

RoCYP716A155 ME--FFYASLLCLFVSLVFLSLHLL--FYKTKTG----SLPPGKTGWPIVIGESLEFLSTGWKGHPKFIIDRMARY---SSHVFRTHLLGEPAAVLCGAG
MiCYP716A12 MPNFYLSLLLLFVTFISLSLFFI--FYKQKSP---NLPPGKMGPVIGESLEFLSTGWKGHPKFIIDRMARY---SSELFKTSIVGSESTVVCAGAS
BpCYP716A180 MFHYLSLLLLFVSVFVTLSTFTL--FYKHSRSHFTG--PNLPPGKTGYPVIGESLEFLSTGWKGHPKFIIDRMARY---SSEVFKTSLLGPPAAVFCGAG
BavCYP716A80 MYLTILFLFVSSILLSLMFL--LRKHLSHFSY--QNLPPGKTGFLIGESLSFLSESGQGHKFIIDRVRRFISSSSGVFKTHLFGSPTAVMTGAGS
BavCYP716A81 MYLTILFLFVSSILLSLMFL--LRKHLSHFSY--QNLPPGKTGFLIGESLSFLSESGQGHKFIIDRVRRFISSSSGVFKTHLFGSPTAVMTGAGS
AiCYP716A1 MYMAIMILFLSSILLSLLL--LRKHLSHFSY--PNLPPGNTGLPIGESLSFLSAGRQGHKFIIDRVRRFISSSSGVFKTHLFGSPTAVMTGAGS
AiCYP716A2 MYLTIIFLFISSIIIFPLLL--LGKHLSHFRY--PNLPPGKIIGPLIGETLSFLSAGRQGHKFIIDRVRRH---SSGIFKTHLFGSPFAVVTGAGS
BevCYP716A49 ME--LFFLCGLILFLSLSLASLYLL--YNNHNSTKGY--RVPPGTMGWVVGESLEFLSTGWKGHPKFIIDRLSKY---APNQIFKTSILGEKVAVICGAG
GuCYP716A179 ME--HFYMSLLLLFVTLVLSLSLFFI--FYNNKHMNNNNNNLPPGKMGPVIGESLEFLSTGWKGHPKFIIDRMARY---SSELIKTSILGVPVIFCGPAC
PagCYP716A52v2 ME--LFYVPLLLFVLFISLSLHFL--FYKSKPSSSGGFLPPGKTGWPVIGESYFLSTGWKGHPKFIIDRMARY---SSNVFKTSILGEPAAVFCGAG
AmCYP716A259 ME--FFYATFLCLFVSIIFLSLHLL--FCKTKSGSAA---LPPGKTGWPIVIGESLEFLSTGRKGHKFIIDRMARY---SSNVFRTHLLGERAAVFCGAG
OoCYP716A48 ME--FFYVSLLLCLFVLLISLHFL--FYKKNKSSFSG--QIPPGKTGWPIVIGESLSFLSNGWKGHKFIIDRLAKY---SSVYFRTHLLGEPAAVFCGAG
CoatCYP716A50 ME--FFYVSLLLCLFLLLVTLHFL--FYKSRSLASG--PLPPGKTGWPMVIGESLEFLSCGWKGHPKFIIDRVRRFISSSSGVFKTHLGERAAVFCGAG
CiCYP716A154 ME--IFYVTLISLFLVLLVLSLHFL--FYKKNKSTLPG--PLPPGRTGWPMVIGESLQFLSAGWKGHKFIIDRLAKY---SSNVFRSHLLGEPAAVFCGAG
MdCYP716A175 ME--HFYLTLLLGFSVFIITLSVL--FYRHRAQFVG--TNLPPGKVGPVIGETYGFLSAGWKGHKFIIDRLAKY---SSEVFKTSLLGEPAAVFCGAG
LaCYP716A265 ME--HFYLSILLFVSVFIITLSLFFV--FYRHLSHFRG--TNLPPGKFLPIGETLFLSAGWKGHKFIIDRLAKY---SSELFKTSILAEPTAVFCGAG
VvCYP716A15 ME--VFFLSLLIFVLVSVISLHLL--FYKHSRSHFTG--PNLPPGKIIGWPMVIGESLEFLSTGWKGHPKFIIDRLAKY---SSEVFKTSLLGEPAAVFCGAG
LaCYP716A266 ME--PNFYLSLLPLFVSVFVSIISLFFV--FYRHRSSFCG--PNLPPGDVGLPVVIGESLQFLSAGWKGHKFIIDRLAKY---SSHVFKTSLLGEPAAVFCGAG

116 120 144 155 176
RoCYP716A155 NKFIFSNNENKLVQAWWPSSVEKIFPNDNAETSKEESIKMRRMLPTFFKPEALHRYVGI MDHIAARRHFADGWGDKREVVFPLAKNYTFWLACRLFLSVE
MiCYP716A12 NKFIFSNNENKLVQAWWPSSVEKIFPNTSLDSNLKEESIKMRRMLPQFFKPEALQRYVGVMDVIAQRHFVTHWDNKNEITVPLAKRYTFLLACRLFMSVE
BpCYP716A180 NKFIFSNNENKLVQAWWPSSVEKIFPSSSTQTSNSKEEAKKMRKLLPQFLKPEALQKQYISIMDTIAQRHFASGWEGQKEVTVPLAKRYTFWLACRLFLSLE
BavCYP716A80 NKFIFTNENKLVVSWWVDSVKIFFP--YTQSTYTEESKKLRILLQFMKPEALRKYIGVMDVIAQRHFETETWNNKQLIVPLSKKLTFSIACRLFLSMD
BavCYP716A81 NKFIFTNENKLVVSWWVDSVKIFFP--YTQSTYTEESKKLRILLQFMKPEALRKYIGVMDVIAQRHFETETWNNKQLIVPLSKKLTFSIACRLFLSMD
AiCYP716A1 NKFIFTNENKLVVSWWVDSVKIFFP--SMQTSYSSKEEARKLRMLPQFMKPEALRRYVGVMDVIAQRHFETETWNNKQLIVPLSKKLTFSIACRLFLSMD
AiCYP716A2 NKFIFTNENKLVISWWVDSVKIFFP--STQTSKEEAIKTRMLMPSMKPEALRRYVGVMDVIAQRHFETETWNNKQLIVPLSKKLTFSIACRLFLSMD
BevCYP716A49 NKFIFSNNENKLVQAWWPSSVEKIFFP--STQTSKEEESKKMRKLLPQFLKPEALQRYVGI MDTIAARRHESGWDGDKKEVTVPLAKRYTFWLACRLFLSVE
GuCYP716A179 NKFIFSNNENKLVQAWWPSSVEKIFFP--TTNSKEEESKKMRKLLPQFLKPEALQRYVGI MDTIAARRHESGWDGDKKEVTVPLAKRYTFWLACRLFLSVE
PagCYP716A52v2 NKFIFSNNENKLVQAWWPSSVEKIFFP--TTNSKEEESKKMRKLLPQFLKPEALQRYVGI MDTIAARRHESGWDGDKKEVTVPLAKRYTFWLACRLFLSVE
AmCYP716A259 NKFIFSNNENKLVQAWWPSSVEKIFFP--STQTSKEEAIKMRKMLPNFLKPEALHRYVGI MDHIAARRHFADGWGDKKEVTVPLAKNYTFWLACRLFLSVE
OoCYP716A48 NKFIFSNNENKLVQAWWPSSVEKIFFP--STQTSKEEAVKMRKMLPTFFKPEALQRYVGI MDHIAARRHESGWDGDKKEVTVPLAKRYTFWLACRLFLSVE
CoatCYP716A50 NKFIFSNNENKLVQAWWPSSVEKIFFP--STQTSKEEAIKMRKMLPNFLKPEALQRYVGI MDHIAARRHESGWDGDKKEVTVPLAKNYTFWLACRLFLSVE
CiCYP716A154 NKFIFSNNENKLVQAWWPSSVEKIFFP--STQTSKEEAIKMRKMLPNFLKPEALQRYVGI MDHIAARRHESGWDGDKKEVTVPLAKNYTFWLACRLFLSVE
MdCYP716A175 NKFIFSNNENKLVQAWWPSSVEKIFFP--SLETSAKEEAKKMRKMLPNFLKPEALQRYVGI MDHIAARRHESGWDGDKKEVTVPLAKNYTFWLACRLFLSVE
LaCYP716A265 NKFIFSNNENKLVQAWWPSSVEKIFFP--SLQTSKEEAKKMRKMLPNFLKPEALQRYVGI MDHIAARRHESGWDGDKKEVTVPLAKRYTFWLACRLFLSVE
VvCYP716A15 NKFIFSNNENKLVQAWWPSSVEKIFFP--STQTSKEEAKKMRKMLPQFFKPEALQRYVGI MDHIAARRHESGWDGDKKEVTVPLAKRYTFWLACRLFLSVE
LaCYP716A266 NKFIFSNNENKLVQAWWPSSVEKIFFP--SLQTSKEEAKKMRKMLPQFLKPEALQRYVGI MDHIAARRHESGWDGDKKEVTVPLAKRYTFWLACRLFLSVE

222 279
RoCYP716A155 DPSQVEKFAAPFNLLASGLISIPIDLPGTPFHKGIKASAYIRKELVAIIKORKADADGTASPTQDILSHMLTSTN--EDGKFMQESDIANKILGLLIGGH
MiCYP716A12 DENHVAKFSDPQLIAAGIISLPIDLPGTPFNKAIKASNFIRKELIKIIRORVDAEGTASPTQDILSHMLTSTN--ENGKSMNELNIDAKLILGLLIGGH
BpCYP716A180 DPNHIAKFADPHSVASGLISIPIDLPGTPFNNGIKASNFIRKELSLIKIRORVDEGEGKASPTQDILSHMLTSTN--ESGQYMTLENDIDAKLILGLLIGGH
BavCYP716A80 DPERVSKLEERFNSVMTGIYSIPIDLPGTRFNRSIKASRLIRKEVCAIIGORREELKAGRASAEQDVLSHMLTSTN--SVGETKDEDLANYLILGLLIGGH
BavCYP716A81 DPERVSKLEERFNSVMTGIYSIPIDLPGTRFNRSIKASRLIRKEVCAIIGORREELKAGRASAEQDVLSHMLTSTN--SVGETKDEDLANYLILGLLIGGH
AiCYP716A1 DPARVRQLEEFQNTVAVGIFSIIPIDLPGTRFNRAIKASRLIRKEVSAIVRORKEELKAGKALEEDILSHMLTSTN--NIGETKDEDLADKILGLLIGGH
AiCYP716A2 DLERVRKLEEFQNTVAVGIFSIIPIDLPGTRFNRAIKASRLIRKEVSAIVRORKEELKAGKVSVEQDILSHMLTSTN--NIGETKDEDLADKILGLLIGGH
BevCYP716A49 DPNHVAKFADPHNDIAAGIISLPVNLPGTPFNNGIKSSNVVRKELRAIIRORKDLDAGGKASTQDILSHMLTSTN--EDGFMTEMDIDAKLILGLLIGGH
GuCYP716A179 DENHVAKFREPFLHLSAGIISVPIDLPGTPFNNGIKASNFIRKELSLIKIRORVDAEGGASPTQDILSHMLTSTN--ENGKFMTEMDIDAKLILGLLIGGH
PagCYP716A52v2 EPAQVDAELLEPFSALASGLISIPIDLPGTPFNFAIKSSIVRRKLVGIIKORKIDLAEGKASATQDILSHMLTSTN--ESGKFMGEGDIDAKLILGLLIGGH
AmCYP716A259 DPQQQDKFAEPFNLLASGLISIPIDLPGTPFNNGIKASNFIRKELVSIKIRORIDLAEGKASPTQDILSHMLTSTN--ENGKFMTEMDIDAKLILGLLIGGH
OoCYP716A48 DPAHVAKFADPFNLLASGLISIPIDLPGTPFNRAIKSSNFIRKELVSIKIRORIDLAEGKASPTQDILSHMLTSTN--ESGKFMTEMDIDAKLILGLLIGGH
CoatCYP716A50 DPEVAKLLEPFLNLLASGLISIPIDLPGTPFNRAIKSSNFIRKELVSIKIRORIDLAEGKASPTQDILSHMLTSTN--ENGKFMTEMDIDAKLILGLLIGGH
CiCYP716A154 DPEVAKLLEPFLNLLASGLISIPIDLPGTPFNRAIKSSNFIRKELVSIKIRORIDLAEGKASPTQDILSHMLTSTN--ENGKFMTEMDIDAKLILGLLIGGH
MdCYP716A175 DSIEIAKLLGDFPNVLLASGLISIPIDLPGTPFNRAIKSSNFIRKELVSIKIRORIDLAEGKASPTQDILSHMLTSTN--ENGKFMTEMDIDAKLILGLLIGGH
LaCYP716A265 DPDHVAKFADPFNEIASGLISIPIDLPGTPLNRAIKSSNFIRKELVSIKIRORIDLAEGKASPTQDILSHMLTSTN--ENGKFMTEMDIDAKLILGLLIGGH
VvCYP716A15 DPAHVAKFEPFHLVASGLITVPIIDLPGTPFNRAIKSSNFIRKELVAIIKIRORIDLAEGKASQNDILSHMLTSTN--EDGKHMNEIDAKLILGLLIGGH
LaCYP716A266 DPNHVARFADPFNLLASGLISIPIDLPGTPFNRAIKSSNFIRKELVAIIKIRORVDAEGKATATQDILSHMLTSTN--EDGKHMNEIDAKLILGLLIGGH

349 356 363
RoCYP716A155 DITASACTFVVKYLAELPQVYEGVYKQMEIAKSKAAGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALDPSFNGFSPKGWKLYWSANSTHKN
MiCYP716A12 DITASACTFVVKYLAELPHIYDQVYQMEIAKSKAPAGELLNWDDLQKMKYSWNVACEVRLRAPPLQGGFREALIDTFMFNGFSPKGWKLYWSANSTHKN
BpCYP716A180 DITASACTFVVKYLAELPHIYDQVYQMEIAKSKAPAGELLNWDDLQKMKYSWNVACEVRLRAPPLQGGFREALIDTFMFNGFSPKGWKLYWSANSTHKN
BavCYP716A80 DTAATATTFIINYLAEPHVYQVRLQEQKEILNEKKEERKLWDEIEKMKYSWNVACEVRLRAPPLTGTFREALIDHFTFGFVSPKGWKLYWSATATHMN
BavCYP716A81 DTAATATTFIINYLAEPHVYQVRLQEQKEILNEKKEERKLWDEIEKMKYSWNVACEVRLRAPPLTGTFREALIDHFTFGFVSPKGWKLYWSATATHMN
AiCYP716A1 DITASIVCTFVVNYLAEPHVYQVRLQEQKEILNEKKEERKLWDEIEKMKYSWNVACEVRLRAPPLTGTFREALIDHFTFGFVSPKGWKLYWSATATHMN
AiCYP716A2 DTTISIVCTFVVNYLAEPHVYQVRLQEQKEILNNDVNEKLWDEIEKMKYSWNVACEVRLRAPPLAGTFREALIDHFTFGFVSPKGWKLYWSATATHMN
BevCYP716A49 DITASACTFVVKYLAELPHVYEAIVCKQMEIAKSKAAGELLNWDDLQKMKYSWNVACEVRLRAPPLQGGFREALIDTFMFNGFSPKGWKLYWSANSTHKN
GuCYP716A179 DITASACTFVVKYLAELPHIYDQVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGGFREALIDTFMFNGFSPKGWKLYWSANSTHKN
PagCYP716A52v2 DITASACTFVVKYLAELPHIYEGVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFYNGFSPKGWKLYWSANSTHKN
AmCYP716A259 DITASACTFVVKYLAELPHVYDRVYEQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFYNGFSPKGWKLYWSANSTHKN
OoCYP716A48 DITASACTFVVKYLAELPEIYEGVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFMFNGFSPKGWKLYWSANSTHKN
CoatCYP716A50 DITASACTFVVKYLAELPEIYEGVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFMFNGFSPKGWKLYWSANSTHKN
CiCYP716A154 DITASACTFVVKYLAELPEIYEGVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFMFNGFSPKGWKLYWSANSTHKN
MdCYP716A175 DITASATCTFVVKYLAELPHIYDQVYQMEIAKSKAPGDLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFYNGFSPKGWKLYWSANSTHKN
LaCYP716A265 DITASACTFVVKYLAELPHIYQGVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFMFNGFSPKGWKLYWSANSTHKN
VvCYP716A15 DITASAAITFLIKYMAELPHIYKGVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFMFNGFSPKGWKLYWSANSTHKN
LaCYP716A266 DITASACTFVVKYLAELPHIYDQVYQMEIAKSKAPGELLNWDDLQKMKYSWNVACEVRLRAPPLQGAFFREALIDTFMFNGFSPKGWKLYWSANSTHKN

424 425
RoCYP716A155 SEFFPEPEKFDPSRFFEGSGPAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPANGLPVRLYPHTS
MiCYP716A12 AECFFPMPEKFDPSRFFEGSGPAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
BpCYP716A180 AEYFFPMPEKFDPSRFFEGSGPAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
BavCYP716A80 PDYFFPEPERFEPNRFEGSGPKPYTYIPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
BavCYP716A81 PDYFFPEPERFEPNRFEGSGPKPYTYIPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
AiCYP716A1 PDYFFPEPERFEPNRFEGSGPKPYTYIPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
AiCYP716A2 PEYFFPEPEKFDPSRFFEGSGPKPYTYIPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
BevCYP716A49 PEYFFPEPEKFDPSRFFEGSGPKPYTYIPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
GuCYP716A179 PEYFFPEPEKFDPSRFFEGSGPKPYTYIPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
PagCYP716A52v2 SEVFFPEPLKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
AmCYP716A259 PQCFPEPEKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
OoCYP716A48 SEFFPEPLKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
CoatCYP716A50 PEYFFPEPEKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
CiCYP716A154 PEYFFPEPEKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
MdCYP716A175 AAYFFPEPEKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
LaCYP716A265 PDYFFPEPEKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
VvCYP716A15 PEYFFPEPEKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA
LaCYP716A266 ADYFFPEPEKFDPSRFFEGSGAPYTFVPFGGGPRMCPGKEYARLEILVFMHNLKRFKWEKMIIDPEKIIVVDPMPIIPAKGLPRLYPHKA