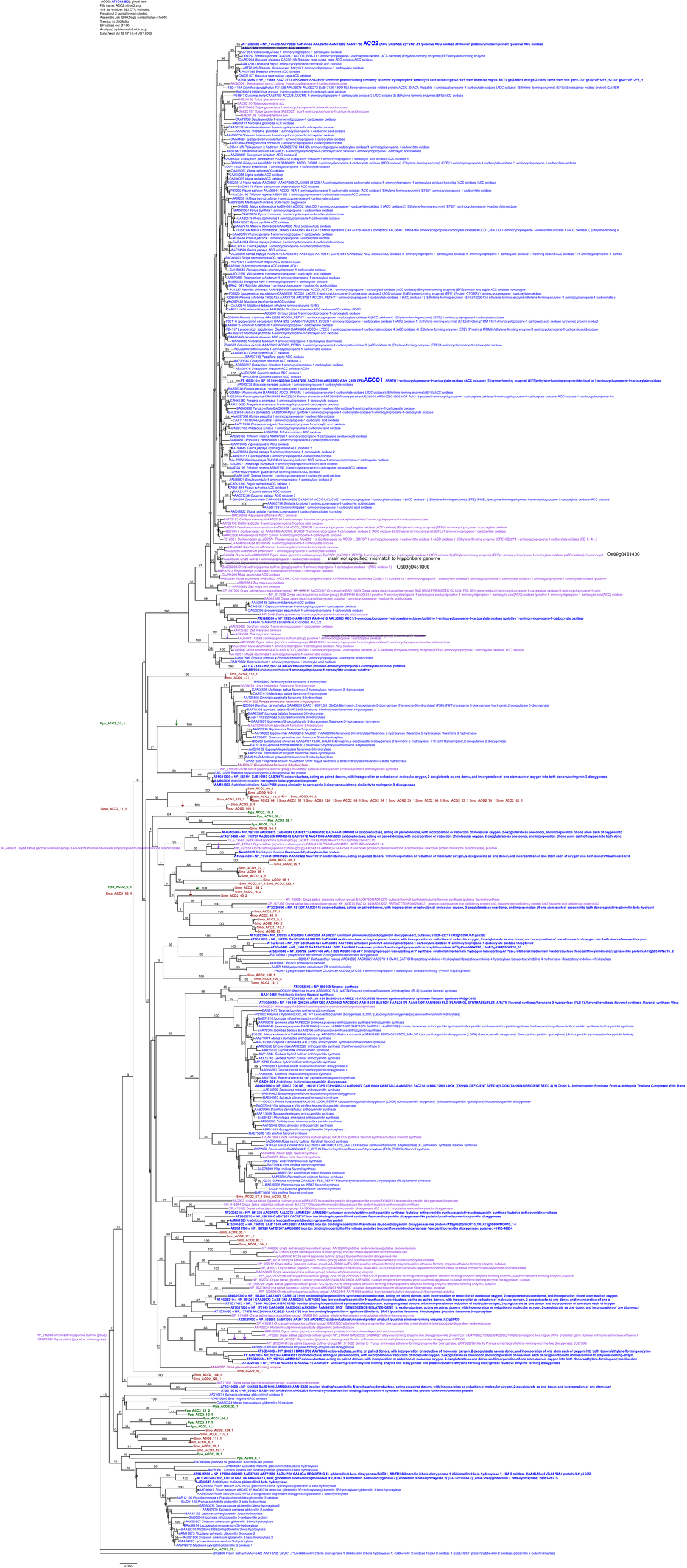
AtCO2 (AT1G62380) global tree
File name: ACO2-rptree5.svg
118 as residues 382 OTU included.
Results of 2 partial trees included.
Assemble Job Id:993hgn8 (selectNaN=f1e94)
Tree scale: 0.1 (bar)
BP value of 100
Analyzed by fivestain@ntlab.ac.jp
Date: Wed Jul 12 17:15:41 JST 2006


AT1G62380 = NP_176438 AAF70838 AAK76550 AAL32763 AAM13380 AAM91785 ACO2 (ACC OXIDASE 2)P2401.11 /putative ACC oxidase /Unknown protein /unknown protein /putative ACC oxidase
AAG07484 Arabidopsis thaliana ACC oxidase
AAF65472 Brassica juncea 1-aminocyclopropane-1-carboxylate oxidase
Q96602 Brassica juncea CAA77807 ACO1, BRAJU 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/ethylene-forming enzyme
CAA72784 Brassica oleracea CAC39108 Brassica rapa subsp. rapa ACC oxidase/ACC oxidase
AAM77435 Brassica oleracea var. botrytis 1-aminocyclopropane-1-carboxylate oxidase
AAM77435 Brassica oleracea var. botrytis 1-aminocyclopropane-1-carboxylate oxidase
CAA57260 Brassica oleracea ACC oxidase
CAC39107 Brassica rapa subsp. rapa ACC oxidase
AT1G12010 = NP_172665 AAC17613 AAK96598 AAL36607 unknown protein/Strong similarity to amino-cyclopropane-carboxylic acid oxidase gb|L27664 from Brassica napus. ESTs gb|Z48548 and gb|Z48549 come from this gene. /At1g12010/F12F1_12 /At1g12010/F12F1_1
AAS09041 Dendrobium hybrid cultivar 1-aminocyclopropane-1-carboxylate oxidase
1804419A Dianthus caryophyllus P31528 AAA33276 AAA33273 BAB47120 1804419A flower senescence-related protein/ACCO_DIACA Probable 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE) (Senescence-related protein) /CARSR1
AAC48824 Helianthus annuus 1-aminocyclopropane-1-carboxylate oxidase
P54847 Cucumis melo CAA64799 ACCO3_CUCME 1-aminocyclopropane-1-carboxylate oxidase 3 (ACC oxidase 3) (Ethylene-forming enzyme) (EFE)/ACC oxidase
BAE20196 Tulipa gesneriana acc
BAE20195 Tulipa gesneriana acc
BAD13865 Tulipa gesneriana 1-aminocyclopropane-1-carboxylic acid oxidase
BAE20197 Tulipa gesneriana BAE20331 acc/1-aminocyclopropane-1-carboxylic acid oxidase
BAE20198 Tulipa gesneriana acc
CAA71738 Beta vulgaris subsp. maritima 1-aminocyclopropane-1-carboxylate oxidase
AAB05171 Nicotiana glutinosa ACC oxidase
AAB58232 Nicotiana tabacum 1-aminocyclopropane-1-carboxylate oxidase
AAA99793 Nicotiana glutinosa 1-aminocyclopropane-1-carboxylic acid oxidase
AAX68076 Solanum tuberosum 1-aminocyclopropane-1-carboxylic acid oxidase
BAA34924 Lycopersicon esculentum 1-aminocyclopropane-1-carboxylic acid oxidase
AAB73984 Pelargonium x hortorum 1-aminocyclopropane-1-carboxylate oxidase
Q1044122A Pelargonium x hortorum AC48977 2104412A aminocyclopropane carboxylate oxidase/1-aminocyclopropane-1-carboxylate oxidase
AAB71421 Helianthus annuus AC48983 1-aminocyclopropane-1-carboxylic acid oxidase/1-aminocyclopropane-1-carboxylic acid oxidase
AAZ89343 Gossypium hirsutum ACC oxidase 2
AAQ84308 Gossypium barbadense AAZ83342 Gossypium hirsutum 1-aminocyclopropane-1-carboxylic acid oxidase/ACC oxidase 1
Q65932 Diospyros kaki BAB11918 BAB86551 ACCO_DIOKA 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase /1-aminocyclopropane-1-carboxylate oxidase
AAP41892 Hevea brasiliensis 1-aminocyclopropane-1-carboxylate oxidase
CAJ55067 Vigna radiata ACC oxidase
CAJ55065 Vigna radiata ACC oxidase
CAJ55063 Vigna radiata ACC oxidase
Q1023614 Vigna radiata AAC49021 AAQ57883 CAJ56064 21023614 aminocyclopropane carboxylate oxidase/1-aminocyclopropane-1-carboxylate oxidase homolog /ACC oxidase /ACC oxidase
BAD06178 Pisum sativum var. macrocarpon ACC oxidase
P31239 Pisum sativum AAA33644 ACCO_PEA 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase
AAD29186 Trillium ripens AB897396 1-aminocyclopropane-1-carboxylate oxidase/ACC oxidase
AAN20919 Rosa hybrid cultivar 1-aminocyclopropane-1-carboxylate oxidase
BD023549 Medicago truncatula (DOU Fw10) oxygenase
O48882 Malus x domestica AAB94031 ACCO2_MALDO 1-aminocyclopropane-1-carboxylate oxidase 2 (ACC oxidase 2) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase
BAD61004 Pyrus pyrifolia 1-aminocyclopropane-1-carboxylate oxidase
CAA11830 Pyrus communis 1-aminocyclopropane-1-carboxylate oxidase
CAA60276 Pyrus communis 1-aminocyclopropane-1-carboxylate oxidase
BAA67697 Pyrus pyrifolia ACC oxidase
AAC61516 Malus x domestica CAA05468 ACC oxidase/ACC oxidase
AAC61516 Malus x domestica 0006951 CAA13462 AAD34312 Malus sylvestris CAA74328 Malus x domestica AAC36401 1905416A aminocyclopropane carboxylate oxidase/ACCO1_MALDO 1-aminocyclopropane-1-carboxylate oxidase 1 (ACC oxidase 1) (Ethylene-forming e
BAA98375 Prunus persica 1-aminocyclopropane-1-carboxylate oxidase
AAT36484 Prunus persica 1-aminocyclopropane-1-carboxylate oxidase
CAD40994 Carica papaya putative 1-aminocyclopropane-1-carboxylate oxidase
AAL37174 Carica papaya 1-aminocyclopropane-1-carboxylate oxidase
AAF45228 Carica papaya ACC oxidase
AAC98808 Carica papaya AAK57516 CAE53415 AAS16933 AAT99444 CAH64841 CAH66522 ACC oxidase/ACC oxidase /1-aminocyclopropane-1-carboxylate oxidase /1-aminocyclopropane-1-carboxylate oxidase 1 /ripening related ACC oxidase 1 /1-aminocyclopropane-1-carbo
AAC66900 Stylosanthes scabra hemorrhagic ACC oxidase
AAP94014 Antirrhinum majus ACC oxidase ACO2
AAP94013 Antirrhinum majus ACC oxidase ACO1
CAH58545 Plantago major aminocyclopropane-1-carboxylate oxidase
AAO37087 Vitis vinifera 1-aminocyclopropane-1-carboxylic acid oxidase 1
AAD76983 Pelargonium x hortorum 1-aminocyclopropane-1-carboxylate oxidase
AAB66362 Diospyros kaki 1-aminocyclopropane-1-carboxylate oxidase
AAC49121 Helianthus annuus 1-aminocyclopropane-1-carboxylate oxidase
P31127 Actinidia deliciosa AAA19836 Actinidia deliciosa ACCO_ACTDE 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/tomato and apple ACC oxidase homologue
P07929 Lycopersicon esculentum CAA68538 ACCO2_LYCES 1-aminocyclopropane-1-carboxylate oxidase 2 (ACC oxidase 2) (Ethylene-forming enzyme) (EFE) (Protein GTOMA)/1-aminocyclopropane-1-carboxylate oxidase
Q08936 Petunia x hybrida 1909343A AAA33786 AAC37961 ACO1_PETHY 1-aminocyclopropane-1-carboxylate oxidase 1 (ACC oxidase 1) (Ethylene-forming enzyme) (EFE)/1909343A ethylene-forming enzyme/ethylene-forming enzyme /1-aminocyclopropane-1-carboxylate o
AAX97426 Nicotiana benthamiana ACC oxidase
CAA62646 Nicotiana tabacum ethylene forming enzyme (EFE)
AAE71119 Nicotiana tabacum AAX99394 Nicotiana attenuata ACC oxidase/ACC oxidase ACO1
AB569910 Ficus carica 1-aminocyclopropane-1-carboxylate oxidase
Q08936 Petunia x hybrida AAA33698 ACCO4_PETHY 1-aminocyclopropane-1-carboxylate oxidase 4 (ACC oxidase 4) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase
P05116 Lycopersicon esculentum CAA41212 CAA39479 ACCO1_LYCES 1-aminocyclopropane-1-carboxylate oxidase 1 (ACC oxidase 1) (Ethylene-forming enzyme) (EFE) (Protein JTOM 13)/1-Aminocyclopropane-1-carboxylic acid oxidase /unnamed protein product
AAX68075 Solanum tuberosum 1-aminocyclopropane-1-carboxylate oxidase
P24157 Lycopersicon esculentum CAA41489 CAA60904 ACCO4_LYCES 1-aminocyclopropane-1-carboxylate oxidase 4 (ACC oxidase 4) (Ethylene-forming enzyme) (EFE) (Protein pHTOM5)/ethylene-forming enzyme /1-aminocyclopropane-1-carboxylate oxidase
AAA99792 Nicotiana glutinosa 1-aminocyclopropane-1-carboxylic acid oxidase
BAA83466 Nicotiana tabacum ACC oxidase
CAA60466 Nicotiana tabacum 1-aminocyclopropane-1-carboxylate deaminase
Q08936 Petunia x hybrida AAA33698 ACCO4_PETHY 1-aminocyclopropane-1-carboxylate oxidase 3 (ACC oxidase 3) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase
AB203969 Citrus unshiu 1-aminocyclopropane-1-carboxylate oxidase
AAG49361 Citrus sinensis ACC oxidase
BAA57133 Passiflora edulis ACC oxidase
AAZ83344 Gossypium hirsutum ACC oxidase 3
ABC00397 Gossypium hirsutum 1-aminocyclopropane-1-carboxylate oxidase
BAA01476 Gossypium hirsutum ACC oxidase ACO4
AAO37232 Cucumis sativus ACC oxidase 1
BAA33276 Cucumis sativus ACC oxidase
AT1G05010 = NP_171994 Q06538 CAA47251 AAC97998 AAK43979 AAN12929 EFE/ACCO1 _ARATH 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/ethylene-forming enzyme /identical to 1-aminocyclopropane-1-carboxylate oxidase
AAO13735 Brassica oleracea putative 1-aminocyclopropane-1-carboxylate oxidase
AAN06786 Prunus persica CAA05214 AAC32824 Prunus armeniaca AAF36483 Prunus persica AAL28913 AAQ10260 1909354A Pch313 protein/1-aminocyclopropane-1-carboxylate oxidase; ACC oxidase /1-aminocyclopropane-1-c
Q96594 Prunus mume BAA60550 ACCO_PRUMU 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/ACC oxidase
AAS94403 Carica papaya isoform CAA53424 AAC32824 Prunus armeniaca AAF36483 Prunus persica AAL28913 AAQ10260 1909354A Pch313 protein/1-aminocyclopropane-1-carboxylate oxidase; ACC oxidase /1-aminocyclopropane-1-c
EAW91648 Fragaria x ananassa 1-aminocyclopropane-1-carboxylate oxidase
AAT01090 Fragaria x ananassa 1-aminocyclopropane-1-carboxylate oxidase
AAD60096 Pyrus pyrifolia BAD60989 1-aminocyclopropane-1-carboxylate oxidase/1-aminocyclopropane-1-carboxylate oxidase
BAC53656 Malus x domestica BAD61000 Pyrus pyrifolia 1-aminocyclopropane-1-carboxylate oxidase/1-aminocyclopropane-1-carboxylate oxidase
AB897398 Rumex paucinis 1-aminocyclopropane-1-carboxylic acid oxidase
CAA71140 Rumex palustris 1-aminocyclopropane-1-carboxylic acid oxidase
ABC12924 Phaseolus vulgaris 1-aminocyclopropane-1-carboxylic acid oxidase
BAB83762 Phaseolus lunatus 1-aminocyclopropane-1-carboxylic acid oxidase
AB897399 Trillium ripens ACC oxidase
AAD29198 Trillium ripens AB897398 1-aminocyclopropane-1-carboxylate oxidase/ACC oxidase
BAA94501 Populus x canadensis 1-aminocyclopropane-1-carboxylic acid oxidase
AAA19605 Vigna angularis ACC oxidase
AAT09445 Carica papaya ripening related ACC oxidase 2
Q11834 Carica papaya 1-aminocyclopropane-1-carboxylate oxidase 2
AAS20198 Carica papaya 1-aminocyclopropane-1-carboxylate oxidase
AAL78058 Carica papaya CAH64548 ripening-induced ACC oxidase 1-aminocyclopropane-1-carboxylate oxidase
AAL35971 Medicago truncatula 1-aminocyclopropane-1-carboxylic acid oxidase
AAD29197 Trillium ripens AB897397 1-aminocyclopropane-1-carboxylate oxidase
AAM74522 Psidium guajava fruit ripening-related ACC oxidase
BAA81997 Triticum fiurmet 1-aminocyclopropane-1-carboxylic acid oxidase
AAN66821 Betula pendula 1-aminocyclopropane-1-carboxylate oxidase 2
CAD21843 Fagus sylvatica ACC oxidase 1
CAD21844 Fagus sylvatica ACC oxidase 1
AAA33377 Cucumis sativus ACC oxidase
AAD57334 Cucumis sativus ACC oxidase 3
Q94644 Cucumis melo CAA60533 BAA06228 CAA64797 ACCO1_CUCME 1-aminocyclopropane-1-carboxylate oxidase 1 (ACC oxidase 1) (Ethylene-forming enzyme) (EFE) (PMEL1)/enzyme-forming ethylene /1-aminocyclopropane-1-carboxylate oxidase /ACC oxidase
AAM55754 Stellaria longipes 1-aminocyclopropane-1-carboxylic acid oxidase
AAM55753 Stellaria longipes 1-aminocyclopropane-1-carboxylic acid oxidase
AAC28802 Citrus radiata 1-aminocyclopropane-1-carboxylate oxidase homolog
BAC06460 Pyrus pyrifolia 1-aminocyclopropane-1-carboxylate oxidase
AAT03193 Cattleya intermedia AAT03194 Laelia anceps 1-aminocyclopropane-1-carboxylic acid oxidase
AAT02192 Cattleya bicolor 1-aminocyclopropane-1-carboxylate oxidase
Q93Q21 Dendrobium crumenatum AAQ55154 ACCO_DENCR 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase
Q39705 x Doritaenopsis sp. AAA97488 ACCO2_DORSP 1-aminocyclopropane-1-carboxylate oxidase 2 (ACC oxidase 2) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase
AAR05056 Phalaenopsis hybrid cultivar 1-aminocyclopropane-1-carboxylic acid oxidase
P31238 x Doritaenopsis sp. JQ2274 Phalaenopsis sp. AAA21611 x Doritaenopsis sp. ACCO1_DORSP 1-aminocyclopropane-1-carboxylate oxidase 1 (ACC oxidase 1) (Ethylene-forming enzyme) (EFE)/JQ2274 1-aminocyclopropane-1-carboxylate oxidase (EC 1.14.-.-)
CAA64656 Musa acuminata 1-aminocyclopropane-1-carboxylate oxidase
AAL40948 Saccharum officinarum 1-aminocyclopropane-1-carboxylate oxidase
AAS20956 Saccharum officinarum 1-aminocyclopropane-1-carboxylate oxidase
Q40634 Oryza sativa BAD38007 Oryza sativa (japonica cultivar-group) BAD38023 ACCO1_ORYSJ 1-aminocyclopropane-1-carboxylate oxidase 1 (ACC oxidase 1) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) /1-aminocycl
AAQ56668 Oryza sativa (japonica cultivar-group) putative 1-aminocyclopropane-1-carboxylate oxidase 1 (EC 1.14.11.-) (Ethylene-forming enzyme) (EFE)
BAD29026 Oryza sativa (japonica cultivar-group) putative 1-aminocyclopropane-1-carboxylate oxidase 1 (EC 1.14.11.-) (Ethylene-forming enzyme) (EFE)
CAA11200 Musa acuminata ACC oxidase
AAB95006 Musa acuminata AAB95007 AAD21907 CAD44264 Mangifera indica AAR06930 Musa acuminata CAE53174 AAW66542 1-aminocyclopropane-1-carboxylate oxidase /1-aminocyclopropane-1-carboxylate oxidase /putative
AAR05564 Zea mays acc oxidase
AAR05565 Zea mays acc oxidase
XP_507091 Oryza sativa (japonica cultivar-group) hypothetical protein LOC_Os01g01000 AAO05507 Oryza sativa BAD16853 Oryza sativa (japonica cultivar-group) BAD16858 PREDICTED Q10353_F08.16-1 gene product/1-aminocyclopropane-1-carboxylate oxidase /1-aminocyclopropane-1-carboxylic acid oxidase
XP_511988 Oryza sativa (japonica cultivar-group) BAB84460 BAD35051 putative 1-aminocyclopropane-1-carboxylate oxidase/putative 1-aminocyclopropane-1-carboxylic acid/ACC oxidase /putative 1-aminocyclopropane-1-carboxylic acid(ACC) oxidase
BAD61848 Oryza sativa (japonica cultivar-group) putative 1-aminocyclopropane-1-carboxylic acid oxidase
AT5G01600 = NP_179549 AAD19157 AAK44010 AAL33785 ACO11-aminocyclopropane-1-carboxylate oxidase /putative 1-aminocyclopropane-1-carboxylate oxidase /putative 1-aminocyclopropane-1-carboxylate oxidase
AAM91843 Solanum tuberosum ACC oxidase
CAG13131 Capsicum chinense 1-aminocyclopropane-1-carboxylate oxidase
CAQ22095 Lycopersicon esculentum 1-aminocyclopropane-1-carboxylic acid oxidase
AAP13398 Elaeis guineensis 1-aminocyclopropane-1-carboxylic acid oxidase
AAX06475 Manihot esculenta ACC oxidase ACCO2
AAC68448 Solanum tuberosum 1-aminocyclopropane-1-carboxylate oxidase
AAR05562 Zea mays acc oxidase
AAR05561 Zea mays acc oxidase
AAO66360 Oryza sativa (japonica cultivar-group) putative 1-aminocyclopropane-1-carboxylic acid oxidase
AAU44831 Oryza sativa (japonica cultivar-group) putative 1-aminocyclopropane-1-carboxylic acid oxidase
AAO66346 Oryza sativa (japonica cultivar-group) ABA91820 1-aminocyclopropane-1-carboxylate oxidase/1-aminocyclopropane-1-carboxylate oxidase
AAO13057 Musa acuminata 1-aminocyclopropane-1-carboxylic acid oxidase
Q9FI99 Musa acuminata AAG43056 ACCO_MUSAC 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) (Ethylene-forming enzyme) (EFE)/1-aminocyclopropane-1-carboxylate oxidase
AAN05511 Musa acuminata 1-aminocyclopropane-1-carboxylate oxidase
AAN87846 Populus tremula x Populus tremuloides 1-aminocyclopropane-1-carboxylic acid oxidase
CAD76622 Coix aretinum 1-aminocyclopropane-1-carboxylic acid oxidase
AT1G77330 = NP_565154 AAG29196 unknown protein/1-aminocyclopropane-1-carboxylate oxidase, putative
AAM65058 Arabidopsis thaliana 1-aminocyclopropane-1-carboxylate oxidase, putative
Smo_ACO2_113_1
Smo_ACO2_121_1
AAD09310 Torenia hybrida flavanone 3-hydroxylase
BAD87971 Iris x hollandica Flavanone 3-hydroxylase
CAA55028 Medicago sativa flavanone 3-hydroxylase; naringenin 3-dioxygenase
CAA74310 Medicago sativa flavanone-3-hydroxylase
AAB51366 Sinningia cardinalis flavanone 3-hydroxylase
AAO37525 Persea americana flavanone 3-hydroxylase
Q05964 Diantha caryophyllus CAA49839 CAA51190 FLSH_DIACA Naringenin,2-oxoglutarate 3-dioxygenase (Flavanone-3-hydroxylase) (F3H) (FHT)/naringenin 3-dioxygenase /naringenin,2-oxoglutarate 3-dioxygenase
BAA73308 Ipomoea batatas BAA73309 flavanone 3-hydroxylase/flavanone 3-hydroxylase
BAA75307 Ipomoea batatas flavanone 3-hydroxylase
ABA11102 Ipomoea purpurea flavanone 3-hydroxylase
BAA21887 Ipomoea nil 2-oxoglutarate 3-dioxygenase; flavanone 3-hydroxylase; naringenin
AAT72003 Lilium speciosum flavanone 3-hydroxylase
ACN26018 Glycine max flavanone 3-hydroxylase
AAU93465 Glycine max AAO60219 AAO60217 AAY85095 flavanone 3-hydroxylase/flavanone 3-hydroxylase /flavanone 3-hydroxylase /flavanone 3-hydroxylase
AAO60218 Glycine max flavanone 3-hydroxylase/flavanone 3-hydroxylase
Q93983 Callistephus chinensis CAA51191 FLSH_CALCH Naringenin,2-oxoglutarate 3-dioxygenase (Flavanone-3-hydroxylase) (F3H) (FHT)/naringenin,2-oxoglutarate 3-dioxygenase
BAD31936 Gentiana triflora BAD31807 flavanone 3-hydroxylase/flavanone 3-hydroxylase
AAS20189 Gypsophila paniculata flavanone 3-hydroxylase
AAP57394 Petroselinum crispum flavanone 3beta-hydroxylase
BAX21540 Anethum graveolens flavanone-3-beta-hydroxylase
AAX21535 Pimpinella anisum AAX21539 Ammi majus flavanone-3-beta-hydroxylase/flavanone-3-beta-hydroxylase
AAU93547 Ginkgo biloba flavanone 3-hydroxylase
XP_510523 Oryza sativa (japonica cultivar-group) BAA81862 putative anthocyanidin synthase/putative anthocyanidin synthase
CAC14568 Brassica napus naringenin 3-dioxygenase like protein
AT4G15330 = NP_567491 CAB10410 CAB78675 oxidoreductase, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors/naringenin 3-dioxygenase
AAM65506 Arabidopsis thaliana naringenin 3-dioxygenase like protein
AAM12979 Arabidopsis thaliana AAM47961 strong similarity to naringenin 3-dioxygenase/strong similarity to naringenin 3-dioxygenase
Smo_ACO2_65_1
Smo_ACO2_140_1
Smo_ACO2_118_1
Smo_ACO2_48_2
Smo_ACO2_123_2
Smo_ACO2_64_1 Smo_ACO2_97_1 Smo_ACO2_120_1 Smo_ACO2_63_1 Smo_ACO2_84_1 Smo_ACO2_39_1 Smo_ACO2_36_1 Smo_ACO2_33_1 Smo_ACO2_70_1 Smo_ACO2_62_1
Smo_ACO2_3_1
Smo_ACO2_105_1
Smo_ACO2_17_1
Ppa_ACO2_19_1
Ppa_ACO2_37_1
Ppa_ACO2_38_1
Ppa_ACO2_13_1
Smo_ACO2_94_1
AT4G10500 = NP_192798 AAM20431 CAB40043 CAB78173 AAG51160 BAD44441 BAD44674 oxidoreductase, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into
AT4G10490 = NP_192787 AAD30424 CAB40042 CAB78172 AAG51989 AAD50563 oxidoreductase, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both dono
XP_478842 Oryza sativa (japonica cultivar-group) AAO11170 OSJNBa0004A03.10/OSJNBa0004B03.10
XP_473641 Oryza sativa (japonica cultivar-group) CAD41199 OSJNBa0004A03.14/OSJNBa0064D23.14
XP_468578 Oryza sativa (japonica cultivar-group) AAN74829 Putative flavanone 3-hydroxylase/Putative flavanone 3-hydroxylase AAP54813 unknown protein/putative flavanone 3-hydroxylase /unknown protein /flavanone 3-hydroxylase, putative
AAR06235 Arabidopsis thaliana flavanone-3-hydroxylase like protein
AT5G24530 = NP_197841 BAB11202 AAK59620 AAM19017 oxidoreductase, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors/flavanone 3-hyd
Smo_ACO2_80_1
Smo_ACO2_65_1
Smo_ACO2_32_1
Smo_ACO2_68_1
Smo_ACO2_4_1
Smo_ACO2_38_1
Smo_ACO2_87_1 Smo_ACO2_133_1
Ppa_ACO2_6_1
Smo_ACO2_46_1
Smo_ACO2_134_2
Smo_ACO2_75_2
Smo_ACO2_43_2
XP_482994 Oryza sativa (japonica cultivar-group) BAD07600 BAD10270 putative flavonol synthase/putative flavonol synthase /putative flavonol synthase
XP_507007 Oryza sativa (japonica cultivar-group) XP_480774 BAD31144 BAD31205 PREDICTED P0560A06.51 gene product/putative iron deficiency protein ids3 /putative iron deficiency protein ids3
AT2G30890 = NP_181207 AAD20146 oxidoreductase, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors/putative gibberellin beta-hydroxyl
Smo_ACO2_77_1
Smo_ACO2_41_1
Smo_ACO2_5_1
Smo_ACO2_145_2
Smo_ACO2_118_1
Smo_ACO2_99_1
AT1G55290 = NP_175923 AAG51560 AAR92264 AAS76251 unknown protein/leucoanthocyanidin dioxygenase 2, putative; 51024-52213 /At1g55290 /At1g55290
AT3G13610 = NP_187970 BAB02603 AAS49108 BAD95049 oxidoreductase, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors/leucoanthocyani
AT5G43450 = NP_198158 BAA31624 AAK68810 AAT71693 unknown protein/1-aminocyclopropane-1-carboxylate oxidase-like protein /1-aminocyclopropane-1-carboxylate oxidase /1-aminocyclopropane-1-carboxylate oxidase
ATTG43440 = NP_199157 BAA97423 AAL10501 AAN28812 unknown protein/1-aminocyclopropane-1-carboxylate oxidase /ATSg43440/MWP20_15 /AtSg43440/MWP20_15
ATG4339540 = NP_200702 BAA97488 AAL11609 AAD61106 ATP binding cassette subfamily B protein/ATP-binding cassette subfamily B protein transporting ATP/pgp_ rotational mechanism /oxidoreductase flavoenzyme-like protein /ATSg39540/D315_2
AAR06235 Arabidopsis thaliana flavanone-3-hydroxylase like protein
Smo_ACO2_102_1
Smo_ACO2_102_2
Smo_ACO2_14_1
AT1G63595 = NP_680463 flavonol synthase
O04395 Matthiola incana AAB58800 FLS_MATIN Flavonol synthase/flavanone 3-hydroxylase (FLS) /putative flavonol synthase
BAB10465 Arabidopsis thaliana flavonol synthase
AT5G63590 = NP_201164 BAB10452 AAM63319 AAO34566 flavonol synthase/flavonol synthase /flavonol synthase /flavonol synthase /AtSg63590
AT5G08640 = NP_196481 Q96330 AAB17393 AAC80362 AAC80362 AAB41504 BAB10013 AAL24178 AAM64297 AAN16063 FLS /FLAVNOL SYNTHASE/EYFLS1_ARATH Flavonol synthase/flavanone 3-hydroxylase (FLS 1) /flavonol synthase /flavonol synthase /flavonol synthase /flavo
AAC83024 Allium cepa AAS59954 anthocyanidin synthase/anthocyanidin synthase
BAB21477 Torenia flavonol anthocyanidin synthase
P51092 Petunia x hybrida LDOX_PETHY Leucoanthocyanidin dioxygenase (LDOX) (Leucocyanidin oxygenase) (Leucoanthocyanidin hydrolase)
AAL92744 Vitis vinifera anthocyanidin synthase
AAP53029 Ipomoea alba AAP83200 ipomoea purpurea anthocyanidin synthase/anthocyanidin synthase
AAB80408 Ipomoea purpurea BAB71606 ipomoea nil BAB71827 BAB71809 BAB71811 AAP83229 ipomoea hederacea anthocyanidin synthase/anthocyanidin synthase /anthocyanidin synthase /anthocyanidin synthase /anthocyanidin synthase
BAA75393 Ipomoea batatas BAA75306 anthocyanidin synthase/anthocyanidin synthase
AAC31091 Malus x domestica CAA50498 Malus sp. AAD50205 Malus x domestica BAB92998 ABD04052 LDOX_MALDO Leucoanthocyanidin dioxygenase (LDOX) (Leucocyanidin oxygenase) (Leucoanthocyanidin hydrolase) (Anthocyanidin synthase)/anthocyanidin hydroxy
AAZ75974 Malus x domestica anthocyanidin synthase
AAU12368 Fragaria x ananassa AAU12369 anthocyanidin synthase/anthocyanidin synthase
AAR06526 Glycine max AAR06527 anthocyanidin synthase 2/anthocyanidin synthase 3
AAR06525 Glycine max anthocyanidin synthase
AAY15744 Gerbera hybrid cultivar anthocyanidin synthase
AAY15745 Gerbera hybrid cultivar anthocyanidin synthase
BAY15745 Gerbera hybrid cultivar anthocyanidin synthase
AAD56581 Daucus carota leucoanthocyanidin dioxygenase 2
AAD56580 Daucus carota leucoanthocyanidin dioxygenase 1
AAD22937 Matthiola incana anthocyanidin synthase
AAL69299 Arabidopsis thaliana leucocyanidin dioxygenase
CAA91994 Arabidopsis thaliana leucocyanidin dioxygenase
AT4G22880 = NP_001031750 NP_194019 1GPS 1GPN Q96329 AAB09572 CAA19803 CAB79243 AAM65745 BAC75818 BAC75819 LDOX (TANNIN DEFICIENT SEED 4)/LDOX (TANN DEFICIENT SEED 4) /A Chain A, Anthocyanidin Synthase From Arabidopsis Thaliana Complexed With Trans
AAS48200 Saussurea medusa anthocyanidin synthase
BAD34462 Eustoma grandiflorum leucoanthocyanidin dioxygenase
BAE54920 Spinacia oleracea anthocyanidin synthase
O04274 Perilla frutescens BAA20143 LDOX_PERFR Leucoanthocyanidin dioxygenase (LDOX) (Leucocyanidin oxygenase) (Leucoanthocyanidin hydrolase)/leucoanthocyanidin dioxygenase
BAC07545 Vitis labrusca x Vitis vinifera leucoanthocyanidin dioxygenase
AAB39993 Dianthus caryophyllus anthocyanidin synthase
AAF13054 Gypsophila elegans anthocyanidin synthase
BAE54521 Phytolacca americana anthocyanidin synthase
AAB66060 Callistephus chinensis anthocyanidin synthase
AAT03642 Citrus sinensis anthocyanidin synthase
BAD34463 Eustoma grandiflorum gibberellin 3-hydroxylase 1
BAE75810 Vitis vinifera flavonol synthase
AT1G76810 = NP_567568 Oryza sativa (japonica cultivar-group) BAD17324 putative flavonol synthase/putative flavonol synthase
BAC06468 Rosa hybrid cultivar Xanthine flavonol synthase
Q90HQ2 Malus x domestica AAD52621 AAS89401 FLS_MALDO Flavonol synthase/flavanone 3-hydroxylase (FLS)/flavonol synthase /flavonol synthase
Q9ZWQ9 Citrus unshiu BAA36054 FLS_CITUN Flavonol synthase/flavanone 3-hydroxylase (FLS) (CitFLS) /flavonol synthase
AAT69476 Allium cepa flavonol synthase
AAO63923 Allium cepa flavonol synthase
BAE75807 Vitis vinifera flavonol synthase
BAE75809 Vitis vinifera flavonol synthase
BAE75808 Vitis vinifera flavonol synthase
AB553382 Ankistrum majus flavonol synthase
AAP67395 Petroselinum crispum flavonol synthase
Q07512 Petunia x hybrida CAA80354 FLS_PETHY Flavonol synthase/flavanone 3-hydroxylase (FLS)/flavonol synthase
BAC10995 Nierembergia sp. NB17 flavonol synthase
BAD34464 Eustoma grandiflorum flavonol synthase
BAE75668 Vitis vinifera flavonol synthase
Smo_ACO2_67_1 Smo_ACO2_72_1
AAS55314 Oryza sativa (japonica cultivar-group) ABA93323 leucoanthocyanidin dioxygenase-like protein/AY085111 leucoanthocyanidin dioxygenase-like protein
NP_913344 Oryza sativa (japonica cultivar-group) BAD13770 leucoanthocyanidin dioxygenase-like protein/putative anthocyanidin synthase
NP_470586 Oryza sativa (japonica cultivar-group) AAO65998 putative leucoanthocyanidin dioxygenase (EC 1.14.11.-) /putative leucoanthocyanidin dioxygenase
AT2G38240 = NP_181359 AAC27173 AAL32721 AAM13301 AAM63604 unknown protein/putative anthocyanidin synthase /putative anthocyanidin synthase /putative anthocyanidin synthase
AT3G55970 = NP_191150 CAB79781 AAM14162 AAM64080 oxidoreductase, acting on paired donors, with incorporation or reduction of molecular oxygen, 2-oxoglutarate as one donor, and incorporation of one atom each of oxygen into both donors/putative gibberellin beta-hydroxyl
AAM61665 Arabidopsis thaliana leucoanthocyanidin dioxygenase-like protein
AT5G05600 = NP_196179 BAB11549 AAA32097 AAM61495 iron ion binding/isopenicillin-N synthase /leucoanthocyanidin dioxygenase-like protein /AT5g05600/MOP10_14 /AT5g05600/MOP10_14
AT5G11190 = NP_197728 AAF01507 AAQ50960 iron ion binding/isopenicillin-N synthase /putative leucoanthocyanidin dioxygenase /leucoanthocyanidin dioxygenase, putative; 41415-43854
Smo_ACO2_30_1
Smo_ACO2_121_1
Smo_ACO2_82_1
Smo_ACO2_120_1
XP_466860 Oryza sativa (japonica cultivar-group) AAR89005 putative oxidoreductase/putative oxidoreductase
AAD29056 Oryza sativa (japonica cultivar-group) iron/ascorbate-dependent oxidoreductase-like
BAD29052 Oryza sativa (japonica cultivar-group) leucoanthocyanidin dioxygenase-like
XP_470470 Oryza sativa (japonica cultivar-group) AAS01972 putative carbapenem biosynthesis/putative carbapenem biosynthesis
NP_922712 Oryza sativa (japonica cultivar-group) AAL79802 AAP54999 putative ethylene-forming enzyme/putative ethylene-forming enzyme /ethylene-forming enzyme, putative
NP_908607 Oryza sativa (japonica cultivar-group) BAB89620 BAD53094 P0463A06.28 putative isopenicillin-N synthase-like dioxygenase-like dependent oxidoreductase
BAD53300 Oryza sativa (japonica cultivar-group) putative ethylene-forming enzyme
XP_502704 Oryza sativa (japonica cultivar-group) AAL79798 AAP54991 AAB47979 putative ethylene-forming enzyme/putative ethylene-forming enzyme /ethylene-forming enzyme, putative /ethylene-forming enzyme, putative
NP_922703 Oryza sativa (japonica cultivar-group) AAK55454 AAL79801 AAP54990 putative ethylene-forming enzyme/putative dioxygenase /putative ethylene-forming enzyme /dioxygenase, putative
NP_922709 Oryza sativa (japonica cultivar-group) AAL79797 AAP54993 putative ethylene-forming enzyme/putative ethylene-forming enzyme /ethylene-forming enzyme, putative
NP_922700 Oryza sativa (japonica cultivar-group) AAK55463 AAP54987 putative dioxygenase/putative dioxygenase /dioxygenase, putative
NP_922699 Oryza sativa (japonica cultivar-group) AAK55464 AAP54985 putative dioxygenase/putative dioxygenase /dio