Phage virion proteins

>VIR|P82889|CAPSD_BP

MDFNPSEVASQVTNYIQAIAAAGVGVLALAIGLSAAWKYAKRFLKG

>VIR|P03619|CAPSD_BP

MKKSVVAKIIAGSTLVIGSSAFAADDATSQAKAAFDSLTAQATEMSGYAWALVVLVVGATV GIKLFKKFVSRAS

>VIR|P03620|CAPSD_BP

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>VIR|P03621|CAPSD_BP

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>VIR|P03623|CAPSD_BP

MQSVITDVTGQLTAVQADITTIGGAIIVLAAVVLGIRWIKAQFF

>VIR|P15794|CAPSD BP

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>VIR|P22535|CAPSD_BP

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ANVGIVKGFLVKVTAAITNNHATEAVALTDFGPANLVQRVIYYDPDNQRHTETSGWHLHF
VNTAKQGAPFLSSMVTDSPIKYGDVMNVIDAPATIAAGATGELTMYYWVPLAYSETDLTG
AVLANVPQSKQRLKLEFANNNTAFAAVGANPLEAIYQGAGAADCEFEEISYTVYQSYLDQ
LPVGQNGYILPLIDLSTLYNLENSAQAGLTPNVDFVVQYANLYRYLSTIAVFDNGGSFNAG
TDINYLSQRTANFSDTRKLDPKTWAAQTRRRIATDFPKGVYYCDNRDKPIYTLQYGNVGF
VVNPKTVNQNARLLMGYEYFTSRTELVNAGTISTT

>VIR|P85987|CAPSD_BP

MAAYQTYTMAGIKEDFADWVSNISPEYTPLISMIRKFPVHNTMFQWQWDVLKDVDTEN QHNEASDAKDVELTPTTVVQNYVQIMRKVVFVSDSANAVSSHGREKELFYQLKKAAKEL KRDNEGIFLLKDRAGDAGSATKPRLTASFGSLIDASMKKTADLDEATLFEMTAKLYTEGA DPTLIMYHPSNANFFASLQEKSGTRMRIFENDKRFVKQVEYIVDPLGQELKCIPNRWCPED ATYIFNPSDLGMAVLRAPKKVALAKSGSAEKYMIEQEVGFRLNNPKAAALIIGKYKEGGN GGGESVKS

>VIR|P85989|CAPSD_BP

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PQVYVTEDGIAKDTNVYFRKGLIKNLY

>VIR|P03622|CAPSD_BP

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>VIR|P03614|COAT BPF

MASNFEEFVLVDNGGTGDVKVAPSNFANGVAEWISSNSRSQAYKVTCSVRQSSANNRKY TVKVEVPKVATQVQGGVELPVAAWRSYMNMELTIPVFATNDDCALIVKALQGTFKTGNPI ATAIAANSGIY

>VIR|P49861|COAT_BPH

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>VIR|O04754|COAT_BPL

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>VIR|P85500|COAT_BPP

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SKTIVLSVGEATRTLTEIQSTADRQIFEEKVGPLVGRLRLTASLRQNGAKTAYRVNLKLDQA DVVDCSTSVCGELPKVRYTQVWSHDVTIVANSTEASRKSLYDLTKSLVVQATSEDLVVNL VPLGR

>VIR|P03616|COAT_BPP

AQLQNLVLKDREATPNDHTFVPRDIRDNVGEVVESTGVPIGESRFTISLRKTSNGRYKSTL KLVVPVVQSQTVNGIVTPVVVRTSYVTVDFDYDARSTTKERNNFVGMIADALKADLMLV HDTIVNLQGVY

>VIR|P04535|COAT_BPT

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QETGTVYLQASVQVTIDAGATDAAKLDAEIKKQMEAGALVEIAEGMATSIAELQEGFNGS
TDNPWNEMGFRIDKQVIEAKSRQLKAAYSIELAQDLRAVHGMDADAELSGILATEIMLEI
NREVVDWINYSAQVGKSGMTLTPGSKAGVFDFQDPIDIRGARWAGESFKALLFQIDKEAV
EIARQTGRGEGNFIIASRNVVNVLASVDTGISYAAQGLATGFSTDTTKSVFAGVLGGKYRV
YIDQYAKQDYFTVGYKGPNEMDAGIYYAPYVALTPLRGSDPKNFQPVMGFKTRYGIGINP
FAESAAOAPASRIOSGMPSILNSLGKNAYFRRVYVKGI

>VIR|P11128|FUS BPPH

MSIFSSLFKVIKKVISKVVATLKKIFKKIWPLLLIVAIIYFAPYLAGFFTSAGFTGIGGIFSSIAT TITPTLTSFLSTAWSGVGSLASTAWSGFQSLGMGTQLAVVSGAAALIAPEETAQLVTEIGTT VGDIAGTIIGGVAKALPGWIWIAAGGLAVWALWPSSDSKE

>VIR|P19192|F_BPCHP

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VTSPDGGYAENSIYDYFGLPTKVANYRHQVLPLRAYNLIFNEYYRDENLQESLPVWTGDA
DPKVDPTTGEESQEDDAVPYVYKLMRRNKRYDYFTSALPGLQKGPSVGIGITGGDSGRLP
VHGLAIRSYLDDSSDDQFSFGVSYVNASQKWFTADGRLTSGMGSVPVGTTGNFPIDNVV
YPSYFGTTVAQTGSPSSSSTPPFVKGDFPVYVDLAASSSVTINSLRNAITLQQWFEKSARYG
SRYVESVQGHFGVHLGDYRAQRPIYLGGSKSYVSVNPVVQNSSTDSVSPQGNLSAYALST
DTKHLFTKSFVEHGFVIGLLSATADLTYQQGLERQWSRFSRYDYYWPTFAHLGEQPVYNK
EIYCQSDTVMDPSGSAVNDVPFGYQERYAEYRYKPSKVTGLFRSNATGTLDSWHLSQNFA
NLPTLNETFIQSNTPIDRALAVPDQPDFICDFYFNYRCIRPMPVYSVPGLRRI

>VIR|P03661|G3P BPFD

>VIR|O80297|G3P_BPIF

MKKIIIALFFAPFFTHATTDAECLSKPAFDGTLSNVWKEGDSRYANFENCIYELSGIGIGYD NDTSCNGHWTPVRAADGSGNGGDDNSSGGGSNGDSGNNSTPDTVTPGQTVNLPSDLSTL SIPANVVKSDSIGSQFSLYTNASCTMCSGYYLSNNADSIAIANITETVKADYNQPDMWFEQ TDSDGNHVKILQNSYKAVSYNVESKQSDVNNPTYINYSYSVNVKQVSYDTSNVCIMNWE TFQNKCDASRAVLITDTVTPSYSRNITIQSNINYQGSNGSGGSGGSGGSGNDGGGTGNNG NGTGDFDYVKMANANKDALTESFDLSALQADTGASLDGSVQGTLDSLSGFSDSIGGLVG NGSAISGEFAGSSAAMNAIGEGDKSPLLDSLSFLKDGLFPALPEFKQCTPFVFAPGKEYEFII ECKYIDMFKGIFAFILYFWTFVTVYDSFSGILRKGRG

>VIR|P03663|G3P BPIK

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SSSAWKPTGYVPESGEPSSSPLKDGDTGGTGEGGSDTGGDTGGGSTGGDTGGSS GGGSSGGSSGGSTGKSLTKEDVTAAIHVASPSIGDAVKDSLTEDNDQYDNQKKADEQSA KASASVSDAISDGMRGVGNFVDDFGGESSQYGTGNSEMDLSVSLAKGQLGIDREGHGSA WESFLNDGALRPSIPTGHGCTNFVMYQGSVYQIEIGCDKLNDIKSVLSWVMYCLTFWYVF QSVTSLLRKGEQ

>VIR|P69532|G6P_BPM1

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>VIR|P69535|G7P_BPM1

MEQVADFDTIYQAMIQISVVLCFALGIIAGGQR

>VIR|P69538|G9P BPM1

MSVLVYSFASFVLGWCLRSGITYFTRLMETSS

>VIR|P31281|G_BPAL3

MYQNFVTKHDTAIQTSRFSVTGNVIPAAPTGNIPVINGGSITAERAVVNLYANMNVSTSSD GSFIVAMKVDTSPTDPNCVISAGVNLSFAGTSYPIVGIVRFESASEQPTSIAGSEVEHYPIEM SVGSGGVCSARDCATVDIHPRTSGNNVFVGVICSSAKWTSGRVIGTIATTQVIHEYQVLQP LK

>VIR|P03644|G_BPG4 M

MFQKFISKHNAPINSTQLAATKTPAVAAPVLSVPNLSRSTILINATTTAVTTHSGLCHVVRID ETNPTNHHALSIAGSLSNVPADMIAFAIRFEVADGVVPTAVPALYDVYPIETFNNGKAISFK DAVTIDSHPRTVGNDVYAGIMLWSNAWTASTISGVLSVNQVNREATVLQPLK

>VIR|Q9T1S4|HEAD_BPA

MANNLESNISQIVLKKFLPGFMSDIVLCKTVDRQLLSGEINSNTGDSVSFKRPHQFKSERTE TGDITGKDKNGLFSAKATGKVGKYITVAVEWTQIEEALKLNQLDQILSPIHERMVTDLETE LAHFMMNNGALSLGSPNTAIKKWADVAQTASFIKDIGIKTGENYAIMDPWSAQRLADAQS GLHAADQLVRTAWENAQISGNFGGIRALMSNGLASRKQGDFDGAITVKTAPNVDYLSVK DSYQFTVALTGATPSKTGFLKAGDQLKFTSTHWLNQQSKQTLYNGSTAMSFTATVLEETN STASGDVTVKLSGVPIYDEKNSQYNAVDAKVKAGDAVSIIGTAKQQMKPNLFYNKFFCGL GTIPLPKLHSLDSAVATYEGFSIRVHKYADGDANKQMMRFDLLPAYVCFNPHMGGQFFGN P

>VIR|P19193|H_BPCHP

MSFAENVGRFIGNSVNSVGSVIGDGLKGFNSTQSISSAKQANLLNNLPLPSLDNVLNIGMF GGLASGLLSYRAAKKQNKVMQDIANRQMAFQERMSSTAVRRHVEDLKKAGLNPLLALG GSASTPQGAFYSPVNPMESGLNSAISVADKVFDYQRLAHADFQGRLNSAMSVVQLASAV QDYKRNYGKFGEVAYWFDRYAGKLLPAMLFYLFRKHPVGRAVSAANSGYAVAKGAKGV NFKFSNMSSTAVQRHNSRYNVSKGWRR

>VIR|P03646|H BPPHX

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RDYLAAAFPELNAWERAGADASSAGMVDAGFENQKELTKMQLDNQKEIAEMQNETQKE
IAGIQSATSRQNTKDQVYAQNEMLAYQQKESTARVASIMENTNLSKQQQVSEIMRQMLTQ
AQTAGQYFTNDQIKEMTRKVSAEVDLVHQQTQNQRYGSSHIGATAKDISNVVTDAASGV
VDIFHGIDKAVADTWNNFWKDGKADGIGSNLSRK

>VIR|P85991|IGLVP_BP

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>VIR|P69592|J_BPPHX

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>VIR|P07582|LYS_BPPH

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>VIR|P26596|MCP_BPF4

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>VIR|D6RRG7|ORF10_BP

MAGRTSTYAPNQVTIVINHAASGISHTLTGFSEDSIVSVERLVDTFTEYVGADDTHTRVFN ANSGARATVSLAQTSESNDVLTFLHEFDREAMSADGMFEMLIKDNSGRSLYFSDEAYIAVI PQGGFSNQMNTRDWVISMTNTTFQHGGNQKVSPATADTLTALGVNLDARWL

>VIR|D6RRG1|ORF4 BPK

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>VIR|P11130|P13_BPPH

 $MVPLKISTLESQLQPLVKLVATETPGALVAYARGLSSADRSRLYRLLRSLEQAIPKLSSAVVS \\ ATTLAARGL$

>VIR|P11126|P1_BPPH6

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GLGQRRERVRILKPTVAHAIIQMWYSWFVEDDRTLAAARRTSRDDAEKLAIDGRRMQNA VTLLRKIEMIGTTGIGASAVHLAQSRIVDQMAGRGLIDDSSDLHVGINRHRIRIWAGLAVL QMMGLLSRSEAEALTKVLGDSNALGMVVATTDIDPSL

>VIR|P27378|P2 BPPRD

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>VIR|P11129|P3_BPPH6

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LGVKRGTKSDPRTTDVYADPKVPASRISGPMINGTVAPPATIPATIPVPLAPLGGAGGPGAQ
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GRVTLTDSERAQLASLTVRTASLRQQLSVGADPLSKTSIWRRAQKADYDLLSQQIIEADTV
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VVDADEQDAVIAISSGKPVKNSSDLPTADAVNYLFGITADDMPGIVSSQKEMNSEFEEGFL
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>VIR|Q9XJR6|P3_BPPM2

 $MNTSVPTSVPTNQSVWGNVSTGLDALISGWARVEQIKAAKASTGQGRVEQAMTPELDNG\\ AAVVVEAPKKAAQPSETLVFGVPQKTLLLGFGGLLVLGLVMRGNK$

>VIR|P11125|P4_BPPH6

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>VIR|O37958|P4 BPPM2

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>VIR|Q9XJR2|P5_BPPM2

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>VIR $|P22536|P5_BPPRD$

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LGDVTVTMPDTGQRITARAGTQGYYPVLSTNLMKFIVSATIDGKFPMNFINFPIALGVWPS GIKGDKGDPGAPGPAGGTVVVEDSGASFGESLLDTTSEPGKILVKRISGGSGITVTDYGDQ VEIEASGGGGGGGVTDALSLMYSTSTGGPASIAANALTDFDLSGALTVNSVGTGLTKSA AGIQLAAGKSGLYQITMTVKNNTVTTGNYLLRVKYGSSDFVVACPASSLTAGGTISLLIYC NVLGVPSLDVLKFSLCNDGAALSNYIINITAAKIN

>VIR|Q9XJR1|P6_BPPM2

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>VIR|P11123|P7_BPPH6

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>VIR|Q9XJR8|P7_BPPM2

MINKTTIKTVLITLGVLAAVNKVSALRSVKRLIS

>VIR|P07579|P8 BPPH6

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>VIR|Q9XJR5|P8 BPPM2

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>VIR|Q9XJR9|P9_BPPM2

MRTTTKKQIERTDPTLPNVHHLVVGATGSGKSAFIRDQVDFKGARVLAWDVDEDYRLPRV RSIKQFEKLVKKSGFGAIRCALTVEPTEENFERFCQLVFAISHAGAPMVVIVEELADVARIG KASPHWGQLSRKGRKYGVQLYVATQSPQEIDKTIVRQCNFKFCGALNSASAWRSMADNL DLSTREIKQLENIPKKQVQYWLKDGTRPTEKKTLTFK

>VIR|P11124|RDRP BPP

MPRRAPAFPLSDIKAQMLFANNIKAQQASKRSFKEGAIETYEGLLSVDPRFLSFKNELSRYL TDHFPANVDEYGRVYGNGVRTNFFGMRHMNGFPMIPATWPLASNLKKRADADLADGPV SERDNLLFRAAVRLMFSDLEPVPLKIRKGSSTCIPYFSNDMGTKIEIAERALEKAEEAGNL MLQGKFDDAYQLHQMGGAYYVVYRAQSTDAITLDPKTGKFVSKDRMVADFEYAVTGGE QGSLFAASKDASRLKEQYGIDVPDGFFCERRRTAMGGPFALNAPIMAVAQPVRNKIYSKYA YTFHHTTRLNKEEKVKEWSLCVATDVSDHDTFWPGWLRDLICDELLNMGYAPWWVKLF ETSLKLPVYVGAPAPEQGHTLLGDPSNPDLEVGLSSGQGATDLMGTLLMSITYLVMQLDH TAPHLNSRIKDMPSACRFLDSYWQGHEEIRQISKSDDAILGWTKGRALVGGHRLFEMLKE GKVNPSPYMKISYEHGGAFLGDILLYDSRREPGSAIFVGNINSMLNNQFSPEYGVQSGVRD RSKRKRPFPGLAWASMKDTYGACPIYSDVLEAIERCWWNAFGESYRAYREDMLKRDTLE LSRYVASMARQAGLAELTPIDLEVLADPNKLQYKWTEADVSANIHEVLMHGVSVEKTER FLRSVMPR

>VIR|Q9XJR3|SPIKE BP

MIVKKKLAAGEFAETFKNGNNITIIKAVGELVLRAYGADGGEGLRTIVRQGVSIKGMNYTS VMLHTEYAQEIEYWVGDLDYSFQEQTTKSRDVNSFQIPLRDGVRELLPEDASRNRASIKSP VDIWIGGENMTALNGIVDGGRKFEAGQEFQINTFGSVNYWVSDEEIRVFKEYSARAKYAQ NEGRTALEANNVPFFDIDVPPELDGVPFSLKARVRHKSKGVDGLGDYTSISVKPAFYITEG DETTDTLIKYTSYGSTGSHSGYDFDDNTLDVMVTLSAGVHRVFPVETELDYDAVQEVQH DWYDESFTTFIEVYSDDPLLTVKGYAQILMERT

>VIR|P85501|STRU1 BP

MATDSLGTLTVDLIANTGGFERGMDAAERRIASTTRAFQRQEQAAERLVGRIDPVAGAIN RLVQEQTELERHFRSGIIPAGEFERLNRILNDQLDAVQRGNREMASGAMSARQYQAALRGVPAOFTDIAVSLASGOOPLTVLLOOGGOLKDMFGGVVPAARALGGYIAGLVNPITGLAAS VGVLGISFIDAEREAAAFNKAIFAGNNAAGVSGSGLSQIAEQASAVAGSLSSANKAAIALA SSGKVAASQLQSLTEATIAIAQFTGKEVDDVAKSLSAMGDSATDAAAKISEQYGLLTYEQY QVIKSIDEQGNSQRALDVLGEELNRNAQERLKQYRESLSDIERDWIDIKTAITNSYAAVRSE IFPNQNQQIEQIQRILRTRQEGGVLGAVSSAFGFGENSTESLQQQLDSLVKQRDAAAKQAE EQAKITKSNQDRVDASREWEKENEKYLSSRVKMEKEISAARELGRKAGLNEIEIEDRIAQI RKSYEEKPSSRSGSLDAGQRMLDSLRQQYASMQAQLEATEKLGTQAQALVKWEQQLAD LKSRGSLSADOKALLANADLITAOLKRNAALEDELNTRKEIOKTLDDYKRLNESLRTDAE KQLDLTRQRFEILDKARQAGISDDDYRRTAERIVSSSTTKAPTFSGVDAVVAGPQGELDKLDKAQEDLEAWYEQQLEILNENREKRAELNASWDEQELKLKQEHEDAMAAIEQSRQQITL SANEQFFGNLSGLAKTFFGEQSGLYKAAFVAEKSFAIAKTLINVPKTASDAYSAMAGIPVIG PALGIAAAAAVTAQLAQVAAVKNVNLSGMAHDGIDAVPETGTWLLQKGERVTTAETSA KLDKTLDDVRSNQSGGGAPTINLIEDRSRAGQVNTRRQDDQYIIDVVVADLFGDGRTSKA**IGSSFGMRRSGT**

>VIR|P85502|STRU2 BP

MAYDTSAFPLGSKDPRVLYNNAENMDVAMNSVEQERWMDRGPQRPPLPRWTYWGMEQ
NYNRFISNSAWELPPLVYVDGSPLTVERSSQVIERDGNLYSVKLPASFPVELSGTWSADEPL
LVFRSDQSLRQELAEQNGGTLVGWKRTQLSASIDTIQQLADSIPIRVWEFAELVSDKPSPDP
ATWNWTPAFQAMVDTAESYMQSSGAKQITCYAGPGTFLIDSIVWRSGVHMYFGGAELKA
HPDSIDGNSLINATLKLSDIGFYGPGIVNGDKDSFDPEHRQHGIHCVAKKVKVKDLFIENIG
SSSVFSLGDGVIFRPTIPEGDFQCEDCEVSGCTFSNIERQCITVESGFNIRILSNGFYNSTYAA
LDIENAGYTMGDVDGVIFQGNYIDGCLYGVTAVTYQPVDAQRNIVCGGNIYKNVMDAYH
FRGCSNVKVGYGDIAEVSRYGAYIYSDGATTVSNIEISDFTTSGGTYGVYAQTTSGGSFNRI
KLSTLKITGTSTSPITVQSTSGLRIEEVDVLINTGAGVVIQNCASPIIRNLKMVGAVTLSVPA
VSFIGTTTNPRVGGLDIAGFTVGVSVTTSATTTIHSLSNNVFAGVATPWSVNPGNYIKGQFS
GTFTMNAAASMNVNSVGMNVTSSVVRLIPTNAAAATLQAGSKMAWVVNSASSNNVSFR
VQTADGTAAAGTETFAFVIENL

>VIR|P85503|STRU3_BP

MAKNNVVKAQGTDLYFIDPDTHVVMNAGCITSLSGIDTSIDQIETTCLNETARSYVAGLAT PGTATFSINTNPQDPVHIRLLELKNAGVSLDWAVGWSDGTSAPTAVLDSSGEYDFDVPADR SWLLFEGYMNSFSFEFAQNAVVTSSIGIQVSGEPVLIPKSTS

>VIR|P85992|TAILF_BP

MATVNEFRGAMSRGGGVQRQHRWRVTISFPSFAASADQTRDVCLLAVTTNTPTGQLGEIL VPWGGRELPFPGDRRFEALPITFINVVNNGPYNSMEVWQQYINGSESNRASANPDEYFRD VVLELLDANDNVTKTWTLQGAWPQNLGQLELDMSAMDSYTQFTCDLRYFQAVSDRSR >VIR|P09009|TERM_BPP

MAKKKPVEKNGLVYKEFQKQVSNLKKAGLIPKTLDVRKVKPTKHYKGLVSKYKDVATG GAKLAAIPNPAVIETLEARGESIIKKGGKAYLKARQQINQRGQIVNPFTVRVTKRGEVVRR

YRKTTPEGKPVYITQRELPIKFENMEQWLTELKAAGFQLQPGEQIYFTFNGNYSRRTYTSF DEAFNKFMTYDIIIDAVAGKLKVEDEADLVKSVGFQRISGPEAKAYNRNRIVLPEMQFSQA AKKKYKRRQKRGYGSKGV

>VIR|P12528|TSPE BPP

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YSVKLSDYPTLQDAASAAVDGLLIDRDYNFYGGETVDFGGKVLTIECKAKFIGDGNLIFTK
LGKGSRIAGVFMESTTTPWVIKPWTDDNQWLTDAAAVVATLKQSKTDGYQPTVSDYVKF
PGIETLLPPNAKGQNITSTLEIRECIGVEVHRASGLMAGFLFRGCHFCKMVDANNPSGGKD
GIITFENLSGDWGKGNYVIGGRTSYGSVSSAQFLRNNGGFERDGGVIGFTSYRAGESGVK
TWQGTVGSTTSRNYNLQFRDSVVIYPVWDGFDLGADTDMNPELDRPGDYPITQYPLHQL
PLNHLIDNLLVRGALGVGFGMDGKGMYVSNITVEDCAGSGAYLLTHESVFTNIAIIDTNTK
DFQANQIYISGACRVNGLRLIGIRSTDGQGLTIDAPNSTVSGITGMVDPSRINVANLAEEGL
GNIRANSFGYDSAAIKLRIHKLSKTLDSGALYSHINGGAGSGSAYTQLTAISGSTPDAVSLK
VNHKDCRGAEIPFVPDIASDDFIKDSSCFLPYWENNSTSLKALVKKPNGELVRLTLATL

>VIR|Q9XJP3|TSPE_BPS

MTDIITNVVIGMPSQLFTMARSFKAVANGKIYIGKIDTDPVNPENQIQVYVENEDGSHVPA SQPIVINAAGYPVYNGQIVKFVTEQGHSMAVYDAYGSQQFYFQNVLKYDPDQFGPDLIEQ LAQSGKYSQDNTKGDAMIGVKQPLPKAVLRTQHDKNKEAISILDFGVIDDGVTDNYQAIQ NAIDAVASLPSGGELFIPASNQAVGYIVGSTLLIPGGVNIRGVGKASQLRAKSGLTGSVLRL SYDSDTIGRYLRNIRVTGNNTCNGIDTNITAEDSVIRQVYGWVFDNVMVNEVETAYLMQG LWHSKFIACQAGTCRVGLHFLGQCVSVSVSSCHFSRGNYSADESFGIRIQPQTYAWSSEAV RSEAIILDSETMCIGFKNAVYVHDCLDLHMEQLDLDYCGSTGVVIENVNGGFSFSNSWIA ADADGTEQFTGIYFRTPTSTQSHKIVSGVHINTANKNTAANNQSIAIEQSAIFVFVSGCTLT GDEWAVNIVDINECVSFDKCIFNKPLRYLRSGGVSVTDCYLAGITEVQKPEGRYNTYRGCS GVPSVNGIINVPVAVGATSGSAAIPNPGNLTYRVRSLFGDPASSGDKVSVSGVTINVTRPSP VGVALPSMVEYLAI

>VIR|P09677|VA1 BPSP

MAKLNQVTLSKIGKNGDQTLTLTPRGVNPTNGVASLSEAGAVPALEKRVTVSVAQPSRNR KNFKVQIKLQNPTACTRDACDPSVTRSAFADVTLSFTSYSTDEERALIRTELAALLADPLIV DAIDNLNPAYWAALLVASSGGGDNPSDPDVPVVPDVKPPDGTGRYKCPFACYRLGSIYEV GKEGSPDIYERGDEVSVTFDYALEDFLGNTNWRNWDQRLSDYDIANRRRCRGNGYIDLD ATAMQSDDFVLSGRYGVRKVKFPGAFGSIKYLLNIQGDAWLDLSEVTAYRSYGMVIGFW TDSKSPQLPTDFTQFNSANCPVQTVIIIPSL

>VIR|P19726|VC10A BP

MASMTGGQQMGTNQGKGVVAAGDKLALFLKVFGGEVLTAFARTSVTTSRHMVRSISSG KSAQFPVLGRTQAAYLAPGENLDDKRKDIKHTEKVITIDGLLTADVLIYDIEDAMNHYDV RSEYTSQLGESLAMAADGAVLAEIAGLCNVESKYNENIEGLGTATVIETTQNKAALTDQV ALGKEIIAALTKARAALTKNYVPAADRVFYCDPDSYSAILAALMPNAANYAALIDPEKGSI RNVMGFEVVEVPHLTAGGAGTAREGTTGQKHVFPANKGEGNVKVAKDNVIGLFMHRSA VGTVKLRDLALERARRANFQADQIIAKYAMGHGGLRPEAAGAVVFKVE

>VIR|P03714|VCF2_LAM

 $MADFDNLFDAAIARADETIRGYMGTSATITSGEQSGAVIRGVFDDPENISYAGQGVRVEGS\\ SPSLFVRTDEVRQLRRGDTLTIGEENFWVDRVSPDDGGSCHLWLGRGVPPAVNRRR\\$

>VIR|P26747|VG05_BPP

MALNEGQIVTLAVDEIIETISAITPMAQKAKKYTPPAASMQRSSNTIWMPVEQESPTQEGW DLTDKATGLLELNVAVNMGEPDNDFFQLRADDLRDETAYRRIQSAARKLANNVELKVA NMAAEMGSLVITSPDAIGTNTADAWNFVADAEEIMFSRELNRDMGTSYFFNPQDYKKAG YDLTKRDIFGRIPEEAYRDGTIQRQVAGFDDVLRSPKLPVLTKSTATGITVSGAQSFKPVAW QLDNDGNKVNVDNRFATVTLSATTGMKRGDKISFAGVKFLGQMAKNVLAQDATFSVVR VVDGTHVEITPKPVALDDVSLSPEQRAYANVNTSLADAMAVNILNVKDARTNVFWADDAI RIVSQPIPANHELFAGMKTTSFSIPDVGLNGIFATQGDISTLSGLCRIALWYGVNATRPEAIG VGLPGQTA

>VIR|P19060|VG06_BPT

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YNTLYIQQFGNAAVYESFMRTANLRSSVVQAAQDNGYLPTSKSAAQTEIMLTCTDALNRN
YITIPRGTRFLAYAKDTSVNPYNFVSREDVIAIRDKNNQYFPRLKLAQGRIVRTEIIYDKLTP
IIIYDKNIDRNQVKLYVDGAEWINWTRKSMVHAGSTSTIYYMRETIDGNTEFYFGEGEISV
NASEGALTANYIGGLKPTQNSTIVIEYISTNGADANGAVGFSYADTLTNITVININENPNDDP
DFVGADGGGDPEDIERIRELGTIKRETQQRCVTATDYDTFVSERFGSIIQAVQTFTDSTKPG
YAFIAAKPKSGLYLTTVQREDIKNYLKDYNLAPITPSIISPNYLFIKTNLKVTYALNKLQESE
QWLEGQIIDKIDRYYTEDVEIFNSSFAKSKMLTYVDDADHSVIGSSATIQMVREVQNFYKT
PEAGIKYNNQIKDRSMESNTFSFNSGRKVVNPDTGLEEDVLYDVRIVSTDRDSKGIGKVII
GPFASGDVTENENIQPYTGNDFNKLANSDGRDKYYVIGEINYPADVIYWNIAKINLTSEKF
EVQTIELYSDPTDDVIFTRDGSLIVFENDLRPQYLTIDLEPISQ

>VIR|P19062|VG08_BPT

MNDSSVIYRAIVTSKFRTEKMLNFYNSIGSGPDKNTIFITFGRSEPWSSNENEVGFAPPYPT
DSVLGVTDMWTHMMGTVKVLPSMLDAVIPRRDWGDTRYPDPYTFRINDIVVCNSAPYN
ATESGAGWLVYRCLDVPDTGMCSIASLTDKDECLKLGGKWTPSARSMTPPEGRGDAEGTI
EPGDGYVWEYLFEIPPDVSINRCTNEYIVVPWPEELKEDPTRWGYEDNLTWQQDDFGLIY
RVKANTIRFKAYLDSVYFPEAALPGNKGFRQISIITNPLEAKAHPNDPNVKAEKDYYDPED
LMRHSGEMIYMENRPPIIMAMDOTEEINILFTF

>VIR|P10927|VG09_BPT

MFIQEPKKLIDTGEIGNASTGDILFDGGNKINSDFNAIYNAFGDQRKMAVANGTGADGQII HATGYYQKHSITEYATPVKVGTRHDIDTSTVGVKVIIERGELGDCVEFINSNGSISVTNPLTI QAIDSIKGVSGNLVVTSPYSKVTLRCISSDNSTSVWNYSIESMFGQKESPAEGTWNISTSGS VDIPLFHRTEYNMAKLLVTCQSVDGRKIKTAEINILVDTVNSEVISSEYAVMRVGNETEEDE IANIAFSIKENYVTATISSSTVGMRAAVKVIATQKIGVAQ

>VIR|P10928|VG10_BPT

MKQNINIGNVVDDGTGDYLRKGGIKINENFDELYYELGDGDVPYSAGAWKTYNASSGQT LTAEWGKSYAINTSSGRVTINLPKGTVNDYNKVIRARDVFATWNVNPVTLVAASGDTIKGS AVPVEINVRFSDLELVYCAPGRWEYVKNKQIDKITSSDISNVARKEFLVEVQGQTDFLDVF RGTSYNVNNIRVKHRGNELYYGDVFSENSDFGSPGENEGELVPLDGFNIRLRQPCNIGDTV QIETFMDGVSQWRSSYTRRQIRLLDSKLTSKTSLEGSIYVTDLSTMKSIPFSAFGLIPGEPIN PNSLEVRFNGILQELAGTVGMPLFHCVGADSDDEVECSVLGGTWEQSHTDYSVETDENGI PEILHFDSVFEHGDIINITWFNNDLGTLLTKDEIIDETDNLYVSQGPGVDISGDVNLTDFDKI GWPNVEAVQSYQRAFNAVSNIFDTIYPIGTIYENAVNPNNPVTYMGFGSWKLFGQGKVLV GWNEDISDPNFALNNNDLDSGGNPSHTAGGTGGSTSVTLENANLPATETDEEVLIVDENG

SVIVGGCQYDPDESGPIYTKYREAKASTNSTHTPPTSITNIQPYITVYRWIRIA >VIR|P10929|VG11 BPT

MSLLNNKAGVISRLADFLGFRPKTGDIDVMNRQSVGSVTISQLAKGFYEPNIESAINDVHN FSIKDVGTIITNKTGVSPEGVSQTDYWAFSGTVTDDSLPPGSPITVLVFGLPVSATTGMTAIE FVAKVRVALQEAIASFTAINSYKDHPTDGSKLEVTYLDNQKHVLSTYSTYGITISQEIISESK PGYGTWNLLGAQTVTLDNQQTPTVFYHFERTA

>VIR|P15132|VG13 BPP

MVYVSNKYLTMSEMKVNAQYILNYLSSNGWTKQAICGMLGNMQSESTINPGLWQNLDE GNTSLGFGLVQWTPASNYINWANSQGLPYKDMDSELKRIIWEVNNNAQWINLRDMTFKE YIKSTKTPRELAMIFLASYERPANPNQPERGDQAEYWYKNLSGGGGGGLQLAQFPMDIINI SQGENGSFSHKGTLCIDFVGKTEKYPYYAPCDCTCVWRGDASAYLAWTSDKEVMCADG SVRYITWVNVHESPLPFDVGKKLKKGDLMGHTGIGGNVTGDHWHFNVIDGKEYQGWTK KPDSCLAGTELHIYDVFAVNNVEIINGNGYDWKTSDWQDGDGGDGDDDNDNNKTKDLI TLLLSDALHGWKA

>VIR|P13332|VG18_BPT

MTLLSPGIELKETTVQSTVVNNSTGTAALAGKFQWGPAFQIKQVTNEVDLVNTFGQPTAE
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VSDDIETEGKITEVDADGKIKKINIPTGKNYAKAKEVGEYPTLGSNWTAEISSSSSGLAAVI
TLGKIITDSGILLAEIENAEAAMTAVDFQANLKKYGIPGVVALYPGELGDKIEIEIVSKADYA
KGASALLPIYPGGGTRASTAKAVFGYGPQTDSQYAIIVRRNDAIVQSVVLSTKRGEKDIYD
SNIYIDDFFAKGGSEYIFATAQNWPEGFSGILTLSGGLSSNAEVTAGDLMEAWDFFADRESV
DVQLFIAGSCAGESLETASTVQKHVVSIGDARQDCLVLCSPPRETVVGIPVTRAVDNLVN
WRTAAGSYTDNNFNISSTYAAIDGNHKYQYDKYNDVNRWVPLAADIAGLCARTDNVSQT
WMSPAGYNRGQILNVIKLAIETRQAQRDRLYQEAINPVTGTGGDGYVLYGDKTATSVPSP
FDRINVRRLFNMLKTNIGRSSKYRLFELNNAFTRSSFRTETAQYLQGNKALGGIYEYRVVC
DTTNNTPSVIDRNEFVATFYIQPARSINYITLNFVATATGADFDELTGLAG

>VIR|P13333|VG19_BPT

MFVDDVTRAFESGDFARPNLFQVEISYLGQNFTFQCKATALPAGIVEKIPVGFMNRKINVA GDRTFDDWTVTVMNDEAHDARQKFVDWQSIAAGQGNEITGGKPAEYKKSAIVRQYARD AKTVTKEIEIKGLWPTNVGELQLDWDSNNEIQTFEVTLALDYWE

>VIR|Q05229|VG23_BPM

MAENDDAVLTAAVGYVYVGAAGTAAPTPALLKTIDLSKPETWTGATGWTSVGHTSRGTL PEFGFEGGESEVKGSWQKKKLREITTEDPIDYVTVLLHQFDEQSLGLYYGPNASETPGVFG VKTGQTNEKAVLVVIEDGDMRLGHHAHKAGVRRDDAIELPIDDLAALPVRFTYLDHEDE LPFSWINEDLFNVPEVPEG

>VIR|P19896|VG24_BPT

MAKINELLRESTTTNSNSIGRPNLVALTRATTKLIYSDIVATQRTNQPVAAFYGIKYLNPDNE FTFKTGATYAGEAGYVDREQITELTEESKLTLNKGDLFKYNNIVYKVLEDTPFATIEESDLE LALQIAIVLLKVRLFSDAASTSKFESSDSEIADARFQINKWQTAVKSRKLKTGITVELAQDL EANGFDAPNFLEDLLATEMADEINKDILQSLITVSKRYKVTGITDSGFIDLSYASAPEAGRS LYRMVCEMVSHIQKESTYTATFCVASARAAAILAASGWLKHKPEDDKYLSQNAYGFLAN GLPLYCDTNSPLDYVIVGVVENIGEKEIVGSIFYAPYTEGLDLDDPEHVGAFKVVVDPESL QPSIGLLVRYALSANPYTVAKDEKEARIIDGGDMDKMAGRSDLSVLLGVKLPKIIIDE >VIR|P35837|VG26 BPP

MADPSLNNPVVIQATRLDASILPRNVFSKSYLLYVIAQGTDVGAIAGKANEAGQGAYDAQ VKNDEQDVELADHEARIKQLRIDVDDHESRITANTKAITALNVRVTTAEGEIASLQTNVSA LDGRVTTAENNISALQADYVSKTATTSQSLASPLNVTTSYSVGGKKVLGARQTGWTAATG TANKGVFDADLTFAVSDTYTQSEIQAIANALITERRRTKALEDALRAHGLID >VIR|P17172|VG27_BPT

MSMLQRPGYPNLSVKLFDSYDAWSNNRFVELAATITTLTMRDSLYGRNEGMLQFYDSKN IHTKMDGNEIIQISVANANDINNVKTRIYGCKHFSVSVDSKGDNIIAIELGTIHSIENLKFGR PFFPDAGESIKEMLGVIYQDRTLLTPAINAINAYVPDIPWTSTFENYLSYVREVALAVGSDK FVFVWQDIMGVNMMDYDMMINQEPYPMIVGEPSLIGQFIQELKYPLAYDFVWLTKSNPH KRDPMKNATIYAHSFLDSSIPMITTGKGENSIVVSRSGAYSEMTYRNGYEEAIRLQTMAQY DGYAKCSTIGNFNLTPGVKIIFNDSKNQFKTEFYVDEVIHELSNNNSVTHLYMFTNATKLE TIDPVKVKNEFKSDTTTEESSSSNKQ

>VIR|P13339|VG48_BPT

MAIVKEITADLIKKSGEKISAGQSTKSEVGTKTYTAQFPTGRASGNDTTEDFQVTDLYKNG LLFTAYNMSSRDSGSLRSMRSNYSSSSSSILRTARNTISSTVSKLSNGLISNNNSGTISKSPIA NILLPRSKSDVDTSSHRFNDVQESLISRGGGTATGVLSNIASTAVFGALESITQGIMADNNE QIYTTARSMYGGAENRTKVFTWDLTPRSTEDLMAIINIYQYFNYFSYGETGKSQYAAEIKG YLDDWYRSTLIEPLSPEDAAKNKTLFEKMTSSLTNVLVVSNPTVWMVKNFGATSKFDGK TEIFGPCQIQSIRFDKTPNGNFNGLAIAPNLPSTFTLEITMREIITLNRASLYAGTF >VIR|P08767|VGF_BPAL

MSNVQTSAEREIVDLSHLAFDCGMLGRLKTVSWTPVIAGDSFELDAVGALRLSPLRRGLA IDSKVDFFTFYIPHRHVYGDQWIQFMRDGVNAQPLPSVTCNRYPDHAGYVGTIVPANNRI PKFLHQSYLNIYNNYFRAPWMPERTEANPSNLNEDDARYRFRCCHLKNIWSAPLPPETKL AEEMGIESNSIDIMGLQAAYAQLHTEQERTYFMQRYRDVISSFGGSTSYDADNRPLLVMH TDFWASGYDVDGTDQSSLGQFSGRVQQTFKHSVPRFFVPEHGVMMTLALIRFPPISPLEHH YLAGKSQLTYTDLAGDPALIGNLPPREISYRDLFRDGRSGIKIKVAESIWYRTHPDYVNFKY HDLHGFPFLDDAPGTSTGDNLQEAILVRHQDYDACFQSQQLLQWNKQARYNVSVYRHM PTVRDSIMTS

>VIR|P13559|VLYS_BPP

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>VIR|P03733|VMTV_LAM

MPVPNPTMPVKGAGTTLWVYKGSGDPYANPLSDVDWSRLAKVKDLTPGELTAESYDDS YLDDEDADWTATGQGQKSAGDTSFTLAWMPGEQGQQALLAWFNEGDTRAYKIRFPNGT VDVFRGWVSSIGKAVTAKEVITRTVKVTNVGRPSMAEDRSTVTAATGMTVTPASTSVVKG QSTTLTVAFQPEGVTDKSFRAVSADKTKATVSVSGMTITVNGVAAGKVNIPVVSGNGEFAA VAEITVTAS

>VIR|P27379|VP06_BPP

MDTEEIKEEMQEAAEAAIENAVETAELETAAIKAEGAAAAAEQSAEQAAVMAATLAASV EANAAQQIAEHSEQVQTQEEKISWLENQVMAMASNLQMMQEAVTALTVSQSLTPEPSPVP AVEVEAMPEAVTVEILPESAGDQQEAEPVPSVGDQQETAPRKRFRAI

>VIR|P27380|VP07_BPP

MSGALOWWETIGAASAOYNLDPRLVAGVVOTESSGNPRTTSGVGAMGLMOLMPATAKS

LGVTNAYDPTQNIYGGAALLRENLDRYGDVNTALLAYHGGTNQANWGAKTKSYPGKV MKNINLLFGNSGPVVTPAAGIAPVSGAQEMTAVNISDYTAPDLTGLTMGAGSPDFTGGAS GSWGEENIPWYRVDKHVANAAGSAYDAVTDAVSAPVEAAGNYALRGVVIIAAVAIVVVG LYFLFQDEINSAAMKMIPAGKAAGAAAKALA

>VIR|P27381|VP09_BPP

MTIRMPNDRQRILVLGKTGTGKTCAAVWHLSQKDFKRKAWIVLNHKGDDLIDSIEGANH VDLNFRPKKPGLYIYHPIPDVDDAEVTQLLWDIHAMGDIGVYVDEGYMIPNRDPAFQALL TQGRSKKIPMIILSQRPVWLTRFAISESDFFQIFQLGDQRDRQTVQGFVPVDLEKLMQAPV NTVPALKKFHSIYYDVGANNCVIMTPVPTADAVLARFDLGKKRKQTL

>VIR|P27382|VP11_BPP

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>VIR|P27392|VP16_BPP

MDKKKLLYWVGGGLVLILIWLWFRNRPAAQVASNWEGPPYMTYNQPQAGSVTLPVAGY TSPSPTLPNRNRSCGCNPAVSAAMAQGADLASKLTDSITSQLNDYASSLNDYLASQAGV >VIR|P27388|VP22 BPP

MQLITDMAEWSSKPFRPDMSLTGWLAFVGLIIVAIILWQQIIRFIIE

>VIR|P27391|VP30 BPP

 ${\tt MALINPQFPYAGPVPIPGPAPTETMPLLNYRVEGRIAGIQQARQFMPFLQGPHRAVAEQTY}\\ {\tt HAIGTGIQMGQTFNQPLINTQEG}$

>VIR|P27384|VP31_BPP

 $MNVNNPNQMTVTPVYNGCDSGEGPQSVRGYFDAVAGENVKYDLTYLADTQGFTGVQCI\\ YIDNAENDGAFEIDVEETGQRIKCPAGKQGYFPLLVPGRAKFVARHLGSGKKSVPLFFLNF\\ TIAQGVW$

>VIR|P27390|VP34_BPP

 ${\tt MNDFVGPIVTVLTAIIGVAILAVLVSRNSNTAGVIKAGSGGFSSMLGTALSPVTGGTGFAMT} \\ {\tt NNYSGF}$

>VIR|P85225|VPN1_BPP

MAVEQFPRKKVSRPHTEITVDTSGIGGSSSSSDKTLMLVGSAKGGKPDTVYRFRNYQQAK QVLRSGDLLDAIELAWNASDVNTASAGDILAVRVEDAKNATLTKGGLTFASTIYGVDANEI QVALEDNNLTHTKRLTVAFSKDGYKKVFDNLGKIFSIQYKGSEAQANFTIAQDSISKKATT LTLNVGSEPESTTEVMKYELGQGVYSETNVLVSAINSLPDWEAKFFPIGDKNLPTDALEAV TKVDVKTEAVFVGALAGDIAKQLEYNDYVTVAVDATKPVEDFELTNLTGGSDGTAPESWA NKFPLLANEGGYYLVPLTDKQAVHSEALAFVKDRTDNGDPMRIIVGGGTNETVEESITRAT NLRDPRASLVGFSGTRKMDDGRLLKLPGYMMASQIAGIASGLEVGEAITFKHFNVTSVDR VFESSQLDMLNESGVISIEFVRNRTLTAFRVVQDVTTYNDKSDPVKNEMSVGEANDFLVSE LKIELDNNFIGTKVIDTSASLIKNFIQSFLDNKKRAREIQDYTPEEVQVVLEGDVASISMTV MPIRSLNKITVQLVYKQQILTA

>VIR|P85226|VPN2 BPP

MTEKKNTERQLTSVQEEVIKGFTTGYGITPESQTDAAALRREFLDDQITMLTWADGDLSF YRDITKRPATSTVAKYDVYLAHGRVGHTRFTREIGVAPISDPNLRQKTVNMKYVSDTKNM SIATGLVNNIEDPMRILTDDAISVVAKTIEWASFYGDSDLSENPDAGSGLEFDGLAKLIDKH NVLDAKGASLTEALLNQASVLVGKGYGTPTDAYMPIGVQADFVNQQLDRQVQVISDNG QNATMGFNVKGFNSARGFIRLHGSTVMELEQILDENRMQLPNAPQKATVKATLEAGTKG KFRDEDLTIDTEYKVVVVSDDAESAPSDVASVVIDDKKKQVKLEITINNMYQARPQYVAI YRKGLETGLFYQIARVPASKAVEGVITFIDVNDEIPETADVFVGELTPSVVHLFELLPMMRL PLAQVNASVTFAVLWYGALALRAPKKWARIKNVKYIATGNVFN

>VIR|P85227|VPN3_BPP

MAIATNNSRVYASLQLKNKQDSMYLAIGKTTPWTNEDAPPAPDPTTTTLTEVIGYKKVAR VSLCREYLPSDDSKYPVVSYGSRKFTLIPDEDGYKEQAWMVYVEAEITGDELPTGTFRQV GIHTDLVSKASSEKKALLPTDVTDAGILQFFENRQQQNRTSDVILKEKFIITMENKKSVKQ >VIR|P85228|VPN4_BPP

MAKEILNIEDLLKPETLEVAIDGKYLIVPTLSDGFTGTVAGGYAYAVTKKGTDYTVNELIYN QKDNTFKPSDEPIIITDDNEIFFITRTLEDPYNYPVVATEKLKTKDVKEKQVLQAFLAFADD RFKLGVYNVFLADEPFVYGDKTE

>VIR|P85229|VPN5 BPP

 $MASVGNQTVHTGNTVYLMIGNKIIGRAQSASGERQYGTQGIYEIGSIMPQEHVYLKYEGT\\ ITLERMRMKKEDLASLGITALGEDILQRDIIDIVMMDNLTKEIVVAYRGCSAISYSESFTANE\\ VTSESTQFTYLTSAKVK$

>VIR|P85230|VPN6_BPP

MNYPKREKVVEVSLASGTYSVFPRRLGVTTNDAMSIVNGAMKGAELPMIPVHKLADRDS ELTYVNAFQIQTATENIVDVPERITSLYTKPEDETPEDEEVRLGTINNYFSLR

>VIR|A8E283|VPN7_BPP

MNKLVKRRFQAGLGSEIKRVYKEGQQINTLLLAQVIQVNYKYNTVDLLALQHKEVFQNS YANEGRFSARLPMEFGGRNIVGQPYGQVNPIAVGTVVLVGFINSDKDMPIVISVYNNNDV SKQLSRTQFSNSDPKDLELIGDMHQKFSLYPSLTYDSVDGEGGRVVTFSGKSFIAFDTKEV ANSSTTDAGYGTKYEDLETSYYNNGDLIEPMKGRAPNVLFKHQGVLDDDGKPDLHDLLI HINPDGTYRTSMMNKEEDWRTLFEMTPDGRVKLRKQDSINIDGGIEISELGINNEGFVYLR NGDMDLEVRKDGIYSQGKLFTADVDLSDVYDKLNGLSIQIKETNGQLEIIANGVEEQNGK ISELSTEITIVAGKVESKVTKTEVQDMIDSSFVDMSDAIKKAQEDADKANKVIADMSSDNR LTPSEKIDLLKEWDIIKNEYPSYLEQAETYEVDSKDYTAKYNSLELFVTPILADMESTSSVD GATLRKTFNSYYTARIALLNSISKKLKDGITEAMKKASQASLDATQAMADASQAKIDADN ANKLISDIASDNKLTPSEKYQLKKEWDVIVKEYPTTIAQAEKYAVDTAEYTAKYKALELFV EPLFKDMDETSIVDGERLRATFSDYYASKIALLKEVTDSAKTELDAYGNKISVMETNITQT SEAITLLATRVQTVEDGVQSNKAQIEIQAEQISQKVTASEVKGIVDDSINNLTLGGTNLFVI KTQTAGLLNENDGTVGTAVDNSVVSDYIKVNQKTPYIATLYGNTGTNMIITDWYDKNRTF ISGEAVADSGDFSKKYVSPENAVYARVSYKKANSVNIKFEAGTKATDYSPSWEDIKGDQTA LEEYIKKVEEQAKKAQQDAENAKNDAENANNAIADMSNDNMLAPNEKKQILLQWEQIK TEYPINLDQATKFGVSSQQYTTAYNALDEYLKPILADMTTTSVVVGSTLRNTFNNYYDKR TTLLNRISDVAKNVADKAQETADTINDNLQNIGGYNYVGFSSGDNMLPRLMIKNVGYYTL GSSTTEFIDSMVAVKGDATTQPFDYTVGTSDKEIAGGGLADYRMKEVKEGQWLTASANV QVIDGGSARLAIYTLEGDNWVGSNSTPIQVSDGLKRVVAQRKVTGLTKGVLIRIESADTNV KEFRFGNVQLEVGIIPTPWKKSDIDIQEDINNVVQNIKTYTAWANDLQGLDFTREKVEGKT YMYVGTSMKDSDNYSDYTWRLTDEHIEGQINGKEGAWIYSPTAPTNPSQGLIWVDLSKV PNQPKRWVDSETGWVALTPEEVKDLPWGEDGTNLADWVAQAEQRISSDSIINTVLGSEDF TSVFDTKANTTDLDNLATYEDLDSIKEDYNRLIKEGINGIDFTPYVTNSELQQLKDSFNFSV

QQAGGVNMLKNSLGFSGLDFWDGTVGKNLLPNSTWNLGFGRWGGASIASFEILPPEDDK PTSHILGSIGSRSSTKEIGNRPHPLKVNSGETYTISFDYKEEALAYDKDRPILVVRNYPDKDT DQWMEYSIEGWAVMANGSTTDLTVWRRFTKTFTIGTSGYLDILPKTIVESWTHRSFWREL KIEEGSQATTWVPNKEDGAFTGGIVETTQTEELANLGFGSGFVSSKRPSSSLTQSVELPEIG ANLEYSLSFYMKVTTDNPVADFKCGIRVYEGDTLTYTLGIEDATQPIPLGFQQYKLVFTPTS TSTKIEMFVENGQEASVIISGIMYNIGNIPLKWQPYPSEIYNTNVKIDINGVTVKNNQTDGY TMITPQEFSGYSRIDGNIERIFTLNGQVTEVKMLKAEKRITMEPVSVFAMNTVTDTKRIRG WAFVPSFE

>VIR|P25477|VPN_BPP2

MRQETRFKFNAYLSRVAELNGIDAGDVSKKFTVEPSVTQTLMNTMQESSDFLTRINIVPVS EMKGEKIGIGVTGSIASTTDTAGGTERQPKDFSKLASNKYECDQINFDFYIRYKTLDLWAR YQDFQLRIRNAIIKRQSLDFIMAGFNGVKRAETSDRSSNPMLQDVAVGWLQKYRNEAPAR VMSKVTDEEGRTTSEVIRVGKGGDYASLDALVMDATNNLIEPWYQEDPDLVVIVGRQLLA DKYFPIVNKEQDNSEMLAADVIISQKRIGNLPAVRVPYFPADAMLITKLENLSIYYMDDSH RRVIEENPKLDRVENYESMNIDYVVEDYAAGCLVEKIKVGDFSTPAKATAEPGA

>VIR|P36275|VSHP BPP

MVTKTITEQRAEVRIFAGNDPAHTATGSSGISSPTPALTPLMLDEATGKLVVWDGQKAGSA VGILVLPLEGTETALTYYKSGTFATEAIHWPESVDEHKKANAFAGSALSHAALP >VIR|P03715|VSOC BPT

MASTRGYVNIKTFEQKLDGNKKIEGKEISVAFPLYSDVHKISGAHYQTFPSEKAAYSTVYE ENORTEWIAANEDLWKVTG

Phage non-virion proteins

>NON|Q37976|AEPE_BPA

MTSYYYSRSLANVNKLADNTKAAARKLLDWSESNGIEVLIYETIRTKEQQAANVNSGAS QTMRSYHLVGQALDFVMAKGKTVDWGAYRSDKGKKFVAKAKSLGFEWGGDWSGFVD NPHLQFNYKGYGTDTFGKGASTSNSSKPSADTNTNSLGLVDYMNLNKLDSSFANRKKLA TSYGIKNYSGTATQNTTLLAKLKAGKPHTPASKNTYYTENPRKVKTLVQCDLYKSVDFTT KNQTGGTFPPGTVFTISGMGKTKGGTPRLKTKSGYYLTANTKFVKKI

>NON|Q37979|AEPE_BPA

MALTEAWLIEKANRKLNAGGMYKITSDKTRNVIKKMAKEGIYLCVAQGYRSTAEQNALY AQGRTKPGAIVTNAKGGQSNHNYGVAVDLCLYTNDGKDVIWESTTSRWKKVVAAMKAE GFKWGGDWKSFKDYPHFELCDAVSGEKIPAATQNTNTNSNRYEGKVIDSAPLLPKMDFKS SPFRMYKVGTEFLVYDHNQYWYKTYIDDKLYYMYKSFCDVVAKKDAKGRIKVRIKSAK DLRIPVWNNIKLNSGKIKWYAPNVKLAWYNYRRGYLELWYPNDGWYYTAEYFLK >NON|Q38653|ALYS_BPA

MVKYTVENKIIAGLPKGKLKGANFVIAHETANSKSTIDNEVSYMTRNWKNAFVTHFVGG GGRVVQVANVNYVSWGAGQYANSYSYAQVELCRTSNATTFKKDYEVYCQLLVDLAKKA GIPITLDSGSKTSDKGIKSHKWVADKLGGTTHQDPYAYLSSWGISKAQFASDLAKVSGGG NTGTAPAKPSTPAPKPSTPSTNLDKLGLVDYMNAKKMDSSYSNRDKLAKQYGIANYSGTA SQNTTLLSKIKGGAPKPSTPAPKPSTSTAKKIYFPPNKGNWSVYPTNKAPVKANAIGAINPT KFGGLTYTIQKDRGNGVYEIQTDQFGRVQVYGAPSTGAVIKK

>NON|O03979|ALYS_BPD

MGVDIEKGVAWMQARKGRVSYSMDFRDGPDSYDCSSSMYYALRSAGASSAGWAVNTEY

MHAWLIENGYELISENAPWDAKRGDIFIWGRKGASAGAGGHTGMFIDSDNIIHCNYAYDG ISVNDHDERWYYAGQPYYYVYRLTNANAQPAEKKLGWQKDATGFWYARANGTYPKDEF EYIEENKSWFYFDDQGYMLAEKWLKHTDGNWYWFDRDGYMATSWKRIGESWYYFNR DGSMVTGWIKYYDNWYYCDATNGDMKSNAFIRYNDGWYLLLPDGRLADKPQFTVEPD GLITAKV

>NON|P32762|ALYS_BPH

MDIDRNRLRTGLPQVGVQPYRQVHAHSTGNRNSTVQNEADYHWRKDPELGFFSHVVGN FRIMQVGPVNNGSWDVGGGWNAETYAAVELIESHSTKEEFMADYRLYIELLRNLADEAG LPKTLDTDDLAGIKTHEYCTNNQPNNHSDHVDPYPYLASWGISREQFKQDIENGLSAATG WQKNGTGYWYVHSDGSYSKDKFEKINGTWYYFDGSGYMLSDRWKKHTDGNWYYFDQ SGEMATGWKKIADKWYYFDVEGAMKTGWVKYKDTWYYLDAKEGAMVSNAFIQSADG TGWYYLKPDGTLADKPEFTVEPDGLITVK

>NON|P15879|ARC3_CBD

MKGLRKSILCLVLSAGVIAPVTSGMIQSPQKCYAYSINQKAYSNTYQEFTNIDQAKAWGN AQYKKYGLSKSEKEAIVSYTKSASEINGKLRQNKGVINGFPSNLIKQVELLDKSFNKMKT PENIMLFRGDDPAYLGTEFQNTLLNSNGTINKTAFEKAKAKFLNKDRLEYGYISTSLMNVS QFAGRPIITKFKVAKGSKAGYIDPISAFAGQLEMLLPRHSTYHIDDMRLSSDGKQIIITATM MGTAINPK

>NON|P32267|ASIA BPT

MNKNIDTVREIITVASILIKFSREDIVENRANFIAFLNEIGVTHEGRKLNQNSFRKIVSELTQE DKKTLIDEFNEGFEGVYRYLEMYTNK

>NON|O64174|BNRDF_BP

MTKIYDAANWSKHEDDFTQMFYNQNVKQFWLPEEIALNGDLLTWKYLGKNEQDTYMK VLAGLTLLDTEQGNTGMPIVAEHVDGHQRKAVLNFMAMMENAVHAKSYSNIFLTLAPTE QINEVFEWVKNNRFLQKKARTIVSVYKTIKKNDEISLFKGMVASVFLESFLFYSGFYYPLY FYGQGKLMQSGEIINLIIRDEAIHGVYVGLLAQEIYKKQTPQKQKELYAWALNLLQELYEN ELEYTEDVYDQVGLAPDVKKFIRYNANKALNNLGFDHWFEEEDVNPIVINGLNTKTKSH DFFSTKGNGYKKATVEPLKDSDFIFTEKGCIO

>NON|P22499|BOF_BPP1

 $MKKRYYTVKHGTLRALQEFADKHNVEVRREGGSKALRMYRPDGKWRTVVDFKTNSVP\\ QGVRDRAFEEWEQIIIDNALLLNAD$

>NON|P26814|BOR_LAMB

 $MKKMLLATALALLITGCAQQTFTVQNKPAAVAPKETITHHFFVSGIGQKKTVDAAKICGG\\ AENVVKTETQQTFVNGLLGFITLGIYTPLEARVYCSQ$

>NON|P19194|B BPCHP

MKFRTIYDEERPAPVLECKDESLCLAYQCTETSIEKLVKLANQNPSYLHAFAGDPTRQPEY GECPSPLDYQDALEIVARGEEAFYSLPANIRVNFSNPMEFLSWLEDPANYDEVEKLGLLDP EKVQIRKSKLQKDQKEEVSSEEK

>NON|P03633|B_BPPHX

MEQLTKNQAVATSQEAVQNQNEPQLRDENAHNDKSVHGVLNPTYQAGLRRDAVQPDIEA ERKKRDEIEAGKSYCSRRFGGATCDDKSAQIYARFDKNDWRIQPAEFYRFHDAEVNTFGY F

>NON|P08773|DCHM_BPT

MISDSMTVEEIRLHLGLALKEKDFVVDKTGVKTIEIIGASFVADEPFIFGALNDEYIQRELE

WYKSKSLFVKDIPGETPKIWQQVASSKGEINSNYGWAIWSEDNYAQYDMCLAELGQNPD SRRGIMIYTRPSMQFDYNKDGMSDFMCTNTVQYLIRDKKINAVVNMRSNDVVFGFRNDY AWQKYVLDKLVSDLNAGDSTRQYKAGSIIWNVGSLHVYSRHFYLVDHWWKTGETHISK KDYVGKYA

>NON|P16006|DCTD_BPT

MKASTVLQIAYLVSQESKCCSWKVGAVIEKNGRIISTGYNGSPAGGVNCCDYAAEQGWLL NKPKHAIIQGHKPECVSFGSTDRFVLAKEHRSAHSEWSSKNEIHAELNAILFAARNGSSIEG ATMYVTLSPCPDCAKAIAQSGIKKLVYCETYDKNKPGWDDILRNAGIEVFNVPKKNLNKL NWENINEFCGE

>NON|P32270|DDA_BPT4

MTFDDLTEGQKNAFNIVMKAIKEKKHHVTINGPAGTGKTTLTKFIIEALISTGGTGIILAAP
THAAKKILSKLSGKEASTIHSILKINPVTYEENVLFEQKEVPDLAKCRVLICDEVSMYDRK
LFKILLSTIPPWCTIIGIGDNKQIRPVEPGENTAYISPFFTHKDFYQCELTEVKRSNAPIIDVAT
DVRNGKWNYDKVVDGHGVRGFTGDTALRDFMVNYFSIVKSLDDLFENRVMAFTNKSV
DKLNSIIRKKIFETDKDFIVGEIIVMQEPLFKTYKIDGKPVSEIIFNNGQLVRIIEAEYTSTFVK
ARGVPGEYLIRHWDLTVETYGDDEYYREKIKIISSDEELYKFNLFLAKTAETYKNWNKGG
KAPWSDFWDAKSQFSKVKALPASTFHKAQGMSVDRAFIYTPCIHYADVELAQQLLYVGV
TRGRYDVFYV

>NON|P04392|DMA BPT4

MLGAIAYTGNKQSLLPELKSHFPKYNRFVDLFCGGLSVSLNVNGPVLANDIQEPIIEMYKR LINVSWDDVLKVIKQYKLSKTSKEEFLKLREDYNKTRDPLLLYVLHFHGFSNMIRINDKG NFTTPFGKRTINKNSEKQYNHFKQNCDKIIFSSLHFKDVKILDGDFVYVDPPYLITVADYN KFWSEDEEKDLLNLLDSLNDRGIKFGQSNVLEHHGKENTLLKEWSKKYNVKHLNKKYV FNIYHSKEKNGTDEVYIFN

>NON|P39232|DMD BPT4

MELVKVVFMGWFKNESMFTKEITMMKDDVQWATTQYAEVNKALVKAFIDDKKVCEVD CRG

>NON|P03015|DNIV_BPM

MLIGYVRVSTNDQNTDLQRNALVCAGCEQIFEDKLSGTRTDRPGLKRALKRLQKGDTLV VWKLDRLGRSMKHLISLVGELRERGINFRSLTDSIDTSSPMGRFFFHVMGALAEMERELIIE RTMAGLAAARNKGRIGGRPPKLTKAEWEQAGRLLAQGIPRKQVALIYDVALSTLYKKHPA KRAHIENDDRIN

>NON|P00969|DNLI BPT

MMNIKTNPFKAVSFVESAIKKALDNAGYLIAEIKYDGVRGNICVDNTANSYWLSRVSKTIP
ALEHLNGFDVRWKRLLNDDRCFYKDGFMLDGELMVKGVDFNTGSGLLRTKWTDTKNQ
EFHEELFVEPIRKKDKVPFKLHTGHLHIKLYAILPLHIVESGEDCDVMTLLMQEHVKNMLP
LLQEYFPEIEWQAAESYEVYDMVELQQLYEQKRAEGHEGLIVKDPMCIYKRGKKSGWW
KMKPENEADGIIQGLVWGTKGLANEGKVIGFEVLLESGRLVNATNISRALMDEFTETVKE
ATLSQWGFFSPYGIGDNDACTINPYDGWACQISYMEETPDGSLRHPSFVMFRGTEDNPQE
KM

>NON|P04531|DNMK BPT

MKLIFLSGVKRSGKDTTADFIMSNYSAVKYQLAGPIKDALAYAWGVFAANTDYPCLTRKE FEGIDYDRETNLNLTKLEVITIMEQAFCYLNGKSPIKGVFVFDDEGKESVNFVAFNKITDVI NNIEDQWSVRRLMQALGTDLIVNNFDRMYWVKLFALDYLDKFNSGYDYYIVPDTRQDH

EMDAARAMGATVIHVVRPGQKSNDTHITEAGLPIRDGDLVITNDGSLEELFSKIKNTLKVL >NON|Q06259|DOC BPP1

 $MRHISPEELIALHDANISRYGGLPGMSDPGRAEAIIGRVQARVAYEEITDLFEVSATYLVATA\\RGHIFNDANKRTALNSALLFLRRNGVQVFDSPELADLTVGAATGEISVSSVADTLRRLYGS\\AE$

>NON|P04526|DPA44_BP

MITVNEKEHILEQKYRPSTIDECILPAFDKETFKSITSKGKIPHIILHSPSPGTGKTTVAKALC HDVNADMMFVNGSDCKIDFVRGPLTNFASAASFDGRQKVIVIDEFDRSGLAESQRHLRSF MEAYSSNCSIIITANNIDGIIKPLQSRCRVITFGQPTDEDKIEMMKQMIRRLTEICKHEGIAIA DMKVVAALVKKNFPDFRKTIGELDSYSSKGVLDAGILSLVTNDRGAIDDVLESLKNKDVK QLRALAPKYAADYSWFVGKLAEEIYSRVTPQSIIRMYEIVGENNQYHGIAANTELHLAYLF IQLACEMQWK

>NON|O80164|DPA5_BPR

MKLSKDTIAILKNFASINSGILLSQGKFIMTRAVNGTTYAEANISDEIDFDVALYDLNSFLSIL SLVSDDAEISMHTDGNIKIADTRSTVYWPAADKSTIVFPNKPIQFPVASVITEIKAEDLQQLL RVSRGLQIDTIAITNKDGKIVINGYNKVEDSGLTRPKYSLTLTDYDGSNNFNFVINMANMK IQPGNYKVMLWGAGDKVAAKFESSQVSYVIAMEADSTHDF

>NON|P04527|DPA62_BP

MSLFKDDIQLNEHQVAWYSKDWTAVQSAADSFKEKAENEFFEIIGAINNKTKCSIAQKDY SKFMVENALSQFPECMPAVYAMNLIGSGLSDEAHFNYLMAAVPRGKRYGKWAKLVEDST EVLIIKLLAKRYQVNTNDAINYKSILTKNGKLPLVLKELKGLVTDDFLKEVTKNVKEQKQL KKLALEW

>NON|P03680|DPOL_BPP

MKHMPRKMYSCDFETTTKVEDCRVWAYGYMNIEDHSEYKIGNSLDEFMAWVLKVQADL YFHNLKFDGAFIINWLERNGFKWSADGLPNTYNTIISRMGQWYMIDICLGYKGKRKIHTV IYDSLKKLPFPVKKIAKDFKLTVLKGDIDYHKERPVGYKITPEEYAYIKNDIQIIAEALLIQF KQGLDRMTAGSDSLKGFKDIITTKKFKKVFPTLSLGLDKEVRYAYRGGFTWLNDRFKEKE IGEGMVFDVNSLYPAQMYSRLLPYGEPIVFEGKYVWDEDYPLHIQHIRCEFELKEGYIPTIQ IKRSRFYKGNEYLKSSGGEIADLWLSNVDLELMKEHYDLYNVEYISGLKFKATTGLFKDFI DKWTYIKTTSEGAIKQLAKLMLNSLYGKFASNPDVTGKVPYLKENGALGFRLGEEETKDP VYTPMGVFITAWARYTTITAAQACYDRIIYCDTDSIHLTGTEIPDVIKDIVDPKKLGYWAHE STFKRAKYLRQKTYIQDIYMKEVDGKLVEGSPDDYTDIKFSVKCAGMTDKIKKEVTFENF KVGFSRKMKPKPVQVPGGVVLVDDTFTIK

>NON|Q38087|DPOL_BPR

MKEFYLTVEQIGDSIFERYIDSNGRERTREVEYKPSLFAHCPESQATKYFDIYGKPCTRKLF ANMRDASQWIKRMEDIGLEALGMDDFKLAYLSDTYNYEIKYDHTKIRVANFDIEVTSPDG FPEPSQAKHPIDAITHYDSIDDRFYVFDLLNSPYGNVEEWSIEIAAKLQEQGGDEVPSEIID KIIYMPFDNEKELLMEYLNFWQQKTPVILTGWNVESFDIPYVYNRIKNIFGESTAKRLSPH RKTRVKVIENMYGSREIITLFGISVLDYIDLYKKFSFTNQPSYSLDYISEFELNVGKLKYDGP ISKLRESNHQRYISYNIIDVYRVLQIDAKRQFINLSLDMGYYAKIQIQSVFSPIKTWDAIIFNS LKEQNKVIPQGRSHPVQPYPGAFVKEPIPNRYKYVMSFDLTSLYPSIIRQVNISPETIAGTFK VAPLHDYINAVAERPSDVYSCSPNGMMYYKDRDGVVPTEITKVFNQRKEHKGYMLAAQ RNGEIIKEALHNPNLSVDEPLDVDYRFDFSDEIKEKIKKLSAKSLNEMLFRAQRTEVAGMT AQINRKLLINSLYGALGNVWFRYYDLRNATAITTFGQMALQWIERKVNEYLNEVCGTEGE

AFVLYGDTDSIYVSADKIIDKVGESKFRDTNHWVDFLDKFARERMEPAIDRGFREMCEYM NNKQHLMFMDREAIAGPPLGSKGIGGFWTGKKRYALNVWDMEGTRYAEPKLKIMGLET QKSSTPKAVQKALKECIRRMLQEGEESLQEYFKEFEKEFRQLNYISIASVSSANNIAKYDV GGFPGPKCPFHIRGILTYNRAIKGNIDAPQVVEGEKVYVLPLREGNPFGDKCIAWPSGTEIT DLIKDDVLHWMDYTVLLEKTFIKPLEGFTSAAKLDYEKKASLFDMFDF

>NON|P00581|DPOL_BPT

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HALEAWGYRLGEMKGEYKDDFKRMLEEQGEEYVDGMEWWNFNEEMMDYNVQDVVV
TKALLEKLLSDKHYFPPEIDFTDVGYTTFWSESLEAVDIEHRAAWLLAKQERNGFPFDTK
AIEELYVELAARRSELLRKLTETFGSWYQPKGGTEMFCHPRTGKPLPKYPRIKTPKVGGIF
KKPKNKAQREGREPCELDTREYVAGAPYTPVEHVVFNPSSRDHIQKKLQEAGWVPTKYT
DKGAPVVDDEVLEGVRVDDPEKQAAIDLIKEYLMIQKRIGQSAEGDKAWLRYVAEDGKI
HGSVNPNGAVTGRATHAFPNLAQIPGVRSPYGEQCRAAFGAEHHLDGITGKPWVQAGID
ASGLELRCLAHFMARFDNGEYAHEILNGDIHTKNQIAAELPTRDNAKTFIYGFLYGAGDE
KIGQIVGAGKERGKELKKKFLENTPAIAALRESIQQTLVESSQWVAGEQQVKWKRRWIKG
LDGRKVHVRSPHAALNTLLQSAGALICKLWIIKTEEMLVEKGLKHGWDGDFAYMAWVH
DEIQVGCRTEEIAQVVIETAQEAMRWVGDHWNFRCLLDTEGKMGPNWAICH
>NON|P13320|DSBA BPT

MAKKEMVEFDEAIHGEDLAKFIKEASDHKLKISGYNELIKDIRIRAKDELGVDGKMFNRL LALYHKDNRDVFEAETEEVVELYDTVFSK

>NON|P31654|DUHM_BPS

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DQLRDVYEKIKADPDTRQAVAVIYNPLFDNINNDTKDRPCNLLLSFKLRNGKLDLSVYNR
SNDLHWGTFGANLCQFSTILEAMATWLGVEVGSYYQITDSLHVYLDDYGAKITEDIQKV
YGVNLETDEAPVVEDFEELLDPNPRMSYTMNELNQFLNEYFGIVDSLMRDDETYMHDG
DCAQMLLNQIRHEPDEYIKVTLLLMVAKQALNRGMKDTVATAMNWIPLCEIKVSALRFLY
KSYPEYINQYDLDEKLMKYIRREE

>NON|P04382|DYR_BPT4

MIKLVFRYSPTKTVDGFNELAFGLGDGLPWGRVKKDLQNFKARTEGTIMIMGAKTFQSLP TLLPGRSHIVVCDLARDYPVTKDGDLAHFYITWEQYITYISGGEIQVSSPNAPFETMLDQN SKVSVIGGPALLYAALPYADEVVVSRIVKRHRVNSTVQLDASFLDDISKREMVETHWYKI DEVTTLTESVYK

>NON|P69486|D_BPPHX

MSQVTEQSVRFQTALASIKLIQASAVLDLTEDDFDFLTSNKVWIATDRSRARRCVEACVYG TLDFVGYPRFPAPVEFIAAVIAYYVHPVNIQTACLIMEGAEFTENIINGVERPVKAAELFAFT LRVRAGNTDVLTDAEENVRQKLRAEGVM

>NON|Q04830|ENAN_BPK

MSTITQFPSGNTQYRIEFDYLARTFVVVTLVNSSNPTLNRVLEVGRDYRFLNPTMIEMLVD QSGFDIVRIHRQTGTDLVVDFRNGSVLTASDLTTAELQAIHIAEEGRDQTVDLAKEYADAA GSSAGNAKDSEDEARRIAESIRAAGLIGYMTRRSFEKGYNVTTWSEVLLWEEDGDYYRW DGTLPKNVPAGSTPETSGGIGLGAWVSVGDAALRSQISNPEGAILYPELHRARWLDEKDA RGWGAKGDGVTDDTAALTSALNDTPVGQKINGNGKTYKVTSLPDISRFINTRFVYERIPG QPLYYASEFVQGELFKITDTPYYNAWPQDKAFVYENVIYAPYMGSDRHGVSRLHVSWV KSGDDGQTWSTPEWLTDLHPDYPTVNYHCMSMGVCRNRLFAMIETRTLAKNALTNCAL WDRPMSRSLHLTGGITKAANQRYATIHVPDHGLFVGDFVNFSNSAVTGVSGDMTVATVID KDNFTVLTPNQQTSDLNNAGKNWHMGTSFHKSPWRKTDLGLIPSVTEVHSFATIDNNGFA MGYHQGDVAPREVGLFYFPDAFNSPSNYVRRQIPSEYEPDASEPCIKYYDGVLYLITRGTR GDRLGSSLHRSRDIGQTWESLRFPHNVHRTTLPFAKVGDDLIMFGSERAENEWEAGAPDD RYKASYPRTFYARLNVNNWNADDIEWVNITDQIYQGGIVNSGVGVGSVVVKDNYIYYMF GGEDHFNPWTYGDNSAKDPFKSDGHPSDLYCYKMKIGPDNRVSRDFRYGAVPNRAVPVF FDTNGVRTVPAPMEFTGDLGLGHVTIRASTSSNIRSEVLMEGEYGFIGKSIPTDNPAGQRIIF CGGEGTSSTTGAQITLYGANNTDSRRIVYNGDEHLFQSADVKPYNDNVTALGGPSNRFTT AYLGSNPIVTSNGGGGKOSR

>NON|P07059|END2_BPT

MGRKAHFIMKEIATEYSFIKYTELELDDNGSIKQLSIPNKYNVIYAIAINDELVYIGKTKNLR KRINYYRTAINRKDKTSDSTKSALIHSALKEGSKVEFYARQCFNLSMTNELGTMTIATIDLE EPLFIKLFNPPWNIQHKKK

>NON|P04418|END5 BPT

MTRINLTLVSELADQHLMAEYRELPRVFGAVRKHVANGKRVRDFKISPTFILGAGHVTFFY DKLEFLRKRQIELIAECLKRGFNIKDTTVQDISDIPQEFRGDYIPHEASIAISQARLDEKIAQ RPTWYKYYGKAIYA

>NON|P13340|END7 BPT

MLLTGKLYKEEKQKFYDAQNGKCLICQRELNPDVQANHLDHDHELNGPKAGKVRGLLC NLCNAAEGQMKHKFNRSGLKGQGVDYLEWLENLLTYLKSDYTQNNIHPNFVGDKSKEF SRLGKEEMMAEMLQRGFEYNESDTKTQLIASFKKQLRKSLK

>NON|P00641|ENRN BPT

MAGYGAKGIRKVGAFRSGLEDKVSKQLESKGIKFEYEEWKVPYVIPASNHTYTPDFLLPN GIFVETKGLWESDDRKKHLLIREQHPELDIRIVFSSSRTKLYKGSPTSYGEFCEKHGIKFAD KLIPAEWIKEPKKEVPFDRLKRKGGKK

>NON|P06229|EXO5 BPT

MSKSWGKFIEEEEAEMASRRNLMIVDGTNLGFRFKHNNSKKPFASSYVSTIQSLAKSYSA RTTIVLGDKGKSVFRLEHLPEYKGNRDEKYAQRTEEEKALDEQFFEYLKDAFELCKTTFPT FTIRGVEADDMAAYIVKLIGHLYDHVWLISTDGDWDTLLTDKVSRFSFTTRREYHLRDMY EHHNVDDVEQFISLKAIMGDLGDNIRGVEGIGAKRGYNIIREFGNVLDIIDQLPLPGKQKYI QNLNASEELLFRNLILVDLPTYCVDAIAAVGQDVLDKFTKDILEIAEQ

>NON|P03697|EXO_LAMB

MTPDIILQRTGIDVRAVEQGDDAWHKLRLGVITASEVHNVIAKPRSGKKWPDMKMSYFH TLLAEVCTGVAPEVNAKALAWGKQYENDARTLFEFTSGVNVTESPIIYRDESMRTACSPD GLCSDGNGLELKCPFTSRDFMKFRLGGFEAIKSAYMAQVQYSMWVTRKNAWYFANYDP RMKREGLHYVVIERDEKYMASFDEIVPEFIEKMDEALAEIGFVFGEQWR

>NON|P03639|E_BPPHX

 $MVRWTLWDTLAFLLLLSLLLPSLLIMFIPSTFKRPVSSWKALNLRKTLLMASSVRLKPLNC\\ SRLPCVYAQETLTFLLTQKKTCVKNYVRKE$

>NON|P03657|G1P_BPF1

MAVYFVTGKLGSGKTLVSVGKIQDKIVAGCKIATNLDLRLQNLPQVGRFAKTPRVLRIPDK PSISDLLAIGRGNDSYDENKNGLLVLDECGTWFNTRSWNDKERQPIIDWFLHARKLGWDI IFLVQDLSIVDKQARSALAENVVYCRRLDRITLPFVGTLYSLITGSKMPLPKLHVGVVKYG DSQLSPTVERWLYTGKNLYNAYDTKQAFSSNYDSGVYSYLTPYLSHGRYFKPLNLGQKM KLTKIYLKKFSRVLCLAIGFASAFTYSYITQPKPEVKKVVSQTYDFDKFTIDSSQRLNLSYR YVFKDSKGKLINSDDLQKQGYSLTYIDLCTVSIKKGNSNEIVKCN

>NON|P03666|G4P_BPF1

MKLLNVINFVFLMFVSSSSFAQVIEMNNSSLRDFVTWYSKQTGESVIVSPDVKGTVTVYSS DVKPENLRDFFISVLRANNFDMVGSIPSIIQKYNPNNQDYIDELPSSDNQEYDDNSAPSGG FFVPQNDNVTQTFKINNVRAKDLIRVVELFVKSNTSKSSNVLSVDGSNLLVVSAPKDILDN LPQFLSTVDLPTDQILIEGLIFEVQQGDALDFSFAAGSQRGTVAGGVNTDRLTSVLSSAGGS FGIFNGDVLGLSVRALKTNSHSKILSVPRILTLSGQKGSISVGQNVPFITGRVTGESANVNN PFQTVERQNVGISMSVFPVAMAGGNIVLDITSKADSLSSSTQASDVITNQRSIATTVNLRDG QTLLLGGLTDYKNTSQDSGVPFLSKIPLIGLLFSSRSDSNEESTLYVLVKATIVRAL

>NON|O80294|G5P_BPIF

 $MSELGNLETTVTGKIKRFNNGGGYYYTTVVSPAADAYSFPPVIRIKSKKSLGRVGDEIADI\\ HCRITGYERSFPYTDKQTGEQSRGFNVDMLLELLE$

>NON|P03670|G5P BPIK

MLTVEIHDSQVSVKERSGVSQKSGKPYTIREQEAYIDLGGVYPALFNFNLEDGQQPYPAGK YRLHPASFKINNFGQVAVGRVLLESVK

>NON|P03671|G5P BPPF

MNMFATQGGVVELWVTKTDTYTSTKTGEIYASVQSIAPIPEGARGNAKGFEISEYNIEPTL LDAIVFEGQPVLCKFASVVRPTQDRFGRITNTQVLVDLLAVGGKPMAPTAQAPARPQAQA QAPRPAQQPQGQDKQDKSPDAKA

>NON|P03672|G5P_BPPF

MNIQITFTDSVRQGTSAKGNPYTFQEGFLHLEDKPFPLQCQFFVESVIPAGSYQVPYRINVN NGRPELAFDFKAMKRA

>NON|P68676|G5P_BPPH

MKVQIMSSAVAVRSFPAREGKPATHFREQTAAVLREGDFPLPFTIGLDEDQPPYGEGFYIIDP KSLQNNKFGGLEFGRRIRLIPDLTAKLQQQPAKVG

>NON|P00276|GLRX_BPT

MFKVYGYDSNIHKCVYCDNAKRLLTVKKQPFEFINIMPEKGVFDDEKIAELLTKLGRDTQI GLTMPQVFAPDGSHIGGFDQLREYFK

>NON|P04519|GSTA_BPT

MRICIFMARGLEGCGVTKFSLEQRDWFIKNGHEVTLVYAKDKSFTRTSSHDHKSFSIPVIL AKEYDKALKLVNDCDILIINSVPATSVQEATINNYKKLLDNIKPSIRVVVYQHDHSVLSLRR NLGLEETVRRADVIFSHSDNGDFNKVLMKEWYPETVSLFDDIEEAPTVYNFQPPMDIVKV RSTYWKDVSEINMNINRWIGRTTTWKGFYQMFDFHEKFLKPAGKSTVMEGLERSPAFIAI KEKGIPYEYYGNREIDKMNLAPNQPAQILDCYINSEMLERMSKSGFGYQLSKLNQKYLQR SLEYTHLELGACGTIPVFWKSTGENLKFRVDNTPLTSHDSGIIWFDENDMESTFERIKELSS DRALYDREREKAYEFLYQHQDSSFCFKEQFDIITK

>NON|P04547|GSTB BPT

MKIAIINMGNNVINFKTVPSSETIYLFKVISEMGLNVDIISLKNGVYTKSFDEVDVNDYDRL IVVNSSINFFGGKPNLAILSAQKFMAKYKSKIYYLFTDIRLPFSQSWPNVKNRPWAYLYTEE ELLIKSPIKVISQGINLDIAKAAHKKVDNVIEFEYFPIEQYKIHMNDFQLSKPTKKTLDVIYG GSFRSGQRESKMVEFLFDTGLNIEFFGNAREKQFKNPKYPWTKAPVFTGKIPMNMVSEKN

SQAIAALIIGDKNYNDNFITLRVWETMASDAVMLIDEEFDTKHRIINDARFYVNNRAELID RVNELKHSDVLRKEMLSIQHDILNKTRAKKAEWQDAFKKAIDL

>NON|Q37993|HEAD_BPC

MANKITTFLSGQTGKQISNIDLLNSIRTRASADYQADIPVLEGARINHATVPYQDFQKHAN EFFTALVNRIGSTVIKALTYENPLAIFKSETFEFGDTLQEIYVHPAEKKTYDAKSDVSPFKFA DTDIEAFYHTLNNENYYERTFERAWIQKAFVSDMAFDEFVDKMFTSLLSSDTLDEYQAVR VYLRNHLRKSLIQTLKGNDKKITVAGTKIDETKQDFVVDFNQSLINLSKRFTIPSRTTFNNP VGVPNMTAIEDQYLVISAEFSTHLDMLLANAFNMDKASVLARTIVVDDFEKFTGEGANN GRKPVAFLISAKSIINKDKLVHMEAIRNPRNMTYNYFYHHHYMTSLSLFENIHFWYVEEA >NON|A9CRA7|HEAD_BPM

MPQGITKTSNQIIPEVLAPMMQAQLEKKLRFASFAEVDSTLQGQPGDTLTFPAFVYSGDAQ VVAEGEKIPTDILETKKREAKIRKIAKGTSITDEALLSGYGDPQGEQVRQHGLAHANKVD NDVLEALMGAKLTVNADITKLNGLQSAIDKFNDEDLEPMVLFINPLDAGKLRGDASTNFT RATELGDDIIVKGAFGEALGAIIVRTNKLEAGTAILAKKGAVKLILKRDFFLEVARDASTKT TALYSDKHYVAYLYDESKAVKITKGSGSLEM

>NON|B2ZYY5|HEAD BPM

MEQTQKLKLNLQHFASNNVKPQVFNPDNVMMHEKKDGTLMNEFTTPILQEVMENSKIM QLGKYEPMEGTEKKFTFWADKPGAYWVGEGQKIETSKATWVNATMRAFKLGVILPVTKE FLNYTYSQFFEEMKPMIAEAFYKKFDEAGILNQGNNPFGKSIAQSIEKTNKVIKGDFTQDN IIDLEALLEDDELEANAFISKTQNRSLLRKIVDPETKERIYDRNSDSLDGLPVVNLKSSNLK RGELITGDFDKLIYGIPQLIEYKIDETAQLSTVKNEDGTPVNLFEQDMVAITCNYACSIAYR >NON|P34081|HMUI_BPS

MEWKDIKGYEGHYQVSNTGEVYSIKSGKTLKHQIPKDGYHRIGLFKGGKGKTFQVHRLV AIHFCEGYEEGLVVDHKDGNKDNNLSTNLRWVTQKINVENQMSRGTLNVSKAQQIAKIK NQKPIIVISPDGIEKEYPSTKCACEELGLTRGKVTDVLKGHRIHHKGYTFRYKLNG >NON|P03718|IPI1_BPT

MKTFKEFTSTTTPVSTITEATLTSEVIKANKGREGKPMISLVDGEEIKGTVYLGDGWSAKK DGATIVISPAEETALFKAKHISAAHLKIIAKNLL

>NON|P03719|IPI2_BPT

MKTYQEFIAEARVGAGKLEAAVNKKAHSFHDLPDKDRKKLVSLYIDRERILALPGANEGK QAKPLNAVEKKIDNFASKFGMSMDDLQQAAIEAAKAIKDK

>NON|P13302|IPI3_BPT

MKTYQEFIAEASVVKAKGINKDEWTYRSGNGFDPKTAPIERYLATKASDFKAFAWEGLR WRTDLNIEVDGLKFAHIEDVVASNLDSEFVKADADLRRWNLKLFSKQKGPKFVPKAGKW VIDNKLAKAVNFAGLEFAKHKSSWKGLDAMAFRKEFADVMTKGGFKAEIDTSKGKFKD ANIQYAYAVANAARGNS

>NON|P06855|KIPN BPT

MKKIILTIGCPGSGKSTWAREFIAKNPGFYNINRDDYRQSIMAHEERDEYKYTKKKEGIVT GMQFDTAKSILYGGDSVKGVIISDTNLNPERRLAWETFAKEYGWKVEHKVFDVPWTELV KRNSKRGTKAVPIDVLRSMYKSMREYLGLPVYNGTPGKPKAVIFDVDGTLAKMNGRGPY DLEKCDTDVINPMVVELSKMYALMGYQIVVVSGRESGTKEDPTKYYRMTRKWVEDIAG VPLVMQCQREQGDTRKDDVVKEEIFWKHIAPHFDVKLAIDDRTQVVEMWRRIGVECWQ VASGDF

>NON|Q38162|LLP_BPT5

MKKLFLAMAVVLLSACSTFGPKDIKCEAYYMQDHVKYKANVFDRKGDMFLVSPIMAYG SFWAPVSYFTEGNTCEGVF

>NON|P15057|LYS BPCP

MVKKNDLFVDVSSHNGYDITGILEQMGTTNTIIKISESTTYLNPCLSAQVEQSNPIGFYHFA RFGGDVAEAEREAQFFLDNVPMQVKYLVLDYEDDPSGDAQANTNACLRFMQMIADAGY KPIYYSYKPFTHDNVDYQQILAQFPNSLWIAGYGLNDGTANFEYFPSMDGIRWWQYSSNP FDKNIVLLDDEEDDKPKTAGTWKQDSKGWWFRRNNGSFPYNKWEKIGGVWYYFDSKG YCLTSEWLKDNEKWYYLKDNGAMATGWVLVGSEWYYMDDSGAMVTGWVKYKNNW YYMTNERGNMVSNEFIKSGKGWYFMNTNGELADNPSFTKEPDGLITVA

>NON|P33486|LYS_BPMV

MTKTYGVDVAVYQPIDLAAYHKAGASFAIVKLTEGVDYVNRRGPSRWTAPGLTTSTLMPT ISRSFGSSVSRAKKEAAYFLKEAKKQDISKKRMLWLDWEAGSGNVVTGSKSSNTAAILDF MDAIKAAGWRPGLYSGASLMRTAIDTKQVVKKYGTCLWVASYPTMAAVSTADFGYFRQ WTGSPSGSLPVTAWPGRRRERCSG

>NON|Q37875|LYS_BPP1

MKGKTAAGGGAICAIAVMITIVMGNGNVRTNQAGLELIGNAEGCRRDPYMCPAGVWTD GIGNTHGVTPGVRKTDQQIAADWEKNILIAERCINQHFRGKDMPDNAFSAMTSAAFNMG CNSLRTYYSKARGMRVETSIHKWAQKGEWVNMCNHLPDFVNSNGVPLRGLKIRREKER QLCLTGLVNE

>NON|P27359|LYS BPP2

MPPSLRKAVAAAIGGGAIAIASVLITGPSGNDGLEGVSYIPYKDIVGVWTVCHGHTGKDIM LGKTYTKAECKALLNKDLATVARQINPYIKVDIPETMRGALYSLLYNVGAGNFRTSTLLR KINQGDIKGACDQLRRWTYAGGKQWKGLMTRREIEREICLWGQQ

>NON|P09963|LYS BPP2

MMQISSNGITRLKREEGERLKAYSDSRGIPTIGVGHTGKVDGNSVASGMTITAEKSSELLK EDLQWVEDAISSLVRVPLNQNQYDALCSLIFNIGKSAFAGSTVLRQLNLKNYQAAADAFL LWKKAGKDPDILLPRRRRERALFLS

>NON|O6OGP7|LYS BPT5

MSFKFGKNSEKQLATVKPELQKVARRALELSPYDFTIVQGIRTVAQSAQNIANGTSFLKDP SKSKHITGDAIDFAPYINGKIDWNDLEAFWAVKKAFEQAGKELGIKLRFGADWNASGDY HDEIKRGTYDGGHVELV

>NON|P03706|LYS_LAMB

MVEINNQRKAFLDMLAWSEGTDNGRQKTRNHGYDVIVGGELFTDYSDHPRKLVTLNPKL KSTGAGRYQLLSRWWDAYRKQLGLKDFSPKSQDAVALQQIKERGALPMIDRGDIRQAIDR CSNIWASLPGAGYGQFEHKADSLIAKFKEAGGTVREIDV

>NON|P39423|MODA_BPT

MIINLADVEQLSIKAESVDFQYDMYKKVCEKFTDFEQSVLWQCMEAKKNEALHKHLNEII KKHLTKSPYQLYRGISKSTKELIKDLQVGEVFSTNRVDSFTTSLHTACSFSYAEYFTETILRL KTDKAFNYSDHISDIILSSPNTEFKYTYEDTDGLDSERTDNLMMIVREQEWMIPIGKYKITS ISKEKLHDSFGTFKVYDIEVVE

>NON|P39421|MODB BPT

MKYSVMQLKDFKIKSMDASVRASIREELLSEGFNLSEIELLIHCITNKPDDHSWLNEIIKSR LVPNDKPLWRGVPAETKQVLNQGIDIITFDKVVSASYDKNIALHFASGLEYNTQVIFEFKA PMVFNFQEYAIKALRCKEYNPNFKFPDSHRYRNMELVSDEQEVMIPAGSVFRIADRYEYK **KCSTYTIYTLDFEGFNL**

>NON|P22915|MOTA BPT

MSKVTYIIKASNDVLNEKTATILITIAKKDFITAAEVREVHPDLGNAVVNSNIGVLIKKGLV EKSGDGLIITGEAQDIISNAATLYAQENAPELLKKRATRKAREITSDMEEDKDLMLKLLDK NGFVLKKVEIYRSNYLAILEKRTNGIRNFEINNNGNMRIFGYKMMEHHIQKFTDIGMSCKI AKNGNVYLDIKRSAENIEAVITVASEL

>NON|P00806|NAAA BPT

MARVQFKQRESTDAIFVHCSATKPSQNVGVREIRQWHKEQGWLDVGYHFIIKRDGTVEA GRDEMAVGSHAKGYNHNSIGVCLVGGIDDKGKFDANFTPAQMQSLRSLLVTLLAKYEGA VLRAHHEVAPKACPSFDLKRWWEKNELVTSDRG

>NON|P06020|NER BPMU

MCSNEKARDWHRADVIAGLKKRKLSLSALSRQFGYAPTTLANALERHWPKGEQIIANAL ETKPEVIWPSRYQAGE

>NON|P03765|NINB_LAM

MKKLTFEIRSPAHQQNAIHAVQQILPDPTKPIVVTIQERNRSLDQNRKLWACLGDVSRQVE WHGRWLDAESWKCVFTAALKQQDVVPNLAGNGFVVIGQSTSRMRVGEFAELLELIQAFG TERGVKWSDEARLALEWKARWGDRAA

>NON|P07071|NRDD_BPT

MTIEKEIEGLIHKTNKDLLNENANKDSRVFPTQRDLMAGIVSKHIAKNMVPSFIMKAHESG
IIHVHDIDYSPALPFTNCCLVDLKGMLENGFKLGNAQIETPKSIGVATAIMAQITAQVASHQ
YGGTTFANVDKVLSPYVKRTYAKHIEDAEKWQIADALNYAQSKTEKDVYDAFQAYEYEV
NTLFSSNGQTPFVTITFGTGTDWTERMIQKAILKNRIKGLGRDGITPIFPKLVMFVEEGVNL
YKDDPNYDIKQLALECASKRMYPDIISAKNNKAITGSSVPVSPMGCRSFLSVWKDSTGNEI
LDGRNNLGVVTLNLPRIALDSYIGTQFNEQKFVELFNERMDLCFEALMCRISSLKGVKATV
APILYQEGAFGVRLKPDDDIIELFKNGRSSVSLGYIGIHELNILVGRDIGREILTKMNAHLKQ
WTERTGFAFSLYSTPAENLCYRFCKLDTEKYGSVKDVTDKGWYTNSFHVSVEENITPFEKI
SREAPYHFIATGGHISYVELPDMKNNLKGLEAVWDYAAQHLDYFGVNMPVDKCFTCGST
HEMTPTENGFVCSICGETDPKKMNTIRRTCGYLGNPNERGFNLGKNKEIMHRVKHQ
>NON|Q58MU6|PEBS_BPP

MTKNPRNNKPKKILDSSYKSKTIWQNYIDALFETFPQLEISEVWAKWDGGNVTKDGGDA KLTANIRTGEHFLKAREAHIVDPNSDIYNTILYPKTGADLPCFGMDLMKFSDKKVIIVFDFQ HPREKYLFSVDGLPEDDGKYRFFEMGNHFSKNIFVRYCKPDEVDQYLDTFKLYLTKYKE MIDNNKPVGEDTTVYSDFDTYMTELDPVRGYMKNKFGEGRSEAFVNDFLFSYK >NON|Q06253|PHD BPP1

 $MQSINFRTARGNLSEVLNNVEAGEEVEITRRGREPAVIVSKATFEAYKKAALDAEFASLFD\\ TLDSTNKELVNR$

>NON|P26744|PORTL BP

MADNENRLESILSRFDADWTASDEARREAKNDLFFSRVSQWDDWLSQYTTLQYRGQFD VVRPVVRKLVSEMRQNPIDVLYRPKDGARPDAADVLMGMYRTDMRHNTAKIAVNIAVRE QIEAGVGAWRLVTDYEDQSPTSNNQVIRREPIHSACSHVIWDSNSKLMDKSDARHCTVIH SMSQNGWEDFAEKYDLDADDIPSFQNPNDWVFPWLTQDTIQIAEFYEVVEKKETAFIYQD PVTGEPVSYFKRDIKDVIDDLADSGFIKIAERQIKRRRVYKSIITCTAVLKDKQLIAGEHIPIV PVFGEWGFVEDKEVYEGVVRLTKDGQRLRNMIMSFNADIVARTPKKKPFFWPEQIAGFEH MYDGNDDYPYYLLNRTDENSGDLPTQPLAYYENPEVPQANAYMLEAATSAVKEVATLGV

DTEAVNGGQVAFDTVNQLNMRADLETYVFQDNLATAMRRDGEIYQSIVNDIYDVPRNVTI TLEDGSEKDVQLMAEVVDLATGEKQVLNDIRGRYECYTDVGPSFQSMKQQNRAEILELL GKTPQGTPEYQLLLLQYFTLLDGKGVEMMRDYANKQLIQMGVKKPETPEEQQWLVEAQ QAKQGQQDPAMVQAQGVLLQGQAELAKAQNQTLSLQIDAAKVEAQNQLNAARIAEIFN NMDLSKQSEFREFLKTVASFQQDRSEDARANAELLLKGDEQTHKQRMDIANILQSQRQN QPSGSVAETPQ

>NON|P54309|PORTL_BP

MADIYPLGKTHTEELNEIIVESAKEIAEPDTTMIQKLIDEHNPEPLLKGVRYYMCENDIEKK RRTYYDAAGQQLVDDTKTNNRTSHAWHKLFVDQKTQYLVGEPVTFTSDNKTLLEYVNE LADDDFDDILNETVKNMSNKGIEYWHPFVDEEGEFDYVIFPAEEMIVVYKDNTRRDILFA LRYYSYKGIMGEETQKAELYTDTHVYYYEKIDGVYQMDYSYGENNPRPHMTKGGQAIG WGRVPIIPFKNNEEMVSDLKFYKDLIDNYDSITSSTMDSFSDFQQIVYVLKNYDGENPKEF TANLRYHSVIKVSGDGGVDTLRAEIPVDSAAKELERIQDELYKSAQAVDNSPETIGGGATG PALENLYALLDLKANMAERKIRAGLRLFFWFFAEYLRNTGKGDFNPDKELTMTFTRTRIQ NDSEIVQSLVQGVTGGIMSKETAVARNPFVQDPEEELARIEEEMNQYAEMQGNLLDDEGG DDDLEEDDPNAGAAESGGAGOVS

>NON|P03772|PP_LAMBD

MRYYEKIDGSKYRNIWVVGDLHGCYTNLMNKLDTIGFDNKKDLLISVGDLVDRGAENVE CLELITFPWFRAVRGNHEQMMIDGLSERGNVNHWLLNGGGWFFNLDYDKEILAKALAH KADELPLIIELVSKDKKYVICHADYPFDEYEFGKPVDHQQVIWNRERISNSQNGIVKEIKG ADTFIFGHTPAVKPLKFANQMYIDTGAVFCGNLTLIQVQGEGA

>NON|P10277|PRIM_BPP

MKMNVTATVSHALGHWPRILPALGIQVLKNRHQPCPVCGGSDRFRFDDREGRGTWYCN QCGAGDGLKLVEKVFGVSPSDAAAKVAAVTGSLPPADPAVTTAAVDETDAARKNAAALA QTLMAKTRTGTGNAYLTRKGFPGRECRMLTGTHRAGGVSWRAGDLVVPLYDDSGELVNL QLISADGRKRTLKGGQVRGTCHTLEGQNQAGKRLWIAEGYATALTVHHLTGETVMVALSS VNLLSLASLARQKHPACQIVLAADRDLSGDGQKKAAAAADACEGVVALPPVFGDWNDA FTQYGGEATRKAIYDAIRPPAESPFDTMSEAEFSAMSTSEKAMRIYEHYGEALAVDANGQ LLSRYENGVWKVLPPQDFARDVAGLFQRLRAPFSSGKVASVVDTLKLIIPQQEAPSRRLIG FRNGVLDTQNGTFHPHSPSHWMRTLCDVDFTPPVDGETLETHAPAFWRWLDRAAGGRA EKRDVILAALFMVLANRYDWQLFLEVTGPGGSGKSIMAEIATLLAGEDNATSATIETLESP RERAALTGFSLIRLPDQEKWSGDGAGLKAITGGDAVSVDPKYRDAYSTHIPAVILAVNNNP MRFTDRSGGVSRRRVIIHFPEQIAPQERDPQLKDKITRELAVIVRHLMQKFSDPMLARSLL QSQQNSDEALNIKRDADPTFDFIGYLETLPQTSGMYMGNASIIPRNYRKYLYHAYLAYME ANGYRNVLSLKMFGLGLPVMLKEYGLNYEKRHTKQGIQTNLTLKEESYGDWLPKCDDP TTA

>NON|P03692|PRIM BPT

MDNSHDSDSVFLYHIPCDNCGSSDGNSLFSDGHTFCYVCEKWTAGNEDTKERASKRKPS GGKPMTYNVWNFGESNGRYSALTARGISKETCQKAGYWIAKVDGVMYQVADYRDQNG NIVSQKVRDKDKNFKTTGSHKSDALFGKHLWNGGKKIVVTEGEIDMLTVMELQDCKYPV VSLGHGASAAKKTCAANYEYFDQFEQIILMFDMDEAGRKAVEEAAQVLPAGKVRVAVLP CKDANECHLNGHDREIMEQVWNAGPWIPDGVVSALSLRERIREHLSSEESVGLLFSGCTG INDKTLGARGGEVIMVTSGSGMGKSTFVRQQALQWGTAMGKKVGLAMLEESVEETAED LIGLHNRVRLRQSDSLKREIIENGKFDQWFDELFGNDTFHLYDSFAEAETDRLLAKLAYMR SGLGCDVIILDHISIVVSASGESDERKMIDNLMTKLKGFAKSTGVVLVVICHLKNPDKGKA HEEGRPVSITDLRGSGALRQLSDTIIALERNQQGDMPNLVLVRILKCRFTGDTGIAGYMEY NKETGWLEPSSYSGEESHSESTDWSNDTDF

>NON|P03037|RANT BPP

MNSIAILEAVNTSYVPFNGQHVLTAMVAGVAYVAMKPVVDNIGLSWSSQVQKLLKMKDK FNYVDIDMVAGDMKKRLMGCIPLKKLNGWLFSINPEKVRADIRDKLIKYQEECFTVLYDY WTKGKAENPRKKTSVDERTPLRDAVNMLVSKKHLMYPEAYAMIHQRFNVESIEELEASQI PLAVEYIHRVVLEGEFIGKQEKKTNDLSAKEANSLVWLWDYANRSQALFRELYPAMRQIQ SNYSGKCYDYGHEFSYIIGIARDVLINHTRDVDINEPDGPTNLSAWMRLKDKELPPSLHRY >NON|P03050|RARC_BPP

MKGMSKMPQFNLRWPREVLDLVRKVAEENGRSVNSEIYQRVMESFKKEGRIGA >NON|P09964|RCRO_BPP

MYKKDVIDHFGTQRAVAKALGISDAAVSQWKEVIPEKDAYRLEIVTAGALKYQENAYRQ AA

>NON|P03040|RCRO_LAM

MEQRITLKDYAMRFGQTKTAKDLGVYQSAINKAIHAGRKIFLTINADGSVYAEEVKPFPSN KKTTA

>NON|P15965|RDRP_BPF

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NDEATRRSLAIAKLLEANDRCGQINRDGFLHDATASWDPDVLQTSIRSLIGNLLSGYSSQL
FRHCTFSNGASMGHKLQDAAPYKKFAEQATVTPRALKAAVLVKDQCSPWIRHSHVFPES
YTFRLVGGNGVFTVPKNNKIDRAACKEPDMNMYLQKGVGGFIRRRLKTVGIDLNDQTIN
QRLAQQGSRDGSLATIDLSSASDSISDRLVWSFLPPELYSYLDMIRSHYGYVNGKMIRWEL
FSTMGNGFTFELESMIFWAIVRATQIHFRNTGTIGIYGDDIICPTEIAPRVLEALSFYGFKPNL
RKTFTSGSFRESCGAHYFRGVDVKPFYIKKPITDLFSLMLILNRIRGWGVVNGIADPRLYE
VWEKLSRLVPRYLFGGTDLQADYYVVSPPILKGIYSKMNGRREYAEARTTGFKLARIARW
RKHFSDKHDSGRYIAWFHTGGEITDSMKSAGVRVMRTSEWLQPVPVFPQECGPASSPQ
>NON|P14647|RDRP BPO

MSKTASSRNSLSAQLRRAANTRIEVEGNLALSIANDLLLAYGQSPFNSEAECISFSPRFDGT
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GESCIHMARRKIAKLIGDVPSVEGMLRHCRFSGGATTTNNRSYGHPSFKFALPQACTPRAL
KYVLALRASTHFDTRISDISPFNKAVTVPKNSKTDRCIAIEPGWNMFFQLGIGGILRDRLRC
WGIDLNDQTINQRRAHEGSVTNNLATVDLSAASDSISLALCELLLPPGWFEVLMDLRSPK
GRLPDGSVVTYEKISSMGNGYTFELESLIFASLARSVCEILDLDSSEVTVYGDDIILPSCAVP
ALREVFKYVGFTTNTKKTFSEGPFRESCGKHYYSGVDVTPFYIRHRIVSPADLILVLNNLYR
WATIDGVWDPRAHSVYLKYRKLLPKQLQRNTIPDGYGDGALVGSVLINPFAKNRGWIRY
VPVITDHTRDRERAELGSYLYDLFSRCLSESNDGLPLRGPSGCDSADLFAIDQLICRSNPTKI
SRSTGKFDIQYIACSSRVLAPYGVFQGTKVASLHEA

>NON|P06956|RECR_BPP

MSNLLTVHQNLPALPVDATSDEVRKNLMDMFRDRQAFSEHTWKMLLSVCRSWAAWCKL NNRKWFPAEPEDVRDYLLYLQARGLAVKTIQQHLGQLNMLHRRSGLPRPSDSNAVSLVM RRIRKENVDAGERAKQALAFERTDFDQVRSLMENSDRCQDIRNLAFLGIAYNTLLRIAEIA RIRVKDISRTDGGRMLIHIGRTKTLVSTAGVEKALSLGVTKLVERWISVSGVADDPNNYLF CRVRKNGVAAPSATSQLSTRALEGIFEATHRLIYGAKDDSGQRYLAWSGHSARVGAARDM

ARAGVSIPEIMQAGGWTNVNIVMNYIRNLDSETGAMVRLLEDGD

>NON|P35926|REF_BPP1

MKTIEQKIEQCRKWQKAARERAIARQREKLADPVWRESQYQKMRDTLDRRIAKQKERPP ASKTRKSAVKIKSRGLKGRTPTAEERRIANALGALPCIACYMHGVISNEVSLHHIAGRTAP GCHKKQLPLCRWHHQHAAPAEVREKYPWLVPVHADGVVGGKKEFTLLNKSEMELLADA YEMANIMH

>NON|P69628|REGA_BPR

MIEITLKKPEDFLKVKETLTRMGIANNKDKVLYQSCHILQKKGLYYIVHFKEMLRMDGRQ VEMTEEDEVRRDSIAWLLEDWGLIEIVPGQRTFMKDLTNNFRVISFKQKHEWKLVPKYTIG N

>NON|P13312|REGB BPT

MTINTEVFIRRNKLRRHFESEFRQINNEIREASKAAGVSSFHLKYSQHLLDRAIQREIDETY VFELFHKIKDHVLEVNEFLSMPPRPDIDEDFIDGVEYRPGRLEITDGNLWLGFTVCKPNEK FKDPSLQCRMAIINSRRLPGKASKAVIKTQ

>NON|P04891|REGN_BPP

MTVITYGKSTFAGNAKTRRHERRRKLAIERDTICNIIDSIFGCDAPDASQEVKAKRIDRVTK AISLAGTRQKEVEGGSVLLPGVALYAAGHRKSKQITAR

>NON|P07243|REGN_BPP

MVTIVWKESKGTAKSRYKARRAELIAERRSNEALARKIALKLSGCVRADKAASLGSLRCK KAEEVERKQNRIYYSKPRSEMGVTCVGRQKIKLGSKPLI

>NON|P03045|REGN_LAM

MDAQTRRRERRAEKQAQWKAANPLLVGVSAKPVNRPILSLNRKPKSRVESALNPIDLTVL AEYHKQIESNLQRIERKNQRTWYSKPGERGITCSGRQKIKGKSIPLI

>NON|P03631|REPA BPP

MVRSYYPSECHADYFDFERIEALKPAIEACGISTLSQSPMLGFHKQMDNRIKLLEEILSFRM QGVEFDNGDMYVDGHKAASDVRDEFVSVTEKLMDELAQCYNVLPQLDINNTIDHRPEG DEKWFLENEKTVTQFCRKLAAERPLKDIRDEYNYPKKKGIKDECSRLLEASTMKSRRGFA IQRLMNAMRQAHADGWFIVFDTLTLADDRLEAFYDNPNALRDYFRDIGRMVLAAEGRK ANDSHADCYQYFCVPEYGTANGRLHFHAVHFMRTLPTGSVDPNFGRRVRNRRQLNSLQN TWPYGYSMPIAVRYTQDAFSRSGWLWPVDAKGEPLKATSYMAVGFYVAKYVNKKSDMD LAAKGLGAKEWNNSLKTKLSLLPKKLFRIRMSRNFGMKMLTMTNLSTECLIQLTKLGYD ATPFNQILKQNAKREMRLRLGKVTVADVLAAQPVTTNLLKFMRASIKMIGVSNLQSFIAS MTQKLTLSDISDESKNYLDKAGITTACLRIKSKWTAGGK

>NON|P03759|REXB LAM

MRNRIMPGVYIVIIPYVIVSICYLLFRHYIPGVSFSAHRDGLGATLSSYAGTMIAILIAALTFL IGSRTRRLAKIREYGYMTSVVIVYALSFVELGALFFCGLLLLSSISGYMIPTIAIGIASASFIHI CILVFOLYNLTREOE

>NON|P32277|RLIG2_BP

MFKKYSSLENHYNSKFIEKLYSLGLTGGEWVAREKIHGTNFSLIIERDKVTCAKRTGPILPA EDFFGYEIILKNYADSIKAVQDIMETSAVVSYQVFGEFAGPGIQKNVDYCDKDFYVFDIIVT TESGDVTYVDDYMMESFCNTFKFKMAPLLGRGKFEELIKLPNDLDSVVQDYNFTVDHAG LVDANKCVWNAEAKGEVFTAEGYVLKPCYPSWLRNGNRVAIKCKNSKFSEKKKSDKPIK AKVELSEADNKLVGILACYVTLNRVNNVISKIGEIGPKDFGKVMGLTVQDILEETSREGITL TQADNPSLIKKELVKMVQDVLRPAWIELVS >NON|P00971|RLIG_BPT

MQELFNNLMELCKDSQRKFFYSDDVSASGRTYRIFSYNYASYSDWLLPDALECRGIMFE
MDGEKPVRIASRPMEKFFNLNENPFTMNIDLNDVDYILTKEDGSLVSTYLDGDEILFKSKG
SIKSEQALMANGILMNINHHRLRDRLKELAEDGFTANFEFVAPTNRIVLAYQEMKIILLNV
RENETGEYISYDDIYKDATLRPYLVERYEIDSPKWIEEAKNAENIEGYVAVMKDGSHFKIKS
DWYVSLHSTKSSLDNPEKLFKTIIDGASDDLKAMYADDEYSYRKIEAFETTYLKYLDRAL
FLVLDCHNKHCGKDRKTYAMEAQGVAKGAGMDHLFGIIMSLYQGYDSQEKVMCEIEQN
FLKNYKKFIPEGY

>NON|P03049|RMNT BPP

 ${\bf MARDDPHFNFRMPMEVREKLKFRAEANGRSMNSELLQIVQDALSKPSPVTGYRNDAERL} \\ {\bf ADEOSELVKMVFDTLKDLYKKTT} \\$

>NON|P13319|RNH_BPT4

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GYTKIVLCIDNAKSGYWRRDFAYYYKKNRGKAREESTWDWEGYFESSHKVIDELKAYM
PYIVMDIDKYEADDHIAVLVKKFSLEGHKILIISSDGDFTQLHKYPNVKQWSPMHKKWVK
IKSGSAEIDCMTKILKGDKKDNVASVKVRSDFWFTRVEGERTPSMKTSIVEAIANDREQAK
VLLTESEYNRYKENLVLIDFDYIPDNIASNIVNYYNSYKLPPRGKIYSYFVKAGLSKLTNSI
NEF

>NON|P07879|RPBA BPT

MTKITVNYTVDVKDIQPKHVRSESNPQNQNKIRRAWVLSLSDNAMEVIQNKIKSAPARHA YYEAIDREVSNKWIELMRKHTTESLNAGAKFIMTSCGERLEDDYCGNADERLIVAAQIVA ETIAADFNR

>NON|P08707|RPC1_BP1

MRIDSLGWSNVDVLDRICEAYGFSQKIQLANHFDIASSSLSNRYTRGAISYDFAAHCALET GANLQWLLTGEGEAFVNNRESSDAKRIEGFTLSEEILKSDKQLSVDAQFFTKPLTDGMAIR SEGKIYFVDKQASLSDGLWLVDIEGAISIRELTKLPGRKLHVAGGKVPFECGIDDIKTLGRV VGVYSEVN

>NON|P06019|RPC1_BPM

MAADGMPGSVAGVHYRANVQGWTKQKKEGVKGGKAVEYDVMSMPTKEREQVIAHLG LSTPDTGAQANEKQDSSELINKLTTTLINMIEELEPDEARKALKLLSKGGLLALMPLVFNE QKLYSFIGFSQQSIQTLMMLDALPEEKRKEILSKYGIHEQESVVVPSQEPQEVKKAV >NON|P13121|RPC1_BPP

MINYVYGEQLYQEFVSFRDLFLKKAVARAQHVDAASDGRPVRPVVVLPFKETDSIQAEID KWTLMARELEQYPDLNIPKTILYPVPNILRGVRKVTTYQTEAVNSVNMTAGRIIHLIDKDIR IQKSAGINEHSAKYIENLEATKELMKQYPEDEKFRMRVHGFSETMLRVHYISSSPNYNDG KSVSYHVLLCGVFICDETLRDGIIINGEFEKAKFSLYDSIEPIICDRWPQAKIYRLADIENVK KQIAITREEKKVKSAASVTRSRKTKKGQPVNDNPESAQ

>NON|P14819|RPC1_BPP

MSSISERIKFLLAREGLKQRDLAEALSTSPQTVNNWIKRDALSREAAQQISEKFGYSLDWL LNGEGSPKKDLESNIPPESEWGTVDAWDKNTPLPDDEVEVPFLKDIEFACGDGRVHDEDH NGFKLRFSKATLRRVGANSDGSGVLCFPASGDSMEPVIPDGATVAVDTGNKRVIDGELYAI NQGDLKRIKQLYRKPGGKILIRSINRDYDDEEADEADVEIIGFVFWYSVLRYRR

>NON|P03034|RPC1_LAM

MSTKKKPLTQEQLEDARRLKAIYEKKKNELGLSQESVADKMGMGQSGVGALFNGINALN

AYNAALLAKILKVSVEEFSPSIAREIYEMYEAVSMQPSLRSEYEYPVFSHVQAGMFSPELR TFTKGDAERWVSTTKKASDSAFWLEVEGNSMTAPTGSKPSFPDGMLILVDPEQAVEPGDF CIARLGGDEFTFKKLIRDSGQVFLQPLNPQYPMIPCNESCSVVGKVIASQWPEETFG >NON|P69202|RPC2 BPP

MNTQLMGERIRARRKKLKIRQAALGKMVGVSNVAISQWERSETEPNGENLLALSKALQC SPDYLLKGDLSQTNVAYHSRHEPRGSYPLISWVSAGQWMEAVEPYHKRAIENWHDTTVD CSEDSFWLDVQGDSMTAPAGLSIPEGMIILVDPEVEPRNGKLVVAKLEGENEATFKKLVMD AGRKFLKPLNPQYPMIEINGNCKIIGVVVDAKLANLP

>NON|P03042|RPC2_LAM

MVRANKRNEALRIESALLNKIAMLGTEKTAEAVGVDKSQISRWKRDWIPKFSMLLAVLE WGVVDDDMARLAROVAAILTNKKRPAATERSEOIOMEF

>NON|P18681|RPC3_BPH

MMHFQLAGSGVMSAFYPHESELSRRVKQLIRAAKKQLEALCAMK

>NON|P03044|RPC3 LAM

MQYAIAGWPVAGCPSESLLERITRKLRDGWKRLIDILNQPGVPKNGSNTYGYPD

>NON|P15238|RPC BP16

MHKGTFHMSRLTDTLAAKLEEAGITQAELARRVGQSQQAINNLFAGRAASSMVWRELAR ELGIDEQEMRQMMTEAGRDPEKVTSLAGLRKYRAVLPSPREPFPIIRQQEHLPRPNATIGEE TNMEPRKKKLLPVLGEAVGGEDGEYIFNGSVLDYVDCPPSLENVPNAYAVYIDGESMVPR FRPGETVWVHPTKPPRRGDDVVIQIHPDNEDDGAPPRGFVKEFVGWTANKLVLQQYNPT KKIEFTREQVVSVHPIILAGKYW

>NON|P06153|RPC_BPPH

MTVGQRIKAIRKERKLTQVQLAEKANLSRSYLADIERDRYNPSLSTLEAVAGALGIQVSAI VGEETLIKEEQAEYNSKEEKDIAKRMEEIRKDLEKSDGLSFSGEPMSQEAVESLMEAMEHI VRQTQRINKKYTPKKYRNDDQE

>NON|P06221|RPOL_BPS

MQDLHAIQLQLEEEMFNGGIRRFEADQQRQIAAGSESDTAWNRRLLSELIAPMAEGIQAY KEEYEGKKGRAPRALAFLQCVENEVAAYITMKVVMDMLNTDATLQAIAMSVAERIEDQV RFSKLEGHAAKYFEKVKKSLKASRTKSYRHAHNVAVVAEKSVAEKDADFDRWEAWPKET QLQIGTTLLEILEGSVFYNGEPVFMRAMRTYGGKTIYYLQTSESVGQWISAFKEHVAQLSP AYAPCVIPPRPWRTPFNGGFHTEKVASRIRLVKGNREHVRKLTQKQMPKVYKAINALQNT QWQINKDVLAVIEEVIRLDLGYGVPSFKPLIDKENKPANPVPVEFQHLRGRELKEMLSPEQ WQQFINWKGECARLYTAETKRGSKSAAVVRMVGQARKYSAFESIYFVYAMDSRSRVYV QSSTLSPQSNDLGKALLRFTEGRPVNGVEALKWFCINGANLWGWDKKTFDVRVSNVLDE EFQDMCRDIAADPLTFTQWAKADAPYEFLAWCFEYAQYLDLVDEGRADEFRTHLPVHQD GSCSGIQHYSAMLRDEVGAKAVNLKPSDAPQDIYGAVAQVVIKKNALYMDADDATTFTS GSVTLSGTELRAMASAWDSIGITRSLTKKPVMTLPYGSTRLTCRESVIDYIVDLEEKEAQK AVAEGRTANKVHPFEDDRQDYLTPGAAYNYMTALIWPSISEVVKAPIVAMKMIRQLARFA AKRNEGLMYTLPTGFILEQKIMATEMLRVRTCLMGDIKMSLQVETDIVDEAAMMGAAAP NFVHGHDASHLILTVCELVDKGVTSIAVIHDSFGTHADNTLTLRVALKGQMVAMYIDGNA LQKLLEEHEVRWMVDTGIEVPEQGEFDLNEIMDSEYVFA

>NON|P00573|RPOL_BPT

MNTINIAKNDFSDIELAAIPFNTLADHYGERLAREQLALEHESYEMGEARFRKMFERQLK AGEVADNAAAKPLITTLLPKMIARINDWFEEVKAKRGKRPTAFQFLQEIKPEAVAYITIKTT

LACLTSADNTTVQAVASAIGRAIEDEARFGRIRDLEAKHFKKNVEEQLNKRVGHVYKKAF MQVVEADMLSKGLLGGEAWSSWHKEDSIHVGVRCIEMLIESTGMVSLHRQNAGVVGQD SETIELAPEYAEAIATRAGALAGISPMFQPCVVPPKPWTGITGGGYWANGRRPLALVRTHS KKALMRYEDVYMPEVYKAINIAQNTAWKINKKVLAVANVITKWKHCPVEDIPAIEREELP MKPEDIDMNPEALTAWKRAAAAVYRKDKARKSRRISLEFMLEQANKFANHKAIWFPYN MDWRGRVYAVSMFNPQGNDMTKGLLTLAKGKPIGKEGYYWLKIHGANCAGVDKVPFPE RIKFIEENHENIMACAKSPLENTWWAEQDSPFCFLAFCFEYAGVQHHGLSYNCSLPLAFDG SCSGIQHFSAMLRDEVGGRAVNLLPSETVQDIYGIVAKKVNEILQADAINGTDNEVVTVTD ENTGEISEKVKLGTKALAGQWLAYGVTRSVTKRSVMTLAYGSKEFGFRQQVLEDTIQPAI DSGKGLMFTQPNQAAGYMAKLIWESVSVTVVAAVEAMNWLKSAAKLLAAEVKDKKTG EILRKRCAVHWVTPDGFPVWQEYKKPIQTRLNLMFLGQFRLQPTINTNKDSEIDAHKQES GIAPNFVHSQDGSHLRKTVVWAHEKYGIESFALIHDSFGTIPADAANLFKAVRETMVDTYE SCDVLADFYDQFADQLHESQLDKMPALPAKGNLNLRDILESDFAFA

>NON|Q37935|RZ1 LAMB

MLKLKMMLCVMMLPLVVVGCTSKQSVSQCVKPPPPPAWIMQPPPDWQTPLNGIISPSERG >NON|P39230|SPAC_BPT

MKKFIFATIFALASCAAQPAMAGYDKDLCEWSMTADQTEVETQIEADIMNIVKRDRPEMK AEVQKQLKSGGVMQYNYVLYCDKNFNNKNIIAEVVGE

>NON|Q38504|SSB BPPH

 ${\tt MENTNIVKATFDTETLEGQIKIFNAQTGGGQSFKNLPDGTIIEANAIAQYKQVSDTYGDAK} \\ {\tt EETVTTIFAADGSLYSAISKTVAEAASDLIDLVTRHKLETFKVKVVQGTSSKGNVFFSLQLS} \\ {\tt L}$

>NON|P09385|STXA_BP9

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>NON|P09386|STXB_BP9

MKKMFMAVLFALASVNAMAADCAKGKIEFSKYNEDDTFTVKVDGKEYWTSRWNLQPL LQSAQLTGMTVTIKSSTCESGSGFAEVQFNND

>NON|P08763|T3MO_BPP

MKKETIFSEVETANSKQLAVLKANFPQCFDKNGAFIQEKLLEIIRASEVELSKESYSLNWL GKSYARLLANLPPKTLLAEDKTHNQQEENKNSQNLLIKGDNLEVLKHMVNAYAEKVNMI YIDPPYNTGKDGFVYNDDRKFTPEQLSELAGIELDEANRILEFTTKGSSSHSAWLTFIYPRL YIARELLKEDGVIFISIDDNEDKQLGLLCDEVFGQGNFVAKLPTIMNLKGNHDNFGFSDTH EYIYVYAKNKDVCSLGQFDIDESEVEKEWDEDEYGLFKRADTLKRTGQDASRKSRPKGW FPVFINSENKVYVTDDDKPLNEDDYVLYPVSPTGEELSWSWGKKKINDEFYNLIVIDIKDG KNIYKKQRPALGELPTKKPKSIWYKPEYSTSTATTELKNLLGAKLFEGPKPVPLITDLVKIG TKKDSLVLDFFAGSGTTAEAVAYLNEKDSGCRNFICIQKDEVINKTKNAYSLGYRSIFEITK KRIQEVFKKSTTTSDNAAKIGFKVIHTIDDFRAKVESELTLTNHTFFDDAVLTPEQYDALLT TWCVYDGSLLTTPIEDVDLSGYTAHFCNGRLYLIAPNFTSEALKALLQKLDSDEDFAPNKV VFYGCNFESAKQRELNEALKSYANKKSIELDLVVRN

>NON|A9CRB8|TAIL_BPM

MAQDKYIVALQIADKDLAKKLTIEEATLLGSLAEGGHTISNDLAEIIQGGKKDYSRNSVEE EIKLTLDVVPGDKGQLALKESVKQFKQLRVWIWETKKRDGKHHGVFAYVVIEEHEWSFD DEDNKIEITAKVKFNSADGTINDLPKEWLNPSALAPVVEFEDMNAYEDSYENRTKKTTAG SSDLSM

>NON|B2ZYZ1|TAIL_BPM

MANMKNSNDRIILFRKAGEKVDATKMLFLTEYGLSHEADTDTEDTMDGSYNTGGSVEST MSGTAKMFYGDDFADEIEDAVVDRVLYEAWEVESRIPGKNGDATKFKAKYFQGFHNKFE LKAEANGIDEYEYEYGVNGRFQRGFATLPEAVTKKLKATGYRFHDTTKADALTGEDLTAI PQPKVDSSTVTPGEV

>NON|P26745|TERL BPP

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NQLGKSFTGAAEVAFHLTGRYPGTKGYPADGKYGGEWKGKRFYEPVVFWIGGETNETVT
KTTQRILCGRIEENDEPGYGSIPKEDIISWKKSPFFPNLVDHLLVKHHTADGVEDGISICYFK
PYSQGRARWQGDTIHGVWFDEEPPYSIYGEGLTRTNKYGQFSILTFTPLMGMSDVVTKFL
KNPSKSQKVVNMTIYDAEHYTDEQKEQIIASYPEHEREARARGIPTMGSGRIFQIPEETIKC
QPFECPDHFYVIDAQDFGWNHPQAHIQLWWDKDADVFYLARVWKKSENTAVQAWGAV
KSWANKIPVAWPHDGHQHEKGGGEQLKTQYADAGFSMLPDHATFPDGGNSVESGISELR
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>NON|P54308|TERL BPS

MKKVRLSEKFTPHFLEVWRTVKAAQHLKYVLKGGRGSAKSTHIAMWIILLMMMMPITFL VIRRVYNTVEQSVFEQLKEAIDMLEVGHLWKVSKSPLRLTYIPRGNSIIFRGGDDVQKIKSI KASKFPVAGMWIEELAEFKTEEEVSVIEKSVLRAELPPGCRYIFFYSYNPPKRKQSWVNKV FNSSFLPANTFVDHSTYLQNPFLSKAFIEEAEEVKRRNELKYRHEYLGEALGSGVVPFENL QIEEGIITDAEVARFDNIRQGLDFGYGPDPLAFVRWHYDKRKNRIYAIDELVDHKVSLKRT ADFVRKNKYESARIIADSSEPRSIDALKLEHGINRIEGAKKGPDSVEHGERWLDELDAIVID PLRTPNIAREFENIDYQTDKNGDPIPRLEDKDNHTIDATRYAFERDMKKGGVSLWG >NON|P17312|TERL_BPT

MEQPINVLNDFHPLNEAGKILIKHPSLAERKDEDGIHWIKSQWDGKWYPEKFSDYLRLHK IVKIPNNSDKPELFQTYKDKNNKRSRYMGLPNLKRANIKTQWTREMVEEWKKCRDDIVY FAETYCAITHIDYGVIKVQLRDYQRDMLKIMSSKRMTVCNLSRQLGKTTVVAIFLAHFVC FNKDKAVGILAHKGSMSAEVLDRTKQAIELLPDFLQPGIVEWNKGSIELDNGSSIGAYASS PDAVRGNSFAMIYIDECAFIPNFHDSWLAIQPVISSGRRSKIIITTTPNGLNHFYDIWTAAVE GKSGFEPYTAIWNSVKERLYNDEDIFDDGWQWSIQTINGSSLAQFRQEHTAAFEGTSGTLI SGMKLAVMDFIEVTPDDHGFHQFKKPEPDRKYIATLDCSEGRGQDYHALHIIDVTDDVWE QVGVLHSNTISHLILPDIVMRYLVEYNECPVYIELNSTGVSVAKSLYMDLEYEGVICDSYT DLGMKQTKRTKAVGCSTLKDLIEKDKLIIHHRATIQEFRTFSEKGVSWAAEEGYHDDLVM SLVIFGWLSTQSKFIDYADKDDMRLASEVFSKELQDMSDDYAPVIFVDSVHSAEYVPVSH GMSMV

>NON|P04893|TERM BPP

MAAPKGNRFWEARSSHGRNPKFESPEALWAACCEYFEWVEANPLWEMKAFSYQGEVIQ EPIAKMRAMTITGLTLFIDVTLETWRTYRLREDLSEVVTRAEQVIYDQKFSGAAADLLNA NIIARDLGLKEQSQVEDVTPDKGDRDKRRSRIKELFNRGTGRDS >NON|P03681|TERM_BPP

MARSPRIRIKDNDKAEYARLVKNTKAKIARTKKKYGVDLTAEIDIPDLDSFETRAQFNKW
KEQASSFTNRANMRYQFEKNAYGVVASKAKIAEIERNTKEVQRLVDEKIKAMKDKEYYA
GGKPQGTIEQRIAMTSPAHVTGINRPHDFDFSKVRSYSRLRTLEESMEMRTDPQYYEKKMI
QLQLNFIKSVEGSFNSFDAADELIEELKKIPPDDFYELFLRISEISFEEFDSEGNTVENVEGN
VYKILSYLEQYRRGDFDLSLKGF

>NON|P54307|TERS BPS

MGEVKGKWTPKLERFVDEYFINGMNATKAAIAAGYSKKSASTIAAENMQKPHVRARIEE RLAQMDKKRIMQAEEVLEHLTRIALGQEKEQVLMGIGKGAETKTHVEVSAKDRIKALEL LGKLTQCLRTSRRSRLTKSSSLTIAAMQNEESKAFREVYTAFLRGVENGQSRSTPQICIEGR PWFR

>NON|P03707|TERS_LAM

MEVNKKQLADIFGASIRTIQNWQEQGMPVLRGGGKGNEVLYDSAAVIKWYAERDAEIEN EKLRREVEELRQASEADLQPGTIEYERHRLTRAQADAQELKNARDSAEVVETAFCTFVLS RIAGEIASILDGLPLSVQRRFPELENRHVDFLKRDIIKAMNKAAALDELIPGLLSEYIEQSG >NON|P13299|TEV1_BPT

MKSGIYQIKNTLNNKVYVGSAKDFEKRWKRHFKDLEKGCHSSIKLQRSFNKHGNVFECSI LEEIPYEKDLIIERENFWIKELNSKINGYNIADATFGDTCSTHPLKEEIIKKRSETVKAKMLK LGPDGRKALYSKPGSKNGRWNPETHKFCKCGVRIQTSAYTCSKCRNRSGENNSFFNHKHS DITKSKISEKMKGKKPSNIKKISCDGVIFDCAADAARHFKISSGLVTYRVKSDKWNWFYIN A

>NON|P04445|TF1_BPSP

MNKTELIKAIAQDTELTQVSVSKMLASFEKITTETVAKGDKVQLTGFLNIKPVARQARKGF NPQTQEALEIAPSVGVSVKPGESLKKAAEGLKYEDFAK

>NON|P03739|TFA BPT4

MKIYHYYFDTKEFYKEENYKPVKGLGLPAHSTIKKPLEPKEGYAVVFDERTQDWIYEEDH RGKRAWTFNKEEIFISDIGSPVGITFDEPGEFDIWTDDGWKEDETYKRVLIRNRKIEELYKE FQVLNNMIEASVANKKEKFYYKNLKRFFALLEKHEHLGGEFPSWPEKEQKPWYKRLFKH YV

>NON|P03740|TFA_LAMB

MAFRMSEQPRTIKIYNLLAGTNEFIGEGDAYIPPHTGLPANSTDIAPPDIPAGFVAVFNSDEA SWHLVEDHRGKTVYDVASGDALFISELGPLPENFTWLSPGGEYQKWNGTAWVKDTEAEK LFRIREAEETKKSLMQVASEHIAPLQDAADLEIATKEETSLLEAWKKYRVLLNRVDTSTAP DIEWPAVPVME

>NON|P09176|TOPL BPT

MIKNEIKILSDIEHIKKRSGMYIGSSANETHERFMFGKWESVQYVPGLVKLIDEIIDNSVDE GIRTKFKFANKINVTIKNNQVTVEDNGRGIPQAMVKTPTGEEIPGPVAAWTIPKAGGNFGD DKERVTGGMNGVGSSLTNIFSVMFVGETGDGQNNIVVRCSNGMENKSWEDIPGKWKGT RVTFIPDFMSFETNELSQVYLDITLDRLQTLAVVYPDIQFTFNGKKVQGNFKKYARQYDEH AIVQEQENCSIAVGRSPDGFRQLTYVNNIHTKNGGHHIDCAMDDICEDLIPQIKRKFKIDVT KARVKECLTIVMFVRDMKNMRLIRQTKERLTSPFGEIRSHIQLDAKKISRDILNNEAILMPII EAALARKLAAEKAAETKAAKKASKAKVHKHIKANLCGKDADTTLFLTEGDSAIGYLIDV RDKELHGGYPLRGKVLNSWGMSYADMLKNKELFDICAITGLVLGEKAFEEKEDGEWFTF ELNGDTIIVNENDEVQINGKWITVGELRKNL

>NON|P23992|TOPS_BPT

MKFVKIDSSSVDMKKYKLQNNVRRSIKSSSMNYANVAIMTDADHDGLGSIYPSLLGFFSN WPELFEQGRIRFVKTPVIIAQVGKKQEWFYTVAEYESAKDALPKHSIRYIKGLGSLEKSEY REMIQNPVYDVVKLPENWKELFEMLMGDNADLRKEWMSQ

>NON|P07636|TRA_BPMU

MELWVSPKECANLPGLPKTSAGVIYVAKKQGWQNRTRAGVKGGKAIEYNANSLPVEAK
AALLLRQGEIETSLGYFEIARPTLEAHDYDREALWSKWDNASDSQRRLAEKWLPAVQAA
DEMLNQGISTKTAFATVAGHYQVSASTLRDKYYQVQKFAKPDWAAALVDGRGASRRNV
HKSEFDEDAWQFLIADYLRPEKPAFRKCYERLELAAREHGWSIPSRATAFRRIQQLDEAM
VVACREGEHALMHLIPAQQRTVEHLDAMQWINGDGYLHNVFVRWFNGDVIRPKTWFWQ
DVKTRKILGWRCDVSENIDSIRLSFMDVVTRYGIPEDFHITIDNTRGAANKWLTGGAPNRY
RFKVKEDDPKGLFLLMGAKMHWTSVVAGKGWGQAKPVERAFGVGGLEEYVDKHPALA
GAYTGPNPQAKPDNYGDRAVDAELFLKTLAEGVAMFNARTGRETEMCGGKLSFDDVFER
EYARTIVRKPTEEQKRMLLLPAEAVNVSRKGEFTLKVGGSLKGAKNVYYNMALMNAGV
KKVVVRFDPQQLHSTVYCYTLDGRFICEAECLAPVAFNDAAAGREYRRQKQLKSATKA
AIKAQKQMDALEVAELLPQIAEPAAPESRIVGIFRPSGNTERVKNQERDDEYETERDEYLN
HSLDILEQNRRKKAI

>NON|P41063|TUM_BP18

MDRELNEHVMIERVEMIARLTAEGTCQERDREIALNLIAEIARGNLMKNNNFSVVFSAPPV GETFAKEGKVKVNITLDKDQKIGQPVIDAFQCELTKRIQSVFPSTRVTVKKGSMTGVELM GFDKDSDREALDSILQEVWEDESWR

>NON|P00471|TYSY_BPT

MKQYQDLIKDIFENGYETDDRTGTGTIALFGSKLRWDLTKGFPAVTTKKLAWKACIAELI WFLSGSTNVNDLRLIQHDSLIQGKTVWDENYENQAKDLGYHSGELGPIYGKQWRDFGG VDQIIEVIDRIKKLPNDRRQIVSAWNPAELKYMALPPCHMFYQFNVRNGYLDLQWYQRSV DVFLGLPFNIASYATLVHIVAKMCNLIPGDLIFSGGNTHIYMNHVEQCKEILRREPKELCEL VISGLPYKFRYLSTKEQLKYVLKLRPKDFVLNNYVSHPPIKGKMAV

>NON|P20703|UVSW BPT

MDIKVHFHDFSHVRIDCEESTFHELRDFFSFEADGYRFNPRFRYGNWDGRIRLLDYNRLLP FGLVGQIKKFCDNFGYKAWIDPQINEKEELSRKDFDEWLSKLEIYSGNKRIEPHWYQKDA VFEGLVNRRRILNLPTSAGKSLIQALLARYYLENYEGKILIIVPTTALTTQMADDFVDYRLF SHAMIKKIGGGASKDDKYKNDAPVVVGTWQTVVKQPKEWFSQFGMMMNDECHLATGK SISSIISGLNNCMFKFGLSGSLRDGKANIMQYVGMFGEIFKPVTTSKLMEDGQVTELKINSI FLRYPDEFTTKLKGKTYQEEIKIITGLSKRNKWIAKLAIKLAQKDENAFVMFKHVSHGKAI FDLIKNEYDKVYYVSGEVDTETRNIMKTLAENGKGIIIVASYGVFSTGISVKNLHHVVLAH GVKSKIIVLQTIGRVLRKHGSKTIATVWDLIDSAGVKPKSANTKKKYVHLNYLLKHGIDRI QRYADEKFNYVMKTVNLISFGPLEKKMLLEFKQFLYEASIDEFMGKIASCQTLEGLEELEA YYKKRVKETELKDTDDISVRDALAGKRAELEDSDDEVEESF

>NON|P04529|UVSX_BPT

MSDLKSRLIKASTSKLTAELTASKFFNEKDVVRTKIPMMNIALSGEITGGMQSGLLILAGPS KSFKSNFGLTMVSSYMRQYPDAVCLFYDSEFGITPAYLRSMGVDPERVIHTPVQSLEQLRI DMVNQLDAIERGEKVVVFIDSLGNLASKKETEDALNEKVVSDMTRAKTMKSLFRIVTPY FSTKNIPCIAINHTYETQEMFSKTVMGGGTGPMYSADTVFIIGKRQIKDGSDLQGYQFVLN VEKSRTVKEKSKFFIDVKFDGGIDPYSGLLDMALELGFVVKPKNGWYAREFLDEETGEMI REEKSWRAKDTNCTTFWGPLFKHQPFRDAIKRAYQLGAIDSNEIVEAEVDELINSKVEKF KSPESKSKSAADLETDLEQLSDMEEFNE

>NON|P03775|V03_BPT7

MAMSNMTYNNVFDHAYEMLKENIRYDDIRDTDDLHDAIHMAADNAVPHYYADIFSVMA SEGIDLEFEDSGLMPDTKDVIRILQARIYEQLTIDLWEDAEDLLNEYLEEVEEYEEDEE >NON|P23541|VA2_BPT5

 $MTNAKTAKFAWNEENTQKAVSMYQQLINENGLDFANSDGLKEIAKAVGAASPVSVRSKL\\TSAKAYQKSDKPRKVGGGSSIRKAHYVRVIAKHAIDSGIIKDADDLASLESAKLETLDAVA\\OLLGVADEVKQAAGE$

>NON|P15966|VASS_BPF

MRKFIPTERMSKSHVVSVREYADGELEDNSLPLIYRSNWSPGQYTSTGPRTKEWHYPSSY SRGAIGIKALDQGKYARLGTSWGREFEERAGYGMSIDARSCYSLFPVSQNLTWIDVPTNV ANRATTEVLGKVTQGNFNLGVALAEARSTASQLSTQTIALIKAYTAARRGNWRQALRYLA LNENRKFNSKSVASRWLELQFGWMPLLSDIQGAYEMLTKVHLKAFMPMRAVRQVGQNV SLSGRLTSPAASYKSTCNISRRIVIWFYINDARLAWLSSLGILNPLGIVWEKVPFSFLVDWLL PVGNMLEGLTAPIGCSYQSGTVTDVISGESTITADDIYGWDTVRPATAKVQISAVHRGVQS VWPTTGVYVKSPFSMVHTLDALALFRQRLWK

>NON|P07394|VASS_BPG

MFPKSNIDRNYKVKLISYDKKGKLVSDDSFEQVENYLFQNRSTTYKPGYIRRDFRRPTNF WNGYRCFNQPVGTFTRKLSDGGRQVADYGIVNPNKFTANSQHLGDNMVIYPGPFSINIDQ RASVEVLNKLSQSNLNIGVAIAEAKMTASLLAKQSIALIRAYTAAKRGNWREVLSQLLISE HRFRAPAKDLGGRWLELQYGWLPLMSDLKAAYDLLTQTKLPAFMPLRVTRTVGGTHNY KVRNVESAGDTWSYRHRLSVNYRIWYFISDPRLAWASSLGLLNPLEIYWEKTPWSFVVD WFLPVGNLIEAMSNPLGLDIISGTKTWQLESKLNATLPASGWSGTAKLTAYAKAYDRSTFY SFPTPLPYVKSPLSGLHLANALALINQRLKR

>NON|P09676|VASS_BPS

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>NON|P21680|VDHR BP1

MSRDELRIVLGAMIPNMEEGFEIKTRDGAILRVDPEWECCKEFKDGLKAEIIKQLKSKPAV VFGYS

>NON|P10310|VDMB_BPT

MSTQSNRNALVVAQLKGDFVAFLFVLWKALNLPVPTKCQIDMAKVLANGDNKKFILQAF RGIGKSFITCAFVVWTLWRDPQLKILIVSASKERADLNSIFIKNIIDLLPFLDELKPSPGQRDS VISFDVGPAKPDHSPSVKSVGITGQLTGSRADIIIADDVEIPSNSATQGAREKLWTLVQEFRA LLKPLPTSRVIYLGTPQTEMTLYKELEDNRGYTTIIWPALYPRSREEDLYYGERLAPMLREE FNDGFEMLQGQPTDPVRFDMEDLRERELEYGKAGFTLQFMLNPNLSDAEKYPLRLRDAI VCGLDFEKAPMHYQWLPNRQNRNEELPNVGLKGDDIHSYHSCSQNTGQYQQRILVIDPS GRGKDETGYAVLFTLNGYIYLMEAGGFPDGYSDKTLESLAKKANEWKVQTVVFESNFGD GMFGKVFSPVLLKHHAAALEEIRARGMKELRICDTLEPVLSTHRLVIRDEVIREDYQTARD ADGKHDVRYSLFYQLTRMAREKGAVAHDDRLDAFRLGVEFLRSTMELDAVKVEAEVLE AFLEEHMEHPIHSAGHVVTAMVDGMELYWEDDDVNGDRFINW

>NON|P15236|VFIL_BP1

MLKSEPSFASLLVKQSPGMHYGHGWIAGKDGKRWHPCRSQSELLKGLKTKSPKSSGFLII RIVHFVIKGVKHVTR

>NON|P26746|VG04_BPP

MQIKTKGDLVRAALRKLGVASDATLTDVEPQSMQDAVDDLEAMMAEWYQDGKGIITGY VFSDDENPPAEGDDHGLRSSAVSAVFHNLACRIAPDYALEATAKIIATAKYGKELLYKQTAI SRAKRAPYPSRMPTGSGNSFANLNEWHYFPGEONADSTTPHDEGNG

>NON|P16009|VG05 BPT

MEMISNNLNWFVGVVEDRMDPLKLGRVRVRVVGLHPPQRAQGDVMGIPTEKLPWMSVI QPITSAAMSGIGGSVTGPVEGTRVYGHFLDKWKTNGIVLGTYGGIVREKPNRLEGFSDPT GQYPRRLGNDTNVLNQGGEVGYDSSSNVIQDSNLDTAINPDDRPLSEIPTDDNPNMSMAE MLRRDEGLRLKVYWDTEGYPTIGIGHLIMKQPVRDMAQINKVLSKQVGREITGNPGSITM EEATTLFERDLADMQRDIKSHSKVGPVWQAVNRSRQMALENMAFQMGVGGVAKFNTML TAMLAGDWEKAYKAGRDSLWYQQTKGRASRVTMIILTGNLESYGVEVKTPARSLSAMAA TVAKSSDPADPPIPNDSRILFKEPVSSYKGEYPYVHTMETESGHIQEFDDTPGQERYRLVHP TGTYEEVSPSGRRTRKTVDNLYDITNADGNFLVAGDKKTNVGGSEIYYNMDNRLHQIDGS NTIFVRGDETKTVEGNGTILVKGNVTIIVEGNADITVKGDATTLVEGNQTNTVNGNLSWK VAGTVDWDVGGDWTEKMASMSSISSGQYTIDGSRIDIG

>NON|Q05278|VG06 BPM

MADLGNPLDLEMLCLVTGRDFRWTIDYPWGPGELFLELETGGEHNALHQVYVTGATGGT YTLNVNGTNTPAIDYNDVSENPQGLAGDIQDALDAAVGAGNAVVHPVSLFPAWTLNFNL NASKPLTEQLVNTINKAANDFFDTFDQLLGVDVEMTVTDTLNFKLKVTSRRSFDEVGVVT FAVDVTSQAVINFFNSVAELTGAVNTVNVDFYWNRTYDIEFTGSLGLQPIPATTADITNLAG TSKAVSVTVVEPGKKRLTIWPFTVNGETATIKVESEEADKIPNRCRWQLVHMPTGEAAGG DAKQLGRVYRQPR

>NON|Q01074|VG07_BPP

MLYAFTLGRKLRGEEPSYPEKGGKGGADKSAKYAAEAQKYAADLQNQQFNTIMNNLKPF TPLADKYIGSLEGLSSLEGQGQALNNYYNSQQYQDLAGQARYQNLAAAEATGGLGSTAT SNQLSAIAPTLGQQWLSGQMNNYQNLANIGLGALQGQANAGQTYANNMSQISQQSAAL AAANANRPSAMQSAIGGGASGAIAGAGLAKLIGSSTPWGAAIGGGIGLLGSLF

>NON|P26748|VG08 BPP

MEPTTEIQATEDLTLSGDHAAASADSLVVDNANDNAGQEEGFEIVLKDDETAPKQDPAKN AEFARRIERKRQRELEQQMEAVKRGELPESLRVNPDLPPQPDINAYLSEEGLAKYDYDNS RALAAFNAANTEWLMKAQDARSNAVAEQGRKTQEFTQQSAQYVEAARKHYDAAEKLNI PDYQEKEDAFMQLVPPAVGADIMRLFPEKSAALMYHLGANPEKARQLLAMDGQSALIEL TRLSERLTLKPRGKQISSAPPADQPITGDVSAANKDAIRKQMDAAASKGDVETYRKLKAK LKGIR

>NON|P04332|VG10_BPP

MARKRSNTYRSINEIQRQKRNRWFIHYLNYLQSLAYQLFEWENLPPTINPSFLEKSIHQFG YVGFYKDPVISYIACNGALSGQRDVYNQATVFRAASPVYQKEFKLYNYRDMKEEDMGV VIYNNDMAFPTTPTLELFAAELAELKEIISVNQNAQKTPVLIRANDNNQLSLKQVYNQYE GNAPVIFAHEALDSDSIEVFKTDAPYVVDKLNAQKNAVWNEMMTFLGIKNANLEKKERM VTDEVSSNDEQIESSGTVFLKSREEACEKINELYGLNVKVKFRYDIVEQMRRELQQIENVS RGTSDGETNE

>NON|O64205|VG12_BPM

MSKPWLFTVHGTGQPDPLGPGLPADTARDVLDIYRWQPIGNYPAAAFPMWPSVEKGVAE LILQIELKLDADPYADFAMAGYSQGAIVVGQVLKHHILPPTGRLHRFLHRLKKVIFWGNP MRQKGFAHSDEWIHPVAAPDTLGILEDRLENLEQYGFEVRDYAHDGDMYASIKEDDLHE YEVAIGRIVMKASGFIGGRDSVVAQLIELGQRPITEGIALAGAIIDALTFFARSRMGDKWPH LYNRYPAVEFLRQI

>NON|P20345|VG12_BPP

MSTKPELKRFEQFGEMMVQLYERYLPTAFDESLTLLEKMNKIIHYLNEIGKVTNELIEEWN KVMEWILNDGLEDLVKETLERWYEEGKFADLVIQVIDELKQFGVSVKTYGAKGDGVTDD IRAFEKAIESGFPVYVPYGTFMVSRGIKLPSNTVLTGAGKRNAVIKFMDSVGRGESLMYN QNVTTGNENIFLSSFTLDGNNKRLGQGISGIGGSRESNLSIRACHNVYIRDIEAVDCTLHGI DITCGGLDYPYLGDGTTAPNPSENIWIENCEATGFGDDGITTHHSQYINILNCYSHDPRLTA NCNGFEIDDGSRHVVLSNNRSKGCYGGIEIKAHGDAPAAYNISINGHMSVEDVRSYNFRHI GHHAATDPQSVSAKNIVASNLVSIRPNNKRGFQDNATPRVLAVSAYYGVVINGLTGYTDDP NLLTETVVSVQFRARNCSLNGVGLTGFSNSDNGIYVIGGSRGGDAVNISNVTLNNSGRYG VSIGSGIENVSITNISGIGDGINSPVALVSTINSNPEISGLSSIGYPTAARVAGTDYNDGLTLFN GAFRASTTSSGKIHSEGFIMGSTSGCEASVSKSGVLTSSSSKTSSERSLIAGSSTSEAKGTYN TILGSLGAVADEQFAALISASQSRASGNHNLILSSYGINTTGSYKVNGGFEKINWELDSLNG RIKARDTVTGGNTWSDFAEYFESLDGQVIETGYLVTLEKGKIRKAEKGEKIIGVISETAGFV LGESSFEWQGAVLKNEFGGIIYEEVTTEDGVKFKRPLPSPDFDPNKNYIPRSQRREWHVVG LLGQIAVRIDETVKQGHGIDAVGGVATDGDNFIVQEITTPYTKEKGYGVAIVLVK >NON|P10930|VG12_BPT

MSNNTYQHVSNESRYVKFDPTDTNFPPEITDVQAAIAAISPAGVNGVPDASSTTKGILFIPT EQEVIDGTNNTKAVTPATLATRLSYPNATETVYGLTRYSTNDEAIAGVNNESSITPAKFTVA LNNAFETRVSTESSNGVIKISSLPQALAGADDTTAMTPLKTQQLAIKLIAQIAPSETTATESD QGVVQLATVAQVRQGTLREGYAISPYTFMNSSSTEEYKGVIKLGTQSEVNSNNASVAVTG ATLNGRGSTTSMRGVVKLTTTAGSQSGGDASSALAWNADVIQQRGGQIIYGTLRIEDTFTI ANGGANITGTVRMTGGYIQGNRIVTQNEIDRTIPVGAIMMWAADSLPSDAWRFCHGGTVS ASDCPLYASRIGTRYGGNPSNPGLPDMRGLFVRGSGRGSHLTNPNVNGNDQFGKPRLGVG CTGGYVGEVQIQQMSYHKHAGGFGEHDDLGAFGNTRRSNFVGTRKGLDWDNRSYFTN DGYEIDPESQRNSKYTLNRPELIGNETRPWNISLNYIIKVKE

>NON|P16517|VG167_BP

MEAILMIGVLALCVIFLLSGRNNKKKQEARELEDYLEDLNKRVVQRTQILSELNEVISNRSI DKTVNLSACEVAVLDLYEQSNIRIPSDIIEDLVNQRLQSEQEVLNYIETQRTYWKLENQKKL YRGSLK

>NON|Q05222|VG16 BPM

MSDNPTPESTPEAETPEVEKPMEPQGKVFDEAYVQSLRQEAAAARVAKKDAVEAAEARV KAEYEAKLAERDTAYTELQNQLGQAWIELEKVYLSLDAKVPNDKVRAFVEILEGNDRDSI AESVKSRLELVGGFGNKTPSPAFDPSQGRGGKPPIPLNGDPILEAIKAAVGIKK >NON|Q01146|VG16 BPP MKVTANGKTFNFPDGTSTEDIGAAVDEYFAGQASAAETQPAEQQEEPQQPEQSLMQRAG DLLTGGQSAGQIAEQAGRGLVNIPFDVLQGGASLINAISQGLGGPKVLDDVYRPVDRPTDP YAQAGESIGGYLIPGAGVAGNMAIGSVAEAANQQGDFAGNVAKNAAVNLGAQGLLSGAA KLVGRGITAARGEIAPEARQLIDTAESMGVKPMTSDMIKPGNAFTRSLMQGGEGALLGTG GKRAEQYAIRSKLLGDYFDRVGGYNPDDIVKSMTSTVGGRKNAAGAVRDEIVNRMGSAP VGTTNSINAIDTNIARLEKLGTSADQRLLTALKNLKGELNSGNVDFDLLQQHRTAFRTNVQ GDAMVFPNQAKAATNMVENAMTRDLRNAVGKSLGPQAASKYLKSNSDFANIYNKVLNK RISNTLNKARSEYTPELINTVVFSRKPSDIKRIWSSLDNKGKDAMRAAYISKIAEKTGDSPA KFITEVNKLKAQSGGEIYNTIFSGRHMKELDALHDVLRQTARSDSANVVTQTGQALANPV RLGAAIPTLGKSLAAEAGYGLAMRVYESKPIRNMLLRLANTKPGTPAYERALNQAATAVR PLLANEATRO

>NON|Q05223|VG17_BPM

MAVNPDRTTPFLGVNDPKVAQTGDSMFEGYLEPEQAQDYFAEAEKISIVQQFAQKIPMGT TGQKIPHWTGDVSASWIGEGDMKPITKGNMTSQTIAPHKIATIFVASAETVRANPANYLGT MRTKVATAFAMAFDNAAINGTDSPFPTFLAQTTKEVSLVDPDGTGSNADLTVYDAVAVNA LSLLVNAGKKWTHTLLDDITEPILNGAKDKSGRPLFIESTYTEENSPFRLGRIVARPTILSDH VASGTVVGYQGDFRQLVWGQVGGLSFDVTDQATLNLGTPQAPNFVSLWQHNLVAVRVE AEYAFHCNDKDAFVKLTNVDATEA

>NON|P03686|VG17 BPP

MNNYQLTINEVIDIINTNTEINKLVAKKENLFPTDLYDLDKQELIAIILNSDFALSSIKRVLLE VTVEELGTQDNDEDDELEDLDGEIDRVDYIDKDGIRFDVPRETSPHVDKSIVTFNDELLDE ANKIAKSIQEHDFNDKAIEEAELKIFKNHLPSIYSMKKENK

>NON|P03679|VG1_BPPH

MGKIFDQEKRLEGTWKNSKWGNQGIIAPVDGDLKMIDLELEKKMTKLEHENKLMKNAL YELSRMENNDYATWVIKVLFGGAPHGAK

>NON|P04534|VG22_BPT

MLKEQLIAEAQKIDASVALDSIFESVNISPEAKETFGTVFEATVKQHAVKLAESHIAKIAEK AEEEVEKNKEEAEEKAEKKIAEQASKFIDHLAKEWLAENKLAVDKGIKAELFESMLGGLK ELFVEHNVVVPEESVDVVAEMEEELQEHKEESPRLFEELNMRDAYINYVQREVALSESTK DLTESQKEKVSALVEGMDYSDAFSSKLSAIVEMVKKSNKDESTITESINTPDTEAAGLNFV TEAVEDKAAQGAEDIVSVYAKVASRF

>NON|Q05233|VG26_BPM

MPNSAGVEVARISVKVSPNTKEFRRELKTELEKIERELKGDVEINGHLDAAQAKADFKRM MMQLKTEAAKGVHVPVDVTVDKKSKKGGLLGGLLGGSRGLGDLGDDAEKASSQVQHL GKSFLGLTRAAWIGVGIVAVAAPLVGIVAGLLAGLPSLLSAFGAGAGVVALGMDGIKAAAS TLAPTLETVKAAVSSTFQQGLTPVFQQLGPMLTAITPNLQNVASGLVNMAGSITDVITQAP GLQQIQNILTKTGEFFTGLGPVLATGTQAFLTLSNAGANSFGTLLAPLQEFTNGFNDMVNR VTSNGVFEGAMQGLSQTLGSVLNLFNRLMESGLQAMGQLGGPLSTFINGFGDLFVSLMP ALTSVSGLIGNVLGTLGTQLAPIVTALTPAFQTLASTLGTMLTGALQALGPILTQVATLIGTT LNTALQALQPMLPSLMQSFQQISDVLVTSLAPHIPALATALGQVAGAVLQLAPTIISTLVPAF VQLVPKVAELVPTIVNLVQSFANLMPVVLPLAQALVSVAGAVIQVGVSIGGALIGALANLT EIISNVIKKVSEWVSSFSSGAQQIAAKAAELPGMIQSALANLMAIGLQAGKDLVQGLINGI GGMVSAAVNKAKELASSVAGAVKGFLGIESPSKLFTEYGQFTAEGFGNGMEAGFKPVIER AKDLAAELSRAMESGTDPSGILAGLDQNELKQMLAALEEERKRLKVEKNGIPKGDKAGR

 $\label{lem:condition} EALQNQLDQIQAQKDILSYQRDRIKNESEYGDMAGEDPLVKAASGLMSAPVDFAKATGK\\ QFLSDIGISGDGFISKAITEGIQYIFQIGSVDEALSIKDREESKNALSVVGR$

>NON|Q05234|VG27_BPM

MITDTIVELEGVNGERFNLTTGDQGVYLATDVEGCFYDPPVKVVVEEPGNYPGARYLSHR ALKRDIVFGVVILNDAKQGPRSWLSRDSEWRKAWAFNRTCKLYVTTPDSGTRYLKLALFE SPTVKMDTDPRGKPLEVTVMSCIAYDPFWYEDDKVFSAKTKTDTRFDPSFWTPPWPWEE LPKETLRIKVGREQGGLNPTDQYIFPKWTVPGSTEKVPNFPWPFPPNVPIPWETAPFTQFVI PDYSFEDEEFRNRRLKTPGLIYGENCVIDTDRREEQIASESGSPVWARMNGVRFRNSIPPYT EEAEFVIDASGCAPGQVVTLRLTRPWSRCWGLE

>NON|Q05235|VG28_BPM

MSGLTSVREAEDLWQKIQLRRCKREQERLKHPDVELRDGDFRLRGLVAGERVLEWEFIEN ETGTCTLQLSLSHYLAKWVMDHRGRAKRNVIINIEKQGARWTGMMDHYRVIKTDAGDA YIEIVFLHDFEQTKHIRVWCNPFLRPELQFPKVWIIFGPAKWCLLVTLFVNLLRLETSLWTL PDDPTDINEWMGPSFNPANWRNIVKPFPFLADNSPVTMVFSRFGTFYDTAKKILEDHQLTL TCRRYIKDRDPHPFEDLKGLWGIDPVEDLLQKIPLRDGCVVWDIEDNSGWGTQTAFGGS WLTGFVRGMVQLAGDGQVEGVDVFTGDYTFPGEYYSPWFMGTSPIAPHVVFEEGPLTGI KSSEFSYYEATDTSFLAGGQSAPGINEGISALVNIGGDLLTSFINSQLAALGAVGGAIDLPPL GGLLDAVLQPLYSDVFGAFMEVPTLRAMGISLPISGLEDIVTGLGDFHYFENMADGAMKA FTLSAFAAIASQIHKTRARTTHTLKVSDAAPYIFAPKPYGHCWIGDRVGTSVLGYPVEHQL FVERIRKVKYRIDKDGMKPLEIEIGYREPKNPALHILEEIKRVNGALGTAGIL

>NON|P17313|VG31 BPT

MSEVQQLPIRAVGEYVILVSEPAQAGDEEVTESGLIIGKRVQGEVPELCVVHSVGPDVPEG FCEVGDLTSLPVGQIRNVPHPFVALGLKQPKEIKQKFVTCHYKAIPCLYK

>NON|P13338|VG33 BPT

 $MTQFSLNDIRPVDETGLSEKELSIKKEKDEIAKLLDRQENGFIIEKMVEEFGMSYLEATTAF\\ LEENSIPETQFAKFIPSGIIEKIQSEAIDENLLRPSVVRCEKTNTLDFLL$

>NON|P03744|VG37_BPT

MATLKQIQFKRSKIAGTRPAASVLAEGELAINLKDRTIFTKDDSGNIIDLGFAKGGQVDGN VTINGLLRLNGDYVQTGGMTVNGPIGSTDGVTGKIFRSTQGSFYARATNDTSNAHLWFEN ADGTERGVIYARPOTTTDGEIRLRVRQGTGSTANSEFYFRSINGGEFQANRILASDSLVTKR IAVDTVIHDAKAFGQYDSHSLVNYVYPGTGETNGVNYLRKVRAKSGGTIYHEIVTAQTGL ADEVSWWSGDTPVFKLYGIRDDGRMIIRNSLALGTFTTNFPSSDYGNVGVMGDKYLVLG DTVTGLSYKKTGVFDLVGGGYSVASITPDSFRSTRKGIFGRSEDQGATWIMPGTNAALLSV QTQADNNNAGDGQTHIGYNAGGKMNHYFRGTGQMNINTQQGMEINPGILKLVTGSNNV **OFYADGTISSIOPIKLDNEIFLTKSNNTAGLKFGAPSQVDGTRTIQWNGGTREGQNKNYVII** KAWGNSFNATGDRSRETVFQVSDSQGYYFYAHRKAPTGDETIGRIEAQFAGDVYAKGIIA NGNFRVVGSSALAGNVTMSNGLFVQGGSSITGQVKIGGTANALRIWNAEYGAIFRRSESN FYIIPTNQNEGESGDIHSSLRPVRIGLNDGMVGLGRDSFIVDQNNALTTINSNSRINANFRM QLGQSAYIDAECTDAVRPAGAGSFASQNNEDVRAPFYMNIDRTDASAYVPILKQRYVQGN GCYSLGTLINNGNFRVHYHGGGDNGSTGPQTADFGWEFIKNGDFISPRDLIAGKVRFDRT GNITGGSGNFANLNSTIESLKTDIMSSYPIGAPIPWPSDSVPAGFALMEGQTFDKSAYPKLA VAYPSGVIPDMRGQTIKGKPSGRAVLSAEADGVKAHSHSASASSTDLGTKTTSSFDYGTK GTNSTGGHTHSGSGSTSTNGEHSHYIEAWNGTGVGGNKMSSYAISYRAGGSNTNAAGNH SHTFSFGTSSAGDHSHSVGIGAHTHTVAIGSHGHTITVNSTGNTENTVKNIAFNYIVRLA

>NON|P17171|VG40_BPT

MNKDDLDLEIIDESPSSEGEERKERLFNESLKIIKSAMENVIQEIVIKLEDGSTHIVYVT KLDWVDGKVVMDFAVLDQERKAELAPHVEKCITMQLQDAFNKRSKKKFKFF >NON|P04530|VG41 BPT

MVEIILSHLIFDQAYFSKVWPYMDSEYFESGPAKNTFKLIKSHVNEYHSVPSINALNVALEN SSFTETEYSGVKTLISKLADSPEDHSWLVKETEKYVQQRAMFNATSKIIEIQTNAELPPEKR NKKMPDVGAIPDIMRQALSISFDSYVGHDWMDDYEARWLSYMNKARKVPFKLRILNKIT KGGAETGTLNVLMAGVNVGKSLGLCSLAADYLQLGHNVLYISMEMAEEVCAKRIDANM LDVSLDDIDDGHISYAEYKGKMEKWREKSTLGRLIVKQYPTGGADANTFRSLLNELKLK KNFVPTIIIVDYLGICKSCRIRVYSENSYTTVKAIAEELRALAVETETVLWTAAQVGKQAW DSSDVNMSDIAESAGLPATADFMLAVIETEELAAAEQQLIKQIKSRYGDKNKWNKFLMGV QKGNQKWVEIEQDSTPTEVNEVAGSQQIQAEQNRYQRNESTRAQLDALANELKF >NON|P03682|VG4_BPPH

MPKTQRGIYHNLKESEYVASNTDVTFFFSSELYLNKFLDGYQEYRKKFNKKIERVAVTPW NMDMLADITFYSEVEKRGFHAWLKGDNATWREVHVYALRIMTKPNTLDWSRIQKPRLRE RRKSMV

>NON|P04532|VG57_BPT

MSEQTVEQKLSAEIVTLKSRILDTQDQAARLMEESKILQGTLAEIARAVGITGDTIKVEEIV EAVKNLTAESADEAKDEE

>NON|P13342|VG59_BPT

MIKLRMPAGGERYIDGKSVYKLYLMIKQHMNGKYDVIKYNWCMRVSDAAYQKRRDKYF FQKLSEKYKLKELALIFISNLVANQDAWIGDISDADALVFYREYIGRLKQIKFKFEEDIRNIY YFSKKVEVSAFKEIFEYNPKVQSSYIFKLLQSNIISFETFILLDSFLNIIDKHDEQTDNLVWN NYSIKLKAYRKILNIDSQKAKNVFIETVKSCKY

>NON|Q05286|VG71 BPM

MSGKIQHKAVVPAPSRIPLTLSEIEDLRRKGFNQTEIAELYGVTRQAVSWHKKTYGGRLTT RQIVQQNWPWDTRKPHDKSKAFQRLRDHGEYMRVGSFRTMSEDKKKRLLSWWKMLRD DDLVLEFDPSIEPYEGMAGGGFRYVPRGIEDDDLLIRVNEHTNLTAEGELLWSWPDDIEEL LSEP

>NON|P13848|VG7 BPPH

MPLKPEEHEDILNKLLDPELAQSERTEALQQLRVNYGSFVSEYNDLTKSHEKLAAEKDDLI VSNSKLFRQIGLTDKQEEDHKKADISETITIEDLEAK

>NON|P20344|VG85_BPP

MMVSFTARAKSNVMAYRLLAYSQGDDIIEISHAAENTIPDYVAVKDVDKGDLTQVNMYP LAAWQVIAGSDIKVGDNLTTGKDGTAVPTDDPSTVFGYAVEEAQEGQLVTLVISRSKEISIE VDDIKDAGDTGKRLLKINTPSGARNIIIENEDAKALINGETTNTNKKNLQDLLFSDGNVKA FLQATTTDENKTALQQLLVSNADVLGLLSGNPTSDNKINLRTMIGAGVPYSLPAATTTTIG GVKKGAAVTASTATDVATAVKDLNSLITVLKNAGIIS

>NON|P03702|VGAM_LAM

MDINTETEIKQKHSLTPFPVFLISPAFRGRYFHSYFRSSAMNAYYIQDRLEAQSWARHYQQ LAREEKEAELADDMEKGLPQHLFESLCIDHLQRHGASKKSITRAFDDDVEFQERMAEHIR YMVETIAHHQVDIDSEV

>NON|P03654|VGK_BPG4

MKPKTTLLLQELLLTYELNRSGLLVENEEIQSQLKKLEVVLLCNLSPSSQRAGKN

>NON|P03695|VHED_BPT

MFKRKSTAELAAQMAKLNGNKGFSSEDKGEWKLKLDNAGNGQAVIRFLPSKNDEQAPF AILVNHGFKKNGKWYIETCSSTHGDYDSCPVCQYISKNDLYNTDNKEYSLVKRKTSYWA NILVVKDPAAPENEGKVFKYRFGKKIWDKINAMIAVDVEMGETPVDVTCPWEGANFVLK VKQVSGFSNYDESKFLNQSAIPNIDDESFQKELFEQMVDLSEMTSKDKFKSFEELNTKFGQ VMGTAVMGGAAATAAKKADKVADDLDAFNVDDFNTKTEDDFMSSSSGSSSSADDTDLD DLLNDL

>NON|P03696|VHED_BPT

MAKKIFTSALGTAEPYAYIAKPDYGNEERGFGNPRGVYKVDLTIPNKDPRCQRMVDEIVK CHEEAYAAAVEEYEANPPAVARGKKPLKPYEGDMPFFDNGDGTTTFKFKCYASFQDKKTK ETKHINLVVVDSKGKKMEDVPIIGGGSKLKVKYSLVPYKWNTAVGASVKLQLESVMLVE LATFGGGEDDWADEVEENGYVASGSAKASKPRDEESWDEDDEESEEADEDGDF >NON|P68660|VHTJ_LAM

MTRQEELAAARAALHDLMTGKRVATVQKDGRRVEFTATSVSDLKKYIAELEVQTGMTQR RRGPAGFYV

>NON|P21442|VINT_BPH

MAVRKDTKNGKWLAEVYVNGNASRKWFLTKGDALRFYNQAKEQTTSAVDSVQVLESS DLPALSFYVQEWFDLHGKTLSDGKARLAKLKNLCSNLGDPPANEFNAKIFADYRKRRLD GEFSVNKNNPPKEATVNREHAYLRAVFNELKSLRKWTTENPLDGVRLFKERETELAFLYE RDIYRLLAECDNSRNPDLGLIVRICLATGARWSEAETLTQSQVMPYKITFTNTKSKKNRTV PISKELFDMLPKKRGRLFNDAYESFENAVLRAEIELPKGQLTHVLRHTFASHFMMNGGNIL VLKEILGHSTIEMTMRYAHFAPSHLESAVKFNPLSNPAQ

>NON|P03700|VINT LAM

MGRRRSHERRDLPPNLYIRNNGYYCYRDPRTGKEFGLGRDRRIAITEAIQANIELFSGHKH KPLTARINSDNSVTLHSWLDRYEKILASRGIKQKTLINYMSKIKAIRRGLPDAPLEDITTKEI AAMLNGYIDEGKAASAKLIRSTLSDAFREAIAEGHITTNHVAATRAAKSEVRRSRLTADEY LKIYQAAESSPCWLRLAMELAVVTGQRVGDLCEMKWSDIVDGYLYVEQSKTGVKIAIPTA LHIDALGISMKETLDKCKEILGGETIIASTRREPLSSGTVSRYFMRARKASGLSFEGDPPTF HELRSLSARLYEKQISDKFAQHLLGHKSDTMASQYRDDRGREWDKIEIK

>NON|P03701|VLOM_LAM

MRNVCIAVAVFAALAVTVTPARAEGGHGTFTVGYFQVKPGTLPSLSGGDTGVSHLKGINV KYRYELTDSVGVMASLGFAASKKSSTVMTGEDTFHYESLRGRYVSVMAGPVLQISKQVS AYAMAGVAHSRWSGSTMDYRKTEITPGYMKETTTARDESAMRHTSVAWSAGIQINPAAS VVVDIAYEGSGSGDWRTDGFIVGVGYKF

>NON|P09962|VLY1_BPP

MKKMPEKHDLLTAMMAAKEQGIGAILAFAMAYLRGRYNGGAFKKTLIDATMCAIIAWFI RDLLVFAGLSSNLAYIASVFIGYIGTDSIGSLIKRFAAKKAGVDDANQQ

>NON|Q38008|VLYS_BPC

MLYNIMLEVAKGDYITILFALILFDFITGFLKAWKWKVTDSWTGLKGVIKHTLTFIFYYFVA VFLTYIHAMAVGQILLVIINLYYALSIMENLAVMGVFIPKFMTARVQEELQKYTAQLDAGK DLLEEFKGEKK

>NON|P23848|VMOR_BPM

MTEDLFGDLQDDTILAHLDNPAEDTSRFPALLAELNDLLRGELSRLGVDPAHSLEIVVAIC KHLGGGQVYIPRGQALDSLIRDLRIWNDFNGRNVSELTTRYGVTFNTVYKAIRRMRRLKY

RQYQPSLL

>NON|P03732|VMTU LAM

MKHTELRAAVLDALEKHDTGATFFDGRPAVFDEADFPAVAVYLTGAEYTGEELDSDTWQA ELHIEVFLPAQVPDSELDAWMESRIYPVMSDIPALSDLITSMVASGYDYRRDDDAGLWSSA DLTYVITYEM

>NON|P18683|VNUN_BPH

MLMVKKTIYVNPDSGQNRKVSDRGLTSRDRRRIARWEKRIAYALKNGVTPGFNAIDDGPE YKINEDPMDKVDKALATPFPRDVEKIEDEKYEDVMHRVVNHAHQRNPNKKWS

>NON|P27383|VP17 BPP

MMGKGFEMMVASAIRAAGINPDELMEKANTLVHNLNYQLDRFGQRLDSIDSRLSVIEKA LDISPAEKPDNOPELTGITFEGDNNDO

>NON|Q06419|VPA_BPP2

MAVKASGRFVPPSAFAAGTGKMFTGAYAWNAPREAVGRERPLTRDEMRQMQGVLSTINR LPYFLRSLFTSRYDYIRRNKSPVHGFYFLTSTFQRRLWPRIERVNQRHEMNTDASLLFLAER DHYARLPGMNDKELKKFAARISSQLFMMYEELSDAWVDAHGEKESLFTDEAQAHLYGH VAGAARAFNISPLYWKKYRKGQMTTRQAYSAIARLFNDEWWTHQLKGQRMRWHETLLI AVGEVNKDRSPYASKHAIRDVRARRQANLEFLKSCDLENRETGERIDLISKVMGSISNPEIR RMELMNTIAGIERYAAAEGDVGMFITLTAPSKYHPTRQVGKGESKTVQLNHGWNDEAFN PKDAQRYLCHIWSLMRTAFKDNDLQVYGLRVVEPHHDGTPHWHMMLFCNPRQRNQIIEI MRRYALKEDGDERGAARNRFQAKHLNQGGAAGYIAKYISKNIDGYALDGQLDNDTGRP LKDTAAAVTAWASTWRIPQFKTVGLPTMGAYRELRKLPRGVSIADEFDERVEAARAAADS GDFALYISAQGGANVPRDCQTVRVARSPSDEVNEYEEEVERVVGIYAPHLGARHIHITRTT DWRIVPKVPVVEPLTLKSGIAAPRSPVNNCGKLTGGDTSLPAPTPSEHAAAVLNLVDDGVI EWNEPEVVRALRGALKYDMRTPNRQQRNGSPLKPHEIAPSARLTRSERLQITRIRVDLAQ NGIRPQRWELEALARGATVNYDGKKFTYPVADEWPGFSTVMEWT

>NON|P03763|VPB_BPMU

MNISDIRAGLRTLVENEETTFKQIALESGLSTGTISSFINDKYNGDNERVSQMLQRWLEKY HAVAELPEPPRFVETQTVKQIWTSMRFASLTESIAVVCGNPGVGKTEAAREYRRTNNVW MITITPSCASVLECLTELAFELGMNDAPRRKGPLSRALRRRLEGTQGLVIIDEADHLGAEVL EELRLLQESTRIGLVLMGNHRVYSNMTGGNRTVEFARLFSRIAKRTAINKTKKADVKAIAD AWQINGEKELELLQQIAQKPGALRILNHSLRLAAMTAHGKGERVNEDYLRQAFRELDLD VDISTLLRN

>NON|P07696|VPB_BPP2

MTVMTLNLVEKQPAAMRRIIGKHLAVPRWQDTCDYYNQMMERERLTVCFHAQLKQRHA TMCFEEMNDVERERLVCAIDELRGAFSKRRQVGASEYAYISFLTVSQRRTLFMHAGLTEKE FNQPYWRINEESCYWRDALFRALRELFSLFEYAPTILTSVKPEQYLH

>NON|P22501|VPF1 BPP

MSDYHHGVQVLEINEGTRVISTVSTAIVGMVCTASDADAETFPLNKPVLITNVQSAISKAG KKGTLAASLQAIADQSKPVTVVMRVEDGTGDDEETKLAQTVSNIIGTTDENGQYTGLKA MLAAESVTGVKPRILGVPGLDTKEVAVALASVCQKLRAFGYISAWGCKTISEVKAYRQNF SQRELMVIWPDFLAWDTVTSTTATAYATARALGLRAKIDQEQGWHKTLSNVGVNGVTGIS ASVFWDLQESGTDADLLNESGVTTLIRRDGFRFWGNRTCSDDPLFLFENYTRTAQVVADT MAEAHMWAVDKPITATLIRDIVDGINAKFRELKTNGYIVDATCWFSEESNDAETLKAGKL YIDYDYTPVPPLENLTLRQRITDKYLANLVTSVNSN

>NON|P03709|VPF1_LAM

MTKDELIARLRSLGEQLNRDVSLTGTKEELALRVAELKEELDDTDETAGQDTPLSRENVLT GHENEVGSAQPDTVILDTSELVTVVALVKLHTDALHATRDEPVAFVLPGTAFRVSAGVAAE MTERGLARMQ

>NON|P22502|VPF2_BPP

MAMPRKLKLMNVFLNGYSYQGVAKSVTLPKLTRKLENYRGAGMNGSAPVDLGLDDDA LSMEWSLGGFPDSVIWELYAATGVDAVPIRFAGSYQRDDTGETVAVEVVMRGRQKEIDTG EGKQGEDTESKISVVCTYFRLTMDGKELVEIDTINMIEKVNGVDRLEQHRRNIGL

>NON|P25475|VPL BPP2

MMTLIIPRKEAPVSGEGTVVIPQPAGDEPVIKNTFFFPDIDPKRVRERMRLEQTVAPARLRE AIKSGMAETNAELYEYREQKIAAGFTRLADVPADDIDGESIKVFYYERAVCAMATASLYER YRGVDASAKGDKKADSIDSTIDELWRDMRWAVARIQGKPRCIVSQI

>NON|P08558|VPP_BPMU

MSNTVTLRADGRLFTGWTSVSVTRSIESVAGYFELGVNVPPGTDLSGLAPGKKFTLEIGG QIVCTGYIDSRRRQMTADSMKITVAGRDKTADLIDCAAVYSGGQWKNRTLEQIARDLCAP YGVTVRWELSDKESSAAFPGFTLDHSETVYEALVRASRARGVLMTSNAAGELVFSRAAST ATDELVLGENLLTLDFEEDFRDRFSEYTVKGYARANGAEGDDIDAKSIVSRKGTATDSDVT RYRPMIIIADSKITAKDAQARALREQRRRLAKSITFEAEIDGWTRKDGQLWMPNLLVTIDA SKYAIKTTELLVSKVTLILNDQDGLKTRVSLAPREGFLVPVESDRKNRKGGDSNGGIDALV EDYYRRHPEKTPPWKE

>NON|P05460|VPSU BPP

MESTALQQAFDTCQNNKAAWLQRKNELAAAEQEYLRLLSGEGRNVSRLDELRNIIEVRK WQVNQAAGRYIRSHEAVQHISIRDRLNDFMQQHGTALAAALAPELMGYSELTAIARNCAI QRATDALREALLSWLAKGEKINYSAQDSDILTTIGFRPDVASVDDSREKFTPAQNMIFSRK SAQLASRQSV

>NON|P31340|VPV_BPP2

MNTLANIQELARALRNMIRTGIIVETDLNAGRCRVQTGGMCTDWLQWLTHRAGRSRTW WAPSVGEQVLILAVGGELDTAFVLPGIYSGDNPSPSVSADALHIRFPDGAVIEYEPETSALT VSGIKTASVTASGSVTATVPVVMVKASTRVTLDTPEVVCTNRLITGTLEVQKGGTMRGNIE HTGGELSSNGKVLHTHKHPGDSGGTTGSPL

>NON|P17309|VR3_BPT4

MIKQLQHALELQRNAWNNGHENYGASIDVEAEALEILRYFKHLNPAQTALAAELQEKDE LKYAKPLASAARKAVRHFVVTLK

>NON|P03704|VRPI_BPT

 $MSNVNTGSLSVDNKKFWATVESSEHSFEVPIYAETLDEALELAEWQYVPAGFEVTRVRPC \\ VAPK$

>NON|P13310|VS BPT4

MTKILVLCIGLISFSASASADTSYTEIREYVNRTAADYCGKNKACQAEFAQKLIYAYKDGE RDKSSRYKNDTLLKRYAKKWNTLECSVAEEKDKAACHSMVDRLVDSYNRGLSTR >NON|P03748|VTFP BPT

MANVIKTVLTYQLDGSNRDFNIPFEYLARKFVVVTLIGVDRKVLTINTDYRFATRTTISLTK AWGPADGYTTIELRRVTSTTDRLVDFTDGSILRAYDLNVAQIQTMHVAEEARDLTTDTIGV NNDGHLDARGRRIVNLANAVDDRDAVPFGQLKTMNQNSWQARNEALQFRNEAETFRNQ AEGFKNESSTNATNTKQWRDETKGFRDEAKRFKNTAGQYATSAGNSASAAHQSEVNAEN SATASANSAHLAEQQADRAEREADKLENYNGLAGAIDKVDGTNVYWKGNIHANGRLYM TTNGFDCGQYQQFFGGVTNRYSVMEWGDENGWLMYVQRREWTTAIGGNIQLVVNGQII TQGGAMTGQLKLQNGHVLQLESASDKAHYILSKDGNRNNWYIGRGSDNNNDCTFHSYV HGTTLTLKQDYAVVNKHFHVGQAVVATDGNIQGTKWGGKWLDAYLRDSFVAKSKAWTQ VWSGSAGGGVSVTVSQDLRFRNIWIKCANNSWNFFRTGPDGIYFIASDGGWLRFQIHSNG LGFKNIADSRSVPNAIMVENE

>NON|P68927|VXIS_BPH

MYLTLQEWNARQRRPRSLETVRRWVRECRIFPPPVKDGREYLFHESAVKVDLNRPVTGSL LKRIRNGKKAKS

>NON|P10104|WAC_BPT4

MTDIVLNDLPFVDGPPAEGQSRISWIKNGEEILGADTQYGSEGSMNRPTVSVLRNVEVLD KNIGILKTSLETANSDIKTIQGILDVSGDIEALAQIGINKKDISDLKTLTSEHTEILNGTNNTV DSILADIGPFNAEANSVYRTIRNDLLWIKRELGQYTGQDINGLPVVGNPSSGMKHRIINNT DVITSQGIRLSELETKFIESDVGSLTIEVGNLREELGPKPPSFSQNVYSRLNEIDTKQTTVES DISAIKTSIGYPGNNSIITSVNTNTDNIASINLELNQSGGIKQRLTVIETSIGSDDIPSSIKGQIK DNTTSIESLNGIVGENTSSGLRANVSWLNQIVGTDSSGGQPSPPGSLLNRVSTIETSVSGLN NAVQNLQVEIGNNSAGIKGQVVALNTLVNGTNPNGSTVEERGLTNSIKANETNIASVTQEV NTAKGNISSLQGDVQALQEAGYIPEAPRDGQAYVRKDGEWVFLSTFLSPA

>NON|Q9ZX29|WHIB BPM

 $\label{lem:mass} \mbox{MHMHMGGDPSAICAQTDPELWFPDKGQSTRDAKRMCMRCPLLDECRALALRDPHLVGV} \\ \mbox{WGGLSAQERRIRKGASA}$

>NON|P39487|Y00B_BPT

MTCFKNEKGEVFRLHVNDPRIKTEKLVGVGNTVAATAKAAELEKAKPWYNKSATNPEAV KLIPNLYEWYVTKYDPDHYKRTGVAKWKSVNNITVNSKLFGRAFNEFKRGWIPDEKFYE VYNEICKN