAMD LTRDQVEAAVRALRPDLIFFDT
AYWVPEMAKEHRVKS VIYFVISANSIAHELVP GGELGVPPP GYPSSKVLYRGHDAHAL
LTFSIFYERLHYRITTGLKNCD FISIRTCKEIEGKFCDYIERQYQRKVLLTG PMLPEPDN

SRPLEDRWNHWLNQFKPGSVIYCALGSQITLEKDQFQELCLGMELTGLPFLVAVKPP
KGAKTIQEALPEGFEERVKNHGVVWGEWVQQPLILAHPSVGCFTVTHCGFGSMWESL
VSDCQIVLLPYLCDQILNTRLMSEEEVSVVEVKREETGWFSKESLSVAITSVMDKDSEL
GNLVRRNHAKLKEVLVSPGLLTGYTDEFVETLQNIVNDTNLE

>Arabidopsis UGT79B10

MGQTFHAFMFPWFAGHMTPLYHLANKLAERGHRTFLIPKKAQKQLEHLNLFPSI
VFHSLTIPHVDGLPAGAETFSDIPMPLWKFLPPAIDLTRDQVEAAVSALSPDLILFDIAS
WVPEVAKEYRVKSMLYNIISATSIAHDFVPGGELGVPPPGYPSSKLLYRKHDAHALLSF
SVYYKRFSHRLITGLMNCDFISIRTCKEIEGKFCEYLERQYHKKVFLTGPMLPEPNKKG
PLEDRWSHWLNGFEQGSVVFALGSQVTLEKDQFQELCLGIELTGLPFFVAVTPPKG
AKTIQDALPEGFEERVKDRGVVLGEWVQQPLLLAHPSVGCFLSHCGFGSMWESIMSD
CQIVLLPFLADQVLNTRLMTEELKVSVEVQREETGWFSKESLSVAITSVMDQASEIGN
LVRRNHSKLKEVLVSDGLLTGYTDKFVDLTLENLVSETKRE

>Arabidopsis UGT79B11

MGQKIHA FMFPWFAGHMTPLYHLGNKLAEKGHRVTFLLPKKAQKQLEHQNLFPH
GIVFHPLVIPHVDGLPAGAETASDIPISLVKFLSIAMD LTRDQIEAAIGALRPDLILFDLA
HWVPEMAKALKVKSM LYNVMSATSIAHDLVPGGELGVAPPGYPSSKALYREHDAHA
LLTFSGFYKRFYHRFTTGLMNCDFISIRTCEEIEGKFCDYIESQYKKKVLLTGPM LPEP
DKSKPLEDQWSHWLSGFGQGSVVFALGSQTILEKNQFQELCLGIELTGLPFLVAVK
PPKGANTIHEALPEGFEERVKGRGIVWGEWVQQPSWQPLILAHPSVGCFTVSHCGFGS
MWESLMSDCQIVFIPVLNDQVLTTRVMTEEEVSVVEVQREETGWFSKENLSGAIMSL
MDQDSEIGNQVRRNHSKLKETLASPGLLTGYTDKFVDLTLENLVNEQGYIS

>tomato NSGT1

MERIKENSPSILLFPWLGFHVNPFALAKKLSKMNFHIYFLSTPIILKSIKETLDKNST
NYNQSIQLVEFHLPYLHELPPHYHTTKDLPPHLNSTLIQAFQMASSKFPSIETLKPNI
IYDGFQPWVATMASSYNIHAIMFYVSSTSGLAYLYHQFLHGSSSLTSFPFSSIYLDHEI
KKLGIQPIKPRDEKAFAYIILESFQSHNIVLLNTCREIEGKYIDYVSTIGKKELIPIGPLIR
EAMIDEEEDWGTIQSWLDKKDQLSCVYVSFGSESFLSKQEIEEIAKGLELSKVNFIWTI
KFPKGVNKTIEEMVPQGFLESTKGKGMVIEGWAPQSLILNHSSIGGFITHCGWNSILES
MSFGIPIIAMP MNHDQPLNSRLVEELGIGVEILRGENGKIMKEEVAKGIRKVIEEKPRK
QIHLKAMQLSEKIKLKAIDEGVKLLKLLY

>tomato NSGT2

MERIKENSPSILLFPWLGFHVNPFALAKKLSKMNFHIYFLSTPIILKSIKETLDKNST
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IYDGFQPWVATMASSYNIHAIMFYVSSTGLAYLYHQFLYGSSSLTSFPFLHDYEIKKL
DMKPIKPRDEKAFGYVVLKSFEKSHNIVLLNTCREIEGKYIDYVSTIGKKELIQIGPLIRE
ATLGEEENLGTIQSWLDNKDHISCVYVSFGSEFFMSKQEIEEIAKGLELSKVSFIWTIKF
PKGVTNTTIEEMVPQGFLESTKGKGMVIEGWVPQSLILNHSSIGGFVTHCGWNSMLES
MSFGIPLIAMPMNHDQPLNSRLVEELGIGVEILRGENGEMKEEVAKGIKKVVEDNTR
KQVNLKAMELSEKIKFKGEKAIDEGVKKGLKLLC

>pomelo CmF7G2RT

MDTKHQDKPSILMLPWLAHGHIAPHLELAKKLSQKNFHIYFCSTPNNLQSFGRNVEK
NFSSSIQLIELQLPNTFPELPSQNQTTKNLPPHLIYTLVGAFEDAKPAFCNILETLKPTL
VMYDLFQPWAAEAAAYQYDIAAILFLPLSAVACSFLHNIVNPSLKYPFFESDYQDRESK
NINYFLHLTANGTLNKDRFLKAFELSCKFVFIKTSREIESKYLDYFPSLMGNEIIPVGPLI
QEPTFKEDDTKIMDWLSQKEPRSVVYASFGSEYFPSKDEIHEIASGLLLSEVNFIWAFR
LHPDEKMTIEEALPQGFAEEIERNNKGMIVQGWVPQAKILRHGSIGGFSLHCGWGSV
VEGMVFGVPIIGVPMAYEQPSNAKVVDNGMGMVVPDKINQRLGGEEVARVIKHV
VLQEEAKQIRRKANEISESMKKIGDAEMSVVVEKLLQLVKKSE

>tomato GAME18

MGNMRIVMLPYLAYGHITPFLELAKKLSNRGFSIHICSSPINLSFIKAKIPEKYSSSIHLVE
LHLPNLPELPPHHHTTNGLPNHLKQTLFKTLKMTKPQLHQILSDLKPDFFIYDIMLL
WSAVVASSLNIPSLRFYTVNAAIFSYYFFHFYFNPGEFFFPALYMRDYELAKMTHEVAD
DAEVEVDRDKVTESDKFVLVHSTKSIDGKYMDYLCGTGQAKVVPIGTESPEDGVGD
VDKIDIELVKWLEKKTEHSTVYVSFGSEYFLSKEEMEEVAYGLEVSGVDFIWVVRYQK
GEQLELPQGFKERIGDRGRIIEGWAPQQRILKHSSIGGFVTHCGWNSTLESIEFGVPIIA
MPMLYDQPLNARLMVENGVAVEVPRDEKGNLDRVNIAEKIKHVIRDETGENLRKKM
NNLGENVRSQREEEMDGVVKVIQLLIDEKKGTL

>Sesami UGT94D1

MDTRKRSIRILMFPWLAHGHISAFLELAKSLAKRNFVIYICSSQVNLNSISKNMSSKDSIS
VKLVELHIPTTILPPPYHTTNGLPPLMSTLKRALDSARPAFSTLLQTLKPDLVLYDFL
QSWASEEAESQNIPAMVFLSTGAAAISFIMYHWFETRPEEYFPFPAIYFREHEYDNFCRF
KSSDSGTSDQLRVSDCVKRSHDLVLIKTFRELEGQYVDFLSDLTRKRFVPVGPLVQEV
GCDMENEGNDIIEWLDGKDRRSTVFSSFGSEYFLSANEIEEIAYGLELSGLNFIWVVRF
PHGDEKIKIEEKLPEGFLERVEGRGLVVEGWAQQRRILSHPSVGGFLSHCGWSSVMEG

VYSGVPPIAVPMHLDQPFNARLVEAVGFGEEVVRSRQGNLDRGEVARVVKKLVMGKS
GEGLRRRVEELSEKMREKGEEIDSLVEELVTVVRRRERSNLKSENSMKKLNVMDDGE

>daisyUGT94B1

MDSKIDSKTFRVVMLPWLAYSHISRFLVFAKRLTNHNFHIYICSSQTNMQYLKNNLTS
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IYDFNQLWAPEVASTLHIPSIQLLSGCVALYALDAHLYTKPLDENLAKFPFPEIYPKNR
DIPKGGSKYIERFVDCMRRSCEILVRSTMELEGKYIDYLSKTLGKKVLPVGPLVQEASL
LQDDHIWIMKWLDKKEESSVVFVCFGSEYILSDNEIEDIAYGLELSQVSFVWAIKAKTS
ALNGFIDRVGDKGLVIDKWVPQANILSHSSTGGFISHCGWSSTMESIRYGVPIIAMP
QFDQPYNARLMETVGAGIEVGRDGEGRLLKREEIAAVVRKVVEDSGESIREKAKELGE
IMKKNMEAEDGIVENLVKLCENNN

>tea UGT94P1

MDSKSKSMNVMLPWLAQGHITPFLELAKKLTNKNFHIYFCSTPINLISIKKRITDKYS
LSIELVEIHLPPSPPELPPHYHTTNGLPIHLNSTLKTAFEMASTSFSTILNTLSPDLVIYDV
SPSWAQSTALSFDIPAVQLMITGATVASFGQHMIKHCGSVEFPFPAIKLQGFHETQFR
HFVETVVKEYNDKQVASVNDQPSCNFMLYNTFRELEGKYIDYLPVIGEKVVVPVGPL
VQGIDDDENEHSEIIQWLDNKGEYSTLFVSFGSEYFMSKEEIEEIAHGLELSMVNFIWV
VRFPEVEKVELEEALSKGFIDRVGERGLVVEGWAPQARILTHSSTGGFVSHCGWNSVL
ESLKFGVPMVAIPMQYEQPLNAKLVEEVGVAAEVNRDINGRLNREEIAQVIRKVVVEK
SGEDIRIKARIFGDKIRMKGDEEIDEAVEVLLQLCKDVKLLKN

>Arabidopsis UGT72B2

MAEANTPHIAIMPSPGMGHLIPFVELAKRLVQHDCFTVTMIISGETSPSKAQRSVLNSL
PSSIASVFLPPADLSDVPSTARIETRAMLTMTRSNPALRELFGLSTKKSLPAVLVDM
FGADAFDVAVDFHVSPYIFYASNANVLSFFLHLPKLDKTVSCEFRYLTEPLKIPGCVKIT
GKDFLDTVQDRNDDAYKLLLHNTKRYKEAKGILVNSFVDLESNAIKALQEPAPDKPT
VYPIGPLVNTSSSNVNLEDKFGCLSWLDNQPFGSVLYISFGSGGTLTCEQFNELAIGLA
ESGKRFIWVIRSPSEIVSSSYFNPHSETDPFSFLPIGFLDRTKEKGLVVPVSWAPQVQILAH
PSTCGFLTHCGWNSTLESIVNGVPLIAWPLFAEQKMNTLLLVEDVGAALRIHAGEDGI
VRREEVVRVVKALMEGEEGKAIGNKVKEKGVVRVLGDDGLSSKSFGEVLLKWKTH
QRDINQETSH

>Arabidopsis UGT72B3

MADGNTPHVAIIPSPGIGHLIPLVELAKRLLDNHGFTVTFIIPGDSPPSKAQRSVLNSLP

SSIASVFLPPADLSDVPSTARIETRISLTVTRSNPALRELFSGLSAEKRLPAVLVVDLFGT
DAFDVAAEFHVSPYIFYASNANVLTFLHLPLKLDVTSCEFRELTEPVIIPGCVPTITGKD
FVDPCQDRKDESYKWLLHNVKRFKEAEGILVNSFVDLEPNTIKIVQEPAPDKPPVYLI
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>Arabidopsis_UGT72D1

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>Arabidopsis UGT79B4

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>Arabidopsis UGT72E1

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>Arabidopsis UGT72B1

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>Arabidopsis UGT72C1

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>Arabidopsis UGT72E3

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>Arabidopsis UGT72E2

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>tomato UGT5

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KCQMIDVANH

>grapeGT16

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>Kiwi AdTG4

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>grape GT14

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>tea UGT85K11

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>Arabidopsis UGT85A7

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>Arabidopsis UGT85A2

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>Arabidopsis UGT85A5

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>Arabidopsis UGT85A3

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>Arabidopsis UGT85A1

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>Arabidopsis UGT85A4

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