

Additional File 12: *Coffea* spp. OrthoMCL families of cystatins: In green: variation of LARFAV motif; In yellow: new motif GG-X-YY; In blue: QVVAG motif

Family544

Coffea arabica

CA00_XX_AR1_001_B01_EB_F

MAAAKFAIGTGQTDISSLEPVKPADPHVIQIGKFVEQHHHGKLLSVAVVGGFTWSGDG
GNYYALIIENQDSDGATCLHKHKVLVLETPSETKLIWHKK

CaContig113

MSTVAARSATPAIGAGQKNMVGVPVPMASSTVKRTDPGVIGIANFAVEKYNERNETALA
VINVEFGFLWPHGGHYYYMLAIITQDDKGTHHDVAVVRDAGKSNAHAYEFMWYNHNNN

CA00_XX_LP1_007_B05_EB_F

MDQVPVNPEDVDRIGRFAVNEENRKRPNQLTFVHVYAFKGSAGEDKIYPLIIKIRDVN
DKPFKHKALVLEKTDGSLNLKGYWE

CA00_XX_RT8_064_F07_EQ_F

MAAAKSAIGTGKNDISSLEPVKPADRHVIQIGEFVVEQCHHGQLLFVAVVGGFTWSGDG
GYYYALIIENQDSEGATYLHKALVLETPNETKLIWHKK

CaContig8767

MAAAKSAIGTGKNDISELEPVKPADPHVVQIGEFVVEQCHHGQLLFVAVVGGFTWSGDG
GYYYALIIENQDSDGATYLHKALVLQTPSETKLIWHKK

CaContig10690

MAAAKSAIDTGKNDISSLEPVKPADPHVIQVGQFVVEQCYHGQLLFVAVVGGFTWSGDG
GYYYALIIENQDNDGATYLHKALVLETPSETKLIWHKK

CA00_XX_RX1_054_H06_EB_F

MPGQIDVDGLVPVKPTDPPVIAIGKFAVEEYKKKKQPIEIVAVVSGFTGSGDGGNYYLLI
IETQDSNGAIFLHKALVFKDTNGGLKVKGWGF

CaContig13279

MAAVAANFPVAGVAKNPMQGLKPALVVGALNQLAGQKQGQGNAAVPDDWTPVNPLDRHI
QE LGAFAVDEHNKQTKDQLVFVAVLSGIQKTEDDRSTYCLLISAKDSTGKLGRYYAVII
EYNTGCQQLLQFEPSP

CaContig11025

MAAAKSAIGTGQTDISSLEPVKPADPHVIQIGRFVVEQAHHGKLLFVAVVGGFTWSVIG
GNYYALIIENQDYEGATYLHKALVFETPDGVLELIWHKK

CaContig5403

MAAAKSAIGTGQTDISSLEPVKPADPHVIQIGQFVVEQAHHGKLLFVAVVGGFTWSVIG
GNYIALIIENQDYEGATYLHKALVFETPDGVLTLIWHKK

CaContig16944

MAEAKSATVTDQIDINSIQPVAPADPHVVGIGQFVVEKFHHGKLLFIAVLGGFTWKCEG
GKYIALIIQNQDYEGATFIHKALVVEAKGETKLLWHRN

CaContig4522

MAEAKSATVTDQIDITSIQPVAPADPHVVGIGQFVVEKFHHGKLHFIAVIGGFTWNCEG
GKYIALIIQNQDYEGATFIHKALVVEAKGETKLLWHRN

CaContig16895

MAAAKSAIGTGQTDISSLEPVKPADPRVIQIGQFVVEQAHHGKLLFVAVVGGFTWSVIG
GNYIALIIENQDYEGATYLHKALVFETPDGVLTLIWHKK

CaContig8410

MAEAKSATVTDQIDINSIQPVKPADPRVVEIGQFVVEKFHHGKLLFIAVLGGFTWKCEG
GKYIALVIENQDYEGATFIHKALVVEAPGETKLLWHKN

CaContig4566

MAAAKSAIGTGQTDISSLEPVKPADPHVIQIGQFVVEQAHHGKLLFVAVVGGFTWSVIG
GNYIALIIENQDYEGATYLHKALVFETPDGVLTLIWHKK

CaContig12045

MAKFSVDKYNEEAGTKLVFMKVIACALWNLGVVTVYALLIQTQDSKGTYIDKAVAVDVT
IIGKKLLWYKH

CA00-XX-RT8-047-A07-EP.F

MAAAKSAIGTGKNDISSLEPVKPADPHVIQIGQFVVEQCHHGQLLFVAVVGGFTWSGDG
GYYIALIIENQDSDGATYLHKALVLETPSETKLIWHMK

CaContig15921

MVGVPVPMAS TVKRTDPGVIGIANFAVEKYNERNETALAVINVEFGFLWPHGGHYYYM
LAIITXDDKGTHHDVAYVRDAGKTMLTLMNSCGTIITIIDLALLIS

CaContig8137

MAAAKSAIGAGKNDIDALEPVKPADPRVIEIGRFAVTEHGHALLFVG VGGFRWAIPGG
DHYALIIETQDDNGATYLHKALVVMVEVEGQPLRLIWKYN

CaContig17257

MAAAKSAIGTGKIDISSLEPVKPADPHVIQIGKFVEQQHHGKLLCVAVVGGFTWSGDG
GNYIALIIENQDSDGATYLHKHKVLVLETPSEMKLIWHKK

Coffea canephora

CcContig2160

MAEAKSATVTDQIDINSIQPVAPADPHVVGIGQFVVEKFHHGKLLFIAVLGGFTWKCEG
GKYIALIIQNQDYEGATFIHKALVVEAKGETKLLWHRN

CcContig4504

MATVAAKSATAAIGAGQKNMVGGGLSSTVPPRSSTVNPCKDPHVIQIAQFAVANYNAKAG
TTVVWLNVEYGFWWIDDDTYMLAIKTQDLTGTHCDVALVREISESNGTYSLKWYNHNN
K

CC00-XX-PP1-087-G12-TL.F

MDQVPVNPEDVDRIGRFAVNEENRKRPNQLTFVHVYAFKGSAGEDKIYPLIIKIRDVN
DKPFKHKALVLEKTDGSLNLKGYW

CcContig3825

MSTVAARSATPAIGAGQKNMMGGGVSCIIPPATTVKVEDACVIEIAKFVAQITGRVFI
KVEFGFWWKIEIGPNA GTYYMLAIITQDNNRTHCDVALVCDLETSNGHTLIWYNDKNN

CcContig7886

MAEAKSATVTDQIDINSIQPVAPADPRVAEIGQFVVEKFHHGKLLFIAVIGGFTWKCEG
GKYIALIIQNQDYEGATFIHKALVVEAPGETKLLWHRN

CcContig1043

MVGGGLSSTVPPRSSTVNPCKDPHVIQIAQFAVANYNAKAGTTVVWLNVEYGFWWIDDDT
YYMLAIKTQDLTGTHCDVALVREISESNGTYSLKWYNHNNK

Family2703

Coffea arabica

CaContig1058

MTEVIANYNISVNEFAANMAVEGFQSAEVEAIMKAVGENKTWNAIEGLSDTNANLRGLC
GTTTAQNVDKTVPPDVQEMAEEFAVAEYNRIAGTKLVLIKVLAYVKLVVVFGTIFYGLHML
TQDDKGTYKDQALTLKLNNGMKVLLWYKHN

CaContig4053

MAVTAKCQKTELANNYVKQFQSAEVDAILKQAGETKLIVHGGWTPVNPADPHIQELGRF
AVDEHNKQTGDKLVFVAVVAGLKPKVELATLYWLIIEAKDSDGNQNIYKALVQETDLEM
KKLLYFGEVPPVN

CaContig5345

MTEVIANYNINVNEFAANMAVEGFQSAEVEAIMKAVGENKTWNAIEGLSDTNANLQGLC
GTTTAQNVDKTVPPDVQEMAEEFAVAEYNRIAGTNLVLIKVLAYVKRVVVFGTLYRLHML
TQDDKGIHNDQALTLKLNKNGKKVLLSYKHN

CaContig4160

MAAAKSGIGSGQKDEPIIPMASTVNPDDVVIQKAKFAVDSYNGQAGTGLKFNSVEFGF
CWSVSDVTDYLLAINTHDDKGPYCDPALVSDTLKSNAHTYELIWYNHKKK

CaContig7667

MATVAAKSATAAIGAGQKNMVGGLSSTVPPRSSTVNPKDPHVIQIAQFAVANYNAKAG
TTVVWLNVEYGFWWIDDDTYMLAIKTRDLTGTHCDVALVREISESNGTYSCLKWYNHNN

CaContig7242

DPHIQELGRFAVNEHNRQTRDKLVFVAVVAGLKPKVELATLYWLIIEAKDRNGNQNIYK
A

Coffea canephora

CcContig6730

MTEVVANYNINVNEFAANMAVEGFQSAEVEAIMKAVGENKTWNAIEGLSDTNANLQGLR
GTTTAQNVDKTVPPDVQEMAEEFAVAEYNRIAGTNLVLIKVLAYVKRVVVFGTLYGLHML
TQDDKGIHHDQALTLKFKNGKKVLLWYKHNNH

CcContig4176

MTEVIANYNINVNEFAANMAVEGFQSTEVEAIMKAVGENKTWNAIEGLNDTNANLQGLC
GTTTAQNVDKAVPPDVQEMAEEFAVAEYNRRAGTKLVLIKVLRYVKRVVVFGTIFYGLHML
TQDDKGTYKDQALALKFKNGKKVLVWYKHNN

CC00-XX-SH3-075-F10-EM.F

MAAAKSGIGSGQKDQPIIPVASTVKPKDDKVIEAAQFAVVTYNKQAGTDLVCINVEFGF
WWSITGATYYMLAIKTQDAKGTYCHVALVADVLVSGGNHTYDLIWYNHKN

Family942

Coffea arabica

CaContig2092

MAAVVANPHINITEITANMKAEGVQSPEIEAIVKALSDDTIWKTIEGFKGKDMSTQEKM
INNMOVAGGHLPQVGVPPLPTPVNPTDPHVISVAKFALAKYNDKHGTKLVFNRVNGGLQWK
IVIGTLYILVLATQDSKGTYTDYAVVFETFLGQKYLFWYKH

CaContig2323

MAAVAANFPVAGVAKNPMQGLKPALVVGALKQLAGQKQGQGNAAVPDDWTVVSTLDRHI
QALGAFAVDEHNKQTKNQLVFVAVLSGIKKTEDDRSTYCLLISAKNSTGKLGSYNAVII
EYNTGCQQLLQFEESP

CaContig 13328

MDLVPVNPAEPHVTAIGQFAVDEENKKRPTNKLNFVAVVGGYHGPVTGATRYPLILGTQ
DGKGHTFLHKALVHEKPDGSLELKGW

CaContig5297

MASAFPHLLLLTTLAAICLFSDVPSAALGGRPKDALVGGWSKADPKDPEVVENGKFAVD
EHNKEAKTKLEFKTVVEAQQQVVAGTNYKIVIKALDGTASNLYEAIWVKPWLKFKKLT
SFRKLP

CaContig15270

MASAFPHLLLLTTLAAICLFSDVPSAALGGRPKDALVGGWSKADPKDPEVVENGKFATD
EHNKEAGTKLEFKTVVEAQEQVVAGTNYKIVIKALDGTASNLYEAIWVKPWLKFKKLT
SFRKLP

CaContig14147

MDMCDEDDFFVTGGGKDTKLVGIAGVPLPKPVDKTSPhVIKIAQFAVKKHNEKAGTKLVF
IKVVGGVKWSAIAGTfYALQIETQDSKGTyRDkTLVVEAVTGhKKLIWYKH

CaContig3848

MTEVTVNYNfNITEVAANMAVEGFQSAEVEAIMKTAGDDMIWNAIEDTKDMDMCDEDDF
VTGGGKDTKLVGIAGVPLPKPVDKTSPhVIKIAQFAVKKHNEKAGTKLVFIKVVGGVKW
SAIAGTfYALQIETQDSKGThRDkTLVVEAITGhKKLIWYKH

CA00-XX-IA2-005-D11-EC.F

MAAVVANYNINISEITANMKAEGVQSPMEAILKATAEDAIWNTIERFKGMDMSNKKKM
INNRMGSGGRAQLGIPLPEPVNPTDPHVIAIAKFAVEKHNENAGTSLVFIQVIGGLQWN
LLIGALYMLIITTQDSKGTYYDKTVVFETCLGQKYLLWYKH

Coffea canephora

CcContig1026

MASAFPHLLLLTTLAAICLFSDVPSAALGGRP KDALVGGWSKADPKDPEVLENGKFATD
EHNKEAGTKLEFKTVVEAQEQVVAGTNYKIVIKALDGTASNLYEAIWVKPWLKFKKLT
SFRKL

CcContig6451

MTEVTVNYNFNITEVAANMAVEGFQSVEAEAIMKTAGDDMIWNAIEDTKDMDMCDEDF
VTGGGKDTKLVGIAGVPLPKPVDKTSPHVIKIAQFAVKKHNEKAGTKLVFIKVVGGVKW
SAIAGTFYALQIETQDSKGTHRDKTLVVEAITGHKKLIWYKH

CcContig7844

MAAVVANPHINISEITANMKAEGVQSPEIEAIVKALSDDTIWNTIEGFKGKDMSTQEK
INNMVAGGHLPQGVPLPTPVNPTDPHVISVAKFAVAKYNDKHGTKLVFN RVNGGLQWK
IVIGTLYILILATQDSKGTYYDYAVVFETFLGQKYLFWYK