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:          **      *:*      :*:      :
Barren_Encepha -----MSNDD-----LGTWLKAAAEENKITTNTWKSLLIDHFTN 34
Barren_At -----MDESLTPNPKQKPASTT-----TRIQAPSPFFLGSNDDRLERERQARAA-RAAASRRRSV-----IFARGSQPEIESDPCFDKQIILELFQNCIKLASENKINQKNTWELNLIDHLC 107
Barren_Oryza -----MPAADPALALAPAPTPPPARGTAAAGPRL-----LLIQSPPPAFLGSNDDQLERARARAAARAASVRRRSLL-----AASLAPRAAQOQLDNLNRQVMDLDFHNCIKLASENKINQKNTWELNLIDHLC 120
Barren_Dm -----MTLRLLETPLRRAVAVGS-----VQEGVSRMLTFFVDDDEAERREARRR--RLLOQH-----HRSSLTESIENETIKNCELELVNGKVKNSKNTWELNLIDHLSLAN 91
Barren_Anoph -----AAANDDDEAERRSRRS-----EVTLNDSISAVEEENENIKMCKLKYSDNKMSKENAWSLTITDSFAT 59
Barren_Hs -----RRRCQGMCPGPPALPATMNNSSSETRGHPHSASSPSERVFPMPLPRKAPLNIPTGTPVLEDFPQNDDEKERLQRRRS-RVF-DLQFST-----DSPRLLASPSRRSIDIATIPKFTNTQITEHYSTCIKLSSTENKITTNAFGLHLIDPFMSE 145
Barren_Mm -----MNSFLKARGQQDVLSSPLERVPASRPGKALPLGPKTPTVLEDFPQNDDEKERMQRRRS-RVF-DLQFST-----DSIHLASPNRNIDVSTTISKFTNTQITEHYSTCIKLSSTENKITTNAFGLHLIDPFMSE 126
Barren_Xl -----MSTSTPQSGGRKKEPDPDAFLSPATRF--QFISAATPTLLNFTSDDDERERKLRMS-RV-IDLQLNANSFATAISPAQSRGADTPTSLLPKLNNTQISDHYSTCIKLSQENKITTNAFGLHLIDYMGD 129
Barren_Sc ----------MMAFEEWIKMATDNKINSRNSWNFALIDYFYD 33
Barren_Nc -----MKRVPILANFEWMMKMATDNKINAANSWNFALIDYFHD-----MKRVPILANFEWMMKMATDNKINAANSWNFALIDYFHD 38
Barren_Sp -----MKRASLGCHAPVSLPSLNDDALEKRAKENSRRKQRELRSS-----ALHSTIPRRESLNSPENSSSHQVPLSNFSEWIKLADHNKINRTNWFALIDYFHD 99
Barren_Plasm_y -----MKKLGVSNKANANFTQIRGFDPIFKNPIERKNKL-----RRLSFLNNKDEDLNKEKNKVKIINDVFKNCMAALSHNKICIRNAFDIRIIDLHED 90
Barren_Plasm_f -----MKKLGVNAGENKGNISINKDGTKNKTIEVNKNMRLI-----FLNNSNSDSIEGNKNKVDKNKVKIINDVFKNCMAALSHNKICIRNAFDIRIIDLHED 95
ruler 1.....10.....20.....30.....40.....50.....60.....70.....80.....90.....100.....110.....120.....130.....140.....150

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Barren_Encepha -----GINFOKASCTLDGCAKVVSTRVDDVSENAMRLLEGSGREEA-----RKKQKQKVNKVITEKNICNLNIRVSSSRRCVDPKFLY 120
Barren_At -----ETNFOKASCTLEAGVKIYSRVRDVSVHSEAYKVLGGITRAGHDDGGDHEDAAGAVENATNQK-----KQEKKISPLSTLEPSFDALNVKFFDVAFVADPLYHC 215
Barren_Oryza -----ETNFOKASCTLEAGVKIYSRVRDVSVHSEAYKVLGGINRAGRDEAGTKDTLKIQQKVAI-----GSIHKKISPTSLSESSFDLNVKFFDVAFVADPLYHC 226
Barren_Dm -----MSNFKMAGSSLEASSKVYGLRVDSTVLDAMRISAGLSARTLTKQINAAEDDDGPOGEQATGEGODSAGQAAKE-----AAPPKRQKPKISTVTKNRETLN-SRLDTAPLQDPVFGK 211
Barren_Anoph -----LQNFQVAGSTLEASTKVYGLRVDSTVLDVMMRMCSELTRQTARAMNNAADQDDEEAGGEGNAGDSMVEGGDGGGKNEQVTVQQPRARKRTRKRVSTITKSKDSIN-GPLDTPNPFMPFFAK 191
Barren_Hs -----PTNFKVAAGTLDASTKIYAVRVDVAHADVYRVLGGGLKDA-----PSLEE-VEGHVAD--GSATEMGTTRKAVKPKKHLHRHIEQININNLNVEADRKCECDPMFQK 253
Barren_Mm -----PTNFKVAAGTLDASTKIYAVRVDVAHADVYRVLGGGLKDTPPQGE-----ESHSGD--GSTLETERTKPKPKKQCKIEQNLNSINVSADGKCAVDPMFQK 233
Barren_Xl -----LTNFKVAAGTLDASAKIYAVRVDVAHADVYRVLGGGLKES-----QATEDTENQEDTIG-----PQDGRKNPKRRKCSYKTIERNLNSINRSETERKSEIDPLFQK 233
Barren_Sc -----NNINFOKASATLDGCKIYSSRVDVSTETGKLLSGLAQRKTNASNGDDSGGEGELGGDSDEANIEIDPLTG-MPIENDDPVNNTRRRVYNRVLETPLV-EFETIKMKELDQELIIDPLFKK 164
Barren_Nc -----GVNFOKASCTLDGCVKIYTSRVDVAVTETGKLLSGLADSRDSSKRRDRGEGEDDDEEDEVDFENG-----NVLKKRRKKTQRSSSEALAPSFASLQLKCKFELEFSVDPLFKK 155
Barren_Sp -----DINFOKASCTLDGCVKIYTSRVDVAVTETGKLLSGLANDSKVLQTEEGEDAEND-----DEDLQKKERKRA-RSVKLVKDFESIRAKKFELECSFDPPLFKK 206
Barren_Plasm_y -----LVNLND--EINEELNDELLETGDFNLSFTRASKAIEGATKVYGYRVEAIVDQTNFISNMNIAKKSITNDVVIDEKKHVNEI-----TNKMKRRKLEFFQESSTLAKPSDITIESVSVSNISVDTFFLK 214
Barren_Plasm_f -----LVNLND--EIEPEELNDEMIENGEFNLSFTRASKAIEGATKVYGYRVEAIVDQTNFNLNMLNLAQKFLDNDMDDDNKNTIDP-----LNKMRMRKRLTYLQESSTLAKSSDITVDSLNSNISVDTFFLK 219
ruler .....160.....170.....180.....190.....200.....210.....220.....230.....240.....250.....260.....270.....280.....290.....300

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Barren_Encepha -----LSSLPENT---LMIDSLGISS-DGVLRMS-SCRD-----EGTVIVDDFKMSMDF 164
Barren_At -----LSAQFDEGGAGKLLNLNLGVYG-GCQVLFDSQEIPEGKLVSSANKHKDSEITDLSFVKGL-----ALLADMPRS-----TIVHVLVHYAFSDVVVKFVCEVQVNLNM 311
Barren_Oryza -----TSAQFDEGGAGKLLSYNLGVYD-SCRVLFDSEAPDKCI-----LSDMOTEMAELIGLSFAKQIETQMIHM-----LNAEMEQVPATSLMSTNLMRKLPH 292
Barren_Dm -----LNSVCGASINASNRMLMHNILPSFDSSELRLRTTYNFWNSEESTEEVQDHTI-----LNARMEQVPATSLMSTNLMRKLPH 286
Barren_Anoph -----LNSVGVVNSSSRMLMONTI-VPTKQSELRLGMDYAFWDPAPE-----LDLGVPEAYEGLCSMRFLPL-----LDLGVPEAYEGLCSMRFLPL 256
Barren_Hs -----LAASFDECSSTAGVFLSTLHCQDYRSELLFPDMQTL-----STGEPL-LPE-----LQCVEMTDLKAP-----L-----LQCC 315
Barren_Mm -----LAASFDECSSTAGVFLSTLHCQDYRSELLFPDMQTL-----SSEGLE-LPD-----LGFVMDTLEAS-----L-----LQCC 295
Barren_Xl -----AAASFDEFSTAGVFLSTLKHCHSYHSELHFDADVKPLSTAEETPPSP-----GSMDSITELKSL-----L-----LQCC 295
Barren_Sc -----ALVDFDEGGAKSLLNLTNIDN-TARVIFDASIKDQNVQCKLQRKEE-----F-----FLIERDSLVDDENEPQSQSLIST 234
Barren_Nc -----ASADFDEGGAKSLLNLTNIDN-QGRIVFDSDDAIDTLDNRNQAEEENDQADDPDAM-----DIDAMEIDQTEKIQTRTQ-----QOEEEBEDDVEIDIASIGARFFPLGR 259
Barren_Sp -----MCADFDEGGAKSLLNLTNIDN-HGRIVFDSDDTVIKDLENKDVAEAEQAVVAAPLES-----NLSGNSDELNDMLQKNEPQVVK-----VGEYVFNNDNKIMAREVKSILYTNSDILREMFQNEITE 291
Barren_Plasm_y -----LNIYDHSAGISYLLPNLTLNN-DLSIQDFDIDICEYKMKKFEKLGKQNIERNK-----FIEVNNRFDNFLTBEELQAAVPD-----FIENVNNRFDNFLTBEELQAAVPD 332
Barren_Plasm_f -----LNIYDHSAGISYLLPNLTLNN-DLSIQDFDIDICEYKMKKFLDDIDGKGVKDKEDGIHIMKKNRNDNCDTYDKIICNNNDINKVDEKKNVDVICENRKNKESCNIVYDFVNEHKEFFDIKKKILFLNADILKILYGGP-DD 367
ruler .....310.....320.....330.....340.....350.....360.....370.....380.....390.....400.....410.....420.....430.....440.....450

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Barren_Encepha -----PKQLLISPSISEDK-----EIRDIVEPIVDNDA-----EVSDEHAG-----FSGD 205
Barren_At -----RKKDEIVPSLRALINQF-----DEENQRPSDTSCGQOT-----TESFDISHGND-----SYADDEGGEN 368
Barren_Oryza -----PLCNDISPILSNIVYQF-----DDENRRPPHEATSRQIPV-----MEDQVVDGNDVAND-----DITQNDMQ 349
Barren_Dm -----AERSNLRPLHTGVYIITS-----APNPKSANAKAAEVVQDEHDEGLDNADDVCVNKISMADFINAECEP-----MPDLD 355
Barren_Anoph -----GPNLLRITLRSGLYLTID-----APAEADEEDARNTNRLSLDAHMDKVEARHSAALLNR-----SALDVHFDINAEVEP-----VPSG 330
Barren_Hs -----AEDRQICPSLAGFQFTQ-----WDS-----ETHNESVSALVDFKKNQV-----FDINAEVDE-----SDCGDFPDGSLGDDFDANDEPDHTAVGDHEEFRSWKELCQVQSQOEBEMISLGD 417
Barren_Mm -----VEDRPLCPSLAGFQFTK-----WDS-----ETHNESVSALVDFKKNQV-----FDINAEVDE-----DEEDVDPGLVEDFVDNDEPDLSAAGDHEEFRSWKELCQVQSQOEBEMISLGD 396
Barren_Xl -----VEKRPLCPSLSGFRFMQ-----WNSDAQENLSLLMDFKPKSDHV-----FDINAEVDE-----DFVSEAPVADEFDADVCEGMDAGDIGEFAEHREACRLERKGAQLTQIGN 394
Barren_Sc -----RNDSTVNSVISAAPSM-----EDELISLGMDFIKFDQIACEISGS-----IEQLRNVDVINDQAKD-----FIENVNNRFDNFLTBEELQAAVPD-----NAEDSDGFD 325
Barren_Nc -----LDREMDVCPSLKTFILGD-----PSGSLDIPFLRAPEDWRQEQDRAKTPGLGN-----KSGFIIDDENP-----LGFDDDALGAFDLGGVDVAFGEGGEEA-----WAREAAIEPQMMRVFD 361
Barren_Sp -----IDQLTICPSLQGFEP-----DSKGNLDVSLKLSLSDVNMITTTSLVDNTEKTD-----ADAASLSSDSGEGEHI-----VHALEEMAYDEEN 371
Barren_Plasm_y -----FNNLNTICPELDYFKBEI-----KNLKLKRSDSKTLDDDEDIDNYEDDDTGLDKFSKKNELNLDENMSMDNLLGDMDGNNNDCCNENNDNGNSYGDNNKILESSFNNNLNF-----DDCNIDDLNINVMQES 456
Barren_Plasm_f -----FNSLHLCPELDYFKBEIKKHLKRTSKLTDVYDKEDGDNLYNDDDTGNTDKNNIINFYDENLGCNMSNNMLMESIYNSDALNTDRKNIFPENLGMSCGNLNEEKKNNMNSNNSNNLNNCNYDNNDLVLC-----DVRMDDLNIENVMQES 514
ruler .....460.....470.....480.....490.....500.....510.....520.....530.....540.....550.....560.....570.....580.....590.....600

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Barren\_Encepha NFELPEILPPSNQNPVYKEN-----SFSY-----FKGWAGPNHWKQAK-KGRSG----- 250  
Barren\_At FGTISFDYEGQSGVDVDFENFGPNEAEPIY-----SNFHEEVEFASLQDMDSDDRLNVDDYL-----FSLSLGISSSKQNSWAGPDHWKVKRKT-KGPDV----- 452  
Barren\_Oryza NDCGTFWDFGGCDDQESVDEHCDPMDH-----SSMNGQEETDEYTFESAEGLDVNERIDKIDFL-----SFGMGFSAKTNAWAGPEHWKVKRKA-KDLDF----- 438  
Barren\_Dm GPPPLVLEVDNELEELAAEQMVINN-----CRRRLRQTEFTELDLRFVDQNSKLE-----YSYRPMQDISQFWAGPSPHWKFKRTR-RFRST----- 435  
Barren\_Anoph DAFILDYDAKIDIGNDDFAEDDELALE-----CCKGLMRKTVVIEDMRPLDTTSSHL-----EYSYRPLDNISQFWAGPAHWKFKRSMRPRST----- 413  
Barren\_Hs -----GDIRTMCPLLSMKPGE-----YSYFSP-RTMSMWAGPDHWRFRFR-RKQDA----- 461  
Barren\_Mm -----RDIQVMCSFLSMKPGE-----YSYFSP-RTMKMWAGPDHWRFRFR-PKQDA----- 440  
Barren\_Xl -----GDIGTMCLQLSSCPGE-----YSYFSP-RTMSMWAGPEHWRFRFR-QKAST----- 438  
Barren\_Sc MGMOQEELCYPDENHDNTSHDEQDD-----DINVNSTIGSIFEKDL-----MAVFDE-NLNRNWRGREHWKVRNF-KKANLVNKESD 398  
Barren\_Nc AGLDIEGEGEGDDGDGVDGLLEMI-----DQDKDFGMVNMVNTNAQKTRDLHED-----ILSYFDQ-ALSKNWISAEHWIRIKI-KDVNK----- 438  
Barren\_Sp FVVDVVEKAMDESNDFGVDTEVNMA-----DQSTMNENYIISIAANGV-----VEYFDK-SMKKNWAGPEHWRIQAL-RKNIN----- 446  
Barren\_Plasm\_y MAFDNMLNLDLNNLNLSLNNLSLHNSNILGGNIPLELMKSENKDFSLINSFTGNFNFSSONMLFKNDKGSFSKPKHMLISIIDPDLTLWNRQALIS-----FESRLNAIDVNSKFN--YHYNRSKLMINGN----- 584  
Barren\_Plasm\_f LG--FDNLNYSCKRNMNFSNNNGMLLQ-----QSINMMDCGMNFPFLIKSENKELDLGNTQINNEHYLLKNNYIHKRHSIISEVDDDTLWNRVMTFENRINAIDINNELNHYMYPNKLMMM-----GNFRNLIDLNKN----- 643  
ruler .....610.....620.....630.....640.....650.....660.....670.....680.....690.....700.....710.....720.....730.....740.....750

Barren\_Encepha -----TQKQ-----KEASFLDFT--ETV--DYE--GM--LEPCN--ILFDPAFTVER--RESRHTL-----PQDFRLEV-----EDLY-RYLVRDGLFYKK----- 318  
Barren\_At -----QPASEIKSSPPAKKTRKKCAEPDLDA--KAL--EEMPDIIF--APPKNPKILL--LPASR--TPCQTKL-----PEDCHYQP-----ENLI-KLFLLPNVMVVL----- 537  
Barren\_Oryza -----VPTKDDSDAPKTKKRRG-----KDEPDIDFS--KAL--EHDMPNIF--APPKNSKLLLA--NRASTNNKL-----PEDCHYRP-----ESLV-KLFLPDVLCCLA-----R----- 524  
Barren\_Dm -----PSQTNGQVDTQPIRTQRA-----KKAHLNANRRAKALDYC-----NVLENFFQQLDITIRQRKANFOKQKWDPRKLI-----PTKFELDP-----DLFF-KYESAPSIKLSKRAEPDSDEG----- 537  
Barren\_Anoph -----MAPPPSDTASQTSSTTAKGRAVGRKKTFEPDIL-----DDVLSVTETLFOENPNRPIRGITHLKSIVCKKWKESKLLK-----PTDYKIDP-----KRFD-LYKARGLSMDDYGAFNHAPS----- 521  
Barren\_Hs -----PSQSENKKKST-----KKDFEIDFE--DDI--DFDV--YFRKTKAAILTKSTLENQNW--RATTL-----PTDFNINV-----TLV-QLHLKPGTRLLK-----MA----- 540  
Barren\_Mm -----TSCTEKKKSA-----KKDFEINF--DDI--DFDA--YFQKTKAAILTKSTLENQNW--KATTL-----PTDFHYET-----DNLI-QLHLKPKGRSLKMDQD----- 521  
Barren\_Xl -----DSDQQRVKA-----KKVFELNFE--DDI--DFEV--HFRKTRAAITLTKSTLESQNK--KSTTL-----PADPHYDP-----DNIA-RMSLRPKRDIRKTTV----- 517  
Barren\_Sc LLEERTITIGDITDKNTTDDKSMDTKHKHQ-----KKVLEIDFF--KTD--DSFEDKVF--ASKGRKIDMPIKNRK--NDTHYLL-----PDDFHPST-----DRIT-RLPFKPAQKMSLFS----- 498  
Barren\_Nc -----PQTGEPQORQRK-----KQAFEIDFF--TPV--DRTLHDVL-----HTQATNSAISLQKDKWKRKSRNLL-----PDDKHFS-----KQLL-NLPLKPKARLGRKQRAFGRSNADNONPDC----- 536  
Barren\_Sp NASTVFNSSNTAESDINVSRLSSTERKKRR-----ELDNAIDFL--QEV--DVEA--LFTPATSS--LKLPRKSHWRKSRNCLL-----PDDYQDS-----KRLI-QLFLPKMSVL----- 540  
Barren\_Plasm\_y -----FSNLMMAKAFKKNQGPLNALANKKLSFDIT-----DINFENLYIEVNDVELSVLDLWNEKKKYISN--SLFAIDQTSYIFETKDCNCINCVNTVIDRIMKFARSFFIESQNFNTDIKT----- 699  
Barren\_Plasm\_f -----VNNINNNKSTILQNIIMKMKYAFDV--TSI--DFE-----NLYTENNNIELSTDLWKEKKKYYSN--ALFCIDQTSYIFDTRENCVCVNTVDKVMKFSKFCVYDFDLHACNKNRKHNNN----- 761  
ruler .....760.....770.....780.....790.....800.....810.....820.....830.....840.....850.....860.....870.....880.....890.....900

Barren\_Encepha -----DQASAEEMSIDHSPASCVIEE-----PEDEFVADIPSQGS-----QKMPIFRKTPK----- 366  
Barren\_At -----AKHRPSETSRQDDYEHGESWGNVYDD-----DDGPFDDNENQSDAEDTNTLISQPROV-----DDGPFDDNENQSDAEDTNTLISQPROV-----NKIDVQDKASK----- 607  
Barren\_Oryza -----RRKKPLGSGRENTDDEIPSEPDGDDDFDNC-----HVDEGNGDITDVEDAVDLITKPRQV-----NKIDVQDKASK-----AKVIVFAKRAK----- 635  
Barren\_Dm -----GDLGIDMDADMHDDNDQELFNNEHFTDAV-----PANVSVIAIAAEQAAEASMMNVSAGETGLTGMNATCNNTVFEIGTE-FEGAPSQV-----AKVIVFAKRAK----- 609  
Barren\_Anoph -----EEVNCDDGDDQISCSNDINDGDNNDMMNH-----DDGGFSQMDHDNCGPVEEQHEKDKTMNATVGLAISTE-FLGAPDKV-----HKINIAVAKTAK----- 609  
Barren\_Hs -----QGRVETEHYEE--IEDYDYNPNPNTSNFCPGL-----QAADSDEEDLDDLEVGP-----VQNSDLSPPYCHPCKTAQONGDT-----PEAQGLD-----ITTYGESNLVAEPQKV-----NKIEIHYAKTAK----- 646  
Barren\_Mm -----QKAKTEHYEE--IEDYDYNPNPNTSNFCPGL-----QAADSDEEADDFADP-----VGTLDLESDEPKTTQENGHS-----PENQGV-----ITTYQELNLVAEPQKV-----NKIEIHYAKTAK----- 622  
Barren\_Xl -----QESVSEPEDD--IGDYDYNPNPNTSNFCPAL-----QAADSDDDDGAFLGPESNSAGFSAENQM-----NITSYGESN-LVAGQKV-----NKIEIHYAKTAK----- 602  
Barren\_Sc -----HRKHTRGQDVSSGLFEKSTVSANHSNNDIPTI-----ADEHFWADNVERKEQEEKEKEQSKVEGDVGGALDNPFFEDDMDGVDVFNQAFEGTDDNEEASVKLDDQDEDEHKFPI-----RENKVTYSRVSK----- 617  
Barren\_Nc -----VPEGTMDAEAFWAQKAPLNQGFSSQDDHLEQGDYDANFFQDDGLEFANGCDDDDDEMDDEEVFADARDHFSFGPGGTQDGAAGKEGTAGLTMVDVGMTGAFNGLTVTNPADLAFGTM-LVTQSRV-----RPEYVQARRAK----- 673  
Barren\_Sp -----PNADGEGQLQNLKALDDENDLDGI-----PQHGFSDGSDNVDEGIPFPYGFCDSDSPKTPLLTPPSSSGFGDN-LLLTARLA-----KPDMLNAYAKRAK----- 629  
Barren\_Plasm\_y -----NVILNEINNDYIGNDLQINNFERRQTENMF-----MDNMDDGQDYQMHGELNDSIDKFWNMNFDIWNENKNDITKFGSKNDNTSIFQLHST-----GHANSLGSVAPDNLPK----- 806  
Barren\_Plasm\_f INKNNMNVILNEVNNNDILNDIDPINOQDFNNINIDNF-----DMENMDMNDGHLHEGLNEAIDKYVNMDFDNIWANNKNDNINNNNNLNSYNNMNSHNNNNNNNNLNSLFKKHSNFFNTALFPQFHSNTFQNVPEFENVSK----- 903  
ruler .....910.....920.....930.....940.....950.....960.....970.....980.....990.....1000.....1010.....1020.....1030.....1040.....1050

Barren\_Encepha KVNIKKLDKSDVLDVKKGGST-----SLLSIFEGIP-KVYNGEESKDISVHLCFISLLHLANENKNIQKAVGNDIEVQMLQ--- 440  
Barren\_At QVDVQVLKETLWECLQESHQPEIQNL-----IVQDEEHQ-----EPPSRSRPFKVLASFPDDCQAERTQDISPHLCFCICLLHLANENHNSLIGSINLDDLITHLA--- 704  
Barren\_Oryza QVDVHALKEVLWNHINTSADTDLLED-----KDTESFLCLSKVLQDLB-SCNPDAAAATEISPHLYVICLLHLANENHSLTLDRRPTLEIDDIYIPAS 680  
Barren\_Dm VIDMKNLKKSNSLIQKQLLNAVPEE-----IIPSHPKKKGEEH-----YSKGFASFOVYQKLB-DLLTTKMSDLSPSVAFYAVLHLANDLKLRLIPQEDLEDFQIRQVLD 736  
Barren\_Anoph VIDMKQLKYNCRWRVSSHVQAEVPPP-----PTQPPAASQPDVTPPPPQ-----BEETRITFSALYRKVP-QLLSKTMSENISKSLAFYAVLHLANENKSLLLGRQEDLNDVFTIRKEDD 718  
Barren\_Hs KMDMKKLLQSMWSLLTKFSRKEADTE-----ANHTESQEGAPE-----EVADEKMLSGLKDQ-RSLPPVMAQNLISPLAFACLLHLANENKLNKLEGTEDLSDLVLRQGD 747  
Barren\_Mm KMDMKKLLQSMWSLLTKFSRKEADTE-----ANHTESQEGAPE-----EVADEKMLSGLKDQ-RSLPPVMAQNLISPLAFACLLHLANENKLNKLEGTEDLSDLVLRQGD 723  
Barren\_Xl KMDMKKLLQSMWSLLTKFSRKEADTE-----ANHTESQEGAPE-----EVADEKMLSGLKDQ-RSLPPVMAQNLISPLAFACLLHLANENKLNKLEGTEDLSDLVLRQGD 699  
Barren\_Sc KVDVRRLLKKNVRSINNLIQEHDSRK-----PSSKEEIDA-----ALITDEQVFSVVHGLQ-KRLPPVMAQNLISPLAFACLLHLANENKLNKLEGTEDLSDLVLRQGD 721  
Barren\_Nc KVDVRRLLKKELRWGMGMDMLNQRVFFSLLFFSFFFLFVSSSFYFSQLLTRITDINNNNNNNPKRRLPLPPTPNDPFRPTPELLSRTSQRQRRTARKTNAQVRSHELAKSLPETSHGRHLHQLLHLLVA 823  
Barren\_Sp KVDVRRLLKKELRWGMGMDMLNQRVFFSLLFFSFFFLFVSSSFYFSQLLTRITDINNNNNNNPKRRLPLPPTPNDPFRPTPELLSRTSQRQRRTARKTNAQVRSHELAKSLPETSHGRHLHQLLHLLVA 731  
Barren\_Plasm\_y FVDVSKIKKILFNIVKPDENEENAEN-----ENENKNSDSSKQIVPYEGEK-----ETNMVPKSFPSVFNQLE-ETVEKKELKDIS-SFAVICVHLANENKLELTSNEDSDVFRPGPN 886  
Barren\_Plasm\_f FVDVAKIKKILCDIVKNBEEQKSNITN-----DSLCEYQTEKDNQIVTYIAEKITTFEIVKVEKHNEYNKD-KNINNTT-AT-ACLNESEASSISIHMLFVCLLYTCDQELLLLEKIPQNNNFVRYGLP 1024  
ruler .....1060.....1070.....1080.....1090.....1100.....1110.....1120.....1130.....1140.....1150.....1160.....1170.....1180.....1190.....1200

Barren_Encepha	-----	440
Barren_At	-----	704
Barren_Oryza	SLVK-----	684
Barren_Dm	-----	736
Barren_Anoph	GDAD-----	722
Barren_Hs	-----	747
Barren_Mm	-----	723
Barren_Xl	-----	699
Barren_Sc	ATTQAAS-----	728
Barren_Nc	SCQRKRVGD-----	832
Barren_Sp	LTTLEALENDV---	742
Barren_Plasm_y	-----	886
Barren_Plasm_f	VECHVNDDIPMLKN	1039
ruler	.....1210.....	