



## Fasta input file

```

INTNTRKSSGLIYTTKVDKELSSIDKVNDPNINGLVCAGKTHLGLYKFSPSDRSIKCVHD
-----atvvttetvy-repaidsqgrafatssn-gkilll
||||| |||BBB|||BBBBBB|||BBBBB
FITPNSNTSTRGTTSLLPKLSKRTRQ--NKFSTIADVKTGFNNYKNCIAVCNNSTAISIY
dltg-----kkvlfrpdd-npspaviydtgklllvtrptnglviytlkw-----
B||| |BB| ||||| |||BBBB| |||BBBBBB|||BBBBBB|||
DLNKSSSIDNPLITSLCEHTRSINSFDFNM-VESNLIISGGQDSCVKIWDLRSNKSXSNN
-----ekkt
||||
RSDISINTASDSIRDVKWMPGYNFASKNDQGSSTYGNLKSgyKFASIHDSGYLLKFDLRQ
diga-ialdnv-ndgafdtl--kgalyvtd-rkvgsvyifyld-----sgk
|||| ||||| |||BB||| |BBBBBB |||BBBBBB||| |B
PAQYEEKKLNHAHTGPGCLCNWHPNQEYIATGGRDGKCCLFVVDNANAAENTVLNYGNPS
vtpflkglsingiaispdgtltyirettrnkiwkfe-----lgtsl-vlkdatgpvg
B||||||| |||BBBB|||BBBBBB BBBB ||||| |||||
LHAPNTSLNNSGSLAPFK-LTINTGY---PVTKLKFKPAYSSNIYNSLLGISSMGDEAE
isvds-----dgtlyvas-----grsniaryk-----ls--kdivqiesp--g
BBBB| |BBBBBB |||BBBBBB || |||BB||| |
VRIYSLARKYIPKHVLLSETPSLGLVWWDENLIFNIDKGRINGWDINKEPTVLENLSKN
kstysavspfdgsvlvessnsslyilnwe-----
||| |BBBB| ||BBBBBB|||BBBBBB|||
TTTWRDLDG-NGLLSVDQFEIGSYEVVEPELOPTSSTTCKKHPGTIKNPKNGNPENQGIIG
-----
GIKKGFSHT

```

7-bladed

>YOL138C  
Raw score: 22.3070  
P-value: 0.00571

-----dveieapaygsavilgdssllllias-sg  
BBBBBB ||  
INTNTRKSSGLIYTTKVDKELSSIDKVNDPNI-----NGLVCAGKT

qvyvwdlvtlkvtrqlplr-----sivssvafsp---d  
BBBBBB|||||BBBB|| ||||BBBB|| |  
HLGLYKFSPSDRSIKCVHDFITPNSNTSTRGTTSLLPKLSKRTRQNKfstiadvktgfnN

g-dkvavag-dgrvalydle----akftaeepgk----vtalavskdgnkvvgss-d-  
|BBBBBB|BBBBBB| ||||| |||||BBBB|BBBB| |  
YKNCIAVCNNSTAISIYDLNKSSSIDNPLITSLCEHTRSINSFDFNMVESNLIISGGQDS

-----galsvldlegtptv-----elsdgvtsvldldpergt-1  
||BBBBB|||BB| |||||BBBB| |||||B  
CVKIWDLRSNKSKSSNRSDISINTASDSIRDVKWMPGYNFASKNDQGSSTYGNLKSgykf

yagakdgsiqvfdss--ksvaavtgkespravaf--spntglyvlse--gkvcvidldds  
BBBB||BBBBB||| |||BB|||||BBBB |||BBBBBB|BBBBBB|||  
ASIHDSGYLLKFdlRQPAQYEkKLNAHTGPGLClnWHPNQeYIATGGRDGKCLLWFVGDN

e-----vtvlrgedaltaiavspa  
| ||||| |||||BBBB  
ANAAENTVLNYGNPSLHAPNTSLNNSGSLAFPKLTINTGYPVTKLKFKPAYSSNIY---

svlyaats---dgtvylwdattkkekrvdal-ndsvssvavddkplyvgts--griviid  
||BBBB|| |||BBBB||||| |||||BBB|||BBB||| |||BBB|  
NSLLGISSMGDEAEVRIYSLARKYIPKHVLLSETPSLGLVWWDENLIFNIDKGTRINGWD

le-----  
||  
INKEPTVLENLSKNTTTWRDLDGNGLLSVDQEIGSYEVVEPELQPTSSTTCKKHpgTIKN

-----  
PKNGNPENQGIIGGIKKGFSHT

8-bladed

```
>YOL138C
Raw score: -56.7226
P-value: 0.08178

fedlsellik---ildlnsv-dekskv-kvdstk-ndlsvsdgrfilveyqvksdasidi
||BBBBB  BBBBBBB ||||| ||||| |BBBB||| BBBBBB|BB|BBBBB
---INTNRKSSGLIYTTKVDELSSIDKVNDPNINGLVCAGKTHLGLYKFSPSDRSIKC

idlakrqliteiikisne----alvevsk-----dkvlgasvrn
BB  BB||||||| |BBBB| | |BBBBB|||
VH----DFITPNSNTSTRGTTSLLPKLSKRTRQNKFTIADVKTGFNNYKNCIAVCNNST

diavkdeksleskr---ivf---trgt--ykiveyrgsaliys-gevdllayasked--
BBBBB|||||BB ||| ||| | |BBB||BBB| |||BBBBBBBB|
AISIYDLNKSSSIDNPLITSLCEHTRSINSF-DFNMVESNLIISGGQDSCVKIWDLRSNK

-----lieysf-----ktvrvpypae-----tvkvfvnaksitnl
BBBBBB BBBBBB||| BBBBBBB|| |||
SKSSNRSDISINTASDSIRDVKWMPGYNFASKNDQGSSTYGNLKSgyKFASIHDS--GYL

tstaiga-----dhylndvtwseq---kllslaarrssivdvldrderdlsv-adk
|BBBB| | |BBB|BBBB|| |BBBBBBBBBBBBBBBBB|BBB| BBB
LKFDLRQPAQYEkKLNAHTGPGLCLNWHPNQEIYIATGGRDGKCCLWfVGDNANAAENTVL

vds-----dwvrkrpnedaftvd-gkvfykiis--kl
BB| |||||BB||| BBBBBBB ||
NYGNPSLHAPNTSLNNSGSLAFPKLTINTGYPVTKLKFKPAYSSNIYNSLLGISSMGDE

gsiklfqaikge--vaelteefsvigiealasdylyitadrsvkaidlkdldkltvlk-
BBBBBB||| |BB|||||BB|BB||BBBBBB|BBBBBB||| BBB|
AEVRIYSLARKYIPKHVLLSETPSLGLVWWDENLIFNIDKGTRINGWDINK--EPTVLEN

lkvvsqpfsnrakyvalrvggg-sllvvvssktlkgkavle-----
||BBBBB|||BBBBBB|| |BBBBBB||BB|BB|
LSKNTTTWRDLdGNLLSVDQEIgSYEVVEPELQPTSSTTCKKHpgTIKNPKNGNPENQG

-----

IIGGIKKGFSHT
```

6-6-bladed

```
>YOL138C
Raw score: -68.3625
P-value: 0.37402

----atvvtetvyrepaidsqgrafatssngkillldl----tgskkvlfrpddnpspav
      BBB|||BBBBBB|||BBBBBB|      |||BB||| ||| |||BBB
INTN-----TRKSSGLIYTTKVDELSSIDKVNDPNINGLVCAGKTHLGlyKF

iydntgkllvvtrp----tnglviiytlkwekktdigaialdn---v-ndg--afdtlkga
B| |||BBBBBB||      ||BBBBBB| ||| ||| ||| ||| |||BB|| ||B
SP-SDRSIKCVHDFITPNSNTSTRGTT-SLLP-KLSKRTRQNKfstiADVKTGFNN-YKN

lyvtdrkvgsvyifyld-----sgkvtplfk-glsgingiaispdgltyirettrnkiw
BBBBB|||BBBBBB||      ||BB||| ||| |||BBBB|||BBBBBB|||BBB
CIAVCNNSTAISIYDLNKSSSIDNPLITSLCEHTRSINSFDFNMVESNLIISGGQDSCVK

kfelgtslvlkdatgpvgisvdsdgtlyvasgrsniaryklskdivqiesp---gkstys
BBB|      ||| |||BBBB| BBBB|||BBBBBB| |||BB||| ||| |||B
IWDL-----RSNKSksnrs--DISINTASDSIRDVKW-MPGYNFASKNDQGSSTYG

avspfdgsvlvessnsslyilnweatvvtetvy-re-----paidsqgrafatss-ngk
BBB| ||BBBBBB|||BBBBBB||| ||| |||BBB|||BBBBBB| ||B
NLKS-GYKFASIHDSGYLLKFDLRQPAQYEkKLNAHTGPGLCLNWHPNQeyIATGGRDGK

illldl----tgskkvlfrpddnpspaviyd-----ntgkllvvtrptnglviiytlkwe
BBBBB|      |||BB||| |||BBBB|      |||BBBBBB|||BBBBBB|
CCLWFVGDNANAAENTVLNY--GNSPSLHAPNTSLNNSGSLAFPKLTINTGYPVTK---

kktdigaialdnvndgafdtlkgalyvtdrkvgsvyifyldsgkv--tplfkglsgingia
|      || ||| |||BB|||BBBBBB |||BBBBBB|||BB ||| ||| |||BB
-L----KF--KPAYSSNIYNSLLGISSMG-DEAEVRIYSLARKYIPKHVLLSETPSLGLV

ispdgltyirettrnkiwkfelgtslvlkda--tgpvgisvdsdgtlyvas--grsnia
BB|||BBBBBB|||BBBBBB| ||| ||| ||| |||BBBB|||BBBBBB |||BBB
WWDENLIFNIDKGTRINGWDINK-EPTVLENLSKNTTWRDLDGNGLLSVDQeIGSYEVV

rykls-kdivqiespgkstysavspf-----dgsvlvessnsslyilnwe
BBB|| |||BB|||      |BBBB|      |||BBBBBB BBBB||
EPELQPTSSTTCKK-----HPGTIKNPKNGNPENQGIIGGI---KKGFSHT-
```

6-7-bladed

```
>YOL138C
Raw score: -87.7564
P-value: 0.37682

----atvvvtetvyrepaidsqgrafatssngkillldltgskkvlfrrpddnpspaviydn
          BBB|||BBBBBB|||BBBBBB      BB      ||BBBB
INTN-----TRKSSGLIYTTKVDKELSSID-----KV-----NDPNIN---

tgkllvvtrptnglviiytlkwekktdigaialdnvndgafdtl-----kgalyvtd
  BBBBBB||  BBBBBB|  ||      |||||BB|||      ||BBBBBB
--GLVCAGKT--HLGLYKF---SP-----SDRSIKCVHDFITPNSNTSTRGTTSLLPK

-rkvgsvyifyldsgkvtpfkglsingiaispdgtlyirettrnkiwkfelgtslvlk
  |||BBBBBB|  |BB||| |||||BBBB|||BBBBBB  ||BBBBBB||| |||||
LSKRTRQNKFST--IADVKTGFNNYKNCIAVCNNSTAISIYD--LNKSSSIDNPLITSLC

-datgpvgisvds-dgtlyvasgrsniarykls--kdi-----vqiespgk---stysav
  |||||BBBB|  ||BBBBBB|||BBBBBB|  ||      BB||| |||||  |||BBB
EHTRSINSFDFNMVESNLIISGGQDSCVKIWDLRSNKSNSRSDISINTASDSIRDVKW

spfdgsvlvess-nsslyilnwedveieapaygsavilgdssllllias-sgqvyyvwdlvt
B|  |BBBBBB|  ||BBBBBB|||      ||      BBBBBB  ||BBBBBB
MP--GYNFASKNDQGSSTYGNLKS-----GY---KFASIHDSGYLLKFD---

lkvtqrlp--lr----sivssvafspdgdkvavag-dgrvalydleakftaeapg---
|||BBBB  ||      ||| BBBB||| |BBBBBB  ||BBBBBB||| ||||| |||||
LRQPAQYEEKLNAHTGPGI-CLNWHPNQEIYIATGGRDGKCLWFVGDNANAAENTVLNYG

kvtalavskdgnkvvvvgssdgalsvldlegtptvvels-dgvtsvldldpergtlyagak-
|||BBBB|  BBBBB|  |||BBBBB||| |BB|||  |||BBBB||| |BBBBB|
NSPSLHAP----NTSLNN-SGSLAFPKLTINTGYPTKLKFKPAYSSNIYN-SLLGISSM

--dgsiqvfdssksv--aavtgkesp-ravafspntglyvlseg-kvcvidlddsevtvl
  ||BBBBB||| ||| BB||| ||| BBBB|||BBBBBB|  BBBBBB||| |||||
GDEAEVRIYSLARKYIPKHVLLSETPSLGLVWWDENLIFNIDKGTTRINGWDINK-EPTVL

rgedaltaiavsp----asvlyaatsdgtvylwdattkkekrvdalndsvssvavddkpl
||      |BBBB|  |||BBBB|  |||BBB|  ||||| |||||  |||BBB|||B
EN----LSKNTTTWRDLGDGNLLSVD-QEIGSYE---VVEPELQPT----SSTTCKKHHPG

yvgts-----griviid-le-----
BB|||      |||BBB|  ||
TIKNPKNGNPENQGIIGGIKKGFSHT
```

6-8-bladed

```
>YOL138C
Raw score: -282.2490
P-value: 0.69909

----atvvvtetvyrepaidsggrafatssngkilllldltgskkvlfrrpddnpspaviydn
          BBB|||BBBBBB|||BBBBBB      BB      ||BBBB
INTN-----TRKSSGLIYTTKVDKELSSID-----KV-----NDPNIN---

tgkllvvtrptnglviiytlkwekktdigaialdnvndgafdtlkgalyvtd--rkvgsvy
  BBBBBB||  BBBBBB|          |||||BB||  BBBBBB  |||BBB
--GLVCAGKT--HLGLYKF-----SPSDRSIKCVH---DFITPNSNTSTRGTT

ifyldsgkvtpflfkglsingiaispdgltyirettrnkiwkfelgtslvlkdatgpvgi
BBB  |BB||| |||||BBBB|| |BBBBBB  BBBBBB|          |||B
SLL---PKLSKRTRQNKFSSTIADVKT-GFNKYKN---CIAVCNN-----STAI

svdsdgtlyvasgrsniaryklskdivqiespgkstysavspfdgsvlvessnsslyiln
BBB|||BBBBBB|||BBBBBB|  BB  |  BBBB|  BBBBBB  BBBBBB
SIYDLNKSSSIDNPLITSLCEH----TR--S-----INSFD---FNMVES---NLIISG

wefedlsellikildlnsvdekskv-kvdstkn-dlsvsdgrfilvey-qvksdasidii
|          |BBBBBBBBBBBBB||| ||||| BBBB|||BBBBBB |BB|BBBBBBB
G-----QDSCVKIWDLRSNKSKSSNRSDISINTASDSIRDVKWMPGYNFASKNDQGSSTY

dlakrqliteiikisnealvevskdkvlvgasvrndiavkdeksleskrivftr-gtyki
B  BB|||          BBBB|||BBBBB  BBBBB||| |||BB||| ||||
G----NLKSG-----YKFASIHDSGYLL----KFDLRQPAQYEKKLNAHTGPGLCLN

veyrgsaliysgevdllayaskedlieysfktvrpypaetvkvfvnaksitnltstai
|BBB|||BBB||| |BBBBBBB|BBBBBBBBBBBBB ||BBBBBBB|| ||||BBBBB
WHPNQEIYIATGGRDGKCCLWFVGDNANAENTVLNY--GNSPSLHAPNTS-LNNSGSLAF

qadhylndvtwseqkllslaarr--ssivdvldrderdlsvadkvdsdwrkrpngedaf
|| BBB|BBBB|||BBBBBBBBB BBBBBBBBBB|BBB|BBBBB||| |||BB
PK-LTINTGYPVTKLKFKPAYSSNIYNSLLGISSMGDEAEVRIYSLARKYIPKH----VL

tvdgkvfykiisklgsiklfaqikge-vaelteefsvigiealasdylyitadr-svka
||| |BBBBBBB|BBBBBBB||| |BB|||  ||BB|BB||BBBBBB||| BBBB
LSETPSLGLVWWDENLIFNIDKGTRINGWDINKE--PTVLENLSKNNTTWRDLGNGLLS

idldkldkltvlk--lkvvspqfsnrakyvalrvggg-----sllvvvssktlkgkavl
BB ||||BBB||  ||BBBBB| ||BBBBBB||  |BBBBBB  BB|BB
VD-QEIGSYEVVEPELQPTSSTTC-KKHPGTIKNPKNGNPENQGIIGGIK----KGFSH-

e
|
T
```

7-6-bladed

```
>YOL138C
Raw score: -117.6820
P-value: 0.57016

-dveieapaygsavilgdssllllias-sgqvyywdlv-tlkvtqrlplrsivssvafspd
      BBBBBB ||BBBBBB|| ||||BBBBB||| ||BBBB||
I-----NTNTRKSSGLIYTTKVDKELSSIDKVNDPNINGLVCAGK-

gdkvavagd-----grvalydleakft-aeapgv-----talavskd--
|BBBBBB|      |BBBBBB||| |||||      |BBBB||
-THLGLYKFSPSDRSIKCVHDFITPNSNTSTRGTTSLLPKLSKRTRQNKFSTIADVKTGF

---gnkvvvgssdgalsvldlegt-----ptvvel--sdgytsvldlper-gtlyagak
||BBBBB||| ||BBBBB|||      |BB|| ||||BBBBB||| ||BBBBB|
NNYKNCIAVCNNSTAISIYDLNKSSSIDNPLITSLCEHTRSINSFDFNMVESNLIISGGQ

dgsiqvfd--ssksv-aavtg-----kespravafspntglyvlsegkvcvldlddsev
||BBBBB| |||| BB||      ||||BBBBB|| BBBBBB|BBBBBB||
DSCVKIWDLRSNKSSNRSDISINTASDSIRDVKWMPG-YNFASKNDQGSSTYGN----

tvlrgedaltaiavspasvlyaatsdgtvylwdattkkekrvdalndsvssvavddkp-l
||      BBBB      BBBB|| ||BBBB|| |||||      BBB||| B
--LKS-----GYKF-----ASIHDS-GYLLKFDL--RQPAQYEKK-----LNAHTGPGL

yvgtsgriviidleatvvtetvyrepaid-----qgrafats----sngkillldltgs
BB      BBB|||      BBB|      |BBBBBB      ||BBBBBB|||
CL-----NWHPNQE-----YIATGGRDGKCCLWFGDNANAAENTVLNYGNP

kkvlfrpddnpspaviydnrtgkllvtrptnglvitytlkwekktdigaialdnvndgafd
|BB||      BBBB |||BBBBBB|||BBBBBB|      ||      |||||BB|
SLHAPN-----TSLN--NSGSLAFPKLTINTGYPVTK----L----KF--KPAYSSNIY

tlkgalyvtdrkvgsvyifyldsgkv--tpfkglsingiaispdgtlyirettrnkiw
|||BBBBBB |||BBBBBB|||BB ||||| ||||BBBBB|||BBBBBB|||BBB
NSLLGISSMG-DEAEVRIYSLARKYIPKHVLLSETPSLGLVWWDENLIFNIDKGTRINGW

kfelgtslvlkda--tgpvgisvdsdgtlyvas--grsniarykls-kdivqiespgkst
BBB| ||||| ||||BBBBB||BBBBBB ||BBBBBB|| ||BB||
DINK-EPTVLENLSKNTTTWRDLDGNGLLSVDQEIGSYEVVEPELQPTSSTTCKK-----

ysavspf-----dgsvlvessnsslyilnwe
|BBBB||      |BBBBBB BBBB|
HPGTIKNPKNPENQGIIGGI---KKGFSHT-
```

7-7-bladed

```
>YOL138C
Raw score: -144.3040
P-value: 0.59325

-dveieapaygsavilgdssllllias-sgqvyvwdlv-tlkvtqrlplrsivssvafspd
      BBBBBB || BBBBBB || |||| BBBBB |||| BBBBB ||
I-----NTNTRKSSGLIYTTKVDKELSSIDKVNDPNINGLVCAGK-

gdkvavagd----grvalydleakftaeapgkvtalavskd---gnkvvgssdgalsv
| BBBBBB | | BBBBBB | | BBBBB || | BBBBB | | BBB
-THLGLYKFSPSDRSIKCVHD-----FITPNSNTSTRGTTSLLP---KLSK

ldlegtptvvelsdgvtsvldldpergtlyagakdgsiqvfdssksvaavtgkespravaf
BB |||| BB || | BBBBB |||| BBBBB || BBBBB || || BB || BBBBB
RTRQNKfstiad----VKTGFNNYKNCIAVCNNSTAISIYDL-NKSSSID-----NPLI

spntglyvlsegkvcvidlddsevtvlrgedaltaiavspasvlyaat--sdgtvylwda
      BBBBBB || BBBBBB || | BBBBB BBBBB | ||| BBBBB ||
----TSLCEHTRSINSFDFN-----MVES-----NLIISGGQDSCVKIIDL

--ttkke----krvdaln-dsvssvavd-dkplyvgtsgriviidledveieapaygsav
      |||| | ||||| |||| BBB | || BBB ||||| BBB ||||
RSNKSksSNRSDISINTASDSIRDVKWMPGYNFASKNDQGSSTYGNLK-----

ilgdssllllias-sgqvyvwdlvtlkvtqrlp--lr----sivssvafspdgdkvavag-
|| | BBBBBB || BBBBBB ||| BBBBB || | BBBBB |||| BBBBBB
SGY---KFASIHDSGYLLKFD---LRQPAQYEKKLNAHTGPGL-CLNWHFPNQEIATGGR

dgrvalydleakftaeapg----kvtalavskdgnkvvgssdgalsvldlegtptvve
| BBBBBB ||||| |||| | || BBB | BBBBB | || BBBBB |||| BB ||
DGKCCLWfVGDNANAAENTVLNYGNPSLHAP----NTSLNN-SGSLAFPKLTINTGYPV

ls-dgvtsvldldpergtlyagak---dgsiqvfdssksv--aavtgkesp-ravafspnt
|| ||| BBBBB ||| BBBBB | | BBBBB |||| | BB ||||| BBBBB |||
TKLKfKPAYSSNIYN-SLLGISSMGDEAEVRIYSLARKYIPKHVLLSETPSLGLVWWDEN

glyvlseg-kvcvidlddsevtvlrgedaltaiavsp----asvlyaatdsdgtvylwdat
BBBBBB || BBBBBB || | |||| | | BBBBB | | BBBBB | | BBBBB |
LIFNIDKGTRINGWDINK-EPTVLEN----LSKNttTWrdLDGNGLLSVD-QEIGSYE--

tkkekrvdalnsvssvavddkplyvgts-----griviid-le-----
      ||||| || | BBB ||| BBB || | | BBB | |
-VVEPELQPT----SSTTCKKHPGTIKNPKNGNPENQGIIGGIKKGFSHT
```



7-8-bladed

```
>YOL138C
Raw score: -335.0468
P-value: 0.77286

-dveieapaygsavilgdssllllias-sgqvvywdlv-tlkvtqrlplrsivssvafspd
      BBBBBB ||BBBBBB|| ||||BBBBB||| ||BBBB||
I-----NTNTRKSSGLIYTTKVDKELSSIDKVNDPNINGLVCAGK-

gdkvavagd---grvalydleakftaeapgkvtalavskd---gnkvvvgssdgalsv
|BBBBBB|      |BBBBBB|      BBBBB||| ||BBBBB| |BBB
-THLGLYKFSPSDRSIKCVHD-----FITPNSNTSTRGTTSLLP---KLSK

ldlegtptvvelsdgvtsvldldpergtlyagakdgsiqvfdssksvaavtgkespravaf
BB|||BB||| |BBBBB||| ||BBBBB||BBBBB|| ||BB||      BBBBB
RTRQNKfstiad----VKTGFNNYKNCIAVCNNSTAISIYDL-NKSSSID-----NPLI

spntglyvlsegkvavidlddsevtvlrgedaltaiavspasvlyaat--sdgtvylwda
      BBBBBB|BBBBBB||      BBBBB      BBBBB| |||BBBBB||
----TSLCEHTRSINSFDFN-----MVES-----NLIISGGQDSCVKIIDL

ttkkekrvdalndsvssvavddkplyvgtsgriviidlefedlsellikildlnsvdeks
      ||||| |||BBB| BBB| BBB      |BBBBBBBBBBBBB|||
-----RSNKS---KSSNRSD---ISINT---ASD-----SIRDVKWMPGYNFASK-

kvkvdstkndlsvsdgrfilveyqvksdasidiidl-akrqliteiikisnealvevskd
      ||| BBBBB|||BBBBBB|BB|BBBBBBBB| ||BB|||      |BBBB|||
----NDQG-SSTYGNLKSGYKFASIHDSGYLLKFDLRQPAQYEKK-----LNAHTGPG

kvlvgasvrndiavkdeksleskrivftrgtykiveyrgsaliysgevdllayaskedli
|BBBBB ||BBBBB| BB      BBB|| BBB||| BBBBBBBB|BB
LCLNWH--PNQEYIATG-----GR-----DGKCC-LWFVGD--NANAAENTVLN

eysfktvrpypaetvkvfvnaksitnltstaiqadhylnvdtwseqllslaarr--s
BBBBBBBBBBB BBBBBBBB|| |||BBBB||BBB|BBBB| BBBBBBBB B
YGNPSLHAP----NTSLNNSGSL---AFPKLTINTGYPVTKLKFKP--AYSSNIYNSSL

sivdvldrderdlsvadkvdsdwrkrpngedaftvdgkvfykiisklgsiklfgaikge
BBBBBBBBB|BBB|BBBBB || ||BB|||BBBBBBB|BBBBBBB|||
GISSMGDEAEVRIYSLARKY-----IP--KHVLLSETPSLGLVWWDENLIFNIDKGTRI

-vaelteefsvigiealasdylyitadr-svkaidlkdldkltvlk--lkvvsqpfsnr
|BB||| ||BB|BB||BBBBBB|| BBBBBB ||||BBB| |||BBBBB| |
NGWDINKE--PTVLENLSKNTTTWRDLGDGNLLSVD-QEIGSYEVVEPELQPTSSTTC-K

akyvalrvggg-----sllvvvssktlkgkavle
||BBBBBB||| |BBBBBB BB|BB |
KHPGTIKNPKNGNPENQGIIGGIK----KGFSH-T
```

8-6-bladed

```
>YOL138C
Raw score: -249.8349
P-value: 0.59476

fedlsellik---ildlnsv-dekskv-kvdstk-ndlsvsdgrfilveyqvksdasidi
||BBBBB  BBBBBBB ||||| ||||| |BBBB||| BBBBBB|BB|BBBBBB
---INTNTRKSSGLIYTTKVDKELSSIDKVNDPNINGLVCAGKTHLGLYKFSPSDRSIKC

idlakrqliteiikisnealvevskdkvlvgasvrndiavkdeksleskrivftrgtyki
BB  BB|||  BBBB|||BBBBB  |BBBBB|  BB|||
VH----DFITP-----NSNTSTRGTTSSL---PKLSKRT-----RQNKFST-----

veyrgsaliysgevdllayaskedlieysf--ktvrvpypaetvkfvvnaksitnltst
BBB|||BBB||| BBBBBBBB|BBBBBB  BBBBBB|  BBBBBBBB||  BB
-IADVKTGFNYYK-NCIAVCNNSTAISIYDLNKSSSIDNP--LITSLCEHTR-----SI

aiqadhylndvtwseqkllslaarrssivdvldrderdlsvadkvdsdwvrkrpnedaf
BB  BBB|BBBB  BBBBBBBBBBBBBBBBBB  BBB|BBBBB|  BB
NS---FDFNMVES---NLIISGGQDSCVKIWDL--RSNKS KSSNRS-----DI

tvdgkvfykiisklgsiklfgaikgevaelteefsvigiealasdylyitadrsvkaid
BBBBBBB|BBBBBBB|||  |BB| ||||| |BB|BB|| BBBBBB|||BBBBBB
-----SINTASDSIRDVKWMPGYN--FASKNDQGSSTYGNLKS GYKFASIHDSGYLLKFD

lkldldklvtlklkvvsqpfsnrakyaalrvvggslvvvssktlkgkavleatvvtetvy
|||||BBB  ||BBBBB|  BBBBBB|||BBBBBB  |||BB|BB
LRQPAQYEK---KLNAHTGP---GLCLNWHN-NOEYIAT-GGRDGKCC-----

repaidsqgrafatssngkillldltgskkvlfprddnpspaviydtngkllvvtrptng
|BBB| |BBBBBB| BBBBBB  |BB|||  ||BBBB  |||BBBBBB|||B
--LWFVG-DNANAAEN--TVLNYG---NSPSLHA---PNTSLN--NSGSLAFPKLTINT

lviytlkwekktdigaialdnvndgafdtlkgalyvtdrkvgsvyifyldsgkv--tplf
BBBBB|  |  ||  |||||BB| |||BBBBBB  |||BBBBBB|||BB  |||
GYPVTK----L----KF--KPAYSSNIYNSLLGISSMG-DEAEVRIYSLARKYIPKHVLL

kglsingiaispdgltyirettrnkiwkfelgtslvlkda--tgpvgisvdsdgtlyva
|||||BBBB|||BBBBBB|||BBBBBB|  |||||  |||BBBB|||BBBBB
SETPSLGLVWWDENLIFNIDKGTRINGWDINK-EPTVLENLSKNTTWRDLDGNGLLSVD

s--grsniarykls-kdivqiespgkstysavspf-----dgsvlvessnsslyilnw
B  |||BBBBBB|  |||BB|||  |BBBB|  |BBBBBB  BBBBBB|
QEIGSYEVVEPELQPTSSTTCKK-----HPGTIKNPKNGNPENQGIIGGI---KKGFSHT

e

-
```

# 8-7-bladed

```

>YOL138C
Raw score: -319.8627
P-value: 0.73372

fedlsellik---ildlnsv-dekskv-kvdstk-ndlsvsdgrfilveyqvksdasidi
||BBBBB  BBBBBBB ||||| ||||| |BBBB||| BBBBBB|BB|BBBBBB
---INTNTRKSSGLIYTTKVDKELSSIDKVNDPNINGLVCAGKTHLGLYKFSPSDRSIKC

idlakrqliteiikisnealvevskdkvlvgasvrndiavkdeksleskrivftrgtyki
BB  BB|||  BBBB|||BBBBB  |BBBBB|  BB|||
VH----DFITP-----NSNTSTRGTTSSL---PKLSKRT-----RQNKfst-----

veyrgsaliysgevdllayaskedlieysf--ktvrpypaetvkfvvnaksitnltst
BBB|||BBB||| BBBBBBBB|BBBBBB  BBBBBB|  BBBBBBBB|  BB
-IADVKTGFNNYK-NCIAVCNNSTAISIYDLNKSSSIDNP--LITSLCEHTR-----SI

aiqadhylndvtwseqkllslaarrssivdvlrdrderdlsvadkvdswvrkrpnedaf
BB  BBB|BBBB  BBBBBBBBBBBBBBBBBB  BBB|BBBBB|  BB
NS---FDFNMVES---NLIISGGQDSCVKIWDL--RSNKSksNRS-----DI

tvdgkvfykiisklgsiklfgaikgevaelteefsvigiealasdylyitadrsvkaid
BBBBBBB|BBBBBBB|||  |BB||||||BB|BB|||BBBBBB|||BBBBBB
-----SINTASDSIRDVKWMPGYN--FASKNDQGSSTYGNLKSgyKFASIHDSGYLLKFD

lkldldklvtlklkvvsqpfsnrakyvalrvggsgllvvvssktlkgkavledveieapay
||||||BBB  ||BBBBB|  BBBBBB|  BBBBBB  BB|BB
LRQPAQYEK---KLNAHTGP---GLCLNWHp--NQEYIA---TGGRD-----

gsavilgdssllliassgqvvdvltlktvtrplrsivssvafspdgdkvavagdgvr
||  BBBBBB|BBBBBB  |BBBB|||  BBBB  |  BBBBBB|BB
-----GK---CCLWFGDNANAAE-----NTVLNYGNsp-SLHA-P---NTSLNNSGSL

alydleakftaeapg-kvtalavskdgnkvvgssdgalsvldlegtpvvelsdgvts
BBBB|  ||||  |||BBBB|  ||BBBBB|  ||BBBBB|||BB||  B
AFPKL-----TINTGYPVTKLKFKP-AYSSNIYN--SLLGISSMGDEAEVRIY-----S

vldlpergtlyaga-kdgsiqvfdssksvaavtgkespravafspn-tglyvlsegkvcv
BBB||||||BBBBB  |||BBBBB|||BB|||  ||BBBBB||| BBBBBB|BBBB
LARKYIPKHVLLSETPSLGLVWWDENLIFNIDKGT-RINGWDINKEPTVLENLSK-NTTT

idlddsevtvlrgedaltaiavsp-asvlyaatsdgtvylwdattkke-krvdalndsvs
BB|||  |||  BBBB||  ||BBBBB|  |BBBB||||||  |||||  ||
WRDLD-----GNG-----LLSVDQEIGSYEVVEP--ELQPTSSTTCKKHpgTIKN---PK

svavddkplyvgtsgriviidle
|BBB|  ||BBB|||BBB  |
NGNPE-NQGIIGGIKKGFSh--T

```

## 8-8-bladed

```

>YOL138C
Raw score: -590.0442
P-value: 0.90517

fedlsellik---ildlnsv-dekskv-kvdstk-ndlsvsdgrfilveyqvksdasidi
||BBBBB  BBBBBBB ||||| ||||| |BBBB||| BBBBBB|BB|BBBBBB
---INTNTRKSSGLIYTTKVDKELSSIDKVNDPNINGLVCAGKTHLGLYKFSPSDRSIKC

idlakrqliteiikisnealvevskdkvlvgasvrndiavkdeksleskrivftrgtyki
BB  BB|||  BBBBB|||BBBBB  |BBBBB|  BB|||
VH----DFITP-----NSNTSTRGTTSSL---PKLSKRT-----RQNKfst-----

veyrgsaliysgevdllayaskedlieysf--ktvrpypaetvkfvvnaksitnltst
BBB|||BBB||| BBBBBBBB|BBBBBB  BBBBBB|  BBBBBBBB|  BB
-IADVKTGFNNYK-NCIAVCNNSTAISIYDLNKSSSIDNP--LITSLCEHTR-----SI

aiqadhylndvtwseqkllslaarrssivdvldrderdlsvadkvdswvrkrpnedaf
BB  BBB|BBBB  BBBBBBBBBBBBBBBBBB  BBB|BBBBB|  BB
NS---FDFNMVES---NLIISGGQDSCVKIWDL--RSNKSksNRS-----DI

tvdgkvfykiisklgsiklfqaikgevaelteefsvigiealasdylyyitadrsvkaid
BBBBBBB|BBBBBBB  BB  BB BB|||BBBBBB  BBBBBB
-----SINTASDSIRDVKWMP-----GY-----NF-ASKNDQGSSTY---GNLKSg

lkdldkltvlklkvvsqpfnsrakyvalrvggsgllvvssktlkgkavlefedlselli
BBB  BBBBB|  BBBBBB  |BBBBBB  BB|BB  BBBB
-----YKF-----ASIHDS---GYLLKF---DLRQPAQ---YEKKL-----NAHT

k-ildlnsvdekskvkvdstkndlsvsdgrfilveyqvksdasidiidlakrqliteiik
B BBBBBBBB  BBBBB  BBBBBB|BB|BBBBBBB  BB||
GPGCLCNWH-----PNQE---YIATGGRDGKCCLWFVGD---NANAA---

isnealvevskdkvlvgasvrndiavkdeksleskrivftrgtykiveyrgs-aliysge
BBBB  BBBBB  ||BBBBB  BB  BBB||  BBB
-----ENTV---LNYGN--SPSLHAP-----NT-----SLNNSGSLAF---

vdllayaskedlieysfktvrpypaetvkfvvnak-sitnltstaiqadhylndvtws
|BBBBBBB|BBBBBBBBBBBBB  |BBBBBBB|  |||||BBBB|BBB|BBBB|
-PKLTINTGYPTKLKFKPAYSS--NIYNSLLGISSMGDEAEVRIYSLARKYIPKHVLLS

eqkllslaarrssivdvldrderdlsvadkvdswvrkrpnedaf tvdgkvfykiiskl
||BBBBBBBBBBBBBBBBBB| BBB|BBBBB  BB|  BBBBBB||
ETPSLGLVWWDENLIFNIDKG-TRINGWDINK-----EPT---VLENLSKNT

gsiklfqaikgevaelteefsvigiealasdylyyitadrsvkaidlkdldkltvlklkv
BBBBBBB  BB  BB|BB  BBBBBB|  BBBBBB|  |||||BBB  ||
TTWRDL-----GN-----GLLSV---DQEIGSY--EVVEPELQPTSSTTC---KK

vsqpfnsrakyvalrvggsgllvvssktlkgkavle
BBBBB|  ||BBBBB|  BBBBBB  BB|BB  |
HPGTIK-NPKNGNPENQG--IIGGIK---KGFSH-T

```

If you use SMURF, please cite: [M. Menke, B. Berger and L. Cowen, "Markov random fields reveal an N-terminal double beta-propeller motif as part of a bacterial hybrid two-component sensor system" PNAS March 2, 2010 vol. 107 no. 9 4069-4074.](#)

WebsERVER by Matt Menke (Based on [Anoop Kumar](#)'s [Matt script](#))