

SEQUENCES

>fcr3 745 amino acids | 640 aa; underlined sequence corresponds to the ID1 domain of FCR3, Sequence in bold corresponds to DBL2Xb domain of FCR3. Remaining sequence is ID2a (SEQ ID

NO:1)

NYIKGDPYFAEYATKLSFILNPSDANNPSGETANHNDACNCNESGISSVGQAQTSGPSSNKT
CITHSSIKTNKKKECKDVKLGVRENDKDLKICVIEDTSLSGVDNCCCQDLLGILQENCSDNKR
GSSSNDSCDNKNQDECQKKLEKVFASLTNGYKCDKCKSGTSRSKWKWIWKSSGNEEGL
QEEYANTIGLPPRTQSLYLGNLPKLENVCEDVKDINFDTKEKFLAGCLIVSFHEGKNLK
KRYPQNKNSGNKENLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQNNFGKLFGK
YIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWTAMKHGAEMNITTCNADGSVTGSGS
SCDDIPTIDLIPQYLRLFLQEWVENFCEQRQAKVKDVITNCKSCKESGNKCKTECKTKCK
DECEKYKKFIEACGTAGGGIGTAGSPWSKRWDQIYKRYSKHIEDAKRNRKAGTKNCGT
SSTNAAASTDENKCVQSDIDSFFKHLIDIGLTPSSYLSNVLDDNICGADKAPWTTYTTY
TTTEKCNKERDKSKSQSSDTLVVVNVPSPLGNTPYRYKYACQCKIPTNEETCDDRKEYMN
QWSCGSARTMKRGYKNDNYELCKYNGVDVKPTTVRSNSSKLD

>gi | 254952610 | gb | ACT97135.1 | VAR2CSA [Plasmodium falciparum] | 341 aa (SEQ ID NO:2)

KCDKCKSGTSRSRKIWTWRKSSGNKEGLQEEYANTIGLSPRTQLLYLGNLRKLENVCEDVTD
INFDTKEKFLAGCLIAAFHEGKNLKKRYLEKKKGDNNSKLCKDLKYSFADYGDLIKGTSIWD
NDFTKDLELNLQQIFGKLFRKYIKKNISTEQDTSYSSLDELRESWWNTNKKYIWLAMKHGA
GMNSTTCSCSGDSSSGENQTNSCDDIPTIDLIPQYLRLFLQEWVEHFCEQRQAKVKDVITNCNS
CKESGGTCNSDCEKKCKNKCDAYKTFIEDCKGVGGTGTAGSSWVKRWYQIYMRYSKYIED
AKRNRKAGTKSCGTSSTTNVSVSTDENKCVQS-

>M24 745 amino acids | 656 aa (SEQ ID NO:3)

DYIKGDPYFAEYATKLSFILNSSDANNPSGETANHNDVCNPNSEISSVGQAQTSDPSSN
KTCNTHSSIKANKKKVCKHVKLGINNNDKVLRCVIEDTSLSGVENCCFKDLLGILQEN
CSDNKS GSSSNGSCNNKNQEACEKNLEKVLASLTNCYKCDKCKSGTSTVNKNWIWKKS
SGNKEGLQKEYANTIGLPPRTHSLYLGNLPKLENVCEDVKDINFDTKEKFLAGCLIAAF
HEGKNLKKRYPQNKNDNNNSKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQQI
FGKLFRKYIKKNISTEQDTLYSSLDELRESWWNTNKKYIWLAMKHGAGMNITTCGDDG
SVTGSGSSCDDIPTIDLIPQYLRLFLQEWVEHFCKQRQEKVKDVINSCNSCKNTSSKTKLG
DTCNSDCEKKCKIECEKYKKFIEECRTAVGGTAGSSWSKRWDQIYKMYSKHIEDAKRN
RKAGTKNCGITTGTISGESSGANSVTTTENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLD

DNICGDDKAPWTTYTTYTTTTEKCNKERDKSKSQSNTSVVVNVPSPLGNTPHGYK
YACQCKIPTNEETCDDRKEYMNQWISDTSKNPKGSGSTNNDYELYTYNGVKETKLPKKLNS
PKLD

5 >KMVII 745 amino acids | 643 aa (SEQ ID NO:4)

DYIKDDPYSKEYTTKLSFILNSSDANTSSGETANHNDACNCNESEISSVGQAQTSGPSSN
KTCITHSFIKANKKKVCKDVKLGVRENDKVLRVCVIEDTSLSGVDNCCCQDLLGILQEN
CSDNKRGSSSNGSCNNKNQDECQKKLEKVFSLTNGYKCDKCKSGTSTVNKKWIWKK
SSGNEKGLQKEYANTIGLPPRTQSLYLGNLPLKGNVCEDVTDINFDTKEKFLAGCLIAAF
10 HEGKNLKISHEKKKGDNGKKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQKAF
GKLFGKYIKKNIASDENTSYSLDELRESWWNTNKKYIWTAMKHGAEMNSTMCNADG
SVTGSGSSCDDIPTTDFIPQYLRFLQEWVEHFCKQRQEKVNAVIENCNSCKNTSGERKIG
GTCNGDCKTECKNKCEAYKNFIEDCKGGDGTAGSSWVKRWDQIYKRYSKHIEDAKRN
RKAGTKSCGPSSITNASVSTDENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDENNCGEDN
15 APWTTYTTYTTTEKCNKDKKKSKSQSCNTAVVVNVPSPLGNTPHEYKYACQCKIPTTEE
TCDDRKEYMNQWISDTSKKQKSGSGSTNNDYELYTYTGVKETKLPKKLNSPKLD

>1248 745 amino acids | 640 aa (SEQ ID NO:5)

SYVKNDPYSKEYVTKLSFILNPSDANNPSGETANHNDACNPNESEIASVGQAQTSDRLS
20 QKACITHSFIGANKKIVCKDVKLGVREKDKDLKICVIEDDSLARGVENCCFKDLLGILQE
NCSDNKS GSSSSNGSCNNKNQDECQKKLDEALASLHNGYKCDKCKSGTSRSKKIWTWRK
FPGNGEGLQKEYANTIGLPPRTQSLYLGNLRKLENVCKGVTDINFDTKEKFLAGCLIAA
FHEGKNLKISNKKKNDDNGKKLCKDLKYSFADYGDLIKGTSIWDNEYTKDLELNLQKI
FGKLFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIWLAMKHGTTCSGSGDNGD
25 GSVTGSGSSCDDMSTIDLIPQYLRFLQEWVEHFCKQRQEKVKDVIENCKSCKNTSGERII
GGTCGSDCKTKCKGECDAYKNFIEECKRGDGTAGSPWSKRWDQIYMRYSKYIEDAKR
NRKAGTKNCGTSSTTNAENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDENICGDDKAP
WTTYTTYTTTEKCNKETDKSKSQSCNTAVVVNVPSPLGNTPHGYKYACECKIPTTEETCD
DRKEYMNQWISDTSKKPKGGRSTNNDYELYTYNGVKETKLPKKSSSSKLD

30

>gi | 254952618 | gb | ACT97139.1 | VAR2CSA [Plasmodium falciparum] | 358 aa (SEQ ID
NO:6)

KCEKCKSEQSKNNNIWIWRKFPGNGEGLQKEYANTIGLPPRTHSLYLGNLPLENVCKDVK
DINFDTKEKFLAGCLIAAFHEGKNLKTTYPNQKNADNNSKLCKDLKYSFADYGDLIKGTSIW
35 DNDFTKDLELNLQKIFGKLFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIWLAMKHG
AEMNSTMCNGDGSVTGSSDSGSTTCSGDNGSISCCDIPTIDLIPQYLRFLQEWVEHFCKQRQE

KVKPVIENCKSCKNTSGERIIGGTCGSDCEKKCKGECDAYKKFIEECKGGGGGTGTAGSPWS
KRWDQIYKRYSKYIEDAKRNRKAGTKSCGPSSTTNAAASTTESKCVQS

>gi | 254952592 | gb | ACT97126.1 | VAR2CSA [Plasmodium falciparum] | 333 aa (SEQ ID

5 NO:7)

KCDKCKSEQSKKNNKNWIWKQFPGNGEGLQKEYANTIGLPPRTHSLYLGNLPKLENVCKGV
TDINFDTKEKFLAGCLIAAFHEGKNLKTSHEKKKGDNGKKLCKDLKYSFADYGDLIKGTSIW
DNDFTKDLELNLQQIFGKLFRKYIKKNISAEQDTSYSSLDELRESWWNTNKKYIWLAMKHGT
TCSSGSGDNGDGSVTGSGSSCDDMPTTDFIPQYLRFLQEWVEHFCKQRQEKVNAVITNCKSC
10 KESGGTCNSDCEKKCKDECEKYKKFIEECRTAADGTAGSSWSKRWDQIYKMYSKHIEDAKR
NRKAGTKNCGTSSTTNAAENKCVQS

>gi | 90193467 | gb | ABD92329.1 | erythrocyte membrane protein 1 [Plasmodium
falciparum] | 269 aa (SEQ ID NO:8)

15 DYIKDDPYSKEYTTKLSFILNSSDANTSSGETANHNDACNCNESEIASVEQASISDRSSQKAY
ITHSSIKTNKKKVCKYVKLGINNNDKVLRVCVIEDTSLSGVENCCFKDLLGILQENCSDNKRK
SSFNDSCNNNNEEACQKKLEKVLASLTNGYKCEKCKSGTSRSKKKWIWKKSSGKEGGLQKE
YANTIGLPPRTQSLYLGNLPKLENVCKGVTDINFDTKEKFLAGCLIAAFHEGKNLKPSHQKNK
DDNNSKLCKDLKYSFADY

20

>gi | 254952616 | gb | ACT97138.1 | VAR2CSA [Plasmodium falciparum] | 333 aa (SEQ ID
NO:9)

KCDKCKSGTSRSKKKWTWRKSSGNKEGLQKEYANTIGLPPRTHSLYLGNLRKLENVCEDVT
DINFDTKEKFLAGCLIAAFHEGKNLKTTPQNKNDDNNSKLCKALKYSFADYGDLIKGTSIW
25 DNDFTKDLELNLQKIFGKLFRKYIKKNISTEQHTSYSSLDELRESWWNTNKKYIWLAMKHGA
EMNGTTCSCSGDSSDDIPTIDLIPQYLRFLQEWVEHFCKQRQAKVNAVINSCNSCKNTSGERK
LGGTCGSECKTECKNKCDAYKEFIDGTGSGGGTGTAGSSWVKRWDQIYKRYSKYIEDAKRN
RKAGSKNCGTSSTTNAAESKCVQS

30 >hb31 745 amino acids | 650 aa (SEQ ID NO:10)

SYVKNNPYSAEYVTKLSFILNSSDANTSSETPSKYYDEVNCNCNESEISSVGQAQTSGPSSN
KTCITHSSIKTNKKKVCKDVKLGINNNDKVLRVCVIEDTSLSGVDNCCCQDLLGILQEN
CSDKNQSGSSNGSCNNKNQDECQKKLEKVFASTNGYKCDKCKSGTSRSKKKWIWR
KSSGNEEGLQKEYANTIGLPPRTQSLYLGNLRKLENVCKGVTDINFDTKEKFLAGCLIA
35 AFHEGKNLKTTPQNKKKLCKDLKYSFADYGDLIKGTSIWDNEYTKDLELNLQKAFGK
LFRKYIKKNISTEQHTLYSSLDELRESWWNTNKKYIWLAMKHGAGMNSTTCCGDGSVT

GSGSSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQEKVNAVIENCNSCKECCGDTCN
GECKTECEKKCKIECEKYKTFIEECVTA VGGTSGSPWSKRWDQIYKRYSKYIEDAKRNRKAG
TKNCGITTGTISGESSGANSVTTTENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDDNIC
GADNAPWTTYTTYTTYTTTKNCDIKKKTPKSQPINTSVVVNVPSPLGNTPHGYKYACQC
5 KIPTTEESCDDRKEYMNQWIIDTSKKQKSGSGSTNNDYELYTYNGVKETKLPKKSSSSKLD

>hb32 745 amino acids | 643 aa (SEQ ID NO:11)

SYVKDDPYSAEYVTKLSFILNSSDANTSSETPSKYYDEVNCNENESEISSVGQAQTSGPSSN
KTCITHSSIKTNKKKVCKDVKLGINNDKVLRVCVIEDTSLSGVDNCCCQDLLGILQEN
10 CSDKNQSGSSSNGSCNNKNQDECQKKLEKVFASLTNGYKCDKCKSGTSRSKKKWIWR
KSSGNEEGLQKEYANTIGLPPRTQSLYLGNLPKLENVCKGVTDIIYDTKEKFLSGCLIAA
FHEGKNLKTSHEKKNDNGKKLCKALEYSFADYGD LIKGTSIWDNDFTKDLELNLQKI
FGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWTAMKHGAGMNSTTCSGD
GSGVTGSGSSCDDMPTIDLIPQYLRFLQEWVEHFCKQRQEKVKDVITNCNSCKECCGDTCN
15 GECKTECKTKCKGECEKYKNFIEECNGTADGGTSGSSWSKRWDQIYKRYSKYIEDAKR
NRKAGTKNCGTSSTTNAASTTENKCVQSDIDSFFKHLIDIGLTPSSYLSNVLDDNICGE
DKAPWTTYTTYTTTKNCDIQKKTPKPQSCDTLVVVNVPSPLGNTPHGYKYVCECKIPTTE
ETCDDRKEYMNQWIIDTSKKQKSGSGSTNNDYELYTYNGVQIKQAAGTLKNSKLD

20 >gi | 90193475 | gb | ABD92333.1 | erythrocyte membrane protein 1 [Plasmodium
falciparum] | 269 aa (SEQ ID NO:12)

NYIKGDPYSAEYATKLSFILNSSDTENASEKIQKNNDEVNCNENESEIASVEQAPISDRSSQKACI
THSSIKANKKKVCKHVKLG VRENDKDLKICVIEDTSLSGVDNCCCQDLLGILQENCSDNKSG
SSSNGSCNNNNEEICQKKLEKVLASLTNGYKCDKCKSGTSTVNKNWIWKKYSGKEGGLQEE
25 YANTIGLPPRTQSLYLGNLPKLENVCEDVKDINFDTKEKFLAGCLIAAFHEGKNLKTSNKKK
NDDNNSKLCKALKYSFADY

>gi | 254952600 | gb | ACT97130.1 | VAR2CSA [Plasmodium falciparum] | 344 aa (SEQ ID
NO:13)

30 KCDKCKSGTSTVNKKWIWKKYSGTEGGLQEEYANTIALPPRTQSLYLGNLPKLENVCKDVT
DINFDTKEKFLAGCLIAAFHEGKNLKT TYLEKKKGDNGKKNDNNSKLCKALKYSFADYGD
LIKGT SIWDNDFTKDLELNLQQIFGKLFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIW
LAMKHGAGMNSTMCNADGSGVTGSGSSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQAKVKDV
ITNCNSCKECCGTCN GECKTECEKKCKGECDAYKKFIEECKGKADEGTSGSSWSKRWDQIY
35 KRYSKYIEDAKRNRKAGTKNCGPSSTTSTAESKCVQS

>gi | 254952598 | gb | ACT97129.1 | VAR2CSA [Plasmodium falciparum] | 334 aa (SEQ ID NO:14)

KCDKCKSEQSKKNNNIWIWKKSSGTEGGLQKEYANTIALPPRTQSLYLGNLRKLENCEDV
KDINFDTKEKFLAGCLIAAFHEGKNLKKRYLEKKNGDNNSKLCKALKYSFADYGDLIKGTSI
5 WDNEYTKDLELNLQKIFGKLFRKYIKKNNTAEQHTSYSSLDELRESWWNTNKKYIWLAMK
HGTTCSGSGDNGSISCDIPTIDLIPQYLRFLQEWVEHFCEQRQGKVNAVIENCNSCKNTSSK
TKLGGTCNGECKTECKGECDAYKEFIEKCKGTAAEGTSGSSWVKRWYQIYMRYSKYIEDAK
RNRKAGTKNCGTSSTTSTAESKCVQS

10 >gi | 254952596 | gb | ACT97128.1 | VAR2CSA [Plasmodium falciparum] | 332 aa (SEQ ID NO:15)

KCDKCKSEQSKKNNNIWIWKKSSGTEGGLQKEYANTIALPPRTQSLYLGNLRKLENCEDV
KDINFDTKEKFLAGCLIAAFHEGKNLKKRYLEKKNGDNNSKLCKALKYSFADYGDLIKGTSI
WDNEYTKDLELNLQKIFGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWTAMK
15 HGTTCSGSGDNGSISCDIPTIDLIPQYLRFLQEWVEHFCEQRQEKVKDVIKNCNSCKECCG
TCNGECKTECKNKCKDECDAYKKFIEECEGKAAEGTSGSSWSKRWDQIYKRYSKYIEDAKR
NRKAGTKNCGTSSTTSTAENKCVQS

20 >gi | 90193465 | gb | ABD92328.1 | erythrocyte membrane protein 1 [Plasmodium falciparum] | 267 aa (SEQ ID NO:16)

NYIKDDPYSAEYTTKLSFILNSSDTENASEKIQKNNDEVCPNPESGIACVELAQTSGSSSNKTC
NTHSFIKANKKKVKCKDVKLGINKKDKDLKICVIEDDSLGRVDNCCCQDLLGILQENCSDKNQ
SGSSNGSCNNKNQEACQKKLENVFASLTNGYKCEKCKSEQSKKNNKNWIWKKYSVKEEG
LQKEYANTIALPPRTQSLYLGNLPKLGNVCKGVTDINFDTKEKFLAGCLIAAFHEGKNLKT
25 LQNKKKLCKALKYSFADY

>gi | 90193477 | gb | ABD92334.1 | erythrocyte membrane protein 1 [Plasmodium falciparum] | 263 aa (SEQ ID NO:17)

DYIKGDPYFAEYATKLSFILNSSDANTSSGETANHNDACNPNESEIASVEQASISDRSSQKAC
30 NTHSSIKANKKKECKHVKLGVRENDKDLKICVIEDTSLSGVDNCCCQDLLGILQENCSDNKR
GSSSNGSCDNKNSIEICQKKLDEALASLHNGYKNQKCKSEQSKKNNKNWIWKKSSGNEKGLQ
KEYANTIGLPPRTQSLYLGNLPKLENCEDVTDINFDTKEKFLAGCLIAAFHEGKNLKTTPQ
NKNDNGKKLCKD

35 >gi | 254952594 | gb | ACT97127.1 | VAR2CSA [Plasmodium falciparum] | 338 aa (SEQ ID NO:18)

KCDKCKSEQSKKNNNIWIWKKSSGNKKGLQKEYANTIGLPPRTQSLYLGNLPKLENVCKDV
TDINFDTKEKFLAGCLIAAFHEGKNLKISNEKKNDNGKKLCKDLKYSFADYGD LIKGTSIW
DNEYTKDLELNLQNNFGKLFRKYIKKNNTAEQHTLYSSLDELRESWWNTNKKYIWLAMKH
GTTCCSSGSGDNGDGSVTGSGSSCDDMSTIDLIPQYLRFLQEWVEHFCKQRQEKVNAVIENCN
5 SCKNTSSSKTKLGGTCNGECKTECEKKCKDECEKYKEFIEECKRGDGTAGSPWVKRWDQIYM
RYSKYIEDAKRNRKAGTKSCGTSAAENKCVQS

>gi | 254952602 | gb | ACT97131.1 | VAR2CSA [Plasmodium falciparum] | 341 aa (SEQ ID
NO:19)

KCDKCKSEQSKKNNNIWIWKKSSGDEKGLQKEYANTIALPPRTQSLYLGNLPKLENVCKDV
10 TDINFDTKEKFLAGCLIAAFHEGKNLKTSHQKNADNGKKNDNGKKLCKALKYSFADYG
DLIKGTSIWDNEYTKDLELNLQQIFGKLFRKYIKRNNTAEQHTLYSSLDELRESWWNTNKKY
IWLAMKHGTTCCSSGSGDNGDGSVTGSGSSCDDMSTIDLIPQYLRFLQEWVEHFCKQRQEKV
KDVITNCNSCKECCGTCGSDCKTKCEAYKKFIEECNGTADGGTSGSSWSKRWDQIYKRYSK
YIEDAKRNRKAGTKNCGPSSGANSVTTTENKCVQS

15

>gi | 254952660 | gb | ACT97160.1 | VAR2CSA [Plasmodium falciparum] | 352 aa (SEQ ID
NO:20)

KCEKCESEQSKKNNKYWIWKKSSGNGEGLQEEYANTIALPPRTHSLCLVCLHEKEGKKTQEL
KNIRTNSELLKERIIAAFHEGKNLKTSPQKNNDNGKKLCKDLKYSFADYGD LIKGTSIWDNEY
20 TKDLELNLQKIFGKLFRKYIKKNNTAEQHTLYSSLDELRESWWNTNKKYIWLAMKHGAGM
NSTMCNADGSVTGSSDSGSTTCCGDNGSISCDDMPTIDLIPQYLRFLQEWVEHFCEQRQEKV
NAVITNCKSCKECCGTCNSDCEKKCKAYKEFIEKCKGGTGTSGSSWSKRWDQIYKRHSK
HIEDAKRNRKAGTKNCGITTGTISGESSGANSVTTTENKCVQS

25

>gi | 254952652 | gb | ACT97156.1 | VAR2CSA [Plasmodium falciparum] | 344 aa (SEQ ID
NO:21)

KCDKCKSGTSRSRKIWTWRKFRGNGEGLQKEYANTIGLSPRTQLLYLVCLHEKGKKTQELK
NISTNSELLKEWIIAAFHEGKNLKTTPQKKNDDNGKKLCKALKYSFADYGD LIKGTSIWDN
30 DFTKDLELNLQKIFGKLFRKYIKKNIASDENTSYSSELDELRESWWNTNKKYIWTAMKHGAG
MNGTTCCGDGSVTGSSDSGSTTCCGDGSVTGSGSSCDDIPTIDLIPQYLRFLQEWVEHFCEQR
QEKVKDVITNCKSCKESEKKCKNKCDAYKEFIDGTGSGGGTGTAGSSWSKRWDQIYMRYSK
YIEDAKRNRKAGTKNCGTSSGANSVTTTENKCVQS

35

>gi | 254952622 | gb | ACT97141.1 | VAR2CSA [Plasmodium falciparum] | 350 aa (SEQ ID
NO:22)

KCEKCKSEQSKKNNKIWTWRKFPNGEGLQKEYANTIGLSPRTQLLYLVCLHEKGKKTQHK
TISTNSELLKEWIIAAFHEGKNLKKRYLEKKKGDNNSKLCKDLKYSFADYGDLIKGTSIWDN
DFTKDLELNLQQIFGKLFRKYIKKNIASDENTSYSLDELRESWWNTNKKYIWTAMKHGAG
MNSTMCNGDGSVTGSSDSGSTTCSGDNGSISCDIPTIDLIPQYLRFLQEWVEHFCEQRQEKV
5 KDVINKCNSCKECCGGTCNGECKTECKNKCKDECEKYKNFIEVCTGGDGTAGSPWSKRWYQI
YMRYSKYIEDAKRNRKAGTKSCGTSSGANSVTTTESKCVQS

>gi | 254952626 | gb | ACT97143.1 | VAR2CSA [Plasmodium falciparum] | 359 aa (SEQ ID
NO:23)

10 KCEKCKSEQSKKNNKNWIWRKFPNGEGLQKEYANTIGLPPRTHSLYLVLHEKGKKTQEL
KNIRTNSELLKEWIIAAFHEGKNLKKRYHQNNNSGNKKKLCKALEYSFADYGDLIKGTSIWD
NEYTKDLELNLQQIFGKLFRKYIKKNISTEQDTLYSSLDELRESWWNTNKKYIWLAMKHGA
GMNSTTCCGDGSVTGSSDSGSTTCSGDNGSISCDMPTIDLIPQYLRFLQEWVEHFCEQRQEK
VKDVIENCKSCKNTSGERIIGGTCNGECKTECEKKCKAACEAYKTFIEECEGKAAEGTSGSSW
15 SKRWYQIYMRYSKYIEDAKRNRKAGTKNCGKSSGANSVTTTENKCVQS

>gi | 90193469 | gb | ABD92330.1 | erythrocyte membrane protein 1 [Plasmodium
falciparum] | 270 aa (SEQ ID NO:24)

NYIKDDPYSKEYVTKLSFIPNSSDANNPSGETANHNDVCNPNSEISSVEHAQTSVLLSQKA
20 YITHSSIKANKKKVCKYVKLGVRENDKDLKICVIEDDSLGRGVENCCFKDFLRILQENCSDNKR
ESSSNGSCNNNNEEACEKNLDEALASLTNCYKNQKCKSGTSTVNNNKWIWKKSSGKEGGLQ
KEYANTIGLPPRTQSLCLVVCLDEKEGKTQELKNIRTNSELLKEWIIAAFHEGKNLKKRYHQ
KNDDNNSKLCKALKYSFADY

25

>gi | 254952644 | gb | ACT97152.1 | VAR2CSA [Plasmodium falciparum] | 334 aa (SEQ ID
NO:25)

KCDKCKSEQSKKNNKYWIWKKYSVKEGGLQKEYANTIALPPRTQSLCLVVCLDEKEGKTQE
LKNIRTNSELLKERIIAAFHEGKNLKTYHEKKKGDDGKKLCKDLKYSFADYGDLIKGTSIWD
30 NDFTKDLELNLQKIFGKLFRKYIKNNNTAEQHTSYSSLDELRESWWNTNKKYIWTAMKHGA
EMNGTTCSCSGDSSNDIPTIDLIPQYLRFLQEWVEHFCEQRQAKVNAVINKCKSCKECCGGTCN
GECKTECKTKCKGECEKYKEFIEKCEGQAAEGTSGSSWSKRWYQIYMRYSKYIEDAKRNRK
AGTKNCGTSSGANSVTTTENKCVQS

35 >gi | 254952642 | gb | ACT97151.1 | VAR2CSA [Plasmodium falciparum] | 351 aa (SEQ ID
NO:26)

KCDKCKSEQSKKNNKNWIWKKYSGTEGGLQKEYANTIALPPRTQSLYLVLHEKEEKTQEL
KNISTNSELLKEWIIAAFHEGKNLKI SPQNKNDNGKNLCKDLKYSFADYGD LKGT SIWDNDF
TKDLELNLQQIFGKLFRKYIKKNNTAEQDTLYSSLDELRESWWNTNKKYIWTAMKHGAGM
NGTTCCGDGSGVTGSSDSGSTTCCGDGSGVTGSGSSCDDIPTIDLIPQYLRFLQEWVEHFCEQRQ
5 AKVKDVIKNCNSCKECCGGTCNGECKTECEKKCKGECEAYKKFIEKCNGGGGEGTSGSSWSK
RWDQIYMRYSKYIEDAKRNRKAGTKNCGTSSTTNA AENKCVQS

>gi | 254952658 | gb | ACT97159.1 | VAR2CSA [Plasmodium falciparum] | 353 aa (SEQ ID NO:27)

10 KCDKCKSGTSTVNKKWIWKKFPGKEGGLQEEYANTIALPPRTQSLCLVCLDEKEGKTQHK
TISTNSELLKEWIIAAFHEGKNLKISNKKKNDENNSKLCKDLKYSFADYGD LKGT SIWDNDF
TKDLELNLQKIFGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWLAMKHGTTCS
SGSGDNGDGSVTGSSDSGSTTCCGDGSGVTGSGSSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQ
AKVKDVIENCKSCKNTSSKTKLGDTCNSDCKTKCKVACEKYKEFIEKCVSAAGGTSGSSWV
15 KRWDQIYMRYSKYIEDAKRNRKAGTKNCGPSSTTSTAESKCVQS

>gi | 254952640 | gb | ACT97150.1 | VAR2CSA [Plasmodium falciparum] | 327 aa (SEQ ID NO:28)

20 KCDKCKSGTSTVNKKWIWKKYSGKEGGLQKEYANTIGLPPRTQSLCLVCLHEKEGKTQELK
NISTNSELLKEWIIAAFHEGKNLKISNKKKNDNGKKLCKDLKYSFADYGD LKGT SIWDNDF
TKDLELNLQKIFGKLFRKYIKKNNTAEQDTLYSSLDELRESWWNTNKKYIWTAMKHGAGM
NSTTCSCSGDSSNDIPTIDLIPQYLRFLQEWVEHFCKQRQEKVNAVITNCKSCKESGGTCNSD
CEKKCKIECEKYKNFIEKCVTAAGGTSGSSWSKRWDQIYKMYSKYIEDAKRNRKAGTKNCG
25 PSSTTNA AASTDENKCVQS

>dd2full 745 amino acids | 628 aa (SEQ ID NO:29)

NYIKGDPYFAEYATKLSFILNSSDTENASETPSKYYDEACNCNESEIASVGQAQTSGPSSN
KTCITHSSIKTNKKKECKDVKLGINNNDKVL RVCVIEDTSLSGVDNCCCQDLLGILQEN
30 CSDNKRGS SSGSCDKNSEEICQKKLEKV FASLTNGYKCDKCKSGTSRSKKKWIWKKSS
GNEEGLQKEYANTIGLPPRTQSLCLVCLHEKEGKTQHK TISTNSELLKEWIIAAFHEGK
NLKTSHEKKNDNGKKLCKALEYSFADYGD LKGT SIWDNEYTKDLELNLQKIFGKL
FRKYIKKNNTAEQHTSYSSLDELRESWWNTNKKYIWTAMKHGAGMNGTTCS CSGDSSN
DMPTIDLIPQYLRFLQEWVEHFCKQRQEKVNAVIENCNSCKESGGTCNSDCKTECKNK
35 CEAYKEFIEDCKGGGTGTAGSPWSKRWDQIYKRYSKHIEDAKRNRKAGTKNCGTSSTT
NAAASTDENKCVQSDVDSFFKHLIDIGLTTPSSYLSNVLDDNICGADKAPWTTYTTTTT

**KNCDIQKKTPKSQSCDTLVVVNVPSPLGNTPHEYKYACECKIPTTEETCDDRKEYMNPWS
CGSAQTVRGRSGKDDYELYTYNGVKETKPLGTLKNSKLD**

>gi | 254952636 | gb | ACT97148.1 | VAR2CSA [Plasmodium falciparum] | 350 aa (SEQ ID

5 NO:30)

KCEKCKSEQSKKNNKNWIWRKFRGTEGGLQEEYANTIGLPPRTQSLCLVVCLDEKGKKTQE
LKNIRTNSELLKEWIIAAFHEGKNLKPISHQNKNSGNKENLCKALKYSFADYGDLIKGTSIWD
NDFTKDLELNLQKIFGKLFRKYIKKNNTAEQHTSYSSLDELRESWWNTNKKYIWTAMKHGA
EMNGTTCNADGSVTGSSDSGSTTCSGDNGSISCDDIPTIDLIPQYLRLQEWVEHFCKQRQEK
10 VNAVINSNCNSCKNTSSKTKLGDTCSNDCCKTKCKIECEKYKTFIEKCVTAAGGTSGSPWSKRW
DQIYKRYSKYIEDAKRNRKAGTKNCGPSSTTSTAESKCVQS

>gi | 254952638 | gb | ACT97149.1 | VAR2CSA [Plasmodium falciparum] | 330 aa (SEQ ID

NO:31)

15 KCDKCKSEQSKKNNKNWIWRKYSGNGEGLQKEYANTIGLPPRTHSLYLVLHEKEGKTQEL
KNIRTNSELLKEWIIAAFHEGKNLKTTYLENKNDENKKKLCKALKYSFADYGDLIKGTSIWD
NDFTKDLELNLQKIFGKLFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIWTAMKHGA
MNGTTCSSSGSDNGSISCDDIPTIDLIPQYLRLQEWVGHFCKQRQEKVNAVITNCNSCKESG
GTCNSDCEKKCKIECEKYKKFIEECRTAAGGTSGSPWSKRWDQIYKMYSKYIEDAKRNRKA
20 GTKNCGPSSTTSTAESKCVQS

>gi | 254952628 | gb | ACT97144.1 | VAR2CSA [Plasmodium falciparum] | 334 aa (SEQ ID

NO:32)

KCDKCKSEQSKKNNKNWIWRKYSGNGEGLQKEYANTIGLPPRTHSLYLVLHEKEGKTQHK
25 TISTNSELLKEWIIAAFHEGKNLKKRYPQNNNSGNKKKLCKDLKYSFADYGDLIKGTSIWDN
EYTKDLELNLQKAFGKLFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIWLAMKHGA
MNGTMCNADGSVTGSGSSCDDMSTIDLIPQYLRLQEWVEHFCEQRQAKVKDVINSCKSCK
ESGDTCNSDCEKKCKNKCDAYKTFIEEFCTADGGTAGSPWSKRWDQIYKRYSKYIEDAKRN
RKAGTKNCGTSSGANSGVTTTENKCVQS

30

>gi | 254952630 | gb | ACT97145.1 | VAR2CSA [Plasmodium falciparum] | 350 aa (SEQ ID

NO:33)

KCDKCKSGTSTVNKNWIWKKYSGKEEGLQKEYANTIALPPRTHSLYLVLHEKGKKTQELK
NIRTNSELLKEWIIAAFHEGKNLKTSPQNNNSGNKKKLCKALKYSFADYGDLIKGTSIWDND
35 FTKDLELNLQKIFGKLFRKYIKKNNTAEQHTSYSSLDELRESWWNTNKKYIWLAMKHGAEM
NGTTCCGDGSVTGSSDSGSTTCSGDNGSISCDDMPTTDFIPQYLRLQEWVEHFCKQRQEKV

KHVMESCKSCKECGDTCNGECKTECEKKCKNKCEAYKTFIEKCVSADGGTSGSSWSKRWD
QIYMRYSKYIEDAKRNRKAGTKNCGTSSTTNAAASTAENKCVQS

>P13 745 amino acids | 647 aa (SEQ ID NO:34)

5 **DYIKDDPYSAEYATKLSFILNPSDANTSSGETANHNDVCNENESEIASVELAPISDSSSNK**
TCITHSFIGANKKKECKDVKLGVREKDKDLKICVIEDDSLGRGVENCCCQDLLGILQENC
SDNKSGSSSNGSCDKNSEDECQKKLENVFASLKNGYKCDKCKSGTSTVNKKWIWRKYS
GNGEGLQKEYANTIGLPPRTHSLYLVCLHEKEGKTQHKTISTNSELLKEWIIAAFHEGK
NLKTSHQNNNSGNKKKLCKALKYSFADYGDLIKGTSIWDNDFTKDLELNLQKIFGKLF
10 **RKYIKKNIASDENTSYSDDLDELRESWWNTNKKYIWLAMKHGAEMNSTMCNGDGSVTG**
SSDSGSTTCSGDNGSISCDIPTIDLIPQYLRFLQEWVEHFCKQRQEKVKDVITNCKSCKE
SGDTCNSDCEKKCKNKCEAYKKFIEERRTAAQGTAESSWVKRWDQIYMRYSKYIEDAK
RNRKAGTKSCGPSSTTNAAASTAENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDDNICG
ADNAPWTTYTTYTTTKNCDIKKKTPKPQSCDTLVVVNVPSPLGNTPEHYKYACQCRTPN
15 **KQESCDDRKEYMNQWSSGSAQTVRGRSTNNDYELYTYNGVKETKPLGTLKNSKLD**

>gi | 254952608 | gb | ACT97134.1 | VAR2CSA [Plasmodium falciparum] | 341 aa (SEQ ID NO:35)

KCDKCKSGTSTVNKKWIWRKSSGNKEGLQKEYANTIGLPPRTQSLYLGNLPKLENVCEDVK
20 **DINFDTKEKFLAGCLIVSFHEGKNLKTSHEKKNDNGKKLCKALEYSFADYGDLIKGTSIWD**
NEYTKDLELNLQKIFGKLFRKYIKKNNTAEQDTSYSSDLDELRESWWNTNKKYIWTAMKHGA
GMNITTCGSGDSSGENQTNSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQEKVNAVVTNCKSC
KESGGTCNGECKTKCKNKCEVYKTFIDNVGDGTAGSPWVKRWDQIYKRYSKHIEDAKRNR
KAGTKNCGITTGTISGESSGATSGVTTTENKCVQS

25

>7g8 745 amino acids | 632 aa (SEQ ID NO:36)

NYIKDDPYSKEYVTKLSFIPNSSDANTSSEKIQKNNDVCNPNESGISSVEQAQTSGPSSNK
TCITHSSIKANKKKECKDVKLGVRENDKDLKICVIEDTSLSGVDNCCCQDLLGILQENC
DNKRGSNDSCDNKNQDECQKKLDEALES LHNGYKNQKCKSGTSTVNKKWIWKSS
30 **GNKEGLQKEYANTIGLPPRTQSLYLGNLPKLENVSKGVTDIIYDTKEKFLAGCLIVSFHE**
GKNLKTSHEKKNDNGKKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQKAFGK
LFRKYIKKNISAEQDTSYSSDLDELRESWWNTNKKYIWIAMKHGAGMNGTTCCGDGSSG
ENQTNSCDDIPTIDLIPQYLRFLQEWVEHFCEQRQAKVKDVITNCKSCKNTSGERKIGG
TCNGECKTKCKNKCEAYKTFIEHCKGGDGTAGSSWVKRWDQIYKRYSKHIEDAKRNR
35 **KAGTKSCGTSTAENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDENNCGEDKAPWTTYT**

TTKNCDIQKDKSKSQSSDTLVVVNVPSPLGNTPHGYKYACQCKIPTTEETCDDRKEYMNQ
WSCGSARTMKRGYKNDNYELCKYNGVDVKPTTVRSSSTKLD

>Indo 745 amino acids | 639 aa (SEQ ID NO:37)

5 DYIKGDPYSAEYVTKLSFIPNSSDANNPSEKIQKNNDEVCNCNESEISSVGQASISDPSSNK
TCNTHSSIKANKKKVKCKDVKLGVRENDKVLKICVIEHTSLRGVDNCCFKDLLGILQEPR
IDKNQSGSSSNGSCDKNSEEACEKNLEKVLASLTNGYKCDKCKSGTSRSKKKWIWKY
SGKEGGLQEEYANTIGLPPRTQSLCLVVCLDEKEGKTQELKNISTNSELLKEWIIAFPE
GKNLKPSEKKKGDNKKLCKDLKYSFADYGDLIKGTSIWDNEYTKDLELNLQKIFGK
10 LFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIWLAMKHGAGMNSTMCNADGSV
TGSGSSCDDMPTIDLIPQYLRFLQEWVEHFCKQRQEKVKPVIENCNSCKNTSSERKIGG
TCNSDCKTECKNKCEVYKKFIEDCKGGDGTAGSSWSKRWDQIYKRYSKYIEDAKRNRK
AGTKNCGPSSTTNAENKCVQSDIDSFFKHLIDIGLTPSSYLSVLDDNICGEDNAPWTT
YTTYTTTTKNCDKDKKKSKSQSCDTLVVVNVPSPLGNTPHEYKYACECRTPNKQESDDR
15 KEYMNQWISDNTPKNPKGSGSGKDYYELYTYNGVDVKPTTVRSSSTKLD

>MC 745 amino acids | 655 aa (SEQ ID NO:38)

DYIKGDPYFAEYATKLSFILNSSDANTSSGETANHNDACNCNESEISSVEHASISDPSSNK
TCNTHSSIKANKKKVKCKHVKLGVRENDKDLRVCVIEHTSLSGVENCCFKDFLRILQENC
20 SDNKSGSSSNGSCDKNNEEACEKNLEKVFASTNICYKCEKCKSEQSKKNNKKWTWRKS
SGNKGGGLQEEYANTIGLPPRTQSLCLVVCLDEKEGKKTQELKNIRTNSELLKEWIIAF
HEGKNLKPSHEKKNDNGKKNDNNSKLCKDLKYSFADYGDLIKGTSIWDNEYTKDLE
LNLQKIFGKLFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIWLAMKHGAEMNGT
TCNADGSVTGSGSSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQAKVKDVIENCKSCKES
25 GNKCKTECKNKCEAYKKFIENCKGGDGTAGSSWVKRWDQIYMRYSKYIEDAKRNRKA
GTKNCGPSITNVSASTDENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDDNICGDDKAPW
TTYTTYTTYTTYTTYTTYTTYTTTTKNCDKERDKSKSQSCNTAVVVNVPSPLGNTPHEYK
YACECRTPSNKLCDDDRKEYMNQWSSGSAQTVRDRSGKDYYELYTYNGVKETKLPKKLNS
SKLD

30

>gi | 254952650 | gb | ACT97155.1 | VAR2CSA [Plasmodium falciparum] | 347 aa (SEQ ID
NO:39)

KCDKCKSEQSKKNNKYWIWKSSVKEEGLQKEYANTIALPPRTHSLCLVVCLDEKGKKTQE
LKNISTNSELLKERIIAFHEGKNLKTTYLEKKNADNNSKLCKALKYSFADYGDLIKGTSIWD
35 NEYTKDLELNLQQIFGKLFRKYIKKNNTAEQHTLYSSLDELRESWWNTNKKYIWLAMKHGA
GMNGTTCCGDGSVTGSSDSGSTTCSGDNISISCDDMPTTDFIPQYLRFLQEWVEHFCKQRQE

KVKDVIENCNSCKNNLGKTEINEKCKTECKNKCEAYKNFIEKFCTADGGTSGSPWSKRWDQI
YKRYSKYIEDAKRNRKAGTKNCGTSSTTSTAENKCVQS

>gi | 254952648 | gb | ACT97154.1 | VAR2CSA [Plasmodium falciparum] | 335 aa (SEQ ID

5 NO:40)

KCEKCKSGTSTVNKYWIWRKSSGNKEGLQKEYANTIALPPRTHSLCLVVCLDEKEGKTQEL
KNISTNSELLKERIIAAFHEGENLKTSHEKKKGDDGKKNADNNSKLCKALKYSFADYGDLIK
GTSIWDNEYTKDLELNLQKIFGKLFRKYIKKNIASDENTSYSSELDLRESWWNTNKKYIWL
MKHGAGMNGTTCSCSGDSSDDMPTTDFIPQYLRFLQEWVEHFCKQRQENVNAVIENCNSCK
10 ECGGTCNSDCEKKCKTECKNKCEAYKNFIEKFCTADGGTSGYSWSKRWDQIYKRYSKYIED
AKRNRKAGTKSCGTSSTTSTAESKCVQS

>ghana2 745 amino acids | 667 aa (SEQ ID NO:41)

SYVKNNPYSKEYVTKLSFILNPSDANNPSETPSKYDEVCNCNESGIACVGQAQTSGPSS
15 NKTCTHSFIGANKKKVCKDVKLGVREKDKDLKICVIEDTYLSGVDNCCFKDFLGMLQ
ENCSDNKSGSSNGSCNNKNQDECEKNLDEALASLTNGYKCEKCKSGTSTVNKYWIWR
KSSGNKEGLQKEYANTIALPPRTHSLCLVVCLDEKEGKTQHKTISTNSELLKEWIIAAFH
EGKNLKTSHEKKKGDDGKKNADNNSKLCKALKYSFADYGDLIKGTSIWDNDFTKDLEL
NLQKIFGKLFRKYIKKNIASDENTSYSSELDLRESWWNTNKKYIWLAMKHGAGMNSTT
20 CCGDGSVTGSSDSGSTTCCGDGSVTGSGSSCDDMPTTDFIPQYLRFLQEWVEHFCKQRQ
ENVNAVIENCNSCKECCGGTCNSDCEKKCKTECKGECDAYKEFIEKCNCGAAEGTSGSS
WSKRWDQIYKRYSKYIEDAKRNRKAGTKNCGTSSTTSTAESKCVQSDIDSFFKHLIDIGL
TTPSSYLSIVLDENICGADNAPWTTYTTYTTYTTYTTTEKCNKETDKSKLQQCNTSVVV
NVPSPLGNTPHGYKYVCECRTPNKQETCDDRKEYMNQWISDNTKNPKGSRSTNNDYELYT
25 YNGVQIKPTTVRSNSTKLD

>gi | 254952634 | gb | ACT97147.1 | VAR2CSA [Plasmodium falciparum] | 348 aa (SEQ ID
NO:42)

KCDKCKSEQSKKNNKNWIWKKSSGNEKGLQKEYANTIGLPPRTQSLCLVVCLDEKEGKTQE
30 LKNIRTNSELLKEWIIAAFHEGKNLKTSHEKKKGDNNSKLCKDLKYSFADYGDLIKGTSIWD
NEYTKDLELNLQNNFGKLFRKYIKKNIASDENTSYSSELDLRESWWNTNKKYIWLAMKHGA
GMNSTTCSSGSGSTTCSSGSGSTTCSSGSGDSCDDMPTIDLPQYLRFLQEWVEHFCKQRQEK
VNAVIKNCNSCKESGGTCNGECKTECKNKCEAYKTFIEEFCTADGGTSGSPWSKRWDQIYK
MYSKHIEDAKRNRKAGTKNCGPSSTTNVSVSTDENKCVQS

35

>ghana1 745 amino acids | 652 aa (SEQ ID NO:43)

DYIKDDPYFAEYVTKLSFILNSSDANNPSGETANHNDVCNPNESGSIASVEQAQTSDPSSN
 KTCNTHSSIKANKKKVCKHVKLGVRENDKDLKICVIEHTSLSGVENCCCQDFLRILQEN
 CSDNKSGSSSNGSCNNKNQEACEKNLEKVLASLTNCYKCDKCKSEQSKKNNKNWIWK
 KSSGNEKGLQKEYANTIGLPPRTQSLCLVVCLDEKEGKTQELKNIRTNSELLKEWIIAAF
 5 HEGKNLKKRYPQKNDDNNSKLCKDLKYSFADYGDLIKGTSIWDNEYTKDLELNLQNN
 FGKLF RKYIKKNISTEQDTLYSSLDELRESWWNTNKKYIWLAMKHGAGMNSTTCSSGS
 GSTTCSSSGSGSTTCSSSGSDSCDDMPTTDFIPQYLRFLQEWVEHFCKQRQEKVNAVIKN
 CNSCKESGGTCNGECKTECKNKCEAYKTFIEEFCTADGGTSGSPWSKRWDQIYKMYSK
 HIEDAKRNRKAGTKNCGPSSITNVSVSTDENKCVQSDIDSFFKHLIDIGLTPSSYLSIVL
 10 DDNICGEDKAPWTTYTTYTTTKKCNKETDKSKSQSCNTAVVVNVPSP LGNTPHGYKYA
 CECKIPTTEETCDDRKEYMNQWIIDTSKKQKSGSGKDDYELYTYNGVDVKPTTVRSNSTKL
 D

>V1S1 745 amino acids | 628 aa (SEQ ID NO:44)

15 DYIKDDPYSAQYTTKLSFILNPSDANTSSEKIQKNNDEACNCNESGISSVGQAQTSGPSSN
 KTCITHSSIKANKKKVCKDVKLGINNNDKVL RVCVIEDTSLSGVDNCCCQDLLGILQEN
 CSDNKRGS SSGSCNNNNEEACEKNLDEAPASLHNGYKNQKCKSGTSRSK KKW IWKKS
 SGNEKGLQEEYANTIGLPPRTQSLCLVCLHEKEGKTQHKTISTNSELLKEWIIAAFHEG
 KNLKTSHEKKNDNGKKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQKAFGKL
 20 FRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWIAMKHGAGMNGTTCSCSGDSSN
 DMPTIDLIPQYLRFLQEWVEHFCEQRQAKVKDVITNCKSCKESGNKCKTECKTKCKDE
 CEKYKTFIEDCNGGGTGTAGSSWVKRWDQIYKRYSKHIEDAKRNRKAGTKNCGPSSIT
 NAAASTDENKCVQSDIDSFFKHLIDIGLTPSSYLSNVLDENSCGDDKAPWTTYTTYTTT
 KNCDIQKDKSKSQPINTSVVVNVPSP LGNTPYRYKYACECKIPTTEESCDDRKEYMNQWS
 25 CGSARTMKRGYKNDNYELCKYNGVDVKPTTVRSNSSKLD

>raj116_var25 745 amino acids | 653 aa (SEQ ID NO:45)

DYIKGDPYFAEYATKLSFILNPSDTENASETPSKYYYDEACNPNESEIASVEQAQTSGPSSN
 KTCITHSSIKTNKKKECKDVKLGVRENDKDLKICVIEDTSLSGVDNCCFKDLLGILQENC
 30 SDNKRGS SSGNDSCNNNNEEACEKNLDEALASLTNGYKCDKCKSGTSTVNKKWTWRKSS
 GNEEGLQKEYANTIGLPPRTQSLCLVCLHEKEGKTKHKTISTNSELLKEWIIAAFHEGK
 NLKTSHEKKNDNGKKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQKAFGKLF
 RKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWTAMKHGAEMNGTTCSSSGSDNG
 DSSITGSSDSGSTTCSGDNGSISCDIPTTDFIPQYLRFLQEWVEHFCEQRQAKVKDVINS
 35 CNSCNESGGTCNGECKTKCKDECEKYKKFIEDCNGGDGTAGSSWVKRWDQIYKRYSK
 HIEDAKRNRKAGTKNCGPSSITNAAASTDENKCVQSDVDSFFKHLIDIGLTPSSYLSIVL

DENSCGDDKAPWTTYTTYTTTEKCNKERDKSKSQSSDTLVVVNVPSPLGNTPHEYKYA
CECKIPTNEETCDDRKYMNQWISDTSKKQKSGSGKDYYELYTYNGVQIKQAAGRSSSTK
LD

5 >gi | 31323048 | gb | AAP37940.1 | var2csa [Plasmodium falciparum] | 490 aa (SEQ ID
NO:46)
KCDKCKSEQSKKNNNKWIWKKYSGNGEGLQKEYANTIGLPPRTQSLCLVCLHEKEGKTQHK
TISTNSELLKEWIIAAFHEGKNLKKRYPQKNDDNNSKLCKALEYSFADYGDLIKGTSIWDNE
YTKDLELNLQKAFGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWTAMKHGAE
10 MNGTTCSSSGSDNGDSSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQAKVKDVINSCNSCKNTS
GERKIGGTCNSDCEKKCKVACDAYKTFIEECRTAVGGTAGSSWVKRWDQIYKRYSKHIEDA
KRNKAGTKNCGPSSTTNAENKCVQSDIDSFFKHLIDIGLTPSSYLSNVLDENSCGADKAP
WTTYTTYTTYTTYTTYTTTEKCNKERDKSKSQSNTSVVVNVPSPLGNTPHEYKYACECKIP
TTEETCDDRKEYMNQWIIDNTKNPKGSGSTDNDYELYTYNGVQIKQAAGRSSSTKLD

15 >gi | 254952620 | gb | ACT97140.1 | VAR2CSA [Plasmodium falciparum] | 335 aa (SEQ ID
NO:47)
KCEKCKSGTSTVNNKWIWRKSSGKEGGLQKEYANTIGLPPRTQSLYLGNLPKLENVCKGVT
DIIYDTKEKFLSGCLIAAFHEGKNLKTTYPELEKKNDDNGKKLCKALEYSFADYGDLIKGTSIWD
NEYTKDLELNLQKIFGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWIAMKHGA
20 GMNGTTCSSSGSDSSNDIPTTDFIPQYLRFLQEWVENFCEQRQAKVKPVIENCNSCKESGGTC
NGECKTKCKVACDAYKKFIDGTGSGGSRPTGIAGSSWSKRWDQIYKRYSKHIEDAKRNK
AGTKNCGPSSITNVSVSTDENKCVQS

>T2C6 745 amino acids | 637 aa (SEQ ID NO:48)

25 NYIKDDPYSKEYVTKLSFIPNSSDANTSSEKIQKNDEVCNPNESGISSVEQAQTS DPSSNK
TCITHSSIKANKKKECKDVKLGVRENDKDLKICVIEHTSLSGVDNCCFKDFLRMLQEPRI
DKNQRGSSSNGSCDKNSEEACEKNLDEALASLTNGYKCDKCKSEQSKKNNNKWIWKK
FPGKEGGLQEEYANTIGLPPRTQYLCLVCLDEKEGKTQELKNIRTNSELLKEWIIAAF
HEGKNLKTTPQKKNDDNGKKLCKDLKYSFADYGDLIKGTSIWDNEYTKNVELNLQN
30 NFGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWLAMKHGAEMNSTTCCG
DGSVTGSGSSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQAKVKDVITNCNSCKESGNKC
KTECKNKCKDECEKYKKFIEACGTAVGGTGTAGSPWSKRWDQIYKRYSKHIEDAKRN
RKAGTKNCGPSSTTNAENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDDNICGADKAPW
TTYTTYTTTENC DIQKKTPKSQSCDTLVVVNVPSPLGNTPHGYKYACQCRTPNKQESCDD
35 RKEYMNQWIIDNTKNPKGSGSGKDYYELCKYNGVKETKPLGTLKNSKLD

>gi | 254952632 | gb | ACT97146.1 | VAR2CSA [Plasmodium falciparum] | 330 aa (SEQ ID NO:49)

KCDKCKSEQSKKNNNKWIWRKFPGKEGGLQKEYANTIGLPPRTQSLCLVCLHEKEGKTQHK
TISTNSELLKEWIIAFHEGKNLKTTYPELEKNAENKKKLCKALKYSFADYGDLIKGTSIWDNE
5 YTKDLELNLQKIFGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWTAMKHGAG
MNGTMCNADGSVTGSGSSCDDMPTTDFIPQYLRFLQEWVEHFCKQRQAKVKDVIENCKSCK
ESGNKCKTECKNKCDAYKTFIEECGTAVGGTAGSSWVKRWDQIYKRYSKHIEDAKRNRKA
GTKNCGTSSTTNAASTAENKCVQS

10 >gi | 90193487 | gb | ABD92339.1 | erythrocyte membrane protein 1 [Plasmodium falciparum] | 269 aa (SEQ ID NO:50)

NYIKDDPYSKEYVTKLSFILNSSDAENASETPSKYYDEACNCNESGISSVEQASISDRSSQKAC
NTHSFIGANKKKVCKHVKLGVRENDKDLKICVIEDDSLGRVENCCFKDFLRMLQEPRIDKNQ
RGSSSNDSCNNNNNEEACEKNLDEALASLHNGYKNQKCKSEQSKKNNNKWIWKKSSGKEGG
15 LQKEYANTIGLPPRTQSLCLVCLHEKEGKTQHK TISTNSELLKEWIIAFHEGKNLKTTYPELEK
KKGDNGKKLCKALKYSFADY

>gi | 254952646 | gb | ACT97153.1 | VAR2CSA [Plasmodium falciparum] | 347 aa (SEQ ID NO:51)

20 KCDKCKSEQSKKNNKNWIWKKSSGKEGGLQKEYANTIALPPRTQSLCLVVCLHEKEGKTQH
KTISTNSELLKEWIIAFHEGKNLKTTYPELEKQNAENGKKNADNNSKLCKDLKYSFADYGDLI
KGTSIWDNEYTKDLELNLQQIFGKLFRKYIKKNIASDENTLYSSLDELRESWWNTNKKYIWT
AMKHGAEMNGTTCSSGSGDSSSGENQTNSCDDIPTIDLIPQYLRFLQEWVEHFCEQRQAKVK
DVITNCKSCKESGGTCNSDCKTKCKGECEKYKKFIEKCKGGGTEGTSGSSWVKRWYQIYMR
25 YSKYIEDAKRNRKAGTKSCGTSSGANSVTTTESKCVQS

>gi | 90193485 | gb | ABD92338.1 | erythrocyte membrane protein 1 [Plasmodium falciparum] | 269 aa (SEQ ID NO:52)

DYIKDDPYSKEYTTKLSFILNSSDANTSSEKIQKNNDEVCPNESEISSVEQAQTSRPSSNKTCI
30 THSSIKANKKKVCKDVKLGVRENDKVLRVCVIEHTSLSGVENCCCQDLLGILQENCSDNKR
SSSNGSCDKNSEEACEKNLDEALASLTNCYKNQKCKSEQSKKNNNKWIWKKSSGNEKGLQK
EYANTIGLPPRTQSLCLVCLHEKEGKTQELKNISTNSELLKEWIIAFHEGKNLKTTPQNKN
DDNGKKLFDLKYFADY

>MTS1 745 amino acids | 646 aa (SEQ ID NO:53)

35 **DYIKDDPYSKEYTTKLSFILNSSDANTSSEKIQKNNDEVCPNESEISSVEQAQTSRPSSNK**
TCITHSSIKANKKKVCKDVKLGVRENDKVLRVCVIEHTSLSGVENCCCQDLLGILQENC

SDNKRGSSSSNGSCDKNSEEACEKNLDEALASLTNCYKNQKCKSEQSKKNNNKWIWKK
SGKEGGLQKEYANTIGLPPRTQSLYLGNLPKLENVCKGVTDINFDTKKFLAGCLIAAF
HEGKNLKTTYPELEKKNDDNGKKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQKA
FGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWTAMKHGAGMNGTTCSSG
5 SGDSSNDIPTTDFIPQYLRFLQEWFENFCEQRQAKVKDVIENCNSCKNTSGERKIGDTCN
SDCEKKCKDECEKYKKFIEDCKGGDGTAGSSWVKRWDQIYKRYSKHIEDAKRNRKAG
TKNCGITTGTISGESSGATSGVTTTENKCVQSDIDSFFKHLIDIGLTPSSYLSNVLDDNIC
GEDNAPWTTYTTYTTEKCNKETDKSKSQSNTAVVVNVPSPLGNTPHGYKYACECKIPT
TEETCDDRKEYMNQWSCGSAQTVRDRSGKDDYELCKYNGVQIKQAAGTLKNSKLD

>Q8I639 (Q8I639_PLAF7) Plasmodium falciparum (isolate 3D7), 632 aa extracellular part
(SEQ ID NO:54)

NYIKGDPYFAEYATKLSFILNSSDANNPSEKIQKNNDEVCCNENSGIASVEQEQISDPSSN
KTCITHSSIKANKKKVCKHVKLGVRENDKDLRVCVIEHTSLSGVENCCCQDFLRILQEN
15 CSDNKSGSSSSNGSCNNKNQEACEKNLEKVLASLTNCYKCDKCKSEQSKKNNKNWIWK
KSSGKEGGLQKEYANTIGLPPRTQSLCLVVCLDEKGKKTQELKNIRTNSELLKEWIIAA
FHEGKNLKPSHEKKNDDNGKKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQKI
FGKLFRKYIKKNNTAEQDTSYSSLDELRESWWNTNKKYIWLAMKHGAGMNSTTCCGD
GSGVTGSGSSCDDIPTIDLIPQYLRFLQEWFVEHFCKQRQEKVKPVIENCKSCKESGGTCNG
20 ECKTECKNKCEVYKKFIEDCKGGDGTAGSSWVKRWDQIYKRYSKYIEDAKRNRKAGT
KNCGPSSTTNAENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDDNICGADKAPWTTYTT
YTTTEKCNKETDKSKLQQCNTAVVVNVPSPLGNTPHGYKYACQCKIPTNEETCDDRKEY
MNQWSCGSARTMKRGYKNDNYELCKYNGVDVKPTTVRSNSSKLD

>Q8I639 (Q8I639_PLAF7) Plasmodium falciparum (isolate 3D7), complete 2730 aa
extracellular part (SEQ ID NO:55)

MDKSSIANKIEAYLGAKSDDSKIDQSLKADPSEVQYYGSGGDGYLRKNICKITVNHSDSGT
NDPCDRIPPPYGDNDQWKCAILSKVSEKPVNFVPPRRQRMCMNNLEKLNVDKIRDKHAFLA
DVLLTARNEGERIVQNHPTDNSSNVCNALERSFADIADIIRGTDLWKGTSNLEQNLKQMFA
30 KIRENDKVLQDKYPKDQNYRKLREDWWNANRQKVWEVITCGARSNDLLIKRGWRTSGKSN
GDNKLELCRKCGHYEEKVPTKLDYVPQFLRWLTEWIEDFYREKQNLIDDMERHREECTSED
HKSKEGTSYCSTCKDKCKKYCECVKKWKSEWENQKNKYTELYQQNKNETSQKNTSRYDD
YVKDFFKKLEANYSSLENYIKGDPYFAEYATKLSFILNSSDANNPSEKIQKNNDEVCCNENSG
IASVEQEQISDPSSNKTCTHSSIKANKKKVCKHVKLGVRENDKDLRVCVIEHTSLSGVENCC
35 CQDFLRILQENCSDNKSGSSSSNGSCNNKNQEACEKNLEKVLASLTNCYKCDKCKSEQSKKN
NKNWIWKKSSGKEGGLQKEYANTIGLPPRTQSLCLVVCLDEKGKKTQELKNIRTNSELLKE

WIIAAFHEGKNLKPSHEKKNDNDNGKKLCKALEYSFADYGDLIKGTSIWDNEYTKDLELNLQ
KIFGKLFRKYIKKNNTAEQDTSYSSSLDELRESWWNTNKKYIWLAMKHGAGMNSTTCCGDGS
VTGSGSSCDDIPTIDLIPQYLRFLQEWVEHFCKQRQEKVKPVIENCKSCKESGGTCNGECKTE
CKNKCEVYKKFIEDCKGGDGTAGSSWVKRWDQIYKRYSKYIEDAKRNRKAGTKNCGPSSTT
5 NAAENKCVQSDIDSFFKHLIDIGLTPSSYLSIVLDDNICGADKAPWTTYTTYTTTEKCNKETD
KSKLQQCNTAVVVNVPSPLGNTPHGYKYACQCKIPTNEETCDDRKEYMNQWSCGSARTMK
RGYKNDNYELCKYNGVDVKPTTVRSNSSKLDDKDVTFNLFQWNKEIQYQIEQYMTNTKI
SCNNEKNVLSRVSDEAAQPKFSDNERDRNSITHEDKNCKEKCKCYSLWIEKINDQWDKQKD
NYNKFQRKQIYDANKGSQNKVVSLSNFLFFSCWEEYIQKYFNGDWSKIKNIGSDTFEFLIKK
10 CGNDSGDGETIFSEKLNNAEKKCKENESTNNKMKSSSETSCDCSEPIYIRGCQPKIYDGKIFPGK
GGEKQWICKDTIIHGD TNGACIPRTQNL CVGELWDKRYGGRSNIKNDTKESLKQKIKNAIQ
KETELLYEYHDKGTAIISRNPMKGQKEKEEKNND SNGLPKGFCHAVQRSFIDYKNMILGTSV
NIYEYIGKLQEDIKKIIEKGTTKQNGKTVGSGAENVNAWWKGIEGEMWDAVRCAITKINKKQ
KKNGTFSIDECGIFPTGNDDEDQSVSWFKEWSEQFCIERLQYEKNIRDACTNNGQGDKIQGDC
15 KRKCEEYKKYISEKKQEWDKQKTKYENKYVGKSASDLLKENYPECISANFDFIFNDNIEYKT
YYPYGDYSSICSCEQVKYYEYNNAEKKNNKSLCHEKGNDRTWSKKYIKKLENGRTLEGVYV
PPRRQQLCLYELFPIIKNKNDITNAKKELLETLQIVAEREAYYLWKQYHAHNDDTTYLAHKKA
CCAIRGSFYDLEDIIKGNDLVHDEYTKYIDSKLNEIFDSSNKNDIETKRARTDWWENEAIAVP
NITGANKSDPKTIRQLVWDAMQSGVRKAIDEEKEKKKPNENFPPCMGVQHHIGIAKPQFIRWL
20 EEWTNEFCEKYTKYFEDMKSNCNLRKGADDCDDNSNIECKKACANYTNWLNPKRIEWNGM
SNYYNKIYRKS NKESD GKDYS MIM EPTVIDYLNKRCNGEINGNYICCSCKNIGENSTSGTVN
KKLQKKETQCEDNKGPLDL MNKVLNKMDPKYSEHKMKCTEVYLEHVEEQLKEIDNAIKDY
KLYPLDRCFDDKSKMKVCDLIGDAIGCKHKTKLDELDEWNDVDMRDPYNKYKGVLIPPRRR
QLCFSRIVRGPANLRNLKEFKEEILKGAQSEGKFLGNYYNEDKDKEKALEAMKNSFYDYEYII
25 KGSDMLTNIQFKDIKRKLDRLLEKETNNTEKVDDWWETNKKSIWNAMLCGYKKSGNKIIDP
SWCTIPTTETPPQFLRWIKEWGTNVCIQKEEHKEYVKSKCSNVTNLGAQESSESKNCTSEIKKY
QEWSRKRSIQWEAISEGYKKYKGMDEFKNTFKNIKEPDANEPNANEYLKKHCSKCPCGFND
MQEITKYTNIGNEAFKQIKEQVDIPAELEDVIYRLKHHEYDKGNDYICNKYKNINVMKKNN
DDTWTDLVKNSSDINKGVLLPPRRKNLFLKIDESDICKYKRDPKLFKDFIYSSAISEVERLKKV
30 YGEAKTKVVHAMKYSFADIGSIIKGDDMMENNSSDKIGKILGDGVGQNEKRKKWWD MNK
YHIWESMLCGYKHAYGNISENDRKMLDIPNNDDHQLRWFQEWTFENFCTKRNELYENMV
TACNSAKCNTSNGSVDKKECTEACKNYSNFILIKKKEYQSLNSQYDMNYKETKAEEKESPEY
FKDKCNGECSCLSEYFKDETRWKNPYETLDDTEVKNNCMCKPPPPASNNTSDILQKTIPFGIA
LALGSIAFLFMKKKPKTPVDLLRVLDIPKGDYGIPTPKSSNRYIPYASDRYKGKTYIYMEGDT
35 SGDDDKYIWDL

>FCR3 (SEQ ID NO:56) complete 2734 aa extracellular part (577 aa highlighted corr. ID1-

DBL2b)

MDSTSTIANKIEEYLGAKSDDSKIDELLKADPSEVEYYRSGGDGYLKNNICKITVNHSDSGK
YDPCEKKLPPYDDNDQWKCCQNSSDGSCKPENICVPPRRERLCTYNLENLKFDKIRDNNAFL
5 ADVLLTARNEGEKIVQNHPDTNSSNVCNALERSFADLADIIRGTDQWKGTNSNLEKNLKQM
FAKIRENDKVLQDKYPKDQKYTKLREAWWNANRQKVWEVITCGARSNDLLIKRGWRTSGK
SDRKKNFELCRKCGHYEKEVPTKLDYVPQFLRWLTEWIEDFYREKQNLIDDMERHREECTR
EDHKSKEGTSYCSTCKDKCKKYCECVKKWKTEWENQENKYKDLYEQNKNKTSQKNTSRY
DDYVKDFFFEKLEANYSSLENYIKGDPYFAEYATKLSFILNPSDANNPSGETANHNDACNC
10 NESGISSVGQAQTS GPSSNKT CITHSSIKTNKKKECKDVKLG VRENDKDLKICVIEDTSLS
GVDNCCCQDLLGILQENCSDNKRGSSSNDSCDNKNQDECQKKLEKVFASLTNGYKCDK
CKSGTSRSKKKWIWKSSGNEEGLQEEYANTIGLPPRTQSLYLG NLPKLENVCEDVKDI
NFDTK EKFLAGCLIVSFHEGKNLKKRYPQNKNSGNKENLCKALEYSFADYGD LIKGTSI
WDNEYTKDLELNLQN NFGKLF GKYYIKNN TAEQDTSYSSLDELRESWWNTNKKYIWT
15 AMKHGAEMNITTCNADGSVTGSGSSCDDIPTIDLIPQYLRFLQEWVENFCEQRQAKVKD
VITNCKSCKESGNKCKTECKTKCKDECEKYKKFIEACGTAGGGIGTAGSPWSKRWDQI
YKRYSKHIEDAKRNRKAGTKNCGTSSTTNAAASTDENKCVQSDIDSFFKHLIDIGLTPS
SYLSNVLDDNICGADKAPWTTYTTYTTTEKCNKERDKSKSQSSDTLVVVNVPSPLGNTP
YRYKYACQCKIPTNEETCDDRKEYMNQWSCGSARTMKRGYKNDNYELCKYNGVDVKPTT
20 VRSNSSKLDGNDVTFFNLFEQWNKEIQYQIEQYMTNANISCIDEKEVLDSVSDEGTPKVRGG
YEDGRNNNTDQGTNCKEKKCYKLWIEKINDQWGKQKDNYNKFRSKQIYDANKGSQNKK
VVSLSNFFLFFSCWEEYIQKYFNGDWSKIKNIGSDTFEFLIKCGNNSAHGEEIFNEKLKNAEK
KCKENESTDTNINKSETSCDLNATNYIRGCQSKTYDGKIFPGKGGEKQWICKDTIIHGD TNGA
CIPRTQNL CVGELWDKSYGGRSNIKNDTKELLKEKIKNAIHKETELLYEYHDTGTAIISKND
25 KKGQKGKNDPNGLPKGFCHAVQRSFIDYKNMILGTSVNIYEHIGKLQEDIKKIIEKGTPQQKD
KIGGVGSSTENVNAWWKGIEREMWDAVRCAITKINKNNNSIFNGDECGVSPPTGNDEDQS
VSWFKEWGEQFCIERLRYEQNIREACTINGKNEKKCINSKSGQGDKIQGACKRKCEKYKKYI
SEKKQEWDKQKTKYENKYVGKSASDLLKENYPECISANFDFIFNDNIEYKTYYPYGDYSSICS
CEQVKYKYNNAEKKNNKSLCYEKDNDMTWSKKYIKKLENGRSLEGVYVPPRRQQLCLYE
30 LFPPIIKNEEGMEKAKEELLETLQIVAEREAYYLWKQYNPTGKGIDDANKACCAIRGSFYDL
EDIKGNLDLVHDEYTKYIDSKLNEIFGSSDTNDIDTKRARTDWWENETITNGTDRKTIRQLVW
DAMQSGVRYAVEEKNENFPLCMGVEHIGIAKPQFIRWLEEWTFNEFCEKYTKYFEDMKS KCD
PPKRADTCGDNSNIECKKACANYTNWLNPKRIEWNGMSNYYNKIYRKS NKESEGGKDYSMI
MAPTVIDYLNKRCHGEINGNYICCSCKNIGAYNTTSGTVNKKLQKKETECEEEKGPLDLMNE
35 VLNKMDDKYS AHKMKCTEVYLEHVEEQLNEIDNAIKDYKLYPLDRCFDDQTKMKVCDLIA
DAIGCKDKTKLDELDEWNDMDLRGTYNKHKGVLIPRRRQLCFSRIVRGPANLRSLNEFKEE

ILKGAQSEGKFLGNYYKEHKDKEKALEAMKNSFYDYEDIKGTDMLTNIEFKDIKIKLDRLLE
KETNNTKKAEDWWKTNNKSIWNAMLCGYKKSGNKIIDPSWCTIPTTETPPQFLRWIKEWGT
NVCIQKQEHKEYVKSCKSNVTNLGAQASESNCTSEIKKYQEWSRKRSIRWETISKRYKKYK
RMDILKDVKEPDANTYLREHCSKCPCGFNDMEEMNNNEDNEKEAFKQIKEQVKIPAELEDVI
5 YRIKHHEYDKGNDYICNKYKNIHDRMKKNNGNFVTDNDFVKKSWAISNGVLIPPRRKNLFLYI
DPSKICEYKKDPKLFKDFIYWSAFTEVERLKKAYGGARAKVVHAMKYSFTDIGSIKGDMM
EKNSSDKIGKILGDTDGQNEKRKKWWD MNKYHIWESMLCGYREAEGDTETNENCRFPDIES
VPQFLRWFQEWSENFCDRRQKLYDKLNSECISAECTNGSVDNSKCTHACVNYKNYILTKKT
EYEIQTNKYDNEFKNKNNSNDKDAPDYLKEKCNDNKCECLNKHIDDKNKTWKNPYETLEDTF
10 KSKCDCPKPLPSPIKPDDLPPQADEPFDPTILQTTIPFGIALALGSIAFLFMKVIYIYIYVCCICMY
VCMYVCMYVCMYVCMYVCMHVCMLCVYVIYVFKICIIYIEKEKRKK

>BPTI, protease inhibitor (SEQ ID NO:57)

RPDFCLEPPYTGPCKARIIRYFYNAKAGLCQTFVYGGCRAKRNNFKSAEDCMRTCGGA

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