BIN2 related (**AT1G06390**): global tree
File name: BIN2related.njtree0.svg
268 aa residues 153 OTU included.
Results of 2 partial trees included.
Assemble Job Id:CXbVAI (selectNalign=250->szgFCi)
Tree job id: XbbqZa
BP values out of 100
Analyzed by hiwatash@nibb.ac.jp
Date: Wed Jun 07 16:55:02 JST 2006

AT1G06390
AT2G30980
AT4G18710 **BIN2**

Q39077 CAA68027 AAB71545 AAF82167 AAK59553 AAK93730 GSK1 (GSK3/SHAGGY-LIKE PROTEIN KINASE 1); kinase /GSK1 (GSK3/SHAGGY-LIKE PROTEIN KINASE 1); kinase /KSG9_ARATH Shaggy-related protein kinase iota (ASK-iota) /shaggy-
AAM65064 *Arabidopsis thaliana* putative shaggy-like protein kinase dzeta
AAM19796 AAM20332 ATP binding/kinase/protein kinase/protein serine/threonine kinase/protein-tyrosine kinase /putative shaggy-like protein kinase dzeta /putative shaggy protein kinase dzeta /At2g30980/F7F1.19 /
Q39077 CAA64408 CAA70483 KSG6_ARATH Shaggy-related protein kinase dzeta (ASK-dzeta)/shaggy-like kinase dzeta /serine/threonine kinase
Q39077 CAA78873 AAL77705 AAM63594 AAN71719 (BRASSINOSTEROID-INSENSITIVE 2); kinase/KSG7_ARATH Shaggy-related protein kinase eta (ASK-eta) (BRASSINOSTEROID-INSENSITIVE 2) (ULTRACURVATA1)/shaggy-like protein kinase
CAA64409 *Arabidopsis thaliana* CAA70144 shaggy-like kinase etha/shaggy-like kinase etha
BAD54124 *Oryza sativa* (japonica cultivar-group) shaggy-like kinase etha
~~CAA73848 *Oryza sativa* (japonica cultivar-group) shaggy-like kinase etha (OSKetha)~~
BAD27595 *Oryza sativa* (japonica cultivar-group) putative Shaggy-related protein kinase dzeta (ASK-dzeta)
NP_913231 *Oryza sativa* (japonica cultivar-group) BAA92966 unnamed protein product/putative shaggy-like kinase dzeta
AAU90187 *Oryza sativa* (japonica cultivar-group) putative shaggy-related protein kinase
NP_908533 *Oryza sativa* (japonica cultivar-group) BAB55743 putative shaggy-related protein kinase/putative protein kinase
AAM77397 *Triticum aestivum* GSK-like kinase
AAT85177 *Oryza sativa* (japonica cultivar-group) putative glycogen synthase kinase
~~AAT94043 *Oryza sativa* (japonica cultivar-group) putative glycogen synthase kinase~~
P51138 *Medicago sativa* CAA48473 MSK2_MEDSA Glycogen synthase kinase-3 homolog MsK-2/protein kinase
P51139 *Medicago sativa* S37642 CAA48472 MSK3_MEDSA Glycogen synthase kinase-3 homolog MsK-3/S37642 protein kinase MSK-3 (EC 2.7.1.-) /protein kinase
NP_912753 *Oryza sativa* (japonica cultivar-group) BAA92214 BAB40983 unnamed protein product/putative protein kinase /shaggy-related protein kinase gamma
2106142A *Nicotiana tabacum* Q40518 CAA54803 2106142A Ser/Thr protein kinase/MSK1_TOBAC Shaggy-related protein kinase NtK-1 /shaggy like protein kinase
ABB55385 *Solanum tuberosum* ABB87119 Ser/Thr protein kinase-like /NtK-1-like
CAA67554 *Trifolium repens* protein kinase
P51137 *Medicago sativa* CAA48474 MSK1_MEDSA Glycogen synthase kinase-3 homolog MsK-1/protein kinase
BAD95892 *Lotus japonicus* Ser/Thr protein kinase
CAA53181 *Arabidopsis thaliana* CAA48538 CAA04265 shaggy related kinase/serine /threonine protein kinase /shaggy-like kinase alpha
AT5G26751 = NP_568486 P43288 T01756 AAB61055 AAK76698 AAL16257 AAN13164 ATSK11; protein kinase/KSG1_ARATH Shaggy-related protein kinase alpha (ASK-alpha)/T01756 hypothetical protein A_IG002P16.21 - Arabidopsis thaliana/Similar to shaggy related prot
AT3G05840 = NP_187235 NP_850520 P43289 CAA53180 CAA73247 AAF26086 AAL32791 AAM13346 AAM62970 ATSK12; protein kinase/ATSK12; protein kinase /KSG3_ARATH Shaggy-related protein kinase gamma (ASK-gamma)/ASK-gamma (Arabidopsis shaggy-related kinase) /sha
~~CAA72291 *Oryza sativa* (japonica cultivar-group)~~ **AT5G14640 = NP_196968 Q8VZD5 CAB87631 AAL57679 AAQ65089 ATP binding/protein kinase/protein serine/threonine kinase/protein-tyrosine kinase /KSG5_ARATH Shaggy-related protein kinase epsilon (ASK-epsilon)/protein kinase MSK-3-like /AT5g14640/T15N1_130**
NP_922386 *Oryza sativa* (japonica cultivar-group) AAM92301 AAP54673 putative shaggy-like kinase/putative shaggy-like kinase /shaggy-like kinase, putative
CAC08564 *Medicago sativa subsp.* x *varia* wound-induced GSK-3-like protein
BAD95891 *Lotus japonicus* Ser/Thr protein kinase
AT3G61160 = NP_974471 NP_191675 O23145 CAA05292 CAB71046 CAA11903 ATP binding/protein kinase/protein serine/threonine kinase/protein-tyrosine kinase /ATP binding /protein kinase/protein serine/threonine kinase/protein-tyrosine kinase /KSG2_ARATH Sha
O04160 *Brassica napus* CAA73214 KSGT_BRANA Shaggy-related protein kinase theta (ASK-theta)/shaggy-like protein kinase tetha
AT4G00720 = NP_191981 Q96287 CAA69156 AAC13616 CAB80881 AAL32976 AAM70590 ATP binding/kinase/protein kinase/protein serine/threonine kinase/protein-tyrosine kinase /KSG8_ARATH Shaggy-related protein kinase theta (ASK-theta)/Shaggy-like kinase tetha
CAA05328 *Nicotiana tabacum* shaggy-like kinase 111
CAA11862 *Petunia* x *hybrida* shaggy kinase 7
CAA05329 *Nicotiana tabacum* shaggy-like kinase 59
CAA58595 *Petunia* x *hybrida* Petunia Shaggy kinase 6
CAA11861 *Petunia* x *hybrida* shaggy kinase 6
AAT81407 *Lycopersicon peruvianum* shaggy-related protein kinase 6
CAA11860 *Nicotiana tabacum* shaggy-like kinase 91
CAA69899 *Nicotiana tabacum* NSK6; Shaggy-like kinase 6
Ppa_GSK1_9_1
Ppa_GSK1_30_1 AAQ23110 *Physcomitrella patens* shaggy-related protein kinase 5
Ppa_GSK1_23_1 AAQ23109 *Physcomitrella patens* shaggy-related protein kinase 4
Ppa_GSK1_21_1 AAQ23108 *Physcomitrella patens* AAQ23113 shaggy-related protein kinase 3/shaggy-related protein kinase 3
Ppa_GSK1_2_1 AAQ23106 *Physcomitrella patens* AAQ23111 shaggy-related protein kinase 1/shaggy-related protein kinase 1
Ppa_GSK1_39_1 AAQ23107 *Physcomitrella patens* AAQ23112 shaggy-related protein kinase 2/shaggy-related protein kinase 2
Smo_GSK1_1_1
Smo_GSK1_88_1
Smo_GSK1_24_2 Smo_GSK1_11_2
CAA55866 *Arabidopsis thaliana* CAA68872 K-1/shaggy-like kinase kappa
AT1G09840 = NP_973801 NP_172455 NP_001031013 NP_849627 Q39019 F86232 AAB60754 AAM12986 AAN15451 ATP binding/protein kinase/protein serine/threonine kinase/protein-tyrosine kinase /ATP binding /protein kinase/protein serine/threonine kinase/protein-t
AT1G57870 = NP_176096 Q9FVS6 AAG29234 AAG50665 AAN72029 AAP68300 ATP binding/protein kinase/protein serine/threonine kinase/protein-tyrosine kinase /KSG4_ARATH Shaggy-related protein kinase delta (ASK-delta)/protein kinase, putative /glycogen syntha
AAN63591 *Medicago sativa* GSK-3-like protein MsK4
AAU43771 *Zea mays* putative salt-inducible protein kinase
AAT77026 *Oryza sativa* (japonica cultivar-group) putative protein kinase
Ppa_GSK1_51_1
2467_Cre AAT40314 *Chlamydomonas reinhardtii* glycogen synthase kinase 3
AAO14684 *Pyrocystis lunula* shaggy-like kinase
gnl|CMER|CMO218C_shaggy_protein_kinase
NP_733426 *Drosophila melanogaster* P83101 AAN14270 AAN71093 gasket CG31003-PA/GSK3H_DROME Putative glycogen synthase kinase-3 homolog (GSK-3) (Protein gasket) /CG31003-PA /AT21229p
EAL27079 *Drosophila pseudoobscura* GA15928-PA
CAE63499 *Caenorhabditis briggsae* Hypothetical protein CBG07972
NP_493243 *Caenorhabditis elegans* CAA22311 AAD45354 Glycogen Synthase Kinase family member (gsk-3)/Hypothetical protein Y18D10A.5 /GSK-3
CAH04890 *Suberites domuncula* glycogen synthase kinase 3
AAG13665 *Hydra vulgaris* serine/threonine kinase GSK3
BAD93244 *Dugesia japonica* glycogen synthase kinase 3
XP_392504 *Apis mellifera* PREDICTED: similar to CG2621-PA, isoform A
XP_313732 *Anopheles gambiae str. PEST* EAA09210 ENSANGP00000017061/ENSANGP00000017061
CAA50212 *Drosophila melanogaster* protein kinase; sgg protein kinase
CAA37419 *Drosophila melanogaster* sgg protein kinase
NP_476716 *Drosophila melanogaster* NP_996335 NP_996337 NP_996336 NP_726822 NP_476714 NP_476715 NP_996338 NP_599105 NP_726823 1611405B *Drosophila* sp. P18431 *Drosophila melanogaster* S10932 S35423 CAA37952 CAA50213 CAA50214 CAA19676 CAB65860 CAB72296
AAT42372 *Lytechinus variegatus* glycogen synthase kinase-3
XP_801759 *Strongylocentrotus purpuratus* PREDICTED: similar to glycogen synthase kinase 3 beta isoform 2
XP_779899 *Strongylocentrotus purpuratus* XP_801836 PREDICTED: similar to glycogen synthase kinase 3 beta isoform 1/PREDICTED: similar to glycogen synthase kinase 3 beta isoform 3
CAA10901 *Paracentrotus lividus* GSK3 beta
NP_001026837 *Mus musculus* glycogen synthase kinase 3 alpha
NP_059040 *Rattus norvegicus* P18265 CAA37518 glycogen synthase kinase 3 alpha/GSK3A_RAT Glycogen synthase kinase-3 alpha (GSK-3 alpha) (Factor A) (FA)/unnamed protein product
XP_541590 *Canis familiaris* XP_852706 PREDICTED: similar to Glycogen synthase kinase-3 alpha (GSK-3 alpha) isoform 1/PREDICTED: similar to Glycogen synthase kinase-3 alpha (GSK-3 alpha) isoform 2
NP_063937 *Homo sapiens* P49840 AAA62432 BAA23608 AAD11986 AAH27984 AAH51865 CAH18414 BAE89209*Macaca fascicularis* glycogen synthase kinase 3 alpha/GSK3A_HUMAN Glycogen synthase kinase-3 alpha (GSK-3 alpha) /glycogen synthase kinase 3/glycogen syntha
XP_616695 *Bos taurus* PREDICTED: similar to Glycogen synthase kinase-3 alpha (GSK-3 alpha) isoform 1
XP_688675 *Danio rerio* PREDICTED: similar to glycogen synthase kinase 3 alpha, partial
CAF96416 *Tetraodon nigroviridis* unnamed protein product
NP_571465 *Danio rerio* CAA11419 AAH56332 AAH65952 glycogen synthase kinase 3 alpha/glycogen synthase kinase 3 alpha /Glycogen synthase kinase 3 alpha /Glycogen synthase kinase 3 alpha
NP_001027597 *Ciona intestinalis* BAA92186 BAE06824 glycogen synthase kinase alpha/beta /glycogen synthase kinase /glycogen synthase kinase alpha/beta
AAA84444 *Xenopus laevis* glycogen synthase kinase 3 beta
AAC42224 *Xenopus laevis* AAI08582 intracellular kinase/Xgsk-3 protein
XP_416557 *Gallus gallus* PREDICTED: similar to glycogen synthase kinase 3 beta
P18266 *Rattus norvegicus* CAA37519 GSK3B_RAT Glycogen synthase kinase-3 beta (GSK-3 beta) (Factor A) (FA)/unnamed protein product
1H8F *Homo sapiens* 1H8F B Chain B, Glycogen Synthase Kinase 3 Beta./A Chain A, Glycogen Synthase Kinase 3 Beta
1UV5 *Homo sapiens* A Chain A, Glycogen Synthase Kinase 3 Beta Complexed With 6-Bromoindirubin-3'-Oxime
AAS59774 *Spermophilus citellus* glycogen synthase kinase 3 beta
XP_856691 *Canis familiaris* XP_878154 *Bos taurus* NP_114469 *Rattus norvegicus* NP_002084 *Homo sapiens* XP_614643 *Bos taurus* XP_869573 XP_878051 XP_535751 *Canis familiaris* XP_856731 XP_878453 *Bos taurus* NP_062801 *Mus musculus* XP_878253 *Bos t*
CAG05862 *Tetraodon nigroviridis* unnamed protein product
NP_571456 *Danio rerio* CAA11420 BAA92442 glycogen synthase kinase 3 beta/glycogen synthase kinase 3 /glycogen synthase kinase 3 beta
XP_856814 *Canis familiaris* PREDICTED: similar to Glycogen synthase kinase-3 beta (GSK-3 beta) isoform 6
NP_010204 *Saccharomyces cerevisiae* P50873 AAA74429 CAA98645 Glycogen synthase kinase 3 (GSK-3) homolog; one of four GSK-3 homologs in S. cerevisiae that function to activate Msn2p-dependent transcription of stress responsive genes and that function i
CAA61157 *Kluyveromyces lactis* protein kinase
NP_455844 *Kluyveromyces lactis NRRL Y-1140* CAG98552 unnamed protein product/unnamed protein product
NP_984349 *Eremothecium gossypii* AAS52173 *Ashbya gossypii ATCC 10895* ADR253Wp/ADR253Wp
AAA16206 *Saccharomyces cerevisiae* protein-serine kinase
NP_013859 *Saccharomyces cerevisiae* P38615 AAC48917 AAB04166 CAA87353 AAS56320 Protein kinase required for signal transduction during entry into meiosis; promotes the formation of the Ime1p-Ume6p complex by phosphorylating Ime1p and Ume6p; shares simi
XP_449073 *Candida glabrata CBS 138* CAG62043 unnamed protein product/unnamed protein product
XP_460743 *Debaryomyces hansenii CBS767* CAG89083 hypothetical protein DEHA0F09647g/unnamed protein product
XP_710126 *Candida albicans SC5314* EAK90854 putative protein kinase/likely protein kinase
T45138 *Schizosaccharomyces pombe* AAB51081 T45138 protein kinase skp1/protein kinase
NP_593134 *Schizosaccharomyces pombe 972h-* Q10452 *Schizosaccharomyces pombe* CAA22609 hypothetical protein SPAC1687.15/GSK3_SCHPO Protein kinase gsk3 (Protein kinaae skp1)/SPAC1687.15
XP_387505 *Gibberella zeae PH-1* EAA77562 hypothetical protein FG07329.1/hypothetical protein FG07329.1
XP_361498 *Magnaporthe grisea 70-15* ABA02071 *Magnaporthe grisea* hypothetical protein MG03972.4/glycogen synthase kinase
EAQ85913 *Chaetomium globosum CBS 148.51* hypothetical protein CHGG_07166
XP_961145 *Neurospora crassa N150* XP_323525 *Neurospora crassa* CAC18200 EAA31909 AAS68519 hypothetical protein ((AL451015) probable glycogen synthase kinase 3 alpha/hypothetical protein ((AL451015) probable glycogen synthase kinase 3 alpha /probabl
BAE61786 *Aspergillus oryzae* unnamed protein product
XP_664112 *Aspergillus nidulans FGSC A4* EAA57848 hypothetical protein AN6508.2/conserved hypothetical protein
XP_747565 *Aspergillus fumigatus Af293* EAL85527 glycogen synthase kinase-3/glycogen synthase kinase-3, putative
XP_569081 *Cryptococcus neoformans var. neoformans JEC21* EAL22323 *Cryptococcus neoformans var. neoformans B-3501A* AAW41774 *Cryptococcus neoformans var. neoformans JEC21* glycogen synthase kinase 3/hypothetical protein CNBB4980 /glycogen synthase ki
CAJ42002 *Ustilago hordei* glycogen synthase kinase
XP_756707 *Ustilago maydis 521* EAK81209 hypothetical protein UM00560.1/hypothetical protein UM00560.1
EAS02097 *Tetrahymena thermophila SB210* Protein kinase domain containing protein
EAS04144 *Tetrahymena thermophila SB210* Protein kinase domain containing protein
XP_763066 *Theileria parva strain Muguga* EAN30783 *Theileria parva* glycogen synthase kinase/glycogen synthase kinase, putative
XP_954764 *Theileria annulata strain Ankara* CAI75288 *Theileria annulata* glycogen synthase kinase/glycogen synthase kinase, putative
XP_674675 *Plasmodium berghei strain ANKA* CAI02492 *Plasmodium berghei* hypothetical protein PB300789.00.0/hypothetical protein PB300789.00.0
XP_679117 *Plasmodium berghei strain ANKA* CAH93929 *Plasmodium berghei* glycogen synthase kinase/glycogen synthase kinase, putative
XP_729518 *Plasmodium yoelii yoelii str. 17XNL* EAA21083 *Plasmodium yoelii yoelii* hypothetical protein PY01719/Protein kinase domain, putative
NP_473241 *Plasmodium falciparum 3D7* CAA15599 glycogen synthase kinase, putative/glycogen synthase kinase, putative
AAC27446 *Toxoplasma gondii* protein kinase 3
BAA13782 *Schizosaccharomyces pombe* Saccharomyces cerevisiae protein kinase MCK 1 (Meiosis and centromere regulatory kinase), SWISS-PROT Accession Number P21965
NP_595564 *Schizosaccharomyces pombe 972h-* Q9URT9 *Schizosaccharomyces pombe* BAA13867 CAA17816 glycogen synthase kinase 3/GSK31_SCHPO Protein kinase gsk31/similar to Saccharomyces cerevisiae protein kinase MCK1, SWISS-PROT Accession Number P21965 /SP
XP_769651 *Giardia lamblia ATCC 50803* EAA46436 hypothetical protein GLP_93_31086_30034/GLP_93_31086_30034
XP_771014 *Giardia lamblia ATCC 50803* EAA40842 protein kinase/GLP_154_37233_36121
CAJ03501 *Leishmania major* glycogen synthase kinase, putative; protein kinase, putative
XP_820602 *Trypanosoma cruzi strain CL Brener* EAN98751 *Trypanosoma cruzi* protein kinase/protein kinase, putative
XP_823855 *Trypanosoma brucei TREU927* AAX69635 *Trypanosoma brucei* AAZ12306 glycogen synthase kinase-3 alpha/glycogen synthase kinase-3 alpha, putative /glycogen synthase kinase-3 alpha, putative
XP_811041 *Trypanosoma cruzi strain CL Brener* EAN89190 *Trypanosoma cruzi* glycogen synthase kinase-3 alpha/glycogen synthase kinase-3 alpha, putative
XP_813711 *Trypanosoma cruzi strain CL Brener* EAN91860 *Trypanosoma cruzi* glycogen synthase kinase-3 alpha/glycogen synthase kinase-3 alpha, putative
XP_657520 *Entamoeba histolytica HM-1:IMSS* EAL52130 protein kinase/protein kinase, putative
XP_648915 *Entamoeba histolytica HM-1:IMSS* EAL43525 protein kinase/protein kinase, putative
XP_651793 *Entamoeba histolytica HM-1:IMSS* EAL46406 protein kinase/protein kinase, putative
XP_712529 *Candida albicans SC5314* XP_712499 EAK93317 EAK93348 putative protein kinase/putative protein kinase /likely protein kinase /likely protein kinase
XP_459540 *Debaryomyces hansenii CBS767* CAG87767 hypothetical protein DEHA0E05819g/unnamed protein product
NP_014092 *Saccharomyces cerevisiae* P21965 CAA38895 AAA34764 CAA86388 CAA96236 Protein serine/threonine/tyrosine (dual-specificity) kinase involved in control of chromosome segregation and in regulating entry into meiosis; related to mammalian glycoge
NP_983928 *Eremothecium gossypii* AAS51752 *Ashbya gossypii ATCC 10895* ADL168Cp/ADL168Cp
XP_454284 *Kluyveromyces lactis NRRL Y-1140* CAG99371 unnamed protein product/unnamed protein product
XP_445762 *Candida glabrata CBS 138* CAG58681 unnamed protein product/unnamed protein product
AAR04351 *Tetrahymena thermophila* putative MAPK
NP_917813 *Oryza sativa* (japonica cultivar-group) BAD61401 MAP kinase-like protein/mitogen-activated protein kinase 7-like
CAB37188 *Medicago sativa* MAP kinase
Q40531 *Nicotiana tabacum* CAA58760 NTF6_TOBAC Mitogen-activated protein kinase homolog NTF6 (P43)/p43Nft6 serine/threonine protein kinase
BAB93532 *Solanum tuberosum* mitogen-activated protein kinase
Q07176 *Medicago sativa* AAB41548 CAA47099 MMK1_MEDSA Mitogen-activated protein kinase homolog MMK1 (MAP kinase MSK7) (MAP kinase ERK1)/MAP kinase /MAP Kinase
CAH05023 *Papaver rhoeas* putative MAP kinase
AT2G43790 = NP_181907 Q39026 BAA04869 AAB64027 AAM53295 AAP68294 ATMPK6 (MAP KINASE 6); MAP kinase/kinase /MPK6_ARATH Mitogen-activated protein kinase homolog 6 (MAP kinase 6) (AtMPK6)/MAP kinase /MAP kinase (ATMPK6) /MAP kinase ATMPK6 /At2g43790
NP_609603 *Drosophila melanogaster* AAF53245 Pk34A CG5182-PA/CG5182-PA
EAL32970 *Drosophila pseudoobscura* GA18716-PA

0.100