

S8 Table. List of proteins used for construction of phylogeny of selected plant cytochrome P450s involved in phytohormone biosynthesis.

Plant names	Protein names (Protein ID)
<i>Arabidopsis thaliana</i>	CYP72A (NP188080), CYP88A (NP001320198), CYP94B (NP001331365), CYP94C (NP180337), CYP94D (NP174713), CYP707A (CAA16713), CYP714A (NP568463)
<i>Citrullus lanatus</i> *	<p>>CICYP72A MWSVAATISIWILVLLLLGCKFVNWIWLKPKKLEKVLREQGFA GNSYRILYGDLKFRAAMREQALS KPMNFSNDIAPRVIPSIIHTIQN YGKNSFMWLGPIPRVHIMDPEQLKIVFSLINDFQKPTINPFARLLA DGILNHEGPKWVKHRKIINPAFHLQKLKDMVPAFYHSCNEMISK WENMVFVEESCELDVMPYLQNM TADVISRTAFGSSYEKGGKIFK LQTELAELVIQSTLGVYIPGWRFLPTKSNNKMKEISNEITTLILGIM NEREKSMKAGEAIQTDLLSILMESNLNEIKQHGNKDIGMSIEDVI AECKLFYIAGQETTATLLVWTM VLLSSYSEWQE QARA EVFEIFG NKKPDYDGLSQLKVVTMILNEVRL YPPVSMFGRFVKKETRLGK LTL PAGVMLALPTILIQRDP ELWGEDANEFKPERFSKGVSKATKN PSAFV PFGWGPRICIGLNFAMIEAKLALS MILQRFSFELSSSYTHAP TVTITTQPQHGAHILHKL</p> <p>>CICYP88A MYTAVLAAVLTVA VVVLKNANHWVYETARLGLKRFALPPGDL GWPFIGNMWSFLRAFKSPYPDSFMSFFSRYGNTGMYKAFMFGS PSVIVTSAEACKRVLNDDEAFSGSWPLSTMKLIGEKSFISYQEH KRLRRITAAPVNGYDALATYLT YIEKIVVSSLEKWASMGQIEFLT HLRKLTFKIIMYIFLSSETEAIMEALEREYTELNHGVRAMAINIPGF A YKALKARKNLVATFGSIVRGRKERERKNNLR TKRRDMMDA LLDAEDEDGRRLSDEEIIDILIMYLNAGHESGHTMMWATIFLQQ HPQFLQKAKAEQEEIVKKRPPGQKGLTLKEVREMTYLSKVIDETL RVVTFSLTVFREAKHDVKISGYTIPKGWKVLVWFRSVHHDPEY PNPKEFNPSRWDDFTP KAGSFLPFGAGSRLCPGNDLAKLEISIFLH YFLLSYKMERVNPKSPVRYLPHSRPKDNCLARIKRLD</p> <p>>CICYP94A MLSPLLLFFILFLLPLLFFIFIFTKTPNSPFTPPIKLPKSYPLVGSFFAV FANRRRRLQWLSVDLQVSPAATFTLHRPFGQRQIFTANPAVVQHI LKTHFHYYQKGD SFRSVFSDFLGDGIFNADGESWK FQRQVSSHEF TTKSLRKFVETVVD AELSDRLVPVLYTAAADCSVLD FQDVLQRF AFDNVCKIAFGYDPAYLSPSFGQSKFAKAFEDAVRISSLRFQSLIPF VWKLKFLDIGSEKRLRIAIAEVRGYANNIINDKKT ELKTNSSIPS VDLLSRFLTSGHSDHNFITDIIISFILAGQDTTSAALTWFFWLLAKY PQVEIRILEEISQKTEDLFGYDEVKDLTYTHAALCESMRLYPPVPV DGKQAAADDVLPDGTAVRKGERVAYHPYAMGRMEAIWGKDW AKFRPERWLES DSGDEATEVKWRFVGRDNYTYPVFQAGPRICLG KEMAFLQM KRMVAGILKRFRVVPAAAE EGVPRFVQYMTAKM EGGFPVRIEVREGSE</p>

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	<p>>CICYP94B MIYFSVSFLLLSSSLWAFLLYLCSKFCFSRKRKYSPSPSYPPFG CLISFYKNRRLLAWYTDLLSDSPTQTIVVHRLGSRRTVVTANPA NVEHMLKTNFINYPKGKPFDTILDGDLGCGIFNVDGDLWSSQRKL ASHAFSAKSLREFVVKLEDEVHLRLIPLLSNAARTNAVIDLQDV LGRLAFDTVCKVTLGTDEQCLDMSRPIPEIVNAFDATATGISAKRAI APLFLTWKAKRMLNVGSEKKLKEAVQMVQKWVSNIRNKNNT LHNHNQTHNNDLLSRLSTNHDEEVVRDMIISFIMAGRDTTSA MTWLFWLLTKHPKAEQAIINEATSLSDDSKTMSLGYGYEELKDM KYLKACLCEMRLYPPVAWDSKHAAAADILPDGTPVRKGDRTV YFPYGMGRMEEVWGKDRLEFKPDRWFQNGELKTVSPFKFPVFQ AGPRMCLGMEMAFIQMKYVVATVLNRFEFPASENSPVFVPLLT AHMAGGLRVYVRERIEQKSTMW</p> <p>>CICYP94C MSGSELLFSLPTAISLLFFSFTAFTIFSFLYLRLNPCCNCCVCRS YLSSWSFSFPNLSDWYTHLLSLPTATIHLVLSNIVTANPDNVQ HILKSNFHNYPKGKPFSSILGDLLGHGIFNVDGHSWRFQRKMASL ELGSLSLRSHAFEILTQIQTRLVPVMKDVGEVDLQDVFRFSD NICRFSGLDPGCLRLCLPISEFAVAFDLASRLSAERAMAASPIW KIKRVLRVGSERKLREAIKMVDGLAMEVIRQRREMGSFHRNDLL SRFMASNDDRYLDRDIVVSFLLAGRDTVASALTSFLWLLSQNPEV ETKIISEDRIIMPDRDTPNFDNLKDMHYLQAAVYENMRLFPV QFDSKFAEEDDILPDGTFVQKGRVTVYHPYAMGRMDRIWGPDC EFKPERWLKNGYFAPENPFKFPVFQAGLRVCLGKELAVMDVKC VAVLIRKFKIRLAADRVARFAPGLTASWRGGLPVRIERTTC</p> <p>>CICYP94D MDISVLSVLTLPFIFLTFLSLSLYLLFFTSPNTKSKPHQGFKHFPL VGTLPLFLLNRHRFLDWSTEVLKSCRTNTAVFKRPGKVHGVITA NPLVVEHILKTQFENYPKGERFISLLEDFLGRGIFNSDGEIWKVQR KTASYEFNTKSLRNFMENVRVEVQSRLLPFGKACETERILDQ DVLERFAFDNVCKLAFNYDPAACLGDDGTAAAEFMRAFEDAATL SSGRFMYAFPGLYKVKKFLNIGSERSLKEAIAIVHKFADDIISRM EEKKRTQIEKDQDLLSRFMGDENNSPEFLRDIISFILAGRDTTSSA LTWFFWILSSRPDVEQKILTELQTISSRTHKEIGEMYGFDQLRDM QYLQAALSETLRLYPPVPVDTKACRNDDVLPDGTFIGKSWFVTV HTYAMGRMESIWGKNYGEFSPERWLQNGVCKTESPFRFPIFHAG PRMCLGKDMAIYQMKIAAAVIEKFEVEMVEKKKTPKHLLSLTL RMENGLQVMVKKRDRSMPI</p> <p>>CICYP707A MFAFVLLLLLVLLFFHFLFKFSAPALRKLPLPPGSMGWPYLGET LQLYSQDPNVFFASKKKRYGPIFKSHILGYPCVMVSSPEAAKFVL VTKAHLFKPTFPASKERMLGKNAIFFHQGDYHAKLRRLVLRFTM PEAIRNIVPSIESIAKNTVQSWDGLINTFQEMKMFVSLLSIFG KDEALYFEDLKRCYYILEKGYNSMPINLPGTLFHKAMKARKELA</p>

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	<p>HILNKILSTRREMKRDNHNDLLGSFMGEKEGLTDEQIADNVIGLIFA ARDTTASVLTWILKYLGENPSVLQAVTAEQEAIMKQKQSGDDNL TWADTKNMPITSRVIQETLRMASVLSFTFREA VEDVEFDGYLIPK GWKVLPLFRNIHSPENFPQPKFDPTRFEVAQKPNTYMPFGNGT HSCPGNELAKLEMLVLLHHLTKYRWNVVGAQEGIQYGPFALPL NGLPIKIFLKK >CICYP714 MEGSIIGGFVSVFPVAVAVTVVAILVHLYFYGAWRRTAEVRRKL RAQGVIGPPPSVLYGNLPEMQKIQLQTAAMASPPHGASAIHAHDY TSTLFPYFVEWRKQYGPLYTYSTGMRQHLYANKVELVKDLNFSN NINLGKPFYVTKKLAPILGHSVVRNNGAVWAVQRKIIAPEFFMDR VRAMVGLMADAALCLIDKWESRIGDGATAEIEVDEDLRGFSADV ISRACFGSWYEKGKEIFSKLRDLQRLVSEGSFLFGYISLSDRFFQRS KHRIKKLEKEIESLIWETVQQRQKECSKTSSEKDLLQLIMEATT NDPNIGANDSSKNFIVDNCKSIYFAGHESTAVAATWSLMLLALHP EWQDCIRSEFAHACPDGHPDMAVISQLKSVSMVVHETLRLYPPA AFVARETFAEMQLGNVVVPGKVCLWTLIPSLHREVEIWGEDANK FKPERFENGIKACKFPQAYVPFGAGPRLCLGKNFALVELKIIISL VVSFRFSLSPEYRHCPYSYRMIVEPANGVKIVFQRL >CICYP714E MAVMVLSVLA AVSFFIFLHFLFESLFLPKRLRSKLRNQGIDGPPSPS FLLGNLPEIKNIRAIKSHALTTTEGDDSHAGWPSNLLPHLEHWRN RYGPKFVYSSGTVQILCITDVEMVKEIGLSTTLNLGKPAHLSKDR GPLLGLGILASSGPIVHQRKTIAPELYLDRVKDMTSLMVESVKS MIKSWETIVENDGGQSELNVDSYFRTLSADIISKA WVKLSCPCKK TLVFLGSGIYISIYMGDVILFDLEKKS YAMYLPKDNREIWKLEKE IESMVLEV VKKRIKQCSKEKDLLQIIEDAKCLDVEGKSLKISGDK FIVDNCKNIYFAGHETTAITASWCLMLLAKHPDWQARVRSEVLE CCQDGTLD AETIKMKTLTMVIQETLRLYPPGVFVTREALEDLRF KNLRIPKGMHNVQLWGPVLSFNPQRFSNGILKACKNPQAYIPF GVGPHICAGQH FAMVELKIVVSLIVSKFEFSLSPSYNHSPAFSLVV EPKNGVLLHLRNLSSFSL</p>
<i>Cucumis sativus</i>	<p>CYP72A (XP011659939), CYP88A (XP011656712), CYP94A (XP011658957), CYP94B (XP011651558), CYP94C (KGN64915), CYP94D (XP004136768), CYP707A (XP004150544), CYP714A (XP004146466), CYP714E (XP004138935)</p>
<i>Durio zibethinus</i>	<p>CYP72A (XP022738158), CYP88A (XP022738013), CYP94A (XP022759757), CYP94A (XP022771227), CYP94D (XP022764670), CYP707A (XP022755802), CYP714E (XP022743116)</p>
<i>Fragaria ananassa</i>	<p>CYP72A (XP004294188), CYP88A (XP011469589), CYP94D (XP004299232), FaCYP94C (XP004305353), CYP94B (XP004303976), CYP707A (XP004295971), CYP714A (XP004307754), CYP714E (XP004294859)</p>

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<i>Glycine max</i>	CYP72A (XP003531823), CYP88A (XP003546291), CYP94D (ABD97099), CYP707A (XP003534341)
<i>Gossypium raimondii</i>	CYP72A (XP012438179), CYP88A (XP012475722), CYP94A (XP012476259), CYP94B (XP012489010), CYP94C (XP012485820), CYP94D (XP012456972), CYP94F (XP012472918), CYP707A (XP012471298), CYP714A (XP012443451), CYP714E (XP012458489), CYP714F (XP012448130)
<i>Musa acuminata</i>	CYP72A (XP009394609), CYP88A (XP009392783), CYP94B (XP009407042), CYP94C (XP009411963), CYP94D (XP009383332), CYP94E (XP009414953), CYP707A (XP009396959), CYP714B (XP009406861), CYP714C (XP009381346)
<i>Malus domestica</i>	CYP72A (XP008366858), CYP88A (XP028961309), CYP94A (RXH86486), CYP94B (RXH77817), CYP94C (XP008371286), CYP94D (XP008393292), CYP707A (XP008356917), CYP714A (XP008343675), CYP714E (XP008354178)
<i>Oryza sativa</i>	CYP72A (XP015615867), CYP88A (XP015643774), CYP94C (XP015615638), CYP94D4 (XP015616099), CYP94E (XP015621268), CYP707A (XP015627713), CYP714B (XP015645488), CYP714C (XP015619748), CYP714D (XP015637923)
<i>Solanum lycopersicum</i>	CYP72A (XP004242635), CYP88A (XP004229509), CYP94A (XP004242690), CYP94B (XP004233587), CYP94C (XP015086840), CYP94D (XP004249121), CYP707A (NP001362844), CYP714A (XP004235212), CYP714E (XP004229723)
<i>Theobroma cacao</i>	CYP72A (EOX99507), CYP88A (XP017972617), CYP94A (XP007050381), CYP94B (EOY22465), CYP94C (EOY08182), CYP94D (EOY19355), CYP707A (EOY33987), CYP714A (EOY29240), CYP714E (EOY19021), CYP714F (EOY34111)
<i>Vitis vinifera.</i>	CYP72A (XP002263652), CYP88A (XP002264215), CYP94A (CAN75729), CYP94B (XP002279981), CYP94C (XP002264897), CYP94D (XP002278009), CYP94F (RVX19985), CYP707A (NP001267981), CYP714A (XP002266768), CYP714E (XP002269307), CYP714F (XP002273288)

* *Citrullus lanatus* cytochrome P450s are exclusively available on P450 homepage (<http://drnelson.uthsc.edu/>), without NCBI accession numbers.