

CYP702A5 1 -----MVEVYEF-WAVIVSLIVVKLCHWIYQW-----KNPKGNKGLP-  
 CYP702A6 1 -----MVDLYEF-WAVIVSLIVVKLCHSIYQW-----RNPKSNGELP-  
 CYP702A1 1 -----MVEVYEL-LTVMVSLIVVKLFHWIYQS-----KNPKTNGKLP-  
 CYP702A2 1 -----MVEFHEL-LTVMVSLFLVKIFHWVYQW-----RNPKTNGKLP-  
 CYP702A3 1 -----MSEIYVLALS VVFSLIVVKLCHWVYQW-----SNPKCKGKLP-  
 CYP708A1 1 -----MNNLISLDIMKEMWGVALS FVIALVVKISLWLYRW-----ANPNCSGKLP-  
 CYP708A2 1 -----MSFVWSAAV-WVIAAAVVISKWLRYW-----SNPKCNGKLP-  
 CYP90A1 1 -----MAFTAFLLLLSSIAAG--FLLLL-R-----RTRYRRMGLP-  
 CYP90B1 1 -----MFETEHTLLPLLLLPSLLSLLFLILLKR-----RNRKTRFNLP-  
 CYP707A1 1 -----MDISALFRTL FAGSLFLYFLRCLISQR-----RFGSSKLP-  
 CYP707A3 1 -----MDFSGFLFTLSAAALFLCLLRFIAGVR-----RSTTKLP-  
 CYP707A2 1 -----MQISSSSSSNFSSLYADEPALITLTIVVVVVLLFKWHLHWKEQRLRLP-  
 CYP88A3 1 -----MAETTSWIPVWFPLMVLGCFGLNWLVRKVNWLYES---SLGENRHYLP-  
 CYP88A4 1 -----MTETGLILMWFPLIILGLFVLKWLKRVNVWIYVS---KLGEKKHYLP-  
 CYP716A1 1 -----MYMAMIILFLSSILSLLLLLRKHL-----HFSYPNLP-  
 CYP716A2 1 -----MYLTI-IFLFISSIFPLFFLGKHL-----NFRYPNLP-  
 CYP51 1 -----MDWDYIT-LLKTSVAIIIVFVAKLITS-----SKSKKTS-  
 CYP51A2 1 -----MELDSENKLLKTGLVIVATLVIAKLIFSFFT-----SDSKKR-  
 CYP710A1 1 -----MVFSVSI-FASLAPYLISAFLLFLLVEQL-----SYLFKRN-  
 CYP710A2 1 -----MVFSVSI-FASLAPYLSALLFLLIEQL-----SYLVKRN-  
 CYP710A3 1 -----MVSSVSL-FASLTPYLSALLFLLLEQL-----FYRLKRN-  
 CYP710A4 1 -----MVSSVSL-FASLTPYLSALLFLLLEQL-----FYRVKRN-  
 CYP76C2 1 -----MDIIFEQALFPLFCFV-LSFFIIFFTTRPR-----SSRKVPS-  
 CYP76C4 1 -----MDIISGQALFLFCFI-SSCFLISTARSRR-----SSGRAALP-  
 CYP76C1 1 -----MDIISGQALLLFCFI-LSCFLIFTTTRSGR-----ISRGAALP-  
 CYP76C3 1 -----MSLPLYFLL-TLFFFFFATAKTRR-----SS-STGTLP-  
 CYP706A1 1 -----METASS--NFSLSQILNIEEPYSSVMLGVAALL-AVVCYFWIQGKSKS-----KNGPPLP-  
 CYP706A2 1 -----MGTASSKSNINLSQVLNTEEPYSSVMLAVAALL-AVVCYLWIQGKSKS-----KKEPPLP-  
 CYP706A3 1 -----MTDISS--LFRNRSRKDQLDYG---LTVIVIS-TLCWCLWLYAKCK-----RRSPPLP-  
 CYP71A12 1 -----MEMILM-VSLCLTTLI-TLFLKQFLKRT-----ANKVNL-  
 CYP71A13 1 -----MEMILS-ISLCLTTLI-TLLLRRFLKRT-----ATKVNLP-  
 CYP71A14 1 -----MEMII--ISLCLATIL-ALLLQFLNRTY-----TAKVNLP-  
 CYP71A15 1 -----MEIII--ISLCLATIL-AFLLKPLNRT-----VAKDNLP-  
 CYP71A16 1 -----MEMMIL-ISLCLTTFL-TLLFFKSLKRT-----PNSNLP-  
 CYP71A27 1 -----MEMIL--ISLCLTTLI-AFLFLKPLKRT-----TTKPKLP-  
 CYP71A28 1 -----MIL--ISLCLTTFL-AFLFLNPLKRT-----TTKPNQ-  
 CYP71B10 1 -----M-TVLWVFSLI-LLISILLVAVKHS-----KRRWVRQ-P-  
 CYP71B9 1 -----M-ATIWFSLI-FLCCILLAAPFKHK-----KRRTNQ-  
 CYP71B11 1 -----MSLWYIIVA-FVFFSTIIIVRN-----TRKTKNLP-  
 CYP71B12 1 -----MSLWYIIVA-FVFFSSMIIIVRI-----IRKTKNLP-  
 CYP71B14 1 -----MIWWFIVGA-SFFFAFILIAKD-----TRTTKNLP-  
 CYP71B13 1 -----MSLWYIIVV-FVFFASIFIKN-----TRKTKNLP-  
 CYP71B6 1 -----MSLFSFPIS-TELLPWL LLLIPLLIF-FLLRSPKNLP-  
 CYP71B15 1 -----MS-VFLCFLVLL-PLILIFLNVL-----KPSKYKLP-

CYP71B7 1 -----MS-ILLCFLCLI-PVFLVLSLSILSKR-----LKPSKWKLP-  
CYP71B5 1 -----MS-IFLCFLLLL-PLSLI---FLKK-----LLPSKGKLP-  
CYP71B8 1 -----MIKS-ILLCFFFLF-PLLLT---LFKK-----LLPSKWKLP-  
CYP71B2 1 -----MT-ILLCFFLVLS-LITIVSSIFLKQ-----NKTSKFNLP-  
CYP71B3 1 -----MS-ILLYFFFL---PVILSLIFMKK-----FKDSKRNLP-  
CYP71B4 1 -----MV-SLLSFFLLL-LVPIFFLLIFTKK-----IKESKQNLNLP-  
CYP83A1 1 -----M-EDIIIGVVA-LAAVLLFFLYQK-----PKTKRYKLP-  
CYP83B1 1 -----MDLLLIAG-LVAAAFFFLRS-----TTKKSRLNLP-  
CYP705A2 1 -----MAVLIIFILLCLI-SFLCYSLFFMKPKDS-----RD--GRDLP-  
CYP705A5 1 -----MITVDFENCFIFLLCLF-SRLSYDLFFRKTADS-----RA--GCALP-  
CYP705A8 1 -----MGEIMNVDFVNCLILILLCLL-SILCYSFFFKPKD-----GFNLP-  
CYP705A9 1 -----MNVDFQNCILILLCLL-SFLCYSFFFKPKD-----GFNLP-  
CYP705A3 1 -----MIAIIVEFQNFIFILLCLF-SLLCHSLFFKPKDS-----R--SFVLP-  
CYP705A6 1 -----MAAIVSDFQNCIFIVLCLF-SLFCYSLFFKPKHP-----R--GCDLP-  
CYP705A1 1 -----MDAIVVDSQNCIFIIILLCSF-SLISYFVFFKPKVN-----FDLL-  
CYP705A4 1 -----MIDFQNCIFIFILLCLF-SRLCYSHFFKPKDP-----RL--HFDLP-  
CYP705A12 1 -----MAELIIVDFQNISIFILLCLF-SFLCYALFFKPKG-----FDLP-  
CYP712A1 1 -----MDLKLN-TKLIILITSLAF-PFMLYALFKWFLKEQ-----GSLAATKLP-  
CYP93D1 1 -----MFTLNLDMNYTSCSYLFFTLVT-IFLLHRLFSSSR-R-----G-----LP-  
CYP81D2 1 -----MEA-LMLIFTFC-FIVLSLIFLIGRI-----KRKLNLP-  
CYP81D3 1 -----MEG-QTLIFTFL-FISLSLTFIIGRI-----KRRPNLP-  
CYP81D4 1 -----MDLNQILILSFL-SLFTLAIFFLTRS-----KRKLNLP-  
CYP81D5 1 -----MDLTQILLLSFL-FLTISIKLLLTKS-----NRKPNLP-  
CYP81D6 1 -----MHVSIQHIYKFLDLNMEYFLLSLAF-FLFISVKLLFGKR-----LSKFNLP-  
CYP81D7 1 -----MITPKLELFFIIMFHVNSRFYKLSYNFELPCSVQHIFKFDL-METHFLILSLAF-LFFISLKLFLGKR-----HSKFNLP-  
CYP81D1 1 -----MEETNIRVVLYSIFSLI-FLIISFKFLPK-----KQNLNLP-  
CYP81F1 1 -----MLYFILLPLL-FLVISYKFLYS-K-----TQRFNLP-  
CYP81F2 1 -----MDYVLIVLPLA-LFLIAYKFLFSK-----TQGFNLP-  
CYP81H1 1 -----MDCILLILTTLV-AIFIVKIVLLVTK-----P-NKNLP-  
CYP81G1 1 -----MRLVSRIMCSRGMIDLFLALM-AGFIAYAVVFRSK-----QKKNLP-  
CYP82C3 1 -----MDTSLFSLFVSI-LVFVFIALFKKSK-----KPKYVK--  
CYP82C4 1 -----MDTSLFSLFVPI-LVFVFIALFKKSK-----KPKYVK--  
CYP82C2 1 -----MDTSLFSLFVPI-LVFVFIALFKKSK-----KPKHVK--  
CYP82F1 1 -----MDLIMLFLLSAL-FIFPVLILIKSRL-----RPKNKKST  
CYP79B2 1 -----MNTFTSNSSDLTT-TATETSSFSTLYLLSTLQAF--VAITLVMLLKKLMTDP-----NKKKPYLP-  
CYP79B3 1 -----MQKQLAYITKHILIVSPSPSSLQMDTLASNSDLTTKSSLGMSSTNMYLLTTLQAL--AALCFMLILNKIKSSSR-----NKKLHPLP-  
CYP79A2 1 -----MLAFIIGLLLLALTMKR--KEKKKTMLISPTRNLS-----LPP-  
CYP79C1 1 -----MDYYLNNVIFSUVVTF-SITLNIVFLIKSVVARFL--GRRK-KLP-  
CYP78A6 1 -----MATKLESSLIFALLSKSVLSQTNLAFS-LLAVTIIWLAISLFLWTY-PGGPAWGKYLF  
CYP78A8 1 -----MRTEIESLWVFALASKFNIMYQHFASL-LVAIAITWFTITIVFWST-PGGPAWGKYFF  
CYP78A5 1 -----MSPEAYVLFNFNFNLVTFEAFASV-SLIIATVAFLLS-----PGGLAWAGPGS  
CYP78A7 1 -----MELMNLASKETSYWMIALPAGFGSQNLHVDVSTLGYLFLAVVFLSVTWALAG-GGGVAVWKNGRN  
CYP89A2 1 -----MEIWLILILASLSGSLFHLLLRRL-----NSSSPPLP-  
CYP89A4 1 -----MEIWLILILGSLFSLLLNLLFRRL-----DSSSLPLP-  
CYP89A3 1 -----MATWFHIFCVSFTVNFLLYLFRRL-----TNNNPLP-  
CYP704A1 1 -----MAIIVVTTIFILLSFALYLT-----RIFTGK-  
CYP704A2 1 -----MEILTSIAITVATTIFIVLCFTIYLM-----RIFTGK-

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CYP94B1      1 --MKESFINYVVFCTEVIWSEPQLLFCFYSPIYIIVPLQIKNTNQNNIINLPKQETQESKMEMLNAILILFPIIGFVLIFS-----PTKTKK-
CYP94C1      1 -----MLLIISFTIVSFFFIIIF-----SLFHLL-
CYP86A2      1 -----MDVSNTMLL---VAVVAAYWLWF-----QRISR--
CYP86A4      1 -----MEISNAMLL---VAIVTGYWLWF-----KRISR--
CYP86A8      1 -----MEISTALMI---LSAITAYFLWL-----TFISR--
CYP86A1      1 -----MEALNSILTGYAVAALSVALWF-----YFLSR--
CYP86C1      1 -----MNVLISAVVWVYTHRLSDVALALVGLFLLS-----YLREKLV
CYP86C2      1 -----MSLIDRISGHLCLQDVSIALLGLFLFG-----CLQAKLT
CYP86B1      1 -----MNFNSSYNLTFNDVFFSSSSSDPLVSRRLFLLRDVQILELLIAIFVFAIH-----ALRQK--
CYP96A2      1 -----MASISLLQVSVAILCFLILH-----YFLFKKP
CYP96A5      1 -----MAYVGLVEFIALLVFFFH-----FLIHKKS
CYP96A1      1 -----MALITLLEVSISLLFFSFLYGY-----FLISKKP
CYP96A3      1 -----MAIVIGLLEIFTAFVFFIFQ-C-----LLLHKKT
CYP96A4      1 -----MAMIIGLLEIFIAFIFFFVYQ-C-----FSLHKKT
CYP709A1     1 -----MLLTILKSLLVIFVTTILRVLYDTISCYWLT-----RRIKKIM
CYP709A2     1 -----MMVTLVLKYVLVIVMTLILRVLYDSICCYFLT-----RRIKFFM
CYP709B3     1 -----MELLSTINLLAIALVLLVVKIYGACRILVWR-----WMLSRRF
CYP709B2     1 -----MELISTINLTIIVLLFVVKIWKACWILLR-----LMLSRRF
CYP709B1     1 -----MGLV--IFLALIVLILIGLRIFKAFMLVWHP-----FVLTRRL
CYP72A11     1 -----MEISVASVTVSVAVVVSWVVWRTLQVWVFKP-----KMLESYL
CYP72A13     1 -----MEISVASVTVSVAVVVSWVVWRTLQVWVFKP-----KMLESYL
CYP72A15     1 -----MSSPHPYLFQSFQPFIPRNFLANSLP-LSSLG-KMEISVASVTVSVAVVVSWVVWRTLQVWVFKP-----KMLEHYL
CYP72A14     1 -----MEISVSSVTFSLAVVVSWVVWRTLQVWVFKP-----KMLERSL
CYP72A10     1 -----MRGGNIHIHTFF-ETISLLWERKMEISVACVTVSVAVVVSWVVWRTLQVWVFKP-----KMLESYL
CYP72A7      1 -----MSFSVVAALP-VLVAVVLTWRIVKVVWIKP-----KMLESSL
CYP72A9      1 MWPEVVRNLSKGQSSTVTNNILLSEHKSISTKDKSAHAFSSSKFSKILRDQKHQMEIVIASLALVVVLCIWRILEWVWIKP-----KMLESYL
CYP72A8      1 -----MSDTKISAVAVAAVVVTTVTVWVWKGLNVAWLR-----KKNEAYL
CYP82G1      1 -----MTFLFSTLQLSLFSLALVIFGYIFLRKQLS-----RCEVDSS-
CYP72B1      1 -----MEEESSWFIPKVLVLSVILSLVIVKGMSSLWWR-----PRKIEEHF
CYP712A2     1 -----MVDLQYFSVILVCLGITVLIQAITNRLR-----DRLPPL-
CYP90C1      1 -----MDYLVAGFLVLTAGILLRPWLWLRNRNSKTKD-----GDEEDNEEK
CYP718       1 -----MVLEPNFVLSVFLCIAATISSTLFFFRRKKHHR-----FITKKIQKKK
CYP84A1      1 -----MESSISQTLKSLSDPTSLVIVVSLFIFISFTR-----RRRPPYP-
CYP85        1 -----MGAMMMGLLLIIVSLCSALLRWNQMR-----YTKNGLP-
CYP715A1     1 -----MEFFEMSRVWYIFFKVFFVVICLMFLKFLRCWIWP-----VRAQKKLRG
CYP98A3      1 -----MSWFLIAVATIAAVVSYKLIQR-----LRYKFP-
CYP714A1     1 -----MENFMVEMAKTISWIVVIGVGLGIRVYGKVMAEQWRMRKLTMOGVKG-----KMLKLP-
CYP73A5      1 -----MDLLLLEKSLIAVFAVILATVISKLRG-----KMLKLP-
CYP701A3     1 -----MAFFSMISILGFVISSFIFIFFFKLLSFRK-----NMSEVSTLP-
CYP711A1     1 -----MKTQHQQWVEVLDPPFLTQHEALIAFLTFAAVVIVIYLGRP-----SWSVCN-
CYP97B3      1 -----MAFPAAATYPHFQGGALHLGRDHCDFGFYPTISSVNSRRASVSIKQOSTEPK
CYP74A       1 -----MASISTPFPISLHPKTVRSKPLKFRVLTRPIKASGSETPDLTVAIRTGSKDLPI
CYP74B2      1 -----MAATSPRPPPSTSLTSQQP-----PSPPSQLPL
consensus   1

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CYP702A5	37	-----	PGSM-GYP-II	IGETFEFMKLHDA	----	IQLPTFVKEKLLRHG	-----	PVFRTSLFGGKVIIST	----	DIGLNMEIAKT	
CYP702A6	37	-----	PGSM-GYP-II	IGETFEFMKPHDA	----	IQLPTFVKEKVLRHG	-----	PVFRTSLFGGKVIIST	----	DIGLNMEIAKT	
CYP702A1	37	-----	PGSM-GFP-II	IGETFEFMKPHDA	----	FQFPFRIKERIIRYV	-----	PIFRTSLFGAKVIIST	----	DIELNMEIAKT	
CYP702A2	37	-----	PGSM-GFP-FI	GETFEFFKPHDA	----	LQFSLSIVIFFNRHG	-----	PVFRTSLFGDKAIIISM	----	DMEINLEMAKA	
CYP702A3	38	-----	PGSM-GFP-II	GETFEFMTFPDIS	----	LVVSPYLKKRISRYCS	-----	KVFRTSLFGAKVIVSI	----	DPDVNMEIAKA	
CYP708A1	47	-----	PGSM-GFP-VI	GETVEFFKPYSF	----	NEIHPFVKKRMFKHGG	-----	SLFRTNILGSKTIVST	----	DPEVNFIEILKQ	
CYP708A2	37	-----	PGSM-GLP-II	GETCDFFEFHGL	----	YEISPFVKKRMLRYG	-----	PLFRTNIFGSNTVVLT	----	EPDIIFEVFRQ	
CYP90A1	33	-----	PGSL-GLP-LI	GETFQLIGAYKT	----	ENPEPFIDERVARYG	-----	SVFMTHLFGSEPTIFSA	----	DPETNRFVLQN	
CYP90B1	41	-----	PGKS-GWP-FI	GETIGYLKPYTA	----	TTLGDFMQQHVSKYV	-----	KIYRSNLFGEPTIVSA	----	DAGLNRFILQN	
CYP707A1	38	-----	PGTM-GWP-YVG	---ETFQLYSQ	----	DPNVFFQSKQKRYG	-----	SVFKTHVLGCPCVMIS	----	SPEAAKFVLT	
CYP707A3	38	-----	PGTM-GYP-YVG	---ETFQLYSQ	----	DPNVFFAAKQRRYV	-----	SVFKTHVLGCPCVMIS	----	SPEAAKFVLT	
CYP707A2	51	-----	PGSM-GLP-YIG	---ETLRLYTE	----	NPNSFFATRQNKYV	-----	DIFKTHILGCPCVMIS	----	SPEAARMVLS	
CYP88A3	47	-----	PGDL-GWP-FI	GNMLSFLRAFKT	----	SDPDSFTRTLIKRYGPK	----	GIYKAHMFGNPSIIVT	----	TSBTCRRVL-T	
CYP88A4	46	-----	PGDL-GWP-VI	GNMWSFLRAFKT	----	SDPESFIQSYITRYGRT	----	GIYKAHMFGYPCVLVT	----	TPETCRRVL-T	
CYP716A1	36	-----	PGNT-GLP-LI	GESFSFSLSAGRQ	----	GHPEKFITDRVRFPSSSS	----	CVFKTHLFGSPTAVVT	----	GASGNKFLFTN	
CYP716A2	35	-----	PGKI-GFP-LI	GETLSFSLSAGRQ	----	GHPEKFTDRVRHFFSSG	----	IFKTHLFGSPFAVVT	----	GASGNKFLFTN	
CYP51	36	V-----	VPL-PV	LQAWPPFIGSLIRFMKGP	-----	IVLLREYPKLGSV	----	FTVKLLH-KNITFLIGP	-----	EVSSHFFNA	
CYP51A2	39	-----	L-PPTL	KAWPPLVGSLIKFLKGP	-----	IIMLREEYPKLGSV	----	FTVNLVH-KKITFLIGP	-----	EVS AHFFKA	
CYP710A1	37	-----	I-PG	FFVPP-II	GNVALVRDP	-----	TSFWDKQSSTANIS-G	---	LSANYLIGKFIYIRDT	----	ELSHQIFSN
CYP710A2	37	-----	L-PG	LFVPP-II	GNALSVRDP	-----	TSFWFKQSDTACTSPG	---	LAANYLIGKFIYIRDT	----	ELSHQIFSN
CYP710A3	37	-----	L-PG	LFVFP-II	GNVVALIRDP	-----	TSFWDKQSAMADTSVG	---	LSVNYLIGKFIYIKDA	----	ELSNKVFNS
CYP710A4	37	-----	L-PG	LFVFP-II	GNVVALIRDP	-----	TSFWDKQSAMADTSVG	---	LSVNYLIGKFIYIKDA	----	ELSNKVLNS
CYP76C2	40	-----	PGPP-RLP-II	GNLHLVGR-N-P	-----	HHSFADLSKTYCP	-----	IMSLKFGSLNTVVVT	----	SPEAAREVLN	
CYP76C4	40	-----	PGPP-RLP-II	GNLHQVGR-N-P	-----	HSSFADLAKTYCP	-----	IMSLKFGCLNSVVIT	----	SPEAAREVLR	
CYP76C1	40	-----	PGPP-RLP-II	GNLHLVGR-H-P	-----	HRSFAELSKTYCP	-----	VMSLKLGLSLNTVVIA	----	SPEAAREVLR	
CYP76C3	32	-----	PGPP-ILP-LV	GNLFQLGF-N-P	-----	HRSLAAFSKTYCP	-----	IMSLKLGRLTAVVIS	----	SPEAAKEALR	
CYP706A1	53	-----	PGPW-PLP-IV	GNLPFLNSDV-L	-----	HTQFQALTLKHCP	-----	LMKIHLGSKLAIVVS	----	SPDMAREVLK	
CYP706A2	55	-----	PGPW-PLP-IV	GNLPFLNSDV-L	-----	HTQFQALTLKYCP	-----	LMKIHLGSKLAIVVS	----	SPDMAREVLK	
CYP706A3	48	-----	PGPW-GLP-II	GNLPFLQP-E-L	-----	HTYFQGLAKKHCP	-----	IFKLWLGAKLTIVVT	----	SSEVAQEILK	
CYP71A12	35	-----	PSPW-RLP-LI	GNLHQLSLH--P	-----	HRSLRSLSLRYCP	-----	LMLLHFGRVPILVVS	----	SGEAAQEVLK	
CYP71A13	35	-----	PSPW-RLP-VI	GNLHQLSLH--P	-----	HRSLRSLSLRYCP	-----	LMLLHFGRVPILVVS	----	SGEAAQEVLK	
CYP71A14	35	-----	PSPW-RVP-VI	GNLHQLSLH--P	-----	HRSLRSLSHRYCP	-----	LMLLHFGRVPILVVS	----	SSDVAHDLMK	
CYP71A15	34	-----	PSPW-RVP-VI	GNLHQLSLH--P	-----	HRSLRSLSHRYCP	-----	LMLLHFGRVPILVVS	----	SSDVAHDLMK	
CYP71A16	34	-----	PSPW-RLP-VI	GNLHQLSLH--P	-----	HRALSLSARHCP	-----	LMLLRFGRVPIVVS	----	SADVAHDMK	
CYP71A27	35	-----	PSPW-RLP-VI	GNLHQLGPN--P	-----	HRYLHSLSLRYCP	-----	LMLLHFGRVPILVVS	----	CPDVTNDIMK	
CYP71A28	33	-----	PSPW-RLP-VI	GNLHQLSLH--P	-----	HRSFRSLSLRLWS	-----	AHAPSLRSCPYPFRFSKYI	----	SSSDVAHDMK	
CYP71B10	32	-----	PSPW-GLP-LI	GNLHQLGEL--P	-----	HQSLCKLSKRYCP	-----	VMLLKLGRVPTVIVS	----	TPETAQVLLK	
CYP71B9	33	-----	PSPW-GFP-II	GNLHQLGEL--P	-----	HQSLWLSKTYCP	-----	VMLLKLGSVPTVVVS	----	SSETAQVLLK	
CYP71B11	31	-----	PGPP-RLP-II	GNLHQLGSK--P	-----	HSSMFKLSEKYCP	-----	LMALRFGSVSTVVAS	----	TPETVKEVLK	
CYP71B12	31	-----	PGPP-RLP-II	GNLHQLGSK--P	-----	HRSMFKLSETYCP	-----	LMSLKFSGSVSTVVAS	----	TPETVKEVLK	
CYP71B14	31	-----	PGPP-RLP-II	GNLHQLGSK--P	-----	QRSLFKLSEKYCS	-----	LMSLKFGNVSAVVAS	----	TPETVKDVLK	
CYP71B13	31	-----	PGPP-RLP-II	GNLHQLGSK--P	-----	HRSMFKLSEKYCP	-----	LVYLKLGKVPVSVAS	----	TPETVKDVLK	
CYP71B6	38	-----	PGPP-RLP-LI	GNLHQLGSL--P	-----	HRSLRDSLKRYCP	-----	VITVYLGSRVTVVVH	----	SPETAEEVLK	
CYP71B15	30	-----	PGPK-KLP-II	GNLHQRRTL--H	-----	PRNRRNLAEMYCP	-----	VALLQYGFVPVVAIS	----	SKEAAEEVLK	

CYP71B7 34 -----PGPK-TLP-IIGNLHNLITGL--P-----HTCFRNLSQKFCP-----VMLLHFGFVPPVVVIS-----SKEGAEAEALK-  
CYP71B5 30 -----PGPK-GLP-IIGNLHQFGRF--L-----HKSILHKISQEYCP-----VMLLHFGVVPVLIIVS-----SKEGAEAEVLK-  
CYP71B8 32 -----PGPT-GLP-IIGNLHQLGRL--L-----HSSFHKLKSLHCP-----VMLLRFQGVVPMVVIS-----SKEAAKQVLLK-  
CYP71B2 33 -----PSPS-SLP-IIGNLHHLLAGL--P-----HRCFHKLKSIKYP-----LVFLRLGKSVPPVVIS-----SSEAAEAVLK-  
CYP71B3 31 -----PSPS-KLP-IIGNLHQLRGL--F-----HRCLHKLKSKHCP-----VLLLRLGKSIDMVVIS-----SQETEEVLK-  
CYP71B4 34 -----PGPA-KLP-IIGNLHQLOGL--L-----HKCLHDLKSKHCP-----VMHLRLGFAPMVVIS-----SSEAAEEALK-  
CYP83A1 32 -----PGPS-PLP-VIGNLLQLQKLN-P-----QRFFAGWAKKYCP-----ILSYRIGSRMTMVVIS-----SAELAKELLK-  
CYP83B1 31 -----PGPK-GLP-IIGNLHQMEKFN-P-----QHFLFRLSKLYCP-----IFTMKIGRRRLAVIS-----SAELAKELLK-  
CYP705A2 36 -----PSPP-SLP-IIGHLHLILLST-LT-----HKSFQRLSSKYCP-----LLHLRIFHVPIVILAS-----SASVAYEIFR-  
CYP705A5 41 -----PSPP-SLP-IIGHLHLILFVP-I-----HQSFKNISSKYCP-----LLHLRFFNFPIVLVS-----SASTAYEIFK-  
CYP705A8 41 -----PSPP-SLP-IIGHLHLLLSLF-M-----HRSLQKLSSKYCP-----LLYLHVFNVPILLVS-----SPSIAYEIFR-  
CYP705A9 37 -----PSPP-SLP-IIGHLHLLLSLF-M-----HRSLQKLSSKYCP-----LLYLHVFNVPILLVS-----SPSIAYEIFR-  
CYP705A3 42 -----SSPP-SLP-IIGHLHLLLSVL-T-----HKSLQKLSSKYCP-----LLLIRIFVPIILVS-----SSSMAYEIFK-  
CYP705A6 43 -----PSPP-SLP-IIGHLHLILFSP-L-T-----HKSLQKLSSKYCH-----LLHLRIFNVPIVILVS-----SASVAYEIFR-  
CYP705A1 40 -----PSPP-SLP-IIGHLHLLLSLTL-I-----HKSLQKLSSKYCP-----LLHLRIFNIPFIVLVS-----SDSLAYEIFR-  
CYP705A4 39 -----PSPP-SLP-IIGHLHLLLSVL-L-----HRSLQKLSTKYCS-----ILYLRFVFRFPVVLIS-----SASIAYEIFR-  
CYP705A12 40 -----PSPP-SLP-IIGHLHLLLSSS-LP-----HKSFQKLSFKYCP-----LLHLRIFNFPMVLVS-----SASMAYEVFR-  
CYP712A1 43 -----QSPR-ALP-FIGHLHLIGKVL-P-----VSFQSLAHKYCP-----LMEIRLGASKCVVVS-----SSVAREIFK-  
CYP93D1 40 -----PGPR-GLP-VIGHMHLRSSL-P-----RSLQALAHYCP-----LMTIRIGSLRVLVVS-----DSDTAKLILK-  
CYP81D2 32 -----PSPAWALP-VIGHLRLKPP---L-----HRVFLSVSQSICDAP-----IISLRLGNRLLFVVSSH-----SIAEECF-  
CYP81D3 32 -----PSPSWALP-VIGHLRLKPP---L-----HRVFLSVSESLDAP-----IISLRLGNRLLFVVSSH-----SIAEECF-  
CYP81D4 33 -----PSPAISLP-VIGHLHLKPP---L-----HRTFLSLSKSLGNAP-----VFHLRLGNRLVYVISSR-----SIAEECF-  
CYP81D5 33 -----PSPAYPLP-VIGH-HLLKQP---V-----HRTFHSISKSLGNAP-----IFHLRLGNRLVYVISSH-----SIAEECF-  
CYP81D6 48 -----PSPARPLP-LIGHLHLKLP---L-----HRTFLSFSQSICGAP-----IFCLRLGNRLTVVVSYY-----SIAEECF-  
CYP81D7 77 -----PSPARPLP-FIGHLHLKQP---L-----HRTFLSFSQSICDAP-----IFSLRLGNHLLTVVVSYY-----SIAEECF-  
CYP81D1 35 -----PSPPGWL P-IIGHLRLKPP---I-----HRTLRSFSETLDHNDG--GGVMSLRLGSRLLVYVSSHK-----VAAEECF-  
CYP81F1 30 -----PGPP-SRP-FVGHLLMKPP---I-----HRLLRYSNQYCP-----IFSLRFGSRRVVVITSP-----SLAQESFTG-  
CYP81F2 32 -----PGPT-PFP-IVGHLLVKPP---V-----HRLRFRFAEKYGD-----IFSLRYGSRQVVVSSL-----PLVRESFTG-  
CYP81H1 32 -----PSPNICFP-IIGHLHLKPKL---L-----HRTLSHLSHSLCP-----VFSRLRGSRLAVIISPP-----TAAEECF-  
CYP81G1 44 -----PNPV-GFP-VIGHLHLKPE---V-----HRSLRDLRNLGID-----VFILRLGSRRAVVVTS-----SAAEEFLSQ-  
CYP82C3 32 A-----PAPSGAWP-IIGHLHLGGKEQLL-----YRTLGMADHYCP-----AMSLRSGSSETFVSSFF-----EVAKDCFT-  
CYP82C4 32 A-----PAPSGAWP-IIGHLHLGGKEQLL-----YRTLGMADHYCP-----AMSLQSGNEAFVSSFF-----EVAKDCFT-  
CYP82C2 32 A-----PAPSGAWP-IIGHLHLGSGKEQLL-----YRTLGMADQYCP-----AMSLRSGSSETFVSSFF-----EVAKDCFT-  
CYP82F1 34 A-----PMVPGAWP-LLGHLLHFDTVN-PT-----HVTFGAMADVCP-----VFMAKLSIKVMIINSK-----EVAKEIYT-  
CYP79B2 58 -----PGPT-GWP-IIGMPTMLK-SRPV-----FRWLHSIMKQLNT-----EIACVKLGNTHTVITV-----CPKIAREILK-  
CYP79B3 83 -----PGPT-GFP-IVGMIPAMLK-NRPV-----FRWLHSLMKELNT-----EIACVRLGNTHTVIVT-----CPKIAREIFK-  
CYP79A2 37 -----GPK-SWP-LIGNLPEILGRNKP-----FRWIHSLMDELNT-----DIACIRLANTHVIPVT-----SPRIAREILK-  
CYP79C1 42 -----PGPR-GFP-IIGNLVGMLK-NRPT-----SKWIVRMMDMKT-----DIACFRFRVHVIVIT-----SDVIAREVVR-  
CYP78A6 58 G-RLISGSY--KTGNVI-PGPK-GFP-LVGSMSLSSTL-A-----HRRIADAEEKFAKR-----LMAFSLGETRVIVTC-----NPDVAKEILN-  
CYP78A8 58 TRRFISLDYNRKYKNLI-PGPR-GFP-LVGSMSLRSSHV-A-----HQRIVASVAEMSNAKR-----LMAFSLGDTKVIVTC-----HPVAKEILN-  
CYP78A5 48 S-----KSRVSI-PGP--S-----CSLSVFGSGSN-P-----HRVLAALAKRFKASP-----LMAFVSGFSRFVISS-----EPETAKEILS-  
CYP78A7 64 R-----LGRVAI-PGPR-GIP-VFGSLFTLSRGL-A-----HRTLAAAMAWSRANTE-----LMAFSLGSTPVIIVAS-----EPNIAREILM-  
CYP89A2 33 -----PDPN-FLP-FLGTLQWLREGLGGL-----ESYLRSVHHRICP-----IVTLRITSRPAIFVA-----DRSLTHEALV-  
CYP89A4 34 -----PDPN-FFP-FLGTLQWLROGLGGL-----NNYLRSVHHRICP-----IITLRTSRPAIFVA-----DRSLAHQALV-  
CYP89A3 33 -----PNPN-FFP-MPGPFQWLRQGFDDF-----YSYLRSIHHRICP-----IISLRFVPAIFVS-----DRSLAHKALV-  
CYP704A1 28 -----SR-NDKR-YTP-VHATIFDILFFHSHK-----LYDYETEIARTK-----PTFRFLSPGQS-----EIFTADPRNVEH-  
CYP704A2 34 -----SR-NDKR-YAP-VHATVFDLLFHSDE-----LYDYETEIAREK-----PTYRFLSPGQS-----EILTADPRNVEH-

CYP94B1 88 -----AK-TASP-SND-TSYQIIGSILSFNK-----NRHRLQWYTDLLRLS-----PSQTITVDLLFGRR--TIITANPNVEH  
 CYP94C1 25 -----FL-QKLR-YN-CEICHAYLTSSWKK-----DFINLSDWYTHLLRRS-----PTSTIKVHVLN-----SVITANPSNVEH  
 CYP86A2 26 -----WL-KGPR-VWP-VLGSIPGLIEQRD-----RMHDWITENLRACG---GTYQTCICAVPFLAKKQGLVTVTCDPKNIEH  
 CYP86A4 26 -----WL-KGPR-VWP-LIGSLPGLIEQRD-----RMHEWITENLRACG---GTYQTCIFAVPFLAKKQGLVTVTCDPKNIEH  
 CYP86A8 26 -----CL-KGPR-VWP-IIGSLPGLIENCE-----RMHDWISDNLRACS---GTYQTCICAI PFLAKKQGLVTVTCDPKNLEH  
 CYP86A1 29 -----RL-TGPK-VLP-FVGSIPYLIANRS-----RIHDWIADNLRATG---GTYQTCMTVI PFAKAQGFYTVTCHPKNVEH  
 CYP86C1 39 -----SK-GGPV-MWP-VLGIIPMLALNKH-----DLFTWCTRCSVRSR---GTFHYRGIWFGGAYG-----IMTADPANVEH  
 CYP86C2 13 -----NK-GEPV-QWP-VFGITPEFFLHVH-----DMFGWVTRCLTKSR---GTFPYQGIWFS<sup>C</sup>SYG-----AMTSVPANIEY  
 CYP86B1 58 -----KY-QGLP-VWP-FLGMLPSLAFGLRG-----NIYEWLSDVLCQLN---GTFQFRGPWFSSLNS-----TITCDPRNVEH  
 CYP96A2 28 -----HG-RYPR-NWP-VLRMLPAMLKALH-----RIYDYSVKILETSD---LTFPFKGPFRFTGMDM-----LLTVDPANIHH  
 CYP96A5 28 -----HQ-ITPR-NWP-VLGMIPGVLVMLH-----RINDYVAEILEVSN---LTFAFKGPWFSGMMN-----LITADPSNIQH  
 CYP96A1 30 -----HR-SFLT-NWP-FLGMLPGLLVEIP-----RVYDFVTEILLEASN---LTYPFKGPFCFGLDM-----LITVDPANIHH  
 CYP96A3 30 -----PK-PLLT-NWP-ALGMLPGLLLQVP-----RIYDWITEVLEATD---MTFCFKGPCLSGMDI-----LLTVDPVNIHY  
 CYP96A4 30 -----PK-HVMN-NWP-VLGMIPGVLFQIP-----RIYDFVTEALEAEN---MTGCFIGPWLSGTDI-----LLTVDPVNIQY  
 CYP709A1 40 E-----QQGV-TGPK-PRP-LTGNILEISAMVQSA--SKDCDSIHHDIVGRLLPHYV---AWSKQYGRFIVWNGTDP-RLCLTETELIKE  
 CYP709A2 41 E-----RQGI-TGPK-PRL-LTGNLIDISKMLSHSA--SNDCSSIHNIVPRLPHYV---SWSKQYGRFIMWNGTEP-RLCLTETEMIKE  
 CYP709B2 41 K-----KQGI-SGPK-YRI-LYGNLREIRKMKNEAK--LMVLDPSNNDIVPRVPLPHLQ---QWKSQYGETFLYWQGTDP-RLCISDHELAKQ  
 CYP709B3 41 K-----KQGI-SGPK-YKI-LYGNLSEIKMKKREAD--LCVLDPSNNDIFPRVFPQYH---QWMSQYGD<sup>T</sup>FLFWGTGTP-TIYISNHELAKQ  
 CYP709B1 39 K-----NQGI-SGN-YRI-FYGNLSEIKMKRESH--LSILDPSNNDIFRVLPHYQ---KWSQYGETFLYWNGTEP-RLCISDPELAKT  
 CYP72A11 40 R-----RQGL-AGTP-YTP-LVGD<sup>L</sup>LKKNFSMRAEAR--SKPIN-LTDDITPRIVPYPL---QMLKTHGR<sup>T</sup>FFTFWGAIP-TITIMDPEQITE  
 CYP72A13 40 R-----RQGL-AGTP-YTP-LVGD<sup>L</sup>LKRNFSMLAEAR--SKPIN-LTDDITPRIVPYPL---QMLKTHGR<sup>T</sup>FFTFWGPPIPI-TITIMDPEQIKE  
 CYP72A15 75 R-----RQGL-AGTP-YTP-LVGD<sup>L</sup>LKKNFTMLSEAR--SKPLK-LTDDISPRVVPYPL---QMFKTYGR<sup>T</sup>YTFWGPPIPI-TITIMDPEQIKE  
 CYP72A14 40 R-----RQGL-SGTS-YTP-LIGDFKKMISMFIAT--SKPIK-PTDDITPRVMPHPL---QMLKTHGR<sup>T</sup>NLTFWGPPIPI-TITIMDPEQIKE  
 CYP72A10 62 R-----RQGL-AGTP-YTP-LIGDLKRNVNMLTEAT--SKPIK-LTEDITPRVLPHPF---QMLKTHGR<sup>T</sup>FFTFWLGPKP-TITIMDPELIEKE  
 CYP72A7 39 K-----RQGL-IGTP-YTP-LVGD<sup>L</sup>LKRNVDMMMEAR--SKPIN-VTDDITPRLLPLAL---KMLNSHGK<sup>T</sup>FFIWI<sup>G</sup>GPLP-TIVITNPEQIKE  
 CYP72A9 91 R-----RQGL-VGTR-YTP-LVGDVRRSFSMLKEAR--SKPMK-PTDDLISLVMPYSF---HMLNTYGR<sup>T</sup>FFTFW<sup>S</sup>GPPIPI-AITIMNPOLIEKE  
 CYP72A8 44 K-----RQGL-SGTP-FTF-LVGD<sup>L</sup>LKREASMVEQEK--SRPIN-LTDDYTHRVMPLIQ---QTVKDHGK<sup>T</sup>SYM<sup>M</sup>GPPIPI-SVIVTKPEHIKD  
 CYP82G1 38 -----TI-PEPLGALD-LFGHLHLLRGKK-----LLCKKLAAMSQKH<sup>C</sup>P-----IFSLKLG<sup>F</sup>YRLVVAS-----DPKTVKDCFT-  
 CYP72B1 43 S-----KQGI-RGPP--YHFFIGNVKELVGMMLKAS--SHMPF<sup>S</sup>HNILPRVLSFYH---HWRKIY<sup>G</sup>ATFLVWFGPTFR-LTVADPDLIRE  
 CYP712A2 36 -----PSPT-ALP-TIGHIHLGPIA-----HQALHKL<sup>S</sup>IRYCP-----LMYLFIG<sup>S</sup>IPNLIVS-----SAEMANEILK-  
 CYP90C1 43 K-----KGMI-PNGSLGWP-VIGETLNFACGYSS----RPVTFMDK<sup>R</sup>KSIYCK-----VFKNII<sup>G</sup>TPIIIST-----DAEVN<sup>K</sup>VVLQN  
 CYP718 44 K-----LL-PGEM-GLP-WIGETMDFYKAQKSN---RVFEDFVN<sup>P</sup>RIKHCN-----IFKTRIM<sup>G</sup>SPTIVVN-----GAEANRLILSN  
 CYP84A1 42 -----PGPR-GWP-TIGNMLMMDQLT-----HRGLANLAKKYCG-----LCHLRM<sup>G</sup>FLHMYAVS-----SPEVARQVLQ-  
 CYP85 36 -----PGTM-GWP-IFGETTEFLKQG-----PNFMRN<sup>Q</sup>RLRYCS-----FFKSHLL<sup>G</sup>CPTLISM-----DSEVNRYILKN  
 CYP715A1 46 N-----GF-VGPAPSFP--FGNLNDMKKLMASV--VVDNSKSSTIINHDIHSIALPHFARWQ<sup>E</sup>YGVFVYWLGI<sup>E</sup>P-FVYVADPE<sup>F</sup>FLSV  
 CYP98A3 29 -----PGPS-PKP-IVGNLYDIKPVV-----FRCYYEWAQSYCP-----IISVWIG<sup>S</sup>SILNVVVS-----SAELAKEV<sup>L</sup>LK-  
 CYP714A1 50 -----PPPS-LFRGNVPEM<sup>Q</sup>KIQSQIMSNSKHYS<sup>G</sup>DNIIAHDYTSSLFPYLD---HWRKQYGRVYTYSTG-VKQHYLMNHP<sup>E</sup>LVKE  
 CYP73A5 35 -----GGPI-PIP-IFGNWLQVGD<sup>L</sup>N-----HRNLVDYAKK<sup>F</sup>GD-----LFLLRM<sup>G</sup>QRNLVVVS-----SPDLTKEV<sup>L</sup>LK  
 CYP701A3 43 -----SV-PVVP-GFP-VIGNLQQLKEKK-P-----HKTFTRWSEIYCP-----IYSIKM<sup>G</sup>SSSLIVLN-----STETAKEAMV-  
 CYP711A1 46 -----V-PGPT-AMP-LVGHPLMAKYG-----PDVFSVLAKQYCP-----IFR<sup>F</sup>QMRQPLIIIA-----EAELCREVGI-  
 CYP97B3 56 TNGNILDNASLLTNFLSG<sup>S</sup>LSGSMPTAEC<sup>S</sup>VSDLFGKP-----LFLSLYDWFL<sup>E</sup>HCG-----IYKLAFC<sup>G</sup>PKAFVVIS-----DP<sup>I</sup>IARHVL<sup>R</sup>-  
 CYP74A 55 R-----NIPGNY-GLP-IVGPIKDRWDYFYDQG----AEFFKSRIRKYNST-----VYRVNMP<sup>G</sup>AFIAENPQ--VVALLD<sup>G</sup>KSFV  
 CYP74B2 29 R-----TMP<sup>S</sup>SY-GWP-LVGF<sup>L</sup>SDRLDFQGP-----DKFFRTRA<sup>E</sup>KYKST-----VFR<sup>T</sup>NI<sup>P</sup>PT<sup>F</sup>PF<sup>F</sup>GNVNP<sup>N</sup>IVAVLD<sup>V</sup>KSF<sup>S</sup>H  
 consensus 101 .....

CYP702A5 100 NH----IPGMP--KSLERLFGAT--NLFVN--KDTKHARSLTNQFLGSQALKLRMIQIDIFLAR-THMKEGAR-----KGC-----LDVKETA  
 CYP702A6 100 NH----IPGMP--KSLARLFGAN--NLFVN--KDTKHARSLTNQFLGSQALKLRMLQIDIFLVR-THLKEGAR-----KGS-----LDIKETT  
 CYP702A1 100 NH----APGLT--KSIAQLFGEN--NLFVQS-KESHKVRNLTFFQLLGSQGLKLSVMQEDIDLTR-THMEEGAR-----RGC-----LDVKEIS  
 CYP702A2 100 NS----VPGVT--KSVIRLFGEN--NLFVQS-KESHKVRNLTFFQLLGPQGLKSRMIEDVDLLAR-TYMEEGAR-----NGY-----KYIYNQT  
 CYP702A3 103 SS----QLRAT--ESVTRIFGEN--NPFVQS-KEIHKYVRNLTFRVGPQGLKTRLIHIDNLLR-NDVENGAR-----NGS-----FDVREAT  
 CYP708A1 111 ENRC-FIMSYF--EALVRFQKGD--NLFVQKQDFHRYMRHIALQLLGPCECLKQRFIQDIATS-EHLKSVSF-----QGV-----VDVKDTS  
 CYP708A2 100 ENKS-FVFSYF--EAFVFPFQKE--NVFLKHG-NIHKHVQIISLQHLGSEALKKKMIGEIDRVTY-EHLRSKAN-----QGS-----FDAKEAV  
 CYP90A1 96 EGKL-FECSTF--ASICNLFGKH--SLLLMK-GSLHKRMHSLTMSFANSSI IKDHLMLDIDRLVR-FNLDSWS-----SR-----VLLMEEA  
 CYP90B1 104 EGRL-FECSTF--RSIGGILGKW--SMLVLV-GDMHRDMRSISLNFLSHARLRTILLKDVVERHTL-FVLDSWQQ-----NSI-----FSAQDEA  
 CYP707A1 97 KSHL-FKPTFP--ASKERMLGKQ--AIFFHQ-GDYHAKLRKLVLRVAF-MPEAIRNMVPHIESIAQ-DSLRSWEG-----TM-----INTYQEM  
 CYP707A3 97 KSHL-FKPTFP--ASKERMLGKQ--AIFFHQ-GDYHAKLRKLVLRVAF-MPEAIRNMVPHIESIAQ-DSLRSWEG-----TQ-----LNTYQEM  
 CYP707A2 110 KAHL-FKPTYP--PSKERMLGPE--ALFFHQ-GPYHSTLKRVLQSSSF-MPSALRPTVSHIELLVL-QTLSSWTS-----QKS-----INTLEYM  
 CYP88A3 111 DDDA-FKPGWP--TSTMELGRK--SFVGIS-FEEHKRLRRLTAAPVNGHEALSTYIPIYIENVI-TVLDKWK-----MGE-----FEFLTHL  
 CYP88A4 110 DDDA-FHIGWP--KSTMELGRK--SFVGIS-FEEHKRLRRLTSAPVNGPEALSVYIQFIEETVN-TDLEKWSK-----MGE-----IEFLSHL  
 CYP716A1 103 ENKL-VVSWWP--DSVNIKIFP-----SSMQTS-SKEEARLRMLLSQFMKPEALRRYVGMDEIAQRHFETEWAN-----QDQ-----VIVFPLT  
 CYP716A2 99 ENKL-VISWWP--DSVNIKIFP-----SSTQTS-SKEEAIKTRMLLMPMSMKPEALRRYVGMDEIAQKHFEETEWAN-----QDQ-----LIVFPLT  
 CYP51 100 YESE-LSQKEI-YKFNVPFTG-P--GVVFDVDYF-VRMEQFRFFSSALKGQQ-LRGYVDQMTKETEF-DYFSKWGES-----G-----EVDLKAEL  
 CYP51A2 100 SESD-LSQEVY-YQFNVPFTG-P--GVVFDVDYS-VRMEQFRFFTEALR-----DYFSKWGES-----G-----EVDIKVEL  
 CYP710A1 99 VRPD-AFHLLG-HPFGKQLFGDHNLIYMFGEHDHKSVRRLAPNFTPKALS-----TYSALQQLVIL-RHLRQWEGST---SGGSR-----PVSLRQLV  
 CYP710A2 100 VRLE-AFHPLG-HPFGKQLFGDHSLIYLFGEHDHKTVRRHLAPNFTPKALS-----TYSALQQIVML-RHLRQWEEF---SGGTK-----PVSMRDLV  
 CYP710A3 100 IRPD-AFQLVG-HPFGKQLFGDHSLIYMFGEHDHKSVRRLAPNFTPKALS-----AYSSLQQIVIL-RHLRQWEEF---SSGSR-----PVSMRQLI  
 CYP710A4 100 IRPD-AFQLTG-HPFGKQLFGDHSLIYMFGEHDHKSVRRLAPNFTPKALS-----AYSSLQQIVIL-RHLRQWEEF---SSGSR-----PVSMRQLI  
 CYP76C2 97 TYDQ-ILSSRT-PTNSIRSNHDKVSVVWLPSSSRWRLLRKLRSATQLFSPQRIEATKTLRNNKVK-ELVSFMS-SEEEA-----VDISRAT  
 CYP76C4 97 THDQ-ILSGRK-SNDSIRCFGHEEVSIVLWLPSSARWRLLRKLRSATQLFSPQRIEATKALRNNKVK-ELVSFMS-SEEEA-----VDISRAS  
 CYP76C1 97 THDQ-ILSARS-PTNAVRSINHQDASLWLPSSARWRLLRKLRSATQLFSPQRIEATKALRNNKVK-ELVSFMS-SEEEA-----VDISRVA  
 CYP76C3 89 THDH-VMSART-FNDALRAFDDHKSIVWIPP-SARWRFLKKTITKYLLSPQNLDAIQSLRMRKVE-ELVSLVNEF---RERGEA-----IDLARAS  
 CYP706A1 111 THDI-TFANHD-LPEVGKINTYGGEDILWSPY-GTHWRRLRKLKVMKMTPTPLEASYSSTRRETR-QTIVHMSEM---AREGSP-----VNLGEQI  
 CYP706A2 113 THDI-TFANHD-LPEVGKINTYGGEDILWSPY-GTHWRRLRKLKVMKMTPTPLEASYSSTRRETR-QTIVHMSEM---AREGSP-----VNLGEQI  
 CYP706A3 105 TNDI-IFANHD-VPAVGPVNTYGGTEIIWSPY-GPKWRMLRKLKCVNRI LRNAMLDSSTDLRRETR-QTVRYLADQ---ARVGS-----VNLGEQI  
 CYP71A12 92 THDL-KFANRP-RSKAVHGLMNGGRDVFVFPY-GEYWRQMKSVICILNLLTNKMVASFEKIREEELN-EMIKKLEKA---SSSSS-----ENLSELF  
 CYP71A13 92 THDH-KFANRP-RSKAVHGLMNGGRDVFVFPY-GEYWRQMKSVICILNLLTNKMVASFEKIREEELN-AMIEKLEKA---SSSSS-----ENLSELF  
 CYP71A14 92 THDL-KVANRP-QLKVVEKIFNGGREMVFSPY-GEYWRQIKSVICIVNLLNKKKQVQSFQVREEEIS-EMMERVEKA---SSDSS-----LNLSELL  
 CYP71A15 91 THDL-KVANRP-RLKVIETILNGGREVVFSPY-GDYWRQIKITVCVVHLLNKKMVSQFAKVVREEEIS-VMMEKVEKA---SSDSS-----LNLKLL  
 CYP71A16 91 THDL-KFANRP-ITKSAKLSNGGRDLVFAPY-GEYWRNVKSLCTIHLNKNMVSQSEKREEEIT-LLMETLEEA---SLSSS-----VNLKLI  
 CYP71A27 92 THDL-KFANRP-KSKAINIFMEGGRDIFVFPY-GEDWKSMSLGVVHLLNKNMVSQSEKREEEIK-VMTEKLEEA---SSSSS-----VNLKLL  
 CYP71A28 94 THDL-KFANRP-KTKAVDIIINGGRDVFVFPY-GEYWRQMKSLCTVHLLGRQMVRSFEKVVREEEIT-SVIWKLEKQ---SSSLP-----VNLSDL  
 CYP71B10 89 DYDL-HCCSRP-SLEGTRKLSYNYLDIAFSRF-DDYKELRKLKVEELFCNKRINSIQIPEKAEME-KLIDSIAS-ASQKTL-----VNLSDTF  
 CYP71B9 90 INDL-HCCSRP-SLAC-EELSYNYLDIAFSRF-DDYKELRRLICVQELFSAKRINSIQIPEKEEVR-KLIVSATES-ASQKSP-----VNLSEK  
 CYP71B11 88 TFDA-ECCSRP-YMTYPARTYNLKDIGFCPY-TKYWREVRKMTVVELYTAKRVQSFQHTRKEEVA-SLVDFITQA---ASLEKP-----VNLNTKL  
 CYP71B12 88 TFDA-ECCSRP-NMTYPARTYNLKDLCFSPY-SKYWREVRKMTVVELYTAKRVQSFQHTRKEEVA-ALVDFIKQA---ASLEKP-----VNLNKKL  
 CYP71B14 88 TFDA-ECCSRP-YMTYPARTYNFNDLAFSPY-SKYWREVRKMTVIELYTAKRVKSFQNVQEEVA-SFVDFIKQH---ASLEKT-----VNMKQKL  
 CYP71B13 88 TFDA-ECCSRP-FLTYPARTYNLKDIAFAPY-SKYWKA VRKMTVVELYTAKRVKSFQNVQEEVA-SFVEFIKHS---ASLEEI-----VNLNQT  
 CYP71B6 95 LHDS-ECCTRP-KLSITKSFYDGLGLGFTKW-GDYRDRVRLKCVLELFSVKRANSFRNIREEELS-RLVNSFSDS---ASSGS-----VDLTANL  
 CYP71B15 87 INDL-ECCSRP-EAAGMRATFYNFKDIGMAPF-GDEWSLMRKLSVVELFSVKKLQSFYIIEEENN-LCVKLLSEF---ATRQSP-----VNLERA



CYP71B7 91 TQDL-ECCSRP-ETVATRMISYFNKDIGFAPY-GEHWKALRKLIVVMELLNTKKFQSFYRREEEND-LLIKKLTES----ALKKSP-----VNLKKTLL  
 CYP71B5 87 THDL-ETCSR-ETVATRMISYFNKDIGFAPY-GENWREMRKIAVSELSQKKLKSFYRREDESQ-LLVRKVSQS----ALETPTS-----SVNLRKVI  
 CYP71B8 89 SRDL-ETCSR-ETVATRMISYFNKDIGFAPY-GEDWREMRKLVGLELFPNPKKHKFFRYRREEEGD-LLVKKLSKS----S-QTQT-----LVDLRKAF  
 CYP71B2 90 TNDL-ECCSR-ETVATRMISYFNKDIGFAPY-GEYWRVRLKAVIELFSSKKVQSFYRREEEVD-FVVKKVSES----ALKQSP-----VDLSKTF  
 CYP71B3 88 VHDL-ECCSR-ETVATRMISYFNKDIGFAPY-GEVSRRLRKLISLNFSSQKQVRSFYRREEEND-LMVKKLKES----AKKQNT-----VDLSQTL  
 CYP71B4 91 THDL-ECCSR-ITMASRVFSRNGKDIGFVY-CDEWRRLRKLISVREFFSVKKVQSFYRREEEND-LMIKKLKEL----ASKQSP-----VDLSKIL  
 CYP83A1 90 TQDV-NFADRP-PHRGHEFISYGRDMALNHY-TPYREIRKMGMNHLFSPTRVATFKHVREEAR-RMMDKINKA----ADKSEV-----VDISELM  
 CYP83B1 89 TQDL-NFTARP-LLKGQOTMSYQGRELGFGQY-TAYYREMRKMCVMNLFSPNRVASFRPVREEECQ-RMMDKIYKA----ADQSGT-----VDLSELL  
 CYP705A2 95 DQDV-NVSRP-PPPIEESLFLGSSSFIAPY-DYWKFMKMLVTKILGPQALERSRREDELD-RFYKTLDDK----AMKKES-----VEIVEEA  
 CYP705A5 99 AQDV-NVSRP-PPPIEESLILGSSSFIAPY-DYSKFMKFMVQKLLGPQALQRSNTRADELE-RFYKTLDDK----AMKKQT-----VEIRNEA  
 CYP705A8 99 AQDV-NVSTRD-FPTNEGSLFLGSSSFIAPY-EYWKFMKMLIVTKILGPQALERSRIRANEVE-RFYSNLLDK----AMKKES-----VEIADEA  
 CYP705A9 95 TQDV-NVSRD-FPTNEGSLFLGSSSFIAPY-----SGLKHSRGHKKSQVQR-SYYLNLDDK----AVKKES-----VEIAEEA  
 CYP705A3 100 AHDV-NVSRG-IIALDESLMFGASGILNAPY-DYWKFMKMLMATKLLRPQVLSRGRVVEELH-RFYRSILDK----ATKNES-----VEIGKEA  
 CYP705A6 101 AHDV-NVSRG-VAAIDESLFLGSSGIIAPY-DYWKFMKMLIATKLLRPQVLSRGRVVEELH-RFYRSILDK----ATKNES-----VEIGKEA  
 CYP705A1 98 DHDV-NVSRG-VGAIDESLAYGSSGFIAPY-DYWKFMKMLIATKLLRPQVLSRGRVVEELH-RFYRSILDK----ATKNES-----VEIGKEA  
 CYP705A4 97 AHDV-NVSRG-FTPTDDSLFAGSFSFIAPY-DYWKFMKMLVLTNVPQVLSRGRVVEELH-RFYRSILDK----ATKNES-----VEIGKEA  
 CYP705A12 99 TNDV-NVSRP-VPVNKDSLFLGSSSFIAPY-DYWKFMKMLISTKLLRPHALELSKGNRAEELR-RFCLDLQK----ARKKES-----VEIGKVA  
 CYP712A1 100 EQEL-NFSSRPEFGSAEYFKYRGS-RFVLAQY-GDHWRLRRLCMTKLLAVPQLEKFAIREEEKL-KLVDSVAK-----CREGLP-----CDLSSQF  
 CYP93D1 97 THDP-DFASKFVFGPRQFNKYKGS-EFFNAPY-SYWRFMKMLCMTKLLAVPQLEKFAIREEEKL-KLVDSVAK-----CREGLP-----CDLSSQF  
 CYP81D2 92 KNDV-ILANRQ-TTISTKHISYGNSTVVSASY-SEHWRLRRLRIGALEIFSAHRLNSFSSIRDEIR-RLIGRLLR----NSSYGFT-----KVEMKSMF  
 CYP81D3 92 KNDV-VLANR-ETVATRMISYFNKDIGFAPY-GDHWRNLRRLRIGALEIFSAHRLNSFSSIRDEIR-RLIGRLLR----NSSYGFT-----KVEMKSMF  
 CYP81D4 93 KNDV-VLANR-KFTISKHLGYNATYLLSASY-GDHWRNLRRIAIAVEIFSTHRLNSFLYIRKDEIR-RLISHLSR----DSLHGFV----EVEKTL  
 CYP81D5 92 KNDV-VLANR-IIIMAKHVGNFTNMIASASY-GDHWRNLRRIAIAVEIFSSHRISTFSSIRKDEIR-RLITHS-R----DSLHGFV----EVELKSL  
 CYP81D6 108 KNDI-VFANR-ELILGKHIEYNSTTMTSAPY-GDHWRNLRRIATLEIFASHKLNGLFVSRKDEIR-QLLLRSLK----NSRHGFA----KVEMRHL  
 CYP81D7 137 KNDI-VLANR-KFILGKHIEYNSTTMTSAPY-GDHWRNLRRIATLEIFASHKLNGLFVSRKDEIR-QLLLRSLK----NSRHGFA----KVEMRHL  
 CYP81D1 99 KNDV-VLANR-QVIGKHVGYNNANMIAAPY-GDHWRNLRRLCTIEIFSTHRLNCFVYVTRDEVIR-RLISRLSR----LAGTKT-----VVELKPM  
 CYP81F1 88 QNDI-VLSSR-LQLTAKYVYVNHHTVGTAPY-GDHWRNLRRLMCSQEILSSHRIIFQHIRKDEIR-RLMTRLSRYTQTSNESNDFT----HIELEPLL  
 CYP81F2 90 QNDV-ILTNR-HFLTAKYVAYDYTTIGTAAAY-GDHWRNLRRLCSLEILSSNRLTGFLSVRDEIR-RLTKLSR-----EY-DGR-----VVELEPLL  
 CYP81H1 92 KNDI-VLANR-RFIMGKYVAYDYTSMVTAPY-GDHWRNLRRLITALEVFTNRLNASAEIRHDEVK-MLLQKLHD----LSVERPA----KVVELRQLL  
 CYP81G1 103 QNDV-VFANR-LATLTEYMGYNNTLVSTAPY-GEHWRLRRLRCAVDILSTARLRDSDIRDEVIR-AMIRKIN---VELVTSGGSV----RLKLPFL  
 CYP82C3 94 VNDK-ALAS-L-MTAAAKHMGY-----VFWMELRMIAMIELLNRALQMLNVRVSEIS-MGVKDLVSLWVKKGGSEP-V----MVDLKS  
 CYP82C4 94 VNDK-ALAS-MTAAAKHMGYFAVGFAPY-SAFWREMRKIATIELLNRRLQMLKHVRVSEIS-MGVKDLVSLWVKKGGSEP-V----MVDLKS  
 CYP82C2 94 VNDK-ALAS-ITAAAKHMGYCAVGFAPY-SAFWREMRKIATLELLNRRLQMLKHVRVSEIS-MGVKDLVSLWVKKGGSEP-V----MVDLKS  
 CYP82F1 95 VHDK-LLER-ELTASKLLGYNDSFLTFSPY-GLYWRERKIAVSELSSTSGVDMHMVSRAREAD-LAFRALYVRWEKRGKPKEGV----LVDKQEF  
 CYP79B2 118 QQDA-LFASR-LTYAQKILSNGYKTCVITPF-GDQFKKMRKVIMTEIVCPARHRWLHQRSEEND-HLTAWVYN----MVKNSG-----SVDFRMT  
 CYP79B3 143 QQDA-LFASR-LTYAQKILSNGYKTCVITPF-GEQFKKMRKVIMTEIVCPARHRWLHQRSEEND-HLTAWVYN----MVKNSG-----SVDFRMT  
 CYP79A2 97 QKDS-VFADRP-LTMGTEYCSRGYLTVAPEQ-GEQFKKMRKVIMTEIVCPARHRWLHQRSEEND-HLTAWVYN----MVKNSG-----SVDFRMT  
 CYP79C1 102 EKDA-VFADRP-DSYSAEYISGGYNGVDFEY-GERQMKMKVMSHSLMSTKALNLLKVRNLESD-NLLAYVHNL----YNKDESKTKHGAVVNRDIV  
 CYP78A6 132 --SP-VFADRP-VKESAYSLMNFRAIGFAPY-GVYWRTLRRIASNHFLSTKQIRRAETQRRVISS-QMVEFLEKQ-----SSNEP-----CFVRELLK  
 CYP78A8 135 --SS-VFADRP-VDETAYGLMNFNRAMGFAPN-GTYWRTLRRLGSHNLFNPKQIKQSEDRVIAT-QMVNAFAR-----NPKSA-----CAVRDLLK  
 CYP78A5 110 --SS-AFADRP-VKESAYELLFHRAMGFAPY-GEYWRNLRRLISSTHLSFPRRIASFEGVRVIGIM-KMVKKIKSL-----VTSDA-----CGEVEVKK  
 CYP78A7 131 --SP-HFADRP-VKQSAKSLMFSRAIGFAPN-GTYWRMLRRIASHTLFPARRILAHEAGRQLDCA-EMVKAVSVE----QNGAGS-----VVLKHLQ  
 CYP89A2 93 LNGG-PSMRVTHHLPVISKIVD-EHNISSGSY-GATWRLRRLRITSEILHPSRVRSYSHARHWVLE-ILFERFRN-----HGGD-----EPIVLIHHL  
 CYP89A4 94 LNGA-VFADRP-PAAPISKIISNQHNISSSLY-GATWRLRRLRITSEILHPSRVRSYSHARHWVLE-ILFDRFGK-----SRGE-----EPIVVVDHL  
 CYP89A3 93 LNGA-VFADRP-PALPTGKIITSNQHTISSGSY-GATWRLRRLRITSEILHPSRVRSYSHARHWVLE-ILFDRFGK-----SRGE-----EPIVVVDHL  
 CYP704A1 86 ILKT-RFHNS-KGPVGTVNLADLLGHGIFAVD-GEKWKQQRKL-VSFEFSTR--VLRNFSYSVFRF--SAS-KLVGFI---AEFALS---GKSFDFQDML  
 CYP704A2 92 ILKT-RFDNYS-KGHSSRENADLLGHGIFAVD-GEKWRQQRKL-SSFEFSTR--VLRDFSCSVFRR--NAS-KLVGFV---SEFALS---GKAFDAQDML





CYP702A5 173 SK--IVIECLSKKVMGE-----MEPE-AAKELTLCWTFPPR--DWFRFAW--NFP-----GTGVYRIVK--ARNRMMKVIKETVV  
 CYP702A6 173 SK--IIIECLAKKVMGE-----MEPD-AAKELTLCWTFPPR--EWFQFAW--NIP-----GTGVYRMVKV--ARNRMMKVLKETVL  
 CYP702A1 174 SK--ILIECLAKKVTGD-----MEPE-AAKELALCWRCFPS--GWFRFPL--NLP-----GTGVYKMMK--ARKRMLHLKLETIL  
 CYP702A2 174 LQ--ILIGCLAKKVMGE-----MEPE-AAKELALCWRFYQS--GWFRFFL--NLP-----YLTEADISWQ--ARKRMLHLRKTIVL  
 CYP702A3 177 IK--MVGELAKKIMGE-----TESE-AVKELGLCWSAFRT--SWFQFSY--NIP-----GTTVYRLVK--ARRKAAKLLKALIL  
 CYP708A1 189 GR--LILEQMILMIISN-----IKPE-TKSKLIESFRDFSF--DLVRSFP--DPSF-----WNALYNGLMVRARSNVMKMLKRMFK  
 CYP708A2 177 ES--VIMAHLPKIISN-----LKPE-TQATLVNDIMALGS--EWFQSPL--KLTT-----LISYKVFIVSSARRYALQVIKDVFT  
 CYP90A1 171 KK--ITFELTVKQLMSF-----DPGE-WSESLRKEYLLVIE--GFFSLPL--PLF-----STTYRKAIQ--ARRKVAEALTVVVM  
 CYP90B1 181 KK--FTFNLMAKHISM-----DPGEEETEQLKKEYVTFMK--GVVSAPL--NLP-----GTAYHKALQ--SRATILKFIERKME  
 CYP707A1 172 KT--YTFNVALLSIFG-----KDEVLYREDLKRCYYILEK--GYNSMPV--NLP-----GTLFHKSMK--ARKELSOILARILS  
 CYP707A3 172 KT--YTFNVALLSILG-----KDEVYREDLKRCYYILEK--GYNSMPI--NLP-----GTLFHKAMK--AREKLAQIILAKIILS  
 CYP707A2 186 KR--YAFDVAIMSAFCD-----KEEPTTIDVIKLLYQRLER--GYNSMPL--DLP-----GTLFHKSMK--ARIELSEELRKVIE  
 CYP88A3 188 RK--LTFRIIMYIFLS-----SESENVMDALEREYALNY--GVRAMAV--NIP-----GFAYHRALK--ARKTLVAAFQSIIVT  
 CYP88A4 187 RK--LTFKVIIMYIFLS-----SESEHVMSLEREYTNLNY--GVRAMGI--NLP-----GFAYHRALK--ARKKLVAAFQSIIVT  
 CYP716A1 179 KK--FTFSIACRSFLS-----MEDPARVRQLEEQFNTVAV--GIFSIPI--DLP-----GTRFRNRAIK--ASRLLRKEVSAIVR  
 CYP716A2 175 KK--FTFSIACRLFLS-----MDDLERVRKLEEPFTTVMT--GVFSIPI--DLP-----GTRFRNRAIK--ASRLLSKEVSTIIR  
 CYP51 177 ER--LITLTASRCLLGREV-----RDQ-LFDDVAPLFHDLDK--GMQPI SV--IFP-----KLPIPAHNCRRD--ARGKIAKIFSNIIA  
 CYP51A2 161 ER--LIILTASRCLLGREV-----RDQ-LFDDVAPLFHDLDN--GMLPISV--LFP-----YLPPIPAHRRDR--AREKLSIIFAKIIG  
 CYP710A1 181 RE--LNLETSQTVFVGPYL-----DKE-AKNRFRDYDNLNLFNL--GSMALPI--DLP-----GFAFGARRAVK--RLGETLGCAGKSK  
 CYP710A2 182 RE--LNLETSQTVFVGPYL-----DKE-ARNTFCTDYDNLNLFNL--GSMALPI--NLP-----GFAFNKARRAVM--NLEKTL SVCAGKSK  
 CYP710A3 182 RE--LNLETSQTVFVGPYL-----DKE-VKNTIRDDYDNLNLFNL--GTMALPI--DLP-----GFTFGARRAVS--RLVNTMSL CVRKS  
 CYP710A4 182 RE--LNLETSQTVFVGPYL-----DKE-VKKTICDDYSLTL--GTMAIPI--DLP-----GFTFGARRQAVS--RLVNTMSV CVGKSK  
 CYP76C2 183 FI--TALNII SNILFSVDLGNYS-----SNK-SGV-FQDTVIGMEAVGNPDAAN--FFP---FLGFLDLQ--GNRKT LKA--CSERL FKVFRGFID  
 CYP76C4 183 YT--TVLNIISNILFSVDLGSYD-----SKK-SNE-FQDTVIGMEAAAGPDAAN--YFP---FMGFLDLQ--GNRKAMRG--LTERLFRVFRGFMD  
 CYP76C1 183 FI--TTLNII SNILFSVDLGSYN-----AKA-SINGVQDTVISVMDAAGTDAAN--YFP---FLRFLDLQ--GNVKTFFKV--CTERLVRVFRGFID  
 CYP76C3 174 FV--TSFNII SNALFSVDLATYD-----SNS-SSYEFHNTVVHLTDIAGIPNVGD--YFQ---YMRFLDLQ--GTRKKAVL--CIEK LFRVQEFID  
 CYP706A1 196 FL--SIFNVVTRMMWGATVEGDE-----RTS-LGNE LKTLISDISIEGIQNYSD--FFP---LFSRFDQ--GLVKQMGK--HVKKLDLLFDRVME  
 CYP706A2 198 FL--SIFNVVTRMMWGATVEGDE-----RTS-LGNE LKTLISDISIEGIQNYSD--FFP---LFSRFDQ--GLVKQMGK--HVKKLDLLFDRVME  
 CYP706A3 190 FL--MMLNVVTQMLWGTTVKEEE-----REV-VGAEFLEVI REMNDLLLVPNISD--FFP---VLSRFDLQ--GLAKRMRR--PAQRMDQMFDR IIN  
 CYP71A12 177 VT--LPSDVTSRIALGRKHS-----EDE-TARDLKKRVRQIMELLGEFP IGD--YVP---ALAWIDRINGFNARIKE--VSQGFSDLMDKVVQ  
 CYP71A13 177 IT--LPSDVTSRVALGRKHS-----EDE-TARDLKKRVRQIMELLGEFP IGE--YVP---ILAWIDGIRGFNNKIKE--VSRGFSDLMDKVVQ  
 CYP71A14 177 LT--LTSDVTSRVSLGRKYS-----KEE-SMSDFKIQMRKITELVGGFPVGE--YIP---CLAWIDKLRGVDEKAE--VSKAFGDLMEKVLQ  
 CYP71A15 176 IT--LTSDVASRVFSGKKHS-----NEA-SMSDFKNQVRKITELVGGFPVSE--YIP---CLAWIDQIRGLYNRAE--VSKIFGDLMDKVVQ  
 CYP71A16 176 TN--MVSDIMGKVVLGKKYS-----GEE-GTIDVKTITKSFLDAVGLSPVGE--YIP---SLAWIGKITGSDGKLEK--ITKQFGDFIEKVLQ  
 CYP71A27 177 MT--LTNDICRITLGRKYN-----EEE-GGIDIKNLVMTSSEFFGKFFFGD--FIP---SLAWIDWISGIDDKMKD--INNKLD CFLDSMVQ  
 CYP71A28 179 LN--MSNDVICRIAVGRKYS-----REE-NTSDFENQLRKVMELLAGFPVGD--YIP---GLAWIDKVRGLDRKMEE--VSKTFVEFLERVVQ  
 CYP71B10 174 LS--LNVNVIKAVFGVNFQ--G-----TVL-NNDKFQDLVHEALEMLGSFSASD--FFP---YVGWIVDWFTGLHARRER--SVRDLDAFYEQMID  
 CYP71B9 173 LD--LTVSVICKAAFLSLDFH--T-----SVL-NNDGFDFLIHDAFLGFSFSASN--FFP---NGWIIDWLTGLQRRREK--SVKDLDFYQQMFD  
 CYP71B11 173 MK--LSGSVICRVVFGINLK--G-----SKL-EN-LYEEVIQGTMEVVSFAAAD--YFP---IIGRIIDRITGLHSHKCEK--IFKAMDAFFDQSIK  
 CYP71B12 173 MK--LSGSVICRVAFGINLQ--G-----SKL-EN-TYEEVIQGTVELVGSFAAAD--YFP---VVGRIIDRITGLHSHKCEK--LFKAMDAFFDQSIK  
 CYP71B14 173 VK--LSGSVICRVGFGISLE--W-----SKL-AN-TYEEVIQGTMEVVRFAAAD--YFP---IIGRIIDRITGLHSHKCEK--VFKEMDSFFDQSIK  
 CYP71B13 173 VK--LSGSVICRVGFGINLE--G-----SKL-EN-TYEEVIHGTMEVLGSFAASD--YFP---VIGGIIDRITGLHNKCEK--VFKGTD SFFDHCIK  
 CYP71B6 180 AK--FVASFTCRMAFGLSFQ--G-----SGM-DNETFLELFTANRVIKFAAAD--IFP---GFGWILDRI SGLDSSRRK--SFQDLDTFYQKAIK  
 CYP71B15 172 FT--LVGNI VCRIGYGINLYE--C-----DFF-EADRVDLVLKA EAVIRETVFSD--FFP---GRIGRFIDCISGQNRRLKN--NFSVVD TFFQNVLN

CYP71B7 176 FT--LVASIVCRLAFCGVNIHK-C-----EFV-DEDNVADLVNKFEMLVAGVAFTD--FFP--G-VGWLVDRISSQNKTLNN--VFSELDTFQNVLD  
 CYP71B5 174 FT--FAASTICRLSFGQNF---C-----DFV-DMETVEELVLESETNLGSLAFAD--FLP--A--GWLIDRISGQHSIVMK--AFSKLTNFFELVID  
 CYP71B8 174 FS--FTAGIFRVSFGQNFRE-C-----DFI-DMDRLEELVQESETNVFSFAFTD--FFP--TGLGWLVDRISSGQHSRIEK--AFSKLTKFFQHVLD  
 CYP71B2 175 FS--LTASICRVALGQNFNESG-----FVI-DQDRIEELVTEAEALGTFTFSSD--FFP--GGLGRFVDWLFQRHKKINK--VFKELDAFYQHVLD  
 CYP71B3 173 FY--LVGSIIFRATFGQLDQ-N-----KHV-NKEKIEELMFEV-QKVGSLSSSD--IFP--AGVGFMDVFSGRHKLTHK--VFVEVDLTLNHVID  
 CYP71B4 176 FG--LTASIFRTAFGQSFFD-N-----KHV-DQESIKELMFES-LSNMTFRFS--FFPT--AGLKWFIQFVSGQHKLRYN--VFNRVDTFFNHIVD  
 CYP83A1 175 LT--FTNSVVCRAQAFGKKN--E-----DGE-EMKRFIKILYGTQSVLGIFFSD--FFP----YCGFLDDLSTGLTAYMKE--CFERQDTYIQEVVN  
 CYP83B1 174 LS--FTNCVVCRAQAFGKRYN--E-----YGT-EMKRFIDILYETQALLGTLFFSD--LFP----YFGFLDNLTGLSARLKK--AFKELDTYLQELLD  
 CYP705A2 180 AK--LNNNTICKMIMGRSCS--E-----ETG-EAERIRGLVVTESMALTKKIFLAT--IFH----KPLKKGISLFFKKEIMS--VSRFDELLEKILV  
 CYP705A5 184 MK--LTNNTICKMIMGRSCS--E-----ENG-EAETVRGLVVTESIFLTKKHFLGA--MFH----KPLKKGISLFAKELMN--VSNRFDELLEKILV  
 CYP705A8 184 MK--LVNNTICKMIMGRSCS--E-----ENG-EAERIRGLVTKSDALLKKFLLAA--ILR----KPLKKGITLTKKVFMD--ISLKFDEVLEKILV  
 CYP705A9 162 MK--LVNNTVQMIMGRSCS--E-----ENG-EAERVRGLVTKDALTKKFILAG--ILR----KPLQKIGISLFFKELMD--ASCKFNEVLEKILV  
 CYP705A3 185 MK--LMNNTLCKLIMGRSFS--E-----DNG-ESNRVRGLVDETYALSEKIFLAA--ILR----RPLAKLRISLFFKKEIMG--VSNKFDELLERILQ  
 CYP705A6 186 MK--LVNNTLCRSMGRSFS--E-----ENG-EAEKIRGLVGESYALTKKMFLAS--LLR----KPLKLRISLFEKEIMG--VSDRLDELLERILV  
 CYP705A1 183 SR--FVNNSLYKMCTGRSFS--V-----ENN-EVERIMELTADLGALSQKFFVSK--MFR----KLEKLGISLFFKTEIMV--VSRFSELVERILI  
 CYP705A4 182 LK--LSNSSICKMIMGRSCS--E-----E-----RFRALATELDVLTCKLFFAN--MLR----AWFKLVVSLFFKETTIV--ISYFDELLESILV  
 CYP705A12 184 LK--LTNNTICRSMGRSFS--E-----KNG-VAERARELVNKSFALSVKLFFS-----NMFRKDIMG--VSREFDEFLEKILV  
 CYP712A1 185 IK--YTNNVICRSMGRSFS--G-----TDN-EAEEIRELVKKSLELAGKISVGD--VLG----PLKVMDFSGNGKLVVA--VMEKYDLLVERIMK  
 CYP93D1 182 TA--LTTKILSKMVMGKRRCR--Q-----NSN-IPKEIRKIVSDIMACATRFMFME--LFG----PLRDLDFGNGKLVVA--SIWRYDELVEKILK  
 CYP81D2 178 SD--LTFNNTIRMLAGKCYGDDG---K--EDDP-EAKRVRTLIAEAMSSSGPGNAAD--YIP----ILTWITY---SETRIKK--LAGRLDEFLOGLVD  
 CYP81D3 176 SN--LTFNNTIRMLAGKCYGDDG---A--EDDP-EAKRVRELIAEGMG-CGAGNTAD--YLP----ILTWITG---SEKRIKK--IASRLDEFLOGLVD  
 CYP81D4 179 TN--LASNTTIRMLAGKRYFG-----EDND-DAKLVKNLVSEAVTSAGAGNPID--YLS----ILRWVSS---YEKRIKN--LGNRFDTFLQKLVLD  
 CYP81D5 176 TN--LAFNNTIMMVAGKRYGTG---T--EDND-EAKLVRELIAEIMA-AGSGNLAD--YLP----SINWVTN---FENQTKI--LGNRLDRVLOGLVD  
 CYP81D6 194 FE--LTINNVMRMVAGKRYFYEG---T--EQDE-VAQVRHLMDEIVTSAGAGNAAD--YLP----IMRWFTN---FEKRVKN--LAIRIDKFLQSLVD  
 CYP81D7 223 YD--LTINNVMRMVAGKRYFYEG---T--EQDE-VAQVRHLMDEIVTSAGAGNAAD--YLP----ILRWITD---FEKGVKE--LASREDFLOGLVD  
 CYP81D1 185 MD--LTFNNTMRMVTGKRYGEE---T--TDEE-EAKRVRLVADVANTSSGNAVD--YVP----ILRLFSS---YENRVKK--LGETDKFLQGLVD  
 CYP81F1 179 SD--LTFNNTMRMVTGKRYGDD---V--NNKE-EAELFKKLVYDIAMYSGANHSAD--YLP----ILKLFGNK--FEKEVKA--IGKSMDDILQRLLD  
 CYP81F2 174 AD--LTFNNTMRMVTGRRYGDQ---V--HNKE-EANLFPKLVTDINDNSGASHPGD--YLP----ILKVFHG---YEKKVKA--LGEAMDAFLQRLLD  
 CYP81H1 178 TG--LTLNVMRMVTGKRFFEE---DG--GKAG-ISLEFRELVAEILELSAADNPAD--FLP----ALRWFDYK--GLVKRAK--IGERMSDLLQGLVD  
 CYP81G1 191 YG--LTYNNTLMSMVAGKREED-----E-ETKEVRKLIREFVDFAGVNYVGD--FLP----TLKLFDL--GYRKRK--LASKLDFMQKLVLD  
 CYP82C3 172 ED--MIANNTMRMVTGKRYFGGGA-ESS-EHTE-EARQWRKGIKAFHVLVGIFTVSD--AFP----KLGWLDLQ--GHEKEMKQ--TRRELDVILERWIE  
 CYP82C4 184 ED--MTLNNTMRMVTGKRYFGGGS-VSS-EDTE-EAMQCKKAIKFFHLGIFTVSD--AFP----TLSFDDLQ--GHEKEMKQ--TGSELDVILERWIE  
 CYP82C2 184 ED--MSLNNTMRMVTGKRYFGGGS-S-LSP-EDAE-EARQCRKGVANFFHLVGIFTVSD--AFP----KLGWDFDQ--GHEKEMKQ--TGSELDVILERWIE  
 CYP82F1 185 ID--LTANNTSLMMVSGKRYFGEN---PN-CEVK-EARRCGKLIREFLDYFALFLSD--VAP----VLGFLDWK--TKRGMKR--TAKGLDKVAEGWIE  
 CYP79B2 203 RH--YCGNNTKRLMFGTRTFSEKTE-ADG-GPTL-EDIEHMDAMFEGLGTFFAFCISD--YLP----MLTGLDLN--GHEKIMRE--SSAIMDKYHDPID  
 CYP79B3 228 RH--YCGNNTKRLMFGTRTFSEKTE-ADG-GPTL-EDIEHMDAMFEGLGTFFAFCISD--YLP----MLTGLDLN--GHEKIMRE--SSAIMDKYHDPID  
 CYP79A2 187 RQ--YSGNVARKMMFGRHFGKGE--DGSGL-EEIEHVESLFTVTLHLYAFALSD--YVP----WLRFLDLE--GHEKVSN--AMRNVSKYNDPFDV  
 CYP79C1 194 CT--HTHNVMRLLFGRHFKETTM--DG-SLGL-MEKHEFDFALFAALDCFFSFWAD--YYP----FLRGWNLQ--GEEAELRE--AVDVIARYNKMIID  
 CYP78A6 214 TA--SLNNMCSVFGQYELKNN-----HV-E---LREMFVEGYDLGLTNLWTD--HLP----WLFSEF-DPQRLRSRCST--LVPKRVNFYSRIIS  
 CYP78A8 216 TA--SLCNMGLVFGREYELESNN-----NL-ESECLKGLVEEGYDLGLTNLWTD--HLP----WLAGL-DFQQIRFRCSQ--LVPKVNLLSRIIH  
 CYP78A5 192 IVHFGSLNNVMTTFVFGESYDFDEVN-----GK-G-CFLERLVSEGYELLGIFNWS--HFW----FLRWF-DFQGVKRCRA--LVSEVNTFVGGIIE  
 CYP78A7 214 LA--ALNNTMGSVFGRRYDPLAQ-----KE-DLDELTSMVREGFELGAFNWS--YLP----WLGIFYDSIRLNQRCS--LVPKRVNLLSRIIS  
 CYP89A2 177 HY--AMFALLVLMCFGDKLD-----EK-QIKQVEFIQRLQLLSLRFNIFN--IWP----KFTKLILKRKWEFFLQI--RRQQRDILLPLIRA  
 CYP89A4 179 HY--AMFALLVLMCFGDKLD-----EK-QIKQVEYVQRRLGFSRFNIFN--LWP----KFTKLILKRKWEFFLQI--RRQQRDILLPLIRA  
 CYP89A3 179 RY--AMFSLVLMCFGDKLD-----EE-QIKQVEYVQRRLGFSRFNIFN--VFP----SFTKLFKRKWEFFLTF--RREHKNVLLPLIRS  
 CYP704A1 172 MK--CTLDSIFKVGFGVEL---G-----CLDGSKEGEEFMKAFDEGNATSSRV--TDFP---WKLKCFNLIGSESRLKK--SIATIDKFVYSLIT  
 CYP704A2 178 MR--CTLDSIFKVGFGVEL---K-----CLDGSKEGEEFMKAFDEGNATSSRV--IDPL---WKLKWFNIGSQSKLKK--SIATIDKFVYSLIT





CYP702A5 239 KKR-----A---SGKK----LGEFFTIFGDTES-----VT-----MSIEIATEYI-FTLFVLANE-TTPGVLAATIKLISDN  
 CYP702A6 240 KKR-----A---SGEE----LGDFFKTIFGDTER-----GVKT-----ISLESATEYI-FTLFLLANE-TTPAVLAATIKLISDH  
 CYP702A1 240 KKR-----A---SGEE----LGEFFKIFEGAET-----MSVDNAIEYI-YTLFLLANE-TTPRI LAATIKLISDN  
 CYP702A2 240 TKR-----A---SGEE----LGEFFNIFGEMEG-----EGET-----MSVENAVEYI-YTFFLVANE-TTPRI LAATIKLISDH  
 CYP702A3 243 KKK-----A---SKEG----LGDFLDLIFDEMEK-----DGTA-----LDIDKAVNLI-FVFFILSQE-TTPGVQAVVKLVADH  
 CYP708A1 259 ERRE-----EATS---DDSK----YGFMETMIYEVEK-----EGDT-----INEERSVELI-LSLLIASYE-TTSTMTALTVKFIAEN  
 CYP708A2 247 RRK-----A---SREM----CGDFLDTMVEEGEK-----EDVI-----FNEESAINLI-FAILVAKE-STSSVTS LAIKFLAEN  
 CYP90A1 237 KR---REE---EEE---GAER----KK---DMLAALLA-----ADDG-----FSDEEIVDFL-VALLVAGYE-TTSTIMTLAVKFLTET  
 CYP90B1 248 ERKLDIKEEDQEEEEVKTED--EAEMSKSDHVRKQRTDDDLGWVL-----KHSN-----LSTEQILDLI-LSLLFACHE-TSSVALALAIFFLQAC  
 CYP707A1 238 ERR-----Q---NGSS---HN-DLLGSFMGDKE-----E-----LTDEQIADNI-IGVIFAARD-TTASVMSWILKYLAEN  
 CYP707A3 238 KRR-----Q---NPSS---HT-DLLGSFMEDKA-----G-----LTDEQIADNI-IGVIFAARD-TTASVLTWILKYLADN  
 CYP707A2 253 KRR-----E---NGRE---EG-GLLGVLLGAKDQ-----KRNG-----LSDSQIADNI-IGVIFAARD-TTASVLTWILKYLADN  
 CYP88A3 254 ERRN-----Q---RKQ---NILS---NKKDMLDNLLNVKDE-----DGKT-----LDDEEIDVLI-LMYLNACHE-SSGHTIMWATVFLQEH  
 CYP88A4 253 NRRN-----Q---RKQ---NISS---NRKDMLDNLLNVKDE-----NGRV-----LDDEEIDVLI-LMYLNACHE-SSGHTIMWATVFLQEH  
 CYP716A1 245 QRK-----E---ELKA---GKALEEHDILSHMLM-----NIGE-----TKDEDLADKI-IGLLIGCHD-TASIVCTFVVNYLAEF  
 CYP716A2 241 QRK-----E---ELKA---GKVSVEQDILSHMLM-----NIGE-----TKDEDLADKI-IALLIGCHD-TTIVCTFVVNYLAEF  
 CYP51 247 TRKR-----SGD---KS-----ENDMLQCFIDSKYKD-----GR-----ETTESEVTGLLIAGLFAQH-TSSITATWTGAYLIQN  
 CYP51A2 231 SRKR-----SG---KT-----ENDMLQCFIESKYKD-----GR-----QTTESEVTGLLIAGLFAQH-TSSITATWTGAYLIQN  
 CYP710A1 251 ARMA-----AG---EE-----PACLIDFWMQAIVAE---NPQPP-----HSGDEEIGLLDFDFLFAAQD-ASTSSLLWAVTLLDSE  
 CYP710A2 252 KRMA-----TG---EE-----PTCLIDFWMHAFVTEIESGNPPPL-----HSEDEAIGLLDFDFLFAAQD-ASTSSLLWAVTFLESH  
 CYP710A3 252 EKMA-----AG---EN-----PTCLVDFWTHSIVAE---SPPPP-----HSKDEEISCVLVDFLFAAQD-ASTSSLLWAVVLESE  
 CYP710A4 252 AKMA-----AG---EN-----PTCLVDFWTHSIIIE---NPPPP-----HSKDEEISCVLVDFMFAAQD-ASTSSLLWAVVMESE  
 CYP76C2 262 AKLA-----EKS---LR---DTN-SKDVRERDFVDVLLDLTE---G---DEA---ELTNDIVHLL-LDLFGACTD-TNSSTVEWAMAELLRN  
 CYP76C4 262 AKIA-----EKS---LG---NY---SKDVSNRDFVLSLLILNE---G---DEA---ELDNNDIEHLL-LDMFTACTD-TNSSTVEWAMAELLRN  
 CYP76C1 263 AKIA-----EKS---SQ---NN---PKDVSNRDFVNLLDYK---G---DES---ELSDIEHLL-LDMFTACTD-TSSSTLEWPMTELLKN  
 CYP76C3 254 ARLA-----KRF---SR---TEKEPKEASSIDMLDILLDLTQ---Q---NEA---ELTMNDLKHLL-LDVVFVACTD-TNSSTMEWAMTELFRS  
 CYP706A1 276 SHVK-----MVG---KK---SE---EEEDFLQYLLRVKD---D-DEKA---PLSMTHVKSLI-MDMVLGVD-TSVNASEFAMAEIVSR  
 CYP706A2 278 SHVK-----MVG---KK---SE---EEEDFLQYLLRVKD---D-DEKA---PLSMTHVKSLI-MDMVLGVD-TSVNASEFAMAEIVSR  
 CYP706A3 270 QRLG-----MDR---DS---SDG---RAVDVFLVLLKVKD---EEAECT---KLTMNDVKAVAL-MDMVLGCTD-TSLHVEFAMAEELLHN  
 CYP71A12 255 EHLE-----AGN---H---KEDFVDILLSIES---EKSIGF---QAQRDDIKFMI-LDMFIGCTS-TSSTLEWIMTELIRN  
 CYP71A13 255 EHLE-----ASN---D---KADFVDILLSIEK---DKNSGF---QVQRNDIKFMI-LDMFIGCTS-TTSTLEWIMTELIRS  
 CYP71A14 255 EHLA-----ATD---KP---TLDFVDVLLSLER---HERNGV---QIRRS DIKFLI-LDMFLACTE-TTYALLEWIMTELIRH  
 CYP71A15 254 EHLA-----ATN---KP---TKDFVDILLSFER---QSKDGI---EVRRSDIKFII-LDIFLGCTT-TTNSLEWIMTELIRH  
 CYP71A16 254 EHED-----TTA---DK---ETPDFVDMLLTIQR---DETAQC---QLDKSDLKVII-FEMFLGTT-TTSAVLEWAMTRLMRN  
 CYP71A27 255 EHVD-----ADH---KE---PSDFIDMLLIQK---DKTKRF---KFDRSDLILIL-KDMFFSCTA-TTASQLEWIMTELMRH  
 CYP71A28 257 EHVD-----EGE---NK---ETFDFVDILL-IQL---EKTNEF---ELERSDIRLII-LEFFLGCTT-TTFTAIDWAMTLVVRH  
 CYP71B10 254 LHLQ-----KNR---EE---SEDDFVDLLLRLEK---EEAVLG-Y---GKLTRNHKAIL-MNILLGIN-TSAITMTWAMAELIRN  
 CYP71B9 253 LHKQ-----ENK---Q---GVEDFVDLLKLEK---EETVLG-Y---GKLTRNHVKAIL-MNVLLGAIN-TSAMTMTWAMAELIRN  
 CYP71B11 252 HHLE-----DES---I---KDDIIDLLKMER---GEIELG-E---FQLTRDNTKGIL-FNINLACID-TSAQVMTWVMTYLISN  
 CYP71B12 252 HHLE-----DEI---I---KDDIIDLLKMER---GETTLG-E---FQLTRDHTKGIL-ANILNACID-TSAQVMTWVMTYLISN  
 CYP71B14 252 HHLE-----DTN---I---KDDIIGLLKMEK---GETGLG-E---FQLTRNHTKGIL-LNVLIACVD-TSGHTITWVMTHLIK  
 CYP71B13 252 HHLE-----DGG---S---KDDIVDILLKVER---GEIGLG-E---FQFTRNHTKGIL-LDILLACVD-TSGHTITWVMTHLIK  
 CYP71B6 260 DHRE-----KKK---TE---DREDLIDVLLKLS---QETKLG-S---SRIIDTHIRAI-MDLFVACVD-TSVITLDWTMAELSRH  
 CYP71B15 254 EHLK-----PG---R---ESSTIVDLMDMKK---KQENDGDA--LKFTTDHLKGMII-SDIFVACIGGVAGITL-WGMETELIRN

CYP71B7 257 DHIK-----PG-----R---QVS-----ENPDVVDVMDLKM-----KQEKDGES--FKLTTDHLKGI--SDIFLAGVN-TSAVTINWAMAELIRN  
 CYP71B5 252 DHLK-----SG-----K---I-E-----DHSDIISVMDMIN-----KPTEVG-S--YKVTDDHLKGLM--SDVFLAGVN-AGSITMIWTMTLSRH  
 CYP71B8 256 EELK-----IG-----Q---S-Q-----DHSNLVSSMLDMIN-----RSTEYG-S--FKITSDDLAMM-TDIVLGVN-AGTITMIWTMTLSTRH  
 CYP71B2 258 DHLK-----P-----E---G-R---KNQDIVTLILDMID-----KQEDSD-S--FKLNMDNLKAIV-MDVFLAGID-TSAVTIMWAMTELIRN  
 CYP71B3 254 GHLK-----NPE---DK-----TNQ-----DRPDIIDSILETIY-----KQEQDE-S--FKLTIDHLKGI--QNIYLAGVD-TSAITMIWAMAELVKN  
 CYP71B4 258 DHHS-----KK-----ATQ-----DRPDMVDALLDMID-----NEQQYA-S--FKLTVDHKGVV--SNIYHACID-TSAITLWAMAELVRN  
 CYP83A1 254 ETLD-----PKR---VK-----P---ETESMIDLLMGIYK-----EQPFAS-----EFTVDNVKAVI-LDIVVACTD-TAAAADVWGMTYLMKY  
 CYP83B1 253 ETLD-----PNR---PK-----Q---ETESFIDLLMQIYK-----DQPFSI-----KFTHENVKAMI-LDIVVACTD-TAAAVVWVWAMTYLKY  
 CYP705A2 259 EHE-----EKM---EE---HH-----QGTDMMDVLLLEAYR-----DENAAY-----KITRNHIKSMF-VDLFLACTD-TSSTTIQWIMAEIINH  
 CYP705A5 263 EHE-----EKL---QE---HH-----QTSMDMLDMLLEAYG-----DENAAY-----KITRDQIKSLF-VDLFSACTE-ASANTIQTWMAEIIKN  
 CYP705A8 263 ENE-----ERL---EE---NQ-----QGTDIMDKLLEVYG-----DKTSEY-----KITRDHIKSLF-VDLFFACTD-TATHTIQWIMAEIMNN  
 CYP705A9 241 EYK-----EKV---EE---HH-----QGTDMMDKLLLEVYG-----DEKAEY-----KITRDHIKSLF-VDLFFACTD-TWHTAIQWIMAEIINN  
 CYP705A3 264 ERK-----ENL---EE---KNN-----EGMDMDVLLLEAYG-----DENAAY-----KITWKHIKAFV-VEFFIGCTD-TSVQTTQWAMAEMINN  
 CYP705A6 265 EHE-----EKL---HE---EH-----QGTDMMDVLLAASG-----DENAAY-----NITRNHIKSFV-VEIFIGATD-TSVQTTQWMAEILNH  
 CYP705A1 262 EYE-----EKM---DG---HQ-----GTQFMDALLAAYR-----DENTEY-----KITRSHIKSLTVEFFIGAAD-ASSIAIQWAMADIINN  
 CYP705A4 256 EHE-----KKL---DV---HH-----QRTDMLDALLAAYR-----DENAAY-----KITRNHIKSII-ADLLFACTE-NQVQTIQWAMAIEINN  
 CYP705A12 251 EHE-----ENL---EG---DQ-----TRDMIDHLLLEAYR-----NEEAAY-----KITRQIKSLI-VEIFLCTD-SSAANTIQTWMAEILNN  
 CYP712A1 263 ERE-----AKA---KK---KDG-----TRKDILDILLETYR-----DPTAEM-----KITRNDMKSFL-LDVFMAGTD-TSAAAMQWAMGQLLNH  
 CYP93D1 260 EYEN-----DKS---NE---EEE-----KDKDIVDILLDTYN-----DPKAEL-----RLTMNQIKFFI-LELFMASLD-TTSAALQWMTTELINH  
 CYP81D2 258 EKRE-----GKE---K---KEN-----TMVDHLLCLQE-----TQPEY-----YMDRIKGTM-LSLIAGCTD-TTAVTLEWALSLLLNH  
 CYP81D3 255 ERRE-----GKE---K---RQN-----TMVDHLLC-QE-----TQPEY-----YTDNIKIGIM-LSLIAGCTD-TSAVTLEWTLALLLNH  
 CYP81D4 256 EKRA-----EKE---K---GE-----TMIDHLLALQD-----IQPDY-----YTDVVIKGI--LTLIAGCTD-TSSVTLEWAMSNLLNH  
 CYP81D5 255 EKRA-----EKE---K---GQ-----TLIDHLLSFQE-----TEPEY-----YTDVVIKGI--LALVACTD-TSSVTLEWAMSNLLNH  
 CYP81D6 274 EKRA-----DKE---K---GT-----TMIDHLLSLQE-----SQPDY-----YTDVTLKGI--IVMIAGSE-TIATWLEWAMLNVLNH  
 CYP81D7 303 ERRV-----HKQ---K---GN-----TMDHLLSLQE-----TQPDY-----YTDVTLKGI--IVMILACTE-TLADWLEWAMLNVLNH  
 CYP81D1 265 DKRG-----QQE---T---GT-----TMIDHLLVLQK-----SDIEY-----YTDQIKGI--LIMVACTN-TSAVTLEWALSLLLNH  
 CYP81F1 260 ECRR-----DKE---GN-----TMVNHLLSLQQ-----QQPEY-----YTDVVIKGLM-MSMMLACTE-TSAVTLEWAMANLLRN  
 CYP81F2 255 ECRI-----NGE-----SN-----TMVSHLLSLQL-----DQPKY-----YSDVVIKGLM-LSMMLACTD-TAAVTLEWAMANLLKK  
 CYP81H1 261 EHRA-----NKD---R---LEF-----KNTMIAHLLDSQE-----KEPHN-----YSDQTIKGLI-LMMVACTD-TSALTVEWAMSNLLNH  
 CYP81G1 267 EHRK-----NRG---K---AEL-----EKTMITRLLSLQE-----SEPEC-----YTDDIKGLV-QVMLACTD-TTAVTLEWAMANLLNH  
 CYP82C3 258 NHRQ-----QRKV--SGT---KHN-----DSDFVDVMSLAEQG--KLSHLQY-----DANTCIKTCT-LALILGSE-TSPSTLTWAISSLLLNH  
 CYP82C4 270 NHRQ-----QRKF--SGT---KEN-----DSDFIDVMSLAEQG--KLSHLQY-----DANTSIKSTC-LALILGSD-TSASTLTWAISSLLLNH  
 CYP82C2 269 NHRQ-----QRKV--SGT---KHN-----DSDFVDVMSLAEQG--KFSHLQH-----DAITSIKSTC-LALILGSE-TSPSTLTWAISSLLLNH  
 CYP82F1 267 EHKN-----KRSD--HGR---SEN-----D--YLDHLLKILGQD--KIPGLS-----DHTKIKALC-LNLVLGSE-TAIVVLVWAVSLLLNH  
 CYP79B2 289 ERIK-----MWR---EGK---RTQ-----IEDFLDIFISIKD-----EQGNP-----LLTADEIKPTIKELVMAAPD-NPSNAVEWAMAEMVKN  
 CYP79B3 314 ERIK-----MWR---EGK---RTQ-----IEDFLDIFISIKD-----EAGQP-----LLTADEIKPTIKELVMAAPD-NPSNAVEWAIEMINK  
 CYP79A2 273 ERLM-----QWR---NGK---MKE---PQDFLDMFIIAKD-----TDGKP-----TLDSEIKAQVTEMLMATVD-NPSNAEAWGMAEMINE  
 CYP79C1 279 EKIE-----LWRG--QNKDYNRAETKNDVPMIKDWLDLFTLKD-----ENKGP-----LLTPQEIT-HLSDLDVGID-NAVNIWIBWLAEMLNQ  
 CYP78A6 290 EHRN-----QTGD-----LPRDFVDVLLSLHG-----SDK-----LSDPDI IAVL-WEMIFRCTD-TVAVLVEWILARMVLH  
 CYP78A8 296 EQRA-----ATG-----NFLDMLLSLQG-----SEK-----LSESDMVAVL-WEMIFRCTD-TVAVLVEWVLARIVMH  
 CYP78A5 274 KHKM-----KKN--NLN-----GEENDFVDVLLGLQK-----DEK-----LSDSDMIAVL-WEMIFRCTD-TVAILVEWVLARMVLH  
 CYP78A7 294 EHRV-----SNSE--K-K-----RDIGFVDVLLSLDG-----DEK-----LQEDDMI IAVL-WEMIFRCTD-TTALLTBTWMAELVLN  
 CYP89A2 254 RRRS-----LK-R--EKRS--EEED--KKDYVQSYVDTLLELPL-----EENRK-----LNEEDIMNLC-SEFLTACTD-TTATALQWIMANLVKY  
 CYP89A4 256 RRKI-----VEER--KNRSSEEEED--NKVYVQSYVDTLLELPL-----DEKRK-----LNEEDIVSLC-SEFLNGCTD-TTATALQWIMANLVKN  
 CYP89A3 256 RRKI-----MIES--KDSG-----KEYIQSYVDTLLELPL-----DEKRK-----LNEEDIVSLC-SEFLNACTD-TTATALQWIMANLVRN  
 CYP704A1 252 TKRK-----ELS---KE---QNTISV--REDILSRFLVES-----EKDPEN-----MNDKYLRDIIILNVMVACKD-TTAAASLSWFLYMLCKN  
 CYP704A2 258 TKRK-----ELA---KE---QNTIVV--REDILSRFLVES-----EKDPEN-----MNDKYLRDIIILNFMVACKD-TTAAASLSWFLYMLCKN

CYP94B1 322 AKKK-----SLD----IG---GDVSD---KQDLLSRFLAAG-----HG-----EEAVRDSVISFIMACRD-TTSAAMTWLFWLLSQN  
 CYP94C1 257 QRR-----LT---GLMG---KNDLISRFMVAV-----AED-----DDEYLRDIVVSFLIACRD-TVAAGLTGFFWLLTRH  
 CYP86A2 261 TRKQ-----ELL---SQ---RESG-VQ-RHDDLRSRFMKKKD---QS-----YSETFLRHVALNFILACRD-TSSVALSWFFWLLITTH  
 CYP86A4 263 TRKQ-----ELM---SQ---QESGTHQ-RHDDLRSRFMKKKT---ES-----YSDTFLQHVALNFILACRD-TSSVALSWFFWLLITMH  
 CYP86A8 261 TRKE-----EMM---TQ---HNNG--K-HHDDLRSRFLIKKK-----ES-----YSDELQRVALNFILACRD-TSSVALSWFFWLLITQH  
 CYP86A1 264 ARK-----NSP-----SDDLRSRFLIKKRD---VNG-----NVLPTDVLQRIALNFVILACRD-TSSVALSWFFWLLVMNN  
 CYP86C1 269 ERRN-----KMR---KL---GNLN---DYADLLSRFMQREY---EKEEDTTR--GNYFSDKYFREFCTSFILACRD-TTSVALVWFFWLVQKH  
 CYP86C2 88 ERIA-----MLK---DQ---GTLAN---SKSDVLSRFLIQIES---HKRGDEN---DRFTAKFFRQFCTSFILACRD-TSSVALTWFFWLLITKH  
 CYP86B1 289 TRKK-----ELS---LE---GETT---KRSDDLTVFMGLRD---EK--GES---FSDKFLRDI CVNFILACRD-TSSVALSWFFWLLLEKN  
 CYP96A2 257 AKRE-----EIKR---SQ---GTSNGG--SQDLLTSFIKLD---TTKYKLLNP---SDDKFLRDNILAFILACRD-TTATALSWFFWLLSEN  
 CYP96A5 257 AKRE-----EII---SH---HSNIGGEAHAEDLLSVYMNLD---ISKYELLPN---NDDNFLKDIKSFMLACRD-AIATTLTWFFWLLSKN  
 CYP96A1 259 SKRD-----EIT---NG---VINIDSS--SKDLLMCMNVNDTICH--TTKYKLLNP---SDDKFLRDMILSFMLACRD-TSSVALSWFFWLLSKN  
 CYP96A3 259 AKRE-----EIN---SH---GTHHPSRGEAIDVLTYYMTMD---TTKYKYLEP---SDDRFIKDTILGFLIAARD-TTSSALTWFFWLLMSKN  
 CYP96A4 259 AKRE-----EIK---NH---GIHD--SKGEAMDVLTYYMTID---TTKYKHLKP---SNDKFIKDTILGLVIAARD-TTSSALTWFFWLLSKN  
 CYP709A1 277 SRR-----DC---AEMGRSSTHGDDLGLLNLNEM-----DIDKNNNN--NNNNLQIMDECKTFFFACHE-TTALLTWTTMLLADN  
 CYP709A2 275 SRK-----DS---VEIGRSSSYGDDLGLLNLNQM-----DSNKN---NLNVQIMDECKTFFFACHE-TTSLLLTWTLMLLAHN  
 CYP709B2 279 ARL-----TS---ESK---DYGNLLGIMLTAA---SSNESEK---KMSIDEIIEECKTFFFACHE-TTANLLTWSTMLLSLH  
 CYP709B3 279 SRL-----KS---KCKTY--GYGDDLGLVMTAA---KSNEYER---KMRMDEIIECKVNFYACOG-TTSILTWTTMLLSLH  
 CYP709B1 281 SRL-----QS---KSD---YGDDLGLLTKAY---NTEGKER---KMSIEEIIHECRTFFFACHE-TTSNLLAWTTMLLSLH  
 CYP72A11 275 KRL-----RA---REAGE--APNDLLGILLESN---LGQTKG---NGMSTEDLMEECKLFYFVQOE-TTSVLLVWMTMVLVLSQH  
 CYP72A13 275 KRL-----RA---REAGE--APSDDLGLLLESN---LGQTKG---NGMSTEELMEECKLFYFACOE-TTTVLLVWMTMVLVLSQH  
 CYP72A15 310 KRL-----RA---REAGE--APSDDLGLLLESN---LRQTEG---NGMSTEDLMEECKLFYFACOE-TTSVLLVWMTMVLVLSQH  
 CYP72A14 275 KRE-----RA---RESGE--APSEDLLGILLESN---LGQTEG---NGMSTEDMMEECKLFYFACOE-TTSVLLVWMTMVLVLSQH  
 CYP72A10 298 KRL-----RA---REAGKA-APNDLLGILLESN---LGQAKG---NGMSTEDVMEECKLFYFACOE-TTSVLLVWAMVLLSHH  
 CYP72A7 274 KRE-----KA---REAGE--PANDDLGLLLESN---SEESQG---NGMSVEDVMKECKLFYFACOE-TTSVLLVWMTMVLVLSHH  
 CYP72A9 326 HRE-----KA---RDAGE--APSDDLGLLLESN---SEQSKG---NGLNMEEMEECKLFYFACOE-TTSVLLAWTMVLLVLSQH  
 CYP72A8 279 KRQ-----RG---MDTGE--APKNDLLGILLESN---SGD---HGMSIEDVVEECRLFHFFACOE-TTAVLLVWMTMIMLSHH  
 CYP82G1 264 EHLK-----KRSR--NE---KDQ---ERTIMDLLLDILP-----EDIVISG--HALTLTGSD-STSITEWAVSLLLN  
 CYP72B1 278 FRRQ-----NAID--GE---GEE--CKEPAAKDLLGLMLQAKN-----VTVQDIVVEECKSFFFACQO-TTSNLLTWTTILLSMH  
 CYP712A2 258 EHES-----SKK---N---ATG---ERNMLDVLDDIYE---DKNAEM---KLTRENKAFI-MNIYGGCTD-TSAITVEWALAEILNH  
 CYP90C1 255 ERQ-----VAMTTTSPANDVVDVLLRDGG---DSEKQS---QPSDFVSGKIVEMMIPCEE-TMPTAMTLAVKFLSDN  
 CYP718 251 EKRR-----EME---KE---GAEK---PNTTLFSRFLVEELI-----KG---VITEEEVVDNM-VLLVFAAHD-TTSYAMSMTFKMLAQH  
 CYP84A1 256 EHMK-----KKE---NQ---NAVDDGDVVDTDMVDLLAFYSEEAKLVSETADLQNSIKLTRDNKAI--MDVMFCGTE-TVASAIEWALTELLRS  
 CYP85 237 ERRD-----S---GE---TFTDMLGYLMKKEG-----NRYP---LTDEEIRDQV-VTILYSCYE-TVSTTSMALKYLHDH  
 CYP715A1 286 KRKIS-----LAE---GDD---QGHDDLGLMLKADQ-----KGN---FTAKELVDEC-KTFFFACHE-TTALALTWTFMLLAIH  
 CYP98A3 256 EHTL-----ARQ-----K---SSG---AKQHFDALTLTKD-----QYD---LSEDTIIGLL-WDMITACMD-TTAITAEWAMAEMIKN  
 CYP714A1 292 ERER-----E---CVG---DHKKDLMLQLILEGARSSCDGNLEDKT---QSYKSFVVDNCKSIYFACHE-TSAVAVSWCLMLLALN  
 CYP73A5 260 ERKQ-----IAS---SKP--TGSE---GLKCAIDHILIEAEQ-----KG---EINEDNVLYIVENINVAIE-TTWSIBWGAIELVNH  
 CYP701A3 276 DRLK-----QNG---SE---SD---DDCYLNLMLSEAK-----T---LTKEQIAILVWETI IETAD-TTLVTTWAIYELAKH  
 CYP711A1 282 KRAK-----EAE---TD---SKDFLSLTLKARES---DPFAKN---IFTSDYISAVTYEHLIAGSA-TTAFTLSSVLYLVSGH  
 CYP97B3 306 TRQET-----DVEK--LQ-----ERDYTNLKDASLLR--FLVDMRG---VDIDDRQLRDDLMTMLIACHE-TTAAVLTWAVFLLSQN  
 CYP74A 280 SDYQ-----R---LYEFLRIRGEILV---EADKLG---ISREEATHNLLFATSFNWGMKILFPNMVKRIGPGG  
 CYP74B2 266 ENAG-----DCLRLGQEEFG-----LTRDEAQNLLFVLGFNAYGGFSVFLPSLIGRITGDN  
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CYP702A5 298 PKVMQELRRHEGIV-QDKIKKDET-----ADLTWEDYKS-MTFTQMVIN-ESLRITSTVPTVL--RIIDHEIQFG---D---YTIPAGWIFMGYP  
CYP702A6 301 PKVMQELQRHEGIV-RDKIEKNEK-----ADLTWEDYKS-MTFTQMVIN-ESLRITSTVPTVL--RIIDHEFQFG---E---YTIPAGWIFMGYP  
CYP702A2 297 PKVMKELHRHEGIV-RGKTEKET-----SITWHEYKS-MTFTQMVIN-ESLRITSTAPTVF--RIFDHEFQVG---S---YKIPAGWIFMGYP  
CYP702A1 301 PKVKQELQRHEEIV-RGKAEKEG-----GLTWEDLVF-NTNMQVIVIN-ESLRITSTAPTVL--RVLEHDFQVG---D---YTIPAGWIFMGYP  
CYP702A3 304 PSMVEELQRHEAIV-QNRADKDT-----GVTWHEYKS-MTFTHMVIK-ESLRFSTQPTVH--RIPDQDVQIG---D---YTIPAGWLFFGIP  
CYP708A1 324 PKVLMELKRHEHETIL-QNRADKES-----GVTWKEYRSMNFTHMVIVIN-ESLRLGSLSPAMF--RKAVNDVEIK---G---YTIPAGWIVLVVP  
CYP708A2 308 HKALAEKREHAAAIL-QNRNGKGA-----GVSWEYRHMFTFTNMVIVIN-ETLRMANMAPIMY--RKAVNDVEIK---G---YTIPAGWIVAVIP  
CYP90A1 298 PLALAQKREHEKI--RAMKSDSYS-----LEWSDYKS-MPFTQCVVN-ETLRVANIIGGVF--RAMTDVEIK---G---YKIPKGWKVFSSF  
CYP90B1 331 PKAVEELREHLEIA-RAKKELGES-----LNWDDYKK-MDFTQCVIN-ETLRLGNVVRFLH--RKALKDVRYK---G---YDIPSGWKVLPVI  
CYP707A1 295 PNVLEAVTEQMAIR-KDKEEGES-----LTWGDTKK-MPLTSRVIQ-ETLRVASILSFTF--REAVEDVEYE---G---YLIPKGWKVLPLF  
CYP707A3 295 PTVLEAVTEQMAIR-KDKKEGES-----LTWEDTKK-MPLTYRVIQ-ETLRAATILSFTF--REAVEDVEYE---G---YLIPKGWKVLPLF  
CYP707A2 314 PNLQEVSRQFSIRQKIKKENRR-----ISWEDTRK-MPLTTRVIQ-ETLRAASVLSFTF--REAVQDVEYD---G---YLIPKGWKVLPLF  
CYP88A3 320 PEVLQRAKAEQEMIL-KSRPEGQKG-----LSLKETRK-MEFLSQVVD-ETLRVITFSLTAF--REAKTDVEMN---G---YLIPKGWKVLPLF  
CYP88A4 319 PMILQKAKEQERIV-KKRAPGQK-----LTLKETRE-MVYLSQVVD-ETLRVITFSLTAF--REAKSDVQMD---G---YIIPKGWKVLPLF  
CYP716A1 307 PHVYQRVLEQKEIL-KEKKEKEG-----LRWEDIEK-MRYSWNVAC-EVMRIIVPPLSGTF--READHFSFK---G---FYIPKGWKLYWSA  
CYP716A2 303 PHVYQRVLEQKEIL-NNKDVNEK-----LTWEDIEK-MRYSWNVAC-EVMRIIVPPLAGTF--READHFSFK---G---FYIPKGWKLYWSA  
CYP51 309 KHWWSAALDEQKFLGKHG-----DK-IDYDVLSEMDFLFRSAK-EALRLHPPKILL--RIVHSDFTVTRECK--QYIIPKGHIVATSP  
CYP51A2 292 KEYFSAALDEQKFLGKHG-----DK-IDYDVLSEMDVLYRCK-EALRLHPPKILL--RASHSDFSVTARDGK--TYDIPKGHIVATSP  
CYP710A1 315 PEVLNRVREVAKIWSPE-----NALITVDQLAEMKYTRSVAR-EVIRYRPPATMVP--HVAAIDFPLT---E---TYTIPKGTIVFSP-  
CYP710A2 320 PKVLSKVREVAKIWSPOS-----GHLITADQLAEMKYTRAVAR-EVRYRPPATMVP--HIATNDFPLT---E---SYTIPKGTIVFSP-  
CYP710A3 316 PEVLRRVREDVARFWSPE-----KESITADQLAEMKYTRAVAR-EVLRYPASMP--HVAVSDFRLT---E---SYTIPKGTIVFSP-  
CYP710A4 316 PEVLRRVREDVARFWSSES-----NELITADQLAEMKYTRAVAR-EVLRYPASMP--HVAVSDFRLT---E---SYTIPKGTIVFSP-  
CYP76C2 332 PETMVKAQAEIDCVIGQKG-----VVEESDISALPYLQAVVK-ETFRLEHPAAPLLVP--RKAESDVEVL---G---FMVPKDTQVVLNV  
CYP76C4 331 PKTMVKAQAEIDCVIGQNS-----VVQESDISGLPYLQAVVK-ETFRLEHPAAPLLVP--RKAESDVEVL---G---FMVPKDTQVVLNV  
CYP76C1 331 PKTMVKAQAEIDCVIGQNG-----IVEESDISKLPYLQAVVK-ETFRLEHPAAPLLVP--RKAESDAEIL---G---FMVPLKDTQVVLNV  
CYP76C3 325 TEKMVKAQAEIRQVIGQNG-----FVQESDISPLPYLQAVVK-ETFRLEHPAAP--LIP--RKESDQVIM---G---FLVPKNTQVVVNV  
CYP706A1 342 PEVLNKKIRLELDQVVGKDN-----IVEESHLPKLPYLQAVMK-ETFRLEHPAAPLLVP--HRNSETSVA---G---YTPKDKSKIFINV  
CYP706A2 344 PEVLNKKIRLELDQVVGKDN-----IVEESHLPKLPYLQAVMK-ETFRLEHPAAPLLVP--HRNSETSVA---G---YTPKDKSKIFINV  
CYP706A3 338 PDIMKRAQAEVDKVVGKEK-----VVEESHISKLPYLILAIMK-ETFRLEHPAAPLLVP--RRPSQTTVVG---G---FTIPKDKSKIFINA  
CYP71A12 318 PNVMKKLQDEIRSTIRPHG-----SYIKKEDVENMKYLKAVIK-EVFRVHPPLPLIP--RLLEDVVKV---G---YNTAAGTEVIINA  
CYP71A13 318 PKSMKKLQDEIRSTIRPHG-----SYIKKEVENMKYLKAVIK-EVLRLEHPSLPILIP--RLLEDVVKV---G---YNTAAGTEVIINA  
CYP71A14 319 PECMKKLQDEIRAKATKLI-----LYISEEDVEDMKYLKAVIK-EVLRLEHPPPLLLVP--RELSEDIKLLK---G---YDIAAGTQVIINA  
CYP71A15 318 PECMKKLQDEIRGDATNLT-----IYRSHEEVEDMKYLKAVIK-EGLRLEHPPPLLLVP--RLTQDVKLLK---G---YDIAAGTQVITNA  
CYP71A16 319 PECLKKLQDEIR-SVSKMN-----SYVSGKEVENMNYLKAVIK-EVLRLEHPPPLLLVP--RLLEDVVKLLK---G---YDITAGTQVIINA  
CYP71A27 319 PECMKKLQDEIR-SFSTHN-----LNVTEKEVEKMNLYLHCVIK-EGLRLEHPSGP--LLF--RLPSEDVQLK---G---YDISAGTHVIINA  
CYP71A28 321 PESMKKLQDEIR-TYSRNL-----LYVPEEVENMKYLKAVIK-EVFRVHPPLPLIP--RQLED-----G---YVFINA  
CYP71B10 321 PRVMKKVQSEIRAQIGKNNKT-----RIISLDEINHLSYLNVMVVK-ETCRLEHPVAPLLVP--REVISEFKIN---G---YTIQPKTRLHVNV  
CYP71B9 319 PRVMKKVQSEIRNQMINKS-----VITLDDIDHLPYLKAVIK-ETWRLEHPPVPLLLP--REVMSEFEIN---G---YTIQPKTLLYVNV  
CYP71B11 317 PRVMKKAQAEVREVIKNKDD-----IIEEDIERLEYLKMVVK-ETFRVLEPLVPLLLIP--REASKDVKIG---G---YDIPKKTWIHVNI  
CYP71B12 317 PRVLKKAQAEVREVIKHKDD-----IIEEDIERLQYLKMVVK-ETFRINPLVPLLLIP--REASKDVKIG---G---YNIIPKKTWIHVNI  
CYP71B14 317 PRVMKKAQAEVREVIKNKDD-----ITEEDIERLEYLKMVVK-ETLRINPLVPLLLIP--REASKYIKIG---G---YDIPKKTWIYVNI  
CYP71B13 317 PRVMKKAQAEVREVIKNKDN-----ITEEDIEGLEYLKMVVK-ETLRINPLVPLLLIP--REASKDVKIG---G---YNIIPKKTWIHVNI  
CYP71B6 327 PRVMKKVQAEIREHVGDKG-----IVTYDDLEALVYMKMVK-ETWRLEHAPSILIP--REAMTNFKIK---G---YDIPGTRIHVNA  
CYP71B15 320 PRVMKKVQAEIRTTLDGK--K-----ERIKEDLNQLHYFKLVVK-ETLRLEHPPVPLLLP--RQTMSHIKIQ---G---YDIPAKTQILVNV

CYP71B7 326 PRVMKKVQDEIRTTLGDK--K-----QRITEODLSQVHYFKLVVK-EIFRLHPAAPLLLLP-RETMSHVKIQ---G---YDIPVKTQMMINI  
CYP71B5 319 PRVMRKLQEEIRAALGPN--K-----EKITEEDLEKVEYLKMWIE-EAFRLHPAPLLLLP-RLTMSDINIQ---G---YSIPKNTMIQINT  
CYP71B8 323 PRVMKKLRREIRATLGPN--K-----ERITEEDLEKVEYLKLVIK-ETFRLEHPPGPFLLP-RQVMSDIEIQ---G---YHIPKNAHIKIST  
CYP71B2 324 PRVMKKAQGSIRTTLGLK--K-----ERITVEDLGKVEYLNHILK-ETFRLEHPALPFVVP-RETMSHIKIQ---G---YDIPPKTQIQLNV  
CYP71B3 324 PRVMKKAQEEIRTCIGIKQ-K-----ERIEEEDVDKLOYPKLVIK-ETLRLHPAPLLLLP-RETMA DIKIQ---G---YDIPKRTIILLVNA  
CYP71B4 325 PRVMKKAQDEIRTCIGIKQ-E-----GRIMEEDLDKLOYLKLVVK-ETLRLHPAAPLLLLP-RETMA DIKIQ---G---YDIPQKRALLVNA  
CYP83A1 320 PQVLKKAQAEVREYMKEKGST-----FVTEEDVKNLPPYFRALVK-ETLRLHPVPIPLLIP-RACIQDTKIA---G---YDIPACTTVNVNA  
CYP83B1 319 PEAMKKAQDEVRSVIGDKG-----YVSEEDLPNLPYLKAVIK-ESLRLHPVPIPLLH-RETIADAKIG---G---YDIPAKTIIQVNA  
CYP705A2 325 PKILERLREEDFVVVGKT-----RLIQETDLPNLLYLQAIK-EGLRLHPGPFLLP--RTVQERCEIK---G---FHIPKTIILVVNS  
CYP705A5 329 PKICERLREEDSVVGKT-----RLVQETDLPNLPYLQAVIK-EGLRLHPGPFV--V--RTFKETCEIK---G---FYIPEKTRLFVNV  
CYP705A8 329 SLILERLREEDSVVGKT-----RLIQETDLPNLLYLQATVK-EGLRLHPTIPLVL--RTFQDGTIG---G---FSIPKTKLVVNG  
CYP705A9 307 SYILERLREEDSVVGKT-----RLIQETDLPNLPCLQATVK-EGLRLHPVPLVL--RTFKEGCTIG---G---FYIPEKTTLVVNG  
CYP705A3 331 ANVLERLREETVSVVGET-----RLIQETDLPNLPYLQAVIK-EVLRLHPSPVLI--RKFOEKCEVK---G---FYIPEKTTLVNV  
CYP705A6 331 ENVLERLRKIDSVVGKT-----RLIHEEDLPNLPYLQAVIK-EGLRLHPGPFLLV--RTFQERCKIK---G---FYIPEKTTLVINA  
CYP705A1 328 REILEKLRREEDSVVGKT-----RLVQETDLPNLPYLQAVIK-EGLRLHPPTPLVV--REFQEGCEIG---G---FFVPKNTTLIVNS  
CYP705A4 322 ENVLERLRGEEDSVVGKS-----RLIQETDLPKLPYLQAVIK-ETLRLHPGPFLLP--RFTKEGCRIR---G---FYVPEKTTLVNV  
CYP705A12 316 PGVLEKLRAEDSVVGK-----RLIQESDLPNLPYLQAVIK-EGLRLHPSAPVLL--RVFGESCEVK---E---FYVPEKTTLVNV  
CYP712A1 330 PQAENKLRREINNVVGSK-----RLVKEEDVPNLPYLRAVLR-ETLRLHPSAPLII--RECAEDCQVN---G---CLVKSKTRVLVNA  
CYP93D1 328 PDIFAKIRDEIKSVVGTN-----RLIKESDLPKLPYLQAAIK-ETLRLHPVGPLLR--RESNTDMKIN---G---YDVPKSGTKIFINA  
CYP81D2 320 PEVLNKARDEIDRMIGVD-----RLLEESDIPNLPYLQNIIVS-ETLRLYPAAPMLLP--HVASKDCKVG---G---YDMPRGTMMLTNA  
CYP81D3 316 PQILSKARDEIDNKV-LN-----RLVEESDLSHLPYLQNIIVS-ESLRLYFASPPLLVP--HVASEDCKVG---G---YHMPRGTMMLT-A  
CYP81D4 317 PEILKKARMEIDEKVGLD-----RLVDESDIVNLSYLSQIVL-ETLRLYPAVPLLLP--HLSSEDCCKVG---G---YDIPSGTMVLTNA  
CYP81D5 316 PEILEKARAEIDDKIGSD-----RLVEESDIVNLHYLQNIIVS-ETLRLYSAPVPLLLP--HFSSDECKVA---G---YDMPRRTLLLTNV  
CYP81D6 335 PEVLKKARTEIDTKIGFD-----RLMDEADTKNLPYLQWIVL-ETLRLHPAAPTNPV--HSTSEDCMLA---G---YDVPKGSMLLVNI  
CYP81D7 364 PEVLEKARTEIDTEVGF-----RLMDEADTKNLPYLQWIVL-ETLRLHPVAPTNPV--HMTSDDCILA---G---YDVPKGSMLLVNV  
CYP81D1 326 PDVISKARDEIDNRVGLD-----RLIEEADLSELPLYLKNIVL-ETLRLHPATPLLVP--HMASEDCKIG---S---YDMPRCTTLLVNA  
CYP81F1 320 PEVLEKARSEIDEKIGKD-----RLIDESDIAVLPYLQNIIVS-ETFRLEFPVAPFLIP--RSPTDDMKIG---G---YDVPKRTIIVMVNA  
CYP81F2 315 PEVLKKAKAEIDEKIGEE-----RLVDEPDIANLPYLQNIIVS-ETFRLECPAAPLLVP--RSPSEDLKIG---G---YDIPKRTIIVLVNA  
CYP81H1 325 PQILETTRONIDTQMETSSR-----RLLKEEDLVNMMNYLKNVVS-ETLRLYFVAPLMVP--HVPSSDCVIG---G---FNVPRDTIIVLVNL  
CYP81G1 331 PEVLRKLTTELNEVSKEG-----RVFEESDTGKCPYLNIVS-ETLRLHPAAPLLVP--HASSTDCEVA---G---FDIPRRTWLFINA  
CYP82C3 329 KDMLKKVQDELDIHVGRD-----RNVEDSDIKNLVYLQAIK-ETLRLYPAAPLLGH--REAMEDCTVA---G---YNVPCGTRLIVNV  
CYP82C4 341 KEMLKKVQDELDIHVGRD-----RNVEDSDIENLVYLQAIK-ETLRLYFAGPLLGP--REAMEDCTVA---G---YVVPCCGTRLIVNV  
CYP82C2 340 KDMLKKAQDELDIHVGRD-----RNVEDSDIENLVYLQAIK-ETLRLYFAGPLLGH--REAIEDCTVA---G---YNVRRGTRMLVNV  
CYP82F1 335 PHVLRKAQDELDSKIGKE-----RVVEELDIDKLVYLQAVIK-ETFRLYPPVPLVAY--RAVVEDFDIA---FC--KCHVPAGTQLMVSA  
CYP79B2 356 PEILRKAMEEIDRVVGE-----RLVQESDIPKLNLYKAILR-EAFRLHPVAAFNLP--HVALSDTTVA---G---YHIPKGSQVLLSR  
CYP79B3 381 PEILHKAMEEIDRVVGE-----RFVQESDIPKLNLYKAILR-EAFRLHPVAAFNLP--HVALSDTTVA---G---YHIPKGSQVLLSR  
CYP79A2 340 PSIMQKAVEEIDRVVGE-----RLVIESDLPNLPYLQAVIK-EAFRLHPVAPFNLV--HMSTDDTVVD---G---YFIPKGSMLLVNI  
CYP79C1 356 REIHLEKAVEEIDMVVGE-----RLVQESDVPNLPYLQAVIK-ETLRLHPINPFLVP--HMARHDTTLA---G---YFIPKGSMLLVNI  
CYP78A6 350 EDMQSTVQDELQVVGK---S-----RALDESIDLASLPYLTAIVK-EVLRLHPGPFLLSWARLAIITDITVD-----GRLVPACTTAMVNM  
CYP78A8 352 PKVQLTVHDELDRVVGK---S-----RTVDESDLPSTLYLTAMIK-EVLRLHPGPFLLSWARLSITDTSVD-----GRLVPACTTAMVNM  
CYP78A5 338 QDIQDKLYREIASATSNN--I-----RSLSDSDIPKLPYLQAVIK-ETLRLHPGPFLLSWARLAIHDVHVG-----PNLVPACTTAMVNM  
CYP78A7 357 ENVQTKLRDEILTAVGDGA-D-----GDVADADLAKLPYLNAIVK-ETLRLHPGPFLLSWARLSTSDVQLS---N---GMVLPKGTAMVNM  
CYP89A2 327 PEIQERLHEEIKSVVGR--SK-----GGGEE--DVEKMPYLKALVL-EGLRRLHPGPFHLLP--HSVTEDTVLG---G---YKVPKNGTINFMV  
CYP89A4 332 PEIQKRLYEIKSVVGE--EA-----KEVEEDAQKMPYLKAVVM-EGLRRLHPGPFHLLP--HSVTEDTVLG---G---YKVPKNGTINFMV  
CYP89A3 325 QEIQRRLYEIKSVVGE--EE-----KEIEEEMKMPYLKAVVM-EGLRRLHPGPFHLLP--HRVSEDTLGG---G---YRVPKNGTINFMV  
CYP704A1 319 PLVQEKIVQEIRDVTSSHEKT-----TDVNGFIESVTEEALAQMQYLHAALS-ETMRLYPPVPEHM--RCAENDDVLP---D---GHRVSKCDNIYYIS  
CYP704A2 325 PLVQEKIVQEIRDVTFHEKT-----TDVNGFVESINEEALDEMHYLHAALS-ETLRLYPPVPEHM--RCAENDDVLP---D---GHRVSKCDNIYYIA

CYP94B1 383 DDVETKILDELNRNKGSLGLG-----FEDLREMSYTKACLCEAMRLYPPVAWDS--KHAANDDILP---D---GTPLKKGDKVITYFP  
 CYP94C1 315 BEVENRIRELDRVMGTGFDS-----VTAR-----CDEMREMDYLHAASLYESMRLYPPVQFDS--KFALNDDVLS---D---GTFVNSGTRVITYHA  
 CYP86A2 327 PTVEDKIVREICSVLIETRGT-----DVSSWTAEPLEFDEVDRLVYLKAALS-ETLRLYPPVPEDS--KHVVNDLILP---D---GTFVPAGSSVITYSI  
 CYP86A4 330 PTVEDKIVREICSVLIETRGT-----DVASWTEVPLGFDEIDRLVYLKAALS-ETLRLYPPVPEDS--KHVENDDLVP---D---GTFVPAGSSVITYSI  
 CYP86A8 325 PAIEDKILREICTVLVETRGD-----DVALWTEDEPLSCEELDRLVFLKAALS-ETLRLYPPVPEDS--KRAVKDDVLP---D---GTFVPAGSSVITYSI  
 CYP86A1 323 REVETKIVNELSMVLKETRGD-----DQEKWTEEPLEFDEADRLVYLKAALA-ETLRLYPPVQDF--KYVVEHDVLP---D---GTFVPRGSTVITYSI  
 CYP86C1 342 BEVEKRILREIREIKR-----KLTQTQETEDQFEABDFREMVYLQAALT-ESLRLYPPVPMEM--KQALEDDVLP---D---GTRVKKGARIHYSV  
 CYP86C2 160 BEVETKILHEIREILNQREKNKYKLDDETEGKESRRHFTVKELNDMVYLQAALS-ESLRLYPPVPMEM--KQATEEDVFP---D---GTFLRKGSRVYFSV  
 CYP86B1 356 BEVEEKIMVEMCKILRQRDD-----HGNAEKSDYEPVFGPEEIKKMDYLQAALS-EALRLYPPVVDH--KEVQEDDVFP---D---GTMLKKGDKVITYAI  
 CYP96A2 329 PHVVAKIHQELNINTD-----LS--RTGNSQENVDKLVYLGALC-EAMRLYPPVVFGR--KSPIKSDVLP---S---GHKVDANSKIIICL  
 CYP96A5 331 PEAVTKIROELINTNLP-----GS--GMSLDADKLNKMVYLGALC-ESLRLYAPVIFER--KTPIKQDVLP---S---GHMVDKNWKILFSV  
 CYP96A1 335 PKAITKIROELINTQLSP-----RTND--FDSFNQELNKLIVYHGALC-EALRLYPPVVFQH--KSPTKSDVLP---S---GHRVDASSKIVFCL  
 CYP96A3 333 PEAINKIROELVKKMP-----RFDP--ADLEKLVYLGAVC-ETLRLYPPVVFNH--KSPAKPDVLP---S---GHRVDEKWKIVISM  
 CYP96A4 332 PEAMTKIROELNKKMP-----KFDP--ADLDKLVYLDGAVC-ETLRLYPPVVFNH--KSPAKPDVLP---S---GHKVDKNWRVVIPI  
 CYP709A1 348 PTWQEKVREEVREVFGNG-----LPSVDQLSKLT-SLSKVIN-ESLRLYPPATLLP--RMAFEDLKLK-----DLTLPKGLSIWIPV  
 CYP709A2 342 PTWQDNVRDEVRVQVCGQDG-----VPSVEQLSSTL-SLNKVIN-ESLRLYPPATLLP--RMAFEDIKLG-----DLTLPKGLSIWIPV  
 CYP709B2 344 QDWQEKLRREVFNECGKDK-----IPDAETCSKLLK-IMNTVFM-ESLRLYGPVNLNL--RLASEDMKLG-----NLEIPKGTITILPI  
 CYP709B3 346 QGWQEKLRREVFNECGKDK-----IPDTEFSSKLLK-IMNMVLM-ESLRLYGPVIKIS--REATQDMKVG-----HLEIPKGTISIIPL  
 CYP709B1 345 QDWQEKLRREVFKECGKEK-----TPDSETFSSKLLK-IMNMVLM-ESLRLYGPVSALA--REASVNIKLG-----DLEIPKGTIVVPL  
 CYP72A11 342 QDWQARAREEVKQVFGDK-----EPDAEGLNQLK-VMTMILY-EVLRLYPPVPIQLS--RAIHKEMELG-----DLTLPGGVILNLP  
 CYP72A13 342 QDWQARAREEVKQVFGDK-----EPDAEGLNQLKV-VMTMILY-EVLRLYPPVVQLT--RAIHKEMQLG-----DLTLPGGVQISLPI  
 CYP72A15 377 QDWQARAREEVKQVFGDK-----EPDAEGLNQLK-VMTMILY-EVLRLYPPVTQLT--RAIHKELKLG-----DLTLPGGVQISLPI  
 CYP72A14 342 QDWQARAREEVKQVFGDK-----QPDEGLNQLK-VMTMILY-EVLRLYPPVVQLT--RAIHKEMKLG-----DLTLPGGVQISLPI  
 CYP72A10 366 QDWQARAREEVKQVFGDK-----EPDTECLSQLKV-VMTMILY-EVLRLYPPVTHLT--RAIDKEMKLG-----DLTLPAGVHISLPI  
 CYP72A7 341 QDWQARAREEVMQVLEGENN-----KPDMEGLNQLK-VMTMIFN-EVLRLYPPVAQLK--RVVNKEMKLG-----ELTLPAGIQHISLPT  
 CYP72A9 393 QDWQARAREEVMQVFGHN-----KPDQGLNQLK-VMTMIY-EVLRLYPPVIQMN--RATHKEIKLG-----DMTLPGGIQVHMPV  
 CYP72A8 343 QKWQDQAREEILKVIKGN-----KPNFDALSRLK-TMSMILN-EVLRLYPPGILLG--RTVEKETKLG--E---DMTLPGGAQVVPV  
 CYP82G1 322 PAALEAAQEEIDNSVGKG-----RWIEESDIQNLKYLQAIK-ETHRLYPPAPLTC-IREAREDCFVG--G---YRVEKGTRELLVNI  
 CYP72B1 344 PEWQAKARDEVLRVCGSR-----DVPTKDHVVKLKLISMLLN-ESLRLYPPIVATI--RRAKSDVKLG--G---YKIPKCGTELLIPI  
 CYP712A2 324 PEIMKKAQEEIQVVGNK-----RVVEESDLCNLSYTAQVVK-ETMRLYPPGGPIFV--RESDEECAVA--G---FRIPAKTRVIVNV  
 CYP90C1 320 PVALAKLVEENMEMKRRKLELG-----EYKWTIDYMSLSFTQVNL-ETLRMANIINGVW--RKALKDVEIK--G---YLIIPKGCWCVLASF  
 CYP718 316 PTCRDTLLEBHAQIKANKGEG-----EYLTVEEDVKKMKYSWQVVR-ETMRLYPPVIFGSF--RKAVADIDYG--G---YTIIPKQWKLWTT  
 CYP84A1 339 PEDLKRQQELAEVVGLD-----RRVEESDIEKLTYLKCTLK-ETLRMHPPVPLLL--HETAEDTSID--G---FFIIPKKSVMINA  
 CYP85 297 PKALQELRAEHLAFREKRQD-----EPLGLEEDVKSMMKFTRAVIY-ETSRLATIVNGVL--RKTTRDLIN--G---GYLIIPKGWRIYVYT  
 CYP715A1 349 PEWQDTIREETREVIGDS-----K-IEYNKLAGLKKMSWVMN-EVLRLYPPAPNAQ--RQARNDEVN--G---RVIPNGTNIWIDV  
 CYP98A3 319 PRVQQKVQEEFDRVVGLD-----RILTEADFSRLPYLQCVVK-ESFRLYPPPTPLMLP--HRSNADVKG--G---YDIIPKGSNVHVN  
 CYP714A1 362 PSWQTRIRDEVFLHCKNG-----IPDADTISNLKVTMTVIQ-ETLRLYPPAAFVS--REALEDTKLG-----NLVVPKGCIVTLI  
 CYP73A5 326 PEIQSKLRNELDVTVLGPG-----VQVTEPDLHKLPLYLQAVVK-ETLRLMAIPLLLVP--HMNLHDAKLA--G---YDIPAEISKILVNA  
 CYP701A3 336 BSVQDRLCKEIQNVCGEG-----KFKTEQLSQVPYLVGVFH-ETLRKYSPAPLVP--IRYAHEDTQIG--G---YHVPAQSEITAINI  
 CYP711A1 347 LDVEKRLLEEDDGFGRD-----LIPTAHDLQHKFPYLDQVTK-EAMRFYMSPLVA--RETAKEVEIG--G---YLIIPKGTWVWLAL  
 CYP97B3 375 BEKIRKAQAEIDAVLQGG-----PPTYESMKKLEYIRLIVV-EVLRLYPPVPLLR--RTLKPELTPGCHKGEKEGHKVPKGTDFIFISV  
 CYP74A 341 HQVHNRLAEETRSVKSNG-----GELTMGAIEKMEKTSVYVY-ECLRFVPPVTAQY--GRAKKDLVIESHDA--AFKVKAGEMLYGYQ  
 CYP74B2 318 SGLQERIRTEVRRVCGSG-----SDLNFKTVNEMELKSVVY-ETMRFVPPVPLQF--ARARKDFQIS--SHDAVFEVKKGELLCGYQ  
 consensus 501 . . . . . \* . . . . .

CYP702A5 378 -YVHFNPEKYD-DPLAFNPWRWK-----GKDLSTI-----VSKTYLPPFGSGTRLCVGAEFVKLQMAIFIHHLFR-YRWSMKAET----  
CYP702A6 381 -YVHFNAEKYD-DPLAFNPWRWK-----GKDLSAI-----VSRTYIPFGSGSRLCVGAEFVKLQMAIFIHHLFR-YRWSMKTET----  
CYP702A1 375 -NHVFNPKTYD-DPLVFNPRWE-----GKDLGAI-----VSRTYIPFGAGSRQCVGAEFVKLQMAIFIHHLFR-CRWSMKTIGT----  
CYP702A2 379 -HHHFNSEKYE-DPYAFNPWRWE-----GKDLGAI-----VSKTYIPFGAGRRLCVGAEFVKLQMAIFIHHLFR-CRWSMKSJGT----  
CYP702A3 382 -QVHFDEEKYD-DPLTFNPWRWQ-----GKDINST-----VSREYMPFGAGGTHCVGSEFAKLI IAILLHHLFR-FRWSLDPKT----  
CYP708A1 404 SLLHYDPQIYE-QPCEFNPRWE-----GKELLS-----GSKTFMAFGGGRARLCAGAEFARLQMAIFLHHLVTTYDFSLIDKS----  
CYP708A2 387 PAVHFNDAIYE-NPLEFNPRWE-----GKELRS-----GSKTFMVFGGVRRQCVGAEFARLQISIFIHHLVTTYDFSLAQES----  
CYP90A1 375 RAVHLDPNHFK-DARTFNPRWQ--S-----N-SVTTGPS-----NVFTPFGGGPRLCPGYELARVALSVFLHRLVTTGFSVWPAEQD----  
CYP90B1 410 SAVHLDNSRYD-QPNLFNPWRWQQQN-----NGASSSGSGS-----FSTWGNNYMPFGGGPRLCAGSELAKLEMAVFIHHLVLFKFNWELAEED----  
CYP707A1 372 RNIHHSADIFS-NPGKFDPSRFEV-----APKP-----NTFMPPFCNGTHSCPGNELAKLEMSIMIHHLTTKYRCVCV-----  
CYP707A3 372 RNIHHNADIFS-DPGKFDPSRFEV-----APKP-----NTFMPPFCNGIHSCPGNELAKLEISVLIHHLTTKYRWSIVGPS----  
CYP707A2 392 RRIHHSSEFFP-DPEKFDPSRFEV-----APKP-----YTYMPPFCNGVHSCPGSELAKLEMLILLHHLTTSFREVEIGDE----  
CYP88A3 398 RDVHIDPEVFP-DRKFDPARWDNG-----FVPKA-----GAFLPFGAGSHLCPGNDLAKLEISIFLHHLVLLKYQVKRSNPE----  
CYP88A4 396 RNVHLDPEIYP-DPKKFDPSRWE3-----YTPKA-----GTFLPFGGLGSHLCPGNDLAKLEISIFLHHLVLLKYRVERSNPG----  
CYP716A1 384 TATHMNPDIYFP-EPEFEPNRFEG-----SGPKP-----YTYVPPFGGPRMCPKEYARLEILLFMHNLVNRFKWEKVFVN----  
CYP716A2 380 TATHKNPEYFP-EPEKFEPSRFEV-----SGPKP-----YTYVPPFGGSRICPGREYARLEILLFMHNLVNRFKWEKVFVK----  
CYP51 389 AFANRLPHVYK-DPENFDPSRFSK-----EREEDK-----AAGSCSYISLCAGRHECPGGSFAFLQIKAVWCHLLRNFELELVSP----  
CYP51A2 372 AFANRLPHIFK-DPDTYDPSRFS-----GREEDK-----AAGAFSYIAFGGGRHCLGEPFAYLQIKAIWSHLLRNFELELVSP----  
CYP710A1 391 VFDSSF-QGFT-EPDRFDPSRFS-----TRQED-----QVFKRNFLAFGWGPHQCVGQRYALNHLVLFIAMFSSLLDFKRLRSD----  
CYP710A2 396 VFDASF-QGFT-EPNRFDPSRFS-----TRQED-----QVFKRNYLAFGWGAHQCVGQRYALNHLVLFIAMFSSLLDFKRLQSD----  
CYP710A3 392 LFDASF-QGFT-EPDRFDPSRFS-----TRQED-----EVFKRNFLTFGIGSHQCVGQRYALNHLVLFIAMFSSMDFKRVRS-----  
CYP710A4 392 LFDASF-QGFT-EPDRFDPSRFS-----TRQED-----EVFKRNFLTFGNGSHQCVGQRYAMNHLVLFIAMFSSMDFKRVRS-----  
CYP76C2 407 WAIGRDPNVWE-NSSRFKPERFL-----GKDIDLK-----GRDYELTPFGAGRRICPGLPLAVKTVPLMLASLLYSFDWKLPLNGVVS-E  
CYP76C4 406 WAIGRDPSVWE-NPSQFEPERFL-----GKDIDVK-----GRDYELTPFGAGRRICPGLPLAVKTVSMLASLLYSFDWKLPLNGVVS-E  
CYP76C1 406 WAIGRDPSVWD-NPSQFEPERFL-----GKDMDVR-----GRDYELTPFGAGRRICPGMPLAMKTVSMLASLLYSFDWKLPLKGVLS-E  
CYP76C3 399 WAIGRDASVWE-NPMKFEPERFL-----LRETDVK-----GRDFELTPFGSGRRMCPGISMALKTMHMLASLLYSFDWKLQNGVVP-G  
CYP706A1 417 WAIHRDPKNWD-EPNEFKPERFL-----ENSLDFN-----GGDFKYLPPFGSGRRICAAINMAERLVLFNIASLLHSFDWKAPQG----Q  
CYP706A2 419 WAIHRDPKNWD-EPNEFKPERFL-----ENSLDFN-----GGDFKYLPPFGSGRRICAAINMAERLVLFNIASLLHSFDWKAPQG----Q  
CYP706A3 413 WAIHRNPNVWE-NPLKFDPSRFL-----DMSYDFK-----GNDFNYLPPFGSGRRICVGMAMGERVVLYNLATFLHSFDWKIPQG----E  
CYP71A12 394 WAIQRDPAIWGPDAAEFKPERHL-----DSTLDYH-----GKDLNFI PFCSGRRICPGINLALGLVEVTANLVGRFDWRVRAEAGPNG-D  
CYP71A13 394 WAIQRDTAIWGPDAAEFFKPERHL-----DSGLDYH-----GKNLNYIPFGSGRRICPGINLALGLAEVTANLVGRFDWRVRAEAGPNG-D  
CYP71A14 395 WAIQRDTMTWGDAAEFKPERHL-----DSLVDFR-----GTNFEFIPFGSGRRICPGIGFAMALVEVTANLVNRFNWRMEVQHSNG-D  
CYP71A15 394 WAIQRDIVTWGIDAEFFKPERHL-----DSPLDFR-----GTNFEYIPFGSGRRICPGIGFAMALVEVTANLVNRFNWRMDARLSG-D  
CYP71A16 394 WAIQRDTATWGSDAQEFKPERHF-----DSTWDFV-----GRNFKYIPFGAGRRICPGIGLGSVMASVTANLVKRFDRVEDGPGSYD  
CYP71A27 393 WAIQRNPAIWGLDANEYRPERHF-----WYEFGFQ-----RTDSKFVPPFGAGRRICPGIGFSLVLSKLLALANLVKRFNRWRLKVGVPVGD  
CYP71A28 383 WAIHRDTEKWGPYAEFFKPERHL-----DLPLNFQ-----GQDFNFI PFCSGRRICPDIDFATMLIEVGLANFVYRFNWRVETRPLG--  
CYP71B10 399 WAIGRDPEIWK-DPEEFLPERFM-----DCDIDVK-----GQDYELLPPFGSGRRICPAVYMGITTFEFLANLLYHFDWKLPEGVAV-E  
CYP71B9 394 WAIGRDPSWK-DADMFPERFM-----DNNIDAK-----GQNFELPPFGSGRRICPGMYMGTTFEFLANMLYQFDWEVPDGMVV-E  
CYP71B11 392 WAIHRNPNVWK-DPEAFIPERFM-----DNQIDYK-----GLNFELPPFGSGRRMCPGIGMGMALVHLTLINLLYRFDWKLPEGMV-E  
CYP71B12 392 WAIHRNPNVWK-DPEAFIPERFM-----DSQIDYK-----GLNFELPPFGSGRRICPGIGMGMALVHLTLINLLYRFDWKLPEGMKV-A  
CYP71B14 392 WAIQRNPNVWK-DPEVFI PERFM-----HSEIDYK-----GVDFELPPFGSGRRMCPGMGLGMALVHLTLINLLYRFDWKLPEGMNI-E  
CYP71B13 392 WAIHRNPNVWK-DPEAFIPERFM-----DNQIDYK-----GLNFELPPFGSGRRICPGIGMGMALIHLTLINLLYRFDWKLPEGMV-E  
CYP71B6 402 WAIGRNPDVWK-DPEDEFIPERFV-----DSNVETK-----GTSFELPPFGSGRRICPAMYVGLSTVEYTLANLLYHFDWKA----T--E  
CYP71B15 396 YAMGRDPKLE-NADEFNDRFL-----DSSVDFK-----GKNYEFIPFGSGRRICPGMTMGTILVEMALLNLLYFDWGW--LAK----



CYP71B7 402 YSIARDPKLWT-NPDEFNDRFL-----DSSIDYR-----GLNFELLPFGSGRRICPGMTLGITTVELGLLNLLYFFDWWVPVGNV-K  
CYP71B5 395 YTIGRDPKNWT-KPDEFIPIPERFV-----DNPIEYK-----GQHFELLPFGAGRRVCPGMATGITIVELGLLSLLYFFDWSLPNGMTT-K  
CYP71B8 399 YAIGRDPKCVT-NPEEFNPERFA-----NTSINYK-----GQHYELLPFGAGRRSCPGMTLGITILELGLLNLLYFFDWSLPNGMTI-K  
CYP71B2 400 WTIGRDPKRW-NPEEFNPERFA-----NSSVDFR-----GQHFELLPFGSGRRICPGMPMAIASVELALMNLLYFFDWSMPDGTKG-E  
CYP71B3 401 WSIGRNPDELWE-NPEEFNPERFI-----DCPMDYK-----GHSFEMLPFGSGRRICPGIAFGIATVELGLLNLLYFFDWSLRAEED---K  
CYP71B4 402 WSIGRDPESWK-NPEEFNPERFI-----DCPVDYK-----GHSCELLPFGSGRRICPGIAMAIAITIELGLLNLLYFFDWSMPEKK---K  
CYP83A1 397 WAVSRDEKEWGNPDEFRPERFL-----EKEVDFK-----GTDYEFIPFGSGRRMCPGMRIGAAMLEVPYANLLSFNFKLPNGMKP-D  
CYP83B1 394 WAVSRDTAAWGNPNEFIPIPERFMNE-----HKGVDYK-----GQDFELLPFGSGRRMCPAMHLGIAMVEIPFANLLYKFDWSLPKGIKP-E  
CYP705A2 399 YAIMRDPDFWE-DPDEFKPERFLSIS-----RSGQEDEI-----RDKFLKYIPFASGRRGCPGTNLAYASVGTAVGVMVQCDFWKIE-GE----  
CYP705A5 402 YAIMRDPDFWE-DPEEFKPERFLASS-----RLGEEDEK-----REDMLKYIPFGSGRRACPGSHLAYTVVGSVIGMMVQHFWDWIK-GE----  
CYP705A8 403 YAIMRDPDNWE-DPLEFKPERFLASS-----RSSQDAI-----KEVLKYLSPFGSGRRGCPGNLAYVSVETAIGVMVQCDFWKID-GH----  
CYP705A9 381 YAMMRDPPEYWE-DPQEFKPERFLASS-----RSSQNDEI-----RDLLKYLSPFGSGRRACPGANLAYISVGTAGVMVQCDFWIK-GE----  
CYP705A3 405 YAIMRDSDSWE-DPEKFKPERFLTSS-----RSGEED-----EKELKFLPFGSGRRGCPGANLGSIFVGTAGVMVQCDFWKIK-ED----  
CYP705A6 405 YAVMRDPDSWE-DPDEFKPERFLRSS-----SSGQE-----EKPFKYLSPFGSGRRGCPGNLAYIFVGTAGVMVQCDFWKIK-GD----  
CYP705A1 402 YAMMRDPDSWQ-DPDEFKPERFLAS-----LSREEDK-----KEKILNFLPFGSGRRMCPGSLGYIFVGTAGVMVQCDFWEIN-GD----  
CYP705A4 396 YAVMRDPDAWE-DPLVFKPERFLASS-----RAEQEER-----REKEIKYLPFGSGRRSCPGENLAYVIMGTAGVMVQGFWEWRTT-EE----  
CYP705A12 390 YAVNRDPDSWE-DPDMFKPERFLVSS-----ISGDEEKI-----REQAVKYVTFGSGRRTCPAVKLAHIFMETAIGAMVQCDFWRK-GE----  
CYP712A1 404 YAIMRDPSELWA-DADRFIPIPERFLE-----SSEKIG-----EHQMOPFKGQNFYLPFGSGRRGCPGASLNMVMIHIGVGLVQRFDWKS--VDGQ--  
CYP93D1 403 YGIMRDPITYK-DPDKFMPERFLVVE-----QDTERKMGYYQ-QYMLELKGQDVNYLSPFGSGRRGCLGASHASLVLSLTIGSLVQCDFWIK-GE----  
CYP81D2 395 WAIHRDPLLDW-DPTSFKPERFEK-----E-----GEAKKLPFGGLGRRACPGSGLAQLVTLVLSLGLSIQCFEWEVERIGEE----  
CYP81D3 389 WAIHRDPKIWD-DPTSFKPERFEK-----E-----GEAQKLLGFLGRRACPGSGLAQLASLTIGSLIQCFEWEVERIGEE----  
CYP81D4 392 WAMHRDPVWE-DPEIFKPERFEK-----E-----GEAEKLSFGFMGRRACPGAHLINQALGSLVQCFEWERVGED----  
CYP81D5 391 WAMHRDPGLWE-EPEKFKPERFEK-----E-----GEARKLMPFGMRRACPGAELGKRLVSLALGCLIQSFWEVERVGAEE----  
CYP81D6 410 WSMHRDPSIWE-DPEMFKPERFKN-----E-----KLNQKLLSFGMRRACPGYGLAHRVSLTLGSMVQCFEWQRIQGE----  
CYP81D7 439 WSMHRDPSIWE-APEMFKPERFKN-----E-----KLNQKLLSFGMRRACPGVGLAHRVSLTLGSMVQCFEWQRIQGE----  
CYP81D1 401 WAIHRDPNTWD-DPDSFKPERFEK-----E-----EEAQKLLAFGLGRRACPGSGLAQLVTLVLSLGLSIQCFEWERVGNV----  
CYP81F1 395 WAIHRDPEIWE-EPEKFNDRYNDG-----C---GSD-----YYVYKLMFPFGNGRRTCPGAGLQQRIVTLALGTLIQCFEWENVKGE----  
CYP81F2 390 WAIHRDPERLWD-EPEKFMPEFED-----Q-----EASKKLMVFCNGRRTCPGATLQRMVLLALGSLIQCFDWEKVNGE----  
CYP81H1 403 WAIHRDPSVWD-DPTSFKPERFEKS-----D---QFG-----HYNGKMMFPGLGRRACPGSLANRVVGLLGLSMIQCFEWESGSGG----  
CYP81G1 406 WAIQRDPNVWD-DPETFKPERFES-----E-----THRGKFLPFGIGRRACPGMGLAQLVLSLALGSLIQCFDWERDNDV----  
CYP82C3 404 WKIQRDPKVYM-EPNEFRPERFITG-----EAKDFDVR-----GQNFELMPFGSGRRSCPGSLAMQMLHLGLARFLHSFEVKTVLRD----  
CYP82C4 416 WKIQRDPKVYM-EPNEFRPERFITG-----EAKDFDVR-----GQNFELMPFGSGRRSCPGSSLAMQVLHLGLARFLHSFDVKTVMMDM----  
CYP82C2 415 WKIQRDPVYM-EPNEFRPERFITG-----EAKDFDVR-----GQNFELMPFGSGRRSCPGSSLAMQVLHLGLARFLQSFDVKTVMMDM----  
CYP82F1 412 WKIHRDPNVWS-NPEQFEPERFLTS-----N-RELDVG-----GQSYKFFPFGGLGRRSCPAIPLGMRMVHYLLVRFVLSFDLARPSSQ----  
CYP79B2 431 YGLGRNPKVWA-DPLCFKPERHLNEC-----S---EVTLT-----ENDLRFISFSTGKRGCAAPALGTALTMMMLARLLQGFVWKLKLAGSET---  
CYP79B3 456 YGLGRNPKVWS-DPLSFKPERHLNEC-----S---EVTLT-----ENDLRFISFSTGKRGCAAPALGTAITMMMLARLLQGFVWKLKLAGSET---  
CYP79A2 415 MGIGRNPSVWD-KPHKFDPERHLSTN-----T---CVDLN-----ESDLNIIISFAGRRGCMGVDIGSAMTYMLLARLLQGFVWLPVPGKN---  
CYP79C1 431 PGVGRNPKTWD-EPLIYRPERHITGN-----EVLTL-----EPDLRLVFCFGRRGCVGAKLGTSMIVTLGRLLQGFVWTPPGTTD--  
CYP78A6 426 WAVSHDPHVW-DPLEFKPERFVAKE-----GEVEFSVL-----GSDLRLAPFGSGRRICPGKNLGFTTVMFVWAMMLHFEWGPSS-D---GN  
CYP78A8 428 WAIARDPHVWE-DPLEFKPERFVAKE-----GEAEFSVF-----GSDLRLAPFGSGRRVCPGKNLGLTTVSFVWATLLHFEWLPVVE---AN  
CYP78A5 415 WSIITHNAKIWT-DPEAFMPEFLISED-----VSIM-----GSDLRLAPFGSGRRVCPGKAMGLATVHLWIGQLIQNFVWVKG-----SC  
CYP78A7 436 WAIITHDQTVWS-DPLKFDPERFTGNA-----D---MDIR-----GGDLRLAPFGAGRRVCPGKNMGLATVTRVWVAELVRRFEWQGD-Q---TE  
CYP89A2 402 AEIGRDPVWE-EPMAFKPERFMGE-----EEAVDLTG-----SRGIKMPFGAGRRICPGIGLAMLHLEYVANMVREFVWKEVEGH----  
CYP89A4 408 AEIGRDPVWE-EPMAFKPERFMGE-----EEAVDITG-----SRGIKMPFGAGRRICPGIGLAMLHLEYVANMVREFVWKEVQGH----  
CYP89A3 402 AMIGRDPVWE-EPMEFKPERFIGE-----DKEVDITG-----SRGIKMPFGAGRRICPGIGLAMLHLEYVANMVREFVWKEVEGY----  
CYP704A1 404 YAMGRMTYIWGQDAEEFKPERWLKD-----G---VFQP-----ESQFKFISFTHAGPRICLCKDFAYRQMKIVSMALLHFFR--FKMAD----  
CYP704A2 410 YAMGRMTYIWGQDAEEFKPERWLKD-----G---LFQP-----ESPFKFISFTHAGPRICLCKDFAYRQMKIVSMALLHFFR--FKMAD----



CYP702A5 449 -T--LLRRFLLVLPGRS---DVQIS-----  
CYP702A6 452 -T--LLRRFVLLLPGRS---DVQILEDTKAK-----  
CYP702A1 446 -T--ILRNFVLMFPNGC---EVQFLKDEVDNSSSGSNPDCCNG-----  
CYP702A2 450 -T--IIRSFMLMFPGGC---DVQISEDTEVDK-----  
CYP702A3 453 -E--VLRRYTLVFPAGC---VVHISKESE-----  
CYP708A1 476 -Y--IIRAPLLRFSKPI---RITISENPLSSSHQANLF-----  
CYP708A2 459 -E--FIRAPLPYFPKGL---PIKISQSL-----  
CYP90A1 448 -K--LVFFPTTRTQKRY---PIFVKRRDFAT-----  
CYP90B1 492 -Q--PFAFPFVDFPNGL---PIRVSRL-----  
CYP707A1 438 ----YLLITFSFTHF---VLFQIYV-----  
CYP707A3 441 -D-GIQYGFALPQNGL---PIALERKP-----  
CYP707A2 461 -E-GIQYGFVPVKKGL---PIRVTP-----  
CYP88A3 469 -C-PVMYLPHTRPDNC---LARISYQ-----  
CYP88A4 466 -C-PVMFLPHNRPKDNC---LARITRTP-----  
CYP716A1 454 -ENKIVVDPLPIPDKGL---PIRIFPQS-----  
CYP716A2 450 -ENKLVADPAPIPAKGL---PIRIFPQS-----  
CYP51 463 -FPEINWNALVVGAKGN--VMVRYKRRPFS-----  
CYP51A2 446 -FPEIDWNAMVVGKGN--VMVRYKRRQLS-----  
CYP710A1 464 GCDEIVYCPTISPKDG---CTVFLSRRVAKYPNFS-----  
CYP710A2 469 GCDDIICYPTISPKDG---CTVFLSKRIVTYPNL-----  
CYP710A3 465 GCDEIVHIPTMSPKDG---CTVFLSSRLVTSP-----  
CYP710A4 465 GCDDIVHIPTMSPKDG---CTVFLSSRLVTSP-----  
CYP76C2 484 DLDMDDET-FGLTLHKTN---PLHAVPVK-KRGRN-----  
CYP76C4 483 DLDMDDET-FGITLHRTN---TLVAIPVK-KQTIN-----  
CYP76C1 483 DLDMDDET-FGLTLHKTN---PLHAVPVK-KRANIN-----  
CYP76C3 476 NIDMSET-FGLTLHKAK---SLCAVPVK-KPTISSSY-----  
CYP706A1 491 KFEVEEK-FGLVLKLS---PLVAIPVP-RLSDPKLYTA-----  
CYP706A2 493 KFEVEEK-FGLVLKLS---PLVAIPVP-RLSDPKLYTA-----  
CYP706A3 487 RVEVEEK-FGIVLELKN---PLVATPVL-RLSDPNLYL-----  
CYP71A12 472 QPDLTEA-FGLDVCCKF---PLIAFPSS-VI-----  
CYP71A13 472 QPDLTEA-IGLDVCRKF---PLIAFPSS-VV-----  
CYP71A14 473 EYDLAES-TGLDVCCKF---PLIVFPSP-A-----  
CYP71A15 472 EYDLAEA-TGIDVCRKF---PLIVFPSN-A-----  
CYP71A16 473 KPDLVEG-AGLDVCRKF---PLVVPSS-A-----  
CYP71A27 472 KPDLAEA-SGIDVCRKF---PLIVFPSI-AHTH-----  
CYP71A28 460 DDDGLKQ-TGMEVCHKF---PLIAFPSS-ASFTI-----  
CYP71B10 476 DIYMDEA-SGLTSHKKH---DILLVPVK-SLV-----  
CYP71B9 471 DIDMEES-PGLAVGKKN---EILLVPVK-YLGH-----  
CYP71B11 469 DVDLEES-YGLVCPKKV---PLQLIPVL-TQWS-----  
CYP71B12 469 DVDLEES-YGLVCPKKI---PLQLIPVL-TQWT-----  
CYP71B14 469 DVDLEES-YGLVCPKKV---PLQLIPVL-TQWT-----  
CYP71B13 469 DVDLEES-YGLVCPKKV---PLELIPVL-TQWT-----  
CYP71B6 474 EVSVEEA-PGLTSHRKH---PLHLVPVN-VINRKL-----  
CYP71B15 468 ---QEEA-KEIINGEEN---FLAFFQVL-HH-----



CYP71B7 479 DINLEET-GSIIISKKT---TLELVPLV-HH-----  
CYP71B5 472 DIDMEED-GAFVIKVV---SLELVPTL-HRW-----  
CYP71B8 476 DIDMEED-GALTIKVV---PLELIPTL-PASLCIK-----  
CYP71B2 477 DIDMEEA-GNISIVKKI---PLQLVPVQ-RY-----  
CYP71B3 476 DIDMEEA-GDATIVKKV---PLELVPII-HH-----  
CYP71B4 477 DDMEEA-GDLTVDKKV---PLELLPVI-RISL-----  
CYP83A1 475 DINMDVM-TGLAMHKSQ---HLKLVPEK-VNKY-----  
CYP83B1 474 DIKMDVM-TGLAMHKKE---HLVLAPTK-HI-----  
CYP705A2 477 NVNMNEAAGTMVLTMAH---PLKCTPV--PRTLNLPP-----  
CYP705A5 480 KINMKEG-GTMTLTMAH---PLKCTPV--PRNLNT-----  
CYP705A8 481 KINMNEVAGKGLSMAH---PLKCTLV--PRSVTPLTSK-----  
CYP705A9 459 KINMDEAPGKITLTMAH---PLNCTLV--PRTLIPVTSTVQIPSS-----  
CYP705A3 480 KVNMEETFEGMTLKMVH---PLTCTPF--FEPNLYLLLLISKFPCLILSFGAC-----  
CYP705A6 479 KVNMEETFEGMNLMSVH---PLKCTPV--LRSQFFF-----  
CYP705A1 478 KINMEEATGGFLITMAH---PLTCTPIPLPRTQNSLISHL-----  
CYP705A4 474 KINMDEAVVGLSLTMAH---PLKIIPV--ARTSNLSLSSLQKCL-----  
CYP705A12 468 KVMEEAVSGLSLKMAH---PLKCTPV--VRFDPFSF-----  
CYP712A1 486 KVDLSQG-SGFSAEEMAR---PLVCNPVDHFNTF-----  
CYP93D1 492 KIKIKLP-TGFSASGTAGGSSLMCSPELCFDFPGYQTK-----  
CYP81D2 464 EVDMEGPG-LTMPKAR---PLEAMCRARDFVGKILPDSS-----  
CYP81D3 458 EVDMEGGGGVIMPKAI---PLVAMCKARPVVGKILNESA-----  
CYP81D4 461 FVDMEDEKG-ATLPKAI---PLRAMCKARSIVDKLI-----  
CYP81D5 460 LVDMTEGEG-ITMPKAT---PLRAMCKARAIVGKTI-----  
CYP81D6 479 YVDNSEDKTVVLMRPTT---PLLAMCKARPIVHEILDafa-----  
CYP81D7 508 YVDTREE-PMAMMRPAT---PLLAMCKARPIVHKFLDafa-----  
CYP81D1 470 EVDMEGEG-NTVPKAI---PLKAICKARPFLHKIIS-----  
CYP81F1 468 EMDMSESTG-LGMRKMD---PLRAMCRPRPIMSKLLL-----  
CYP81F2 459 DVDMTENPG-MAMRKLK---QLRAVCHKRPIMTNLLA-----  
CYP81H1 476 QVDMEGPG-LSLPKAE---PLVVTCRTREMASELLFFGSEPSNKNV-----  
CYP81G1 475 AVDMSEGKG-LTMPKSV---PLVAKCKSLPILDKLV-----  
CYP82C3 481 PVDMSESPG-LTITKAT---PLEVLINPR--LKRELFV-----  
CYP82C4 493 PVDMSENG-LTIPKAT---PLEVLISPR--IKEELFV-----  
CYP82C2 492 PVDMTESPG-LTIPKAT---PLEILISPR--LKEGLY-----  
CYP82F1 488 DVDMTESNG-LVNHKAT---PLEVNIIPR--LHKSLEYVDHIGTDN-----  
CYP79B2 508 RVELMESSHDMFLAKPL---VMVGDLRLPEHLYPTVK-----  
CYP79B3 533 RVELMESSHDMFLSKPL---VLVVELRLSEDLVPMVK-----  
CYP79A2 492 KIDISESKNDLFMAKPL---YAVATPRLAPHVYPT-----  
CYP79C1 508 RVELVESKENLFMANPL---MACVKPRLDPNMYPKLVWGPA-----  
CYP78A6 504 GVDLSEK-LRLSCEMAN---PLPAKLRRR-RS-----  
CYP78A8 507 PPDLSEV-LRLSCEMAC---PLIVNVSSR-RKIM-----  
CYP78A5 488 DVELAEV-LKLSMEMKN---PLKCKCKAVPRNVGFA-----  
CYP78A7 511 PVDLGEV-LKLSCEMEH---PLRAVVTIEF-----  
CYP89A2 479 EVDLTEK-LEFTVVMKH---PLKALAVPRR---CH-----  
CYP89A4 485 EVDLTEK-FEFTVVMKH---SLKALAVLRR---SH-----  
CYP89A3 479 EVDLSEK-WEFTVVMKY---PLKALAVTRRKEKTHIVMA-----  
CYP704A1 477 ENSKVSYYKMLTLHVDGG-LHLCAIPRTST-----  
CYP704A2 483 ENSKVYYKMLTLHVDGG-LHLCAIPRTST-----

CYP94B1 535 CNNRPVFPVPLLAHMAAGG-LKVKIKRREQCDSEMYI-----  
CYP94C1 469 TTETLRFAPGLTATVNGG-LPVMIQERS-----  
CYP86A2 486 PGHKVEQKMSLTLFMKNG-LLVNVHKRDLEVMKSLVPKERNDVVVLNGKCNGGIGEGVAVNAAVAVAV-  
CYP86A4 490 PGHKVEQKMSLTLFMKNG-LLVNVYKRDLOGI IKSLVVKKSD--GVSNGQCNGVIGEGVAVYLNTGVAVV  
CYP86A8 485 TGHKVEQKMSLTLFMKYG-LLVNVHERDLTAIAADLRECKSN-----VVNDGCVGNVSS-----  
CYP86A1 483 PGHRVEQKMSLTLFMKNG-LRVYLQPRG-EVLA-----  
CYP86C1 495 QGQEI VPKLTTTLYMKNG-MNVMLQPRDW-----  
CYP86C2 323 QDHVVVPRVTTTLYMKHG-LKVRITPRSL EKKQDS-----  
CYP86B1 515 NGHKVEPKLAL TMYMKHG-LMVNLI NRSVSEIDQYYAKSFDEG-----YIN-----  
CYP96A2 478 QGQKIVPALGFILSMKHG-LQITVTKRCSA-----  
CYP96A5 481 EGHKIEPASSIILHMKHG-LKVTVSKRGLVS-----  
CYP96A1 487 EGHKIEPVPSIILHMKHG-LKVTVTKRSNLL-----  
CYP96A3 478 EGHKTEPVPSVLFMRQHG-LKVNITRI-----  
CYP96A4 477 EGHKPKPVPSVLLRMQHG-LKVSVTKI-----  
CYP709A1 491 KNYRHAPIVVLTIKPKYG-VQVILKPLVS-----  
CYP709A2 485 ENYRHAPIVVLTIKPKYG-VQVILKPLDL-----  
CYP709B2 490 ADYKHAPADHLTLQPQYD-LPVILEPIDG-----  
CYP709B3 492 PEYKHTPVDFDLFPQYG-LPVMLHPLG-----  
CYP709B1 492 DEYKHTPVDNVTIQPQYG-LPVMLQPLED-----  
CYP72A11 487 PSYVHAPYTVFTIHPQFG-APLIMHKL-----  
CYP72A13 488 PSYVHAPYTVLTIHPQFG-APLILHKL-----  
CYP72A15 522 PSYVHAPYTVITTIHPQFG-AQLIMHKL-----  
CYP72A14 487 PSYVHAPYTIITLHPQFG-AHLMLHKL-----  
CYP72A10 512 PSYVHAPQTVVTIHPQFG-AHLILRKL-----  
CYP72A7 487 PSYVHAPQTVMTTRPQFG-AHLILHKL-----  
CYP72A9 538 PSYVHSPYRVFTIHPQCG-AHLILHKL-----  
CYP72A8 490 PSYTHAPHTVLTTLHPQFG-APLIFHML-----  
CYP82G1 471 PLDMAEG-PGLALPKINP-VEVVVMPRLDPKLYSLL-----  
CYP72B1 491 -TYQHAPTVMMLLPQHG-APITFRRLTNHED-----  
CYP712A2 469 -VDMDEG-TGSSLPRAT---PLVCPVVAKEATQSFSLLEPNVNF-----  
CYP90C1 471 ----IVSFPTVKMKRRL---PIRVATVDDASAPISLEDH-----  
CYP718 462 ET--ISMDLFPFSLGM---PIKISPKVS-----  
CYP84A1 491 ELDMNDV-FGLTAPKAT---RIFAVPTTRLICAL-----  
CYP85 446 ---ELMVPRVFAPKGF---HLRISPY-----  
CYP715A1 496 --YRHSPTYMLSLRPGYG-LPLIIRPL-----  
CYP98A3 471 EIDMSEN-PGLVTYMRTP-VQAVATPRLPSDLYKRVPYDM-----  
CYP714A1 507 PTYQHSPVFRMLVEPQHG-VVIRVLRQ-----  
CYP73A5 478 KVDTSKGGQFSLHILN-HSIIVMKPRNC-----  
CYP701A3 484 --EENVDTYGLTSQKLY---PIMAIINPRRS-----  
CYP711A1 497 EIPLQLDYGIILSFKNG--VKLRTIKRF-----  
CYP97B3 551 --ESVELVSGATIHAKN---GMWCKLKRRSK-----  
CYP74A 493 SFDIEVGTSPLGSSVNF--SIKASAF-----  
CYP74B2 474 -----SGSIKAVVKAK-----  
consensus 701 . . . . .