

>*Ginkgo biloba* evm.model.chr8.380

MAASAMTASYQSLHFCLQSKNMA SPECILKSFSLPCSRFNGVSTSLGASNGQYMGFRGHL
RKGLSSRGVMSSGSLNTVAQLVSEAETVKEKKDFEFDFKMYMSKAISVNEALDKAVPT
HYPEKIHESMRYSLLAGGKRVRPALCIAACELVGGTEDLAMPAACAMEMIHTMTLIHDDL
PCMDNDNLRRGKPTNHKAFGEDTAVLAGDALLSFAFEHIARSTSKTVESERVLRVICELGK
SIGSEGLVAGQIVDIASEGDTSDVLDKLTLEYIHLHKTAVLLECSVVSgaiGGASEEEIERTRY
ARCVGLLFQVVDILDVTKTSEELGKTAGKDLISDKATYPKLMGLEKAKEFAVELVNKAK
EELSYFDPVKAAPLLGLADYIAFRQN

>*Picea abies* ACA21461.1

MAYSGMAASYHGLHFMTIATQECSLKRGSISSRRFHGVPTSLWSSNGFQGHKLRQLSAYT
FLVSSSRCSSTIAQLANLREEVKEVIKDFDFKEYLLSKAMAVNEALDRAVQLRYPEKIHEAM
RYSLLAGGKRVRPVLCAACELVGGTEKLAMPTACAMEMIHTMSLIHDDLPCMDNDDFR
RGKPTNHKVFGEGETAVLAGDALLSFAFEHIAVSTSKSVGSDRILRVVSELGRTIGSQGLVGG
QVADITSEGNASVDLDTLEWIIHKTA V LLECSVVCgaiISGASENEIERVKRYARSVGLLF
QVVDILDVTKSSKELGKTAGKDLISDKATYPKLMGLEKAKQFAVELLDRAKENLSCFDP
MKAAPLLGLADYIAFRQN

>*Abies grandis* AAL17614.2

MAYSGMATSYHGLHFMTIATQECNLKRLSIPSRRFHGVSPSLWASNGFQGHKRELSANS
FLVSSSRYSNTIAKFTNLPEKVKEKVIEFDFKEYLRSKAMAVNEALDRAVPLRYPERIHEA
MRYSLLAGGKRVRPVLCAACELVGGTEEVAMPTACAMEMIHTMSLIHDDLPCMDNDDF
RRGKPTNHKVFGEGETAILAGDALLSFAFEHIAVSTSKSVGTDRILRVVSELGRTIGSQGLVG
GQVADITSEGDASVDLDTLEWIIHKTA V LLECSVMCGaiISGASDNEIERIQRYARSVGLL
FQVVDILDVTKSSKELGKTAGKDLISDKATYPKLMGLEKAKQFASDLLIRAKEDLSCFDP
MKAAPLLGLADYIAFRQN

>*Picea glauca* AHE15048.1

MAYSSMAPSCHLHFMTNIVSQECNLKRVSIQSRFRGLSTSLWSSGGFQGHKRELSAYR
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AMRYSLLAGGKRVRPILCAACELVGGSEELAMPTACAMEIHTMSLIHDDLPPMDNDDL
RGKPTNHKVFGEGETAVLAGDALLSFAFEHIAVSTSKTVESDRVLRVSELGRAIGSEG VAG
GQVADITSQGNPSVGLETLEWIIHKTA V LLECSVASgaiIGGASEDEIERVRKYARCVGLL
FQVVDILDVTKSSEELGKTA AKDLLSDKATYPKLMGLEKAKEFADEL LGKAKEEL SFFN
PTKAAPLLGLADYIAQRQN

>*Abies grandis* AAN01133.1

MAYSCMAASCHGLHFMTIASQECNLKRGIIPSKRLHGISSSLWASNGFQGHLELDLSAYR
HLVSSSRCLNTIAMLSNLSEQAKEKATEFDFKEYLHASKAISVNEALERAVPLRYPEKIHEA
MRYSLLAGGKRIRPILTIAACELVGGSEELAMPTACAMEMIHTMSLIHDDLPSMDNDDL
RGKLTNHKVFGEGETAVLAGDALLSFAFEHIAVSTRKTVASHRVLRVSELGKAIGSQGVAG
GQVADITSEGDPSVGLETLEWIIHKTA V LLECAVVSgaiIGGASENEIERTGRYARCVGLLF
QVVDILDVTRSSEELGKTAGKDLVSDKATYPKLMGLEKAKEFADEL LDRAKEEL SCFNP
AKAAPLLGLADYIALRQN

>*Taxus canadensis* AAD16018.1

MAYTAMAAGTQSLQLRTVASYQECNSMRSCFKLTPFKSFHGVNFNVPSLGAANCEIMGH

LKLGSLPYKQCSVSSKSTKTMAQLVDLAETEKAEKGDIEFDNFNEYMKS KAVAVDAALDK
AIPLEYPEKIHESMRYSLLAGGKRVRPALCIAACELVGGSQDLAMPTACAMEMIHTMSLIH
DDLPCMDNDDFRRGKPTNHKVFGEDEVAVLAGDALLSFAFEHIAVATSKTVPSDRTL RVISE
LGKTIGSQGLVGGQVVDITSEGDANVDLKTLEWIIHK TAVLLECSVVSGGILGGATEDEI
ARIRRYARCVGLLFQVVDILDVTKSSEELGKTAGKDLLTDKATYPKLMGLEKAKEFAAE
LATRAKEELSSFDQIKAAPLLGLADYIAFRQN

>*Taxus x media* WID94116.1

MAYTAMAAGTQSMQLRTVASYQECNSMRSCFKLTPFKSFHGVNFNPSLGAANCEIMGH
LKLGSLPYKQCSVSSRSTKTMAQLVDLAETEKAEKGDIEFDNFNEYMKS KAVAVDAALDK
AIPLEYPEKIHESMRYSLLAGGKRVRPALCIAACELVGGSQDLAMPTACAMEMIHTMSLIH
DDLPCMDNDDFRRGKPTNHKVFGEDEVAVLAGDALLSFAFEHIAVATSKTVPSDRTL RVISE
LGKTIGSQGLVGGQVVDITSEGDANVDLKTLEWIIHK TAVLLECSVVSGGILGGATEDEI
ARIRRYARCVGLLFQVVDILDVTKSSEELGKTAGKDLLTDKATYPKLMGLEKAKEFAAE
LATRAKEELSSFDQIKAAPLLGLADYIAFRQN

>*Arabidopsis thaliana* AT4G36810.1

MASVTLGSWIVVHHNHHHPSSILTKSRSRSCPITLTKPISFRSKRTVSSSSSIVSSSVVTKED
NLRQSEPFDFMSYITKAELVNKALDSAVPLREPLKIHEAMRYSLLAGGKRVRPVLCIAA
CELVGGEESTAMPAACAVEMIHTMSLIHDDLPCMDNDDLRRGKPTNHKVFGEDEVAVLAG
DALLSFAFEHLASATSSDVVSPVRVVRVAVGELAKAIGTEGLVAGQVVDISSEGLDLNDVGL
EHLEFIHLHKTAALLEASAVLGAIVGGGSDDEIERLRKFARCIGLLFQVVDILDVTKSKE
LGKTAGKDLIADKLTYPKIMGLEKSREFAEKL NREARDQLLGFDSK VAPLLALANYIAY
RQN

>*Herrania umbratica* XP_021274730.1

MTSVNLGSWVQSYSIFNQASRSKSLPLRSFPFNPLKNLSSSTPKKRSFTSLTSSISAVLTKE
TIKDEEQDPPKPSDFKSYMVQKASTVNQALDSAVSLRDPVKIHEAMRYSLLAGGKRVRP
ALCLAACELVGGQESMAMPAACAVEMIHTMSLIHDDLPCMDNDDLRRGKPTNHKVFGE
DIAVLAGDALLAFAFEHVAVSTVGVTPGRVVKAVGELAKAIGTEGLVAGQVVDINSEGLTD
VGLDHLEFIHVHKTAALLEAAVVLGAILGGGCDDEDVEKLRKFARNIGLLFQVVDILDVT
KSSKELGKTAGKDLVADKV TYPKLMGIEKSREFAEKLKSDALES LQGFDPKAAPLVALA
NYIAYRQN

>*Arachis hypogaea* XP_025633198.1

MSSVNLNTSFLFHQGSRSRPTFHLFHTLTKLPISSTTKKPQKGNRFFPFPSFSVSAVLTKE
DVLKGDENK DSEKPAFNFKSYMVS RATTVNQALNDAVSLREPQKIHEAMRYSLLAGGK
RVRPVLCIAACELVGGSEAMAMPAACAIEMIHTMSLIHDDLPCMDNDDLRRGMPTNHKV
FGEDVAVLAGDALLAFAFEHMAVDTAKAGVPPARIVRALGELSKAIGAEGLVAGQVVDIA
SEGIADVGLEKLEFIHVHKTAALLEGAVVLGAILGGGSDDEVERLRKFARCIGLLFQVVD
ILDVTKSSEELGKTAGKDLVADKV TYPKLLGLEKSREFADELNKDAQAQLAAFDPKAAP
LVSLANYIAYRQN

>*Cinnamomum camphora* ATT59265.1

MAAFALIPQSCFIFNPANGSKPSICSMFNQLRRGDAIPISHFPQSVSPLVSSVRPFSRTCFSAT
HLAKETVKEEEKTPDAPKVLDPISGFDFKSYMLQKANSVNQALDRAVSLKDPKKIHEAM
RYSLLAGGKRVRPVLCVASCELVGGDEATAMPAACAIEMIHTMSLIHDDLPCMDNDDLRR
GKPTNHKVFGEDEVAVLAGDALLAFAFEHIAAATVGVPPARILRAISELAKAVGSEGLVAGQ
VVDLSSEGLQDVGLEQLEFIHVHK TAVLLEGSVVVGAILGGGSDDEVERLRKFARCIGLLF

QVDDILDVTKSSQELGKTAGKDLVADKVTYPKLLGLEKSREFAEELNKQAKEQLLGFDL
EKAMPLISLANYIAYRQN

>*Glycine max* XP_003518201.1

MEFTLPNLPILMDSTSPMNDEPTLPSNSSFTFLVSVVPTKEHIVTTKEIQLQDVTVLNFNFK
GYMIAKAHTVNQALDATALRDPHKIHEAMRYSLLAGGKRVCPLCITTCELVGGTEATA
IPAACTVEMIHTMSLIHDNLPCMENDDLREKPTKHDVAVLTGDVLLAFAFEHVAASTEGV
SLSPVVRAIEELAKSVGTEGIAFISRRSFGYPFSLNQMISLQGSVLVGSISYGKLLLAGQMD
RKYPEKHLVWYRVSCIIPQNKVDKDKREKSSSSSKKTVSECIEEKYFVGLDLSIRRWLCS
LSENDDMIVFFKAMIVLAEIESLKVRLYQKGLALAEIESLKNLEEFWFCYCVRKSKDL
QNIYAQLLPLALPAPPMGGLGMPPMPF

>*Malus domestica* AHA61556.1

MSCMNLSSWVQFQTCMNLQAGRSRSSQSFHLLHPLKTTIPTSSAAPHRRRPTSPFAVSAV
LTKQETLTEEFDEESRKPTFNFKSYMLQRAESVNQALDAAVSLRDPITHEAMRYSLLAGG
KRVRPVLCLAAACELVGGSESMAMPAACAVEMIHTMSLIHDDLPCMDNDDLRRGKPTNHK
VFGEDVAVLAGDALLAFAFEHISLSTVGVSPARIVRAVGELAKSIGSEGLVAGQVDDIDSEG
LSDVGLQLEYIHLHKTAAALLECSVVLGSGILGGSDSEIEKLRTFARYIGLLFQVDDILDV
TKSSQELGKTAGKDLVADKVTYPKLLGIEKSREFAEKLNKDAKEQLAGFDPEKAAPIAL
ANYIAYRQN

>*Manihot esculenta* XP_021630878.1

MSSVNLGSWVHTSSVLNQATRSRSRSKSFSLPFNPLKSLAIPFVYRKSERPISSVSAITKEE
ETLQEEQNNSTPSDFKSYMLQKANSINQALEAAVSLREPAKIHESMRYSLLAGGKRVRPA
LCLAAACELVGGNDSMAMPAACAVEMIHTMSLIHDDLPCMDNDDLRRGKPTNHIVFGEDV
AVLAGDALLAFAFEHIAVSTLNVSPARIVRAVGELAKAIGAEGLVAGQVDDISSEGLSEVGL
EKLEFIHVHKTAKLLEGAVVLGAILGGGTDEEVEKLRKYARGIGLLFQVDDILDVTKSSQ
ELGKTAGKDLVADKVTYPKLLGIEKSKEFAEKLNKEAQEQLAEFDPEKAAPIALANYIAY
RQN

>*Vitis vinifera* XP_002273789.1

MNTVNLGTWVHTSYVFNHGGRLKSPVLSRMLHPLKNPSFPMLSQRSGRPMSLVAVLTKE
EMVRGGDTPEEEKPAFNFNAYILDKANSVNKALDDAVPIREPVKVHESMRYSLLAGGKRV
RPVLCIAACELVGGDEATAMPAACAVEMIHTMSLMHDDLPCMDNDDLRRGKPTNHKVF
GENVAILAGDALLAFAFEHMATATVGVPPGWIVRAVGELAKSIGSEGLVAGQVDDICSEGL
KDVGLEHLEYIHVHKTAAALLEGAVVLGAILGGGSNEEIEKLRKFARCIGLLFQVDDILDV
TKSSQELGKTAGKDLVADKLTYPKLLGIEKSRELAEQNLKDAKDQLSGFDPDKAAPIALS
NYIAYRQN

Fig. S3. The GGPPS protein sequence in different plant