Online Supporting Information A. This benchmark dataset S for Plant-mPLoc includes 1,055 plant protein sequences (978 different proteins), classified into 12 plant subcellular locations. Among the 978 different proteins, 904 belong to one subcellular location, 71 to two locations, and 3 to three locations. Both the accession numbers and sequences are given. None of the proteins has \geq 25% sequence identity to any other in the same subset (subcellular location). See the text of the paper for further explanation.

(1) \mathbb{S}_1 : 56 cell membrane proteins

>P25848

MSATKKTYSSTTSAKSKHSVRVAQTTADAALEAVYEMSGDSGDSFDYSKSVGQSAESVPA GAVTAYLQRMQREGLIQNFGCMVAVEEPNFCVIAYSENASEFLDLIPQAVPSMGEMDVLG IGTDIRTLFTPSSSAALEKAAATQDISLLNPITVHCRRSGKPLYAIAHRIDIGIVIDFEA VKMIDVPVSAAAGALQSHKLAARAITRLQALPGGDIELLCDTIVEEVRELTGYDRVMAFK FHEDEHGEVVAEIRRMDLEPYMGLHYPATDIPQASRFLLMKNRVRLIADCYASPVKLIQD PDIRQPVSLAGSTLRAPHGCHAQYMGNMGSIASLVMAVIINDNEEYSRGAIQRGRKLWGL VVCQHTSPRTVPFPLRSVCEFLMQVFGMQLNLHVELAAQLREKHILRTQTLLCDMLLRDA PIGIVSQTPNIMDLVKCDGAALYYGKRVWLLGTTPTENQIKEIADWLLEHHNDSTGLSTD SLADANYPGAHLLGDAVCGMAAAKITAKDFLFWFRSHTATEVKWGGAKHDPDEKDDGRKM HPRSSFKAFLEVVNKRSPPWEDVEMDAIHSLQLILRGSFRDIADSDTKTMIHARLNDLKL QGVEERNALANEMSRVLETAAAPILAVDSRGMINAWNAKIAQVTGLPVEEAMHCSLTKDL VLDESVVVVERLLSLALOGEEEONVEIKLKTFGTOTTERAVILIVNACCSRDASDFVVGV FFVGQDVTEQRMFMDRFTRIQGGEKTTVQDPHPLMRPSFDGDEFGRTFKRNSALGGLKDH ATGSVERLDLYLRRAEECMEVMETIPSPKFNNKQCQYLAGKLKAVLQSASLFLRISHHEH HELGASIDMGRHVEIFKLLLALAKEIESFIOGCCKDEWIKAAMTLTNVSEYVSSMGFNLE LCKIAFCKSCAASGSLTLDQIEVICKDEAEVVKRNASIDVDTLFAKVIYDLTEKTLSSDQ NDLAIYLLORLKRAKPILPSFSSRPSWWNFYDDWSFSEKFFOWIOITGSLGSGSSATVEK AVWLGTPVAKKTFYGRNNEDFKREVEILAELCHPNITSMFCSPLYRRKCSIIMELMDGDL LALMQRRLDRNEDHDSPPFSILEVVDIILQTSEGMNYLHEKGIIHRDLKSMNILVKSVKV TKSEIGYVHVKVADFGLSKTKDSSTRYSNOTWNRGTNRWMAPEVINLGYESTEGEISFDG KVPKYPLKSDVYSFGMVCYEVLTGDVPFPEEKNPNNVKRMVLEGVRPDLPAHCPIELKAL ITDCWNQDPLKRPSFAVICQKLKYLKYLLMTGFSSYQDSYPSTEEPS

MAELEAKKVEIVDPAPPAPGPVEAPKEVVADEKAIVAPALPPPAEEKEKPDDSKALVVVE TKAPEPADEKKEGSIDRDAVLARVATEKRVSLIKAWEESEKSKAENKAQKKVSAIGAWEN SKKANLEAELKKMEEQLEKKKAEYTEKMKNKIALLHKEAEEKRAMIEAKRGEDLLKAEEL AAKYRATGTAPKKILGIF

>Q9LDC0

>P93788

MDESLEHQTQTHDQESEIVTEGSAVVHSEPSQEGNVPPKVDSEAEVLDEKVSKQIIKEGH GSKPSKYSTCFLHYRAWTKNSQHKFEDTWHEQQPIELVLGKEKKELAGLAIGVASMKSGE RALVHVGWELAYGKEGNFSFPNVPPMADLLYEVEVIGFDETKEGKARSDMTVEERIGAAD RRKMDGNSLFKEEKLEEAMQQYEMAIAYMGDDFMFQLYGKYQDMALAVKNPCHLNIAACL IKLKRYDEAIGHCNIVLTEEEKNPKALFRRGKAKAELGQMDSARDDFRKAQKYAPDDKAI RRELRALAEQEKALYQKQKEMYKGIFKGKDEGGAKSKSLFWLIVLWQWFVSLFSRIFRRH RVKAD

>08LCS8

 ${\tt MAEVKDQLEIKFRLNDGSDIGPKLFPDATTVATLKETVVAQWPRDKENGPKTVKDVKLIS} \\ {\tt AGRILENNKTVGDCRSPVGNFSGAVTTMHVIIQHQVTEKEKKKKKPKGDLKQNKCVCLCFGARC} \\ {\tt GARC}$

>Q9C7F7

 $\label{thm:condition} \begin{tabular}{l} MKGLHLHLVLVTMTIVASIAAAAPAAPGGALADECNQDFQKVTLCLDFATGKATIPSKKC \\ CDAVEDIKERDPKCLCFVIQQAKTGGQALKDLGVQEDKLIQLPTSCQLHNASITNCPKLL \\ GISPSSPDAAVFTNNATTTPVAPAGKSPATPATSTDKGGSASAKDGHAVVALAVALMAVS \\ FVLTLPRHVTLGM \end{tabular}$

>Q9FJ62

MINMRDNPTMHVLQASKFLFLALILIQLLSTQLFAQRSKSPWQTLTGDAPLVIARGGFSG
LLPDSSLDAYSFVSQTSVPGAVLWCDVQLTKDAIGLCFPDVKMMNASNIQDVYPKRKTSY
LLNGVPTQDWFTIDFNFKDLTKVILKQGILSRSAAFDGNSYGISTVKDISTQLKPEGFWL
NVQHDAFYAQHNLSMSSFLLSISKTVIIDYLSSPEVNFFRNIGRRFGRNGPKFVFRFLEK
DDVEVSTNQTYGSLAGNLTFLKTFASGVLVPKSYIWPIESQYLLPRTSFVQDAHKAGLEV
YASGFGNDFDLAYNYSFDPLAEYLSFMDNGDFSVDGLLSDFPLTASSAVDCFSHLGSNAS
SQVDFLVISKNGASGDYPGCTDLAYTKAIKDGADVIDCSLQMSSDGIPFCLSSINLGEST
NVVQSPFRNRSTTVPEIGSLPGIYSFSLAWSEIQTLRPAIENPYSREFTMFRNPRERSSG
KFVSLSDFLNLAKNSSSLTGVLISVENATYLREKQGLDAVKAVLDTLTEAGYSNKTTTTR
VMIQSTNSSVLIDFKKQSRYETVYKVEETIRDILDTAIEDIKKFADAVVISKKSVFPTSE
SFTTGQTKLVERLQKFQLPVYVEVFRNEFVSQPWDFFADATVEINSHVTGAGINGTITEF
PLTAARYKRNSCLTRKDVPPYMIPVQPAGLLTIVSPASLPPAEAPSPVFTDADVTEPPLP
PVSARAPTTTPGPQSTGEKSPNGQTRVALSLLLSAFATVFASLLLL

>09SD53

MADKTDIISSSSDKASPPPPSAFRNYLSSGSKEPVLLLESAGKESCCIFRVPESFVALNP
KAYKPKVVSIGPYHYGEKHLQMIQQHKPRLLQLFLDEAKKKDVEENVLVKAVVDLEDKIR
KSYSEELKTGHDLMFMMVLDGCFILMVFLIMSGNIELSEDPIFSIPWLLSSIQSDLLLLE
NQVPFFVLQTLYVGSKIGVSSDLNRIAFHFFKNPIDKEGSYWEKHRNYKAKHLLDLIRET
FLPNTSESDKASSPHVQVQLHEGKSGNVPSVDSKAVPLILSAKRLRLQGIKFRLRRSKED
SILNVRLKKNKLQIPQLRFDGFISSFFLNCVAFEQFYTDSSNEITTYIVFMGCLLNNEED
VTFLRNDKLIIENHFGSNNEVSEFFKTISKDVVFEVDTSYLNNVFKGVNEYTKKWYNGLW
AGFRHTHFESPWTFLSSCAVLFVILLTMLQSTVAILSYLNDKKGNGNAAPPPLGLP

>05MFV8

MIGKVVVSVASILLIVGVAIGVVAYINKNGDANLSPQMKAVRGICEATSDKASCVKTLEP
VKSDDPNKLIKAFMLATRDAITQSSNFTGKTEGNLGSGISPNNKAVLDYCKKVFMYALED
LSTIVEEMGEDLNQIGSKIDQLKQWLTGVYNYQTDCLDDIEEDDLRKTIGEGIASSKILT
SNAIDIFHTVVSAMAKLNLKVEDFKNMTGGIFAPSDKGAAPVNKGTPPVADDSPVADPDG
PARRLLEDIDETGIPTWVSGADRKLMTKAGRGSNDGGARIRATFVVAKDGSGQFKTVQQA
VNACPEKNPGRCIIHIKAGIYREQVIIPKKKNNIFMFGDGARKTVISYNRSVKLSPGTTT
SLSGTVQVESEGFMAKWIGFKNTAGPMGHQAVAIRVNGDRAVIFNCRFDGYQDTLYVNNG
RQFYRNIVVSGTVDFIFGKSATVIQNSLIVVRKGNKGQFNTVTADGNEKGLAMKIGIVLQ
NCRIVPDKKLAAERLIVESYLGRPWKKFSTTVIINSEIGDVIRPEGWKIWDGESFHKSCR

YVEYNNRGPGAITNRRVNWVKIARSAAEVNDFTVANWLGPINWIQEANVPVTLGL > 065493

MAFSAPSLSKFSLLVAISASALLCCAFARDFSIVGYTPEHLTNTDKLLELFESWMSEHSK
AYKSVEEKVHRFEVFRENLMHIDQRNNEINSYWLGLNEFADLTHEEFKGRYLGLAKPQFS
RKRQPSANFRYRDITDLPKSVDWRKKGAVAPVKDQGQCGSCWAFSTVAAVEGINQITTGN
LSSLSEQELIDCDTTFNSGCNGGLMDYAFQYIISTGGLHKEDDYPYLMEEGICQEQKEDV
ERVTISGYEDVPENDDESLVKALAHQPVSVAIEASGRDFQFYKGGVFNGKCGTDLDHGVA
AVGYGSSKGSDYVIVKNSWGPRWGEKGFIRMKRNTGKPEGLCGINKMASYPTKTK
>P46011

MSMQQETSHMTAAPQTNGHQIFPEIDMSAGDSSSIVRATVVQASTVFYDTPATLDKAERL LSEAAENGSQLVVFPEAFIGGYPRGSTFELAIGSRTAKGRDDFRKYHASAIDVPGPEVER LALMAKKYKVYLVMGVIEREGYTLYCTVLFFDSQGLFLGKHRKLMPTALERCIWGFGDGS TIPVFDTPIGKIGAAICWENRMPSLRTAMYAKGIEIYCAPTADSRETWLASMTHIALEGG CFVLSANQFCRRKDYPSPPEYMFSGSEESLTPDSVVCAGGSSIISPLGIVLAGPNYRGEA LITADLDLGDIARAKFDFDVVGHYSRPEVFSLNIREHPRKAVSFKTSKVMEDESV >P54774

MSQQGESSDPKSGKKDFSTAILERKKSPNRLVVDEAVNDDNSVVTMHPQTMEKLQLFRGD
TILIKGKKRKDTICIALADENCEEPKIRMNKVVRSNLRVRLGDVVSVHQCPDVKYGKRVH
ILPIDDTIEGVTGNLFDAFLKPYFLEAYRPVRKGDLFLVRGGMRSVEFKVVETDPGEYCV
VAPDTEIFCEGEPLKREDEERLDEVGYDDVGGVRKQMAQIRELVELPLRHPQLFKSIGVK
PPKGILLYGPPGSGKTLIARAVANETGAFFFCINGPEIMSKLAGESESNLRKAFEEAEKN
APSIIFIDEIDSIAPKREKTHGEVERRIVSQLLTLMDGLKSRAHVIVIGATNRPNSIDPA
LRRFGRFDREIDIGVPDEVGRLEVLRIHTKNMKLSDDVDLERIAKDTHGYVGADLAALCT
EAALQCIREKMDVIDLEDETIDAEVLNSMAVTNEHFQTALGTSNPSALRETVVEVPNVSW
EDIGGLENVKRELQETVQYPVEHPEKFEKFGMSPSKGVLFYGPPGCGKTLLAKAIANECQ
ANFISVKGPELLTMWFGESEANVREIFDKARQSAPCVLFFDELDSIATQRGSSVGDAGGA
ADRVLNQLLTEMDGMSAKKTVFIIGATNRPDIIDPALLRPGRLDQLIYIPLPDEDSRHQI
FKACLRKSPIAKNVDLRALARHTQGFSGADITEICQRACKYAIRENIEKDIERERKSREN
PEAMDEDTVDDEVAEIKAAHFEESMKFARRSVSDADIRKYQAFAQTLQQSRGFGSEFRFP
ESGDRTTTGSDPFAASAGGADEDDLYS

>P93339

MSVTELKERHMAATQTVNDLREKLKQKRLQLLDTDVSGYARSQGKTPVTFGPTDLVCCRI LQGHTGKVYSLDWTPEKNRIVSASQDGRLIVWNALTSQKTHAIKLPCAWVMTCAFSPSGH SVACGGLDSVCSIFNLNSPIDKDGNHPVSRMLSGHKGYVSSCQYVPDEDTHLITSSGDQT CVLWDITTGLRTSVFGGEFQFGHTADVQSVSISSSNPRLFVSGSCDTTARLWDTRVASRA QRTFYCHEGDVNTVKFFPDGNRFGTGSEDGTCRLFDIRTGHQLQVYYQPHGDGDIPHVTS MAFSISGRLLFVRYSNGDCYVWDTLLAKVVLNLGAVQNSHEGXISCLGLSADGXXLCTGS WDTNLKIWAFGGHRSVI

>Q8GUI4

MTRRAEFEMGLFVILQSMFLISLCSSQKPEEFLPEISPDTSPQPFLPFIAPSPMVPYINS
TMPKLSGLCSLNFSASESLIQTTSHNCWTVFAPLLANVMCCPQLDATLTIILGKASKETG
LLALNRTQSKHCLSDLEQILVGKGASGQLNKICSIHSSNLTSSSCPVINVDEFESTVDTA
KLLLACEKIDPVKECCEEACQNAILDAATNISLKASETLTDNSDRINDCKNVVNRWLATK
LDPSRVKETLRGLANCKINRVCPLVFPHMKHIGGNCSNELSNQTGCCRAMESYVSHLQKQ

TLITNLQALDCATSLGTKLQKLNITKNIFSVCHISLKDFSLQVGNQESGCLLPSLPSDAI FDKDTGISFTCDLNDNIPAPWPSSSLSSASTCKKPVRIPALPAAASSQPRLHDEGVTRLV IFVLSMLLVMLLS

>P54211

MADIKEGVEEGSVKVDMIKEPLTQGDTGVDEVDFAKITLDDAFKYLNCNKHGLSSAEAAA RLOOHGPNKLPDSSRNPVLVFLGYMWNPLAWAMEAAAIISIALLDVADFVLIVGLLLINA IISFYEESNADKAIKALTAALAPKAMVVRDGAIVTIDAVNLVPGDVILIRLGNIVPADVK LLEEEGADEGEOEAPMOIDOAALTGESLPAKKFTGDVAFSGSSIKOGERHAVVYATGVNT FFGRAAALISGTNNVSNLOTVMNKMSAICIVTILLWVVVELAVOFGHYSHECVGGREGCP TLLNMLVVLVGGIPIAMPTVLSVTLALGAYKLAREGAIVTRMSAVEEMAGMDVLCSDKTG TLTLNKLSIDKSMVVPVGNMGVDEIMRMGALSANTVTEEPIDMVLWESYPDRETIKRDYK HTKYFPFNPNDKITIATCLEIATGRVFRVLKGSPOVVLAKAWNAAELDATVNOKMVEFAN RGFRALGLAMADGDGKDGTKWEMLALLPLFDPPRHDTKETIEHCONOGIOVKMITGDHLL IGKETAKMLGMGTEMFPSEVMIKARNGDASOLHGYKNFVEMVETCNGFAOVFPEHKFEIV KILODSNHVVGMTGDGVNDAPALKKADVGVAVADATDAARGAADIVLTEPGLSTIVTAVI GARKIFORMTTYSKYTIAMTFRICFTFGLITVIYDWYFPTILIVIMAVFNDGAMIALSKD RVVASKTPNSWNITNIFIMGMVYGLYLTLSTWALYQTATKTTFFEDKTPLHSLNDQYSVL QPWCEDEVRAKLGQTIDPYASLCESNSYAKQFDECEGYQKGSGVQVEDVPTLHAQCVTEQ RYLRGAMTRSLIYTQVSISGQALVFVVRTAGYSLMERAGTSTYLAFFFAQVGATLFGIFG LGGFEKPRHQLEDCQFCDYSFHEPVDWFDSGIVPESGTESDFTASVIGCGGYVIVAWIWS AIWYVLLDPIKWILFWILNEEGFRDTMSWRESTKRSLDRRSKDDIGDKEFTGPSGMVPAN YSNPLGRASMSKPVSAVLDRKSASLVAINRNSMTVSQDPNRALNIGRRSMIGRPSGPVGR TSMPLGRISRTSNTLSTGSKDGQIGRGSKPLNSSSAEIKPDKYDFASTIRE >081223

MGCSVSKKKKKNAMRPPGYEDPELLASVTPFTVEEVEALYELFKKLSSSIIDDGLIHKEE FQLALFRNRNRRNLFADRIFDVFDVKRNGVIEFGEFVRSLGVFHPSAPVHEKVKFAFKLY DLRQTGFIEREELKEMVVALLHESELVLSEDMIEVMVDKAFVQADRKNDGKIDIDEWKDF VSLNPSLIKNMTLPYLKDINRTFPSFVSSCEEEEMELQNVSS

>Q8GZ17

MDSAPNFIPRLLLSLLIVSIPLTSSQSDANTTNPSPSPPSDSDLCNGVFVSYTHTKGSK
IPPNDTANQPYRFESVITVLNHGRDELKSWRVFVKFAHREILVSASNAVLSDGSSLPVSV
ENGTVFAGYPSSDLKSAIQTAGDVTQMQARVELVGTQFGVAPPNVPLPKNITLATDGWKC
PKATQKGTNVLQVCCIPDPDYDNREIIDNEFLPRKDGDLTIMYDVVRSYSSNYMAQVTME
NHNPLGRLDNWKLSFDWMRDEFIYTMKGAYPSIVDSSDCVDGPQAKHYQDLDFSNVLSCA
RRPTVIDLPPTKYNDSTFGLIPFCCRNGTILPRSMDPSKSSSVFQMQVYKMPPDLNISAL
SPPQNWRINGTLNPDYKCGPPVRVSPSQFVDPSGLPSNRTAFASWQVVCNITQPKDASPR
CCVSFSAYFNDSIVPCKTCACGCSSNKAARACSATAPSLLLPQQALLVPFENRTELTVAW
AYLKQRPVPNPMPCGDNCGVSINWHLATDYRGGWTARVTVFNWGETDFVDWFTAVQMKNA
APGFEKAYSFNASTIGINGKNNTIFMEGLPGLNYLVAERDGENPLKNPRIPGKQQSVMSF
TKKLTPGINVPGGDGFPSKVFFNGEECSLPTILPMRSSQHRKHISVFLLALPVLALLILR
A

>09FMF5

MWESESDGGVGVGGGGGREYGDGVLSSNKHGGVKTDGFELRGQSWFVATDIPSDLLVKIG DMNFHLHKYPLLSRSGKMNRLIYESRDPDPTILILDDLPGGPEAFELASKFCYGVPVDLT

ATNISGLRCAAEYLEMTEDLEEGNLIFKTEAFLSYVVLSSWRDSILVLKSCEKLSPWAEN LQIVRRCSESIAWKACSNPKGIRWAYTGKAPSPSTTNFAGSSPRWNESKDSSFYCSPSRN TNSQPVPPDWWFEDVSILRIDHFVRVITAIKVKGMRFELLGAVIMHYAGKWLPGLIKEGG VAIAPAMSSAIGGGLGLGGDEMSISCGSNSSGGSSGPDWKGGLHMVLSAGKTNGHQDSVA CLAGLGISPKDQRMIVESLISIIPPQKDSVTCSFLLRLLRAANMLKVAPALITELEKRVG MQFEQATLQDLLIPGYNNKGETMYDVDLVQRLLEHFLVQEQTEGSSPSRMSPSPSQSMYA DIPRGNNNNGGGGGGNNQNAKMRVARLVDSYLTEVARDRNLPLTKFQVLAEALPESARTC DDGLYRAIDSYLKAHPTLSEHERKRLCRVMDCQKLSMDACMHAAQNERLPLRVVVQVLFS EQVKISNALANTSLKESTTLGEAMGTYQPMIPNRKTLIEATPQSFQARWAAAKKDINTLK FELETVKTKYVELQNEMEVMQRQFEKTGKVKNTPSSSAWTSGWKKLSKLTKMSGQESHDI SSGGEQAGVDHPPPRKPRRWRNSIS

>Q6R3K9

MENERVEREQSQFQEDEFIDSRKPPPWRKQITVRAIVASLLIGIVYSVICLKLNLTTGLV
PNLNISSALLAFVFLKSWTKVLQKAGIATTPFTRQENTIAQTCAVACYSISLAGGFASYL
LGLNRRTYEETGVNTEGNNPRGIKEPGVGWMTSFLFVTSFIGLVVLVPLRKVMIIDYKLT
YPSGTATAVLINGFHTSKGDKTAKKQIRGFIKSFGLSFFWAFFGWFYSGGEKCGFSQFPT
FGLQALDKTFYFDFSMTYVGAGMICSHLVNLSLLFGAILSWGIMWPLIARLKGEWFPATL
KDNSMQGLNGYKVFICIALILGDGLYNFVKILFFTGRSFHSRLSKTNSISTLVEVPEDST
KESDNLKRENEVFVRESIPLWMACVGYLFFSLVSIIAIPLMFPQLKWYFVLVAYLLAPSL
SFCNAYGAGLTDMNMAYNYGKAALFVMAALAGKNDGVVAGMVACGLIKSIVSVSADLMHD
FKTGHLTQTSPRSMLVAQAIGTAIGCVVAPLTFFLFYKAFDVGNQNGEYKAPYAMIYRNM
AIIGVQGPSALPKHCLELCYGFFAFAVAANLARDLLPDKPGKWIPLPMAMAVPFLVGGSF
AIDMCIGSLVVYVWKKVNRKKADVMVPAVASGLICGDGLWILPSSLLALAKVRPPICMNF
TAAH

>Q9LVM5

MAMEIGEDEWKVCCGSSEFAKQMSTSGPLTSQEAIYTARDIWFNQVNVTDWLEAFSAHPQ IGNTPSPSINSDFARRSVSEQSTAFATTSASALQELAEWNVLYKKKFGFIFIICASGRTH AEMLHALKERYENRPIVELEIAAMEQMKITELRMAKLFSDKAKVISETDSSSSPVSTKPQ DRLRIIGGHLNVAAEAKAPKRSRPPITTHVLDVSRGAPAAGVEVHLEVWSGTTGPSFVHG GGGVWSSVGTSATDRDGRSGPLMDLVDALNPGTYRISFDTAKYSPGCFFPYVSIVFQVTE SOKWEHFHVPLLLAPFSFSTYRGS

>Q9XFM6

MALELWQTLKEAIHAYTGLSPVVFFTALALAFAIYQVISGWFASPFDDVNRHQRARSLAQ EEEPPIPQPVQVGEITEEELKQYDGSDPQKPLLMAIKHQIYDVTQSRMFYGPGGPYALFA GKDASRALAKMSFEEKDLTWDVSGLGPFELDALQDWEYKFMSKYAKVGTVKVAGSEPETA SVSEPTENVEQDAHVTTTPGKTVVDKSDDAPAETVLKKEE

>09T076

MTFLKMKSLSFFFTILLSLSTLFTISNARKFNVGGSGAWVTNPPENYESWSGKNRFLVHD
TLYFSYAKGADSVLEVNKADYDACNTKNPIKRVDDGDSEISLDRYGPFYFISGNEDNCKK
GQKLNVVVISARIPSTAQSPHAAAPGSSTPGSMTPPGGAHSPKSSSPVSPTTSPPGSTTP
PGGAHSPKSSSAVSPATSPPGSMAPKSGSPVSPTTSPPAPPKSTSPVSPSSAPMTSPPAP
MAPKSSSTIPPSSAPMTSPPGSMAPKSSSPVSNSPTVSPSLAPGGSTSSSPSDSPSGSAM
GPSGDGPSAAGDISTPAGAPGQKKSSANGMTVMSITTVLSLVLTIFLSA

>050016

MIRFILLQNRQGKTRLAKYYVPLEDSEKHKVEYEVHRLVVNRDPKFTNFVEFRTHKVIYR RYAGLFFSICVDITDNELAYLECIHLFVEILDHFFSNVCELDLVFNFHKVYRYLILDEFI LAGELQETSKRQ

>Q8VYI9

MATHSSFTATTPLFLIVLLSLSSVSVLGASHHHATAPAPSVDCSTLILNMADCLSFVSSG GTVAKPEGTCCSGLKTVLKADSQCLCEAFKSSASLGVTLNITKASTLPAACKLHAPSIAT CGLSVAPSTAPGLAPGVAAAGPETAGFLAPNPSSGNDGSSLIPTSFTTVLSAVLFVLFFS SA

>06NPN4

MKNPEKPLLLFLILASSLASMATAKSTIEPCSSKDTCNSLLGYTLYTDLKVTEVASLFQV
DPVSMLLSNSIDISYPDVENHVLPAKLFLKIPITCSCVDGIRKSLSTHYKTRTSDTLGSI
ADSVYGGLVSPEQIQVANSETDLSVLDVGTKLVIPLPCACFNGTDESLPALYLSYVVRGI
DTMAGIAKRFSTSVTDLTNVNAMGAPDINPGDILAVPLLACSSNFPKYATDYGLIIPNGS
YALTAGHCVQCSCVLGSRSMYCEPASISVSCSSMRCRNSNFMLGNITSQQSSSGCKLTTC
SYNGFASGTILTTLSMSLQPRCPGPQQLAPLIAPPDNVPKELMYLPSPSPSPSPEFDDIA
GGGSSIAAVPAASPGGATVSSSNSIPGNPANGPGGSISIASCPLSYYSFIALLIPIGSCF
FVF

>Q38890

MYGRDPWGGPLEINTADSATDDDRSRNLNDLDRAALSRPLDETQQSWLLGPTEQKKKKYV DLGCIIVSRKIFVWTVGTLVAAALLAGFITLIVKTVPRHHPKTPPPDNYTIALHKALKFF NAQKSGKLPKHNNVSWRGNSGLQDGKGETGSFYKDLVGGYYDAGDAIKFNFPMAYAMTML SWSVIEYSAKYEAAGELTHVKELIKWGTDYFLKTFNSTADSIDDLVSQVGSGNTDDGNTD PNDHYCWMRPEDMDYKRPVTTCNGGCSDLAAEMAAALASASIVFKDNKEYSKKLVHGAKV VYQFGRTRRGRYSAGTAESSKFYNSSMYWDEFIWGGAWMYYATGNVTYLNLITQPTMAKH AGAFWGGPYYGVFSWDNKLAGAQLLLSRLRLFLSPGYPYEEILRTFHNQTSIVMCSYLPI FNKFNRTNGGLIELNHGAPQPLQYSVNAAFLATLYSDYLDAADTPGWYCGPNFYSTSVLR DFARSQIDYILGKNPRKMSYVVGFGTKYPRHVHHRGASIPKNKVKYNCKGGWKWRDSKKP NPNTIEGAMVAGPDKRDGYRDVRMNYNYTEPTLAGNAGLVAALVALSGEEEATGKIDKNT IFSAVPPLFPTPPPPPAPWKP

>Q8VYM2

MAEQQLGVLKALDVAKTQLYHFTAIVIAGMGFFTDAYDLFCVSLVTKLLGRIYYFNPESA
KPGSLPPHVAAAVNGVALCGTLSGQLFFGWLGDKLGRKKVYGLTLVMMILCSVASGLSFG
HEAKGVMTTLCFFRFWLGFGIGGDYPLSATIMSEYANKKTRGAFIAAVFAMQGVGILAGG
FVALAVSSIFDKKFPAPTYAVNRALSTPPQVDYIWRIIVMFGALPAALTYYWRMKMPETA
RYTALVAKNIKQATADMSKVLQTDIELEERVEDDVKDPKQNYGLFSKEFLRRHGLHLLGT
TSTWFLLDIAFYSQNLFQKDIFSAIGWIPKAATMNATHEVFRIARAQTLIALCSTVPGYW
FTVAFIDTIGRFKIQLNGFFMMTVFMFAIAFPYNHWIKPENRIGFVVMYSLTFFFANFGP
NATTFIVPAEIFPARLRSTCHGISAAAGKAGAIVGAFGFLYAAQSQDKAKVDAGYPPGIG
VKNSLIMLGVLNFIGMLFTFLVPEPKGKSLEELSGEAEVSHDEK

>Q9FHD4

METTKKLFALLCLFVTMNQAISVSDPDDMETFCMKSSRNTTSNTTYNKNLNTLLSTLSNQ SSFANYYNLTTGLASDTVHGMFLCTGDVNRTTCNACVKNATIEIAKNCTNHREAIIYNVD CMVRYSDKFFLTTLETNPSYWWSSNDLIPKSFGKFGQRLSDKMGEVIVRSSLLSSSFTPY YLMDTTRFDNLYDLESIVOCTPDLDPRNCTTCLKLALQELTECCGNQVWAFIYTPNCMVS FDTYNSSLPPLPPPSRSGSFSHRGNNKLLGGMVLAVSVSVFAFLSLV >09LW07

MKKKTWFLNFSLFFLQIFTSSNALDVTQFGAVGDGVTDDSQAFLKAWEAVCSGTGDGQFV
VPAGMTFMLQPLKFQGSCKSTPVFVQMLGKLVAPSKGNWKGDKDQWILFTDIEGLVIEGD
GEINGQGSSWWEHKGSRPTALKFRSCNNLRLSGLTHLDSPMAHIHISECNYVTISSLRIN
APESSPNTDGIDVGASSNVVIQDCIIATGDDCIAINSGTSNIHISGIDCGPGHGISIGSL
GKDGETATVENVCVQNCNFRGTMNGARIKTWQGGSGYARMITFNGITLDNVENPIIIDQF
YNGGDSDNAKDRKSSAVEVSKVVFSNFIGTSKSEYGVDFRCSERVPCTEIFLRDMKIETA
SSGSGQVAQGQCLNVRGASTIAVPGLECLELSTDMFSSAQLLEQTCMSAQSVQPRTTTQP
MQDPIWVFQSRGKQLRVYNIAILVSFISLVTYILAR

>Q8GUQ5

MKAHKTVFNOHPLSLNKLFFVLLLIFFLPPASPAASVNGLYKDSOOLLSFKAALPPTPTL LONWLSSTGPCSFTGVSCKNSRVSSIDLSNTFLSVDFSLVTSYLLPLSNLESLVLKNANL SGSLTSAAKSOCGVTLDSIDLAENTISGPISDISSFGVCSNLKSLNLSKNFLDPPGKEML KAATFSLOVLDLSYNNISGFNLFPWVSSMGFVELEFFSLKGNKLAGSIPELDFKNLSYLD LSANNFSTVFPSFKDCSNLQHLDLSSNKFYGDIGSSLSSCGKLSFLNLTNNQFVGLVPKL PSESLQYLYLRGNDFOGVYPNOLADLCKTVVELDLSYNNFSGMVPESLGECSSLELVDIS YNNFSGKLPVDTLSKLSNIKTMVLSFNKFVGGLPDSFSNLLKLETLDMSSNNLTGVIPSG ICKDPMNNLKVLYLONNLFKGPIPDSLSNCSOLVSLDLSFNYLTGSIPSSLGSLSKLKDL ILWLNQLSGEIPQELMYLQALENLILDFNDLTGPIPASLSNCTKLNWISLSNNQLSGEIP ASLGRLSNLAILKLGNNSISGNIPAELGNCOSLIWLDLNTNFLNGSIPPPLFKOSGNIAV ALLTGKRYVYIKNDGSKECHGAGNLLEFGGIRQEQLDRISTRHPCNFTRVYRGITQPTFN HNGSMIFLDLSYNKLEGSIPKELGAMYYLSILNLGHNDLSGMIPQOLGGLKNVAILDLSY NRFNGTIPNSLTSLTLLGEIDLSNNNLSGMIPESAPFDTFPDYRFANNSLCGYPLPIPCS SGPKSDANQHQKSHRRQASLAGSVAMGLLFSLFCIFGLIIVAIETKKRRKKEAALEAYM DGHSHSATANSAWKFTSAREALSINLAAFEKPLRKLTFADLLEATNGFHNDSLVGSGGFG DVYKAOLKDGSVVAIKKLIHVSGOGDREFTAEMETIGKIKHRNLVPLLGYCKVGEERLLV YEYMKYGSLEDVLHDRKKIGIKLNWPARRKIAIGAARGLAFLHHNCIPHIIHRDMKSSNV LLDENLEARVSDFGMARLMSAMDTHLSVSTLAGTPGYVPPEYYQSFRCSTKGDVYSYGVV LLELLTGKOPTDSADFGDNNLVGWVKLHAKGKITDVFDRELLKEDASIEIELLOHLKVAC ACLDDRHWKRPTMIOVMAMFKEIOAGSGMDSTSTIGADDVNFSGVEGGIEMGINGSIKEG NELSKHL

>Q94BT2

MASSSSLLILAVACFVSLISPAISQQACKSQNLNSAGPFDSCEDLPVLNSYLHYTYNSS NSSLSVAFVATPSQANGGWVAWAINPTGTKMAGSQAFLAYRSGGGAAPVVKTYNISSYSS LVEGKLAFDFWNLRAESLSGGRIAIFTTVKVPAGADSVNQVWQIGGNVTNGRPGVHPFGP DNLGSHRVLSFTEDAAPGSAPSPGSAPAPGTSGSTTPGTAAGGPGNAGSLTRNVNFGVNL GILVLLGSIFIF

>Q84TI7

MDRVVAKIAKIRSQLTKLRSLFFLYFIYFLFFSFLGFLALKITKPRTTSRPHDFDLFFTS VSAITVSSMSTVDMEVFSNTQLIFLTILMFLGGEIFTSFLNLYVSYFTKFVFPHNKIRHI LGSYNSDSSIEDRCDVETVTDYREGLIKIDERASKCLYSVVLSYHLVTNLVGSVLLLVYV NFVKTARDVLSSKEISPLTFSVFTTVSTFANCGFVPTNENMIIFRKNSGLIWLLIPQVLM GNTLFPCFLVLLIWGLYKITKRDEYGYILKNHNKMGYSHLLSVRLCVLLGVTVLGFLIIQ LLFFCAFEWTSESLEGMSSYEKLVGSLFQVVNSRHTGETIVDLSTLSPAILVLFILMMYL PPYTLFMPLTEQKTIEKEGGDDDSENGKKVKKSGLIVSQLSFLTICIFLISITERQNLQR DPINFNVLNITLEVISAYGNVGFTTGYSCERRVDISDGGCKDASYGFAGRWSPMGKFVLI IVMFYGRFKQFTAKSGRAWILYPSSS

>0948U0

MRGLPGHERRWTSDTVSSGKDLSGESSPGTDSGNISGFASEEFVEVILDLQDDDTIILRS VEPATVINIDASDPATGVGIGGVSIETPASLTSTSGTRSPTMRRSTSNKLROFSOELKAE AVAKAKHFSQELKAELRRFSWSHGHASRTFSPASFFQNAVVGTGNGVDSALAARALRRQR AOLDRTRSSAHKALRGLKFISNNKTNGWNEVENNFAKLAKDGYLYRSDFAOCIGMKDSKE FALELFDALSRRRRLKVDKISKEELYEYWSQITDQSFDSRLQIFFDMVDKNEDGRIGEEE VKEIIMLSASANKLSRLKEQAEEYAALIMEELDPERLGYIELWQLETLLLQKDTYLNYSQ ALSYTSOALSONLOGLRKRSPIRRMSTKLVYSLOENWKRIWVLVLWILIMIGLFLWKFYL YKOKSAFOVMGYCLLTAKGAAETLKFNMALILLPVCRNTITFLRSTKLSCFVPFDDNINF HKTVAAAIVTGIILHAGNHLVCDFPKLIHANNTNYQKYLVNDFGPSQPQYIDLVKGVEGV TGIIMVILMAIAFTLATRWFRRSLIKFPKPFDRLTGFNAFWYSHHLLIIVYIVLIIHGTF LYLVHNWYSKTTWMYLAVPVLLYAGERTLRFFRSGLYTVRLLKVAIYPGNVLTLQMSKPP OFRYKSGOYMFVOCPAVSPFEWHPFSITSAPGDDYLSIHIROLGDWTOELKRVFSEACEO PEAGKSGLLRADENTKTSLPKLLIDGPYGAPAQDYRKYDVLLLVGLGIGATPFISILKDL LKNIVTMEEQADLVSDFSGNSDMSAATSEQPALNKISPKKRKSTLKTTNAYFYWVTREQG SFDWFKGVMNEVAELDQRGVIEMHNYLTSVYEEGDARSALITMVQALNHAKNGVDIVSGT SVRTHFARPNWRKVFSKTLTKHANARIGVFYCGAPILAKELSKLCKEFNOKGTTKFEFHK EHF

>09SVG4

MLTTPPRTFVSVPFFFFFLLFLSLPLSSFSQSNSVYNSFLKCFSDKTKSPQSQITDNVFS
QTNPAFSSVLRAYIRNARFNTSSTLKPTIIITPRSESHVSAAVTCSKTLNFLLKIRSGGH
DYDGLSYISDKPFFILDMSNIRDVSVDIASNSAWISAGATLGEVYYRIWEKSRVHGFPAG
VCPTVGVGGHLSGGGYGNMVRKFGLSVDYVEDAKIVDVNGRVLDRKAMGEDLFWAITGGG
GGSYGVVLGYKVKLVPVPSVVTVFRVEQYMDSGAVDMVHKWQSVGPKTDPNLFMRMLIQP
VTRKKVKTVRASVVALFLGRADEVVALLSKEFPELGLKKENCSEMTWFQSALWWDNRLNA
TQVDPKVFLDRNLDTSSFGKRKSDYVATAIPKKGIESLFKKMIELGKIGLVFNPYGGKMA
EVAVNAKPFPHRNKLFKIQYSVNWKENSAEIEKGYLNQAKVLYSFMTGFVSKNPRSSYFN
YRDVDIGVNDHGANSYKEGEVYGRKYFGENFDRLVKIKTAVDPGNFFRNEQSIPTLKNEK
GMLLPEPGKARRWSRVGGATVVATVVLHVF

>P83326

MAFSYCSSSLFVSLLLVILFISPLSQRPSVKAENHLISEICPKTRNPSLCLQALESDPRS ASKDLKGLGQFSIDIAQASAKQTSKIIASLTNQATDPKLKGRYETCSENYADAIDSLGQA KQFLTSGDYNSLNIYASAAFDGAGTCEDSFEGPPNIPTQLHQADLKLEDLCDIVLVISNL LPGSK

>Q9SV84

MAPPEAEVGAVMVMAPPTPGTPGTPGGPLITGMRVDSMSFDHRKPTPRCKCLPVMGSTWG QHDTCFTDFPSPDVSLTRKLGAEFVGTFILIFTATAGPIVNQKYDGAETLIGNAACAGLA VMIIILSTGHISGAHLNPSLTIAFAALRHFPWAHVPAYIAAQVSASICASFALKGVFHPF MSGGVTIPSVSLGQAFALEFIITFILLFVVTAVATDTRAVGELAGIAVGATVMLNILVAG PSTGGSMNPVRTLGPAVASGNYRSLWVYLVAPTLGAISGAAVYTGVKLNDSVTDPPRPVR SFRR

>03E7D0

MSSSDPKPGPKPGPWPPTPESAAMPPSSWAKKTGFRPKFSGETTATDSSSGQLSLPVRAK
QQETQPDLEAGQTRLRPPPPVSAAVTNGETDKDKKEKPPPPPPGSVAVPVKDQPVKRRD
SDGVVGRSNGPDGANGSGDPVRRPGRIEETVEVLPQSMDDDLVARNLHMKYGLRDTPGLV
PIGFYGLQHYLSMLGSLILVPLVIVPAMGGSHEEVANVVSTVLFVSGITTLLHTSFGSRL
PLIQGPSFVFLAPALAIINSPEFQGLNGNNNFKHIMRELQGAIIIGSAFQAVLGYSGLMS
LILRLVNPVVVAPTVAAVGLSFYSYGFPLVGKCLEIGVVQILLVIIFALYLRKISVLSHR
IFLIYAVPLSLAITWAAAFLLTETGAYTYKGCDPNVPVSNVVSTHCRKYMTRMKYCRVDT
SHALSSAPWFRFPYPLQWGVPLFNWKMAFVMCVVSVIASVDSVGSYHASSLLVASRPPTR
GVVSRAIGLEGFTSVLAGLWGTGTGSTTLTENVHTIAVTKMGSRRVVELGACVLVIFSLV
GKVGGFLASIPQVMVASLLCFMWAMFTALGLSNLRYSEAGSSRNIIIVGLSLFFSLSVPA
YFQQYGISPNSNLSVPSYYQPYIVSSHGPFKSQYKGMNYVMNTLLSMSMVIAFIMAVILD
NTVPGSKOERGVYVWSDSETATREPALAKDYELPFRVGRFFRWVKWVGI

>09XIE2

MDYNPNLPPLGGGGVSMRRSISRSVSRASRNIEDIFSSGSRRTQSVNDDEEALKWAAIEK LPTYSRLRTTLMNAVVEDDVYGNOLMSKEVDVTKLDGEDROKFIDMVFKVAEQDNERILT KLRNRIDRVGIKLPTVEVRYEHLTIKADCYTGNRSLPTLLNVVRNMGESALGMIGIOFAK KAQLTILKDISGVIKPGRMTLLLGPPSSGKTTLLLALAGKLDKSLQVSGDITYNGYQLDE FVPRKTSAYISQNDLHVGIMTVKETLDFSARCQGVGTRYDLLNELARREKDAGIFPEADV DLFMKASAAQGVKNSLVTDYTLKILGLDICKDTIVGDDMMRGISGGQKKRVTTGEMIVGP TKTLFMDEISTGLDSSTTFQIVKCLQQIVHLNEATVLMSLLQPAPETFDLFDDIILVSEG QIVYQGPRDNILEFFESFGFKCPERKGTADFLQEVTSKKDQEQYWVNPNRPYHYIPVSEF ASRYKSFHVGTKMSNELAVPFDKSRGHKAALVFDKYSVSKRELLKSCWDKEWLLMORNAF FYVFKTVQIVIIAAITSTLFLRTEMNTRNEGDANLYIGALLFGMIINMFNGFAEMAMMVS RLPVFYKORDLLFYPSWTFSLPTFLLGIPSSILESTAWMVVTYYSIGFAPDASRFFKOFL LVFLIQOMAASLFRLIASVCRTMMIANTGGALTLLLVFLLGGFLLPKGKIPDWWGWAYWV SPLTYAFNGLVVNEMFAPRWMNKMASSNSTIKLGTMVLNTWDVYHOKNWYWISVGALLCF TALFNILFTLALTYLNPLGKKAGLLPEEENEDADQGKDPMRRSLSTADGNRRGEVAMGRM SRDSAAEASGGAGNKKGMVLPFTPLAMSFDDVKYFVDMPGEMRDOGVTETRLOLLKGVTG AFRPGVLTALMGVSGAGKTTLMDVLAGRKTGGYIEGDVRISGFPKVOETFARISGYCEOT ${\tt DIHSPQVTVRESLIFSAFLRLPKEVGKDEKMMFVDQVMELVELDSLRDSIVGLPGVTGLS}$ TEORKRLTIAVELVANPSIIFMDEPTSGLDARAAAIVMRAVRNTVDTGRTVVCTIHOPSI DIFEAFDELMLMKRGGQVIYAGPLGQNSHKVVEYFESFPGVSKIPEKYNPATWMLEASSL AAELKLSVDFAELYNOSALHORNKALVKELSVPPAGASDLYFATOFSONTWGOFKSCLWK QWWTYWRSPDYNLVRFIFTLATSLLIGTVFWQIGGNRSNAGDLTMVIGALYAAIIFVGIN NCSTVOPMVAVERTVFYRERAAGMYSAMPYAISOVTCELPYVLIOTVYYSLIVYAMVGFE WKAEKFFWFVFVSYFSFLYWTYYGMMTVSLTPNOOVASIFASAFYGIFNLFSGFFIPRPK IPKWWIWYYWICPVAWTVYGLIVSQYGDVETRIQVLGGAPDLTVKQYIEDHYGFQSDFMG PVAAVLIAFTVFFAFIFAFCIRTLNFOTR

>Q94CD8

MLLPRWFAEALLLLLSILACSNAAFIGVNIGTDLTNMPPPSDIVTLLKSQQITHVRLYDA NSHMLKAFANTSIEVMVGVTNEEILKIGRFPSAAAAWVNKNVAAYIPSTNITAIAVGSEV LTTIPHVAPILASALNNIHKALVASNLNFKVKVSSPMSMDIMPKPFPPSTSTFSPSWNTT VYQLLQFLKNTGSFFMLNAYPYYGYTTANGIFPLDYALFKQLSPVKQIVDPNTLLHYNSM FDAMVDAAYYSMEALNFSKIPVVVTETGWPSSGGSDEAAATVANAETFNTNLIKRVLNNS GPPSQPDIPINTYIYELYNEDKRSGPVSERNWGILFPNGTSVYPLSLSGGSSSAALNGSS MFCVAKADADDDKLVDGLNWACGQGRANCAAIQPGQPCYLPNDVKSHASFAFNDYYQKMK SAGGTCDFDGTAITTTRDPSYRTCAYTGSLNANATNGNFPPDALGPASPLGGNANARIIF SYHLPILAPLALTLLQLLLQHDRLL

>Q9LKW9

MTTVIDATMAYRFLEEATDSSSSSSSSKLESSPVDAVLFVGMSLVLGIASRHLLRGTRVP YTVALLVIGIALGSLEYGAKHNLGKIGHGIRIWNEIDPELLLAVFLPALLFESSFSMEVH OIKRCLGOMVLLAVPGVLISTACLGSLVKVTFPYEWDWKTSLLLGGLLSATDPVAVVALL KELGASKKLSTIIEGESLMNDGTAIVVFQLFLKMAMGQNSDWSSIIKFLLKVALGAVGIG LAFGIASVIWLKFIFNDTVIEITLTIAVSYFAYYTAQEWAGASGVLTVMTLGMFYAAFAR TAFKGDSQKSLHHFWEMVAYIANTLIFILSGVVIAEGILDSDKIAYQGNSWRFLFLLYVY IQLSRVVVVGVLYPLLCRFGYGLDWKESIILVWSGLRGAVALALSLSVKQSSGNSHISKE TGTLFLFFTGGIVFLTLIVNGSTTOFVLRLLRMDILPAPKKRILEYTKYEMLNKALRAFO DLGDDEELGPADWPTVESYISSLKGSEGELVHHPHNGSKIGSLDPKSLKDIRMRFLNGVO ATYWEMLDEGRISEVTANILMOSVDEALDQVSTTLCDWRGLKPHVNFPNYYNFLHSKVVP RKLVTYFAVERLESACYISAAFLRAHTIAROOLYDFLGESNIGSIVINESEKEGEEAKKF LEKVRSSFPQVLRVVKTKQVTYSVLNHLLGYIENLEKVGLLEEKEIAHLHDAVQTGLKKL LRNPPIVKLPKLSDMITSHPLSVALPPAFCEPLKHSKKEPMKLRGVTLYKEGSKPTGVWL IFDGIVKWKSKILSNNHSLHPTFSHGSTLGLYEVLTGKPYLCDLITDSMVLCFFIDSEKI LSLQSDSTIDDFLWQESALVLLKLLRPQIFESVAMQELRALVSTESSKLTTYVTGESIEI DCNSIGLLLEGFVKPVGIKEELISSPAALSPSNGNOSFHNSSEASGIMRVSFSQOATQYI VETRARAIIFNIGAFGADRTLHRRPSSLTPPRSSSSDQLQRSFRKEHRGLMSWPENIYAK QQQEINKTTLSLSERAMQLSIFGSMVNVYRRSVSFGGIYNNKLQDNLLYKKLPLNPAQGL VSAKSESSIVTKKQLETRKHACQLPLKGESSTRONTMVESSDEEDEGIVVRIDSPSKI VFRNDL

>094F08

MAKTNQAITICSLLLLLLSETTSHLLCSDSKTPVNNNETLQFCDSYKERSCCNSKDDLQ
LQNRFNSMNISDSNCSSLLKSILCSKCDEFSGQLFGDDDSSLVPILCNSTSQDLCSKLWD
SCQNISIVSSPFSPTLLGGATSPSTSSNSSTLTDLWKSQTEFCTAFGGPSQTNNNKTKCF
NGEPVNRDTSDDDEDDVKTPKGICLEKIGTGSYLNMVAHPDGSNRAFFSNQPGKIWLGTI
PDQDSGKPMEIDESTPFVDITDQVSFDTQFGMMGMAFHPKFAENGRFFASFNCDKVKSPG
CSGRCACNSDVNCDPSKLPKDDGTTPCRYQTVVSEYTANGTSSSPSTAKIGKASEVRRIF
TMGLPYSSSHGGQILFGPDGYLYLMTGDGGGVSDTHNFAQNKKSLLGKILRLDVDVMPSV
SEISKLGLWGNYSIPKNNPFQGNENEQPEIWALGLRNPWRCSFDSERPDYFLCADVGKDT
YEEVDIITMGGNYGWRTYEGPYVFSPLSPFGENVSSDSNLTFPILGYNHSEVNKHEGSAS
IIGGYFYRSNTDPCSYGTYLYADLYANAMWAAIESPEDSGNFTDSLIPFSCSKDSPMKCT
AAPGGASSGPALGYIYSFGQDNNKDIHLLTSSGVYRIVRPSRCNLACSKENTTASAGKQN
PAGSAPPQPLPSSARKLCFSVFLLLSLLMMFLTLLD

>Q93XX5

MSACINGLCRAVTVSLLLLLLSFSFSSACSNGNCQLLDSCSSATDCVSGLYCGDCPAVGR SKPVCTRGQATSPTSIINGLPFNKYTWLMTHNAFSNANAPLLPGVERITFYNQEDTITNQ LQNGVRGLMLDMYDFNNDIWLCHSLRGQCFNFTAFQPAINILREVEAFLSQNPTEIVTII IEDYVHRPKGLSTLFANAGLDKYWFPVSKMPRKGEDWPTVTDMVQENHRLLVFTSVAAKE DEEGVAYQWRYMVENESGDPGVKRGSCPNRKESQPLNSKSSSLFLMNYFPTYPVEKDACK EHSAPLAEMVGTCLKSGGNRMPNFLAVNFYMRSDGGGVFEILDRMNGPVLCGCETLSACQ PGAAYGSCKNVTVQTRTPSMDSTAGSNSGGSYSGSVQFSRSLASVAQLNNIVVFCFSLLP LLIFLL

>023492

MVEGGIAKADKTEFTECWRTTWKTPYIMRLALSAGIGGLLFGYDTGVISGALLFIKEDFD EVDKKTWLQSTIVSMAVAGAIVGAAVGGWINDKFGRRMSILIADVLFLIGAIVMAFAPAP WVIIVGRIFVGFGVGMASMTSPLYISEASPARIRGALVSTNGLLITGGQFFSYLINLAFV HTPGTWRWMLGVAGVPAIVQFVLMLSLPESPRWLYRKDRIAESRAILERIYPADEVEAEM EALKLSVEAEKADEAIIGDSFSAKLKGAFGNPVVRRGLAAGITVQVAQQFVGINTVMYYS PSIVQFAGYASNKTAMALSLITSGLNALGSIVSMMFVDRYGRRKLMIISMFGIIACLIIL ATVFSQAAIHAPKIDAFESRTFAPNATCSAYAPLAAENAPPSRWNCMKCLRSECGFCASG VQPYAPGACVVLSDDMKATCSSRGRTFFKDGCPSKFGFLAIVFLGLYIVVYAPGMGTVPW IVNSEIYPLRYRGLGGGIAAVSNWVSNLIVSESFLSLTHALGSSGTFLLFAGFSTIGLFF IWLLVPETKGLQFEEVEKLLEVGFKPSLLRRREKKGKEVDAA

>006611

MEGKEEDVRVGANKFPERQPIGTSAQSDKDYKEPPPAPLFEPGELASWSFWRAGIAEFIA
TFLFLYITVLTVMGVKRSPNMCASVGIQGIAWAFGGMIFALVYCTAGISGGHINPAVTFG
LFLARKLSLTRAVYYIVMQCLGAICGAGVVKGFQPKQYQALGGGANTIAHGYTKGSGLGA
EIIGTFVLVYTVFSATDAKRNARDSHVPILAPLPIGFAVFLVHLATIPITGTGINPARSL
GAAIIFNKDNAWDDHWVFWVGPFIGAALAALYHVIVIRAIPFKSRS

>09FM65

MAKKMSSLIIIFNILLLLTTQTHAHNVTRLLANHPSFSSFSHFLTQTHLADEINRRRTIT
VCAVDNAAMSALTSKGYTLSTLKNILSLHVLLDYFGTKKLHQIRDGSALAATLFQATGAA
PGTSGFVNITDLRGGKVGFGPDGGDLSSFFVKSIEEVPYNISIIQISRVLPSETAAAPTP
APAEMNLTGIMSAHGCKVFAETLLTNPGASKTYQESLEGGMTVFCPGDDAMKGFLPKYKN
LTAPKKEAFLDFLAVPTYYSMAMLKSNNGPMNTLATDGANKFELTVQNDGEKVTLKTRIN
TVKIVDTLIDEQPLAIYATDKVLLPKELFKASAVEAPAPAPAPEDGDVADSPKAAKGKAK
GKKKKAAPSPDNDPFGDSDSPAEGPDGEADDATADDAGAVRIIGGAKAGLVVSLLCLFAS
SWLL

>Q9LQU4

MEAQHLHAKPHAEGEWSTGFCDCFSDCKNCCITFWCPCITFGQVAEIVDRGSTSCGTAGA LYALIAVVTGCACIYSCFYRGKMRAQYNIKGDDCTDCLKHFCCELCSLTQQYRELKHRGY DMSLGWAGNVERQQNQGGVAMGAPVFQGGMTR

>0944C1

MEGKKEMGSYKFCLIFTRKFRMTESGPVEDVRDLFEKYTEGDAHMSPEQLQKLMTEEGGE
GETSLEEAERIVDEVLRRKHHIAKFTRRNLTLDDFNYYLFSTDLNPPIADQVHQNMDAPL
SHYFIFTGHNSYLTGNQLSSNCSELPIADALRRGVRVVELDLWPRGTDDVCVKHGRTLTK
EVKLGKCLESIKANAFAISKYPVIITLEDHLTPKLQFKVAKMITQTFGDMLYYHDSQGCQ
EFPSPEELKEKILISTKPPKEYLEANDTKEKDNGEKGKDSDEDVWGKEPEDLISTQSDLD
KVTSSVNDLNQDDEERGSCESDTSCQLQAPEYKRLIAIHAGKPKGGLRMALKVDPNKIRR
LSLSEQLLEKAVASYGADVIRFTQKNFLRIYPKGTRFNSSNYKPQIGWMSGAQMIAFNMQ
GYGRALWLMEGMFRANGGCGYVKKPDFLMDASPNGQDFYPKDNSSPKKTLKVKVCMGDGW

LLDFKKTHFDSYSPPDFFVRVGIAGAPVDEVMEKTKIEYDTWTPIWNKEFTFPLAVPELA LLRVEVHEHDVNEKDDFGGQTCLPVSEIRQGIRAVPLFNRKGVKYSSTRLLMRFEFV >O9FHN6

MAATDFFFAFVFSFALIFGFSFAGDPYVSYDFTLSYITASPLGVPQQVIAVNGKFPGPVI
NATTNYNVHVNVLNHLDEPLLLTWPGVQMRRNSWQDGVLGTNCPIPPNWNFTYDFQLKDQ
IGSYFYSPSLNFQRASGGFGALIINNRDLVPIPFTEPDGEIIFIIGDWYTQNHTALRRIL
DSGKELGMPDGVLINGKGPFKYNSSVPDGIEHETVNVDPGKTYRIRVHNVGISTSLNFRI
QNHKLLLIETEGRYTSQMNFTDFDVHVGQSYSFLVTMDQNATSDYYIVASARFVNETVWQ
RVTGVGILHYSNSKGPASGPLPVSATDVNHPWSAMNQPRAIKQNTSASGARPNPQGSFHY
GQINITRTYILRSLPPTKINGKLRATLNGISFVNPSTPMRLADDHKVKGDYMLDFPDRPL
DEKLPRLSSSIINATYKGFIQVIFQNNDTKIQSFHIDGYAFYVVAMDFGIWSEDRNSSYN
NWDAVARSTVEVYPGAWTAVLISLDNVGVWNIRVENLDRWYLGQETYMRIINPEENGSTE
MDPPENVMYCGALQAMQKEQHHSSATKSMTNGQLILIFSMMMVLLSSFSSFC
>P59833

MAISKLHLLFLLSVFLSLHPLVLSDTADEEDVLLTGINSYRASLNLTTLIHNHNAECLAD EIADQFKNQPCTNTTGSASVPGTTPGFPNLPNLLSKCRLNPTVTRDGAILPACVPNLDPS LVLTNFTMSQYSKDLNDSKFTGIGIGSDDNWIVVVLTTSTPEGSYSPASNSGAFAFGVNG LVSSSLMFLLFCFFMF

>Q9LF79

MTSLLKSSPGRRRGGDVESGKSEHADSDSDTFYIPSKNASIERLQQWRKAALVLNASRRF RYTLDLKKEOETREMROKIRSHAHALLAANRFMDMGRESGVEKTTGPATPAGDFGITPEO LVIMSKDHNSGALEQYGGTQGLANLLKTNPEKGISGDDDDLLKRKTIYGSNTYPRKKGKG FLRFLWDACHDLTLIILMVAAVASLALGIKTEGIKEGWYDGGSIAFAVILVIVVTAVSDY KOSLOFONLNDEKRNIHLEVLRGGRRVEISIYDIVVGDVIPLNIGNOVPADGVLISGHSL ${\tt ALDESSMTGESKIVNKDANKDPFLMSGCKVADGNGSMLVTGVGVNTEWGLLMASISEDNG}$ EETPLOVRLNGVATFIGSIGLAVAAAVLVILLTRYFTGHTKDNNGGPOFVKGKTKVGHVI DDVVKVLTVAVTIVVVAVPEGLPLAVTLTLAYSMRKMMADKALVRRLSACETMGSATTIC SDKTGTLTLNOMTVVESYAGGKKTDTEQLPATITSLVVEGISONTTGSIFVPEGGGDLEY SGSPTEKAILGWGVKLGMNFETARSQSSILHAFPFNSEKKRGGVAVKTADGEVHVHWKGA SEIVLASCRSYIDEDGNVAPMTDDKASFFKNGINDMAGRTLRCVALAFRTYEAEKVPTGE ELSKWVLPEDDLILLAIVGIKDPCRPGVKDSVVLCONAGVKVRMVTGDNVOTARAIALEC GILSSDADLSEPTLIEGKSFREMTDAERDKISDKISVMGRSSPNDKLLLVQSLRRQGHVV AVTGDGTNDAPALHEADIGLAMGIAGTEVAKESSDIIILDDNFASVVKVVRWGRSVYANI OKFIOFOLTVNVAALVINVVAAISSGDVPLTAVOLLWVNLIMDTLGALALATEPPTDHLM GRPPVGRKEPLITNIMWRNLLIOAIYOVSVLLTLNFRGISILGLEHEVHEHATRVKNTII FNAFVLCQAFNEFNARKPDEKNIFKGVIKNRLFMGIIVITLVLQVIIVEFLGKFASTTKL NWKQWLICVGIGVISWPLALVGKFIPVPAAPISNKLKVLKFWGKKKNSSGEGSL

>Q9SUC9

MKKSLTLLILLLCSLLFSTVLSNLLVEPVQPNTVPAFPVETQAQSCRLDLSNELFGGVNE ACGRNLDRSRCCPVLAAWLFAAHARSALQLPAPAPTPESSDPDEPMKPDDSQKCVNTLQS ALLTKQIKIPQPNSSCDAILCFCGIRLHQISSLSCPAAFNVSSGFKNATPTAAVKNLEKE CRNSSYSGCTRCLGALQKLKVRGGNKKTTTERGTKMMSKDCQLMGLTWLLARNKTAYIPT VSAVLRAIMYSPHPPHLNKCSPDQENMPLAVDSLQFQKSFSSSSHLFGVLPFLPLVLCIF LFLL

MASESGLNGDPNILEEVSETKRDKEEEEEVKKTEKKDEEHEKTKTVPFYKLFAFADSFDF LLMILGTLGSIGNGLGFPLMTLLFGDLIDAFGENQTNTTDKVSKVALKFVWLGIGTFAAA FLQLSGWMISGERQAARIRSLYLKTILRQDIAFFDIDTNTGEVVGRMSGDTVLIQDAMGE KVGKAIQLLATFVGGFVIAFVRGWLLTLVMLSSIPLLVMAGALLAIVIAKTASRGQTAYA KAATVVEOTIGSIRTVASFTGEKOAISNYNKHLVTAYKAGVIEGGSTGLGLGTLFLVVFC SYALAVWYGGKLILDKGYTGGOVLNIIIAVLTGSMSLGOTSPCLSAFAAGQAAAYKMFET IERRPNIDSYSTNGKVLDDIKGDIELKDVYFTYPARPDEQIFRGFSLFISSGTTVALVGQ SGSGKSTVVSLIERFYDPOAGDVLIDGINLKEFOLKWIRSKIGLVSOEPVLFTASIKDNI AYGKEDATTEEIKAAAELANASKFVDKLPQGLDTMVGEHGTQLSGGQKQRIAVARAILKD PRILLLDEATSALDAESERVVQEALDRIMVNRTTVVVAHRLSTVRNADMIAVIHQGKIVE KGSHTELLKDPEGAYSOLIRLOEEKKSDENAAEEOKMSSIESFKOSSLRKSSLGRSLSKG GSSRGNSSRHSFNMFGFPAGIDGNVVODQEEDDTTQPKTEPKKVSIFRIAALNKPEIPVL ILGSISAAANGVILPIFGILISSVIKAFFQPPKKLKEDTSFWAIIFMVLGFASIIAYPAQ TFFFAIAGCKLVORIRSMCFEKVVHMEVGWFDEPENSSGTIGARLSADAATIRGLVGDSL AQTVQNLSSILAGLIIAFLACWQLAFVVLAMLPLIALNGFLYMKFMKGFSADAKKMYGEA SQVANDAVGSIRTVASFCAEDKVMNMYSKKCEGPMKNGIRQGIVSGIGFGFSFFVLFSSY AASFYVGARLVDDGKTTFDSVFRVFFALTMAAMAISQSSSLSPDSSKADVAAASIFAIMD RESKIDPSVESGRVLDNVKGDIELRHVSFKYPARPDVQIFQDLCLSIRAGKTVALVGESG SGKSTVIALLQRFYDPDSGEITLDGVEIKSLRLKWLRQQTGLVSQEPILFNETIRANIAY GKGGDASESEIVSSAELSNAHGFISGLOOGYDTMVGERGIOLSGGOKORVAIARAIVKDP KVLLLDEATSALDAESERVVODALDRVMVNRTTIVVAHRLSTIKNADVIAVVKNGVIVEK GKHDTLINIKDGVYASLVOLHLTAAS

>096247

MSEGVEAIVANDNGTDQVNGNRTGKDNEEHDGSTGSNLSNFLWHGGSVWDAWFSCASNQV
AQVLLTLPYSFSQLGMLSGIVLQIFYGLLGSWTAYLISVLYVEYRARKEKEGKSFKNHVI
QWFEVLDGLLGSYWKALGLAFNCTFLLFGSVIQLIACASNIYYINDHLDKRTWTYIFGAC
CATTVFIPSFHNYRIWSFLGLGMTTYTAWYLAIASIIHGQAEGVKHSGPTKLVLYFTGAT
NILYTFGGHAVTVEIMHAMWKPQKFKYIYLMATLYVFTLTIPSAAAVYWAFGDALLDHSN
AFSLMPKNAWRDAAVILMLIHQFITFGFACTPLYFVWEKVIGMHDTKSICLRALARLPVV
IPIWFLAIIFPFFGPINSAVGALLVSFTVYIIPSLAHMLTYRSASARQNAAEKPPFFMPS
WTAMYVLNAFVVVWVLIVGFGFGGWASVTNFVRQVDTFGLFAKCYQCKPAAAAAHAPVSA
LHHRL

>Q9LX20

MVSRSAFLLFCVLFLATEETLASLFSSRLIHRFSDEGRASIKTPSSSDSLPNKQSLEYYR
LLAESDFRRQRMNLGAKVQSLVPSEGSKTISSGNDFGWLHYTWIDIGTPSVSFLVALDTG
SNLLWIPCNCVQCAPLTSTYYSSLATKDLNEYNPSSSSTSKVFLCSHKLCDSASDCESPK
EQCPYTVNYLSGNTSSSGLLVEDILHLTYNTNNRLMNGSSSVKARVVIGCGKKQSGDYLD
GVAPDGLMGLGPAEISVPSFLSKAGLMRNSFSLCFDEEDSGRIYFGDMGPSIQQSTPFLQ
LDNNKYSGYIVGVEACCIGNSCLKQTSFTTFIDSGQSFTYLPEEIYRKVALEIDRHINAT
SKNFEGVSWEYCYESSAEPKVPAIKLKFSHNNTFVIHKPLFVFQQSQGLVQFCLPISPSG
QEGIGSIGQNYMRGYRMVFDRENMKLGWSPSKCQEDKIEPPQASPGSTSSPNPLPTDEQQ
SRGGHAVSPAIAGKTPSKTPSSSSSYSFSSIMRLFNSLLLLHWLASLM

>Q8L940

MEGTGVVAVYGNGAITEAKKSPFSVKVGLAQMLRGGVIMDVVNAEQARIAEEAGACAVMA LERVPADIRAQGGVARMSDPQMIKEIKQAVTIPVMAKARIGHFVEAQILEAIGIDYIDES EVLTLADEDHHINKHNFRIPFVCGCRNLGEALRRIREGAAMIRTKGEAGTGNIIEAVRHV RSVNGDIRVLRNMDDDEVFTFAKKLAAPYDLVMQTKQLGRLPVVQFAAGGVATPADAALM MQLGCDGVFVGSGIFKSGDPARRARAIVQAVTHYSDPEMLVEVSCGLGEAMVGINLNDEK VERFANRSE

>07DM58

MWLLSSSPWLSELSCSYSAVVEHTSSVPVPIOWLRFVLLSPCPORALFSAVDFIFLLCFA LHKLFSSPSSSEINGHAEIRKPLIGIRGRTPTRTTAWFKTTVAVTVLLSFCSVVLCVLA FTGKRRTORPWNLIDPLFWLIHAVTHLVIAVLVLHOKRFAALNHPLSLRIYWISSFVLTS LFAVTGIFHFLSDAATSLRAEDVASFFSFPLTAFLLIASVRGITGLVTAETNSPTKPSDA VSVEKSDNVSLYASASVFSKTFWLWMNPLLSKGYKSPLTLEQVPTLSPEHKAERLALLFE SSWPKPSENSSHPIRTTLLRCFWKEILFTAILAIVRLGVMYVGPVLIQSFVDFTSGKRSS PWQGYYLVLILLVAKFVEVLTTHQFNFDSQKLGMLIRSTLITALYKKGLKLTGSARQNHG VGOIVNYMAVDAOOLSDMMLOLHAIWLMPLOVTVALVLLYGSLGASVITAVIGLTGVFVF ILLGTORNNGYOFSLMGNRDSRMKATNEMLNYMRVIKFOAWENHFNKRILKFRDMEFGWL SKFLYSIAGNIIVLWSTPVLISALTFATALALGVKLDAGTVFTTTTIFKILQEPIRTFPQ SMISLSQAMISLGRLDSYMMSKELSEDAVERALGCDGNTAVEVRDGSFSWDDEDNEPALS DINFKVKKGELTAIVGTVGSGKSSLLASVLGEMHRISGOVRVCGSTGYVAOTSWIENGTV QDNILFGLPMVREKYNKVLNVCSLEKDLQMMEFGDKTEIGERGINLSGGQKQRIQLARAV YQECDVYLLDDVFSAVDAHTGSDIFKKCVRGALKGKTVLLVTHQVDFLHNVDCILVMRDG KIVESGKYDELVSSGLDFGELVAAHETSMELVEAGADSAAVATSPRTPTSPHASSPRTSM ESPHLSDLNDEHIKSFLGSHIVEDGSKLIKEEERETGOVSLGVYKOYCTEAYGWWGIVLV LFFSLTWOGSLMASDYWLAYETSAKNAISFDASVFILGYVIIALVSIVLVSIRSYYVTHL GLKTAQIFFRQILNSILHAPMSFFDTTPSGRILSRASTDQTNVDILIPFMLGLVVSMYTT LLSIFIVTCOYAWPTAFFVIPLGWLNIWYRNYYLASSRELTRMDSITKAPIIHHFSESIA GVMTIRSFRKQELFRQENVKRVNDNLRMDFHNNGSNEWLGFRLELVGSWVLCISALFMVL LPSNVIRPENVGLSLSYGLSLNSVLFFAIYMSCFVENKMVSVERIKQFTDIPSESEWERK ETLPPSNWPFHGNVHLEDLKVRYRPNTPLVLKGITLDIKGGEKVGVVGRTGSGKSTLIQV LFRLVEPSGGKIIIDGIDISTLGLHDLRSRFGIIPOEPVLFEGTVRSNIDPTEOYSDEEI WKSLERCOLKDVVATKPEKLDSLVVDNGENWSVGOROLLCLGRVMLKRSRLLFLDEATAS VDSQTDAVIQKIIREDFASCTIISIAHRIPTVMDGDRVLVIDAGKAKEFDSPARLLERPS LFAALVOEYALRSAGI

>P31414

MVAPALLPELWTEILVPICAVIGIAFSLFQWYVVSRVKLTSDLGASSSGGANNGKNGYGD
YLIEEEEGVNDQSVVAKCAEIQTAISEGATSFLFTEYKYVGVFMIFFAAVIFVFLGSVEG
FSTDNKPCTYDTTRTCKPALATAAFSTIAFVLGAVTSVLSGFLGMKIATYANARTTLEAR
KGVGKAFIVAFRSGAVMGFLLAASGLLVLYITINVFKIYYGDDWEGLFEAITGYGLGGSS
MALFGRVGGGIYTKAADVGADLVGKIERNIPEDDPRNPAVIADNVGDNVGDIAGMGSDLF
GSYAEASCAALVVASISSFGINHDFTAMCYPLLISSMGILVCLITTLFATDFFEIKLVKE
IEPALKNQLIISTVIMTVGIAIVSWVGLPTSFTIFNFGTQKVVKNWQLFLCVCVGLWAGL
IIGFVTEYYTSNAYSPVQDVADSCRTGAATNVIFGLALGYKSVIIPIFAIAISIFVSFSF
AAMYGVAVAALGMLSTIATGLAIDAYGPISDNAGGIAEMAGMSHRIRERTDALDAAGNTT
AAIGKGFAIGSAALVSLALFGAFVSRAGIHTVDVLTPKVIIGLLVGAMLPYWFSAMTMKS

VGSAALKMVEEVRRQFNTIPGLMEGTAKPDYATCVKISTDASIKEMIPPGCLVMLTPLIV GFFFGVETLSGVLAGSLVSGVQIAISASNTGGAWDNAKKYIEAGVSEHAKSLGPKGSEPH KAAVIGDTIGDPLKDTSGPSLNILIKLMAVESLVFAPFFATHGGILFKYF

(2) \mathbb{S}_2 : 32 cell wall proteins

>Q42589

MAGVMKLACLLLACMIVAGPITSNAALSCGSVNSNLAACIGYVLQGGVIPPACCSGVKNL NSIAKTTPDRQQACNCIQGAARALGSGLNAGRAAGIPKACGVNIPYKISTSTNCKTVR >P26792

MGVTIRNRNYDHGSLPFLQSLLAILLVTTTTLHINGVEAFHEIHYNLQSVGAENVKQVHR
TGYHFQPKQNWINDPNGPMYYKGVYHLFYQYNPKGAVWGNIVWAHSVSTDLINWTPLEPA
IFPSKPFDKYGCRSGSATILPGNKPVILYTGIVEGPPKNVQVQNYAIPANLSDPYLRKWI
KPDNNPLVVANNGENATAFRDPTTAWLDKSGHWKMLVGSKRNRRGIAYLYRSKDFIKWTK
AKHPIHSQANTGMWECPDFFPVSLKGLNGLDTSVTGESVKHVLKVSLDLTRYEYYTVGTY
LTDKDRYIPDNTSVDGWAGLRYDYGNFYASKTFFDPSKNRRILWGWANESDSTAHDVAKG
WAGIQLIPRTLWLDPSGKQLMQWPIEELETLRGSKVKFSRKQDLSKGILVEVKGITAAQA
DVEVTFSFKSLAKREPFDPKWLEYDAEKICSLKGSTVQGGVGPFGLLTLASEKLEEYTPV
FFRVFKAQNTHKVLMCSDATRSSLKEGLYRPSFAGFVDVDLATDKKISLRSLIDNSVVES
FGAKGKTCISSRVYPTLAVYENAHLYVFNNGSETITVENLDAWSMKKPLRMN

MIGKVVVSVASILLIVGVAIGVVAYINKNGDANLSPQMKAVRGICEATSDKASCVKTLEP
VKSDDPNKLIKAFMLATRDAITQSSNFTGKTEGNLGSGISPNNKAVLDYCKKVFMYALED
LSTIVEEMGEDLNQIGSKIDQLKQWLTGVYNYQTDCLDDIEEDDLRKTIGEGIASSKILT
SNAIDIFHTVVSAMAKLNLKVEDFKNMTGGIFAPSDKGAAPVNKGTPPVADDSPVADPDG
PARRLLEDIDETGIPTWVSGADRKLMTKAGRGSNDGGARIRATFVVAKDGSGQFKTVQQA
VNACPEKNPGRCIIHIKAGIYREQVIIPKKKNNIFMFGDGARKTVISYNRSVKLSPGTTT
SLSGTVQVESEGFMAKWIGFKNTAGPMGHQAVAIRVNGDRAVIFNCRFDGYQDTLYVNNG
RQFYRNIVVSGTVDFIFGKSATVIQNSLIVVRKGNKGQFNTVTADGNEKGLAMKIGIVLQ
NCRIVPDKKLAAERLIVESYLGRPWKKFSTTVIINSEIGDVIRPEGWKIWDGESFHKSCR

>003464

MKMMVVVVVMMLSWLILKPPSTWAINTITFDVGNATINKYATFMKSIHNQAKDPTLKCYG IPMLPNTNLTPKYLLVTLQDSSLKTITLMLKRNNLYVMGYADTYNGKCRYHIFKDISNTT ERNDVMTTLCPNPSSRVGKNINYDSSYPALEKKVGRPRSQVQLGIQILNSGIGKIYGVDS FTEKTEAEFLLVAIQMVSEAARFKYIENQVKTNFNRAFYPNAKVLNLEESWGKISTAIHN AKNGALTSPLELKNANGSKWIVLRVDDIEPDVGLLKYVNGTCQATYQSAMFPHL

YVEYNNRGPGAITNRRVNWVKIARSAAEVNDFTVANWLGPINWIQEANVPVTLGL

>Q9S7Y7

MASSSSSLAFSLSLLLALILCFSPTQSYKTIGKGYRLVSIEESPDGGFIGYLQVKQKNKI
YGSDITTLRLFVKHETDSRLRVHITDAKQQRWEVPYNLLPREQPPQVGKVIGKSRKSPIT
VQEISGSELIFSYTTDPFTFAVKRRSNHETLFNTTSSLVFKDQYLEISTSLPKEASLYGL
GENSQANGIKLVPNEPYTLYTEDVSAINLNTDLYGSHPMYMDLRNVGGKAYAHAVLLLNS
NGMDVFYRGDSLTYKVIGGVFDFYFIAGPSPLNVVDQYTQLIGRPAPMPYWSLGFHQCRW
GYHNLSVVEDVVDNYKKAKIPLDVIWNDDDHMDGHKDFTLNPVAYPRAKLLAFLDKIHKI
GMKYIVINDPGIGVNASYGTFQRAMAADVFIKYEGKPFLAQVWPGPVYFPDFLNPKTVSW

WGDEIKRFHDLVPIDGLWIDMNEVSNFCSGLCTIPEGKQCPSGEGPGWVCCLDCKNITKT
RWDDPPYKINATGVVAPVGFKTIATSATHYNGVREYDAHSIYGFSETIATHKGLLNVQGK
RPFILSRSTFVGSGQYAAHWTGDNQGTWQSLQVSISTMLNFGIFGVPMVGSDICGFYPQP
TEELCNRWIEVGAFYPFSRDHANYYSPRQELYQWDTVADSARNALGMRYKILPFLYTLNY
EAHMTGAPIARPLFFSFPEYTECYGNSRQFLLGSSFMISPVLEQGKTEVEALFPPGSWYH
MFDMTQAVVSKNGKRVTLPAPLNFVNVHLYQNTILPTQQGGLISKDARTTPFSLVIAFPA
GASEGYATGKLYLDEDELPEMKLGNGQSTYVDFYASVGNGTMKMWSQVKEGKFALSKGWV
IEKVSVLGLRGAGQVSEIQINGSPMTKKIEVSSKEHTYVIGLEDEEENKSVMVEVRGLEM
LVGKDFNMSWKMGIN

>P15290

MGYSKTLVAGLFAMLLLAPAVLATDPDPLQDFCVADLDGKAVSVNGHTCKPMSEAGDDFL FSSKLAKAGNTSTPNGSAVTELDVAEWPGTNTLGVSMNRVDFAPGGTNPPHIHPRATEIG IVMKGELLVGILGSLDSGNKLYSRVVRAGETFLIPRGLMHFQFNVGKTEASMVVSFNSQN PGIVFVPLTLFGSNPPIPTPVLTKALRVEARVVELLKSKFAAGF

>09C9H5

MTSLFFFVLLFSSLLISNGDANPNYKEALSKSLLFFQGQRSGPLPRGQQISWRASSGLSD GSAAHVDLTGGYYDAGDNVKFNLPMAFTTTMLSWSALEYGKRMGPELENARVNIRWATDY LLKCARATPGKLYVGVGDPNVDHKCWERPEDMDTPRTVYSVSASNPGSDVAAETAAALAA ASMVFRKVDSKYSRLLLATAKDVMQFAIQYQGAYSDSLSSSVCPFYCSYSGYKDELMWGA SWLLRATNNPYYANFIKSLGGGDQPDIFSWDNKYAGAYVLLSRRALLNKDSNFEQYKQAA ENFICKILPDSPSSSTQYTQGGLMYKLPQSNLQYVTSITFLLTTYAKYMKATKHTFNCGS SVIVPNALISLSKRQVDYILGDNPIKMSYMVGFSSNFPKRIHHRASSLPSHALRSQSLGC NGGFQSFYTQNPNPNILTGAIVGGPNQNDGYPDQRDDYSHAEPATYINAAFVGPLAYFAA GRST

>004300

MASLPKPTPLLKDELDIVIPTIRNLDFLEMWRPFFEQYHLIIVQDGDPSKVIKVPEGFDY
ELYNRNDINRILGPKASCISFKDSACRCFGYMVSKKKYIYTIDDDCFVAKDPTGHEINAL
EQHIKNLLSPSTPFFFNTLYDPYREGTDFVRGYPFSLREGVPTAVSHGLWLNIPDYDAPT
QLVKPHERNTRFVDAVLTIPKGSLFPMCGMNLAFNRELIGPAMYFGLMGDGQPIGRYDDM
WAGWCIKVICDHLGYGVKTGLPYIWHSKASNPFVNLKKEYKGIFWQEEIIPFFQAATLSK
DCTSVQKCYIELSKQVKEKLGTIDPYFIKLADAMVTWVEAWDEINNNKSEETTSTKASEV
AATK

>Q05538

MRLSEFTTLFLLFSVLLLSASAEQCGSQAGGALCASGLCCSKFGWCGNTNEYCGPGNCQS
QCPGGPGPSGDLGGVISNSMFDQMLNHRNDNACQGKNNFYSYNAFVTAAGSFPGFGTTGD
ITARKREIAAFLAQTSHETTGGWPTAPDGPYAWGYCFLREQGSPGDYCTPSSQWPCAPGR
KYFGRGPIQISHNYNYGPCGRAIGVDLLNNPDLVATDPVISFKSAIWFWMTPQSPKPSCH
DVITGRWQPSGADQAANRVPGFGVITNIINGGLECGHGSDSRVQDRIGFYRRYCGILGVS
PGENLDCGNQRSFGNGLLVDIM

>Q9SYM4

MPGNKYNCSSSHIPLSRTERLLRDRELREKRKSNRARNPNDVAGSSENSENDLRLEGDSS RQYVEQYLEGAAAAMAHDDACERQEVRPYNRQRLLVVANRLPVSAVRRGEDSWSLEISAG GLVSALLGVKEFEARWIGWAGVNVPDEVGQKALSKALAEKRCIPVFLDEEIVHQYYNGYC NNILWPLFHYLGLPQEDRLATTRSFQSQFAAYKKANQMFADVVNEHYEEGDVVWCHDYHL MFLPKCLKEYNSKMKVGWFLHTPFPSSEIHRTLPSRSELLRSVLAADLVGFHTYDYARHF
VSACTRILGLEGTPEGVEDQGRLTRVAAFPIGIDSDRFIRALEVPEVIQHMKELKERFAG
RKVMLGVDRLDMIKGIPQKILAFEKFLEENANWRDKVVLLQIAVPTRTDVPEYQKLTSQV
HEIVGRINGRFGTLTAVPIHHLDRSLDFHALCALYAVTDVALVTSLRDGMNLVSYEFVAC
QEAKKGVLILSEFAGAAQSLGAGAILVNPWNITEVAASIGQALNMTAEEREKRHRHNFHH
VKTHTAQEWAETFVSELNDTVIEAQLRISKVPPELPQHDAIQRYSKSNNRLLILGFNATL
TEPVDNQGRRGDQIKEMDLNLHPELKGPLKALCSDPSTTIVVLSGSSRSVLDKNFGEYDM
WLAAENGMFLRLTNGEWMTTMPEHLNMEWVDSVKHVFKYFTERTPRSHFETRDTSLIWNY
KYADIEFGRLQARDLLQHLWTGPISNASVDVVQGSRSVEVRAVGVTKGAAIDRILGEIVH
SKSMTTPIDYVLCIGHFLGKDEDVYTFFEPELPSDMPAIARSRPSSDSGAKSSSGDRRPP
SKSTHNNNKSGSKSSSSSNSNNNNNKSSQRSLQSERKSGSNHSLGNSRRPSPEKISWNVLD
LKGENYFSCAVGRTRTNARYLLGSPDDVVCFLEKLADTTSSP

>Q9M069

MALSISIYFLLIFLSHFPSSHAEPFIGVNYGQVADNLPPPSETVKLLQSTSIQKVRLYGA
DPAIIKALAGTGVGIVIGAANGDVPSLASDPNAATQWINSNVLPFYPASKIMLITVGNEI
LMSNDPNLVNQLLPAMQNVQKALEAVSLGGKIKVSTVNSMTVLGSSDPPSSGSFAAGYQT
GLKGILQFLSDTGSPFAINPYPFFAYQSDPRPETLAFCLFEPNAGRVDSKTGIKYTNMFD
AQVDAVHSALKSMGFEKVEIVVAETGWASRGDANEVGASVDNAKAYNGNLIAHLRSMVGT
PLMPGKPVDTYIFALYDENLKPGPSSERAFGLFKTDLSMVYDVGLAKSSSSSQVRY

MASLVATLLVLTISLTFVSQSTANYFYSSPPPPVKHYTPPVKHYSPPPVYHSPPPPKKHY
EYKSPPPPVKHYSPPPVYHSPPPPKKHYVYKSPPPPVKHYSPPPVYHSPPPPKKHYVYKS
PPPPVKHYSPPPVYHSPPPPKKHYVYKSPPPPVKHYSPPPVYHSPPPPKKHYVYKSPPPP
VKHYSPPPVYHSPPPPKKHYVYKSPPPPVKHYSPPPVYHSPPPPKKHYVYKSPPPPVKHY
SPPPVYHSPPPPKKHYVYKSPPPPVKHYSPPPVYHSPPPPKKHYVYKSPPPPVKHYSPPP
VYHSPPPPKKHYVYKSPPPPVKHYSPPPVYHSPPPPKKHYVYKSPPPPVKHYSPPPVYHS
PPPPKKHYVYKSPPPPVKHYSPPPPVKHYSPPPPKEKYVYKSPPPPVHHYSPPHHPYLYKS
PPPPYHY

>P13983

MKLSTLFALVLLLQSTAILSLVAAEATTQYGGYLPPPVTSQPPPSSIGLSPPSAPTTTPP
SRGHVPSPRHAPPRHAYPPPSHGHLPPSVGGPPPHRGHLPPSRGFNPPPSPVISPSHPPP
SYGAPPPSHGPGHLPSHGQRPPSPSHGHAPPSGGHTPPRGQHPPSHRRPSPPSRHGHPPP
PTYAQPPPTPIYSPSPQVQPPPTYSPPPPTHVQPTPSPPSRGHQPQPPTHRHAPPTHRHA
PPTHQPSPLRHLPPSPRRQPQPPTYSPPPPAYAQSPQPSPTYSPPPPTYSPPPPSPIYSP
PPPAYSPSPPPTTFFSPPPPAYSPPPTYSPPPPTYLPLPSSPIYSPPPPVYSPPPPS
YSPPPPTYLPPPPSSPPPPSFSPPPPTYEQSPPPPPAYSPPLPAPPTYSPPPPTYSPPP
PTYAQPPPLPPTYSPPPPAYSPPPPTYSPPPPTYSPPPPAYAQPPPPPTYSPPPPAYS
PPPPSPIYSPPPPQVQPLPPTFSPPPPRRIHLPPPPHRQPRPPTPTYGQPPSPPTFSPPP
PRQIHSPPPPHWQPRTPTTYGQPPSPPTFSAPPPPQIHSPPPPHRQPRPPTPTYGQPPS
PPTTYSPPSPPYGLLLSTP

>065351

MSSSFLSSTAFFLLLCLGFCHVSSSSSDQGTYIVHMAKSQMPSSFDLHSNWYDSSLRSIS DSAELLYTYENAIHGFSTRLTQEEADSLMTQPGVISVLPEHRYELHTTRTPLFLGLDEHT ADLFPEAGSYSDVVVGVLDTGVWPESKSYSDEGFGPIPSSWKGGCEAGTNFTASLCNRKL IGARFFARGYESTMGPIDESKESRSPRDDDGHGTHTSSTAAGSVVEGASLLGYASGTARG
MAPRARVAVYKVCWLGGCFSSDILAAIDKAIADNVNVLSMSLGGGMSDYYRDGVAIGAFA
AMERGILVSCSAGNAGPSSSSLSNVAPWITTVGAGTLDRDFPALAILGNGKNFTGVSLFK
GEALPDKLLPFIYAGNASNATNGNLCMTGTLIPEKVKGKIVMCDRGINARVQKGDVVKAA
GGVGMILANTAANGEELVADAHLLPATTVGEKAGDIIRHYVTTDPNPTASISILGTVVGV
KPSPVVAAFSSRGPNSITPNILKPDLIAPGVNILAAWTGAAGPTGLASDSRRVEFNIISG
TSMSCPHVSGLAALLKSVHPEWSPAAIRSALMTTAYKTYKDGKPLLDIATGKPSTPFDHG
AGHVSPTTATNPGLIYDLTTEDYLGFLCALNYTSPQIRSVSRRNYTCDPSKSYSVADLNY
PSFAVNVDGVGAYKYTRTVTSVGGAGTYSVKVTSETTGVKISVEPAVLNFKEANEKKSYT
VTFTVDSSKPSGSNSFGSIEWSDGKHVVGSPVAISWT

>P05117

MVIQRNSILLLIIIFASSISTCRSNVIDDNLFKQVYDNILEQEFAHDFQAYLSYLSKNIE
SNNNIDKVDKNGIKVINVLSFGAKGDGKTYDNIAFEQAWNEACSSRTPVQFVVPKNKNYL
LKQITFSGPCRSSISVKIFGSLEASSKISDYKDRRLWIAFDSVQNLVVGGGGTINGNGQV
WWPSSCKINKSLPCRDAPTALTFWNCKNLKVNNLKSKNAQQIHIKFESCTNVVASNLMIN
ASAKSPNTDGVHVSNTQYIQISDTIIGTGDDCISIVSGSQNVQATNITCGPGHGISIGSL
GSGNSEAYVSNVTVNEAKIIGAENGVRIKTWQGGSGQASNIKFLNVEMQDVKYPIIIDQN
YCDRVEPCIQQFSAVQVKNVVYENIKGTSATKVAIKFDCSTNFPCEGIIMENINLVGESG
KPSEATCKNVHFNNAEHVTPHCTSLEISEDEALLYNY

>P23137

>040161

 ${\tt MGSKAFLFLGLCLAFFFLISSEVVAGELAETSNPMKLDGENGVDVDGRGGYNDVGGDGYY} \\ {\tt GGGRGGGGGYKRRGCRYGCCRKGYNGCKRCCSYAGEAMDKVTEAQPHN}$

MHTKIHLPPCILLLLFSLPSFNVVVGGDGESGNPFTPKGYLIRYWKKQISNDLPKPWFL
LNKASPLNAAQYATYTKLVADQNALTTQLHTFCSSANLMCAPDLSPSLEKHSGDIHFATY
SDKNFTNYGTNEPGIGVNTFKNYSEGENIPVNSFRRYGRGSPRDNKFDNYASDGNVIDQS
FNSYSTSTAGGSGKFTNYAANANDPNLHFTSYSDQGTGGVQKFTIYSQEANAGDQYFKSY
GKNGNGANGEFVSYGNDTNVIGSTFTNYGQTANGGDQKFTSYGFNGNVPENHFTNYGAGG
NGPSETFNSYRDQSNVGDDTFTTYVKDANGGEANFTNYGQSFNEGTDVFTTYGKGGNDPH
INFKTYGVNNTFKDYVKDTATFSNYHNKTSQVLASLMEVNGGKKVNNRWVEPGKFFREKM
LKSGTIMPMPDIKDKMPKRSFLPRVIASKLPFSTSKIAELKKIFHAGDESQVEKMIGDAL
SECERAPSAGETKRCVNSAEDMIDFATSVLGRNVVVRTTEDTKGSNGNIMIGSVKGINGG
KVTKSVSCHQTLYPYLLYYCHSVPKVRVYEADILDPNSKVKINHGVAICHVDTSSWGPSH
GAFVALGSGPGKIEVCHWIFENDMTWAIAD

>P31178

MSLATRRFGAAAALLVAACVLCTAPAWAQNETTGTGMVKTKSAFRWIRPPPARPPPFRRP
PPAQTPYVHKVEYTELQILCPQTIDSVTGYPMDDPRCNVPRATVAAGEEALTIRNEFELL
NGDVLNVTLEEVDTPENPSRRRLLSIIREEQRTGRVLLATSAELPTPTFRLKSLKSILKG
SQKEIYAGKPIDLRTIVYIMDFSSCKLSGWSAPATLTPEKVTSDMLRGASAPTNNLANYY
GACSYEKTLFNPDNFLVLGPVPVPCIGGVTPPPRPPRPPRPPRPPRAGSTISSLSRRNDTYD
DWWDLSKYCTASEQQAWERAAEAYAQAIVAQDPNSATGKKLQGILQWRERRRNIYILPPG
VKCSWSGYADVTCTSATCSAYVRGYSDTNAMQVIMHEAMHNYGLEHAGRGTLEYGDATDV
MGDFNKAGKGLLCPNAPNMYRIGWAKPINEPGVAPFQNATGAWGNLTAANFTTDPWIRGL
VIPAQGTRDDNMIVVNVGAQSTRDGAMKATGAQAYYFSYRIKNTTAGGYDSGLTLDFHKK

VLVHAYNGIQSERVFGFKSNLLDWGPNFQSRSNTWTSPFLAYNNGLGGGVRLVVQSTSDT QAVVDICRISENGKELSCDDGIDNDCDGLQDNEDPDCQ

>P93164

MPNDSVLSLFFFVTLFTCLLSATSHDDHIFLPSQLHDDDSVSCTATDPSLNYKPVIGILT HPGDGASGRLSNATGVSYIAASYVKFVESGGARVIPLIYNESPENLNKKLDLVNGVLFTG GWAVSGPYLDTLGNIFKKALERNDAGDHFPVIAFNLGGNLVIRIVSEQTDILEPFTASSL PSSLVLWNEANAKGSLFQRFPSDLLTQLKTDCLVLHNHRYAISPRKLQYNTKLSDFFEIL ATSGDRDGKTFVSTARGRKYPVTVNLWQPEKNAFEWATSLKAPHTEDAIRVTQSTANFFI SEARKSTNTPDAOKVRDSLIYNYKPTFGGTAGKGYDOVYLFE

>P80022

MASNSAFSLFLILLIITQCLSVLNAAKDFDFFYFVQQWPGSYCDTKQSCCYPTTGKPAAD FGIHGLWPNNNDGTYPSNCDPNSPYDQSQISDLISSMQQNWPTLACPSGSGSTFWSHEWE KHGTCAESVLTNQHAYFKKALDLKNQIDLLSILQGADIHPDGESYDLVNIRNAIKSAIGY TPWIQCNVDQSGNSQLYQVYICVDGSGSSLIECPIFPGGKCGTSIEFPTF >0946Y7

MSSAQDPFYIVKEEIQDSIDKLQSTFHKWERISPDMGDQAHVAKELVATCGSIEWQVDEL EKAITVAAKDPSWYGIDEAELEKRRRWTSNARTQVRNVKSGVLAGKVSSGAGHASEVRRE LMRMPNSGEASRYDQYGGRDDDGFVQSESDRQMLLIKQQDEELDELSKSVQRIGGVGLTI HDELVAQERIIDELDTEMDSTKNRLEFVQKKVGMVMKKAGAKGQMMMICFLLVLFIILFV LVFLT

>P93349

MGVKGLLFSIVLINLSLLGLCGYPRKPVDVPFWKNYEPSWASHHIKYLSGGSTVDLVLDR SSGAGFQSKKSYLFGHFSMKLKLVGGDSAGVVTAFYLSSNNAEHDEIDFEFLGNRTGQPY ILQTNVFTGGKGDREQRIYLWFDPTKGYHSYSVLWNTFQIVIFVDDVPIRAFKNSKDLGV KFPFNQPMKIYSSLWDADDWATRGGLEKTDWSNAPFTASYTSFHVDGCEAATPQEVQVCN TKGMRWWDQKAFQDLDALQYRRLRWVRQKYTIYNYCTDRKRYPTLPPECTKDRDI >Q9FL76

MELLKRKLYAKILMMVMVIWIAPMTNGHDHASHVPGGRPGAHPSHGAHPAHGAHPSHGAH PSHGAHPSHGALPSHGGQVPHSGWGHGRATFYGDINGGETQQGACGYGDLHKQG YGLETAALSTALFNNGSRCGACYEIMCEHAPQWCLPGSIKITATNFCPPDFTKPNDNWCN PPQKHFDLSQPMFLKIAKYKAGVVPVKFRRVPCAKIGGVKFEIKGNPHFLMILPYNVGGA GAVRAMQIKGTRTQWIAMKKNWGQIWSTGVVLTGQCLSFRLTTSDGVMKEFIDVTPPDWK CNGOSFDGKVNF

>P35334

MTQFNIPVTMSSSLSIILVILVSLRTALSELCNPQDKQALLQIKKDLGNPTTLSSWLPTT
DCCNRTWLGVLCDTDTQTYRVNNLDLSGHNLPKPYPIPSSLANLPYLNFLYIGGINNLVG
PIPPAIAKLTQLHYLYITHTNVSGAIPDFLSQIKTLVTLDFSYNALSGTLPPSISSLPNL
GGITFDGNRISGAIPDSYGSFSKLFTAMTISRNRLTGKIPPTFANLNLAFVDLSRNMLEG
DASVLFGSDKNTKKIHLAKNSLAFDLGKVGLSKNLNGLDLRNNRIYGTLPQGLTQLKFLQ
SLNVSFNNLCGEIPOGGNLKRFDVSSYANNKCLCGSPLPSCT

>Q9SU40

MDLFKILLLVFFVNISFCFAADPYSFYNFEVSYITASPLGVPQQVIAINGKFPGPTINVT TNENLVVNVRNKLDEGLLLHWNGIQQRRVSWQDGVLGTNCPIPPKWNWTYEFQVKDQIGS FFYFPSLHFQRASGGFGSFVVNPRAIIPVPFSTPDGDITVTIGDWYIRNHTALRKALDDG KDLGMPDGVLINGKGPYRYNDTLVADGIDFETITVHPGKTYRLRVSNVGISTSLNFRIQG
HNLVLAESEGSYTVQQNYTSLDIHVGQSYSFLVTMDQNASSDYYIVASARVVNETIWRRV
TGVGILKYTNSKGKAKGQLPPGPQDEFDKTFSMNQARSIRWNVSASGARPNPQGSFKYGS
INVTDVYVLRNMPPVTISGKRRTTLNGISFKNPSTPIRLADKLKVKDVYKLDFPKRPLTG
PAKVATSIINGTYRGFMEVVLQNNDTKMQSYHMSGYAFFVVGMDYGEWTENSRGTYNKWD
GIARSTIQVYPGAWSAILISLDNPGAWNLRTENLDSWYLGQETYVRVVNPDENNKTEFGH
PDNVLYCGALSKLQKPQKVSSSASKSIGFTSLSMVVMALVMMMMLQH

>08GXV7

MKLTYQFFIFWFFLPFFAISGDDDYKNLIFKGCANQKSPDPTGVFSQNLKNLFTSLVSQS SQSSFASVTSGTDNTTAVIGVFQCRGDLQNAQCYDCVSKIPKLVSKLCGGGRDDGNVVAA RVHLAGCYIRYESSGFRQTSGTEMLFRVCGKKDSNDPGFVGKRETAFGMAENGVKTGSSG GGGGGGFYAGQYESVYVLGQCEGSLGNSDCGECVKDGFEKAKSECGESNSGQVYLQKCF VSYSYYSHGVPNIEPLSGGEKRQHTERTIALAVGGVFVLGFVIVCLLVLRSAMKKKSNKY DAY

>P29060

MIKYSFLLTALVLFLRALKLEAGDIVIYWGQNGNEGSLADTCATNNYAIVNIAFLVVFGN GQNPVLNLAGHCDPNAGACTGLSNDIRACQNQGIKVMLSLGGGAGSYFLSSADDARNVAN YLWNNYLGGQSNTRPLGDAVLDGIDFDIEGGTTQHWDELAKTLSQFSQQRKVYLTAAPQC PFPDTWLNGALSTGLFDYVWVQFYNNPPCQYSGGSADNLKNYWNQWNAIQAGKIFLGLPA AQGAAGSGFIPSDVLVSQVLPLINGSPKYGGVMLWSKFYDNGYSSAIKANV

>P14918

MCPAFSIFFNSRRYSLTPPTYTPSPKPPTPKPTPPTYTPSPKPPASKPPTPKPTPPTYTP
SPKPPTPKPTPPTYTPSPKPPATKPPTPKPTPPTYTPSPKPPTPKPTPPTYTPSPKPPAT
KPPTPKPTPPTYTPSPKPPTPKPTPPTYTPSPKPPTPKPTPPTYTPSPKPPTHPTPKPTP
PTYTPSPKPPTPKPTPPTYTPSPKPPTPKPTPPTYTPSPKPPATKPPTPKPTPPTYTPTP
KPPATKPPTYTPTPPVSHTPSPPPPYY

>P43643

MGKEKFHINIVVIGHVDSGKSTTTGHLIYKLGGIDKRVIERFEKEAAEMNKRSFKYAWVL
DKLKAERERGITIDIALWKFETTKYYCTVIDAPGHRDFIKNMITGTSQADCAVLIIDSTT
GGFEAGISKDGQTREHALLAFTLGVKQMICCCNKMDATTPKYSKARYDEIVKEVSSYLKK
VGYNPDKIPFVPISGFEGDNMIERSTNLDWYKGPTLLEALDQINDAKRPSDKPLRLPLQD
VYKIGGIGTVPVGRVETGVLKPGMVVTFGPTGLTTEVKSVEMHHEALQEALPGDNVGFNV
KNVAVKDLKRGFVASNSKDDPAKGAASFTSQVIIMNHPGQIGNGYAPVLDCHTSHIAVKF
AEILTKIDRRSGKEIEKEPKFLKNGDAGMVKMIPTKPMVVETFSEYPPLGRFAVRDMRQT
VAVGVIKNVDKKDPTGAKVTKAAOKKK

>P20075

MASRKDERAAKEERAQAAAELAAKELRDVNQDRERGIKVVEHKEEVSGGPGVIGSILKSV
QGTLGQAKEVVVGKAHDTAEVSRENTDYAYDKGREGGDVAAQKAEEAKEKAKMAKDTTMG
KAGEYKDYTAQKAEEAKEKAAQKAEETKEKAGEYKNYTAQKAGEAKDTTLGKAGEYKDYA
AQKAAEAKDTTAQKAAEAKEKTGEYKDYAAQKAAEAKVLAAQKAAEAKDTTGKDGEYKDY
AAQKAAEAKDATMQKTGEYKDYAAQKTAETKDATMEKAKEYKEYAAQKAAEAKDATMQKT
GEYKDYSAQKAAETKDATMEKTKEYKDYTAQKAAETKDATMEKAKEAKDTTVQKTGEYKD
YAAEKAKEGKDVTVEKAKEGKDTTVGKMTELKDSAADAARKAMDMFLGKKEEVKGKAGET
AEAAKEKYEDTEFAARKKMEELKLQEEGVKDEAKQRAEADRETAGDRGSAAKGTIFGAMG

 ${\tt SVKDAIVGKLTMPSDVVKDKQQQEAVIKVDETRPGAVAEALKAADQMHGQAFNDVGKMGD}$ ${\tt EEVIVERKETRQGKM}$

>09M1G9

MGPSAHLISALGVIIMATMVAAYEPETYASPPPLYSSPLPEVEYKTPPLPYVDSSPPPTY
TPAPEVEYKSPPPPYVYSSPPPPTYSPSPKVDYKSPPPPYVYSSPPPPYYSPSPKVDYKS
PPPYVYNSPPPPYYSPSPKVDYKSPPPPYVYSSPPPPYYSPSPKVEYKSPPPPYVYSSP
PPPYYSPSPKVDYKSPPPPYVYSSPPPPYYSPSPKVEYKSPPPPYVYSSPPPPYYSPSPK
VDYKSPPPPYVSSPPPPYYSPSPKVDYKSPPPPYVYSSPPPPYYSPSPKVDYKSPPPPY
VYSSPPPPYYSPSPKVDYKSPPPPYVYSSPPPPYYSPSPKVDYKSPPPPYY
SPSPKVDYKSPPPPYVYSSPPPPYYSPSPKVEYKSPPPPYVYSSPPPPTYSPSPKVYYKS
PPPYVYSSPPPPYYSPSPKVYYKSPPPPYVYSSPPPPYYSPSPKVYYKSPPPPYVYSSP
PPYYSPSPKVYYKSPPPPYVYSSPPPPYYSPSPKVYYKSPPPPYYSPSPK
VHYKSPPPPYVYSSPPPPYYSPSPKVHYKSPPPPYVYNSPPPPYYSPSPKVYYKSPPPPY
VYSSPPPPYYSPSPKVYYKSPPPPYVYSSPPPPYYSPSPKVYYKSPPPPYYSPSPKVYYK
SPPHPHVCVCPPPPPCYSPSPKVVYKSPPPPYVYNSPPPPYYSPSPKVYYKSPPPPSYYS
PSPKVEYKSPPPPSYSPSPKTEY

>P54609

MSTPAESSDSKSKKDFSTAILERKKSPNRLVVDEAINDDNSVVSLHPATMEKLQLFRGDT
ILIKGKKRKDTVCIALADETCEEPKIRMNKVVRSNLRVRLGDVISVHQCPDVKYGKRVHI
LPVDDTVEGVTGNLFDAYLKPYFLEAYRPVRKGDLFLVRGGMRSVEFKVIETDPAEYCVV
APDTEIFCEGEPVKREDEERLDDVGYDDVGGVRKQMAQIRELVELPLRHPQLFKSIGVKP
PKGILLYGPPGSGKTLIARAVANETGAFFFCINGPEIMSKLAGESESNLRKAFEEAEKNA
PSIIFIDEIDSIAPKREKTNGEVERRIVSQLLTLMDGLKSRAHVIVMGATNRPNSIDPAL
RRFGRFDREIDIGVPDEIGRLEVLRIHTKNMKLAEDVDLERISKDTHGYVGADLAALCTE
AALQCIREKMDVIDLEDDSIDAEILNSMAVTNEHFHTALGNSNPSALRETVVEVPNVSWN
DIGGLENVKRELQETVQYPVEHPEKFEKFGMSPSKGVLFYGPPGCGKTLLAKAIANECQA
NFISVKGPELLTMWFGESEANVREIFDKARQSAPCVLFFDELDSIATQRGGGSGGDGGGA
ADRVLNQLLTEMDGMNAKKTVFIIGATNRPDIIDSALLRPGRLDQLIYIPLPDEDSRLNI
FKAALRKSPIAKDVDIGALAKYTQGFSGADITEICQRACKYAIRENIEKDIEKEKRRSEN
PEAMEEDGVDEVSEIKAAHFEESMKYARRSVSDADIRKYQAFAQTLQQSRGFGSEFRFEN
SAGSGATTGVADPFATSAAAAGDDDDLYN

(3) \mathbb{S}_3 : 286 chloroplast proteins

>Q85AT7

MNTYAIIDTGGEQLRVEPGRFYDMRHFTLLNPSILDSNTKVLIYRVLMIHHESNIALGDS WLEDATIKGRVLHSHFKDKITIYKMRSKKKMRRKLGYRLNLARFVVDSICFDGKEFYK >094414

MAVAISGSSLISSTLQHYNNRIYIRDYPIPCHSSNPICNSFNFKRRSFSPSSPKFNDHVV
NPSSSYLSSKLSPIRTHSSFAACGCSWIQDNSMVHDYATTTNGTSKRCSALPTTNTVDVS
SVSDLFEFICSGPLVNKIGITPQRVGQSIDKWLLYGSQLCRLFQLNELKLTIPQKARLYH
YYIPVFIWCEDQIALHNSKFKDGDDVPPLVIGFSAPQGCGKTTLVFALDYLFKTTKKKSA
TISVDDFYLTAEGQAELRKKNPGNALLEYRGNAGSHDLKLSVETLEALSKLTKEGLKMKV
PRYNKSAYSGRGDRADSSTWPEVEGPLSVILFEGWMLGFKPLPADVVKAVDPQLEVVNKN
LEAYYDAWDKYIDAWVVIKIQDPSYVYRWRLQAEIAMRQDGQAGMSDEEVNDFVSRYLPA

YKAYLPTLYAEGPSGSDPDRVLAIDIDEERNPILAN

>039129

MAEESRVPSSVSVTVAHDLLLAGHRYLDVRTPEEFSQGHACGAINVPYMNRGASGMSKNP DFLEQVSSHFGQSDNIIVGCQSGGRSIKATTDLLHAGFTGVKDIVGGYSAWAKNGLPTKA

>Q8L6J3

MSSTKTPISLTIKLNOFTDKPTGLDINRYHNSPIMWRNIIKOLSSRTPOKLLFSSKNRTY SFLGFGQDSVFKDNTKFRSLIPISCSNIVMGFQNLGEYLPGDEFLSRPLLKNQVNSNDFC CRKSYASVAEAVAVSSTDAEEDVSVVDEVOELLTELKKEEKKOFAFRRKORMLTSGMGH RKYQTLKRRQVKVETEAWEQAAKEYKELLFDMCEQKLAPNLPYVKSLFLGWFEPLRDKIA EEQELCSQGKSKAAYAKYLYQLPADMMAVITMHKLMGLLMTGGDHGTARVVQAALVIGDA IEOEVRIHNFLEKTKKOKAEKDKOKEDGEHVTOEOEKLRKKVTNLMKKOKLRAVGOIVRR QDDSKPWGQDAKAKVGSRLIELLLQTAYIQPPANQLAVDPPDIRPAFLHSVRTVAKETKS ASRRYGIIOCDELVFKGLERTARHMVIPYMPMLVPPVKWTGYDKGGHLYLPSYVMRTHGA ROOREAVKRASRNOLOPVFEALDTLGSTKWRINKRVLSVIDRIWAGGGRLADLVDRDDAP LPEEPDTEDEALRTKWRWKVKSVKKENRERHSQRCDIELKLAVARKMKDEEGFFYPHNVD FRGRAYPMHPHLNHLGSDICRGVLVFAEGRPLGESGLRWLKIHLANLFAGGVEKLSLEGR IAFTENHMDDIFDSADKPLEGRRWWLNAEDPFOCLAVCINLSEAVRSSSPETSISHIPVH QDGSCNGLQHYAALGRDELGAAAVNLVAGEKPADVYSGIAARVLDIMKRDAQRDPAEFPD AVRARALVNQVDRKLVKQTVMTSVYGVTYIGARDQIKRRLKERGAIADDSELFGAACYAA KVTLTALGEMFEAARSIMTWLGECAKIIASENEPVRWTTPLGLPVVOPYRKIGRHLIKTS LOILTLOOETEKVMVKRORTAFPPNFIHSLDGSHMMMTAVACRRAGLNFAGVHDSYWTHA CDVDKLNRILREKFVELYETPILEKLLESFQTSYPTLLFPPLPERGDFDLRDVLESPYFF

>Q8L785

MAILHFSLPLIVSFLRPHASPRFFLLPRSLSQSPFLSRRRFHRTSAVSSAAVHHQSYRNP DDDVTRAVSVPTFQQAIQRLQEYWASVGCAVMQPSNTEVGAGTMNPCTFLRVLGPEPWNV AYVEPSIRPDDSRYGENPNRLORHTOFOVILKPDPGNSOOLFINSLSALGIDVTAHDIRF VEDNWESPVLGAWGLGWEIWMDGMEITQFTYFQQAGSLPLSPVSVEITYGLERIIMLLQE VDHFKKILYADGITYGELFLENEKEMSSYYLEHASVDRLOKHFDYFDEEARSLLALGLPI PAYDOLLKTSHAFNILDARGFIGVTERARYFGRMRSLAROCAOLWLATRESLGHPLGVAS EPVPPVCHRAALEKVAEKVSEDPRSFIIEIGTEEMPPQDVINASEQLRVLVLELLENQRL RHGAVKAFGTPRRLVVLVDAMSSKQLEEEVEVRGPPASKAFDDEGNPTKAAEGFSRRYGV PLEKLYRKVSGKTEYVHARVTEPARLALEVLSEDLPGILAKISFPKSMRWNSSVMFSRPI RWVMALHGDLVVPFSFAGISSGNVSCGLRNTASASLLVONAESYEDTMRNSGINIEIEER KKIILEKSNALAKSVSGRLVVPQNLLNEVANLVEAPVPLIGKFKESFLELPEELLTIVMQ KHOKYFSIIDESGOLLPYFIAVANGAINEDVVKKGNEAVLRARYEDAKFFYEVDTRKRFS EFRDQLQGILFHEKLGTMLDKMNRLKKMVSKLCLALKIDEDLLPVVEDAASLAMSDLATA VVTEFTALSGIMARHYALRDGYSEQIAEALLEITLPRFSGDVIPKTDAGMVLAIGDRLDS LVGLFAAGCOPSSTNDPFGLRRISYGLVOILVEKDKNVNFKRVLELAASVOPTKVEANTV EDVYQFVTRRLEQLLVDNGVSPEVVRSVLAERGNNPCLAARTAYKTEKLSKGEMFPKIVE AYSRPTRIVRGKDVGVGVEVDENAFETPQERTLWSTYTSIKDRIHTGIEIEDFTEISMQL VEPLEDFFNNVFVMVEEERVRKNRLALLNNIANLPKGVIDLSFLPGF

>020120

MVTLSDLESNASSSVTKNEVNTSSLVNGNGVLIITENVNKEHSVENQLASSKTEEQTLKI SKKSNLNPAQKSSTFGLENTSPVIRPTSVFTKSTVLSTENNLVSFEVDFMNFFSALNFFL ESLVYFVVNDFSS

>085A69

MSILVYEVSKSLGNLKVLDRVSLYVRKVSLVALLGPSGSGKSSLLRIIAGLDSPDYGSVW
LHGTDMTNTSTQYRHMAFVFQHYALFKNMTVYENISFGLRLRGFSYQKIRNKVNDLLDCL
RISDIVSEYPGKLSGGQKQRVALARSLAIKSDFLLLDEPFGALDGELRRHLSKWLKRYLK
DNGITTIMVTHDQKEAISMADEIVVLKQGRFLQQGRSKNLYDEPIDYFVGIFSGSFIEFP
QLEESLDAPLGSSSSSSSSTKKSMEKDFTPFIPDLIWSQIFTNQSIHHYHFFLRPHELYL
ESQIDLKAIPVQIKKIIYKRTFVQLDLSITPSSWNITIPIGYQAFRKLNIQSFVQKLYIK
PRNOVYLRAYPKKKNIISKOI

>P11673

MCLLYTHFYHLILNTRRVDSSFFVFSFHLYFLNDNKGMSPLCLSLVGSGLHLSVMHLLFH VFLFLFDSFLRP

>P27684

MALLSPLLSLSSVPPITSIAVSSSSFPIKLQNVSVALLPSFGQRLVAHGPVIAQKRGTVV AMVSAAAEETAGEDGDQSKVEEANISVQNLPLESKLQLKLEQKIKMKMAKKIRLRRTGLC AKESLRKRGAWPPSKMKKLKNV

>P19593

MKRIKLKYRKLKRQQFIKVEKFNIGIDMVECHRWLENKQESIACAKREGNIVLVEKLAQE
IVNSSFGRAVAVQTVASSKGSRSPGLSRESFKTNKNYVAMMATLEQITSNPHKYKATPLS
RIYIPKRDGSARPLSIPSYTDRCLQALYKLAIEPMAEEVADLSSYGFRPMRNVSWAVGRV
LNGLNNPLANYQYVVEIDIKGCVDNINHQFISQVTPFIPKKILWAWLKCGYIERNSNTLQ
PTTTGVPQGGIISPLIMNLTLDGLEFHIYKKIQKSSSQSKGNTYCRYADDMVILTTTEET
ALIALPAVKEFLAVRGLEVKLAKTTIKNIINDRNGFEFLSFRFRKVYRRNRKRLTSQVGI
PISAIKNFRKNIKAISKTRKSLDTINDEINAVFRDCGYYYRFAHTSGYVFSSLGYWLWKQ
FYKHCYKRTKDKFDKANHTKINEIVLSSYFKPIGSGLSTKPFVIDKKGKPHSLFSIRSIE
YCPPTYTDSARNAFIFEDSVTLTKVNMRSKSSWKRVILEKWGPCCGLCRKNLEINSIPYE
LHHILPKRFGGKDTPNNMVLLCKSPCHQLVSSSIQKADVSEIQNYISLGILEIPMDYLEN
LKTSOSSY

>08VY26

MASLITTKAMMSHHHVLSSTRITTLYSDNSIGDQQIKTKPQVPHRLFARRIFGVTRAVIN SAAPSPLPEKEKVEGERRCHVAWTSVQQENWEGELTVQGKIPTWLNGTYLRNGPGLWNIG DHDFRHLFDGYSTLVKLQFDGGRIFAAHRLLESDAYKAAKKHNRLCYREFSETPKSVIIN KNPFSGIGEIVRLFSGESLTDNANTGVIKLGDGRVMCLTETQKGSILVDHETLETIGKFE YDDVLSDHMIQSAHPIVTETEMWTLIPDLVKPGYRVVRMEAGSNKREVVGRVRCRSGSWG PGWVHSFAVTENYVVIPEMPLRYSVKNLLRAEPTPLYKFEWCPQDGAFIHVMSKLTGEVV ASVEVPAYVTFHFINAYEEDKNGDGKATVIIADCCEHNADTRILDMLRLDTLRSSHGHDV LPDARIGRFRIPLDGSKYGKLETAVEAEKHGRAMDMCSINPLYLGQKYRYVYACGAQRPC NFPNALSKVDIVEKKVKNWHEHGMIPSEPFFVPRPGATHEDDGVVISIVSEENGGSFAIL LDGSSFEEIARAKFPYGLPYGLHGCWIPKD

>P36211

MAATTLSIATTIRSSSFSSGLASAHHFPSRPLSIEFPFSFGVSSSSTLSHRAIYLHPISA VKTPKKIKKIGSEISSLTLEESRILVDYVODKFGVSILFSAPAAAALPPPLDNGGATASV ERQTTFDVVINDVPRGNRIAVITAIRAMTSLSLSESKELIEGFPKKFKEGVTKDEAEEDK TOLEEAGAKVSIV

>P07505

MAAHTILASAPSHTTFSLISPFSSTPTNALSSSLQSSSFNGLSFKLSPTTQSLSLSTSAA SKPLTIVAATKKAVAVLKGTSNVEGVVTLTQEDDGPTTVNVRISGLAPGKHGFHLHEFGD TTNGCMSTGPHFNPDKKTHGAPEDEVRHAGDLGNIVANTDGVAEATIVDNQIPLTGPNSV VGRALVVHELEDDLGKGGHELSPTTGNAGGRLACGVVGLTPV

>007510

MATSYGFFSPSVPSSLNNKISPSLGINGSGFCSHLGISKRVFCSSIEASEKHAAAGVSSS
ESRVSRLVNRGCKLVGCGSAVPKLQISNDDLSKFVETSDEWIATRTGIRQRHVLSGKDSL
VDLAAEAARNALQMANVNPDDIDLILMCTSTPEDLFGSAPQVQRALGCSRTPLSYDITAA
CSGFMLGLVSAACHVRGGGFKNVLVIGADALSRFVDWTDRGTCILFGDAAGAVVVQACDS
EEDGMFAFDLHSDGGGGRHLNASLLNDETDAAIGNNGAVTGFPPKRPSYSCINMNGKEVF
RFAVRCVPQSIEAALQKAGLTSSNIDWLLLHQANQRIIDAVATRLEVPSERVLSNLANYG
NTSAASIPLALDEAVRSGKVKPGNIIATSGFGAGLTWGSSIIRWG

>Q9MTM6

 ${\tt MNLQAHLIVNGSNLSGLLAIGTEKPHFVFSIYRENRKESNKREGKFFYISVLRYYTYNAR} \\ {\tt KGWGQCKKRRKSFGPGMKSNGIQG}$

>Q7XJM2

MSLPIPPKFLPPLKSPPIHHHQTPPPLAPPRAAISISIPDTGLGRTGTILDESTSSAFRD
YQSLFVSQRSETIEPVVIKPIEGSIPVNFPSGTYYLAGPGLFTDDHGSTVHPLDGHGYLR
AFHIDGNKRKATFTAKYVKTEAKKEEHDPVTDTWRFTHRGPFSVLKGGKRFGNTKVMKNV
ANTSVLKWAGRLLCLWEGGEPYEIESGSLDTVGRFNVENNGCESCDDDDSSDRDLSGHDI
WDTAADLLKPILQGVFKMPPKRFLSHYKVDGRRKRLLTVTCNAEDMLLPRSNFTFCEYDS
EFKLIQTKEFKIDDHMMIHDWAFTDTHYILFANRVKLNPIGSIAAMCGMSPMVSALSLNP
SNESSPIYILPRFSDKYSRGGRDWRVPVEVSSQLWLIHSGNAYETREDNGDLKIQIQASA
CSYRWFDFQKMFGYDWQSNKLDPSVMNLNRGDDKLLPHLVKVSMTLDSTGNCNSCDVEPL
NGWNKPSDFPVINSSWSGKKNKYMYSAASSGTRSELPHFPFDMVVKFDLDSNLVRTWSTG
ARRFVGEPMFVPKNSVEEGEEEDDGYIVVVEYAVSVERCYLVILDAKKIGESDAVVSRLE
VPRNLTFPMGFHGLWASD

>09MTM7

 $\label{thm:lik} \begin{tabular}{llk} $\tt MLWEIRYTLRLFMERLRIIRSYLGQATPCPLTSLLYRFFLRFCFEKCYLCFIHSFHIMDH \\ EFKMVGLTLPFQNLKQFSENLSAPLLTLQSIPFSEYSKKIQQFSFIRTYFLIDLILSMNA \\ {\tt GIPIO} \end{tabular}$

>09MTM9

MGFDSVASGLTGLEPAASALTGRCSDQLNYNPREIKKYTYSYNCILTISI >P82411

MSVSAIFGARVVTIPSVLRTSSVDGRTVKLQPSTGGSCGGGVITIECSSRPQKKGTAHHM KTRPKKTARWDIKRGPAVYPPLPPLPAEWTIVSSAVDEADSSSSTTSSSAEIAQSA

>Q06SI4

MGQKIHPYGYRVGITQPHSARWFANTYQYPQYVFEDFLLRQSLFKNLPVENLPRKRTEDK SETKLVQIKIERLIRNTIKIKLYVTSPENASELFEHEALTKSPKKDFGTTNSNKRNLQTN LESKKDRNTLRLNIQKRLLNKKLLQLQILKLQNMQSKLVTMKNLLDGSQNTNKKVFSSSV FVOKNETETIVNNYPFYLNNIAINYSIGKTLIEGIKDCLNMNLDGKKKVKYLFYFLOLKK QLSKTLLYQLDVYQKVEKQKLVNFTGLNKSEEQISAFQNTINLRLFKLKALSLKWTNHSR
HLTNVLVSIQSKLTLELETLVSKLDQNKTNLNQKCATLINILKFKYMLRKNNFNKLELFV
LNQKIEEIKLKWFQSLTIAGTVQAETDSQSDFYSSKKILLELNMISCEKQKMLTLLTKFK
FSLNFYNTHLEKTKRIILAGLFLLSKFGWKKEIFNGLNTFLSQSVLIIKKLETHLGKNYK
ILQERIIVKINHMTILESTIKQNLNLLQILKIAQDHNTNRDKIKVSQLYKNLFKVFYLTS
LSSTPAFHETLTNKTFLYDLVSESLDKYALLISQKVINLNSSLICYSEEKTTQIPVYNDK
FLNILTREYLSNLIRLFKNDSINYYKSKALYQFSLALLNQRYKLNKIIEMKIKNLLLQIK
PEEKTKNTFLVSIRDLNISLKSNTLFIKQLETWLTLLKKKLTENTATNRYLLQARIHKIN
CYLKKIIPVKITENNLVSTIEKNFIFVNYNILKQKLLAELLQMQQTIILAKKEEWEKEES
LSFPPSTSFFTKTNISIGNLNQTLQILQNRILDLQGRFNQENQQKTAGKTVNTDLSPILQ
VENKTNVSKTLQLKTTLQQLLKTNYENSFIVLQTRRQVYNSIINRLGGHRKFGKSRAGEK
ENIWKNPYETAEYLDFKLKKVNNSTDTNSLTTLLETIKQKIYERKPIKLMYTRKQKFLAK
KTIKKKLKHFLVLMALKNNYTNLSSLKNIYDVKTFAKLCENLTNLQTMPKVSVIELVKVH
QPKQYAVCLANFVVENLEKRFSFRSTMKRASEQAMSTANVKGIKIQISGRLNGAEIARTE
WLRDGVVPLQTLRANIDYSYKTAKTIYGILGVKVWLFKDTPANMNS

>P82412

MLSMAVQPNINAIAKPSIYQSPKLSLKPFKTPAFANPKPFFSSPSFSQLKKKNNWSLFVA PETISDVAIMGNEVDIDDDLLVNKEKLKVLVKPMDKPRLVLKFIWMEKNIGLALDQTIPG HGTVPLSPYYFWPRKDAWEELKVLLENKPWISQKQMIILLNQATDIINLWQQSGGNLAS >Q96255

MAATTNSFLVGSNNTQIPALKPKSSSQSFLHLSKPNTVNFVSKTKPVAVRCVASTTQVQD
GVRSGSVGSQERVFNFAAGPATLPENVLLKAQADLYNWRGSGMSVMEMSHRGKEFLSIIQ
KAESDLRQLLEIPQEYSVLFLQGGATTQFAALPLNLCKSDDTVDFVVTGSWGDKAVKEAK
KYCKTNVIWSGKSEKYTKVPSFEELEQTPDAKYLHICANETIHGVEFKDYPVPKNGFLVA
DMSSNFCSKPVDVSKFGVIYGGAQKNVGPSGVTIVIIRKDLIGNAQDITPVMLDYKIHDE
NSSLYNTPPCFGIYMCGLVFEDLLEQGGLKEVEKKNQRKADLLYNAIEESNGFFRCPVEK
SVRSLMNVPFTLEKSELEAEFIKEAAKEKMVQLKGHRSVGGMRASIYNAMPLAGVEKLVA
FMKDFOAKHA

>P46416

MGSGCSSLSYSSSSTCNATVFSISSSPSSSSSLKLNPSSFLFQNPKTLRNQSPLRCGRSF
KMESQKPIFDLEKLDDEFVQKLVYDALVWSSLHGLVVGDKSYQKSGNVPGVGLMHAPIAL
LPTAFPEAYWKQACNVTPLFNELIDRVSLDGKFLQDSLSRTKKVDVFTSRLLDIHSKMLE
RNKKEDIRLGLHRFDYMLDEETNSLLQIEMNTISCSFPGLSRLVSQLHQSLLRSYGDQIG
IDSERVPINTSTIQFADALAKAWLEYSNPRAVVMVIVQPEERNMYDQHLLSSILREKHNI
VVIRKTLAEVEKEGSVQEDETLIVGGQAVAVVYFRSGYTPNDHPSESEWNARLLIEESSA
VKCPSIAYHLTGSKKIQQELAKPGVLERFLDNKEDIAKLRKCFAGLWSLDDSEIVKQAIE
KPGLFVMKPQREGGGNNIYGDDVRENLLRLQKEGEEGNAAYILMQRIFPKVSNMFLVREG
VYHKHQAISELGVYGAYLRSKDEVIVNEQSGYLMRTKIASSDEGGVAAGFGVLDSIYLI
>P82413

MASKVLPQALLVIPSNHSLQCPPLKKQLGFPIDSNRRFSLSSNCRSNLMVSRASSNLFSS NFSSIFSFPARNSFVVRSEAEDSSDAPAESVAVVAEEELPVESEAEAEERPPRQQRVKLG DIMGILNKKAVHAAEELRPVPGIRTGDIVQIRLEVPENKRRLSVYKGIVISRQNAGIHTT IRIRRIIAGVGVEIVFPLYSPNIKEIKVVSHRKVRKARLYYLRDKLPRLSTFK >Q9CAF5 MAGVNLQLRHAYSIAQFVPTVSSPPPLPTQRVRLGTSPSRVLLCNLRANSAAAPILRTTR
RSVIVSASSVSSAVDSDSLVEDRDDVGRIPLLEVRDLRAVIAESRQEILKGVNLVVYEGE
VHAVMGKNGSGKSTFSKVLVGHPDYEVTGGSIVFKGQNLLDMEPEDRSLAGLFMSFQSPV
EIPGVSNMDFLNMAFNARKRKLGQPELDPIQFYSHLVSKLEVVNMKTDFLNRNVNEGFSG
GERKRNEILQLAVLGAELAILDEIDSGLDVDALQDVAKAVNGLLTPKNSVLMITHYQRLL
DYIKPTLIHIMENGRIIKTGDNSLAKLLEKEGYKAISG

>Q3BAI2

MQVVRIFTDMSISPSLSPRQCPDRYAFRAGRNLPDKEFRYLRTVLVTAAVHRGFGRRLPC HOVTNFLDLPALGRROPPYMVLRLCGDLCFW

>09CAF6

MTPVLCHSTASIPNPNSLMSLSSTLRLSSSLLRRSFFRFPLTDPLCRLRRTEPSATRFFS SRTPRSGKFVVGAGKRGDEOVKEESGANNGGLVVSGDESRIVPFELHKEATESYMSYALS VLLGRALPDVRDGLKPVHRRILFAMHELGMSSKKPYKKCARVVGEVLGKFHPHGDTAVYD SLVRMAOSFSLRCPLIOGHGNFGSIDADPPAAMRYTECRLDPLAEAVLLSDLDODTVDFV ANFDNSOKEPAVLPARLPALLLNGASGIAVGMATNIPPHNLGELVDVLCALIHNPEATLO ELLEYMPAPDFPTGGIIMGNLGVLDAYRTGRGRVVVRGKAEVELLDPKTKRNAVIITEIP YOTNKATLVOKIAELVENKTLEGISDIRDESDRNGMRVVIELKRGGDPALVLNNLYRHTA LQSSFSCNMVGICDGEPKLMGLKELLQAFIDFRCSVVERRARFKLSHAQQRKHIIEGIVV GLDNVDEVIELITKASSHSSATAALQSEYGLSEKQAEAILEITLRRLTALERKKFTDESS SLTEQITKLEQLLSTRTNILKLIEQEAIELKDRFSSPRRSMLEDSDSGDLEDIDVIPNEE MLMAVSEKGYVKRMKADTFNLOHRGTIGKSVGKLRVDDAMSDFLVCHAHDHVLFFSDRGI VYSTRAYKIPECSRNAAGTPLVQILSMSEGERVTSIVPVSEFAEDRYLLMLTVNGCIKKV SLKLFSGIRSTGIIAIQLNSGDELKWVRCCSSDDLVAMASQNGMVALSTCDGVRTLSRNT KGVTAMRLKNEDKIASMDIIPASLRKDMEEKSEDASLVKOSTGPWLLFVCENGYGKRVPL SSFRRSRLNRVGLSGYKFAEDDRLAAVFVVGYSLAEDGESDEQVVLVSQSGTVNRIKVRD ISIQSRRARGVILMRLDHAGKIQSASLISAADEEETEGTLSNEAVEAVSL

>P22178

MISLNSSFLERSSVTGGSRTQSQSLRLSARRPVVTSMLNSNSLPERNVSVSVDSAVRDVN
APVAVEVDRSVGEKPFAAVGGGVEDMYGEDTATEDHYITPWSVSVASGYSLLRDPHHNKG
LAFTEKERDAHFLRGLLPPVVVNHDLQVKKMMHNIRQYQVPLQRYQAMMDLQQRNERLFY
KLLIENVEELLPIVYTPTVGEACQKYGSIFENSQGLFISLKDKGRILEILKNWPHKKIQV
IVVTDGERILGLGDLGCQGMGIPVGKLALYTALGGVRPSACLPITIDVGTNNEKLLNDDE
FYIGLKQKRAAGQEYAELMNEFMSAVKQNYGENLLIQFEDFANHNAFDLLEKYRTTHLVF
NDDIQGTASVVLGGLISALKLVGGSLADQKFLFLGAGEAGTGIAELIALEISKQTNIPLE
ESRKKVWLVDSKGLIVRSRLDSLQHFKKPWAHDHEPVNEFLDAIKTIRPTVLIGSSGTGQ
TFTKEVVETMSSLNEKPIILALSNPTSQSECTAEQAYTWSEGRAIFASGSPFKPVEYNGK
LYVSGQANNAYIFPGFGLGLIISGAIRVHDDMLLAASEAPAEQVTQEHFDKGLIFPPFTS
IRKISAHIAAKVAAKAYELGLASRLPQPENLVAYAESCMYSPKYRIYR

>P12629

MATMACASSLTFPSAQTQKSFFGTNVKQTPVLSFPRPTVAAAVAVSARKSTSASTKCTEE WRQLKEAVKKEFAIPHVPLDQRWMFTLEEATGPDIWNTTWYPKSADHVPTDKKWYVVDAT DLILGRMASTIAIHIRGKNLASYTPSVDMGAFVIVVNADKVAVSGKKRTQKLYRRHSGRP GGLKEETFDQLQKRIPERIIEHAVRGMLPKGRLGRYLFNHLKVYKGAEHPHQAQQPIDLP LRDKRIRVEK

>020130

MKKEFLHFLAFLITFVFCVKTQQVVKILRSRTMIDFGLEFQKAQIEMHNNPEDRVRFVDA VNLCLPASDTFFQNPDRENKFSENYSIKLIDTTPHVSEIVLQTFVKEILSLSNINTEDTL GKETLGKETYRLSNLLKKSKFGMESHHRIQNNSEGPNTFENGLGISTPKHGIAHFADAIQ RFLDHKGNSSSNTRAAGARVEAIREALNDRDAINKSEEARKAREEVFIPSEPSKPSIASK RSSASKSTKS

>Q9LER7

MALLCFNSLPSLSSLSSSSSRLLQSPSFASPVLSLKPNAVESKNRVSLSAYSLNSSHGR IVVKAAASGVDGAEPESKEEPKTVVAAVPVDKLPLESKEAKEKLLLELRLKMKLAKKIRL RRKRLVRKRKMRKKGRWPPSKMKKNKNV

>020133

MRAKSIAYVWSTATQSLTPEQCEAMIKLREPLNVVFDQGMRNVQLILKKQDHFDELMTTY
ETCQTAEKNFHETTFLPAKANLDTFVGSQKARKEAANHFKKIKSQSIEYTKEANQAFTAA
MKYDQNHIVPAKNALQKIETCIINEVEDKLEEILNPSSITEKTLKGKTQRQKTNAALINR
IKRRNTAFNNHDNNIINSFHGPSSFEQISIYYNLPIDRSFQKMVQKQLEKIKVLPN
>O9MTN0

MEPEISTDSCRVKKNMKSKKPAVPISSLSNLNIRIVDIVMILWARSTYFLFFFLLISHF >P52334

MMRTVQLRTLRPCIRAQQQPVRAPTSVAAATATTPAPTKKCPFSLFAKLGGREAVEAAVD KFYNKVVADPTVSVFFSKTDMKVQRSKQFAFLAYALGGAAEWKGKDMRTAHKDLVPHLTD VHFQAVVRHLSDTLAELGVTPGDIADAMAVVASTKTEVLNMPRQQGAESNR >Q9MTN3

MGSAKWDSRALSFYDTKKPGKPHTIKQHLHRRKGERGIRTLDNSLLRTMPVFKTGAINHS AISPRDNFYYIFIPPNRTWPYQLIPSLSIDRIPTGYLSIVNLSRYTVQINA

>Q9MTN4

 $\label{thm:main} \texttt{MRELRIPTRKTNPIHNDVPENTTFLLLDQPSGEANTTGTLISKSDEVAINAKTANWKAIV} \\ \texttt{MLLILQATNKRIIPF}$

>040545

MSQALNFFVSSSSRSPATFTISRPSVFPSTGSLRLLVKKSLRTLVVEASSAAASDLDEPQ
SSPVLVSENGSGGVLSSATQEYGRNAAPGTDSSSIEVDTVTEAELKENGFRSTRRTKLIC
TIGPATCGFEQLERLAEGGMNVARINMCHGTREWHRMVIERLRRLNEEKGFAVAIMMDTE
GSEIHMGDLGGASSAKAEDGEIWNFTVRSFDPPLPERTVTVNYDGFAEDVKVGDELLVDG
GMVRFEVIEKIGPDVKCLCTDPGLLLPRANLTFWRDGKLVRERNAMLPTISSKDWLDIDF
GIAEGVDFIAVSFVKSAEVIKHLKSYIQARARDSDISVIAKIESIDSLKNLEEIIQASDG
AMVARGDLGAQIPLEQVPSEQQKIVQICRQLNRPVIVASQLLESMIEYPIPTRAEVADVS
EAVRQRGDALMLSGESAMGQFPEKALTVLRSVSLRIERMWREQKRHEVIELPSIASSFSD
SISEEICNSAAKMANNLEVDALFVYTKNGHMASLLSRCRPDCPIFAFTTTTSVRRRLNLQ
WGLMPFRLSFSDDMESNLNKTFSLLKARGMIKSGDLIIAVSDMLQSIQVMNVP

>Q9MTN9

MFVGPTILLSSDLDKQGYQISNKVRLLIPRRSASSSMPPIGTHGAGLTCNT >085FG9

MSIRLEDIDPVVVSMGPHHPSMHGVLRLVVALQGENVVDCELILGYLHRGMEKIAENRTT SQYLPYVTRWDYLATMFTEAVTVNAPEKLANIQIPERASYIRVIMLELSRIASHLLWLGP FLADIGAOTPFFYIFREREMIYDLFEAATGMRMMHNYFRIGGVAADLPYGWIDKCLDFCO YCLPKIYEYERLVTKNPIFLKRVQGVGFINRQEAINWGLSGPSLRASGVQWDLRKIDHYE CYDKLDWQIQWQGEGDSLARYLVRIDEMKESINILRQALKLLPGGPYENLEGRRLVQKKD KIDWNGFNYQFVGKKSSPTLKLPKQEHYVRVEAPKGELGIFLIGDDSVFPWRLKIRPPGF INLQIVPQLIRGMKLADIVTILGSIDIIMGEVDR

>006SJ3 MSRYLGPRLRITRRLGHLSGLTRKKPAFKPLNPVNPFGPRKIIPPGEHGRNKSFKKKPYE SCEYDYLIRLKLKORLRFHYGLTEROLVRYVOOAKKIKGSTGRVLLRLLEMRLDNIVFRL HMAPTIKAARQLISHGHILINKKKVTIPSYQCEPKDIITVAPKIISMELVSRFLSEFDRE KSRYDRILOILEFGRKGVTMPTKNLKTSSKTLSKNSOSRKYVKNEKRAKIOSLKIGAVLN VTINHRGRKEADAISYGFGKMIVIHPFFVGKOSINKNVRVIIYKKSKNNKILYTYPANPF YLHLENLRKLNSLDVAKLFSHSNNQISSKFNKKPLKKSITRKSKRSISALILMNGAKMLP KTNLERRKRVNKDSATNLTENKOIKKEFSPSVFVRIVAAKCLNSKSKOKLLNVSSFOSSL KKFNPSFSKDPVAYREKYVYTKTSRALRLFGTRFYATILKNTRDVKNSSFIERKKFDSRI IGKTPKVNLTKTTRKAEAKAPDFYSSIFKKSSDNOSONFLNAELLKRESONSSFSSTFNN SNKVEFSNGASLPVTFKSGKVNNTLIPKLNSNKLADOSVNAOLMNVPALFKOYKNIFSKL SSLKNOKNFKKPKYTNLRSKILTNFLFESKNLSLNLNHFHNFIFVVFSKFCKVLVSKTNL NFKIDNILSISONFKEFFKHRNFEAKSIDSKKFSMDILLFSLKLKHFTKLNNKNVGTEIG KTREFELSSSILDKKIONDISLLLLLDKMKTHLOTSLNFVNOFFSSEILMNGIRPYFSSI FSFVLKSEELVKTILTNVINSIKTVLTCSKLTTLKISOOSFLGSAASEKLEKTESFFLEN NLIEKLVNLNSNQSNTLYKKIINFAMVSIPKAVFLVDYSENQISLLNKYSLYSAKKQKIQ MVKTLNFLKRYNLINYSNFENFKOMIOLNIKNHOTILVHFKDSILNKSKLNLRRNKLSPD SELVLNLEOKLLINOTKCKISLLESLKSNSKLSLFSOFNONCNOILCRTKIFLNILNKKN SLFOKLNLLKDFHLIKGKDYESLKNLLNNOFOLLOKLKSLVSIVDFPOSVSOSSLLNRVL NKNLEKITETFGSISTLWKVLILQKQNKLNVTESVKQNILQNISVAKAEFTQTVLITILN KTDLSAFIKHYQSSKINNFTFISKLHKINLLDKLNKLNLLDDTVFVQMFSDIREKLAVKK LKOTNVVLTKFLEFGTMSKLSOTELLSLDSFIOTAFLNSNSLTNNIOHLGHKERDNFVRS SSFWKKFSFLLTPSLIKKGLENLKTLNSISSSQYSYLILKLQNLYDQNKTLNLGLNKQYV HEKLRIIKTLLVLIAKNVNITTLTSLNLFKNTTWGSKTLLNLGLNROKELKLMSGLLISO KIKYSSSFQKWEKDEFSFLMTNYIENQYNYLISKILMRGILTKEEAYFYSRENCQDYLTE KLSFLHSETKOILTSIKLYLLRYOFMVONNKNSSFSPWNLRFOEENFSLKSSISERTLNS SRIFSLKKOKSVLLDKTMYOKLKNFLOKEILSKNMKSLLENKHFILAYLNKELKAKLFYK VSRLQRKNTLLTETEIYEFSNTFKKLTASNLSVKLATNLSTLIAPTNLSTNFTKKIFKIY KSTNIPVYYNLLSNDTTFLDNKIDNVYLSKVLNKLKLQLNNNKLDLLMVNYTNDKLLRLR AKSSMYQTFAKLAFIENGMILNKHLFPVRSAKSVYLKQFNKNLKFVIYLYNLNMLRSRDI LSVOOYEOFKDNYENIFKLIKRKTFVISILNKRKKWKFINYGTYOTLFKNISKNLTTKIL SLFQQSTEKNFFQKEKVNKQVQYSLEVEALVQQTLEQLVNSSESPNHSLTSLIYRFIEKS IVFTHPSSNSLKQLTIENKTVIKPVIKKALQRLISLQKKLKSLGPWSSKEKIMLQNKQKT LILOSLVSYLOKOETPFNSNFKTVSNKFKOISMFOTLSFAORKTVLNKLCLNTYFTPNLO TISNAKDLSNEKKSRALALSGQLTNLQFKLQKEYLTKLNVSLLKAEKNESDLISFNESIL LMLOKTTGVDLTNYKOFSRIVTNNSNIDKGSLAKEIYTTKLLFEFIRONLMDNYRKDKFN FELKQVSKFQKSQFLTNILFKGGSFSSRLSLKKCQNNLIKLKISKLLNHIFSVMPFVNNQ TTTTGFISYDHIDTLVSFGIISSTMANVLNKKINVOIOKOKLRKTLLSLONLOKMTFTSS NKFNRLIYSSILMDVFSRLYELKKAKTITERKYVLIKOKLKIFSLFSALNYKLLDLKEKG SISSSKALELKNOIIOKISOKMKKVKTFAKFKOSLKALKGENFSSRLSYLPKDLDSOKTL

EKAKAFEFNPSLLKILKSRGRWARVTVKQLVKQKLLTTKQQEKLQTIVDKQNLMKMKKLR
RLVSVFVYCRQIVETQRNTVANNSNYEPLMQNVISSVLKSFNGPWKRVLLNLLYKQNFIS
ENLFLSYLTNNTQKTKSSKTKVISLNNNVDTTYTKTKLKRLLTMYYKQICKLRQFQTNRE
ILKGEFEQKLSAILSSVILVLEKGGLDAFKVIYNTKWVNELCQSNLKINNQKNKNSQISS
AIREFVSKYNFLKDQYLNTYKKLQLNDKMKLFKMYKTNLLQELVNLEKTIKSPNAQSFEK
SEILSISRLEQLKMQGLISTKICNKLTVMLNNSLQRLIKLDRLFALQNLYLVTSEAKAIS
ENASYMNTGAVLEANSSKVQIQTESNIIQNNEQYIKLKQKIFQSYFRYEYKHIEKSVIKQ
KLLLQRLDSYNLKQKTTKQYKTNLRRKKSKLLSSEQFNSFFQQLLNFLDSRYKSAGRNRR
NPRINSIIRRLNQKLSFDKTLTKKFGDHLQTFIDKRFGPALPIPPHLELKRWKIKTSKLQ
SKQKLNLKYFILPVGIVRDLAPRRSVGLPILERLIVEYYSRN

>Q42588

MATCIDTCRTGNTQDDDSRFCCIKNFFRPGFSVNRKIHHTQIEDDDDVWIKMLEEAKSDV KQEPILSNYYYASITSHRSLESALAHILSVKLSNLNLPSNTLFELFISVLEESPEIIEST KQDLIAVKERDPACISYVHCFLGFKGFLACQAHRIAHTLWKQNRKIVALLIQNRVSESFA VDIHPGAKIGKGILLDHATGVVIGETAVVGDNVSILHGVTLGGTGKQSGDRHPKIGDGVL IGAGSCILGNITIGEGAKIGSGSVVVKDVPARTTAVGNPARLIGGKENPRKHDKIPCLTM DOTSYLTEWSDYVI

>P28645

MALNLNPVSTPFQCRRLPSFSPRQTPSRRSPKFFMASTLSSSSPKEAESLKKPFSPPREV
HVQVTHSMPQEKIEIFKSLEGWAEENLLVHLKPVEKCWQPQDYLPDPASEDFRDQVKEIQ
ERAKEIPDDLYVVLVGDMITEEALPTYQTMLNTLDGAKDETGASPTSWAVWTRAWTAEEN
RHGDLLNKYLYLSGRVDMRSIEKTIQYLIGSGMDPRTENNPYLGFVYTSFQERATFVSHG
NSARLAKEHGDLKMAQICGIIASDEKRHETAYTKIVEKLFEIDPDATVLAFADMMKKKIS
MPAHLMYDGRDDNLFDHFSAVAQRLGVYTAKDYADILEFLVGRWEVEKLTGLSSEGQKAQ
DYVCSLPPRIRRLEERARERAKQAPSMPFSWIFDRQVKL

>A1E9W1

MIQPQTLLNVADNSGARKLMCIRVIGAAGNQRYARIGDVIIAVIKDAVPKMPLERSEVIR AVIVRTRKEFKGDDGIIIRYDDNAAVIIDQKGNPKGTRVFGAVAEELRELNFTKIVSLAP EVL

>09FV52

MASSVFLSSFSSSSLQLCSSFHGEYLAPSRCFLGAPVTSSSLSLSGKKNSYSPRQFHVS
AKKVSGLEEAIRIRKMRELETKSKVRRNPPLRRGRVSPRLLVPDHIPRPPYVESGVLPDI
SSEFQIPGPEGIAKMRAACELAARVLNYAGTLVKPSVTTNEIDKAVHDMIIEAGAYPSPL
GYGGFPKSVCTSVNECMCHGIPDSRQLQSGDIINIDVTVYLDGYHGDTSRTFFCGEVDEG
FKRLVKVTEECLERGIAVCKDGASFKKIGKRISEHAEKFGYNVVERFVGHGVGPVFHSEP
LIYHYRNDEPGLMVEGQTFTIEPILTIGTTECVTWPDNWTTLTADGGVAAQFEHTILITR
TGSEILTKC

>A4QJK7

MSPQTETKASVGFKAGVKEYKLTYYTPEYETKDTDILAAFRVTPQPGVPPEEAGAAVAAE SSTGTWTTVWTDGLTSLDRYKGRCYHIEPVPGEESQFIAYVAYPLDLFEEGSVTNMFTSI VGNVFGFKALAALRLEDLRIPPAYTKTFQGPPHGIQVERDKLNKYGRPLLGCTIKPKLGL SAKNYGRAVYECLRGGLDFTKDDENVNSQPFMRWRDRFLFCAEAIYKSQAETGEIKGHYL NATAGTCEEMIKRAVFARELGVPIVMHDYLTGGFTANTSLAHYCRDNGLLLHIHRAMHAV IDROKNHGMHFRVLAKALRLSGGDHIHAGTVVGKLEGDRESTLGFVDLLRDDYVEKDRSR GIFFTQDWVSLPGVLPVASGGIHVWHMPALTEIFGDDSVLQFGGGTLGHPWGNAPGAVAN RVALEACVQARNEGRDLAVEGNEIIREACKWSPELAAACEVWKEIRFNFPTIDTIDKLDP SVDKVA

>P25306

MEFLCLAPTRSFSTNPKLTKSIPSDHTSTTSRIFTYQNMRGSTMRPLALPLKMSPIVSVP
DITAPVENVPAILPKVVPGELIVNKPTGGDSDELFQYLVDILASPVYDVAIESPLELAEK
LSDRLGVNFYIKREDKQRVFSFKLRGAYNMMSNLSREELDKGVITASAGNHAQGVALAGQ
RLNCVAKIVMPTTTPQIKIDAVRALGGDVVLYGKTFDEAQTHALELSEKDGLKYIPPFDD
PGVIKGQGTIGTEINRQLKDIHAVFIPVGGGGLIAGVATFFKQIAPNTKIIGVEPYGAAS
MTLSLHEGHRVKLSNVDTFADGVAVALVGEYTFAKCQELIDGMVLVANDGISAAIKDVYD
EGRNILETSGAVAIAGAAAYCEFYKIKNENIVAIASGANMDFSKLHKVTELAGLGSGKEA
LLATFMVEQQGSFKTFVGLVGSLNFTELTYRFTSERKNALILYRVNVDKESDLEKMIEDM
KSSNMTTLNLSHNELVVDHLKHLVGGSANISDEIFGEFIVPEKAETLKTFLDAFSPRWNI
TLCRYRNQGDINASLLMGFQVPQAEMDEFKNQADKLGYPYELDNYNEAFNLVVSE
>P52410

MQALQSSSLRASPPNPLRLPSNRQSHQLITNARPLRRQQRSFISASASTVSAPKRETDPK
KRVVITGMGLVSVFGNDVDAYYEKLLSGESGISLIDRFDASKFPTRFGGQIRGFSSEGYI
DGKNERRLDDCLKYCIVAGKKALESANLGGDKLNTIDKRKAGVLVGTGMGGLTVFSEGVQ
NLIEKGHRRISPFFIPYAITNMGSALLAIDLGLMGPNYSISTACATSNYCFYAAANHIRR
GEADMMIAGGTEAAIIPIGLGGFVACRALSQRNDDPQTASRPWDKARDGFVMGEGAGVLV
MESLEHAMKRGAPIVAEYLGGAVNCDAHHMTDPRADGLGVSSCIERCLEDAGVSPEEVNY
INAHATSTLAGDLAEINAIKKVFKSTSGIKINATKSMIGHCLGAAGGLEAIATVKAINTG
WLHPSINQFNPEQAVDFDTVPNEKKQHEVDVAISNSFGFGGHNSVVAFSAFKP

>P41347

 ${\tt MTSTVTTTVGCGGLPVRPLSTATRGRPRRCAVRAQAAGADASNDKSVEVMRKFSEQYARR} \\ {\tt SNTFFCADKTVTAVVIKGLADHRDTLGAPLCPCRHYDDKAAEVAQGFWNCPCVPMRERKE} \\ {\tt CHCMLFLTPDNDFAGKDQVISFEEIKEATSKF} \\$

>09T052

MAYHPVYNETMSMGGGSSNEFGQWLDKQLVPFDTSSGSLRVELLHGNLDIWVKEAKHLPN
MDGFHNTLVGGMFFGLGRRNHKVDGENSSKITSDPYVTVSISGAVIGRTFVISNSENPVW
MQHFDVPVAHSAAKVHFVVKDSDIIGSQIIGAVEIPTEQLCSGNRIEGLFPILNSRGKPC
KQGAVLSLSIQYIPMERMRLYQKGVGFGVECVGVPGTYFPLRKGGRVTLYQDAHVDDGTL
PSVHLDGGIQYRHGKCWEDMADAIRRARRLIYITGWSVFHPVRLVRRNNDPTQGTLGELL
KVKSQEGVRVLVLVWDDPTSRSLLGFSTKGLMNTSDEETRRFFKHSSVQVLLCPRYGGKG
HSFIKKSEVETIYTHHQKTMIVDAEAAQNRRKIVAFVGGLDLCNGRFDTPKHPLFRTLKT
IHKDDFHNPNFVTTADDGPREPWHDLHSKIDGPAAYDVLANFEERWMKASKPRGIGRLRT
SSDDSLLRLDRIPDIMGLSEASSANDNDPESWHVQVFRSIDSSSVKGFPKDPKEATGRNL
LCGKNILIDMSIHAAYVKAIRSAQHFIYIENQYFLGSSFNWDSNKNLGANNLIPMEIALK
IANKIRAREKFAAYIVIPMWPEGAPTSNPIQRILYWQHKTMQMMYQTIYKALVEVGLDGQ
LEPQDFLNFFCLGTREVGTREVPDGTVSVYNSPRKPPQLNAAQVQALKSRRFMIYVHSKG
MVVDDEFVLIGSANINQRSLEGTRDTEIAMGGYQPHHSWAKKGSRPRGQIFGYRMSLWAE
HLGFLEQEFEEPENMECVRRVRQLSELNWRQYAAEEVTEMPGHLLKYPVQVDRTGKVSSL
PGYETFPDLGGKIIGSFLVVEENLTI

MTHRFRNTTFMRYLSNSRFKKKLILRKIKVSGPFVIQRTVHPQSAHNPNENCGNFDQRKV LGYFFKMFFYHNYNFVFTKLKLICLFLIISISSKKNFKLKVLILFFSIQKFTKSLDRNMS LAFDCTHKRVT

>082782

MRTLSSQLYSNGGLTWFQKKNQSSLFIKHLRVSKPSRVQLISAVQFRPCIDIHKGKVKQI VGSTLRDLKEDGSVLVTNFESDKSAEEYAKMYKEDGLTGGHVIMLGADPLSQAAAIGALH AYPGGLQVGGGINSENCMSYIEEGASHVIVTSYVFNNGKIDLERLKDIVSIVGKQRLILD LSCRKKDGRYAIVTDRWQKFSDVILDEKSLEFLGGFSDEFLVHGVDVEGKKLGIDEELVA LLGNYSPIPVTYAGGVTVMDDVERIKDAGKGRVDVTVGSALDIFGGNLPYKDVVAWHHKQ HSLH

>020143

MIKKHFKKITEHFSLVKISAILVGVVCGLRVYCSLNNKGAANLNFSQDEFFFKPTVAQIA
HESRVSKPMSHFFDEANTGNSNEERKVMFLSPINPATSSASPKKFKWVNTISIGPSLSLN
QNSVSSSVNTSPAREKISEIREKVKEFGEELASNDLVPTQEDVRGWEDLGNRYLEYLELK
LKPQLEQHNLAGFQFVNYGNLAERAKDMLANNTLCGLKVVKTNGESKLISISQFNKIFTI
LGENQLELEHHTISTLQDVRLMAQGVQQKQAVAMRLEPTLQNLLTTLRNQISNFEKTENW
TIEPSFKNLMVYTAPSPFRLQGSMCCHLGEKSLSLGVGETTFTQFSESNPHFGLITGWNF
GPKFSFGOETGLVSFSGYGIHAFCGLGFRI

>P30924

MEINFKVLSKPIRGSFPSFSPKVSSGASRNKICFPSQHSTGLKFGSQERSWDISSTPKSR
VRKDERMKHSSAISAVLTDDNSTMAPLEEDVKTENIGLLNLDPTLEPYLDHFRHRMKRYV
DQKMLIEKYEGPLEEFAQGYLKFGFNREDGCIVYREWAPAAQEDEVIGDFNGWNGSNHMM
EKDQFGVWSIRIPDVDSKPVIPHNSRVKFRFKHGNGVWVDRIPAWIKYATADATKFAAPY
DGVYWDPPPSERYHFKYPRPPKPRAPRIYEAHVGMSSSEPRVNSYREFADDVLPRIKANN
YNTVQLMAIMEHSYYGSFGYHVTNFFAVSSRYGNPEDLKYLIDKAHSLGLQVLVDVVHSH
ASNNVTDGLNGFDIGQGSQESYFHAGERGYHKLWDSRLFNYANWEVLRFLLSNLRWWLEE
YNFDGFRFDGITSMLYVHHGINMGFTGNYNEYFSEATDVDAVVYLMLANNLIHKIFPDAT
VIAEDVSGMPGLGRPVSEGGIGFDYRLAMAIPDKWIDYLKNKNDEDWSMKEVTSSLTNRR
YTEKCIAYAESHDQSIVGDKTIAFLLMDKEMYSGMSCLTDASPVVDRGIALHKMIHFFTM
ALGGEGYLNFMGNEFGHPEWIDFPREGNNWSYDKCRRQWNLADSEHLRYKFMNAFDRAMN
SLDEKFSFLASGKQIVSSMDDDNKVVVFERGDLVFVFNFHPKNTYEGYKVGCDLPGKYRV
ALDSDAWEFGGHGRTGHDVDHFTSPEGIPGVPETNFNGRQIPSKCCLLREHVWLITELMN
ACQKLKITRQTFVVSYYQQPISRRVTRNLKIRYLQISVTLTNACQKLKFTRQTFLVSYYQ
OPILRRVTRKLKDSLSTNIST

>P0C586

MSSAVVASSTTFLVALASSASRGGPRRGRVVGVAAPPALLYDGRAGRLALRAPPPPRPRP RRRDAGVVRRADDGENEAAVERAGEDDEEEEEFSSGAWQPPRSRRGGVGKVLKRRGTVPP VGRYGSGGDAARVRGAAAPAPATQDAASSKNGALLSGRDDDTPASRNGSVVTGADKPAA ATPPVTITKLPAPDSPVILPSVDKPQPEFVIPDATAPAPPPPGSNPRSSAPLPKPDNSEF AEDKSAKVVESAPKPKATRSSPIPAVEEETWDFKKYFDLNEPDAAEDGDDDDWADSDAS DSEIDQDDDSGPLAGENVMNVIVVAAECSPWCKTGGLGDVAGALPKALARRGHRVMVVVP RYGDYAEAQDVGIRKYYKAAGQDLEVKYFHAFIDGVDFVFIDAPLFRHRQDDIYGGNRQE IMKRMILFCKAAVEVPWHVPCGGVPYGDGNLVFLANDWHTALLPVYLKAYYRDNGMMQYT RSVLVIHNIAYQGRGPVDEFPYMELPEHYLDHFKLYDPVGGEHANIFGAGLKMADRVVTV

SPGYLWELKTTEGGWGLHDIIRENDWKMNGIVNGIDYREWNPEVDVHLQSDGYANYTVAS LDSGKPRCKAALQRELGLEVRDDVPLIGFIGRLDGQKGVDIIGDAMPWIAGQDVQLVLLG SGRRDLEVMLQRFEAQHNSKVRGWVGFSVKMAHRITAGADVLVMPSRFEPCGLNQLYAMA YGTVPVVHAVGGLRDTVSAFDPFEDTGLGWTFDRAEPHKLIEALGHCLETYRKYKESWRG LQVRGMSQDLSWDHAAELYEEVLVKAKYQW

>Q9MUL5

MSNTRLTLFFTNIFQLLDSKIQNYSINFPIKILLLLLGFFIATVLATVFGQTGDWDVLVA GILVAMIEILGNKMYSKKYISKKQVFDISFLSLIGINYIKIGLIFGLFVDAFKLGS >O9MUL6

MYFHILILNHTLMKKKSYSTYNLTIWQHIWTIILLFISISCIKQYNFSFQSFNRGEYSNF TTFDSFNKKQVCNLISFDNALLKILLKNKICINTIEKQPIYKQIQICPDFCRLIFTSHSY NPIGIINNVSDLSIIGFVDLYGNKWEEGSAFIAHKYFLENQKLPNIIGINNMNSYKLAQM CFVLKNNKSTHSFVIDLRKEKNIILINNLGKVNIGNDFASLIKKLIFLKSFTSICKEGDD ILSKIDINNLSRPIVOYSSYL

>006801

MAIHTCFSLIPSSFSSPKLPYPKNTTFQSPIPKLSRPTFMFDRKGSFQNGTAAVPAVGED FPIDYADWLPKRDPNDRRRAGILLHPTSFPGPYGIGDLGPQAFKFLDWLHLAGCSLWQVL PLVPPGKRGNEDGSPYSGQDANCGNTLLISLEELVDDGLLKMEELPEPLPTDRVNYSTIS EIKDPLITKAAKRLLSSEGELKDQLENFRRDPNISSWLEDAAYFAAIDNSVNTISWYDWP EPLKNRHLAALEEVYQSEKDFIDIFIAQQFLFQRQWKKVRDYARSKGISIMGDMPIYVGY HSADVWANKKQFLLNRKGFPLIVSGVPPDAFSETGQLWGSPLYDWKAMEKDGFSWWVRRI QRATDLFDEFRIDHFRGFAGFWAVPSEEKIAILGRWKVGPGKPLFDAILQAVGKINIIAE DLGVITEDVVQLRKSIEAPGMAVLQFAFGSDAENPHLPHNHEQNQVVYTGTHDNDTIRGW WDTLPQEEKSNVLKYLSNIEEEEISRGLIEGAVSSVARIAIIPMQDVLGLGSDSRMNIPA TQFGNWSWRIPSSTSFDNLDAEAKKLRDILATYGRL

>P52418

MAAASNLSTLSSSSLSKPSSSFPFRNTPTNNNASFLHNKSLPNQNSLSHKLSSPLPLACN
PKNQNTCVFFDDEDQKPREECGVVGIYGDPEASRLCSLALHALQHRGQEGAGIVAVHDNH
LQSVTGVGLVSDVFEQSKLSRLPGTSAIGHVRYSTAGQSMLKNVQPFLADYRFAAVAVAH
NGNFVNYRSLRARLEHNNGSIFNTTSDTEVVLHLIATSKHRPFLLRIVDACEHLQGAYSL
VFVTEDKLVAVRDPFGFRPLVMGRRTNGAVVLASETCALDLIEATYEREVYPGEVIVVDH
TGIQSLCLVSHPEPKQCIFEHIYFALPNSVVFGRSVYESRKKFGEILASESPVECDVVIA
VPDSGVVAALGYAAKAGVPFQQGLIRSHYVGRTFIEPSQKIRDFGVKLKLSPVHAVLEGK
RVVVVDDSIVRGTTSSKIVRLLKEAGAKEVHMRIACPPIVASCYYGVDTPSSEELISNRM
SVEEIRKFIGSDSLAFLPLDKLKTLLGDDALNYCYACFSGKYPVEPEELQMKRLGVAHFN
WDDDFNGNFESIDVGGWVTNQDGFKIGSV

>Q9MUL7

MRNKIPYDSKKILYDSELLLNSASNRYILTMKVANRANLRRYEEFETMNHSSIKPIARTI IEMVDDKNFLVVKKK

>A2YMU2

MPPLHAVSPAAAAAPPRALSSAARVPQRPGCVPERPNILSSSTNFMSLRAGPMRFYSRPL ILQNSDKRAVLRHATIEEIEAEKSVIEDQARERMEKAIETVQNNFNTVRTGRANPAMLDR IEVEYYGTPVNLKSIAQINTPDATSLLIQPYDKSSLKLIEKTIVAANLGVTPSNDGEVIR VTVPPLTSDRRKELAKTVAKLAEEGKVAIRNIRRDAIKAYDKLEKEKKLSEDNVKDLSAD

LOKVTDEYMKKIEAIOKOKEOELMKI

>020EV4

MAYSVSRLVCSDGSIFSSNTNFETPFQPRVFHPSTSSEINERPDLNLLEGTPRTIVVTSG
KGGVGKTTATANLGMSIARLGYRVVLVDADIGLRNLDLLLGLENRVLYTAMDILDGQCRL
DQALIRDKRWKNLSLLAISKNRQRYNVTRKRMNMLIESLQKQGYDYILIDCPAGIDVGFI
NAVSPAKEAIIVTTPEITSIRDADRVAGLLESNGIYNVKLLVNRVRSEMIQQNDMMSVRD
VQEMLGIPLLGAIPEDNHVIISTNRGEPLVLKKKLTLSGIAFENAARRLIGKQDYFIDLQ
TPYRNVFQRFQQFLGF

>042736

 ${\tt MMSSLFVEGMLLKSADESCLPAKGKQRRTGDLRRLNHHRQPAFVRWICRRKLSGVSRIEF}$ ${\tt HSGGLTPPRAVLNPVSPPVTTTKKRVFTFGKGRSEGNKDMKSLLGGKGANLAEMASIGLS}$ VPPGLTISTEACEEYQONGKKLPPGLWDEILEGLRYVOKEMSASLGDPSKPLLLSVRSGA AISMPGMMDTVLNLGLNDEVVAGLAGKSGARFAYDSYRRFLDMFGNVVMGIPHSLFDEKL EEMKAEKGVHLDTDLTAADLKDLVEOYKNVYVEAKGEKFPTDPKKOLELAVNAVFDSWDS PRANKYRSINOITGLKGTAVNIOCMVFGNMGNTSGTGVLFTRNPSTGEKKLYGEFLVNAO GEDVVAGIRTPEDLATMETCMPEAYRELVENCKILERHYKDMMDIEFTVOENRLWMLOCR TGKRTGKGAVRIAVDMVNEGLIDTRTAIKRVETOHLDOLLHPOFENPSAYKSHVVATGLP ASPGAAVGOVVFSAEDAETWHAOGKSAILVRTETSPEDVGGMHAAAGILTARGGMTSHAA VVARGWGKCCVSGCADIRVNDDMKVLTIGDRVIKEGDWLSLNGSTGEVILGKOLLAPPAM SNDLETFMSWADQVRRLKVMANADTPNDALTARNNGAQGIGLCRTEHMFFASDERIKAVR KMIMAVTPEORKAALDLLLPYORSDFEGIFRAMDGLPVTIRLLDPPLHEFLPEGDLEHIV NELAVDTGMSEDEIYSKIEKLSEVNPMLGFRGCRLGISYPELTEMOVRAIFOAAVSMNNO GVTVIPEIMVPLVGTPOELRHOIGVIRGVAANVFAEMGLTMDYKVGTMIEIPRAALIAEE IAKEAEFFSFGTNDLTQMTFGYSRDDVGKFLQIYLSQGILQHDPFEVLDQKGVGQLIKMA TEKGRAANPNLKVGICGEHGGEPSSVAFFDGVGLDYVSCSPFRVPIARLAAAQVVV >P35006

MGRGLSTKKFYFKIGVQLKSNWNPLIDKLISILKLNSFYSSFVLRLIKLCLTKYLLLYAQ OH

>P52420

MSSLCASNCYPSSSSINLFSNNNNPTKPFLLSLRFASSNSLPFVAPLKFSTTNHVLSNSR
FSSNRIQRRLFLLRCVSEESQPSLSIGNGGSEERVNVLVIGGGGREHALCHALKRSPSCD
SVLCAPGNAGISSSGDATCVPDLDISDSLAVISFCQKWNVGLVVVGPEVPLVAGLANDLV
KAGILTFGPSSQAAALEGSKNFMKNLCHKYNIPTAKYKTFSDASAAKEYIQEQGAPIVIK
ADGLAAGKGVTVAMELEEAFEAVDSMLVKGVFGSAGCQVVVEEFLEGEEASFFALVDGEN
AIPLESAQDHKRVGDGDTGPNTGGMGAYSPAPVLTKELQDFVMESIIHPTVKGMAEEGCK
FVGVLFAGLMIEKKSGLPKLIEFNVRFGDPECQVLMMRLESDLAKVLLAACKGELSGVSL
DWSKDSAMVVVMASNGYPGSYEKGSIIKNLEEAERVAPGVKVFHAGTGLDSEGNVVATGG
RVLGVTAKGKDLEEARERAYSAVQQINWPGGFFRHDIGWRALRQKQVATKEE

>P52423

MEAQQIISRFCPKSSLAPSIPMVKQPFSLNFPPLHSLSSYPFLQSQNLGFPTGALHAISF VHKEVCSSSWRIWCSKSSSSTAEPEEDHEVRAQVTVRRKKLAVFVSGGGSNFRSIHEASK KGSLHGDVTVLVTNKSECGGAQYARNNGIPVILFPKAKDEPKGLSPCDLVDTLRKFEVDF VLLAGYLKLIPVELIRAFERSIFNIHPSLLPAFGGKGYYGMKVHKAVIASGARFSGPTIH FVDEHYDTGRILAQRVVPVLANDTAEELAARVLNEEHQLYVEVVEALCEERIVWRKDGVP LIOSRENPNEFL

>082796

MEALTTSRVVPVQVPCRKLSSLFANFSCLELRRYPCRGLVSIMNHPKLLRPVTASVQPHE
LSTLGHEGNIVPSKEILDLWRSVEAVCFDVDSTVCVDEGIDELAEFCGAGKAVAEWTARA
MGGSVPFEEALAARLSLFKPSLSKVEEYLDKRPPRLSPGIEELVKKLRANNIDVYLISGG
FRQMINPVASILGIPRENIFANNLLFGNSGEFLGFDENEPTSRSGGKAKAVQQIRKGRLY
KTMAMIGDGATDLEARKPGGADLFICYAGVQLREAVAANADWLIFKFESLINSLD
>09MTP2

MKFRVKGKSVDFKNREGSSPSIPKKRSFDSLPINPYFVLFVLLSVQNSLSFFYSFYSFPK GCKRLFFSINPRLVLNMLHVQKNFVLARDQHLNDSQSIISILGLPLKKSFFFFFIFLSKK ALGLGKTFHTFFVFLLIDIERSHLVKCQGSG

>P42804

MAVSSAFVGCPKLETLLNHHNLSPSSSSSSSVSQTPLGLNGVRVLPKNNRTRRGLIQKAR
CELSASSDSASNAASISALEQLKNSAADRYTKERSSIVVIGLSIHTAPVEMREKLAIPEA
EWPRAIAELCGLNHIEEAAVLSTCNRMEIYVLALSQHRGVKEVTEWMSKTSGIPVSEICQ
HRFLLYNKDATQHIFEVSAGLDSLVLGEGQILAQVKQVVKVGQGVNGFGRNISGLFKHAI
TVGKRVRTETNIASGAVSVSSAAVELALMKLPQSSNVSARMCVIGAGKMGKLVIKHLMAK
GCTKVVVVNRSEERVSAIREEMPGIEIIYRPLDEMLACASEADVVFTSTASETPLFLKEH
VENLPQASPEVGGLRHFVDISVPRNVGSCVGEVETARVYNVDDLKEVVAANKEDRMRKAM
EAQTIITEESTQFEAWRDSLETVPTIKKLRAYAERIRVAELEKCMSKMGDDINKKTTRAV
DDLSRGIVNRFLHGPMQHLRCDGSDSRTLSETLENMHALNRMYGLEKDILEEKLKAMAEQ
OOK

>09MUM6

 ${\tt MSLQVPVAKEDNRESNSHLATLSGNLYTRMNLPHEPRARAGIVFFMEKQSNLALHSEFLL}\\ {\tt HVIIN}$

>P42732

MAQMVAMPVAHSLSLICNWAKSNPLSRNTLALPASNTPNKQSLSIRCARVGGVEIPANKR IEYSLQYIHGIGRTRARQILVDLQMENKITKDMAEEELIILRDEVSKYMIEGDLRRFNAL AIKRLKEIQCYRGVRHIQGLPCRGQRTKNNCRTLKGKKIAIAGKKKVSK

>09MIIM7

MILIKKFIVAIELFIFNRNNCRYILLCTDNKVKNIQTSLSICILCAISYALIKKIQQTFQ LSSKFAASCS

>Q2WGC1

MGGVENPVSTDKAIRLPERKQYSSNAEPNPSKTEVKRRIERFPRVRIVAINSHRLPAGAA RGSAGSVTGRRVRKRMITTLRLNHPIPLFPGKQNGFVS

>020159

MATQPSENTPKVITEKKIFLPTEKKINLFNIIDRFNNHLKKLKEKLQEAHFQKQANKLTS
KEQELKDNDDGKSKSKNENDSTSPEKKDVLTGTGVALPGLIQLAGGFTVSITGNAGTAQL
GGRSSRNGNQRQSISRRIIIRSENQRTQNLTESVESVHTSQKKNEVRQALMISAIKKATH
GTGVNQKKPEEAVRINAEASRKIKPEVNYNLKIFLAEKTLTSKEKKEAAKLIKKINHEIS
EWLTKFFTTRTGRQRELQKNLIWSLIKKFLPKVIGLERSGNHVHAYFMLSKLYGLLRMAC
LKVISQKKTILSRRNKMPKERIRVKDEIIRLEKEIKHLTNPAEIGLKEKQLLGQKEELDS
LNAEDVLFQGFEIKLTPTESQFWDEACLTEKQEISRQLHYDNWEDYKKNLTETKTQKRIY
HNILSKLITLGTKKENKNLLEEHFVFFVTKGNFYIRAFLEIQFAHLFGAARRGENEPEDS

SVQGTNSHLNLVYLETFSHSISCLYEMGGYIANVELTTGAILKLLSQSLDSLLLSSSNSS VDERNSYVKTKASLQSLKQLLLEYCNFHNDPESFDVNTTQELKQRLKDLSSVSLSKKKEL ELYKELLKAFKLCFQDIMNALSEVLKKLEKRIPEKTFTELKELFLLHQSHLIKLKQVCGA LSSLFGFFLIELKSLWQLPLDEYIGVFIGSEPRKK

>P0C306

MVYGYGKSNMPHPNRKRKGTDTQYDYWEELLVMVSGLYVLFCVFLVLFIFFDSFKQESNK LELSGKEEKKKLNGENRLSRDIQNLLYIK

>P0C308

MGAFPSPPPWGWSTGFITTPLTTGRLPSQHLDPALPKLFWFTPTLPTCPTVAKQFWDTKR TSPDGNLKVADLPSFAISFATAPAALANCPPLPRVISMLCMAVPKGISVEVDSSFLSKNP FPNCTSFFQSIRLSRCI

>Q9MTP8

MDLLKKERKANEIKIMNYKESSGSKMNCKESSGSNSIDNMDGPVYNDRPMDGFFKLQIWI HPLDILKMGWLNVKIHSLKFNK

>09TL05

MSGEVAQDQPPIRSPRSTRRSQEIVNSAITVQSSAKLDTDKSGAQADKVSSKKSRTTSPE
LLEDQVVSNESKTSKKKETKASQLFSKRKEIFSTRDLRFLKLRIASPTRIRSWGTHKLPN
GKQVGRITKAETINYRTYKPEMDGLFCERAFGPVKDWECHCGRTKGQERNKDGIPIPRVC
THCGVELRDSKIRRHRMGYIELVYPVVHIWYLKSIPSYLGVLLDKPRRELEAITYCTNYA
SSQDSMAFSASLLFPTTGSFRQSKDSMKWEYLNWFHIETYLGLKEATNSALVHYGKRIQD
SPIEVGLPLSEDPRQFSIGAQAIACQLRALNLRSVSRLLSRDLYIIDARETRFGALEEEE
MKRRSKLIRRLQLIHYFMQTKAQPEWMVIKALPVLPPDLRPIVQLEGGRFATTDLNDLYR
RVLNRNNRFMKLHKMVAPETLIRSEKRLLQEAVDGLFDNGKRGKPVLNSSNRPLKSLADA
LKGKQGRFRQNLLGKRVDYSGRSVIVVGPKLRLHQCGLPKEMALELFQPLVIRLLLKRKV
APNIRYAKKLMHHAVARGPENPTIIDAVVWDTLAAVVEGYPILLNRAPTLHRLGIQAFEP
VLINGRAIQLHPLVCTGFNADFDGDQMGVHIPLSAEARAEAKLLMLASHNLLSPATGQPI
VVPSQDMVLGWYYLTTENPWIESTEGLYFSGLSDVEHAYHQGQIHLHSIIWVRWGGESEG
SLGDEFEDNPLEIRIDANGHSWHIYSQYQLRYDDEGDLISQFIRTTTGRVVFNQLVHRHI
EWSLHDQVMEEIETEFPESVLPPDVMRCLVRLYSAHAIGERPAMLGLASPGTPSPGRACA
YPPRDDYADPNOIKEYLNRIGHW

>P42738

MRSSCCSSAIGGFFDHRRELSTSTPISTLLPLPSTKSSFSVRCSLPQPSKPRSGTSSVHA
VMTLAGSLTGKKRVDESESLTLEGIRNSLIRQEDSIIFGLLERAKYCYNADTYDPTAFDM
DGFNGSLVEYMVKGTEKLHAKVGRFKSPDEHPFFPDDLPEPMLPPLQYPKVLHFAADSIN
INKKIWNMYFRDLVPRLVKKGDDGNYGSTAVCDAICLQCLSKRIHYGKFVAEAKFQASPE
AYESAIKAQDKDALMDMLTFPTVEDAIKKRVEMKTRTYGQEVKVGMEEKEEEEEEGNESH
VYKISPILVGDLYGDWIMPLTKEVQVEYLLRRLD

>Q94KU5

MATLFTVTTTSRPFPANPSKTFSPSISLKPNALSFSLTHHRPPRPLRFSKIRSSLPSESD SEPEGGYSITDEWGEQPAEPESPPDNAPSAVSDEWGEKSESVPEESVTRFAESDPPTNED EWEEREADDGVDKTWELKRCLADTVYGTELGFRAGSEVRAEVLEIVNQLEALNPTQAPVE NPELLDGNWVLLYTAFSELLPLLAAGSTPLLKVKSISQSIDTKSLSIDNSTTLSSPFADF SFSATASFEVRTPSRIEVSFKEGTLKPPEIKSSVDLPESVGVFGQEINLSFLKQSLNPLQ DVAANISRAISGOPPLKLPFPGNRGSSWLLTTYLDKDLRISRGDGGLFVLAREGSSLLEL

>09M385

MAIPMSMAMATPTDSVSRVWSMSSLKSALPSTASLRLPSSSSSRRPVTLRLPISSPSLPSF SGLSPVNPLLSIGLPDWQSFENGFKIVDGGGRIYAMRHGRRVPKLNRPPDQRKALLRGLT TQLLKHGRIKTTRARASAMRKFVDKMITLAKDGSLHKRRQALGYIYEKQIVHALFAEVPD RYGERNGGYTRIIRTLPRRGDNAPMAYIELV

>09SUI6

MASFATIAAVQPSAAVKGLGGSSLAGAKLFIKPSRQSFKTKSTRAGAVVAKYGDKSVYFD LEDLGNTTGQWDVYGSDAPSPYNPLQSKFFETFAAPFTKRGLLLKFLILGGGSLLTYVSA NSTGDVLPIKRGPOEPPKLGPRGKL

>P17597

MAAATTTTTTSSSISFSTKPSPSSSKSPLPISRFSLPFSLNPNKSSSSSRRRGIKSSSPS
SISAVLNTTTNVTTTPSPTKPTKPETFISRFAPDQPRKGADILVEALERQGVETVFAYPG
GASMEIHQALTRSSSIRNVLPRHEQGGVFAAEGYARSSGKPGICIATSGPGATNLVSGLA
DALLDSVPLVAITGQVPRRMIGTDAFQETPIVEVTRSITKHNYLVMDVEDIPRIIEEAFF
LATSGRPGPVLVDVPKDIQQQLAIPNWEQAMRLPGYMSRMPKPPEDSHLEQIVRLISESK
KPVLYVGGGCLNSSDELGRFVELTGIPVASTLMGLGSYPCDDELSLHMLGMHGTVYANYA
VEHSDLLLAFGVRFDDRVTGKLEAFASRAKIVHIDIDSAEIGKNKTPHVSVCGDVKLALQ
GMNKVLENRAEELKLDFGVWRNELNVQKQKFPLSFKTFGEAIPPQYAIKVLDELTDGKAI
ISTGVGQHQMWAAQFYNYKKPRQWLSSGGLGAMGFGLPAAIGASVANPDAIVVDIDGDGS
FIMNVQELATIRVENLPVKVLLLNNQHLGMVMQWEDRFYKANRAHTFLGDPAQEDEIFPN
MLLFAAACGIPAARVTKKADLREAIQTMLDTPGPYLLDVICPHQEHVLPMIPSGGTFNDV
ITEGDGRIKY

>P29463

MESRVLTGGATAIRGGLPLLRKPAAVMKFTTAAHAISRDFPAGAVTAKPVGPLIAGPNLI
WGRQLRPAILLETSPKRESIKPCSAAASSSAGSSDSSGDAKVGFFNKATLTTGFFFFMWY
FLNVIFNILNKKIYNYFPYPYFVSVIHLAVGVVYCLVSWGVGLPKRAPIDSTQLKLLTPV
AFCHALGHVTSNVSFAAVRVSFTHTVKALEPFFNAAASQFILGQQIPLALWLSLAPVVLG
VSMASLTELSFNWLGFTSAMISNISFTYRSIYSKKAMTDMDSTNVYAYISIIALIFCLPP
AIFIEGPQLLQHGFNDAIAKVGLTKFVTDLFWVGMFYHLYNQVATNTLERVAPLTHAVGN
VLKRVFVIGFSIVIFGNKISTQTGIGTCIAIAGVAIYSFIKAKMEEEKRQKKAA

>Q00865

MGFVDMDYDIISYSDQMPLAQHYSYFIIYSPSKSRFHVIPYKDDEYLNRFYWLQISLGFS IDASNISSQYSANPTINLSLILD

>09ZST0

MAATAVTLPSSPAPFPVTTTASSSRNVRLLLRSPPPRRALRVAASAADAPPKPAPPPTS
PSGIVLVDPTEAQKVHRLKAVYDQKVVPLITEEFGYTNVHQVPKVEKIVVNCGLGAEAGN
SKGLESAMKDLAMITGQWPVKTKAKKSVASFKIREGNTIGIAVTLRGRVMFNFLDRLINL
GLPRTMDFLGVNPNSFDGHGNFTIGLRDQGVFPEIPYEVGGKKNGMDVCIVTTAKTDNEA
LRLLTLLGMPFAEHIKSSVVIRKKRLKRHHFMSKGRGRR

>P27793

MASSLSTKPFLSGSRRRSTTDGSGWSYFQTSDLRQLSNQSVQISVRRQTAPLKLVVQASG SSFGKVFQVTTYGESHGGGVGCVIDGCPPRFPISEADIQSDLDRRRPGQSRITTPRKETD TCKIYSGVADGFTTGSPIHISVPNTDQRGNDYSEMAKAYRPSHADATYDFKYGVRSVQGG GRSSARETIGRVAAGALAKKILKAYAGTEVLAYVSQAHKVVLPEGLVDHETLSLEQIESN IVRCPDSEYAEKMIAAIDAVRVKGDSVGGVVTCIMRNVPRGLGSPVFDKLEAELAKACMS LPATKGFEFGSGFSGTFLTGSEHNDEFYTDENGRIRTRTNRSGGIQGGISNGEIINMRIA FKPTSTIGKKQNTVTREREEIELIARGRHDPCVVPRAVPMVEAMVALVLLDQLMLQHAQG NLFSINPALQEPLSETVSSAAASLQGV

>Q9SR43

MALSMEFGFSIGSCFKAPNPPVLISASPNKINFTLRRRKKRFLLRVSAVSYKEFAESALE ETRKRIVLEPSHLQEKYSSMTGLDGKTELQMLAFKSSKIRLLRSMAIENETMQVFDFAGF MEPEYDTPIFCANFFTSTNVNIVVLDLNPLHQLTDQTDYQDKYYNKIMSIYHKYAETFPW GGKLTGESIKFFSPLVMWTRFSSSKEKHKALFSAFLEYYQAWLEMTIQVREEMEPSHVRA NCEAQHKYLTWRAQKDPGHGLLKRLVGEAKAKELLRDFLFNGVDELGTKTFIDYFPEYQT EDGTVSDKRSIIGKSYETRPWDLTGOFIG

>P29102

MAAALQTNIRPVKFPATLRALTKQSSPAPFRVRCAAASPGKKRYNITLLPGDGIGPEVIS
IAKNVLQQAGSLEGLEFSFQEMPVGGAALDLVGVPLPEETVSAAKESDAVLLGAIGGYKW
DKNEKHLKPETGLLQLRAGLKVFANLRPATVLPQLVDASTLKREVAEGVDLMVVRELTGG
IYFGVPRGIKTNENGEEVGYNTEVYAAHEIDRIARVAFETARKRRGKLCSVDKANVLDAS
ILWRRRVTALAAEYPDVELSHMYVDNAAMQLVRDPKQFDTIVTNNIFGDILSDEASMITG
SIGMLPSASLSDSGPGLFEPIHGSAPDIAGQDKANPLATILSAAMLLKYGLGEEKAAKRI
EDAVLGALNKGFRTGDIYSAGTKLVGCKEMGEEVLKSVDSHVQASV

>080333

MPKRSNGSLVVRCAVSVVRFSKENVSCDLASENFTFSRDSFPVVSTVLRVSEAVYRMAAV
ASLGSALSVSSAALSQNVSVSNNATKESAFLGLRMGEVAKFGGALLSVSTVAANLKSKPG
VLSVNAVTAPAETMNKPSSKKTATKSTCIITGASSGLGLATAKALADTGEWHVIMACRDF
LKAERAARSVGIPKDSYTVIHCDLASFDSVRAFVDNFRRTERQLDVLVCNAAVYFPTDKE
PKFSAEGFELSVGTNHMGHFLLARLLMEDLQKAKDSLKRMIIVGSITGNSNTVAGNVPPK
ANLGHLRGLAGGLNGVNSSSMIDGGEFDGAKAYKDSKVCNMFTMQEFHRRYHAETGITFS
SLYPGCIAETGLFRNHVTLFRTLFPPFQKYITKGYVSEEEAGKRMAQVVSDPKLSKSGVY
WSWNKDSGSFENELSEEASNPEKAKRLWELSERLSGLV

>020162

MVTEFRDAWEARYGLVPGACCLKNSVTFSSLESGQGLERNPNQEALADRKNKKCQFKNEY VACHATVFPHFVNPENPKAVEFLKNHPLNIPVNMDMTFGPLKDTPAFCYGGHKLGLCNSL YDSIIYDDTYQGKGEHNLKKFFSEAIATCFLYQNAIKPINYKPKNMKHSVIGVSLYY >POC310

MTKDETLLVFTLVVSSVSVFLFGILLFMVLISATRDFRERTKSKLVKIMIWAGIVVITFA
IAVRIYPIFIFLLKERIKPLVEALYDKLPWIWEVSLSRYWDRLIDFLDRYLWACAQRIQT
GIRKQKGEFVVTFSCRVKKRLYARAIEVGIHLSLLSNLFWILKTTLAVGYRLLWVLYYII
SFEGFLGSFRLYLVYFGFYCLLFSGKWLRTSEDRGERQAQISGILLRGMLIECAFSVLCL
EEDSNLHAL

>Q9MUN5

MICKNSIVTSSSKLFYKMFFIAISIEILEYNYIYPLCIEIAQHSGNIKIALCLKEILQKK KYNLILLKIASIVISNFLSTNTYSFIYTPYDVEILFSNLLLEKYEKDKEMSYMIDVFTKL SHLKQNIIYPYLFNQLKHDCNKKHIFLLLKKIDYTDISTFTHSIFIK >Q9TL10 MLVVGNRIVDVSRHTSIGTIVIATVDKLAPGLGIAFVSWTHGQGKGGLPSTKKHYGILPL RSWRGRGPLDFATTHELTGENLILQHGDFVLVQIVQDGNHAKVHLVSGHIALTTSRLVVW PGLSSKDWIFSHQIGQKINNYLHVRKLVSYMRRDQILCTGPQRWMKEQYALEHQWENFVL EFIEQPTGISYLTSMTEKFVSPVCAEWFQHPLSVWIIGCNLQIRESMTKWMITHVPHKSR HIEITTLDAWKNWYNLHRAAIVQPQIPLRSGGTMIIEFTEIGWSFDINSGIGLEIGSKTC ANEEAIYAIAQQILLRSMHGFILIDFIGDIDLEKLRVNLIQFTSLLEQDSYHIRIISISA DGLVCVIRHRSKLI

>020EX1

MNIYLRQNSFLVPDFIAVQRNSFSQFLESGLIQEISKRNPITNSTKELELCFYPQYYKLS PPELNAKQSILKNKTYSCRLYIPVKLTNKRTKTLKLQWVVLGNLPLMTKRGHFIINGSPR VIINQMVRSPGVYFKEVSHADQKLTYYADLIAYRGAWLRIELDKKADIWARMKKTPKLPM LILLQALGLNLPTILKSLNYPKFFENLGHDGNFMKQLKKGRVSSRSSSQELSGSFNLSED VSLRLDDSSKNMGAENVQRAPLQKSTKKATLFGDFSRSSVYCKTQEEALWALYALTHPLK NPDEVTANLGKSFLYRKFMNSRVYDLSPLGRLRLNQKLNLSVNENITTITAQDLLFITNT LINLNYGVGKVDDIDNLKNRRIRTAGELVONOFGIGLLRLEKIIREKLKOOOTKLSIGSL INTKPINGALREFFGSSPLSOFMDOTNPLAEITHKRRLSSLGPGGVNRETAGMAIRGIHP THYGRICPIETPEGONAGLVNSLTIYSRVNPYGFIETPFYKVVKGOVONSTRPIFFSAYO EEKKLLAPGDIYANKLKYLPKSELPIRKLAEFTRTTREKIDYISVSPLQMISIATSLIPF LEHDDANRALMGSNMQRQAVPLMTAEAPVVGTGLECRVASDSGHVLQAKKSGFVTYSSAE KITILSPVDSTPAVPKLSKGNNSPQHFHESVGGSCKESQSLQAAAEGYLSGVASSSSSKF TGSSFSTISALNDGVLRRALTOKVLTTGTNCSSMLKNORFFVEPKAQLYTGAQTPVGRVE TILOPNHAEGYLSEVETIOOTONKLPLOVRFGVEAPKSSFDSEATKISSTLNSIPOHPVL GEDSPSKOVGWALKDPOIOTMLKPKWHHSAOTMSRENWYONLKGONVKTFTOVESGRLVT KPTNTKMPMSSLAGTANSKKTGEALYKLASSESATKSMDFSTKTOLKPITYELOKLFRSN QDTSIMHRPVVREGEWVNRGDLLADNSTTVGGELSLGKNLLLAYMPWEGYNFEDAILISE RLVSDDAYTSLHIERYEVEIRETKFGLEOITSOIPDEGKLSHLDHFGIAKPGTWVEEGDI LIGKVAPMPOKNLSRYEKLLYDVVGKKISTTRDTSLRVPRGVSGRVIHVEILNAENLPPE FVFEGPSRVNLYIAEKRKIHVGDKMAGRHGNKGIISNILPRODMPYLPDGTPLDMVLNPL GVPSRMNVGQIYECLLGLAGRYLGQKFKVRPFDEIYGPQTSRSLVYSKLYEARLRTGQRW LFNPASPGKTRLFDGRTGECFSQPVTVGQAYMLKLIHLVDEKIHARSIGPYSLVTQQPLR GRSKHGGQRLGEMEVWALEGFGAAYTLQELLTVKSDDIKGREQVMESIQKNKTISLGTPE SFKVLIRELQSLCLDVGVYAVDGSGKIKQVDTMKLP

>Q96291

MASVASSTTLISSPSSRVFPAKSSLSSPSVSFLRTLSSPSASASLRSGFARRSSLSSTSR RSFAVKAQADDLPLVGNKAPDFEAEAVFDQEFIKVKLSDYIGKKYVILFFYPLDFTFVCP TEITAFSDRHSEFEKLNTEVLGVSVDSVFSHLAWVQTDRKSGGLGDLNYPLISDVTKSIS KSFGVLIHDQGIALRGLFIIDKEGVIQHSTINNLGIGRSVDETMRTLQALQYIQENPDEV CPAGWKPGEKSMKPDPKLSKEYFSAI

>Q93ZN9

MSSTHQLVSSMISSSSSTFLAPSNFNLRTRNACLPMAKRVNTCKCVATPQEKIEYKTKVS RNSNMSKLQAGYLFPEIARRRSAHLLKYPDAQVISLGIGDTTEPIPEVITSAMAKKAHEL STIEGYSGYGAEQGAKPLRAAIAKTFYGGLGIGDDDVFVSDGAKCDISRLQVMFGSNVTI AVQDPSYPAYVDSSVIMGQTGQFNTDVQKYGNIEYMRCTPENGFFPDLSTVGRTDIIFFC SPNNPTGAAATREQLTQLVEFAKKNGSIIVYDSAYAMYMSDDNPRSIFEIPGAEEVAMET ASFSKYAGFTGVRLGWTVIPKKLLYSDGFPVAKDFNRIICTCFNGASNISQAGALACLTP EGLEAMHKVIGFYKENTNIIIDTFTSLGYDVYGGKNAPYVWVHFPNQSSWDVFAEILEKT HVVTTPGSGFGPGGEGFVRVSAFGHRENILEACRRFKQLYK

>085WU2

MIRVLGLLWDPLSSWVEVSGPIILFGLYYGFIATLPFGPSKIYSMRSFFLGETLYGIIAI SGSITGOLIVFLSMYYSPIYAALWKPHAITLLVIPYTFCRVFRSLEKPSSPESTHPMNSI KNPKILSLFMGGLILQLLNPILLANPVLTRLVNLFLFRYSDNISFMISSFCGWLGGHILF INLTKLVSLRLVSFRIERNSPIDHTSLRRYIHOTFSVLLISYFSFYLGRSPLIFHRKKKD NKKKDRSAAMAKKDRSVAMAKKNCSVAMVKKDRSVAEDEDRSVAMAKKGRSVAEDEDRSE PLAMVMVOEARSVSFIAKKARSVAEDKDPEDEHRSVAMAKKARSVAEDKDPEDEHRSVAM ${\tt AKKDRSVAEDEDRSVAMAKKDRSVAEDEDRSVAEDEDRSVAEDEDRSVAEDEDRSVAEDED}$ DRSVAEDEDRFVAEDEDRSVAEDEDRSVAEDEDRSVAEDEDPEDEDRSVPREQKKLKGLP ISWFKOPCPIKFFDPDRIYOPIRYIGNSPFHCLKPVMRTEVSOYFFGAYSSDGKKRISFT LLPSVLALGEKLGKYRDLLDTSCLSEDPYHRWNHTMKRRRDSLENEFSDRVKALSHGSPA ENVIERRVKFSNSOGDSFTEMYDPLLNGALRGTIDOFESPKMLNDLIISIISNLSDFIEI PIKDCKEGFPNDQFGYGYHISEHWQELEHKSFRLPWEPLPTDTFRSLVPSTKSSRRGKVE PISKRLYPLAERIIPNKAKKIFEEYLSNIDSSFGKLIYPKDLLEMQIQEIYTKDDDSLIH FLWLEIAFRVAYMDLAPEIASCNERIYTNSLVNIYNRIDGRNVAPTGTVKWELILSLFTT KQIFLFESLAQHEWTILRNCRGNVSTDDSTQTKDFIDLYGKILLNEPLQFREIKKHLPRW PSDLMRAERDGDGDDRGPIQISTSRIRTRKVKSKLTLDFGKERIVLKRYHAESDYRRSLI RGSMRAKRKIMIWKRVOPNVHSLFFLRRMEIPTYPKDYYDTFDSGRVNOEOIOKEVREK IHRGKYLDPVLHNTTLAEQVCLAWPEVHYFRGLILVAQSNIRKNIILPSLIIAKNIGRIL LFKAPEFAODWEEMKEELHIKCGSDGTEFSKKGFPDKWYKYGMOIKLIFPFRLKPWHSOS KKRLRLRWSYLTTLGFETDIPFGDPKPKLGIFSEFFOPIFKKVKKGLKKGLKKGLKKGLK RELILFKKVKRRLMGSTGIRRVSRVRYIDKSELNDRIQNKLLSETETTPMGSANDSSEVN DOFGYETOTINVKDPDDWTTTMKERIESIAIINSSPITGMSLMDSEIHTGSKGSFNILGS TLKKRLVQIRRIPGRFRNKSVQLIRKRFYSMKLMKLFLKRMDRYLLLSVIHFIGSNIKFW IRSAWIRSTGNIATIYGRIFIINNDISKINRGKITNYYSINEKRKDFEIRPDRNMLSMSO AYVFHKIWQIGAIDRSYSKYFLKYRAQTSYPLIKKKIKELLDIQRILDHEKPQDLKENDW KOWLRCFDRYKLSPOIWSRINPOKWRNRVNKOCTCYEERFIPYEKKKDYIFATVIEPSLG LLRKMNKRYRYDLLSYSYLNSTKELDILNLTKDSDILNLTKDSDILNLTKDSDILNLTKD SDILNLTKDSDTLKIEKRRSGLDLKFWLFPELSGKENIYDNSKFIPGYSILSEAQERKKI EEKEREERIKVIEERIGIIRSDVONKKVEEKOTGTGEVEEKOTGKVKOKOFGLKVEDOKT DGKKKTNOVLVOHKILKDIGEEDISDLAGMCRILIEIEDPTKFMOIYEENINLNLMFLII YEDLKGYEKYINARDSNANDINANDINANDINAKDSNANDINAKDSNANDINANDSNAKD SNANDINAKDINAKDSNANDINAKDSNADVPKKKEDEIPKTVVSSEPYRLSSIVNDNLLI YKIVSMWLKSEKIKRAGLGDDKNILSSFNLEDILLPKRRREFRILNRFDLENDHVGFFNG KSIONDEELMGRDOHLSVDTTORIKRFLWPSYRLEDLLCMNRYWFNTNDGSRSAMLRIRM YPLNVN

>P08927

MASTFSATTSSCNLSSSAAISSFPLAAGKRNANKVVLPRKNRNVKVSAMAKELHFNKDGS AIKKLQNGVNKLADLVGVTLGPKGRNVVLESKYGSPKIVNDGVTVAKEVELEDPVENIGA KLVRQAAAKTNDLAGDGTTTSVVLAQGLIAEGVKVVAAGANPVLITRGIEKTSKALVAEL KKMSKEVEDSELADVAAVSAGNNHEVGNMIAEALSKVGRKGVVTLEEGKSAENSLYVVEG MQFDRGYISPYFVTDSEKMTVEFENCKLLLVDKKITNARDLINILEDAIRSGFPIVIIAE
DIEQEALATLVVNKLRGSLKIAALKAPGFGERKSQYLDDIAILTGGTVIREEVGLTLDKA
DKEVLGNAAKVVLTKDTTTIVGDGSTQEAVNKRVSQIKNQIEAAEQEYEKEKLSERIAKL
SGGVAVIQVGAQTETELKEKKLRVEDALNATKAAVEEGIVVGGGCTLLRLASKVDAIKDT
LANDEEKVGADIVKRALSYPLKLIAKNAGVNGSVVSEKVLSSDNPKYGYNAATGKYEDLM
AAGIIDPTKVVRCCLEHASSVAKTFLMSDCVVVEIKEPESAPVGNPMDNSGYGNI
>P38365

MTTGVAVMSSATAASTATATAAAATARIPLFLSRNNSSATVCSTLRCRTITRTRARLAI CCEVALKSDSSTGFDSSSSSPPEEDEELKKNLEKVGCKVKVKSPLKVYHVPKLPEVELTP DMVGVIKQYVGFWKGKYISPNYPFKVEYRIDVPDRGSVKLVVHLKEEEFEIIAE >Q20EX8

MRNTVLNTLNAFPTQLGSNKSTLSSKIFHSYLGVLRPPTPLNTSMEVLGEGAHQNREAKR SSLRFEFCSALKECQKGKVPFGSSLRLEAAENLTFECETGNYHTFCPISCVRWLYQQIAD SFFLVIGTKTCGYFLQNAMGVMIFAEPRYAMAELEEGDIAAQLNDYKELKRLCLQIKHDR NPSVIVWIGTCTTEIIKMDLENLAKLIEAELKVPIVVARANGLDYAFTQGEDTVLASLVN RCPSSHESSLDSMKLPSGGREKQINDVNTSKPEGYLSEVISLTSNGDDINKKSCTKPVPK KSLVLFGSVPNSVQTQLTLELAKQGINVDGWLPSRYSELPVLNKDVYVCGINPFLSRTAT SLMRRRKCHLISAPFPIGPDGTRRWIEKICTVLNTDKSSTSLEEVQKNLQQREEKVWKSL QSYLDLVKKKSVFFMGDNLLEISLARFFIRCGMIVYEIGIPYMDRRYQAAELALLEQTCL EMNVPLPRIVEKPDNYNQIQRIRELQPDIVVTGLAHSNPLEARGVTTKWSTEFTFAQIHG FANSRDVLELITRPVRRNQNLDALGFTSLVKN

>Q20EX9

MKLAVYGKGGIGKSTVSCNLSIALAKRGKKVLQIGCDPKHDSTFTLTGFLIPTIIDTLQS KDYHYEDIWPEDVIYAGYGGVDCVEAGGPPAGAGCGGYVVGETVKLLKELNAFYEYDVIL FDVLGDVVCGGFAAPLNYADYCLIVTDNGFDALFAANRIVASVREKARTHPLRLAGLIGN RTATRELIDKYVEVCRMPVLEVLPLIEEIRISRVKGKTIFELEELEPNLKSIGEYYLNIA DQLLAQPEGIVPQELADRDLFTLLSSFYLSDQQTEKAYSSIQHVHGSVGEGCSAQNSEQN OTANDYSFEFI

>Q40147

MAAVNGVGLSWPSKLTKNQTPKWGFSPSHRRCNPSSSSSATIRMTASVDEKKKTFTLEKS
EEAFSKAKELMPGGVNSPVRAFKSVGGQPIIIDSVKGSRMRDIDGNEYIDYVGSWGPAII
GHADDEVLAALAETMKKGTSFGAPCLLENTLAEMVISAVPSIEMVRFVNSGTEACMGVLR
LARAFTCRPKIIKFEGCYHGHADPFLVKAGSGVATLGLPDSPGVPKAATIDTLTAPYNDI
SAVESLFEEHKGEIAAVILEPVVGNAGFIPPKLEFLAAIRKITKENDALLIFDEVMTGFR
LAYGGAQEYFGITPDLTTLGKIIGGGLPVGAYGGRRDIMEMVAPAGPMYQAGTLSGNPLA
MTAGIHTLKRLQGQGTYEHLDKITAELTQGILDAGKKTGHAMCGGSIRGMFGFFFADGPI
YNFSDAKKSDTEKFGRFYRGMLEEGVYFAPSQFEAGFTSLAHTPEDIQRTVAAAEKVLKQ

Ι

>Q9FWS4

MAVSLPNSFLQISPCVPSLQLRKPVMAAVKGGKQSVRRSSNTVVQITCRKKELHPEFHED AKVYCNGELVMTTGGTKKEYVVDVWSGNHPFYLGNRSALMVDADQVEKFRKRFAGLSEIM EIPVLKGEIIMPTKKSKGPKGKKK

>A1E9Z1

 $\verb|MPNILSLTCICFNSVLYPTTSFFFAKLPEAYAIFNPIVDVMPVIPLFFFLLAFVWQAAVS|$

>08HUH1

MNVYVTLKTKLVAELRQIKQTLQTERNIIRVLRRKLKQIAAQKRFIKFLPKLRYLPTPVT KIEQTARFLVKKFVDPKMKYPMDSIYDKKLSRQSKKVAASRKKKWQRLEKYLGGISNMTK IKEKQIANNVAIIIGQQEEMNAVRECQKLGIKMFHIVDTNCNPGLADHFIPANDDARNSI KFILGKFLTRIRLAHKIKVKFKKTSLKK

>08S9K3

MNNSTRLISLFSPHPPPLFLLRGLYISRIANLRRFHRRAFPPSSVASTNLCSFRPLVSLP
PLIPTFPIGRFYNHQVRVSAADFVPSYHNQQLPEWTELLQSLSKAGYFSDSGSISGLESE
FFPGFPDELLRPALACLALARERPELLEMLSRRDVEVLVENGKPFLFKTGPDSLKRMSLY
LRSGLQGIGKLMDMEKASTVDLMRLILSYVVDVASSEESKQHNKEIMESSVRSLLSQIAK
MSLRPPESNVHDTMQNQYSDRDGQGVRSFQNNVEMKRGDWICSRCSGMNFARNVKCFQCD
EARPKRQLTGSEWECPQCDFYNYGRNVACLRCDCKRPRDSSLNSANSDYSSDPELERRLV
ENEKKAQRWLSKVAQGGSDANSVDTDEDFPEIMPLRKGVNRYVVSTRKPPLERRLANTEN
RVATDGNSKRSDDNALGSKTTRSLNEILGSSSSLTSRSDDKNVSSRRFESSQGINTDFVP
FVPLPSDMFAKKPKEETQIGLIDNIQVDGFSGGNQNVYQEDKSDANHSGKETDRLEKEDH
KSEEPARWFKRVTELHNVSDLESAIPQEISPEKMPMRKGENRFVVSRKKDRSLTSPAYKR
PEDSDFVPFVPFPPDYFAKEKQPKESIDTLPAPATENVSQVVQQEPREPSINKSDTVAVK
IRNGKSLEGSLVKESDLLDMSEEAKAERWFKRVAEIKNISELSEIPDEDFPSIMPMRKGV
NRFVVSKRKTPLERRLTSQRHQRNPHITNSDPTGKGDK

>004130

MAFSSSCSSVKAVNSRWTSPSPSPSSRFAVLPAFLHRRYATSVKLTAISAALKTVEQTTL
TEDNRFSTVGSDSDEYNPTLPKPRILVTEKLGEAGVNLLREFGDVDCSYDLSPEDLKKKV
AESDALIVRSGTKVTREVFEAAKGRLKVVGRAGVGIDNVDLQAATEHGCLVVNAPTANTV
AAAEHGIALLASMARNVAQADASIKAGKWERSKYVGVSLVGKTLAVMGFGKVGTEVARRA
KGLGMTVISHDPYAPADRARALGVDLVSFDQAISTADFVSLHMPLTPATKKVFNDETFSK
MKKGVRLINVARGGVIDEDALVRALDAGIVAQAALDVFCEEPPSKDSRLIQHENVTVTPH
LGASTKEAQEGVAIEIAEAVAGALKGELSATAVNAPMVAPEVLSELTPYIVLAEKLGRLA
VQLASGGKGVQSIRVVYRSARDRDDLDTRLLRAMITKGIIEPISDSYVNLVNADFIAKQK
GLRISEERMVVDSSPEYPVDSIQVQILNVESNFAGAVSDAGDISIEGKVKYGVPHLTCVG
SFGVDVSLEGNLILCRQVDQPGMIGQVGNILGEQNVNVNFMSVGRTVLRKQAIMAIGVDE
EPDNKTLERIGGVSAIEEFVFLKL

>020173

MNKKESILREFALLCYFFIVYLLLPKNAKHPLADKSFLDPHPVARVSPFGSRPPFLLMVP STSVPNASLESGQSSTISPRRQKESSIPVLQASGSVSANKTFQSTESSALHQPKSSSSER TGKIITRQRPHSGPTSPRVTPGELLPTLEALKLQEALDFAQLKLKTRQVRYTINLRSQKL LDTICELNDEKRAEVEEQAAYIFTLQKELVETGYEKVSSYNFTYSRLKQKAEELKYASKK EVAQLVNSL

>P48496

MAVVSTSLASQITNPNSAVSTQFSGLRRSFLKLENSVSTQSSFFQNVDSHLRLSSSSRRC PRGVVAMAGSGKFFVGGNWKCNGTKESITKLVSDLNSATLEADVDVVVAPPFVYIDQVKS SLTGRVEISAQNCWIGKGGAFTGEISVEQLKDLGCQWVILGHSERRHVIGEQNEFIGKKA AYALNQGVGVIACIGELLEEREAGKTFDVCYQQLKAFADALPSWDNVVVAYEPVWAIGTG KVASPDQAQEVHVAVRDWLKKNVSEEVASKTRIIYGGSVNGGNCAELAKQEDIDGFLVGG

ASLKGPEFATIVNSVTAKKVAA

>P34802

MASVTLGSWIVVHHHNHHHPSSILTKSRSRSCPITLTKPISFRSKRTVSSSSSIVSSSVV
TKEDNLRQSEPSSFDFMSYIITKAELVNKALDSAVPLREPLKIHEAMRYSLLAGGKRVRP
VLCIAACELVGGEESTAMPAACAVEMIHTMSLIHDDLPCMDNDDLRRGKPTNHKVFGEDV
AVLAGDALLSFAFEHLASATSSDVVSPVRVVRAVGELAKAIGTEGLVAGQVVDISSEGLD
LNDVGLEHLEFIHLHKTAALLEASAVLGAIVGGGSDDEIERLRKFARCIGLLFQVVDDIL
DVTKSSKELGKTAGKDLIADKLTYPKIMGLEKSREFAEKLNREARDQLLGFDSDKVAPLL
ALANYIAYRON

>P30956

MATMVAGISLRGPVMSSHRTFSVTKRASLPQSKLSSELSFVTSQLSGLKISSTHFISSSA PLSVPFKPSLQPVARRICPFTGKKSNRANKVSHSNHKTKKLQFVNLQYKRIWWEAGKRYV KLRLSTKAIKTIEKNGLDAVAKKAGIDLSKK

>049937

MATSTSSSLSLSFFSSSLFSSKSRNFSSKPILKLPSSSHSQTSLSLSIKSELIPLPILNF SGEKVGETFLNLKTAPPEKARAVVHRGLITHLQNKRRGTASTLTRAEVRGGGRKPYPQKK TGRARRGSQGSPLRPGGGVIFGPKPRDWTIKMNKKERRLALSTAIASAVGNSFVVEEFAE NFEKPKTKDFIAAMQRWGLDPAEKSLFFLMDLVENVEKSGRNIRTLKLLTPRSLNLFDVL NAEKLVFTEGTIQYLNQRYGVDTLEDEDEEEEEEEGEEVDDGVEDGTPEPAE

>P42757

MAFPIPARQLFIDGEWREPLLKNRIPIINPSTEEIIGDIPAATAEDVEVAVVAARKAFKR
NKGRDWAALWSHRAKYLRAIAAKITEKKDHFVKLETLDSGKPRDEAVLDIDDVATCFEYF
EYFAGQAEALDAKQKAPVTLPMERFKSHVLRQPIGVVGLISPWNYPLLMDTWKIAPALAA
GCTTVLKPSELASVTCLEFGEVCNEVGLPPGVLNILTGLGPDAGAPIVSHPDIDKVAFTG
SSATGSKIMASAAQLVKPVTLELGGKSPVIMFEDIDIETAVEWTLFGVFWTNGQICSATS
RLLVHESIAAEFVDRMVKWTKNIKISDPFEEGCRLGPVISKGQYDKIMKFISTAKSEGAT
ILCGGSRPEHLKKGYYIEPTIITDITTSMQIWKEEVFGPVICVKTFKTEDEAIELANDTE
YGLAGAVFSKDLERCERVTKALEVGAVWVNCSQPCFVHAPWGGVKRSGFGRELGEWGIEN
YLNIKQVTSDISDEPWGWYKSP

>Q10712

MATLRVSSLFASSSSSLHSNPSVFTKYQSSPKWAFSFPVTPLCSKRSKRIVHCIAGDTLG
LTRPNESDAPKISIGAKDTAVVQWQGDLLAIGATENDMARDENSKFKNPLLQQLDSELNG
LLSAASSEEDFSGKSGQSVNLRFPGGRITLVGLGSSASSPTSYHSLGQAAAAAAKSSQAR
NIAVALASTDGLSAESKINSASAIATGVVLGSFEDNRFRSESKKSTLESLDILGLGTGPE
IERKIKYAEHVCAGVILGRELVNAPANIVTPAVLAEEAKKIASTYSDVISVNILDAEQCK
ELKMGAYLAVAAAATENPPYFIHLCFKTPTKERKTKLALVGKGLTFDSGGYNLKVGARSR
IELMKNDMGGAAAVLGAAKALGEIRPSRVEVHFIVAACENMISAEGMRPGDIVTASNGKT
IEVNNTDAEGRLTLADALIYACNQGVEKIIDLATLTGAIMVALGPSVAGAFTPNDDLARE
VVEAAEASGEKLWRMPMEESYWESMKSGVADMINTGPGNGGAITGALFLKQFVDEKVQWL
HLDVAGPVWSDEKKNATGYGVSTLVEWVLRN

>Q9TL28

MPYIKHIETKRISARTYYGRFCVLPLPAGQGITLGNALRRILLGDLVGFAATSANLAGAS HEFDTLPGIRESVLEILLNIKQLVFKQISSRPKDTNRFAMRASLNLTGPATVTAKDLVLP SWMKVVDPSQYIATLASGASLEFEIQLSQGSGYRLRRTSLVPPGFTLPPPRDPLEPENDS KSETKSKSKGKSKNTSTSDVQLADTDVNAQIIDTDSNSTETEKEAPHIPSMRDDHMTLHI
DAVFFPVTRVNYRVEEEVINGRRREELVIDIWTNGSLSPRKALDQAAVILIRMLASLQAP
PPLLIEPEKKPTTKTIAKEIALTPIESLDLSVRSFNCLKRANITNVGKLIAYTRQELLQL
KNFGTKSASEVVDVLNSRFKLALKGEEVTDQEQVVNQPSSQIATKKGARKKVNRASRPID
SKETRRSRNPVKSTASEVPEKMLRKSSKTKVKAPKSETLPKPSKSANLQQAEESLQVPKL
RRKSELSSSONPEET

>P30524

MSSMQFSSVLPLEGKACVSPVRREGSACERLKIGDSSSIRHERASRRMCNGGARGPAATG
AQCVLTSDASPADTLVLRTSFRRNYADPNEVAAVILGGGTGTQLFPLTSTRATPAVPIGG
CYRLIDIPMSNCFNSGINKIFVMTQFNSASLNRHIHRTYLGGGINFTDGSVEVLAATQMP
GEAAGWFRGTADAVRKFIWVLEDYYKHKSIEHILILSGDQLYRMDYMELVQKHVDDNADI
TLSCAPVGESRASEYGLVKFDSSGRVIQFSEKPKGDDLEAMKVDTSFLNFAIDDPAKYPY
IASMGVYVFKRDVLLNLLKSRYAELHDFGSEILPRALHDHNVQAYVFTDYWEDIGTIRSF
FDANMALCEQPPKFEFYDPKTPFFTSPRYLPPTKSDKCRIKEAIISHGCFLRECKIEHSI
IGVRSRLNSGSELKNAMMMGADSYETEDEISRLMSEGKVPIGVGENTKISNCIIDMNARI
GRDVVISNKEGVOEADRPEEGYYIRSGIVVIOKNATIKDGTVV

>Q06RB0

MEKSERPLIKKKRPFRKKKRSFRKRRSPIESGHQIDFTNTSLLNQFISQQGKILPRKVTR LTLKQQRFMTSAIKQARILSLLPFVFDDKKVKKKQKEEFQKKQKEEFQKKQKEEFQKKQK EEFQKKQKEEFQKKQFQKKEFQRTKSTARTTNEKQTNEKQTKSTARTTNEKQ TKSTARTTNEKQTKSTARTTNEKQTKSTARTTNEKQTKSNDRTTDLRTRKK >09S7W5

MNIVSWKDANDEVAGGATTREREVKEDQEETEVRATSGKTVIKKQPTSISSSSSSWMKS
KDPRIVRVSRAFGGKDRHSKVCTLRGLRDRRVRLSVPTAIQLYDLQERLGVDQPSKAVDW
LLDAAKEEIDELPPLPISPENFSIFNHHQSFLNLGQRPGQDPTQLGFKINGCVQKSTTTS
REENDREKGENDVVYTNNHHVGSYGTYHNLEHHHHHHDHLSLQADYHSHQLHSLVPFPSQ
ILVCPMTTSPTTTTIQSLFPSSSSAGSGTMETLDPRQMVSHFQMPLMGNSSSSSSQNIST
LYSLLHGSSSNNGGRDIDNRMSSVQFNRTNSTTTANMSRHLGSERCTSRGSDHHM
>Q32063

MTCTRTLLVLNRMLALKANFVLHSVKSYLNVSGVNKTLPAKGSAGVKNGFILSHLGCQ >085CT7

MNIINLPELNYEVFFVFIELGLIFGSLGVVFLTNIVYSAFLLGLVFVCISFLYLLLDADF VATAQILIYVGAVNILIVFAVMLINKPQSLQFLPSWTVGDTITLILCTSLFFLLISMILS ISWSNIFSIAQSNKIGEQVLKSSVQGIGSSLLIDFLLPFELLSIVLLVALIGAITIARRE KKVKLOKNRTLOVTKDSFIL

>Q93WX6

MEGVAMKLPSFPNAISIGHRSFSRVRCSSSLSVCSAAAASSATISTDSESVSLGHRVRKD
FRILHQEVNGSKLVYLDSAATSQKPAAVLDALQNYYEFYNSNVHRGIHYLSAKATDEFEL
ARKKVARFINASDSREIVFTRNATEAINLVAYSWGLSNLKPGDEVILTVAEHHSCIVPWQ
IVSQKTGAVLKFVTLNEDEVPDINKLRELISPKTKLVAVHHVSNVLASSLPIEEIVVWAH
DVGAKVLVDACQSVPHMVVDVQKLNADFLVASSHKMCGPTGIGFLYGKSDLLHSMPPFLG
GGEMISDVFLDHSTYAEPPSRFEAGTPAIGEAIALGAAVDYLSGIGMPKIHEYEVEIGKY
LYEKLSSLPDVRIYGPRPSESVHRGALCSFNVEGLHPTDLATFLDQQHGVAIRSGHHCAQ
PLHRYLGVNASARASLYFYNTKDDVDAFIVALADTVSFFNSFK

MTFLNHYTYLFSIPEKOADKVSGILRLAOARPIETLONERINKOLNAFLKTYKFEKLITN YKKMQSFIPNNSLNGNKTNSSTNKLYATSLNVFPENPPLMVRKAVSDEADKFSKFTYSKV QVVTNNLNNGMNSKEFIKANNLKPSLRAAESLVLNHLTYNKFKENLYFKTNNIQPTKSKS TSLFFLNILSNSKPRTCSDFLSSPKIRKTWFRNTAWSLOTOOHRSSNGINLSLOLPYALG PSVPAGASGONMYELPVAOSSSRFGTYYFLOKLLSKYLDVWNASADNGSVLSNSENIKLN FSMVSLLDSKMAIOTPNSLYFVFTOLNOKTFLSYWLLPVAGLALLTPTLLTLTGOSVSVO KFNSFINKKTDMMVLSNTEMPSKSFGTPTLFGTSVEIYLPNSYMPKGEGESGINRVNSSI NAVKKNTVTANLVLDSESOEVATSFONDLISIKYCFNNLYNYISNKTALSTKNLFLFSAI KSNATKHKRTOSFFSVENTTTLGNNSNFVKGHFKSSINAFSSYLPSTNVHSMIPLTSLPY LKAISPLYSKFMIDHSLKFITPKTTLKLLQHKLNKSPKQMYTKTQNFTGLRDLRALNSFS FGOVNFRTNHFLHSNSRPLNHYNOALKLINGYEOYKNNLOINCNKTLDLNTKNKLVYOVH KSHLFNOKCSQIVYKOSLYNRDLCTIRGTGTKVVDYFSHGDKLSNKNGIVLDYFVYSNLL FDNKTNTIINKDGKQNITKLKLNLTKTTVPFKTLIKKYTSINSLVANEQTRNNLNLGLIH FNGHLSVVSNANLLTGRPVKFIYYKFDKRLNSYLIYVNONLKKFIOLNNNFLKPKPLSHO KNKPVEDFNOYATNNSSPPKTNVFEKSFVEDSSLRKPLTSLRGSKOFLNSLTILFKHOKM FKKKTLKAHKWHSDTOGIFRKHTNSSFGSANFSNGPEESSLSTRLHIOKKRKAKKORLET ${\tt RROKKRTRFFPRPVWLRSRMFLNFLTERNKYYLNSTITKOGFSLPSKDVVTTKLDWLKED}$ MRPSSLGAYOYKSLLTOKAGNKFOROSFTEVVSTMEYINGIHKALNNSIFNKIVRKSLLS SSQNPLKLRLVANYSKMQFMHRVKLPFYRTLKHSEGTKNLANKKQNLRDIKIKANYNNFK SOKANNOPOONDKDKDKDTMFRDFWVWSYNNTOTNAFNONLWWLLPNLTTKOSNLEFLTS TYPTAKETORAKEEIHGNSIPTASKNOIALIRLNWALNKTNINTFTDYSKRNNLWTTOKL RNOSKNNKTKSLEKOFITNWEKFFLNKNLNIFSKKIISKVKOKKOKLNYMTSYLNVOSEH NVKIFHNSWWTHLNIKNLVNNODMVIPVREGYFSVGNFNSEFINSAIIKSINNKTLVENY VYSPSSEKETMQLLLMSSSILLHLCAIISLVSISQVRCFVKFHLILLYKLSNVYNAILNQ LSNKLQKNLPIYNNINKLNSRYFYMNHQKSQIKQRKKLLTYFSLTLLKKQFVTVKPLQIR NFASIKNQSSNNSNLTYTDMLPLSLRANKFRGSKYDISIREEEGQSAHIKPSKSMYAKLN ILSLKTIFLKOLLMNKKPSALPSNVGLKSNRETOKSOLIORIKTKELOISLKKNIIGFSK VTKNHILKILFNVIEVFQTAVRNISSFFEKPAEFTTTWIAYGFLVEWSSDFITIIPENVD IYIWNVFSKIYRTIPLSFISTTLGPASTVFDPVTNSTIPIOMGNFNYOKMVAFPILLSLS HLLHRRILYLFDTLFSTITOPDTDLIAROEKGTLFWDIWADFLVTAADYYNVNVAALSTI KAEQNSLIENISNDFDNLTMSSKKPFFMPNKGVSNIKNIFWIKKLKEPQLPESIVQNREV FVRERKRTLKGLFNIYAPOEETLWNNPTSPKNLSDEKISFKLFNOLNLOLFAEKNKIKPY FEAYFSTTQQKTNIMQSAFPEANLNRWSVNQFITYQSWHSHNGSNNSNGDLFIDYHPPKT FSHIPALKYNSILOOPIGSLVCOIYSGLFNKOISKNILLVNPKTTSNNLVDYNVLLIOAL AGETEMKIITDNAORYALVNRGFAIGIKLLREVFDAIALNTPCIFLLEDIHAIGERRPML ISDFGGGMSDDNGSFKEDFFGSORDEVHEKNOVVYOLTRHAITHYKKPFKGDYSLAIPTN LYVTDLFLKLPTOSISNLTNVENHNLSIKNKIOHNGTOSLTETKRNLGGDINKNSYLOLT QFTKTLAPPSTSPFSVLLLKEEKRLKPNKIVEELPWTSLPGEQLATKPRTSYSVRAKVAM LAELSLSNLSAKLDMITDLLVIIDSVRSNKGFVVFATTDIPHVLDPALRRPGRLDETICL PNIHTSNILNFTKNYEIFKSAKDTSNFGKKIILNEMONLTTTSTORDMYLSCLPTNNOTH KTKREGVLTMNLKDYNILLNOVYFAEGTGGILNSOMHKDSLOKSLNFALISHSKKLKELN VSKLIGSNGTVSQGNVDQLGVFAGQIVNKQKKSLQQHLPNSKKSFKKKYKDKAIIYYEVG KFVLNYFLNNOLTOSSIIDKPVSVTNKOTNDITIFGNDFLNLKTINYLSLYNSKNKILLO

LMLIFGGKISQLLSSKNLVKSLKQASINSYMVEEESGSISSAGMPLGQTHLLPKALSVLA
KPMIFSDGYNNQNLKTATTLLLSFIHKRYLYRKNLIVPKLLSFADGNILDEPPSPPFSSL
LIPAKRFENYKRFFRDTLTGDKMGQRKSQITLLEKLQYHMQLRSIKQLNATFSSQENLDF
QSNAALTSQKLDTLMSLSTNNLLQNPTNINWYYQNRILKRHGQYLTNQWWNGQLSEHNAE
TVFLSDIDWRSSFIKNKNINITKSKNLYRLTQQKNNTDGLDVLLDFPDTDQYYNPKRRW
LLNNGSWNFWFNFDKLYSEEIVTTWILESLIQTYKYLHKNTELLDFVTNKFITLGYIAPE
NANLONISGFPSOSELLSTKEIILTNSFKRF

>P06258

MFLLYEYDFFWAFLIISILVPILAFLISGVLAPISKGPEKLSTYESGIEPMGDAWLQFRI RYYMFALVFVVFDVETVFLYPWAMSFDVLGVSVFIEAFIFVLILIIGLVYAWRKGALEWS

>P24613

MASATLAFSCSSLCATLKLPQNLNPLLLNVPPLSKPFSGVVSPPSLSRLSLLPVAAKRRR FQEIPEELKAEFEEFQRPPNQKPQLSDVLPDDFQAPEPGTPEYNDIINQFLPKKGPPPPR EEIFAVVVIGSRQYIVIPGRWIYTQRLKGATVNDKIVLNKVLLVGTKASTYIGTPIVTNA AVHAVVEEQLLDDKVIVFKYKKKKNYRRNIGHRQPITRIKITGITGYEDYPASTLEAEVE AKEEAEAEAEAEAVPV

>P56809

 ${\tt MLLLKHGRIEILDQNTMYGWYELPKQEFLNSEQPELLLTTSKKFPLIKDGNPLENQKYAC} \\ {\tt RIKLLLLSVPITNQLNN}$

>P28759

MASLGGLQNVSGINFLIKEGPKVNAKFELKPPPYPLNGLEPVMSQQTLEFHWGKHHKTYV ENLKKQVVGTELDGKSLEEIIVTSYNKGDILPAFNNAAQVWNHDFFWECMKPGGGGKPSG ELLELIERDFGSFVKFLDEFKAAAATQFGSGWAWLAYRARKFDGENVANPPSPDEDNKLV VLKSPNAVNPLVWGGYYPLLTIDVWEHAYYLDFQNRRPDYISVFMDKLVSWDAVSSRLEQ AKALITSA

>Q06GS8

 ${\tt MVKLRLKRCGRKQRAVYRIVAIDVRSRREGRDLQKVGFYDPIKNQTYLNVPAVLYFLGKG} \\ {\tt AQPTGTVHDISKKAEIFKELRVNQTIRVNQTKGGLHI}$

>Q43064

MTASSSLFSCSMHMEVLTPKISKWPKDFVSCHSKISYVETNYLKSTCYPISRFLCINNLS
KCDKMIKTRQRDGIHCFSEGQKFQLDDVIEAQQFDRDILNAIFEIARDMENIERNSPESQ
ILKGYLMATLFYEPSTRTRLSFESAMRRLGGEVLTTENAREFSSAAKGETLEDTIRTVEG
YSDLIVLRHFESGAARRAAAIAGIPIVNAGDGPGQHPSQALLDVYTIEREIGKLDGIKVG
LVGDLANGRTVRSLAYLLAKYKDVKIYFVSPEVVKMKDDIKDYLTSKGVDWEESSDLVEV
ASECDVVYQTRIQKERFGERLDLYEKARGKFIVNQNILNAMQRHAVIMHPLPRLDEITVD
VDADPRAAYFRQAKYGLYIRMALLKLLLVGW

>A4GYN8

MPTIKQLIRNTRQPIRNVTKSPALGGCPQRRGTCTRVYSGSKGDLSVNFSTITPKKPNSA LRKVARVRLTSGFEITAYIPGIGHNSQEHSVVLVRGGRVKDLPGVRYHIVRGTLDAVGVK DRQQGRSQYGVKKPK

>07YKY4

MNLISKKNELKQGFYPLFFLEEFYIRVLIHMNHNHILKIGNIKQSKLIHVNRICHYLLIK RLIRQIRKQSHKYNGISEFPNYETEFYFQYKNRFYNLMIENVFLLILQMIWQHQKTRKND PCILIHRSIQSTFPFLENKIIHCIWIIHGNIQLFHTIQQLNFLFLLLYERIRDKSFLHLL
KNIFNLKKELLIEAFYCDKFHLIELSMFFRNLYINEFDSFIVYHIVKTWKLAYLLNPSQA
IDDSSFIQKNHILLNIKRKQKSLPLVSWLANRSFYSLYGNIHYVRRDLSFLMAIQAGKHI
SRFWKYNSINFLQLKLGFPCSLDVLYLKSLFNQDFLFLGYRIVNKLWKKNFKIRAVSWYS
PILFFFKGRRISTKMPVLNLIHRLSVMHLCNLEGYPIHKAAWSVFNDKQIMNIFSNLLRN
IILYYSGCSNRSDLGKIQYILEFSCMKTLAFKHKSSIRSTWTQYKKHVSLLSLVKNRHKN
GKTSVDLYFLFOKTNKLWLLDLSKIODSLACFIFID

>P34811

MAAESSLRVATPTLCNLNGSQRRPTTTTLSPLRFMGFRPRPSSHSLTSSSLSHFFGSTRI
HSNSSSSYSSISRQHAPRRNFSVFAMSADGDAKRSVPLKDYRNIGIMAHIDAGKTTTTER
ILYYTGRNYKIGEVHEGTATMDWMEQEQERGITITSAATTTFWNKHRINIIDTPGHVDFT
LEVERALRVLDGAICLFDSVAGVEPQSETVWRQADKYGVPRICFVNKMDRLGANFYRTRD
MIVTNLGAKPLVIQLPIGSEDNFKGVIDLVRNKAIVWSGEELGAKFDIVDIPEDLQEQAQ
DYRAQMIENIVEFDDQAMENYLEGIEPDEETIKKLIRKGTISASFVPVMCGSAFKNKGVQ
PLLDAVVDYLPSPLDLPAMKGSDPENPEATIERLASDDEPFAGLAFKIMSDPFVGSLTFV
RVYAGKLGAGSYVLNANKGKKERIGRLLEMHANSRDDVKVALAGDIIALAGLKDTITGET
LCDPDNPIVLERMDFPDPVIKVAIEPKTKADVDKMATGLIKLAQEDPSFHFSRDEEINQT
VIEGMGELHLEIIVDRLKREFKVEANVGAPQVNYRESISKISEVKYVHKKQSGGQGQFAD
ITVRFEPMDPGSGYEFKSEIKGGAVPREYIPGVMKGLEECMSNGVLAGFPVVDVRAVLTD
GSYHDVDSSVLAFQLAARGAFREGIRKAGPRMLEPIMKVEVVTPEEHLGDVIGDLNSRRG
QINSFGDKPGGLKVVDSLVPLAEMFQYVSTLRGMTKGRASYTMQLAMFDVVPQHIQNQLA
TKEQEVAA

>09LE95

MATAAPPSLSLCYASSSFQYQQDPSFQTHFKPLLLNSSLCRLTLNQRERSCLKWVDFTSQ
KQSPKSVSFRVLAAVAAEAEVADMEEEEGESGGVATLPSPTKPKKGKAALPLKSDRTRSK
RFLEIQKLREIKQEYDLKTALSLMKQMSSTKFVETAEAHFRLNIDPKYNDQQLRATVSLP
KGTGKTVKIAVLAQGDKIDEAKAAGADIVGGEELIEQIKGGFMDFDKLIATSDMMAKVAS
LGRILGPRGLMPTPKAGTVTPNVAQAVEEFKKGKVEFRVDKTGIVHIPFGKLNFEEEDLL
INLFATIKSVETNKPTGAKGVYWKSAHISSSMGPSIRLNIREMLDYKPPSNA

>O9MUP3

MYFQNIDALIFSKLLDTLLNIFFLLFFLVLGAEFTLYIINVYFPNLLLYGNALGIKFVLS
ILGSLIAFPIGLVFQNNYKNFLNYINNFTVDIFFTSLLSIIGALFIANLYFSFLDISSIL
KEFLFIKYLLRLLIQTILCYSGFILVTFHSDYLLNILVPEMAEAIFSYNKIVRPSITRVL
HTSYIINHNIIAIFQSQFVEGLVLIPKSTIQELQILNNSKNFKDKYLGRLGFSRLNELKY
NYFDQIILESSLTNCHENVLFKYNKTYNNEQQNIVLMSSCSNNIKESNISQLLISNLFPL
IININKLIELLKLPYLSGESFYLQIVRKGKRLGQGIGYLEDGTMVIVNAGSKYIGQKIKV
IVKKVWOKSTGKILFTOPIKNS

>P25851

MAATAATTTSSHLLLSSSRHVASSSQPSILSPRSLFSNNGKRAPTGVRNHQYASGVRCMA VAADAAETKTAARKKSGYELQTLTGWLLRQEMKGEIDAELTIVMSSISLACKQIASLVQR AGISNLTGVQGAVNIQGEDQKKLDVISNEVFSNCLRSSGRTGIIASEEEDVPVAVEESYS GNYVVVFDPLDGSSNIDAAVSTGSIFGIYSPNDECIVDDSDDISALGSEEQRCIVNVCQP GNNLLAAGYCMYSSSVIFVLTLGKGVFSFTLDPMYGEFVLTQENIEIPKAGRIYSFNEGN YQMWDDKLKKYIDDLKDPGPTGKPYSARYIGSLVGDFHRTLLYGGIYGYPRDAKSKNGKL RLLYECAPMSFIVEQAGGKGSDGHSRVLDIQPTEIHQRVPLYIGSTEEVEKLEKYLA >P27456

MNQAMATPLSLSCCSPTLTRSTLFFTKTFPFSRSFSTPLPLSTKTLISLSPPHRTFAVRA ESQNGADPARQYDFDLFTIGAGSGGVRASRFASNFGASSAVCELPFSTISSDTTGGVGGT CVIRGCVPKKLLVYASKFSHEFEESNGFGWRYDSEPKHDWSSLIANKNAELQRLTGIYKN TLKNAGVKLIEGRGKIVDAHTVDVDGKLYSAKHILVSVGGRPFIPDIPGKEYAIDSDAAL DLPSKPQKIAIVGGGYIALEFAGIFNGLKSEVHVFIRQKKVLRGFDEEIRDFVAENMALR GIEFHTEESPVAITKAADGSLSLKTNKGTEEGFSHIMFATGRSPNTKDLGLESVGVKVAK DGSIEVDEYSQTSVPSIWAIGDATNRVNLTPVALMEGVALAKTLFQNEPTKPDYRAIPSA VFSQPPIGGVGLTEEQAAEQYGDIDVFTANFRPMKATLSGLPDRVFMKLIVSAETNVVLG LHMCGEDAAEIAQGFAVGIKAGLTKADFDATVGIHPTAAEEFVTMRTPTRKVRKNQASQG KSDSKAKAVAGS

>Q85FL6

MVLTSDHLDKKNIRKIEYKGEDSFSNSMSKLPLQGGMSDSIFMASISDFSNWSRLSSLWP LLYGTSCCFIEFASLIGSRFDFDRYGLVPRSSPRQADLIVTAGTITMKMAPSLIRLYEQM PEPKYVIAMGACTITGGMFSTDSYSTVRGVDKLIPVDIYLPGCPPKPEAIMDAVTKLRKK IARNRFVNRASRPIRTKYFSISHQLNLVPGTCAGKYNWDRENCGTKLAPANFSENCQKFA NEHDELKSAI

>Q93Y52

MALAIRSSLRAAAMGRKAFRQAVPVRVAPAQRVRSVTTASAEITAYSVEEKGPKDSLEYR MFFKQGAKEVSCWHEIPLYAGDGHLHYICEIPKETSAKMEVATDEPRTPIKQDVKKGKLR FYPYNINWNYGMLPQTWEDPGHTDATLGAAGDNDPVDVVEIGAAAAKRGGVYKVKPVGVL AMIDDGELDWKVIAISADDPKAALCNDVEDVEKHFPGEIQKVLEWFRDYKIPDGKPANKF GYDNKCMNKEFTLNVIKETHEAYVKLKSGARANSEELSLI

>Q9M4G5

MAMESALTSTRVSIPSLCSGISSSHHHHRSLSFLNFPKLSSFKYSFRTISPVPFVVSASS
VSPSSPSTSVAQSQDLKIKSVPTKPIEGQKTGTSGLRKKVKVFMQDNYLANWIQALFNSL
PLEDYKNGLLVLGGDGRYFNREAAQIIIKIAAGNGVGKILVGKDGILSTQAVSAVIRKRE
ANGGFIMSASHNPGGPEYDWGIKFNYSSGQPAPESITDKIYGNTLSISEIKIADIPDVDL
SQLGVTKYGNFSVEVVDPVADYLELMENVFDFSLIRSLVSRPDFRFVFDAMHAVTGAYAK
PIFVDKLGASLESIANGVPLEDFGHGHPDPNLTYAEDLVNILYGENGPDFGAASDGDGDR
NMILGRSFFVTPSDSVAIIAAQCQYAIHYFQSGPKGLARSMPTSGSLDRVAQKLNLPFFE
VPTGWKFFGNLMDAGKLSICGEESFGTGSDHIREKDGIWAVLAWLSILAYRNKDKKSGEK
LVSVADVVKDHWATYGRNFFSRYDYEECESEGANNMIEYLRDLISKSKAGDKYGSYSLDF
ADDFAYTDPVDGSVASKQGVRFVFSDGSRIIFRLSGTGSAGATVRIYIEQFEPDVSKHDM
DAQIALKPLIDLALSVSKLKDFTGREKPTVIT

>Q96529

MSLSSLTLDSNPRFAVGGPYHRRYPPLHHPRSFVSCSAKRPAVSASLSVAADSAATESLG RIGSLSQVSGVLGCQWGDEGKGKLVDILAQHFDIVARCQGGANAGHTIYNSEGKKFALHL VPSGILNEDTTCVIGNGVVVHLPGLFKEIDGLESNGVSCKGRILVSDRAHLLFDFHQEVD GLRESELAKSFIGTTKRGIGPAYSSKVIRNGIRVGDLRHMDTLPQKLDLLLSDAAARFQG FKYTPEMLREEVEAYKRYADRLEPYITDTVHFINDSISQKKKVLVEGGQATMLDIDFGTY PFVTSSSPSAGGICTGLGIAPSVVGDLIGVVKAYTTRVGSGPFPTENLGTGGDLLRLAGQ EFGTTTGRPRRCGWLDIVALKFSCQINGFASLNLTKLDVLSDLNEIQLGVAYKRSDGTPV KSFPGDLRLLEELHVEYEVLPGWKSDISSVRNYSDLPKAAQQYVERIEELVGVPIHYIGI GPGRDALIYK

>P42698

MLGGLYGDLPPPTDDEKPSGNSSSVWSSSTKMAPPTLRKPPAFAPPQTILRPLNKPKPIV
SAPYKPPPPSNSSQSVLIPANESAPSHQPALVGVTSSVIEEYDPARPNDYEEYKREKKRK
ATEAEMKREMDKRRQEDEERDKREREEREKERERDNSDPSRLNISGEEAWKRRAAMSGGG
SGGKGRSSSPPGNVDGFSIGKSETSGLGVGAGGQMTAAQRMMAKMGWKQGQGLGKSEQGI
TTPLMAKKTDRRAGVIVNASENKSSSAEKKVVKSVNINGEPTRVLLLRNMVGPGQVDDEL
EDEVGGECGKYGTVTRVLIFEITEPNFPVHEAVRIFVQFSRPEETTKALVDLDGRYFGGR
TVRATFYDEEKFSKNELAPVPGEIPGY

>Q9XIR4

MLLVSPACRGVYLQTIDPKPIDFSARASYALCFQIPTSIPKRECLMRLGTVFCFNQKHRE
QTSFKKRYVSTQNVDLPPILPKNKKKPYPIPFKQIQEEARKDKKLAQMGIEKQLDPPKNG
LLVPNLVPVADQVIDNWKLLIKGLAQLLHVVPVFACSECGAVHVANVGHNIRDCNGPTNS
QRRGSHSWVKGTINDVLIPVESYHMYDPFGRRIKHETRFEYERIPALVELCIQAGVEIPE
YPCRRRTQPIRMMGKRVIDRGGYHKEPEKPQTSSSLSSPLAELDTLGVFERYPPPTPEDI
PKIAQETMDAYEKVRLGVTKLMRKFTVKACGYCSEVHVGPWGHSVKLCGEFKHQWRDGKH
GWQDALVDEVFPPNYVWHVRDLKGNPLTGNLRRFYGKAPALVEICMHSGARVPQRYKAMM
RLDIIVPDSOEADMVA

>006FW2

MAKGKDNRGKVTLECTGCVQNRVNNKKKKKSAGIYRYLTQKNPKNTPSPLELRKFCPYCN KHTIHGEIKE

>084Y95

 ${\tt MALRSVKTPTLITSVAVVSSSVTNKPHSIRFSLKPTSALVVHNHQLSFYGSNLKLKPTKF} \\ {\tt RCSASALTPQLKDTLEKLVNSEKVVLFMKGTRDFPMCGFSNTVVQILKNLNVPFEDVNIL} \\ {\tt ENEMLRQGLKEYSNWPTFPQLYIGGEFFGGCDITLEAFKTGELQEEVEKAMCS} \\ \\$

>024474

MALVSISPLASKSCLRKSLISSIHEHKPPYRTIPNLGMRRRGKSVTPSMSISLATAAPDD GVQRRIGDYHSNIWDDDFIQSLSTPYGEPSYQERAERLIVEVKKIFNSMYLDDGRLMSSF NDLMQRLWIVDSVERLGIARHFKNEITSALDYVFRYWEENGIGCGRDSIVTDLNSTALGF RTLRLHGYTVSPEVLKAFQDQNGQFVCSPGQTEGEIRSVLNLYRASLIAFPGEKVMEEAE IFSTRYLKEALQKIPVSALSQEIKFVMEYGWHTNLPRLEARNYIDTLEKDTSAWLNKNAG KKLLELAKLEFNIFNSLQQKELQYLLRWWKESDLPKLTFARHRHVEFYTLASCIAIDPKH SAFRLGFAKMCHLVTVLDDIYDTFGTIDELELFTSAIKRWNSSEIEHLPEYMKCVYMVVF ETVNELTREAEKTQGRNTLNYVRKAWEAYFDSYMEEAKWISNGYLPMFEEYHENGKVSSA YRVATLQPILTLNAWLPDYILKGIDFPSRFNDLASSFLRLRGDTRCYKADRDRGEEASCI SCYMKDNPGSTEEDALNHINAMVNDIIKELNWELLRSNDNIPMLAKKHAFDITRALHHLY IYRDGFSVANKETKKLVMETLLESMLF

>P05466

MAQVSRICNGVQNPSLISNLSKSSQRKSPLSVSLKTQQHPRAYPISSSWGLKKSGMTLIG SELRPLKVMSSVSTAEKASEIVLQPIREISGLIKLPGSKSLSNRILLLAALSEGTTVVDN LLNSDDINYMLDALKRLGLNVETDSENNRAVVEGCGGIFPASIDSKSDIELYLGNAGTAM RPLTAAVTAAGGNASYVLDGVPRMRERPIGDLVVGLKQLGADVECTLGTNCPPVRVNANG GLPGGKVKLSGSISSQYLTALLMSAPLALGDVEIEIVDKLISVPYVEMTLKLMERFGVSV EHSDSWDRFFVKGGQKYKSPGNAYVEGDASSASYFLAGAAITGETVTVEGCGTTSLQGDV KFAEVLEKMGCKVSWTENSVTVTGPPRDAFGMRHLRAIDVNMNKMPDVAMTLAVVALFAD GPTTIRDVASWRVKETERMIAICTELRKLGATVEEGSDYCVITPPKKVKTAEIDTYDDHR MAMAFSLAACADVPITINDPGCTRKTFPDYFQVLERITKH

>P03938

MAYSSCLNRSLKPNKLLLRRIDGAIQVRSHVDRTFYSLVGSGRSGGPPGLLSSRESIHP LSVYGELSLEHRLRFVLNGKMEHLTTHLHRPRTTRSPLSFWGDGGIVPFEPFFHAFPGGL EKAVINRTSLILPS

>080439

MASLILGAPPRVTVALPSSRLSSSHSETAGVSLSCFTHQFSLSTSSSSSIPLVYCGRGDR KTAKGKRFNHSFGNARPRNKSKGRGPERVPVPPAPPRKDKFENDEKIKIDIDESLFSN >Q9MUQ5

MNKFFSINIILWALIGLNFHILSYSLKISISNFPWQWPQEGLETYMIHTDYYLGSILFIS FLGGRFASLISQLAYQIIQINIVQLIIFFSKNLHISFLLPNILNQLINLDTNRGTITEYT CIQDHIINNGWLSYFVVNLISYDLFENTLNQYNTQAIDSFFNKSVIFLIRLYIMNILFSL LTSNSLNEWIMYSIKDNFLLLPNQLIIICSVVLLVFLLQFCVY

>Q9ZS97

MASLLANGISSFSPQPTSDSSKSPKGFHPKPESLKFPSPKSLNPTRPIFKLRADVGIDSR
PIGASESSSSGTSTVSSTDKLQQYFQNLDYDKKYGFVEDIDSFTIPKGLSEETIRLISKL
KEEPDWMLEFRFKAYAKFLKLEEPKWSDNRYPSINFQDMCYYSAPKKKPTLNSLDEVDPQ
LLEYFDKLGVPLTEQKRLANVAVDAVIDSVSIATTHRKTLEKSGVIFCSISEAIREYPDL
IKKYLGRVVPSDDNYYAALNSAVFSDGSFCYIPKNTRCPMPISTYFRINAMETGQFERTL
IVAEEGSFVEYLEGCTAPSYDTNQLHAAVVELYCGKGAEIKYSTVQNWYAGDEQGKGGIY
NFVTKRGLCAGDRSKISWTQVETGSAITWKYPSVVLEGDDSVGEFYSVALTNNYQQADTG
TKMIHKGKNTKSRIISKGISAGHSRNCYRGLVQVQSKAEGAKNTSTCDSMLIGDKAAANT
YPYIQVKNPSAKVEHEASTSKIGEDQLFYFQQRGIDHERALAAMISGFCRDVFNKLPDEF
GAEVNQLMSIKLEGSVG

>P27608

MALSSSTTNSLLPNKSQLVQNQSLLPSPLKNVSFTTNSTKPVRFVQPISAIHSSDSSKN PIVSDKPSSKPSPPAATVTAAATTVTKTEWTVESWKSKKALQLPEYPNQEELQSVLKTIE EFPPIVFAGEARSLEERLGEAAMGRAFLLQGGDCAESFKEFNANNIRDTFRILLQMGAVL MFGGQMPVIKVGRMAGQFAKPRSDNFEEKNGVKLPSYRGDNVNGDAFDAKSRTPDPQRLI RAYCQSAATLNLLRAFATGGYAAMQRINQWNLDFTEHSEQGDRYRELANRVDEALGFMAA AGLTVDHPIMKTTEFWTSHECLLLPYEQSLTRLDSTSGLYYDCSAHFIWVGERTRQLDGA HVEFLRGVANPLGIKVSDKMDPSALVKLIEILNPDNKAGRITIITRMGAENMRVKLPHLI RAVRRAGQIVTWVSDPMHGNTIKAPCGLKTRPFDSIRAEVRAFFDVHEQEGSHPGGVHLE MTGQNVTECIGGSRTVTFDDLSSRYHTHCDPRLNASQSLELAFIIAERLRKRRLGSQNVL GO

>Q9MUQ8

MINIEFGPSTILGIAVVCGGILLYITRTIKPEISRDHDIFFSSVALLIGGILIFQGWRLD PILLFGQMLSTGTALCFIIESLKLRVPKENNKSLFSTQNKNNSNNRIIKFQPPSKYDINL NQRGKKEKKNNNFQLKENSKYTKDSLVPSNWNDINISSIDYEKPIDYQKK

>Q9LWB5

MATTAPNLHSLSSSFAFSNPSSNVSATSFTFOIPNKKAQISCISSKKLHTQKSFNFHDAV

TPMNKPSFGRDLMVAQATEAVAPTTEEAATSQPKTSKKAKKLKYPRRILDVYQILQSPII TEAAIKNIADENSLLFTVDVRADKKMIREAISNFFGVKVRKVNTLIRPDGTKKAYIMLNK EYNASELAKKIGIFPGGN

>P09753

MSRKKTIKDYENLAATRNHEVISVSNKETPSQGDITLLCKTCNKEFTTTTISYQNARKTG
CPHCKATSASLYWTGRARTKTPEQAKKNAEIKEHINKTRKEKGKAFANIKNKEDLKEKLT
NDLYLPNGEKNAYNDFILKRLNDPVTGKMMEKHHIIPLHAGGPDEKWNLISLTPEDHIEA
HNLRYLVYNETGDKNTIKFRNKTPNVTDQISKAKALGNETRRAQGTGIYEPGMSSKAGKI
GGSVKSVEKDLKQSTKMTSGVYDALYNGSRWKHTKTNTEIVIPPNTIVKMPQLVEKLIEA
LPPCEEKTRLAGAKLTTATSALARVIKGKNEGGRSSYFGWSICKE

>Q9M4W3

MAMATSFYCSTAIPSKKTNQNRENFLCSPVGGSKTTPSYIRLSTRQSRTLSLVVSAAASG
AAVEAEPKFAAVTPSKILSFRVGHGFDLHRLEPGYPLIIGGINIPHDRGCEAHSDGDVLL
HCVVDAILGALGLPDIGQIFPDTDPKWKGAPSSVFIKEAVRLMDEAGYELGNLDATLILQ
RPKVSPHKEAIRQNLCQLLGADPCVVNLKAKTHEKVDSLGENRSIAAHTVVLLMRK
>P0.9754

MDFYNICCKYLKEIELTREDYSADRNSPQYNLFCSHHINPKFNKGGDEPENLVLLHYFEH
AYVHLFRWLITDNPRDLGGFTSAMNAKERRELQIEKRRENPPKLTLPPLPPPAEERKKPA
KTAKAIRAGKAVGSKYQLQSLKRANPFTMFMANLVLKFINNNGIEVIHKPSDNIKDVSVN
SASAIGRALNNVYPTETLTNSPDGISKLLKGTNKIVQNWRIDSLFIDDFEYEITQEVLLK
YQDLFETLTTYFSENQELSILELTKSMADIRNSNPKEIALIQKMFTFIKKWSFLIKSLSE
GKADDEIDLPTD

>06JJ61

MAAYSAAALSWSSSSLLGNYKLSKNAPLGTAKLVERTSNFTIVCQKKTKKIRKIILKEDV QELGKKGQLMNVRAGYYRNYLLPMGMAQIVTPQLLKEMKIEEERIEAEKKRVKEEAQQLA LIFETVGGFKVKRKGGKGKQIFGSVTAQDLVDIIKAQLQREVDKRIVSLPEIRETGAYTA ELKLHPEVTARVQVIVSAN

>P23326

MAMASATATLSFKTPSLSLSPPSTRCSAAQGISLTHFNKQLKSTLNLSSSSSISSSKVQP IVLKNKRISTVDSSVSTSSPSFTVFAAKGYKMKTHKASAKRFRVTGKGKIVRRRAGKQHL LAKKNTKRKNRLSKLIOVDRSDYDNVIGALPYLKVNRKV

>Q9TKU9

 ${\tt MAVPKKRKSKSRANSQNHVWKREIVKQARRAVSLAKALLGGNTNFLLVSPGPTTPIKPNP} \\ {\tt KKQTGRRPRSQRRRT}$

>P26302

MAFCSPHTTTSLRSPCTTIPNSGFRQNQVIFFTTRSSRRSNTRHGARTFQVSCAVEQPIV
IGLAADSGCGKSTFMRRLTSVFGGAAEPPKGGNPDSNTLISDTTTVICLDDYHSLDRTGR
KEKGVTALDPKANDFDLMYEQVKAIKEGKAIEKPIYNHVTGLLDPAELIQPPKIFVIEGL
HPMYDERVRELLDFSIYLDISNEVKFAWKIQRDMAERGHSLESIKASIEARKPDFDAFID
PQKQYADAVIEVLPTQLIPDDNEGKVLRVKLIMKEGIKFFNPVYLFDEGSTINWIPCGRK
LTCSYPGIKFSYGPDTYFGQEVSVLEMDGQFDRLDELIYVESHLSNLSTKFYGEVTQQML
KHADFPGSNNGTGLFQTIVGLKIRDLYEQIIAERAGVPAEAAKV

>Q9XJ27

MASITNLASSLSSLSFSSOVSORPNTISFPRANSVFALPAKSARRASLSITATVSAPPEE

EEIVELKKYVKSRLPGGFAAQKIIGTGRRKCAIARVVLQEGTGKVIINYRDAKEYLQGNP LWLQYVKVPLVTLGYENSYDIFVKAHGGGLSGQAQAITLGVARALLKVSADHRSPLKKEG LLTRDARVVERKKAGLKKARKAPQFSKR

>Q9LS01

MASSSAAMSLESISMTTLNNLSRNHQSHRSSLLGFSRSFQNLGISSNGPDFSSRSRSTTS KNLNVTRAFFWNWGKKTENSRPSKIQELNVYELNEGDRNSPAVLKLGKKPTELCLGDLVP FTNKLYTGDLKKRVGITAGLCVLIQHVPEKSGDRFEASYSFYFGDYGHLSVQGQYLTYED TFLAVTGGSGIFEGAYGQVKLRQLVYPTKLFYTFYLKGLANDLPLELTGTAVTPSKDVKP APEAKAMEPSGVISNFTN

>P13564

MQVRRDDDGAGGCAGDAVPGGGEGQDGVPARQPAGRVWGVSRAARATSGFKVLALGPETT GVIQRMQQLLDMDTTPFTDKIIAEYIWVGGSGIDLRSKSRTISKPVEDPSELPKWNYDGS STGQAPGEDSEVILYPQAIFKDPFRGGNNILVICDTYTPQGEPIPTNKRHMAAQIFSDPK VTSQVPWFGIEQEYTLMQRDVNWPLGWPVGGYPGPQGPYYCAVGSDKSFGRDISDAHYKA CLYAGIEISGTNGEVMPGQWEYQVGPSVGIDAGDHIWASRYILERITEQAGVVLTLDPKP IQGDWNGAGCHTNYSTLSMREDGGFDVIKKAILNLSLRHDLHIAAYGEGNERRLTGLHET ASISDFSWGVANRGCSIRVGRDTEAKGKGYLEDRRPASNMDPYTVTALLAETTILWEPTL EAEALAAKKLALKV

>P46489

MAVVKLSPWANYSSSKSEIKSSSSSSSSSSSSSSSSSSPRLSFYNPYPRRLHHQRL SSPASIRCSVTSSDQIQAPLPAKQKPECFGVFCLTYDLKAEEETKSWKKIINVAVSGAAG MISNHLLFKLASGEVFGPDQPISLKLLGSERSFAALEGVAMELEDSLYPLLRQVSIGIDP YEIFQDAEWALLIGAKPRGPGMERADLLDINGQIFAEQGKALNAVASPNVKVMVVGNPCN TNALICLKNAPNIPPKNFHALTRLDENRAKCQLALKAGVFYDKVSNVTIWGNHSTTQVPD FLNAKIHGIPVTEVIRDRKWLEDEFTNMVQTRGGVLIKKWGRSSAASTAVSIVDAIRSLV TPTPEGDWFSTGVYTNGNPYGIAEDIVFSMPCRSKGDGDYEFVKDVIFDDYLSKKIKKSE DELLAEKKCVAHLTGEGIAVCDLPEDTMLPGEM

>09FYA6

MERSAVASGFHRNYILCASRAATSTTRLHSLSSLRNFPSSSLRIRHCPSPISSNFIVSEV SRNRRCDAVSSSTTDVTELAEIDWDKIDFGLKPTDYMYAMKCSRDGEFSQGQLQPFGNID INPAAGVLNYGQGLFEGLKAYRKQDGNILLFRPEENAIRMRNGAERMCMPSPTVEQFVEA VKTTVLANKRWIPPPGKGSLYIRPLLMGTGAVLGLAPAPEYTFLIFVSPVGNYFKEGVAP INLIVETEFHRATPGGTGGVKTIGNYAAVLKAQSIAKAKGYSDVLYLDCLHKRYLEEVSS CNIFIVKDNVISTPEIKGTILPGITRKSIIEVARSQGFKVEERNVTVDELVEADEVFCTG TAVVLSPVGSITYKSQRFSYGEDGFGTVSKQLYTSLTSLQMGLSEDNMNWTVQLS

>P08889

MPPCSSKSILSTKSSMFILVSFALLRFIFYFVEFYRLVIGMNNLEIKRMNQKIVRNSERW EDPFDRIISFHYIDNFKKLFIL

>022886

MSILQVSTSSLSSSTLLSISPRKSLSSTKSCRIVRCSVEGTTVTERKVSATSEPLLLRAV KGEVVDRPPVWLMRQAGRYMKSYQTLCEKYPSFRDRSENADLVVEISLQPWKVFKPDGVI LFSDILTPLSGMNIPFDIVKGKGPIIFNPPQSAADVAQVREFVPEESVPYVGEALRRLRN EVNNEAAVLGFVGAPFTLSSYVIEGGSSKNFTQIKRLAFSQPKVLHALLQKFTTSMITYI RYQADSGAQAVQIFDSWATELSPVDFEEFSLPYLKQIVEAVKQTHPNLPLILYASGSGGL LERLARTGVDVVSLDWTVDMAEGRDRLGRDIAVQGNVDPGVLFGSKEFITSRIHDTVKKA GRDKHILNLGHGIKVGTPEENVAHFFEVAQEIRY

>P24493

MASTFNIPCNAGTIKNFNNSQRNLGFSSNLGINFAKTRFSNCGDSGRIPSQLVVRASERR DNLTQQKTGLSIEECEAAVVAGNAPSAPPVPPTPKAPSGTPSVSPLSLGRRPRRNRTSPV FRAAFQETTLSPANVVYPLFIHEGEEDTPIGAMPGCYRLGWRHGLVEEVAKARDVVVNSI VVFPKPDALKSPTGDEAYNENGLVPRTIRMLKDKFPDLIIYTDVALDPYYYDGHDGIVTQ HGVIMNDETVHQLCKQAVAQARAGADVVSPSDMMDGRVGAIRAALDAEGYSNVSIMSYTA KYASSFYGPFREALDSNPRFGDKKTYQMNPANYREALIETQEDESEGADILLVKPGLPYL DIIRLLRDNSDLPIAAYQVSGEYSMIKAGGVLKMIDEEKVMLESLLCLRRAGADIILTYF ALQAARCLCGEKR

>Q9MUR1

MAQLENNSTLLVRENELKGLVSNWLIEMKLMHRPLGFDYQGVETLEVKAQNLTSVAIALY AYGFNYLRSQCAYDVSPGGDLASVYHLTKVDDNADQPQEVCIKVFVPRTKPIIPSVFWIW KTADFQERESYDMFGIYYEGHPHLKRILMPEHWIGWPLRKDYITPDFYELQDAY >O9MUR2

MSPIIINSVRLISSLLTIVFIMLPKVDTFSKIMKNKKILLNWQENISTLSIIKWISIILF LSSHCALFITL

>002073

MAATHLTSTSSLTINTLPSFEGLRSASGISKINVSVAYPSFTSRSFRGLVVRAASITTSK
YTSVKPLGDRVLIKTKIVEEKTTSGIFLPTAAQKKPQSGEVVAIGSGKKVGDKKLPVAVK
TGAEVVYSKYTGTEIEVDGSSHLIVKEDDIIGILETDDVKDLKPLNDRLLIKVAEVENKT
SGGLLLAESSKEKPSFGTVVATGPGVLDEEGNRIPLPVCSGNTVLYSKYAGNDFKGVDGS
DYMVLRVSDVMAVLS

>P36437

MKLAYWMYAGPAHIGVLRVSSSFKNVHAIMHAPLGDDYFNVMRSMLERERDFTPVTASIV
DRHVLARGSQEKVVENITRKNKEETPDLILLTPTCTSSILQEDLHNFVESALAKPVQIDE
HADHKVTQQSALSSVSPLLPLEENTLIVSELDKKLSPSSKLHINMPNICIPEGEGEGEQT
KNSIFVKSATLTNLSEEELLNQEHHTKTRNHSDVILADVNHYRVNELQAADRTLEQIVRY
YISQAQKQNCLNITKTAKPSVNIIGIFTLGFHNQHDCRELKRLFNDLGIQINEIIPEGGN
VHNLKKLPQAWFNFVPYREIGLMTAMYLKSEFNMPYVAITPMGLIDTAACIRSICKIITT
QLLNQTATVQEPSKFIYPKATSLEQTNILETSQKETILKDNPDSGNTLSTTVEEIETLFN
KYIDQQTRFVSQAAWFSRSIDCQNLTGKKAVVFGDATHSAAMTKLLAREMGIKVSCAGTY
CKHDADWFREQVSGFCDQVLITDDHTQVGDMIAQLEPAAIFGTQMERHVGKRLDIPCGVI
SAPVHIQNFPLGYRPFLGYEGTNQIADLVYNSFNLGMEDHLLQIFGGHDSENNSSIATHL
NTNNAINLAPGYLPEGEGSSRTSNVVSTISSEKKAIVWSPEGLAELNKVPGFVRGKVKRN
TEKYALQKNCSMITVEVMYAAKEALSA

>Q94FY8

MNLAVAAALPSVTPRTGVVLPRSSRRHCPRGVVPRAASSSVSSFTSPSAAAAPIYTPTPQ
DRSLRTPHSGYHFDGTARPFFEGWYFKVSIPECRQSFCFMYSVENPLFRDGMSDLDKLLY
RPRFTGVGAQILGADDKYICQFSEKSNNFWGSRHELMLGNTFISNKESTPPQGEVPPQDF
SRRVLEGLQVTPIWHQGFIRDDGRSNYVPNVQTARWEYSTRPVYGWGDVKSKQLSTAGWL
AAFPFFEPHWQICMARGLSTGWIEWDGERFEFENAPSYSEKNWGGGFPRKWYWIQCNVFP
GASGEVSLTAAGGLRKIGLGDTYESPSLIGIHYEGOFFEFVPWTGTVSWDIGLWGLWKMS

 ${\tt GENKTHLVEIEATTAESGTALRAPTIEAGLVPACKDTCYGDLRLQLWEKKYDGSKGEMIL} \\ {\tt DATSNMAALEVGGGPWFNGWKGTTVVNEVVNNIVGTPVDVESLLPIPFLKPPGL}$

>09MV14

MAAMVDAKPAASVQGTPLLATATLPVFTRGIYSTKRITLETSSPSSPPPPKPLIIVTPAG
KGTFNVILFLHGTSLSNKSYSKIFDHIASHGFIVVAPQLYTSIPPPSATNELNSAAEVAE
WLPQGLQQNLPENTEANVSLVAVMGHSRGGQTAFALSLRYGFGAVIGLDPVAGTSKTTGL
DPSILSFDSFDFSIPVTVIGTGLGGVARCITACAPEGANHEEFFNRCKNSSRAHFVATDY
GHMDILDDNPSDVKSWALSKYFCKNGNESRDPMRRCVSGIVVAFLKDFFYGDAEDFRQIL
KDPSFAPIKLDSVEYIDASSMLTTTHVKV

>P25873

MATPLSISSNPLTSRHCYRLHLSSTSFKGNVSVLGANPSQILSLKLNQTLKTRNQQQFAR PLVVVSQTAATSSAVVAPERFRLDNLGPQPGSRKKQKRKGRGISAGQGASCGFGMRGQKS RSGPGIMRGFEGGQTALYRRLPKLRGIAGGMRSGLPKYLPVNIKDIETAGFQEGDEVSLE TLKQKGLINPSGRERKLPLKILGTGELSMKLTFKARAFSTQAKEKLEASGCTLTVLPGRK KWVKPSVAKNOARADEYFAKKRAAAAEAATSEPAASA

>P23408

MALSLAINVPPVRDNLLRPQPFQSQFRPNLLKFPIPSSARIRCSSSSSFNDISLKTVTPD NKNSFVCRFNATQLEVQETNQPYAETYAVGRHIRMSADKARRVVDQIRGRPYEASLMVLE LMPYRACEAIIKIVFSAGANASHNLGLSKSSLFISKAEVNEGKTLKRVRARAQGRANQIL KRTCHITITVRGLPDESDKEENSS

>048593

MAATFLPATSLRLTQNSTLRFLSFFTISNPSYSLFRPLRRRVLPPFDAFPANSRRRCFCT
AVSESLGSGDGNKVESYEKRFGSKVGEFRKKLRIAEVKGGADEGLSRVGQSLNIMGWVRT
LRSQSSVTFIEINDGSCLSNLQCVMTSDAEGYDQVESGSILTGASVSVQGTIVASQGTKQ
KVELKVEKIIVVGECDSSYPIQKKRVSREFLRTKAHLRPRTNTFGAVARVRNTLAYATHK
FFQESGFVWVASPIITASDCEGAGEQFCVTTLIPSSHENTDTSIDAIPKTKGGLIDWSQD
FFGKPAFLTVSGQLNGETYATALSDVYTFGPTFRAENSNTSRHLAEFWMIEPELAFADLD
DDMACATAYLQYVVKYVLDNCKEDMEFFDTWIEKGIIRRLSDVAEKEFLQLGYTDAIEIL
LKANKKFDFPVKWGLDLQSEHERYITEEAFGGRPVIIRDYPKEIKAFYMRENDDGKTVAA
MDMLVPRIGELIGGSQREERLEVLEARLDELKLNKESYWWYLDLRRYGSVPHAGFGLGFE
RLVOFVTGIDNIRDVIPFPRTPASAEF

>Q9FN52

MASLLLTSSSMITTSCRSMVLRSGLPIGSSFPSLRLTRPYDKATLFVSCCSAESKKVATS
ATDLKPIMERRPEYIPNKLPHKNYVRVLDTTLRDGEQSPGAALTPPQKLEIARQLAKLRV
DIMEVGFPVSSEEEFEAIKTIAKTVGNEVDEETGYVPVICGIARCKKRDIEATWEALKYA
KRPRVMLFTSTSEIHMKYKLKKTKEEVIEMAVNSVKYAKSLGFKDIQFGCEDGGRTEKDF
ICKILGESIKAGATTVGFADTVGINMPQEFGELVAYVIENTPGADDIVFAIHCHNDLGVA
TANTISGICAGARQVEVTINGIGERSGNAPLEEVVMALKCRGESLMDGVYTKIDSRQIMA
TSKMVQEHTGMYVQPHKPIVGDNCFVHESGIHQDGILKNRSTYEILSPEDVGIVKSENSG
IVLGKLSGRHAVKDRLKELGYEISDEKFNDIFSRYRELTKDKKRITDADLKALVVNGAEI
SSEKLNSKGINDLMSSPQISAVV

>P36443

MTLALMQSMGKLKFLHCLLPLPFRDVPFPLRASKLRDFNAINKFVPLRDVSGSCEVLILY INIECLHTPKEDVSGSGTATAILILRRSSGGPTATKIYLPEDVLPTAEANEF

>Q9SE20

MATSSAYLSCPATSATGKKHVFPNGSPGFLVFGGTRLSNRLVTRKSVIRADLDSMVSDMS
TNAPKGLFPPEPEHYRGPKLKVAIIGAGLAGMSTAVELLDQGHEVDIYESRTFIGGKVGS
FVDRRGNHIEMGLHVFFGCYNNLFRLLKKVGAEKNLLVKEHTHTFVNKGGEIGELDFRFP
VGAPLHGINAFLSTNQLKIYDKARNAVALALSPVVRALVDPDGALQQIRDLDNVSFSEWF
LSKGGTRASIQRMWDPVAYALGFIDCDNMSARCMLTIFALFATKTEASLLRMLKGSPDVY
LSGPIKKYIMDKGGRFHLRWGCREVLYETSSDGSMYVSGLAMSKATQKKIVKADAYVAAC
DVPGIKRLVPQKWRELEFFDNIYKLVGVPVVTVQLRYNGWVTELQDLERSRQLKRAAGLD
NLLYTPDADFSCFADLALASPDDYYIEGQGSLLQCVLTPGDPYMPLSNDEIIKRVTKQVL
ALFPSSQGLEVTWSSVLKIGQSLYREGPGKDPFRPDQKTPVENFFLAGSYTKQDYIDSME
GATLSGRQASAYICNVGEQLMALRKKITAAELNDISKGVSLSDELSLV

>P12347

MYLGISGRSPYGSSVAVACQLPNINISGQIYLLLPPSEYINIGFNTRQWQYHCHWRPKFT CPKGKEAVAVPLPLKFICPKGTSCQLPIFIYSEVYLYASEY

>Q8WHX7

 $\label{thm:mkfanifalehlltlgaylfcigfyglitsqnmikalmclelvlnavninfvtfsnyfdt \\ Qhikgeifvlfimaiaaaeaaiglaivltiyrdrksiridqfnllk \\$

>Q9SMH4

MRTRAGAFFGKQRSTSPSGSSTSASRQWLRSSPGRTQRPAAHRVLAVCVRNPARPAADHP LVSTTQAAAQRQARQWDSRSKPPQLQPQLRHTHVSRQAQRRQQQQVQQQAEAGALVVPTV ITSFPEHLRPEVLANGVLLVDKPPHWEVPEVVAAVQRATGADKVASVAPLDARASGLMLL CFGSATRLAPRVERAAKRYTGTLVLGGSSLSGDVRGGSFRAAQLPAEHLTDEDLREAAQG LVTAAAGAPVHGAVATGHQGGGGLALRVLPRTWRLRQLPSSTEYYEERVEPSMRTLDMEL LDFRVWRESALSHNDGAAGAEYDQHDQHKQELGRGLVWTRSPPHPRPVVLRFSALLVGRS HVRSLIAMYGRRLRTAACLDDLRRTEIGSFNVEEAWPLEALVPVLQRHAH

MAATAAASSLQMATTRPSISAASSKARTYVVGANPRNAYKIACTPHLSNLGCLRNDSALP
ASKKSFSFSTKAMSESSESKASSGLPIDLRGKRAFIAGIADDNGYGWAVAKSLAAAGAEI
LVGTWVPALNIFETSLRRGKFDQSRVLPDGSLMEIKKVYPLDAVFDNPEDVPEDVKANKR
YAGSSNWTVQEAAECVRQDFGSIDILVHSLANGPEVSKPLLETSRKGYLAAISASSYSFV
SLLSHFLPIMNPGGASISLTYIASERIIPGYGGGMSSAKAALESDTRVLAFEAGRKQNIR
VNTISAGPLGSRAAKAIGFIDTMIEYSYNNAPIQKTLTADEVGNAAAFLVSPLASAITGA
TIYVDNGLNSMGVALDSPVFKDLNK

>Q9SWI6

>P80030

MATMSLAAASPLASIPRGIAAQAPCAAFLSIRLGGATATRFAGLAVASQPAERRAAAMVA MAKREQELEEIRAMTTEQMEEEVVDLKGELFLLRLKRSARQEFKNSEFSRMRKRIARMLT VKREREIEQGINKRLSRKLDRKWKQSIVVRPPPSLRGNKEE

>082499

MLQLCSTFRPQLLLPCQFRFTNGVLIPQINYVASNSVVNIRPMIRCQRASGGRGGANRSK PAKPQVKEGSNKTVIEGLVTESLPNGMFRVDLENGDNILGYICGKIRKNFIRILPGDKVK

VEMSVYDSTKGRIIFRMSSRD

>P53797

MVVAILRVVSAIEIPIRLGFSEANWRFSSPKYDNLGRKKSRLSVYSLYTTSKYACVGFEA
ENNGKFLIRSSLVANPAGEATISSEQKVYDVVLKQAALVKDQTKSSRKSTDVKPDIVLPG
TVYLLKDAYDRCGEVCAEYAKTFYLGTLLMTPERRRAIWAIYVWCRRTDELVDGHNASHI
TPSALDRWEARLEDLFAGRPYDMFDAALSDTVSRFPVDIQPFMDMVEGMRMDLKKSRYKN
FDELYLYCYYVAGTVGLMSVPVMGIAPESLAEAESVYNAALALGIANQLTNILRDVGEDA
RRGRIYLPQDELAEAGLSDEDVFTGKVTDKWRSFMKRQIKRARTFFEQAEKGVTELSQAS
RWPVWASLLLYRQILDEIEANDYNNFTKRAYVSKVKRLAALPLAYGKSLLIPLSLRPPSL
SKA

>Q43316

MDIASSSLSQAHKVVLTRQPSSRVNTCSLGSVSAIGFSLPQISSPALGKCRRKQSSSGFV KACVAVEQKTRTAIIRIGTRGSPLALAQAYETREKLKKKHPELVEDGAIHIEIIKTTGDK ILSQPLADIGGKGLFTKEIDEALINGHIDIAVHSMKDVPTYLPEKTILPCNLPREDVRDA FICLTAATLAELPAGSVVGTASLRRKSQILHKYPALHVEENFRGNVQTRLSKLQGGKVQA TLLALAGLKRLSMTENVASILSLDEMLPAVAQGAIGIACRTDDDKMATYLASLNHEETRL AISCERAFLETLDGSCRTPIAGYASKDEEGNCIFRGLVASPDGTKVLETSRKGPYVYEDM VKMGKDAGOELLSRAGPGFFGN

>Q1ACG0

MLSPRKTKFRKHHRGRMKGISTRGNSIVFGKFALQALEPSWITSRQIEAGRRSMTRYARR GGKIWIRIFPDKPVTMRPAETRMGSGKGSPEYWVAVVKPGRILYEMDGVPENIARAAMKI AAYKMPNKTOFLIRDNKDLIDSKI

>P12859

MATHAALASTRIPTNTRFPSKTSHSFPSQCASKRLEVGEFSGLKSTSCISYVHSARDSSF
YDVVAAQLTSKANGSTAVKGVTVAKLKVAINGFGRIGRNFLRCWHGRKDSPLEVIVVNDS
GGVKNASHLLKYDSMLGTFKAEVKILNNETITVDGKPIKVVSSRDPLKLPWAELGIDIVI
EGTGVFVDGPGAGKHIQAGAKKVIITAPAKGADIPTYVIGVNEQDYGHEVADIISNASCT
TNCLAPFAKVLDEEFGIVKGTMTTTHSYTGDQRLLDASHRDLRRARAAALNIVPTSTGAA
KAVSLVLPQLKGKLNGIALRVPTPNVSVVDLVVNVAKKGISAEDVNAAFRKAAEGPLKGI
LDVCDVPLVSVDFRCSDVSTTIDSSLTMVMGDDMVKVVAWYDNEWGYSQRVVDLAHLVAN
KWPGTPKVGSGDPLEDFCETNPADEECKVYE

>Q94IC4

MALSCSKVLSFYLSPVVGGGDVPKKLTFSSFLGLSKGVGGSRSSRVCAASNAPAPLAGVI FEPFQELKKDYLAVPIAHNVXLARQNYADDSESAINEQINVEYNVSYVYHALFAYFDRDN IALKGLAKFFKESSEEEREHAEQLIKYQNIRGGRVVLHPITSPPSEFEHSEKGDALYAME LALSLEKLTNEKLLHVHSVAERNNDPQXADFIESEFLYEQVKSIKKIAEYVAQLRLVGKG HGVWHFDQKLLHDEDHV

>P08474

MASSILSSAAVASVNSASPAQASMVAPFTGLKSSAGFPITRKNNVDITTLASNAGKVQCM KVWPPLGLRKFETLSYLPDMSNEQLSKECDYLLRNGWVPCVEFDIGSGFVYRENHRSPGF YDGRYWTMWKLPMFGCTDSSQVIQEIEEAKKEYPDAFIRVIGFDNVRQVQCISFIAYKPQ VLLFLSSIC

>001292

MAATAATTFSLSSSSTSAAASKALKOSPKPSALNLGFLGSSSTIKACRSLKAARVLPSG

ANGGGSALSAQMVSAPSINTPSATTFDFDSSVFKKEKVTLSGHDEYIVRGGRNLFPLLPD
AFKGIKQIGVIGWGSQAPAQAQNLKDSLTEAKSDVVVKIGLRKGSNSFAEARAAGFSEEN
GTLGDMWETISGSDLVLLLISDSAQADNYEKVFSHMKPNSILGLSHGFLLGHLQSLGQDF
PKNISVIAVCPKGMGPSVRRLYVQGKEVNGAGINSSFAVHQDVDGRATDVALGWSIALGS
PFTFATTLEQEYKSDIFGERGILLGAVHGIVECLFRRYTESGMSEDLAYKNTVECITGVI
SKTISTKGMLALYNSLSEEGKKDFQAAYSASYYPSMDILYECYEDVASGSEIRSVVLAGR
RFYEKEGLPAFPMGKIDQTRMWKVGEKVRSVRPAGDLGPLYPFTAGVYVALMMAQIEILR
KKGHSYSEIINESVIEAVDSLNPFMHARGVSFMVDNCSTTARLGSRKWAPRFDYILSQQA
LVAVDNGAPINQDLISNFLSDPVHEAIGVCAQLRPSVDISVTADADFVRPELRQA

>09MUT3

MSTIDLIKNVTKREERPVYPFTAIVGQEEMKLALILNVIDPDIGGVMIMGDRGTGKSTTI
RALVDLLPEIEVVTNDPFNSDPRDPDLMSDEVREKINNKQEVPTIKTKIKIVDLPLGATE
DRVCGTIDIERALNEGVKAFEPGLLAKANRGILYVDEVNLLDDHLVDILLDSAASGWNTV
EREGISVRHPAKFILVGSGNPEEGELRPQLLDRFGMHAEIRTVKDPDLRVKIVEERSSFD
ENPQVFRKAYEQSQEDVKSQIIQARKNLANVQMDRELRIKVSQICSELDVDGLRGDLVIN
RAAKALAAFEGRDKVLPKDILKIITLCLRHRLRKDPLESIDSGSKVESKFYEVFGLLEEN

>Q85FP0

MKVNYGSPAKSGPLHKNGEFYINKNCFLHPLLFLSEENFYLTDGKRRSHGADANLVFGAW
STVAVKRLIGSVRDPNLNFLKIYDSVSVRNLTDGLDVDLYLHPLLKMTYLILGIALFPKI
RAETSSKSKMLQSIHSMFLFLEDRFSKSNHILEADLPHNLHLETLIRLFRRQIKDVSFLH
LLRIVFRKRKIFCGKTFYSPGGGQDGSVDIPVRNFYIFEIDSLLLIPWKQVYKFRVNYLS
PIDSCNIIRKEIYASAYKFKWNKASIDYSFSRSLWIHYGRWRNKFLIASEGTHYFVKKML
YYLWILLKYHFHYRIKSNEPWIRKLLPTSCVSFLGYTLLAQLVSKNVRIETVTDLYISIL
GGKKFYPKIPNSIIITTLAKQRFCDFTGRPIGKSAWVTSTDDKIIDGYVQLWQVFSLYYG
ASMNQYRLRRLIFLLQMSCDSTLAGKHRSTIRLLRCKSNVEALNQILASRKFELSSSRRV
WRSSSIRSVLVOFTVLDIGL

>093YW0

MPSLSTPPSQNLAFSPAASATSSRLTPSSKRSFYPHRLPDPTALCRCSSSSGSNSSSSSSSDDNPRWDSAIQDVLKSAIKRFDSVLSWYATLDNDDGEQGSENVEKIDDDWDWDRWKKHF
DQVDDQDRLLSVLKSQLNRAIKREDYEDAARLKVAIAATATNDAVGKVMSTFYRALLEER
YKDAVYLRDKAGAGLVGWWSGISEDVKDPFGLIVQITAEHGRYVARSYNPRQLSTSAAGA
PLFEIFLTLDGKGNYKKQAVYLKWKEIFPDVPTMPSRTLTPGRFLTSPGRKEDTGNLAVE
SSEDEESDNSDDDSDLLEESSGFQSFLRDMIPGVKVKVMKVTAPGRVDKDFISKVIEQIA
DEEDEENDLDIEDIDVEDDTKAEIDEKNADIELESVTDEIIDNNGGREIAVKFVIGDIVD
RLSGNQPLKESLRSPANLESVENSSFYLRLEKDLNVKESKGVEGTTLVDGKGSRQSRRRI
ENIMGDLAKSIEKEKKISVKMLKDVGELLSLTLSQAQNRQQLSGLTKFRRIDVTPSLDPL
DGLYIGAHGLYTSEVIHLKRKFGQWKGGKESKKPTDIEFYEYVEAVKLTGDPYVPAGKVA
FRAKIGRRYELPHKGLIPEEFGVIARYKGQGRLADPGFRNPRWVDGELVILDGKYVKGGP
VVGFVYWAPEYHFVMFFNRLRLOA

>P24226

MSFDLSRLSLTSSPRLSFLTRTATKKGFVRCSMKSYRLSELSFSQVENLKARPRIDFSSI FTTVNPIIDAVRSKGDTAVKEYTERFDKVQLNKVVEDVSELDIPELDSAVKEAFDVAYDN IYAFHFAQMSTEKSVENMKGVRCKRVSRSIGSVGLYVPGGTAVLPSTALMLAIPAQIAGC KTVVLATPPTKEGSICKEVLYCAKRAGVTHILKAGGAQAIAAMAWGTDSCPKVEKIFGPG
NQYVTAAKMILQNSEAMVSIDMPAGPSEVLVIADEHASPVYIAADLLSQAEHGPDSQVVL
VVVGDGVNLKAIEEEIAKQCKSLPRGEFASKALSHSFTVFARDMIEAITFSNLYAPEHLI
INVKDAEKWEGLIENAGSVFIGPWTPESVGDYASGTNHVLPTYGYARMYSGVSLDSFLKF
MTVQSLTEEGLRNLGPYVATMAEIEGLDAHKRAVTLRLKDIEAKQTQTK

MEARVSQSLQLSSWINSDKVVRKPSGLLRFSEKWNEKPRHRVVVSCHLQPRKAAHSDRRV QLKVSCSPQNVQASVLESGCFSASIDEIETLKNKAEEVEEYLDGRCVYLVGMMGCGKTTV GRILAETLGYSFFDCDRLIEQAVGGITVAEIFELRGESFFRDNETEVLHKLSLMHRLVVS TGGGAVVRPINWRHMHKGISVWLDVPLEALAKRITTEGTKSRPLLHEESGDVYDTTLKRL TTLMETRGENYANASARVSLENIALKREKDVCHITPAEITLEVLIQIENFLKTQKSVVVL

>P09856

>000497

MALHLSLSHQSWTSPAHPITSSDPTRSSVPGTGLSRRVDFLGSCKINGVFVVKRKDRRM RGGEVRASMEQALGTQEMEAIVGKVTEVNKDTFWPIVKAAGDKPVVLDMFTQWCGPCKAM APKYEKLAEEYLDVIFLKLDCNQENKTLAKELGIRVVPTFKILKENSVVGEVTGAKYDKL LEAIQAARSS

>Q39513

MVATAASSAFFPLPSADTSSRPGKLGNKPSSLSPLKPKSTPNGGLQVKANASAPPKINGS
PVGLKSGGLKTQEDAHSAPPPRTFINQLPDWSMLLAAITTVFLAAEKQWMMLDWKPKRPD
MLVDPFGLGSIVQDGLVFRQNFSIRSYEIGADRTASIETVMNHLQETALNHVKIAGLSND
GFGRTPEMYKRDLIWVVAKMQVMVNRYPTWGDTVEVNTWVAKSGKNGMRRDWLISDCNTG
EILTRASSVWVMMNQKTRRLSKIPDEVRNEIEPHFVDSPPVIEDDDRKLPKLDEKTADSI
RKGLTPRWNDLDVNQHVNNVKYIGWILESTPPEVLETQELCSLTLEYRRECGRESVLESL
TAMDPSGGGYGSQFQHLLRLEDGGEIVKGRTEWRPKNGVINGVVPTGESSPGDYS
>08LPT9

 ${\tt MSNSIGRNVLHQSLLCSTVFEHQSNRHSSGIPANSLFQAVSINQPAGASAARKSPLSTKF}$ YGTSLNARPKMAMGRHRPVLITPRAVLAVDSASELAGKFNLEGNVELQITVGAPTPGSLT QVNIEISYSSNSLLLHWGAIRDKKEKWVLPSRPPDGTKILKNRALRTPFVSSGSKSLVKL EIDDPAIEAVEFLILDEAONKWFKNNGANFHVKLPSERSLIONVSVPEDLVOTOAYLRWE RKGKOIYTPEOEKEEYEAARTELLEEIVRGTSVEDLRAKLTNKNDROEIKESSSHGTKNA IPDDLVQIQSYIRWERAGKPNYSADQQLREFEEARKELQSELEKGISLDEIWKKITKGEI OTKVSDOLKTKKYFRTERIORKORDFMOILNKHVAEPTEKKNISVEPKALTPVELFVGAT EEQEGDSILNKKIYKLAGKELLVLVHKPGGKTKIHLATDGKEPLILHWALSKKAGEWLAP PPSVLPAGSVLLSGSVETTFTTSSLADLPYQVQSIEIEIEEEGYVGMPSVLQSGGNWIKN KGSDFYVDFSYESKQVQQDFGDGKGTAKALLEKIAGLEIEAQKSFMHRFNIAADLIQEAK EAGELGFAGILVWMRFMATROLIWNKNYNVKPREISKAODRLTDLLONVYISNPEYREIV RMILSTVGRGGEGDVGORIRDEILVIORNNNCKGGMMEEWHOKLHNNTSPDDVIICQALI DYIKSDFDISAYWKTLNDNGITKERLLSYDRAIHSEPNFRRDQKDGLLRDLGNYMRTLKA VHSGADLESAITNCLGYRSEGOGFMVGVOINPIPNLPSGFPELLOFVSEHVEDRNVEALL EGLLEARQEIRPLLCKHNDRLKDLLFLDIALESSVRTAIEKGYEELNEAGPEKIMYFVSL ILENLALSLDDNEDLIYCLKGWSNALSMSKSKSDNWALFAKSVLDRTRLALAGKADWYOK VLOPSAEYLGTLLSVDKWAVDIFTEEMIRAGSAAALSLLLNRLDPVLRKTASLGSWOVIS

PVEVFGYVAVVDELLAVODKSYDOPTILLARRVKGEEEIPHGTVAVLTADMPDVLSHVSV

RARNCKVCFATCFDPNILADLQSNEGKMLHLKPTSADIAYSVVEGSELQDSSSANLKEED
GPSSSVALVKKQFAGRYAITSDEFTGELVGAKSRNIAYLKGKVPSWIGIPTSVALPFGVF
EKVLSDDINQAVAEKLQILKQKLGEEDHSALREIRETVLQMKAPNQLVQELKTEMKSSGM
PWPGDEGEQRWEQAWMAIKKVWASKWNERAFFSTRRVKLDHEYLCMAVLVQEIINADYAF
VIHTTNPSSGDSSEIYAEVVKGLGETLVGAYPGRALSFVCKKNDLKSPRVLGYPSKPIGL
FIRRSIIFRSDSNGEDLEGYAGAGLYDSVPMDEAEKVVLDYSSDHLITDGHFQQSILSSI
ARAGCEIEELFGSAQDIEGVVRDGKIYVVOTRPOM

>005728

MEARILQSSSSCYSSLYAVNRSRFSSVSSPKPFSVSFAQTTRTRTRVLSMSKKDGRTDKD
DDTDSLNYKDSGVDIDAGAELVKRIAKMAPGIGGFGGLFPLGDSYLVAGTDGVGTKLKLA
FETGIHDTIGIDLVAMSVNDIITSGAKPLFFLDYFATSRLDVDLAEKVIKGIVEGCRQSE
CALLGGETAEMPDFYAEGEYDLSGFAVGIVKKTSVINGKNIVAGDVLIGLPSSGVHSNGF
SLVRRVLARSNLSLKDALPGGSSTLGDALMAPTVIYVKQVLDMIEKGGVKGLAHITGGGF
TDNIPRVFPDGLGAVIHTDAWELPPLFKWIQQTGRIEDSEMRRTFNLGIGMVMVVSPEAA
SRILEEVKNGDYVAYRVGEVVNGEGVSYO

>P42379

MPIGVPRIIYCWGEELPAQWTDIYNFIFRRRMVFLMQYLDDELCNQICGLLINIHMEDRS KELEKKEIERSGLFKGGPKTQKGGTGAGETGASSIQNKKSNSSSFEDLLAADEDLGIDEN ${\tt NTLEQYTLQKITMEWLNWNAQFFDYSDEPYLFYLAEMLSKDFNKGDARMLFSNNNKFSMP}$ FSQMLNTGSMSDPRRPQSTNGANWNSSEQNNSLDIYSPFRMLANFEAQDYDFKQINPSLA SKEEVFKLFNNTILKNGGORNNNMSKLLTELAORNWENKTNSOENLYKSTEKALSORNLR KEYIKDRTLNNYSSDPFNTKGYVNAQGASTGPSPRTRGMHADGSLNYLDFYSYNDSYNDF KTAPRGKQAERAFQEEESKKVFVIINSFGGSVGNGITVHDALQFIKAGSLTLALGVAASA ${\tt ASLALAGGTIGERYVTEGCHVMIHQPECLTSDHTVLTTRGWIPIADVTLDDKVAVLDNNT}$ GEMSYQNPQKVHKYDYEGPMYEVKTAGVDLFVTPNHRMYVNTTNNTTNQNYNLVEASSIF GKKVRYKNDAIWNKTDYOFILPETATLTGHTNKISSTPAIOPEMNAWLTFFGLWIANGHT TKIAEKTAENNQQKQRYKVILTQVKEDVCDIIEQTLNKLGFNFIRSGKDYTIENKQLWSY LNPFDNGALNKYLPDWVWELSSOOCKILLNSLCLGNCLFTKNDDTLHYFSTSERFANDVS RLALHAGTTSTIQLEAAPSNLYDTIIGLPVEVNTTLWRVIINQSSFYSYSTDKSSALNLS NNVACYVNAQSALTLEQNSQKINKNTLVLTKNNVKSQTMHSQRAERVDTALLTQKELDNS LNHEILINKNPGTSOLECVVNPEVNNTSTNDRFVYYKGPVYCLTGPNNVFYVORNGKAVW TGNSSIQGQASDIWIDSQEIMKIRLDVAEIYSLATYRPRHKILRDLDRDFYLTATETIHY GLADEIASNEVMOEIIEMTSKVWDYHDTKOORLLESRDSTTSGADTOSON

>Q9SHI1

MPSLASLVSLGGACASVSGTSSSDASYALVKRVSLSRRSVKGTKKWLCRYSVSSSTTTTT
ADFIADQNNNSVSIDSNSFRGSKDGDDSEVVLKQTPKPVLKPPVARVERGLGVNTAPWSK
DLSNGGKFDGEEERNKVIESLGEVLDKAEKLEIPKPGNKEGGEAVKPSQPSANSSNSRNG
SYANASDGGTRKTKTMKSVWRKGDAVAAVQKVVKESPKIFNRGVQTEPRTREEGEVNAKA
GTPLAPPQPPFRPQPPVRPQPMLQGKPMVAPPVKKSPILKDLGMAAKPLVSEEVDSSVKS
KERKPILVDKFASKKKGVDPAASQAVLAPTKPGKGPPSNKFRVEHRNKKNASASPRRRIV
AEDDGDDDASISRSGRKGRKWSKASRKAVRLQAAKDAAPVKAEILEVEEEGMSIEDLAYN
LAIGEGDILGYLYSKGIRPDGVHTLDREMVKMICRDYDVEVLDADSVKVEEMAKKRQTFD
EEDLDKLEDRPPVITIMGHVDHGKTTLLDYIRKSKVAASEAGGITQGIGAYKVSVPVDGK
LQSCVFLDTPGHEAFGAMRARGARVTDIAIIVVAADDGIRPQTNEAIAHAKAAAVPIVIA

INKIDKEGASPDRVMQELSSIGLMPEDWGGDVPMVQISALKGENVDDLLETVMLVAELQE
LKANPHRNAKGIVIEAGLDKAKGPFATFIVQKGTLKRGDVVVCGEAFGKVRALFDHSGER
VDEAGPSIPVQVIGLNNVPIAGDEFEIVSSLDVAREMAEARAVSLRDERISAKAGDGKVT
LSSLASAVSAKKMSGLDLHQLNIILKVDVQGSIEAVRQALQVLPQENVTLKFLLQATGDV
SNSDVDLASASEAIVFGFNVKASGSVKKAAENKGVEIRLYRVIYELIDDVRNAMEGLLES
VEEQIPIGSAEVRATFSSGSGRVAGCMVNEGKFVKDCGIRVVRKGKTVHVGVLDSLKRVK
ENVKEVSAGLECGIGMDDYDDWIEGDIIEAFNAVQKRRTLEEASASMSAAIEEAGV
>009FY3

MAIHLYKTSTPSTRNGAVDSQVKSNPRNNLIYGQHRCGKGRNARGIITAGHRGGGHKRLY RKIDFRRNKKNIEGRIVTIEYDPNRNAYICLIHYGDGEKRYILHPRGAIIGDSIVSGTEV SIKMGNALRLGNALPLTDMPLGTAIHNIEITLGKGGQLARAAGAVAKLIAKEGKSATLKL PSGEVRLISKNCSATFGQVGNVGVNQKSLGRAGSKCWLGKRPVVRGVVMNPVDHPHGGGE GRAPIGRKNPTTPWGYPALGRRSRKRNKYSDSLILRRRTK

>P0C452

MAVPKKRTSMSKKRIRKNLWKKKTYFSIVQSYSLAKSRSFSGVSEHPKPKGFSRQQTNNR VI.G

>Q52TG1

MEEFKKYFERDSYWQQHFLYPLLFQEYIYALAHIHNHGLNGSIFYESGEVLGYDNKSSLI
LVKRLILRMYQQNFLIHSSNESHQNGFVGHKNPFFSQMISGGFAVIVEIPFSLPSLIEKK
KKEITKSQNLRSIHSIFPFLVDQFSHLNYVSDILIPYPIHLEILIQIIQSWIQDVPSLHL
LRFFLYEYHNWNSFITRKKSLSTFGKENPRFFWFLYNSYVSEYESVFCFLRKHSSYLLST
SYRNLIERTHFYGKIEHLPVVCSNDFHKNLQLFKDPCMHYVRYQGKAILASKGTSLLMKK
WKWYLVNFWECNFSFWFQPYRIHINQLSNSSFLFWGYFSIVLINPLPVRSQMLGYSCLID
NTLTKKLETLVPIIPLIGSLSKAKFCNVSGHPASKPIWTDLSDSDIIDRFVRICRTLSHY
HSGSSKKQSLYRMKYILRLSCARTLARKHKTTVRAFFQRLGSGFLEEFFTEEQKFLSLVL
PRTSLASGSDRVYKERIWYLDIIRINDLVNYSRLAMELCTGNITKRIEKRSKIAFLFSTD
MLKCSCSGS

>P18823

MINEDPSSLTDMDNNIDSWKNNSENSSYSHADSLADVSNIDNLLSDKIFSIRDSNSNIYD
IYYAYDTNDTNITKYKWTNNINRCIESYLRSQICEDIDFNSDICDKVQRTIIILIRSTND
TNDISDTNDISDTNDTNDTNAIYDPFDISDTNDTNEIYDPFFILDINDTNDTNDIYGIYD
PDDIYETNIKDICERYSEIYPRNREKSTFVPIDYSDPNCMEKLARLWVQCETCYGLNFKQ
FFRPKMNICEHCGEHLKMSSSDRIDLSIDRDTWNPMDEDMVSVDPIKFDSIKELGSEEES
SKDRLDEDMLSPDPIELDSEEESSKDRVDSEEEKDQSYIDRLDSYQEKTGLPETVQTGTD
QREEIHPLFEDIMNQLDLYLQTAKNRVDSEEEKDQSYIDRLDSYQEKTGLPEAVQTGTGQ
LNGIPLALAVMDSEFIAGSMGCVVGEKITRLIEYATNLLLPLIIVCASGGARMQEGSLSL
MQMAKISSALYNYQINQKLFYVAILTSPTTGGVTASFGMLGDIIIAEPNATIAFAGKRVI
EQLLNKEVPEGSQSADLLFDRGLLDAVVPRHLLKEFLTELFOFHGFVPLT

>P56350

MVELNFTQKQKQFLKDRKSLKSLVNQHLASDLGETSLSQYLDEFQILYNRFFCFYFFSYG ENVFCSEEIFSSQLKNGFFPTKTKDEILSSPALNVIFSEKDFLLLKNIRIFLGMDSNNFF LTEELFN

>Q9SZ30

MEATAAPFSSIVSSRONFSSSSSIRASSPASLFLSQKSIGNVNRKFKSPRSLSVRASSTS

DSVVTLLDYGAGNVRSIRNALRHLGFSIKDVQTPGDILNADRLIFPGVGAFAPAMDVLNR
TGMAEALCKYIENDRPFLGICLGLQLLFDSSEENGPVKGLGVIPGIVGRFDASAGIRVPH
IGWNALQVGKDSEILDDVGNRHVYFVHSYRAIPSDENKDWISSTCNYGESFISSIRRGNV
HAVQFHPEKSGEVGLSVLRRFLHPKLPATQKPMEGKASKLAKRVIACLDVRTNDKGDLVV
TKGDQYDVREQSNENEVRNLGKPVDLAGQYYKDGADEISFLNITGFRDFPLGDLPMIQVL
RQTSKNVFVPLTVGGGIRDFTDASGRYYSSLEVAAEYFRSGADKISIGSDAVSAAEEFIK
SGVKTGKSSLEQISRVYGNQAVVVSIDPRRVYVNHPDDVPYKVIRVTNPGPNGEEYAWYQ
CTVSGGREGRPIGAFELAKAVEELGAGEILLNCIDCDGQGKGFDIDLVKLISDSVGIPVI
ASSGAGTPDHFSEVFEKTNASAALAAGIFHRKEVPIOSVKEHLOEERIEVRI

>P94026

MASVFSVHPLPSSSFLCPLKTTKSRTKHHQTFYTYQKTILINSLQLTELDPKIPQPVQTF
WQWLCKEGVVTTKTPVKPGIVPEGLGLVAKRDIAKGETVLQVPKRFWINPDAVAESEIGN
VCSGLKPWISVALFLLREKWRDDSKWKYYMDVLPKSTDSTIYWSEEELSEIQGTQLLSTT
MSVKDYVQNEFQKVEEEVILRNKQLFPFPITLDDFFWAFGILRSRAFSRLRNQNLILVPF
ADLTNHNARVTTEDHAHEVRGPAGLFSWDLLFSLRSPLKLKAGDQLFIQYDLNKSNADMA
LDYGFIEPSSARDAFTLTLEISESDEFYGDKLDIAETNGIGETAYFDIKIGQSLPPTMIP
YLRLVALGGTDAFLLESIFRNSVWGHLGLPVSRANEELICKVVRDACKSALSGYHTTIEE
DEKLMEEGNLSTRLQIAVGIRLGEKRVLKQIDDIFRERELELDELEYYGERRLKDLGLVG
EOGDIIFWEPK

>Q32S00

 ${\tt MKLHKKKLNITMTKQFIQKFPSNTVGSGGKTLLSKFQENSGLTETQIYILTQRVARLSSHLKNHNKDYSSQRGLRKLLGKRKRLLAYLSNEDVERYENLLIQLGIRGLKKI}$

>Q42961

MASATASHTLCGIPATSSSTTNKAIAPSSARFLAKTPLRRLGFAGAAADSLFTNHVATKL
RSLKSSSKPIRGVASMAKKSVGDLTAAELKGKKVFVRADLNVPLDDNQNITDDTRIRAAV
PTIKHLMANGAKVILSSHLGRPKGVTPKYSLAPLVPRLSELLGIQVVKVEDCIGPEVEKL
VASLPEGGVLLLENVRFYKEEEKNEPEFAKKLASLADLYVNDAFGTAHRAHASTEGVTKF
LKPSVAGFLLQKELDYLVGAVSNPKRPFAAIVGGSKVSSKIGVIESLLEKCDILLLGGGM
IFTFYKAQGLSVGSSLVEEDKLELATSLLEKAKAKGVSLLLPSDVVIADKFAPDANSKIV
PASAIPDGWMGLDIGPDSVKTFNDALDTTKTVIWNGPMGVFEFDKFAVGTEAIAKKLADL
SGKGVTTIIGGGDSVAAVEKVGVASVMSHISTGGGASLELLEGKVLPGVIALDEADAPVA

>Q9MTI5

MKRSLKNNPFVANPLLRKMEKLNRREDKILIRTWSRASTIILTMIGHTIAIHNGKEHLPI YITDYMVGHKLGEFAPTINFHEHAKNDNKSRRSKMRIDY

>P05720

 ${\tt MALSNILLFKIEFYIFSSLLMIKKKLVFSILKLLQLTEKDSKILVNESLTNKNFSKLIEF} \\ {\tt LDNYKVEKAKSITLQQLQSVLQNIKLNNSQKSEIIENIYSKLDAANHLIF}$

>P05721

MFILGKSNYTNFIYGHLVIRHIKYKLFDDYKKLIKKLSSKLKTSNSTKANLGDNFSLTLP TWPFFILSWFLHIRTLEFSSNGNKTANSISSVFFLFPKLLNVV

>Q32S08

MNNYPWLTIITLFPISAGLLIPLIPNRGNNLIRWYALGICLIDFLLMTYVFGSQFDFYGQ GIQLKEDISWINVIDFHWRVGVDGLSIALVLLTGFITTLATLAAWPVTRNPRLFYFLMLA MYSGQLGLFLAQDLLLFFFMWELELIPVYLLLSMWGGRRRLYAATKFILYTAGGSIFLLA
AILTISLWGPNGPILDMETLSKQSYPLGLEILVYLGFLIAYAVKLPVFPFHTWLPDTHGE
AHYSTCMLLAGILLKMGGYGFIRINIEMLSDAHRIFAPWLVALGAGQIVYAALVSIAQKN
LKRRIAYSSVSHMGFVLIGAGSFSDLGLSGAILQMISHGLIGAGLFFLAGTTYDRSRTLI
LDDMGGWGSPLPKTFSTFTACAMASLALPGMSGFVAELMIFLGIVASSVYSPLFKAIITC
VEGIGIILTPIYLLSMVRKMFYGYNDISLKTLKDSLILDASPREVFIILSLLVPMLGIGF
YPDLTLQLWNQKAQEIVSLPSGNEKSLTLISYSYPVEKNFSLHH
>P48269

MNFVNLEQIENSLRNATFCMLFLTTFLYWFYTAFYSTNPQQIINPLSLTNIKTNFTYPDG
FQANNINVSTTYLPINPVLNTEREEQPEANGTNGLLGVSSLVVNLKSIAIPRIMMGVSNL
LLVLLLLVRWEKSGHFPLSNLYESLMFLAWCCTFLYLLYCTSFTLLVEKMLGSLIAPCSL
LMNAFATFSLPKEMQQASPLVPALQSNWLMMHVTVMIISYATLIIGSLLSILFLILFKHK
KGTPKKYDNFINNLDALSYRIIGLGFPFLTIGILSGAVWANEAWGSYWSWDPKETWALLT
WLVFAIYLHTRLTKGWEGEKPAIIAAVGFLVVWFCYLGVNLIGEGLHSYGFFN

MYWSLTACSAVLFCLRDSLIFLADDVNPERGNEGVAVGTGGIPGRGIPPLITANGIGLYT FTSIGLLVPFTLGLKTQNQQIKIVVKSKISETNKLVIFCCLKHIISRKARSWLNDSR >P46666

MLIVLFRSKDIRGGRFVRPILIFRTKRSWILFRIGPERRREAEMPTDLCLFSNSPDPIVP VFGTSSAKVTEWVSHQSNPFDKSGVILDIIFYIYRNIIE

>P05723

>P05722

MICFKQQKITSLFVSLILLLTTILICWFCVLSPKVNGTNSPIEVNVYNPIPLAVMRGGIP LPGMPPVPTATPSLPRSGFTSSAKKIKESRKQKSTALQAVKDQYILRVARL >P05724

 ${\tt MQGLEYTLEPEQAKKCKTHQLVDLAKIDLNSWSQENVRPKTLLGRTSKKRLTSQFWYEFT} \\ {\tt KKQKLKNALYYFVIYDITDNSILPVETLNQKNPLSTSFPFFGRPLRGINFSGSCLHCLL} \\ {\tt RVLK} \\$

>P05725

MNTKYNKEFLLYLAGFVDGDGSIIAQIKPNQSYKFKHQLSLAFQVTQKTQRRWFLDKLVD EIGVGYVRDRGSVSDYILSEIKPLHNFLTQLQPFLKLKQKQANLVLKIIWRLPSAKESPD KFLEVCTWVDQIAALNDSKTRKTTSETVRAVLDSLSEKKKSSP >Q9SCX9

MRFRSFFFSSSIFSLSHSRSPSLSSSRFSSLSAAMSPALEKSRQGNGGCNDDSKSKVTVV
GSGNWGSVAAKLIASNALKLPSFHDEVRMWVFEEVLPNGEKLNDVINKTNENVKYLPGIK
LGRNVVADPDLENAVKDANMLVFVTPHQFMDGICKKLDGKITGDVEAISLVKGMEVKKEG
PCMISSLISKQLGINCCVLMGANIANEIAVEKFSEATVGYRGSREIADTWVQLFSTPYFM
VTPVHDVEGVELCGTLKNVVAIAAGFVDGLEMGNNTKAAIMRIGLREMKALSKLLFPSVK
DSTFFESCGVADVITTCLGGRNRRVAEAFAKSRGKRSFDELEAEMLQGQKLQGVSTAREV
YEVLKHCGWLEMFPLFSTVHQICTGRLQPEAIVQYRENKL

>047027

MLNKKPPYLILSLIMIKTQKSKQTAVRKLIPGNVISLKITAMGANNVGINEFTFGIPVLV PNAKLGETVQAKVLKILASKKIAIAKLIKVVTKTNATETNNLAALTPGATLDVTITKLGP NSTGIADLGNNYNNVNKLIVKKSAITIGEKVTVLVTRVKNGYAFGVATVSTQRLNQVSTS LTQNSFKGTKFTVVLPKNAKRYLKHLVFKVTTATAQNLSVNGFEQTLFKKGAVGLDTRIN NQNGSAGNLTTVPTNTILFVKPNLGAKLGDKVQIQIIKFASIENGTLTYNVAIAKIIKLN PLSTPQKKAFVRSSLRQMLKSGMHYGEKAIKCNARMKNYVWTRKKGTDTKVEARPLIKKG RNLINLLKTRRCLTKALAQLTKYAAKGKTFLFVGTKKAASGLVARAALFSKKAFFVNTRW LGGMLTNWKTILKSISKIRPILKEKQMIIKDILEKRQTIKARLIQKALLLRKKSKLMLKK GRLLIQMLKQNNSNSTSGKQAVRFLFTEKTNLLNTKRKEFVSKGILLLEKRQQLVVKRQE LITQSQTLKSKAIQLTNTISQFIKQFNLFT

>P32761

MSNFILKPGEKLPQDKLEELKKINDAVKKTKNFSKYLIDLRKLFQIDEVQVTSESKLFLA GFLEGEASLNISTKKLATSKFGLVVDPEFNVTQHVNGVKVLYLALEVFKTGRIRHKSGSN ATLVLTIDNRQSLEEKVIPFYEQYVVAFSSPEKVKRVANFKALLELFNNDAHQDLEQLVN KILPIWDQMRKQQGQSNEGFPNLEAAQDFARNYKKGIK

>Q8MA04

MERNKNYYINVFHKQAENDLNFNKFYFYFFQETFYCLAYKQVSYKFLQNNVFIKKKKKFS
FFNLKRTIRSMRNQNYKESFFFIEQKKLSKKLLFSKLFYELLQEILKCILEISFKIKKNP
KISSYSTMSSIHGPFISFEENLIYFPVAIQSYLPNRVHPELIVRILRSYNLDVNLFHFLR
NIVHNGLYILSPPFLLNFGFRSLSTIFFNIYAYEIDLGFLSFLKLQKDLPQKYQTELDIF
SSSRKITFYFKNYSDFNNLKKIDQIERKYNNIIDYGPIYYLRYSNILLISLNLIKKNANF
FQLIYIRFFHLRFHFLFAKNLVKKISFNQDQIFFLGFLVFFFYTKIQIRIKLKKCLVNFI
KLEKKICINVPIKLLIIFLSKNGFCDISGNSKSKLSWSVLQDIEIIEKFRRLWLTISGYY
SGSSNKYCLKIVLYILRYSCAKTLACKHKMSLKKIWKKYTLNLSVTLKFQTGKKKFLSFS
HFKDFHKDEKSWOLNLKETNSIVYTFWN

>Q42533

MASSSFSVTSPAAAASVYAVTQTSSHFPIQNRSRRVSFRLSAKPKLRFLSKPSRSSYPVV
KAQSNKVSTGASSNAAKVDGPSSAEGKEKNSLKESSASSPELATEESISEFLTQVTTLVK
LVDSRDIVELQLKQLDCELVIRKKEALPQPQAPASYVMMQQPNQPSYAQQMAPPAAPAAA
APAPSTPASLPPPSPPTPAKSSLPTVKSPMAGTFYRSPAPGEPPFIKVGDKVQKGQVLCI
VEAMKLMNEIESDHTGTVVDIVAEDGKPVSLDTPLFVVQP

>P30222

MACKTLTCSASPLVSNGVVSATSRTNNKKTTTAPFSVCFPYSKCSVRKPASRLVAQATGD
NKDTSVDVHVSNNNQGGNNQGSAVERRPRRMALDVSPFGLLDPMSPMRTMRQMMDTMDRL
FEDTMTFPGSRNRGTGEIRAPWDIKDDENEIKMRFDMPGLSKEEVKVSVEDDVLVIKGEH
KKEESGKDDSWGRNYSSYDTRLSLPDNVDKDKVKAELKNGVLLISIPKTKVEKKVTDVEI

>P46307

MGQKVHPSGFRVGITKKHQSQWFARFNKNKYSQTVLEDRMIRDTLNKLFPELLNPSTKGG
SAPKRHQNARIKKSRITQIKIERNIVPYQIGIQIHAENCKLLKSSIKNLQVKKDILVKLQ
KTRQYLTNLKIKLDKLTNAPAETQVKTNFEDSTKRSVGQLELSHEGLNTKLSKIKSLRKK
LAKLKTGTSTTRANTTGTRQKKLSSKTKRSISQLLKMKLLRAKLAKLVQPKLKRKALEAS
TIEKTTAKTLKTKKKVSLKRKNKFETKLTKRQLKRQRVFKKRLKLRKFIRLRDRLLISKG
LFLQKKGHKITKKIVLAPTPKFLKDFSLNPKVYLLPVKRIEKLLTPKKAAKGGQKSAAVK
TVRTSLQTNIYNSRIQKKFVTMYVEQMKKKFLPHLNELFLEYTSKGFDSNNKAVLSLGYM
KQWDFERRVDNLKVQPIEKLDRLVHNLRDKFVMKLNLLRKDFITFGSFSSNSADILGLFQ
LYNFLMKLKNLVNGLKLNLKHKIKTRLAISKMNGSLNTSRNEPELRSRETSQASDKLRIV
DSTNSSLPQKVFRKKLENISNEYRKMKFIEYLKDVVQKHRTDNIYLYLASISESRRKLKE

IKNEVKQHLDLYLPGANSIKELNQKSSEDSINLATNEVNNVLMKLAKKHPFDRTFLDCKF EELERRKTMWVQNLQLVPKISIKFFSVNQKALNLKASIVSESVVDALEKRKAFRKVIKTT KENLMRNSEIKGVKIQVAGRLNGAEIARTEWVRAGRVPLQTLRANLDYSYRTANTIYGII GVKVWIFKGFTKLVTESTGA

>042463

MASICTSNFHFLCRKNNSSPISHHLLLSPSSLSFSRCGGLRLCRCAAVKTGSEGGGIRSD NAELLRKPVISTELETTSESEELVKEESDDEVGKKSGDGEGWVDWEDQILEDTVPLVGFV RMILHSGKYAIGDRLSPDHQRTILQRLLPYHPECDKKIGPGVDYITVGYHPDFENSRCLF IVRKDGETVDFSYWKCIKGLIRKNYPLYADSFILRHFRKRRND

>006R99

MAKGTRFINFRRYGRFGSRRYRRFGSHKSVRKIPRGVIHIQTSFHNTIVTVTDGRGQVVS WSSAGTCRFKGPRKRTPFAAQIVAADAIGPVVDQGLQRAKIKLKGTGRGRDAALRTISKS GIGFTSVODVTPVPHNGCRPPNKKRO

>03ZJ77

MIKIIIKETFSFKSVLMHFLKEKVSNNKISKKNKIMPSYTLLSCIDSRVENLTKFYGRFE
LGPFAPGQALTVANALRRSLLSQLPGTSITLVEVRGASNEYEIITGVRESILDILLNLKQ
IVLTSDFEIFSPQIGFLSVEGPGVIRANDLKLPSFIYAVDPNQYIATLSNSGRLNMKFLI
CCGKNYITYNPNDSQYFEWLSLLKKSKPLIKSNSPKLNKGNINSEIDSDISIDKKNDEVI
FFQNANTRVVDSQTALKKGLVLKNTLRINKSSFLINSNYQSFFPKTQQKAFSIFRKNSKT
FLSTMGFYKEWKKEREFLKKDLYKNQEDFNKSYDFQETKKKLQTKLIKNFETPKKKLFKV
QNSANPFNKAFIPLTEEKVDYDSDFNLDHKSTKIGYFPIDAIFMPINRVNYLIESTEDIK
LKIKDRVILEVWTNGSIHPRHAIHKAAKALIQLFLPLQQIRTNLFLISDNSHFEEGQDKI
KKRIDNFKKEALLKANPQIQANPQLKKRNFDHRLLELDIANLELTARPYSCLKLANINTI
EDLISYSOEDLLSIKNFGRRSLIEVOKALOLMKLTLK

>Q5YLB4

MALLKPFPLQHSLRCMASRFLLHSHYHTHTLSFSSISLSRPSIVLNPRVINKLRRLSDAI
LIRNMVSLRAFMSSSTTTEAFQENTKSKGYGSEQIQVLEGLDPVRKRPGMYIGSTGPRGL
HHLVYEILDNAVDEAQAGFATKIDVVLHADNSVSIADNGRGIPTELHPVTKKSSLETVLT
VLHAGGKFGGSSSGYNVSGGLHGVGLSVVNALSQALEVTIWRDGKEYQQKYSRGKPITTL
ICHDLPVEMRDRQGTAIRFWPDKEVFTTEMQFDYNTIAGRIRELAFLNPELTIALKKEDI
DPEKIQCNEYFYAGGLVEYVKWLNADKKPLHDVLGFRKEADGITIDMALQWCSDAYSDTM
LGYANSIRTIDGGTHIDGVKAALTRILNNLGKKSKTIKEKDISLSGEHVREGLTCVISVK
VPNPEFEGQTKTRLGNPEVRKVVDQSVQEYLTEYLELHPDVLDSILSKSLNALKAALAAK
RARELVRQKSVLKSSSLPGKLADCSATNPEEAEIFIVEGDSAGGSAKQGRDRRFQAILPL
RGKILNIERKDEAAMYKNEEIQNLILGLGLGVKGEDFKKEALRYHKIIILTDADVDGAHI
RTLLLTFFFRYQRALFEEGCIYVGVPPLYKVERGKQVYYCYDDAELKKVQRSFPSNASYN
IQRFKGLGEMMPAQLWETTMNPETRLLKQLVVEDAAEANVVFSSLMGSRVDIRKQLIQNS
ASMMNLEOLDI

>Q8SAY0

MLASPALAGARAFAATVSGSLGIPIPAISAPSPSQARRRASLVVVAKVKVSTPQADRIAR HVRLRKKVSGTTERPRLSVFRSNKHLYAQVIDDTKSCTLVSASTMHKSLSKDLEYSAGPT VEVAQKIGEVIAKSCLEKGITKVVFDRGGFLYHGRIKALADAARENGLDF

>09ST69

MATTATTTPSATSLTTLHRRIPLFPTTTTLLSLSSSSKPLFLSLSSTRSFPTHLYCIKKD

DIDITFFEQDNPDEEITFDPPEKPEGYIPPRAVDEPPFESEEEIALAYEELYGAAYSGES LLGNDVYAMDSKIKKATGFGSKSKKEKIRDGFEENVVQVRRVTKVVKGGKHMRFRAIVVV GDKKGQVGVGKAKEVVSAVQKAAVDARRNIITVPMTKYLTFPHRNEADYGAARVMLRP AAPGTGVIAGGAVRTVLEMAGVENALGKQLGSNNALNNARATIVAVQTMRQFSDVARDRG IPMEELWK

>024163

MTTTPIANHPNIFTHQSSSSPLAFLNRTSFIPFSSISKRNSVNCNGWRTRCSVAKDYTVP SSAVDGGPAAELDCVIVGAGISGLCIAQVMSANYPNLMVTEARDRAGGNITTVERDGYLW EEGPNSFQPSDPMLTMAVDCGLKDDLVLGDPNAPRFVLWKGKLRPVPSKLTDLAFFDLMS IPGKLRAGFGAIGLRPSPPGHEESVEQFVRRNLGGEVFERLIEPFCSGVYAGDPSKLSMK AAFGKVWKLEETGGSIIGGTFKAIKERSSTPKAPRDPRLPKPKGQTVGSFRKGLRMLPDA ISARLGSKLKLSWKLSSITKSEKGGYHLTYETPEGVVSLQSRSIVMTVPSYVASNILRPL SVAAADALSNFYYPPVGAVTITYPQEAIRDERLVDGELKGFGQLHPRTQGVETLGTIYSS SLFPNRAPKGRVLLLNYIGGAKNPEILSKTESQLVEVVDRDLRKMLIKPKAQDPLVVGVR VWPQAIPQFLVGHLDTLSTAKAAMNDNGLEGLFLGGNYVSGVALGRCVEGAYEVASEVTG FLSRYAYK

>P49079

MRSLTVASRHPGAAFSTRRRPLLHPAAAGRDSTFORCWRWEKTODSSFGSSLRTSRLPRT VHGDILKNLLAPTAGAVSVEQAEAIADLPKGDMWSVHKFGGTCMGTSERIHNVADIVLRD PSERKLVVVSAMSKVTDMMYNLVNKAQSRDDSYIAVLDEVFDKHMTTAKDLLAGEDLARF LSQLHADISNLKAMLRAIYIAGHATESFSDFVVGHGELWSAQMLSYAIQKSGTPCSWMDT REVLVVNPSGANOVDPDYLESEKRLEKWFSRCPAETIIATGFIASTPENIPTTLKRDGSD FSAAIIGSLVKAROVTIWTDVDGVFSADPRKVSEAVILSTLSYOEAWEMSYFGANVLHPR TIIPVMKYNIPIVIRNIFNTSAPGTMICOOPANENGDLEACVKAFATIDKLALVNVEGTG MAGVPGTANAIFGAVKDVGANVIMISQASSEHSVCFAVPEKEVALVSAALHARFREALAA GRLSKVEVIHNCSILATVGLRMASTPGVSATLFDALAKANINVRAIAOGCSEYNITIVLK QEDCVRALRAAHSRFFLSKTTLAVGIIGPGLIGRTLLNQLKDQAAVLKENMNIDLRVMGI AGSRTMLLSDIGVDLTQWKEKLQTEAEPANLDKFVHHLSENHFFPNRVLVDCTADTSVAS HYYDWLKKGIHVITPNKKANSGPLDRYLKLRTLQRASYTHYFYEATVGAGLPIISTLRGL LETGDKILRIEGIFSGTLSYIFNNFEGARTFSDVVAEAKKAGYTEPDPRDDLSGTDVARK VIILARESGLGLELSDIPVRSLVPEALKSCTSADEYMOKLPSFDEDWARERKNAEAAGEV $\verb|LRYVGVVDVVSKKGQVELRAYKRDHPFAQLSGSDNIIAFTTSRYKDQPLIVRGPGAGAEV|$ TAGGVFCDILRLSSYLGAPS

>038802

MSLQYHVLNSIPSTTFLSSTKTTISSSFLTISGSPLNVARDKSRSGSIHCSKLRTQEYIN
SQEVQHDLPLIHEWQQLQGEDAPQISVGSNSNAFKEAVKSVKTILRNLTDGEITISAYDT
AWVALIDAGDKTPAFPSAVKWIAENQLSDGSWGDAYLFSYHDRLINTLACVVALRSWNLF
PHQCNKGITFFRENIGKLEDENDEHMPIGFEVAFPSLLEIARGINIDVPYDSPVLKDIYA
KKELKLTRIPKEIMHKIPTTLLHSLEGMRDLDWEKLLKLQSQDGSFLFSPSSTAFAFMQT
RDSNCLEYLRNAVKRFNGGVPNVFPVDLFEHIWIVDRLQRLGISRYFEEEIKECLDYVHR
YWTDNGICWARCSHVQDIDDTAMAFRLLRQHGYQVSADVFKNFEKEGEFFCFVGQSNQAV
TGMFNLYRASQLAFPREEILKNAKEFSYNYLLEKREREELIDKWIIMKDLPGEIGFALEI
PWYASLPRVETRFYIDQYGGENDVWIGKTLYRMPYVNNNGYLELAKQDYNNCQAQHQLEW
DIFQKWYEENRLSEWGVRRSELLECYYLAAATIFESERSHERMVWAKSSVLVKAISSSFG

ESSDSRRSFSDOFHEYIANARRSDHHFNDRNMRLDRPGSVOASRLAGVLIGTLNOMSFDL FMSHGRDVNNLLYLSWGDWMEKWKLYGDEGEGELMVKMIILMKNNDLTNFFTHTHFVRLA EIINRICLPRQYLKARRNDEKEKTIKSMEKEMGKMVELALSESDTFRDVSITFLDVAKAF YYFALCGDHLQTHISKVLFQKV

>048917

MAHLLSASCPSVISLSSSSSKNSVKPFVSGOTFFNAOLLSRSSLKGLLFOEKKPRKSCVF RATAVPITOOAPPETSTNNSSSKPKRVMVIGGDGYCGWATALHLSKKNYEVCIVDNLVRR LFDHQLGLESLTPIASIHDRISRWKALTGKSIELYVGDICDFEFLAESFKSFEPDSVVHF GEORSAPYSMIDRSRAVYTOHNNVIGTLNVLFAIKEFGEECHLVKLGTMGEYGTPNIDIE EGYITITHNGRTDTLPYPKOASSFYHLSKVHDSHNIAFTCKAWGIRATDLNOGVVYGVKT DETEMHEELRNRLDYDAVFGTALNRFCVQAAVGHPLTVYGKGGQTRGYLDIRDTVQCVEI AIANPAKAGEFRVFNOFTEOFSVNELASLVTKAGSKLGLDVKKMTVPNPRVEAEEHYYNA KHTKLMELGLEPHYLSDSLLDSLLNFAVQFKDRVDTKQIMPSVSWKKIGVKTKSMTT

>A2CI50

MAVRFLFEALQKAIDEEMEREKRVVLIGEDIGHYGGSYKVTQGLYGKYGKHRVIDTPIAE YSFVGAAVGAAATGLIPVVEGMNMAFILLAYSQISNNMGMLCATSGGHFQVPMVLRGPGG IGKOLGAEHSORLESYFOSVPGLOIVTCSTPYNAKGLLKSAIRSKNPILFIEHVLLYNLK GEVPDNDYLLPLEKAELVREGSDITVLTYSRQRYNVIQAVKVLVEEGYDPEVIDLISLKP FDMETIGKSIQKTHKVLIVEECMMTGGISNVLQSLIIDNFFDALDAAPLILSSPNVPTPY TGPLEEATVVQTIDIIESIEYGITGKPPKPRTAKK

>038732

MATINLSLLPKTLTPNSKTLAPLLSILSTSSLSFLPCTRPHPIKSRSAAYPTVRALTDGE YSSRRNNNNNSGEERETIMLPGCDYNHWLIVMEFPKDPAPTREOMIDTYLNTLATVLGS MEEAKKNMYAFSTTTYTGFOCTVTEETSEKFKGLPGVLWVLPDSYIDVKNKDYGGDKYVN GEIIPCQYPTYQPKQSRSSKYKSKAYVRQRDGPPAEQRRPKQEATPESST >0948J9

MELLNGVETLVSGIHHHHRTNAKRNRLVRSVKILNSGNHEIPRKCLCFDLYDKLVPYKKA WSWOKSIVEEKKTLIDRNODCADTVILLOHSPVYTMGTASTEDYLNFDIKDAPFNVYRTE RGGEVTYHGPGQLVMYPIINLRNHEMDLHWYLRMLEEIVIRVLSSTFSIKASRLDGLTGV WVGNOKVAAIGIRVSKWITYHGLALNVTTDLTPFNWIVPCGIRDRKVGNIKGLLEDGEHG MVDDLRLIDIVHESLLKEFSEAFOLOIEKOTVSDPNIL

>Q42545

MAIIPLAQLNELTISSSSSSFLTKSISSHSLHSSCICASSRISQFRGGFSKRRSDSTRSK SMRLRCSFSPMESARIKVIGVGGGGNNAVNRMISSGLQSVDFYAINTDSQALLQSSAENP LOIGELLTRGLGTGGNPLLGEOAAEESKDAIANALKGSDLVFITAGMGGGTGSGAAPVVA QISKDAGYLTVGVVTYPFSFEGRKRSLQALEAIEKLQKNVDTLIVIPNDRLLDIADEQTP LODAFLLADDVLROGVOGISDIITIPGLVNVDFADVKAVMKDSGTAMLGVGVSSSKNRAE EAAEQATLAPLIGSSIQSATGVVYNITGGKDITLQEVNRVSQVVTSLADPSANIIFGAVV DDRYTGEIHVTIIATGFSQSFQKTLLTDPRAAKLLDKMGSSGQQENKGMSLPHQKQSPST **ISTKSSSPRRLFF**

>006FN2

MTNNKNFADWDSLECKDLHNDLLYGRFALSPLTAKESRLLKKGLREALLTGILCLRFTHA KIONACKNLNLMNIVGIOESLDEILKNFGKIILTGKLEEFVGKGPFVAILDVRGPLNAMA VDIELPPGIKVEIETOHIATITEPIPFVVELRIELVSSTSKGETGITDEEGFSIDPNPPI QKVNSSIQGYEYGGQTFQTLFIEILSTSPTVPNKALLLVSMKIMNLFQIVLQAKYLDYKE LEKGIHVGVFCVSALRAEQSKWIKTILEDALYMVGGRKHQGPLTDEEDDSIDSNFTPVQN LDCRIESYEEEGQTFQRLFLEIWTKSPTEPQEALWEASAKILELFSLFLQTSKENEKDLK QIIKDWTENKRKHQEVLRLLDSEESGSIGWITKMKLAYMHMTLLSMNAMYILLVHRLKPD YDRYNSITDQIVQELRASLNKLREIQKGEYSEQRILVHSIAQEIEAALQKYETTYKLDDF VIKAKKDMITMIWDKERADLESSLIRWESDEDYLNLKKMNPVEMDRSFAELQYQETLRKE ODEOSSOOOKDOMEKRRWERONRERERKRGNREF

>P53536

MASMTMRFHPNSTAVTESVPRRGSVYGFIGYRSSSLFVRTNVIKYRSVKRNLEFRRRSAF SVKCGSGNEAKOKVKDOEVOOEAKTSPSSFAPDTTSIVSSIKYHAEFTPLFSPEKFELPO AFIATAQSVRDALIINWNATYDYYEKLNVKQAYYLSMEFLQGRALLNAIGNLELTGPYAE ALSOLSYKLEDVAHOEPDAALGNGGLGRLASCFLDSLATLNYPAWGYGLRYKYGLFKORI TKDGQEEVAEDWLEMGNPWEIVRNDVSYPVRFYGKVVSGSDGKKHWVGGEDIKAVAHDVP IPGYKTRSTINLRLWSTKAASEEFDLNAFNSGRHTEASEALANAEKICYILYPGDESIEG KTLRLKOOYTLCSASLODIIARFERRSGASVNWEDFPEKVAVOMNDTHPTLCIPELMRIL IDIKGLSWKDAWNITORTVAYTNHTVLPEALEKWSMDLMEKLLPRHVEIIEMIDEELIRT IIAEYGTADSDLLDKKLKEMRILENVELPAEFADILVKTKEATDISSEEVQISKEGGEEE ETSKEGGEEEEKEVGGGREEGDDGKEDEVEKAIAEKDGTVKSSIGDKKKKLPEPVPVPP KLVRMANLCVVGGHAVNGVAEIHSEIVKDDVFNAFYKLWPEKFONKTNGVTPRRWIRFCN PDLSKIITQWIGTEDWILNTEKLAELRKFADNEDLQTQWREAKRNNKVKVAAFLRERTGY SVSPDSMFDIQVKRIHEYKRQLLNIFGIVYRYKKMKEMNAAERKENFVPRVCIFGGKAFA TYVQAKRIVKFITDVGATVNHDPEIGDLLKVIFVPDYNVSVAEMLIPASELSQHISTAGM EASGTSNMKFAMNGCLQIGTLDGANVEIREEVGADNFFLFGAKAREIVGLRKERARGKFV PDPRFEEVKKFVRSGVFGSYNYDELIGSLEGNEGFGRADYFLVGODFPSYLECOEEVDKA YRDQKKWTRMSILNTAGSSKFSSDRTIHEYAREIWNIEPVKLE

>043349

MSASASSLSAFNPKSLPLCVSRPASVSVLPPSLSFKLHSDHLVSIFASSALKCSSPAEYP SRFVRNVAVSSDFEVEEDDMFADGDDSAPVERNSFSPDLKLFVGNLSFNVDSAQLAQLFE SAGNVEMVEVIYDKVTGRSRGFGFVTMSTAAEVEAAAQQFNGYEFEGRPLRVNAGPPPPK REESFSRGPRSGGYGSERGGGYGSERGGGYGSERGGGYGSQRSGGGYGGSQR SSYGSGSGSGSGSGSGRLYVGNLSWGVDDMALENLFNEQGKVVEARVIYDRDSGRSKGF GFVTLSSSQEVQKAINSLNGADLDGRQIRVSEAEARPPRGQF

>Q9C5W3

MFLCFCPCHVPIMSRLSPATGISSRLRFSIGLSSDGRLIPFGFRFRRNDVPFKRRLRFVI
RAQLSEAFSPDLGLDSQAVKSRDTSNLPWIGPVPGDIAEVEAYCRIFRSAERLHGALMET
LCNPVTGECRVPYDFSPEEKPLLEDKIVSVLGCILSLLNKGRKEILSGRSSSMNSFNLDD
VGVAEESLPPLAVFRGEMKRCCESLHIALENYLTPDDERSGIVWRKLQKLKNVCYDAGFP
RSDNYPCQTLFANWDPIYSSNTKEDIDSYESEIAFWRGGQVTQEGLKWLIENGFKTIVDL
RAEIVKDTFYQTALDDAISLGKITVVQIPIDVRMAPKAEQVELFASIVSDSSKRPIYVHS
KEGVWRTSAMVSRWKQYMTRPITKEIPVSEESKRREVSETKLGSNAVVSGKGVPDEQTDK
VSEINEVDSRSASSQSKESGRFEGDTSASEFNMVSDPLKSQVPPGNIFSRKEMSKFLKSK
SIAPAGYLTNPSKILGTVPTPQFSYTGVTNGNQIVDKDSIRRLAETGNSNGTLLPTSSQS
LDFGNGKFSNGNVHASDNTNKSISDNRGNGFSAAPIAVPPSDNLSRAVGSHSVRESQTQR
NNSGSSSDSSDDEAGAIEGNMCASATGVVRVQSRKKAEMFLVRTDGVSCTREKVTESSLA

FTHPSTQQQMLLWKTTPKTVLLLKKLGQELMEEAKEAASFLYHQENMNVLVEPEVHDVFA
RIPGFGFVQTFYIQDTSDLHERVDFVACLGGDGVILHASNLFKGAVPPVVSFNLGSLGFL
TSHPFEDFRQDLKRVIHGNNTLDGVYITLRMRLRCEIYRKGKAMPGKVFDVLNEIVVDRG
SNPYLSKIECYEHDRLITKVQGDGVIVATPTGSTAYSTAAGGSMVHPNVPCMLFTPICPH
SLSFRPVILPDSAKLELKIPDDARSNAWVSFDGKRRQQLSRGDSVRIYMSQHPLPTVNKS
DQTGDWFRSLIRCLNWNERLDQKAL

>09FLN4

MAMATSMSLNLIGAFKGLSLSSTSSFLRGDLSFSPKTSFTVTLPLENLQAPIPLTIESAH KKGAGSTKNGRDSPGQRLGVKIYGDQVAKPGAIIVRQRGTKFHAGKNVGIGKDHTIFSLI DGLVKFEKFGPDRKKISVYPREIVPENPNSYRARKRENFRLQREKKKARRENYSYTLPTP ELVLASASVDDAEANPEC

>P46248

MASLMLSLGSTSLLPREINKDKLKLGTSASNPFLKAKSFSRVTMTVAVKPSRFEGITMAP
PDPILGVSEAFKADTNGMKLNLGVGAYRTEELQPYVLNVVKKAENLMLERGDNKEYLPIE
GLAAFNKATAELLFGAGHPVIKEQRVATIQGLSGTGSLRLAAALIERYFPGAKVVISSPT
WGNHKNIFNDAKVPWSEYRYYDPKTIGLDFEGMIADIKEAPEGSFILLHGCAHNPTGIDP
TPEQWVKIADVIQEKNHIPFFDVAYQGFASGSLDEDAASVRLFAERGMEFFVAQSYSKNL
GLYAERIGAINVVCSSADAATRVKSQLKRIARPMYSNPPVHGARIVANVVGDVTMFSEWK
AEMEMMAGRIKTVRQELYDSLVSKDKSGKDWSFILKQIGMFSFTGLNKAQSDNMTDKWHV
YMTKDGRISLAGLSLAKCEYLADAIIDSYHNVS

>P82244

MATLSLLSTGVGAAITNRTPSASLTFITGSRTTNKRVSFNGGSARSGSLHCSFLAPSSSL SSNFSGLSLGLDLTSNTGVSTDRCRRFVVRAGKAALCLTKRSRSRKSLARTHGFRLRMST TSGRALLKRRAKGRKILCTKTNPSSGKRASP

>A1E9S2

 ${\tt MAKKSLIQREKKRHKLEQKYHLIRRSSKKKIRSKVSPLSLSEKTKMQEKLQSLPRNSAPT} \\ {\tt RLHRRCFLTGRPRANYRDFGLSGHILREMVYACLLPGATRSSW}$

>P02902

MAHCLAAVSSFSPSAVRRRLSSQVANVVSSRSSVSFHSRQMSFVSISSRPSSLRFKICCA AMGEAQAKKETVDKVCMIVKKQLAVPDGTPVTAESKFSELGADSLDTVEIVMGLEEEFNI TVDETSAQDIATVQDAANLIEKLVTEKTA

>A2Y3Q5

MWSSSQASTRGVIEVGRVEAGPSHFPKRPAPRNSSRVNLSRTYAIKSCSVSSRTGLCLGQ
CYHKKSSACKCKLGWSSQPLSSLRHHLRVHSSASEAVLTSQSDFTKLLVGNEKIGVLLLN
LGGPETLDDVQPFLFNLFADPDIIRLPRLFRFLQKPLAQFISVVRAPKSKEGYASIGGGS
PLRQITDAQAEALRKALCDKDIPAKVYVGMRYWHPFTEEAIEQIKRDGITKLVVLPLYPQ
FSISTSGSSLRLLEGIFREDEYLVNMQHTVIPSWYQREGYIKAMATLIEKELRTFSEPQK
VMIFFSAHGVPLAYVEEAGDPYKAEMEECVDLIMEELEKRGITNSCTLAYQSRVGPVEWL
RPYTDETIIELGQKGVKSLLAVPISFVSEHIETLEEIDVEYKELALESGIKHWGRVPALG
CEPTFITDLADAVIESLPYVGAMAVSNLEARQPLVPLGSVEELLAAYDSKRDELPPPVTV
WEWGWTKSAETWNGRAAMLAVLALLVLEVTTGEGFLHQWGILPLFH

>Q8VYN6

MDALSQAISSGISVPYKNNSSSLVPSHGLTSLILRKSRSPVNPSSRSRVSVRASEIQHSK TSASSIDLSDPDWKLKYEKDFEQRFSIPHITDVLPDAEAIRSTFCLKMRSPTEDFVGGYP SDEEWHGYINNNDRVLLKVISYSSPTSAGAECLDHDCSWVEQWIHRAGPREKIYFRPEEV
KAAIITCGGLCPGLNDVIRHIVITLEIYGVKNIVGIPFGYRGFSDKDLTEMPLSRKVVQN
IHLSGGSLLGVSRGGPSVSEIVDSMEERGINMLFVLGGNGTHAGANAIHNECRKRKIKVA
VVGVPKTIDNDILHMDKTFGFDTAVEEAQRAINSAYIEAHSAYHGIGVVKLMGRNSGFIA
MQASLASGQVDICLIPEVPFNLHGPNGVLKHLKYLIETKGSAVICVAEGAGQNFLEKTNA
KDASGNAVLGDFGVYIQQETKKYFKEISTPIDVKYIDPTYMIRAVRANASDGILCTVLGQ
NAVHGAFAGYSGITVGIINTHYAYLPITEVIAYPKSVDPNSRMWHRCLTSTGQPDFI
>03ZJ89

MTNKLDCLKLINFIEKSNLFTTNKIRDKKLLIAFSGGQDSSCLLTIFYILSKKWGFKLGA
VYCNHCWTDSPQSSLSAFDTLQMFDIPFYFVESPNSEPMKPEQKARDWRYSSFYTISKWE
DYDFVLTGHSLSDCVETVLFNLFRGSGLKGICSLKEDQKFSNLKTNDFFFQKTVCFLDPF
FYFSDKKGNPFFRKYRLFQSMSFLSIFPKFDFFAFGENCAIDKSNFPLKNKSKGKNLQFL
TSFDIKNWFGIKKICRFCFLDKIGQTGIKKKRGTNRVPILIFSRRVNKTTSPLALNFQTK
NKRVDRKSFLFRFSLAFALPLAFALRAKGEKVRKNALLNQIKPVSFFFKTKKDKTETNLF
HRYLQTIKKLQNRDKISSFITIFRPFILTLGNVKIKGKKIKNKNLPFQIKKLIRKKEKEK
GILWNSLSKLDNKDKLISNQIQKKGFKLIPKFILTKDKKSFSNFPPFIFDQLEKTFRKEK
VDTKPRNSSPQFEVLFNKLSQPSSDKKNVDFIVFRPLIKITRETLFLFSNNLKIPIYYDK
SNKDLNITRNYIRKVLVPLLKKINPRVEENIYKFSKIIEFYYQVFGDLKCPSDRFDIFNP

>P0C471

 ${\tt MKKILFSMFYSILVGEEPDSVFLKKEGKQNQVKMIWVAPSSCAKDLTISEGTGATFLFNF} \\ {\tt HSRVSYLFPRPFLRPRNMKWTNSFS}$

>P94044

 ${\tt MSTATAPRLPAPRSGASYHYQTTAAPAANTLSFAGHARQAARASGPRLSSRFVASAAAVL}$ ${\tt HKVKLVGPDGTEHEFEAPDDTYILEAAETAGVELPFSCRAGSCSTCAGRMSAGEVDQSEG}$ ${\tt SFLDDGQMAEGYLLTCISYPKADCVIHTHKEEDLY}$

>Q84KJ5

MAASSLSLSSPLSNPLRRFTLHHLHLSKKPLSSSSLFLCSAAKMNDHIHRVPALTEEEID SVAIKTFERYALPSSSSVKRKGKGVTILWFRNDLRVLDNDALYKAWSSSDTILPVYCLDP RLFHTTHFFNFPKTGALRGGFLMECLVDLRKNLMKRGLNLLIRSGKPEEILPSLAKDFGA RTVFAHKETCSEEVDVERLVNQGLKRVGNSTKLELIWGSTMYHKDDLPFDVFDLPDVYTQ FRKSVEAKCSIRSSTRIPLSLGPTPSVDDWGDVPTLEKLGVEPQEVTRGMRFVGGESAGV GRVFEYFWKKDLLKVYKETRNGMLGPDYSTKFSPWLAFGCISPRFIYEEVQRYEKERVAN NSTYWVLFELIWRDYFRFLSIKCGNSLFHLGGPRNVQGKWSQDQKLFESWRDAKTGYPLI DANMKELSTTGFMSNRGRQIVCSFLVRDMGLDWRMGAEWFETCLLDYDPCSNYGNWTYGA GVGNDPREDRYFSIPKQAQNYDPEGEYVAFWLQQLRRLPKEKRHWPGRLMYMDTVVPLKH GNGPMAGGSKSGGGFRGSHSGRRSRHNGP

>P31541

MMARALVQSTNILPSVAGERAGQFNGSRKDQRTVRMLCNVKCCSSRLNNFAGLRGCNALD TLLVKSGETLHSKVAAATFVRRPRGCRFVPKAMFERFTEKAIKVIMLAQEEARRLGHNFV GTEQILLGLIGEGTGIAAKVLKSMGINLKDARVEVEKIIGRGSGFIAVEIPFTPRAKRVL ELSLEEARQLGHNYIGSEHLLLGLLREGEGVAARVLENLGADPTNIRTQVIRMVGESSEA VGASVGGGTSGLKMPTLEEYGTNLTKLAEEGKLDPVVGRQAQIERVTQILGRRTKNNPCL IGEPGVGKTAIAEGLAQRIANGDVPETIEGKKVITLDMGLLVAGTKYRGEFEERLKKLME

EIKQSDEIILFIDEVHTLIGAGAAEGAIDAANILKPALARGELQCIGATTLDEYRKHIEK
DPALERRFQPVKVPEPSVDETIQILKGLRERYEIHHKLHYTDEAIEAAAKLSHQYISDRF
LPDKAIDLIDEAGSRVRLRHAQLPEEARELEKELRQITKEKNEAVRGQDFEKAGELRDRE
MDLKAQISALIDKNKEKSKAESEAGDAAGPIVTEADIQHIVSSWTGIPVEKVSTDESDRL
LKMEETLHTRVIGQDEAVKAISRAIRRARVGLKNPNRPIASFIFSGPTGVGKSELAKSLA
TYYFGSEEAMIRLDMSEFMERHTVSKLIGSPPGYVGYTEGGQLTEAVRRRPYTVVLFDEI
EKAHPDVFNMMLQILEDGRLTDSKGRTVDFKNTLLIMTSNVGSSVIEKGGRRIGFDLDFD
EKDSSYNRIKSLVTEELKQYFRPEFLNRLSEMIVFRQLTKLEVKEIADIMLKEVFVRLKN
KEIELQVTERFRDRVVDEGYNPSYGARPLRRAIMRLLEDSMAEKMLAGEIKEGDSVIVDV
DSDGNVTVLNGTSGAPSDSAPEPILV

>065837

MECVGVQNVGAMAVLTRPRLNRWSGGELCQEKSIFLAYEQYESKCNSSSGSDSCVVDKED FADEEDYIKAGGSQLVFVQMQQKKDMDQQSKLSDELRQISAGQTVLDLVVIGCGPAGLAL AAESAKLGLNVGLVGPDLPFTNNYGVWEDEFKDLGLQACIEHVWRDTIVYLDDDEPILIG RAYGRVSRHFLHEELLKRCVEAGVLYLNSKVDRIVEATNGQSLVECEGDVVIPCRFVTVA SGAASGKFLQYELGSPRVSVQTAYGVEVEVDNNPFDPSLMVFMDYRDYLRHDAQSLEAKY PTFLYAMPMSPTRVFFEETCLASKDAMPFDLLKKKLMLRLNTLGVRIKEIYEEEWSYIPV GGSLPNTEQKTLAFGAAASMVHPATGYSVVRSLSEAPKCASVLANILRQHYSKNMLTSSS IPSISTQAWNTLWPQERKRQRSFFLFGLALILQLDIEGIRSFFRAFFRVPKWMWQGFLGS SLSSADLMLFAFYMFIIAPNDMRKGLIRHLLSDPTGATLIRTYLTF

>P16096

MASASLLKTSPVLDNPEFLKGQTLRIPSVAGVRFTPSGSSSLTVRASSYADELVKTAKTV
ASPGRGILAMDESNATCGKRLASIGLENTEANRQAYRTLLISAPGLGQYVSGAILFEETL
YQSTTDGKKMVDVLIEQGIVPGIKVDKGWLPLPGSNDESWCQGLDGLACRSAAYYQQGAR
FAKWRTVVSIPNGPSALAVKEAAWGLARYAAITQDNGLDPILEPEIMLDGEHGIDRTFRV
AQQVWAEVFFNLAENNVLLEGSSLKPSMVGPGALSARKGPPEQVADYPLKLLHRRRGPVV
PGIMVLSGGQSEVEATLNLNAMNQSPNPWHVSFSYARALQNTCLKTWVEGQENVKAQDFA
CAKSNSLAQLGKYTGEGESEERKKDMFVKATLTY

>Q06SG0

MINDTISDMLTRIRNASIVRKKSVLIPYTKMNLKIAEILEKEGYILSFEINTNKAISITK KTSETNLRMLKIYLKYYKKYKTNFYKLNVIKNKKALSDFKNLIKLLKGKQGNKKTPCITN LKRISKPGLRIYVNHKELPRVLAGTGIYILSTSKGILTDREARFRGIGGEVLCSVW >P59287

MALPSAAMQSNPEKLNLFHRLSSLPTTSLEYGNNRFPFFSSSAKSHFKKPTQACLSSTTH QEVRPLAYFPPTVWGNRFASLTFNPSEFESYDERVIVLKKKVKDILISSTSDSVETVILI DLLCRLGVSYHFENDIEELLSKIFNSQPDLVDEKECDLYTAAIVFRVFRQHGFKMSSDVF SKFKDSDGKFKESLRGDAKGMLSLFEASHLSVHGEDILEEAFAFTKDYLQSSAVELFPNL KRHITNALEQPFHSGVPRLEARKFIDLYEADIECRNETLLEFAKLDYNRVQLLHQQELCQ FSKWWKDLNLASDIPYARDRMAEIFFWAVAMYFEPDYAHTRMIIAKVVLLISLIDDTIDA YATMEETHILAEAVARWDMSCLEKLPDYMKVIYKLLLNTFSEFEKELTAEGKSYSVKYGR EAFQELVRGYYLEAVWRDEGKIPSFDDYLYNGSMTTGLPLVSTASFMGVQEITGLNEFQW LETNPKLSYASGAFIRLVNDLTSHVTEQQRGHVASCIDCYMNQHGVSKDEAVKILQKMAT DCWKEINEECMRQSQVSVGHLMRIVNLARLTDVSYKYGDGYTDSQQLKQFVKGLFVDPIS

>Q05753

MQSLSTPHTISLLLPRTSPSRLSPSLHSLAFPTRLRSLSYSSQTSILPDAGDDFIVGDCL
VYEDGVFEDPYLDKEVTQVAKQERKKNRRGGAKRLDESEIEPENLVPEEWRDIQAEVNLT
KKDKRKIAQEMEFGVRVEKKRQGLIPLRKVDLNDFLTYKEAKLAQLRPVILDKPGNFSDD
SGASSDGETAVSSPSERVAPKNPRWAVYGKGFDHVAKFFNSDKYDPSDKKSDGPRKLLSK
EEKFMLNSRNPDLAVATSKKWLPLHTLAACGEFYLVDSLLKHNLDINATDVGGLTVLHRA
IIGKKQAITNYLLRESANPFVLDDEGATLMHYAVQTASAPTIKLLLLYNADINAQDRDGW
TPLHVAVQARRSDIVKLLLIKGADIEVKNKDGLTPLGLCLYLGREIRTYEVMKLLKEFPL
SRHKKRLVTTDEDIE

>P55217

MAVSSFQCPTIFSSSSISGFQCRSDPDLVGSPVGGSSRRRVHASAGISSSFTGDAGLSSR
ILRFPPNFVRQLSIKARRNCSNIGVAQIVAAKWSNNPSSALPSAAAAAATSSASAVSSAA
SAAAASSAAAAPVAAAPPVVLKSVDEEVVVAEEGIREKIGSVQLTDSKHSFLSSDGSLTV
HAGERLGRGIVTDAITTPVVNTSAYFFKKTAELIDFKEKRSVSFEYGRYGNPTTVVLEDK
ISALEGAESTLVMASGMCASTVMLLALVPAGGHIVTTTDCYRKTRIFMENFLPKLGITVT
VIDPADIAGLEAAVNEFKVSLFFTESPTNPFLRCVDIELVSKICHKRGTLVCIDGTFATP
LNQKALALGADLVVHSATKYIGGHNDVLAGCICGSLKLVSEIRNLHHVLGGTLNPNAAYL
IIRGMKTLHLRVQQQNSTAFRMAEILEAHPKVSHVYYPGLPSHPEHELAKRQMTGFGGVV
SFEIDGDIETTIKFVDSLKIPYIAPSFGGCESIVDQPAIMSYWDLPQEERLKYGIKDNLV
RFSFGVEDFEDVKADILQALEAI

>Q06SG5

MARKGAPKKRLLLPDPIYNKVSVHMLVNRILKNGKKSIAYRIVYSVFRKISETMNQNPVE VWEKALNNVKPRVEVKPRRRAGSIQQVPRVMPSAERARAIAIRWIVSACQKKAGKDMISK LFSEISEASNKNGAAFRKKEELHKMALSNLMNSRRPDKIVKAITEQSEINDDVY

>A2CI69

MNDLPFTLDQLLILKAIAAQGSFKKAADSLYISQPAVSMQVQNIEKQLNVQLLDRGGRRA
NLTDAGHLLLRYGDRILALCDETCRALEDLRNLQTGTLIIGASQTTGTYLMPQLISLFRK
KYPQIMVQLHVDSTRHICWNVANGQIDIAIIGGEVPLELREILQVTPYADDELALILPCS
HPFSQRQEIQKEDLYQLHFIALYASSTIRKVVDNILREHDIHSSRFFIEMELNSIEAIKS
AVQSELGAAFVSASAITKELQLGLLHWAKIQNVILNRNLSIVTNPNRYRSKAAEKFSCEI
LASFOPPTVHPCG

>Q3ZJ90

MFIKKKKKVSSFEFSSLRSTFSFVHWAKLKHQTSSIIENHSDQISPIQIDFYNRPFEKG
RLKALVSWSISYFGEKKTVDLVENLKSIGYAYATKAGISLGIDDLKIPPSKKDYITKAEQ
ILEFTNQDVKKGYLTSIEYFSKVIETWNKTSESLKEEVISNFKKTDELNPVFIMAFSGAR
GNISQVRQLTSMRGLMSDPQGRIINFPIQSNFREGLTLTEYLISCYGARKGVVDTALRTA
TSGYLTRRLVDVAHHVIVRGFNCGTKKGLYLSDLKKGDKILLSLKNRIIGRRLAEDIYNS
KKQLIATKNQEISSNLSSLITKNKTSIFVRSPLTCQDKNYVCQLCYGWSLANHRLVPSGE
AIGIIAAQSIGEPGTQLTMRTFHTGGVFSGEVTDEIKAPFRGIVFFNTSIPGKLIRTTYG
QIAFLTKQESFLTLIPENPKQQWLDSSKKLGFSKQKEPDFQKDSLFLQKKVEFKIPAYTL
LFVKNNQLVEKNQVLGEASTFLTRQNQSIESYQTIYSEFSGEVKFQHSKGVQVLKKELDF
KIDDQELSSVLKNKLRKLKSLFNPSANSSTGEFWILSAQKQTISKPVNLLVKPGDFLHQK
ALLYLAKKASYSNYFETIALDPSHNLPTLPLPILFYDFGVNSLAKNLNKNAFFNLALLNE
QLYLRKGNLFLMQDRSTQKKANRSTIKILPSLQKQTLQNFKKVCSDLPFVSRSLFPISES

SRDKLNSIQNGVKLQSTIVGKHRFLSLNIIFTQIAKKKFFKMNLNSEVKIKSLKQFDLNH ESNEMKQIGVFNKDKTPTGGFGIQEIFYTSFESKLKTSPLFLLAQFSSDKTLIDLTKQNV QDFKFKNLNYQYFHPFLVLASDPPFCVSEKTLHFMQSCGQSLNEIDPNPKIETFFSKSAP SFLDKNRRNKRFKSLKKTMEKNHLLSLYYFLTQPLSDDNDDTIMNSFNRKSKLNKFSTKR LNKKOIVFGKLNHHFFADKGGDDFHFKNFIHGGLSFKEVCEVDLYLKERVEVFNWKIATL GTPVSDIITKAEKFVLFHSPTNACGSFILEOPLKNPCFYAFGKIGFLRGKTDYGOPNKIF SSNLFNLKKGWKTKTEGRFTNRPNKOKFKSFINSVEKSGPLNKKIFONEGPFALNDFTKI QPIVGNQLNENFFTNAAELLKKRPGAAKQEFQLTSFLEKFINRHNRLFWFPKDQNILNFA DOOSKGPTNLLFORKFLKDLTLFSDGDPSFSCRSFVFOTKFYLSKKLFENLPRHNFENYD IISGPINFOEFEILOKIPFSFYPLSSRSTOKFGPFFILPREVTKKOSFOIFKYPLLFELK TYSPTFFSTVFFFIRNFGPKFHKKRERKLIKAIFRPLPRLIGFSTLKSPLDSGQTTTEKA GLOKPVYRFIKKSELFFSIFDYOILKNYRRLASNLILKONGLNLLNYSPILNSLLKSALL FNIASAKKNSVFEKLGLKISAAYSESKTFGIATEKNSLNSNSVVLFOKKOSGFLIRELNP FHNTLGSPFFDRSKKVDNPQSSLTFDRPQSANERKQILKKARQKLRLFPLNLNEKKNRFS SVTLDLLRDOTTLHKMOSCGEAESGNLKTKETLFKKVKRENKKITEIFTFCPFCPOLKSK GKRKSKGDQLFQEPCNLNLGENFLSCLPFGFEYPVKARRRLVKEQRLPFSLSLILPDKLN YYOSLTSFPFSKOMGNRLLKNLTOLNFLNVGCIRLSOLDSKILRSDSFNPORKELKSKKF NNFSINELSDSFMNLGWTGFSOKNLILKYLDTDOIFKKGGPLKSNLODSOLVECFFKTKK VHFLFISKLLKESSLNSFFYNFYYSGSSFNSFADIOKFENKASFFOTKKKLYNFEKKDOW QKKMSFLFFIQNKKTHLFLPNSKGFFLKKKKDISCERFSTNVILSKSQSKNETKELKKAS LANONLKKHSTISTENALKNKMNOSFSFSHFNKEKKPLSDCRAOTKGAIOKFSTKLPPTO TGWIFAILNPKIYLNKHNCVEFAGNSNLSDISFDNYVTLTCFLTIRFVNTFFELHANVDF WLKTLNTFHLGLLKOSSFDFKASKIKLOKTPFLFPSFPPNYIELVFVKKAILRRVAKKDS ${\tt TFCNLYSFENFLLDKRFQKFKTHFNLQSHLKLAPSFCVDLQGSKGLENFAWTGKLRSQSQ}$ ASWILETNLFSPCFADKQSKSPLLEFENKKCPAFAKGKLQKSKIEKFEFTYNDIKNKLVY FNKSFFLTSDORPVFORSFPKKIHRKTLFITHPSIIWKSRFESSLKSLTFFKMKAKONGT GSLSFFEKKSLETSLNKTSVLFKKVLAIKTFLLFSFSSLNLVSGKLNFLSSVDQNKKSNL KIOSIFENFAYOOSKGSNEINFSRSAALHSMOSFVFSEKLRKTLSLRISNFHKIOKYANO NLESGIGFFSFFQKSLSIVFFDSAYHFSPQNTSTKDSFEIKKENKTVINNYCRFSNFKLL KLPVFKNRFLNKYSLFKSFLNYLSYSFDVKTSKOILVRLPLLKETCFHFNKNSRFKPKLL ILNOANSOOLLATCFVOPYSEFSNSSFVFNSKSAHLHSOTAVKHRONFEKKSKIIFDERK TFSFISSSTQVLFVSKKATHYLNENFRSQNYKKKTYDFIDNANVLKNRFFERLSPVEFHR KREGFLSKDOKOMTFKYONMOGGLIPALDSTSTFAPFARSSKARGSAKAIFSOAORLWGE ESFINDKOKSIRNOIIFAKNSRFKNLLILNNKNENEKLFYLNLKKKVSEOSTMNFFVPAL YKKLFYTKOSISKFLEVKIOPNLOIOWTFFNSNISKHEKOOKFLLPLFDETFNIOGSNLK NGLNFGMLSLSYSTLDPFFECLKKRVNSSWFFNGKQTFKKKKKIAKEGAFFNHSFFLDAK KSKOLNKKIOKKFTKRLOTLNFSEIKKGFFISEKFKTRLSCLIKKPFLISTFFLSYRLKK PKLALNFNYOSLGNNSKKFSLIRLNSIDFNLSKSORGWFHNONVSKOFRFFKHNRSVNLF QIHFDFENSCDPCFAMQKQTTSSKPVLFLYNLKPLKTDFFQKGFQTTSQLLFKHINHSIV PLKDDANHLSSFLNOANFRGAFEPKAKTIADKLISONVAITKPNLPKSNFSSLKGEVFFV TNSRQFKLVDLSVFKKSSREIQLLTNLDLITFRIKNRNFPSKHIEEQKPNLIEKQLAQSK NKLQIYIGQLLRYGKEISPGIGLNQSGQILILQSNKLVLRYAKPFLLASGGICDLVQGDF VKNQSPLLNLKYKSLKTEDIVQGIPKIEQLFEARENFQDELGINNLLKNKFLVYKTLYHP KEAVRKSFEFIOHYIIDGIOYVYOSOGVNISDKHIEIIVKOMTSKVRILEPRNSGLLRGD

VVDLDWIERINLDILTGKKAQYEPIVLGITKASLDRRGFISAASFQETIKVLTKATILQR RDYLRGLKENVILGHLINSGTGSTLYSILKEKKSNFLNRFLQ >08L770

MASCLQASMNSLLPRSSSFSPHPPLSSNSSGRRNLKTFRYAFRAKASAKIPMPPINPKDP
FLSTLASIAANSPEKLLNRPVNADVPPYLDIFDSPQLMSSPAQVERSVAYNEHRPRTPPP
DLPSMLLDGRIVYIGMPLVPAVTELVVAELMYLQWLDPKEPIYIYINSTGTTRDDGETVG
MESEGFAIYDSLMQLKNEVHTVCVGAAIGQACLLLSAGTKGKRFMMPHAKAMIQQPRVPS
SGLMPASDVLIRAKEVITNRDILVELLSKHTGNSVETVANVMRRPYYMDAPKAKEFGVID
RILWRGOEKIIADVVPSEEFDKNAGIKSVV

>P29344

MASLAQQLAGGLRCPPLSNSNLSKPFSPKHTLKPRFSPIVSAVAVSNAQTRERQKLKQLF
EDAYERCRNAPMEGVSFTIDDFHTALDKYDFNSEMGSRVKGTVFCTDANGALVDITAKSS
AYLPLAEACIYRIKNVEEAGIIPGVREEFVIIGENEADDSLILSLRQIQYELAWERCRQL
QAEDVVVKGKIVGANKGGVVALVEGLRGFVPFSQISSKSSAEELLEKEIPLKFVEVDEEQ
SRLVMSNRKAMADSQAQLGIGSVVTGTVQSLKPYGAFIDIGGINGLLHVSQISHDRVSDI
ATVLQPGDTLKVMILSHDRERGRVSLSTKKLEPTPGDMIRNPKLVFEKAEEMAQTFRQRI
AQAEAMARADMLRFQPESGLTLSSDGILGPLTSDLPAEGLDLSVVPPAVES

>P05314

MASLPVNKIIPSSTTLLSSSNNNRRRNNSSIRCQKAVSPAAETAAVSPSVDAARLEPRVE
ERDGFWVLKEEFRSGINPAEKVKIEKDPMKLFIEDGISDLATLSMEEVDKSKHNKDDIDV
RLKWLGLFHRRKHHYGRFMMRLKLPNGVTTSEQTRYLASVIKKYGKDGCADVTTRQNWQI
RGVVLPDVPEIIKGLESVGLTSLQSGMDNVRNPVGNPLAGIDPHEIVDTRPFTNLISQFV
TANSRGNLSITNLPRKWNPCVIGSHDLYEHPHINDLAYMPATKNGKFGFNLLVGGFFSIK
RCEEAIPLDAWVSAEDVVPVCKAMLEAFRDLGFRGNRQKCRMMWLIDELGMEAFRGEVEK
RMPEQVLERASSEELVQKDWERREYLGVHPQKQQGLSFVGLHIPVGRLQADEMEELARIA
DVYGSGELRLTVEQNIIIPNVENSKIDSLLNEPLLKERYSPEPPILMKGLVACTGSQFCG
QAIIETKARALKVTEEVQRLVSVTRPVRMHWTGCPNSCGQVQVADIGFMGCMTRDENGKP
CEGADVFVGGRIGSDSHLGDIYKKAVPCKDLVPVVAEILINQFGAVPREREEAE
>080575

MKSLASPPCLRLIPTAHRQLNSRQSSSACYIHGGSSVNKSNNLSFSSSTSGFASPLAVEK ELRSSFVQTAAVRHVTGSLIRGEGLRFAIVVARFNEVVTKLLLEGAIETFKKYSVREEDI EVIWVPGSFEIGVVAQNLGKSGKFHAVLCIGAVIRGDTTHYDAVANSAASGVLSASINSG VPCIFGVLTCEDMDQALNRSGGKAGNKGAETALTALEMASLFEHHLK

>P92959

MATMSALQSSFTSLSLSPSSSFLGQRLISPISLSVTSPVKPAENPCLVLAKLKRWERKEC KPNSLPILHKMHVKFGDTVKVISGRDKGKIGEVTKIFTHNSTIVIKDVNLKTKHMKSREE GEPGQIVKIEAPIHSSNVMLYSKEKDVVSRVGHKVLEDGQKVRYLIKTGELIDTIEKWKL LKEAKDKETTOVAVTSAS

>Q9XFS9

MMTLNSLSPAESKAISFLDTSRFNPIPKLSGGFSLRRRNQGRGFGKGVKCSVKVQQQQQP PPAWPGRAVPEAPRQSWDGPKPISIVGSTGSIGTQTLDIVAENPDKFRVVALAAGSNVTL LADQVRRFKPALVAVRNESLINELKEALADLDYKLEIIPGEQGVIEVARHPEAVTVVTGI VGCAGLKPTVAAIEAGKDIALANKETLIAGGPFVLPLANKHNVKILPADSEHSAIFQCIQ GLPEGALRKIILTASGGAFRDWPVEKLKEVKVADALKHPNWNMGKKITVDSATLFNKGLE VIEAHYLFGAEYDDIEIVIHPQSIIHSMIETQDSSVLAQLGWPDMRLPILYTMSWPDRVP CSEVTWPRLDLCKLGSLTFKKPDNVKYPSMDLAYAAGRAGGTMTGVLSAANEKAVEMFID EKISYLDIFKVVELTCDKHRNELVTSPSLEEIVHYDLWAREYAANVQLSSGARPVHA >P49235

MAPLLAAAMNHAAAHPGLRSHLVGPNNESFSRHHLPSSSPQSSKRRCNLSFTTRSARVGS
QNGVQMLSPSEIPQRDWFPSDFTFGAATSAYQIEGAWNEDGKGESNWDHFCHNHPERILD
GSNSDIGANSYHMYKTDVRLLKEMGMDAYRFSISWPRILPKGTKEGGINPDGIKYYRNLI
NLLENGIEPYVTIFHWDVPQALEEKYGGFLDKSHKSIVEDYTYFAKVCFDNFGDKVKNW
LTFNEPQTFTSFSYGTGVFAPGRCSPGLDCAYPTGNSLVEPYTAGHNILLAHAEAVDLYN
KHYKRDDTRIGLAFDVMGRVPYGTSFLDKQAEERSWDINLGWFLEPVVRGDYPFSMRSLA
RERLPFFKDEQKEKLAGSYNMLGLNYYTSRFSKNIDISPNYSPVLNTDDAYASQEVNGPD
GKPIGPPMGNPWIYMYPEGLKDLLMIMKNKYGNPPIYITENGIGDVDTKETPLPMEAALN
DYKRLDYIQRHIATLKESIDLGSNVQGYFAWSLLDNFEWFAGFTERYGIVYVDRNNNCTR
YMKESAKWLKEFNTAKKPSKKILTPA

>08HSW1

MAAMIRLFRSSSSSSNSISLISRSLSTAAASETVKSQSYPHNPHSTSVDPKAKTVQWVF LGCPGVGKGTYASRLSTLLGVPHIATGDLVRDELKSSGPLSKQLAEIVNQGKLVSDEIIL NLLSKRLESGEAKGEAGFILDGFPRTVRQAEILTEVTDIDLVVNLKLPERVLVEKCLGRR ICSECGKNFNVASIDVAGENGAPRISMARLNPPFTVCFKLITRADDTEAIVKERLSIYWD KSQPVEDFYRSQGKLLEFDLPGGIPESWPKLLEVLNLDEQEYKLSPAA

>P19587

MNKKIQDFFLSCKECILENPRSFYGSFSLGPFKNSQSLTVANALRRTLLAELSNIAITHL EIEGVTHEYSTLVGVRESVLDLLLNFKGIALKNTSPVTKPLFGYLQVRGPGVVRASDLKF PPMIQCVDPDQYIATLNENGKLILKFRISDFKNSQENLNFEVSKTFLNIPNFGHFDTSSF QNFENSNFFSSSFFASQKMIKSKRKTKFSQLKVDYLSSFGFSTQHKRSGLNQTQKFAMQH QNPFRIEKNQQDFNKNKNGNFDSQKNKTNSLWVDPLFNPILKVNYIIETIEPMQKNIPNE IVFIELWTNGSIHPRKAFYTALLYLKTMFDKLDCMRLLNYEFSNTMLESEKTSTKFFKTF EYDFRFYNSREDKTMKSFTPEKFFLPEEIEDVEKDYLLNLKNQADNTWNDLPLTNLNLPY RITKILAKNNFFVVGDLLKISPNELKKLSGIGNYCVFILQKRFEKLGLKLGSRNEKNL

>P93184

MLTATKPLVGGACAAPSSSARRRTFVVPEARRKPGNGRRTSVSKVGSTSTSTTTTTTTL
SADSNGAAVGTVTRPDVHVQDRTHATEMKATVTVHMSKAAGVRDFLYDLILKTWLHVDLV
SSELDPQTGQEREPISGAVKHSGRVDDEWDMYEATFKVPASFGPIGAVQVTNYHHSEMLL
GDIEVFPTGQEESAVTFHCKSWIDPSHCTPDKRVFFPAHSYLPSQTPKGVEGLRKRELEI
LRGTGCGERKEHDRIYDYDVYNDLGNPDDDNNPTTRPVLGGKEHPYPRRCRTGRPRSKKD
PFSEERSHKEHIYVPRDEAFTERKMGAFDTKKFMSQLHALTTGLKTAKHKSQSFPSLSAI
DQLYDDNFRNQPVQPEGGKLRFVIDLLETELLHLFKLEGAAFLEGIRRVFKFETPEIHDR
DKFAWFRDEEFARQTIAGMNPMSIQLVTEFPIKSNLDEATYGPADSLITKEVVEEQIRRV
MTADEAVQNKKLFMLDYHDLLLPYVHKVRKLDGTTLYGSRALFFLTADGTLRPIAIELTR
PKSKKKPQWRQVFTPGCDGSVTGSWLWQLAKAHILAHDAGVHQLVSHWLRTHACTEPYII
AANRQLSQMHPVYRLLHPHFRFTMEINAQARAMLINAGGIIEGSFVPGEYSLELSSVAYD
QQWRFDMEALPEDLIRRGMAVRNPNGELELAIEDYPYANDGLLVWDAIKQWALTYVQHYY
PCAADIVDDEELQAWWTEVRTKGHADKQDEPWWPELDSHENLAQTLATIMWVTSGHHAAV
NFGOYPMAGYIPNRPTMARRNMPTEIGGDDMRDFVEAPEKVLLDTFPSOYOSAIVLAILD

LLSTHSSDEEYMGTHEEPAWTKDGVINQAFEEFKESTRKIVEQVDEWNNDPDRKNRHGAG MVPYVLLRPSDGDPTDGDPTDEKMVMEMGIPNSISI

>020118

MENATVPNDQNEDYIDLTKPMSKSYWKKMKVKGFYRWVLVRDFKKINDILNTNEIVPILV SGAKTFTKSRFSAMRWSLNEFAFVDGFFFLLLFFFYKKKKRSKISNTSKRKKRTKKKRTR NLGNLCFLRKNLASILFF

>Q5SD32

MTRVKRGSVARKRRKNILKLASGFQGAHSTIFRTGNQQIIKALASSYRDRGKRKRDFRRL WITRINAAARNNGVSYTKFIRHLYKNQVSSNRKVLAQIAIFDTNSFSTILKKLSSGESIR YRNFSPEFYSGEVRTP

>Q32001

MSLTQQQKDLIFGSLLGDGNLQTGSVGRTWRYRALHKSEHQTYLFHKYEILKPLCGENTL PTESIVFDERTNKEVKRWFFNTLTNPSLKFFADMFYTYDQNTQKWVKDVPVKVQTFLTPQ ALAYFYIDDGALKWLNKSNAMQICTESFSQGGTIRIQKALKTLYNIDTTLTKKTLQDGRI GYRIAIPEASSGAFREVIKPFLVDCMRYKVSDGNKGHL

>09S7B5

MASSCLFNASVSSLNPKQDPIRRHRSTSLLRHRPVVISCTADGNNIKAPIETAVKPPHRT EDNIRDEARRNRSNAVNPFSAKYVPFNAAPGSTESYSLDEIVYRSRSGGLLDVEHDMEAL KRFDGAYWRDLFDSRVGKSTWPYGSGVWSKKEWVLPEIDDDDIVSAFEGNSNLFWAERFG KQFLGMNDLWVKHCGISHTGSFKDLGMTVLVSQVNRLRKMKRPVVGVGCASTGDTSAALS AYCASAGIPSIVFLPANKISMAQLVQPIANGAFVLSIDTDFDGCMKLIREITAELPIYLA NSLNSLRLEGQKTAAIEILQQFDWQVPDWVIVPGGNLGNIYAFYKGFKMCQELGLVDRIP RMVCAQAANANPLYLHYKSGWKDFKPMTASTTFASAIQIGDPVSIDRAVYALKKCNGIVE EATEEELMDAMAQADSTGMFICPHTGVALTALFKLRNQGVIAPTDRTVVVSTAHGLKFTQ SKIDYHSNAIPDMACRFSNPPVDVKADFGAVMDVLKSYLGSNTLTS

>P24846

MPYLQPPRPHPHPHTSRLSRASPPSPFPFFPAGTSRSGRLQPVPVSGHSASRVSKGKFA
VAAVTLDDYLPMRSTEVKNRTSTDGIKSLRLITAVKTPYLPDGRFDLEAYDSLINTQING
GAEGVIVGGTTGEGHLMSWDEHIMLIGHTVNCFGANIKVIGNTGSNSTREAVHATEQGFA
VGMHAALHVNPYYGKTSTEGLISHFKEVLPMGPTIIYNVPSRTSQDIPPPVIEALSSYSN
MAGVKECVGHERVKCYTDKGISIWSGNDDECHDSRWKYGATGVISVASNLVPGLMHSLMF
EGENAALNEKLLPLMKWLFCEPNPIGLNTALAQLGVVRPVFRLPYTPLPLEKRVEFVRIV
EAIGRENFVGOKESRVLDDDDFVLISRY

>Q9FY99

MAALSSSVTTRSYHSGYLASFSPVNGDRHRSLSFLSASPQGLNPLDLCVRFQRKSGRASV
FMQDGAIVTNSNSSESKTSLKGLKDEVLSALSQEAAKVGVESDGQSQSTVSITVVGASGD
LAKKKIFPALFALYYEGCLPEHFTIFGYSRSKMTDVELRNMVSKTLTCRIDKRANCGEKM
EEFLKRCFYHSGQYDSQEHFTELDKKLKEHEAGRISNRLFYLSIPPNIFVDAVKCASTSA
SSVNGWTRVIVEKPFGRDSETSAALTKSLKQYLEEDQIFRIDHYLGKELVENLSVLRFSN
LIFEPLWSRQYIRNVQFIFSEDFGTEGRGGYFDNYGIIRDIMQNHLLQILALFAMETPVS
LDAEDIRNEKVKVLRSMRPIRVEDVVIGQYKSHTKGGVTYPAYTDDKTVPKGSLTPTFAA
AALFIDNARWDGVPFLMKAGKALHTRSAEIRVQFRHVPGNLYNRNTGSDLDQATNELVIR
VQPDEAIYLKINNKVPGLGMRLDRSNLNLLYSARYSKEIPDAYERLLLDAIEGERRLFIR
SDELDAAWSLFTPLLKEIEEKKRIPEYYPYGSRGPVGAHYLAAKHKVQWGDVSIDQ

>Q43295

MIAAGAKSLLGLSMASPKGIFDSNSMSNSRSVVVVRACVSMDGSQTLSHNKNGSIPEVKS INGHTGQKQGPLSTVGNSTNIKWHECSVEKVDRQRLLDQKGCVIWVTGLSGSGKSTLACA LNQMLYQKGKLCYILDGDNVRHGLNRDLSFKAEDRAENIRRVGEVAKLFADAGIICIASL ISPYRTDRDACRSLLPEGDFVEVFMDVPLSVCEARDPKGLYKLARAGKIKGFTGIDDPYE PPLNCEISLGREGGTSPIEMAEKVVGYLDNKGYLQA

(4) \mathbb{S}_4 : 182 cytoplasm proteins

>09SLX0

MSLRPSERAEVRRSRYKVAVDADEGRRRREDNMVEIRKSRREESLLKKRRDGLPAAAAAA
AAASPLLAHSSALQQKLEGLPAMVQAVQSDDSAVQLEATTQFRKLLSIERSPPIEEVINT
GVVPRFIAFLQREDYPQLQFEAAWALTNIASGTSDNTKVVVESGAVPIFVKLLSSPSEDV
REQAVWALGNVAGDSPKCRDLVLASGGLYPLLQQLNEHAKLSMLRNATWTLSNFCRGKPQ
PNFEQVKPALSALQRLIHSQDEEVLTDACWALSYLSDGTNDKIQAVIESGVFPRLVELLM
HPSASVLIPALRTVGNIVTGDDMQTQCVIDHQALPCLLNLLTNNHKKSIKKEACWTISNI
TAGNREQIQAVINANIIAPLVHLLQTAEFDIKKEAAWAISNATSGGTHDQIKYLVAQGCI
KPLCDLLVCPDPRIVTVCLEGLENILKVGEAEKNLGAGDVNSYAQMIDDAEGLEKIENLQ
SHDNTEIYEKAVKMLESYWLEEEDDAMPSGDNAQNGFNFGNQQPNVPSGGFNFG
>P25141

MSSNTAGQVIRCKAAVAWEAGKPLVIEEVEVAPPQKMEVRLKILFTSLCHTDVYFWEAKG
QTPLFPRIFGHEAGGIVESVGEGVTDLKPGDHVLPVFTGECQQCRHCKSEESNMCDLLRI
NTDRGVMIHDGQTRFSKDGKPIYHFVGTSTFSEYTVCHSGCVTKIDPQAPLDKVCVLSCG
ISTGLGATLNVAKPTKGSTVAIFGLGAVGLAAAEGARIAGASRIIGVDLNPSRFNDAKKF
GVTEFVNPKDHGDKPVQQVIAEMTDGGVDRSVECTGNVNAMISAFECVHDGWGVAVLVGV
PNKDDAFKTHPMNLLNERTLKGTFFGNYKPKSDIPSVVDKYMKKELELEKFITHQVPFSE
INKAFDYMLKGESIRCMITMEH

>P26301

MAVTITWVKARQIFDSRGNPTVEVDVGLSDGSYARGAVPSGASTGIYEALELRDGGSDYL GKGVLKAVSNVNNIIGPAIVGKDPTEQVEIDNFMVQQLDGTSNEWGWCKQKLGANAILAV SLAVCKAGAMVKKIPLYQHIANLAGNKTLVLPVPAFNVINGGSHAGNKLAMQEFMILPTG ASSFKEAMKMGVEVYHNLKSIIKKKYGQDATNVGDEGGFAPNIQENKEGLELLKAAIEKA GYTGKVVIGMDVAASEFFGEKDKTYDLNFKEENNDGSNKISGDSLKDLYKSFVSEYPIES IEDPFDQDDWSTYAKLTDEIGQKVQIVGDDLLVTNPTRVAKAINEKTCNALLLKVNQIGS VTESIEAVRMSKRAGWGVMASHRSGETEDTFIADLSVGLSTGQIKTGAPCRSERLAKYNQ LLRIEEELGDAAVYAGAKFRAPVEPY

>P17990

MKILIILTILAMATTFATSEMQVNPSVQVQPTQQQPYPESQQPFISQSQQQFPQPQQPFPQPQQPFPQPQQPFPQQQPFPQSQQQCLQQPQHQFPQPTQQFPQRPLLPFTHPFLTFPDQLLPQPPHQSFPQPPQSYPQPPLQPFPQPPQQKYPEQPQQPFPWQQPTIQLYLQQQLNPCKEFLLQQCRPVSLLSYIWSKIVQQSSCRVMQQQCCLQLAQIPEQYKCTAIDSIVHAIFMQQGQRQGVQIVQQQPQPQQVGQCVLVQGQGVVQPQQLAQMEAIRTLVLQSVPSMCNFNVPPNCSTIKAPFVGVVTGVGGO

>P19595

MATATTLSPADAEKLNNLKSAVAGLNOISENEKSGFINLVGRYLSGEAOHIDWSKIOTPT

DEVVVPYDKLAPLSEDPAETKKLLDKLVVLKLNGGLGTTMGCTGPKSVIEVRNGLTFLDL
IVKQIEALNAKFGCSVPLLLMNSFNTHDDTLKIVEKYANSNIDIHTFNQSQYPRLVTEDF
APLPCKGNSGKDGWYPPGHGDVFPSLMNSGKLDALLAKGKEYVFVANSDNLGAIVDLKIL
NHLILNKNEYCMEVTPKTLADVKGGTLISYEGKVQLLEIAQVPDEHVNEFKSIEKFKIFN
TNNLWVNLSAIKRLVEADALKMEIIPNPKEVDGVKVLQLETAAGAAIKFFDRAIGANVPR
SRFLPVKATSDLLLVQSDLYTLTDEGYVIRNPARSNPSNPSIELGPEFKKVANFLGRFKS
IPSIIDLDSLKVTGDVWFGSGVTLKGKVTVAAKSGVKLEIPDGAVIANKDINGPEDI
>A2ZDX9

MEHQGQHGHVTSRVDEYGNPVGTGAGHGQMGTAGMGTHGTTGGMGTHGTTG TGGGQFQPMREEHKTGGVLQRSGSSSSSSSEDDGMGGRRKKGIKEKLKEKLPGGNKGEQQ HAMGGTGGAYGQQGHGTGMTTGTTGAHGTTTTDTGEKKGIMDKIKEKLPGQH >P16181

 $\label{thm:constraint} $$ MAEQTEKAFLKQPKVFLSSKKSGKGKRPGKGGNRFWKNIGLGFKTPREAIDGAYVDKKCP $$ FTGTVSIRGRILAGTCHSAKMQRTIIVRRDYLHFVKKYQRYEKRHSNIPAHVSPCFRVKE $$ GDHIIIGQCRPLSKTVRFNVLKVIPAGSSSSFGKKAFTGM $$$

>041261

MAAKVSSDPLVIGRVIGDVVDHFTSTVKMSVIYNSNNSIKHVYNGHELFPSAVTSTPRVE VHGGDMRSFFTLIMTDPDVPGPSDPYLREHLHWIVTDIPGTTDSSFGKEVVSYEMPRPNI GIHRFVFLLFKQKKRGQAMLSPPVVCRDGFNTRKFTQENELGLPVAAVFFNCQRETAARR

>004016

MAAAAFVPIPTDTYKLGFIGAGKMAESIARGVVKSGVLPASRIRTAHLGSARREAFESFG VKVLDRNDQVVEDSDVIIFSVKPQIVKEVVLQLRPLLSEKQLLVSIVAGVKLKELEDWAG HSRFIRVMPNTPAAVGEAASVMSLGATATGEDGELITKLFGAIGKIWKADEKLFDAVTGL SGSGPAYIFLAIEALADGGVAAGLPRELALGLASQTVLGAASMVARGGKHPGQLKDDVAS AGGTTIAGIHELEKGGFRGTLMNAVVSATKRSOEIFKR

>P26307

MEASSGSSPPHSQENPPEHGGDMGGAPAEEIGGEAADDFMFAEDTFPSLPDFPCLSSPSS
STFSSNSSSNSSSAYTNTAGRAGGEPSEPASAGEGFDALDDIDQLLDFASLSMPWDSEPF
PGVSMMLENAMSAPPQPVGDGMSEEKAVPEGTTGGEEACMDASEGEELPRFFMEWLTSNR
ENISAEDLRGIRLRRSTIEAAAARLGGGRQGTMQLLKLILTWVQNHHLQRKRPRDVMEEE
AGLHVQLPSPVANPPGYEFPAGGQDMAAGGGTSWMPHQQAFTPPAAYGGDAVYPSAAGQQ
YSFHQGPSTSSVVVNSQPFSPPPVGDMHGANMAWPQQYVPFPPPGASTGSYPMPQPFSPG
FGGQYAGAGAGHLSVAPQRMAGVEASATKEARKKRMARQRRLSCLQQQRSQQLSLGQIQT
SVHLQEPSPRSTHSGPVTPSAGGWGFWSPSSQQQVQNPLSKSNSSRAPPSSLEAAAAAPQ
TKPAPAGARQDDIHHRLAAASDKRQGAKADKNLRFLLQKVLKQSDVGSLGRIVLPKKEAE
VHLPELKTRDGISIPMEDIGTSRVWNMRYRFWPNNKSRMYLLENTGEFVRSNELQEGDFI
VIYSDVKSGKYLIRGVKVRPPPAQEQGSGSSGGGKHRPLCPAGPERAAAAGAPEDAVVDG
VSGACKGRSPEGVRRVRQQGAGAMSQMAVSI

>P49608

MAAENPFKENLTSLPKPGGGEFGKYYSLPSLNDPRIDRLPYSIRILLESAIRNCDNFQVK KEDVEKIIDWENSSPKQVEIPFKPARVLLQDFTGVPAVVDLACMRDAMNKLGSDSNKINP LVPVDLVIDHSVQVDVARSENAVQANMELEFQRNKERFAFLKWGSNAFQNMLVVPPGSGI VHQVNLEYLGRVVFNTSGLLYPDSVVGTDSHTTMIDGLGVAGWGVGGIEAEAAMLGQPMS MVLPGVVGFKLSGKLRNGVTATDLVLTVTQMLRKHGVVGKFVEFYGDGMEELSLADRATI
ANMSPEYGATMGFFPVDHVTLQYLKLTGRSDETVSMIEAYLRANKMFVDYKEPQQEKVYS
SYLQLDLTDVEPCISGPKRPHDRVPLKEMKSDWHACLDNKVGFKGFAIPKEAQENVAKFS
FHGQPAELKHGSVVIAAITSCTNTSNPSVMLGAALVAKKACELGLQVKPWVKTSLAPGSG
VVTKYLLKSGLQPYLNQQGFHIVGYGCTTCIGNSGDLDESVSAAISDNDIVAAAVLSGNR
NFEGRVHPLTRANYLASPPLVVAYALAGTVDIDFEKEPIGKGKDGKDVYFRDIWPSTEEI
AEVVQSSVLPDMFKSTYESITKGNPMWNQLSVPSGTLYSWDPNSTYIHEPPYFKNMTMDP
PGAHGVKDAYCLLNFGDSITTDHISPAGSIHKDSPAAKYLLERGVDRKDFNSYGSRRGND
EVMARGTFANIRLVNKLLDGEVGPKTVHVPTGEKLSVFEAAEKYKSAGQDTIVLAGAEYG
SGSSRDWAAKGPMLLGVKAVIAKSFERIHRSNLVGMGIIPLCFKSGEDADSLGLTGHERY
TIDLPDDISKIRPGQDVTVTTDSGKSFTCTVRFDTEVELAYFNNGGILPYVIRNLIKQ
>023826

MSNKEKGVNVQVLLRCRPFSNDELRNNAPQVVTCNDYQREVAVSQNIAGKHIDRIFTFDK VFGPSAQQRDLYDQAIVPIVNEVLEGFNCTIFAYGQTGTGKTYTMEGECKRSKSGPNGEL POEAGVIPRAVKOVFDTLESONAEYSVKVTFLELYNEEITDLLAPEDLKVALEDROKKOL PLMEDGKGGVLVRGLEEEIVTSANEIFTLLERGSAKRRTAETLLNKOSSRSHSLFSITIH IKEATPEGEELIKCGKLNLVDLAGSENISRSGAREGRAREAGEINKSLLTLGRVINALVE HLGHIPYRDSKLTRLLRDSLGGRTKTCIIATVSPAVHCLEETLSTLDYAHRAKNIKNKPE VNQKMMKSTLIKDLYGEIERLKAEVYAAREKNGVYIPKERYYQEENERKAMADQIEQMGV SIENHQKQFEELQSRHDSQVQQCSDLTCKLDVTQKQLNQTSKLLAYTEEQLRQSQYTLKE RDFIISEOKKAENALAHOACVLRADLEKSIOENASLFOKIAREDKLSTDNRSLVNNFOAE LAKOLGSLSSTLATSVCROTEHLOCVEKFCHNFLDSHDKAVLDLKRKINSSMALYISHFE AMONVVRLHKATSNATLEEVSTLASSNSISTKEFLDAEAVEANSMFDELQSTLSTHQGEM AHFARELRQRFNDSTEHLTNISAIIQRFFDKLLDESKRLEKHATTVDEIQTNSIAEFEKA YEEQSKSDAEKLIADVTSLVSNHMRRQKELVGARLVDLRETVSGNRTFLDGHVSSMEGIT TDAKRKWODFYMOAEGETKENADFSAAKHCRMESLMOKCVSTAETALKRWOSTHELVNDM GNQHVLTMHSVVRNICDNNEQHVTDFDSTRESAEEDVKRNSEDIIKSIDSLSGEERGSIS GVLDTTSAHSETLDVLKKDHCMOSTSIEQIALETFOOKYMDYEPTGATPIRSEPDVPSKV TIESLRAMPMEVLLEEFRENNSFESFQVKEVKPSLIPRSPFSQINN

>Q9SZF7

MDTLFRLVSLQQQQQSDSIITNQSSLSRTSTTTTGSPQTAYHYNFPQNDVVEECFNFFMD EEDLSSSSSHHNHHNHNNPNTYYSPFTTPTQYHPATSSTPSSTAAAAALASPYSSSGHHN DPSAFSIPQTPPSFDFSANAKWADSVLLEAARAFSDKDTARAQQILWTLNELSSPYGDTE QKLASYFLQALFNRMTGSGERCYRTMVTAAATEKTCSFESTRKTVLKFQEVSPWATFGHV AANGAILEAVDGEAKIHIVDISSTFCTQWPTLLEALATRSDDTPHLRLTTVVVANKFVND QTASHRMMKEIGNRMEKFARLMGVPFKFNIIHHVGDLSEFDLNELDVKPDEVLAINCVGA MHGIASRGSPRDAVISSFRRLRPRIVTVVEEEADLVGEEEGGFDDEFLRGFGECLRWFRV CFESWEESFPRTSNERLMLERAAGRAIVDLVACEPSDSTERRETARKWSRRMRNSGFGAV GYSDEVADDVRALLRRYKEGVWSMVQCPDAAGIFLCWRDQPVVWASAWRPT

>Q9SE83

MEAIDELSQLSDSMKQAASLLADEDPDETSSSKRPATFLNVVALGNVGAGKSAVLNSLIG HPVLPTGENGATRAPIIIELSRESSLSSKAIILQIDNKSQQVSASALRHSLQDRLSKGAS GKNRDEINLKLRTSTAPPLKLVDLPGLDQRIVDESMIAEYAQHNDAILLVIVPASQASEI SSSRALKIAKEYDPESTRTIGIIGKIDQAAENSKALAAVQALLSNQGPPKTTDIPWVAVI GQSVSIASAQSGSGENSLETAWRAESESLKSILTGAPQSKLGRIALVDTLASQIRSRMKL
RLPSVLSGLQGKSQIVQDELARLGEQLVNSAEGTRAIALELCREFEDKFLLHLAGGEGSG
WKVVASFEGNFPNRIKQLPLDRHFDLNNVKRVVLEADGYQPYLISPEKGLRSLIKIVLEL
AKDPARLCVDEVHRVLVDIVSASANATPGLGRYPPFKREVVAIASAALDGFKNEAKKMVV
ALVDMERAFVPPQHFIRLVQRRMERQRREEELKGRSSKKGQDAEQSLLSRATSPQPDGPT
AGGSLKSMKDKPSPQDKETPEVSGLKTAGPEGEITAGYLMKKSAKTNGWSRRWFVLNEKT
GKLGYTKKQEERNFRGTITLEECTIEEIPEDEVEKSKSSKDKKANGPDSKGPGLVFKITC
KVPYKTVLKAHNALVLKAESVVDKNEWINKLQKVIQARGGQVGSVSMRQSLSEGSLDKMV
RKPIDPEEELRWMSQEVRGYVEAVLNSLAANVPKAVVLCQVEKAKEDMLNQLYSSISAIG
NERIESLIQEDQNVKRRRERYQKQSSLLSKLTRQLSIHDNRAAAASSYSDNSGTESSPRA
SGGSSGDDWMNAFNSAANGPSDSLSKYGSGGHSRRYSDPAQNGDAASPGSGSNRRTTPNR

>P24632

MDAVMFGLETPLMAALQHLLDVPDGDAGAGGDNKTGSGGSATRTYVRDARAMAATPADVK ELPGAYAFVVDMPGLGTGDIRVQVEDERVLVVSGERRREEREDDAKYLRMERRMGKFMRK FVLPDNADVDKVAAVCRDGVLTVTVEKLPPPEPKKPKTIEVKVA

>08GWZ6

METTVKNSSSDGEWKVVLPSKGRQGRRRKPKPKGQAEEEEQPWKSDDLEIDPQRQARLKQ KMEISLKKIESSSFYTAFLEQLKSPEVSNQIRLVLGSETQLQMVMYGIGSIESYESPRFQ LSIAILMKREFDWVGDNIEVFDPVLSATESSYLESLGCSVLSVNEQARREALKPTLFFMP HCEANLYSNLLQANWRMDRLSKIALFGNSFQMYEEQVSFDAEVICATKRIIAAQRVTSEF AIETESDDYFAAFHDSSWHFFSSGIDSELPLFVSD

>P28996

MVKFTIDQIRGLMEYQNNIRNMSVIAHVDHGKSTLTDSLVAAAGIIAFEQAGDQRLTDTR
ADEQERGITIKSTGISLYYQMTDEQLKGFTGERQGNDFLINLIDSPGHVDFSSEVTAALR
ITDGALVVVDCIEGVCVQTETVLRQALGERIRPVLTINKIDRCFLELMLDPEEAYLAYRR
VIENANVIMATYADEHLGDTQTHPEAGTVSFSAGLHGWAFTLTVFANMYAAKFGTDTKRM
MEKLWGDNFFDATTRKWTKKHTGADTCKRGFCQFIYEPIKTVIEAAMNDNKDKLFDLLKK
LNVYSKLKPEDRELMGKPLMKRVMQTWLPAHEALLEMMIWHLPSPAKAQKYRVDVLYEGP
LDDTYATAVRNCDADGPLMMYVSKMIPAADKGRFYAFGRVFSGRIATGRKVRIMGPNYVP
GQKKDLYVKTVQRTVLCMGRRQEAVEDVPCGNTVALVGLDQFITKNATLTDEKCEDAHTI
KAMKFSVSPVVRVAVEPKVASDLPKLVEGLKRLAKSDPMVQCTIEETGEHIIAGAGELHL
EICLKDLQDDFMGGAEIRVSEPVVSFRETVIGTSDHVVMSKSPNKHNRLYMQARPMEDGL
AEAIDEGKIGPRDDPKVRSKILSEEFGWDKELAKKILAFGPDTTGPNMVTDITKGVQYLN
EIKDSVVAAFQWASKEGVLAEENMRGIVFEVCDVVLHADAIHRGGGQIIPTARRSMYAAQ
LTAQPRLLEPVYLVEIQCPEQAMGGVYSVLNQKRGMVFEELQRPGTPIFNLKAYLPVIES
FGFTSTLRAATAGQAFPQCVFDHWEAMGSDPTQVGSQANTLVMDIRKRKGLKPEPAALSE
YEDKL

>Q94JU3

MDIEQKQAEIIDQLVKRASTCKSEALGPLIIEATSHPSLFAFSEILALPNVAQLEGTTDS
VYLDLLRLFAHGTWGDYKCNATRLPHLSPDQILKLKQLTVLTLAESNKVLPYDTLMVELD
VSNVRELEDFLINECMYAGIVRGKLDQLKRCFEVPFAAGRDLRPGQLGNMLHTLSNWLNT
SENLLISIQDKIKWADNMSEMDKKHRKEAEEGVEEVKKSLSMKGDVDIRGNKEMFGEPSG
VMDYEEDGIRPKRRHPVTR

>P30986

MENKTPIFFSLSIFLSLLNCALGGNDLLSCLTFNGVRNHTVFSADSDSDFNRFLHLSIQN
PLFQNSLISKPSAIILPGSKEELSNTIRCIRKGSWTIRLRSGGHSYEGLSYTSDTPFILI
DLMNLNRVSIDLESETAWVESGSTLGELYYAITESSSKLGFTAGWCPTVGTGGHISGGGF
GMMSRKYGLAADNVVDAILIDANGAILDRQAMGEDVFWAIRGGGGGVWGAIYAWKIKLLP
VPEKVTVFRVTKNVAIDEATSLLHKWQFVAEELEEDFTLSVLGGADEKQVWLTMLGFHFG
LKTVAKSTFDLLFPELGLVEEDYLEMSWGESFAYLAGLETVSQLNNRFLKFDERAFKTKV
DLTKEPLPSKAFYGLLERLSKEPNGFIALNGFGGQMSKISSDFTPFPHRSGTRLMVEYIV
AWNQSEQKKKTEFLDWLEKVYEFMKPFVSKNPRLGYVNHIDLDLGGIDWGNKTVVNNAIE
ISRSWGESYFLSNYERLIRAKTLIDPNNVFNHPQSIPPMANFDYLEKTLGSDGGEVVI
>023979

MSQEDSTSAAAAQQPTSRPAPKLNERILSSLSRRGGGAHPWHDLEIGPGAPAVFNVVVEI TKGSKVKYELDKKTGLIKVDRVLYSSVVYPHNYGFIPRTLCEDNDPMDVLVLMQEPVIPG SFLRARAIGLMPMIDQGEKDDKIIAVCADDPEYRHYSTSVSLLPRLQEIKRLEDYKKNEN KEVAVDAFLPATTAREAIQYSMDLYAQYILQSLRQ

>P49972

MVLAELGGSISRALQQMSNATIIDEKVLNECLNEITRALLQADVQFKLVRDMTTNIKKIV
NLDDLAAGHNKRRIIQQAVFNELCKILDPGKPSFTPKKGKPSIVMFVGLQGSGKTTTCTK
YAYYHQKKGWKPALVCADTFRAGAFDQLKQNATKAKIPFYGSYTESDPVKIAVDGVETFK
KENCDLIIVDTSGRHKQEAALFEEMRQVAEATKPDLVIFVMDSSIGQAAFDQAQAFKQSV
AVGAVIVTKMDGHAKGGGALSAVAATKSPVIFIGTGEHMDEFEVFDVKPFVSRLLGMGDW
SGFMDKIHEVVPMDQQPELLQKLSEGHFTLRIMYEQFQNILKMGPIGQVFSMLPGFSAEL
MPKGRENESQAKIKRYMTMMDSMTNEELDSSNPKLMTDSRIMRIARGSGRQVHEVMDMME
EYKRLAKIWSKMKGLKIPKKGEMSALSRNMNAQHMSKVLPPQMLKQIGGMGGLQNLMKQM
GSAKDMMGGMGGMFGGGDK

>09M571

MAASAMGVLQEREVFKKYWIEHSVDLTVEAMMLDSQASDLDKVERPEVLSMLPPYEGKSV
LELGAGIGRFTGELAEKASQVIALDFIESVIKKNESINGHYKNVKFMCADVTSPSLNISP
NSVDIIFSNWLLMYLSDEEVERLVERMLKWLKPGGYIFFRESCFHQSGDHKRKSNPTHYR
EPRFYTKIFKECHMQDDSGNSYELSLIGCKCIGAYVKSKKNQNQISWLWQKVDSEDDKGF
QRFLDSSQYKFNSILRYERVFGPGYVSTGGLETTKEFVSKLDLKPGQKVLDVGCGIGGGD
FYMAENYDVEVVGIDLSINMISFALERSIGLKCAVEFEVADCTKKDYPENSFDVIYSRDT
ILHIQDKPALFRSFHKWLKPGGKVLISDYCKSAGTPSAEFAAYIRQRGYDLHDVKAYGKM
LKDAGFVEVIAENRTDQFIQVLQKELDALEQEKDDFIDDFSEEDYNDIVDGWKAKLVRTT
EGEOOWGLFIAKKM

>000834

MVEEKAFIAKDVTELIGKTPLVYLNTVADGCVARVAAKLEGMEPCSSVKDRIGFSMITDA EKSGLITPGESVLIEPTSGNTGIGLAFIAAAKGYKLIITMPASMSLERRTILRAFGAELI LTDPAKGMKGAVQKAEEIRDKTPNSYILQQFENPANPKVHYETTGPEIWKGTGGKIDIFV SGIGTGGTITGAGKYLKEQNPDVKLIGLEPVESAVLSGGKPGPHKIQGLGAGFIPGVLDV NIIDEVVQISSEESIEMAKLLALKEGLLVGISSGAAAAAAIKVAKRPENAGKLIVAVFPS FGERYLSSVLFDSVRKEAESMVIES

>Q9T041

MSTPTTSGSAAKPTRPARSSSLATRSCSNSGSLTSFQAMVELKQKILTSISKLADRDTYQ

IAVEDLEKTIQSLTPETLPMFLNCLYDSCSDPKPAVKKECLHLLSYVCSLHCDSTAAHLT
KIIAQIVKRLKDSDSGVRDACRDTIGALSGIYLKGKEEGTNTGSASLAVGLFVKPLFEAM
GEQNKVVQSGASMCMARMVESAASPPVTSFQKLCPRICKLLSNSSFLAKASLLPVVSSLS
QVGAIAPQSLESLLESIHDCLGSTDWVTRKAAAETLTALASHSSGLIKEKTDSTITVLET
CRFDKIKPVRESVTEALQLWKKISGKYVDGASDDSKLSASEQLGSEKNGEKRSNLADLMK
KEASDGSTLSPDSASKGKGCFPEKAVGLLKKKAPVLSDKDFNPEFFQRLERRQSVEVVVP
RRCKNNDEEESGLDDLNAMGSSNRLKNTQADDKQVKGRFDGNGSQARTSGDDKAGVVNGK
ETPGHHAPVSNTDNQSEGSFTSNRGNWSAIQRQLLQLERQQTNLMNMLQEFIGGSHDSMV
TLEGRVRGLERIVEDMARDLSISSGRRANLTAGFGKYNSFANYPTGKYNGRAPGERGSQT
DGAMRGRMWNSDMADDWFIPPHAASRNGQAGPRRSPRSEQYENEHMGNGRRGWDNKASGT
IRFGEGPSARSVWQASKDEATLEAIRVAGEDGAVPRPTRVAVAPEAEAMGDDDNEGQERD
PIWVSWSNAMHSLRVGDIDAAYAEVLCAGDQHLVIKLMDKTGPSLDQMSNEIANEALNFI
SQFLLDHSLYDICLSWSQQLLELVLQDGADTFGVPMELKTEILYNLQDACSTMDPPEDWE
GPAPEQLVVQLASVWEIDLQQFDK

>09FV49

MAIGNPEVATMGKENTEAESSNGNESQLSSDLTKSLDLAEVKEDEKDNNQEEEDGLKAEA
STKKKKKKSKSKKKKSSLQQTDPPSIPVLELFPSGDFPQGEIQQYNDDNLWRTTSEEKRE
MERLQKPIYNSLRQAAEVHRQVRKYMRSILKPGMLMIDLCETLENTVRKLISENGLQAGI
AFPTGCSLNNVAAHWTPNSGDKTVLQYDDVMKLDFGTHIDGHIVDSAFTVAFNPMFDPLL
AASRDATYTGIKEAGVDVRLCDVGAAVQEVMESYEVEINGKVYQVKSIRNLNGHSIGRYQ
IHAEKSVPNVRGGEQTKMEEGELYAIETFGSTGKGYVREDLECSHYMKNYDVGHVPLRLP
RAKQLLATINKNFSTLAFCRRYLDRLGETKYLMALKNLCDSGIIEPCPPVCDVKGSYISQ
FEHTILLRPTCKEIISKGDDY

>0944C1

MEGKKEMGSYKFCLIFTRKFRMTESGPVEDVRDLFEKYTEGDAHMSPEQLQKLMTEEGGE
GETSLEEAERIVDEVLRRKHHIAKFTRRNLTLDDFNYYLFSTDLNPPIADQVHQNMDAPL
SHYFIFTGHNSYLTGNQLSSNCSELPIADALRRGVRVVELDLWPRGTDDVCVKHGRTLTK
EVKLGKCLESIKANAFAISKYPVIITLEDHLTPKLQFKVAKMITQTFGDMLYYHDSQGCQ
EFPSPEELKEKILISTKPPKEYLEANDTKEKDNGEKGKDSDEDVWGKEPEDLISTQSDLD
KVTSSVNDLNQDDEERGSCESDTSCQLQAPEYKRLIAIHAGKPKGGLRMALKVDPNKIRR
LSLSEQLLEKAVASYGADVIRFTQKNFLRIYPKGTRFNSSNYKPQIGWMSGAQMIAFNMQ
GYGRALWLMEGMFRANGGCGYVKKPDFLMDASPNGQDFYPKDNSSPKKTLKVKVCMGDGW
LLDFKKTHFDSYSPPDFFVRVGIAGAPVDEVMEKTKIEYDTWTPIWNKEFTFPLAVPELA
LLRVEVHEHDVNEKDDFGGQTCLPVSEIRQGIRAVPLFNRKGVKYSSTRLLMRFEFV
>024496

MKIFHVPCLQDNYSYLIIDESTGDAAVVDPVDPEKVIASAEKHQAKIKFVLTTHHHWDHA GGNEKIKQLVPDIKVYGGSLDKVKGCTDAVDNGDKLTLGQDINILALHTPCHTKGHISYY VNGKEGENPAVFTGDTLFVAGCGKFFEGTAEQMYQSLCVTLAALPKPTQVYCGHEYTVKN LEFALTVEPNNGKIQQKLAWARQQRQADLPTIPSTLEEELETNPFMRVDKPEIQEKLGCK SPIDTMREVRNKKDOWRG

>Q9ZSY2

MSAKKLEGSSAPANRRDPYEVLCVSKDANDQEIKSAYRKLALKYHPDKNANNPDASELFK EVAFSYSILSDPEKRRHYDNAGFEALDADGMDMEIDLSNLGTVNTMFAALFSKLGVPIKT TVSANVLEEAMNGTVTVRPLPIGTSVSGKVEKQCAHFFGVTISEQQAESGVVVRVTSTAQ SKFKLLYFEQDSSGGYGLALQEEREKTGKVTSAGMYFLHFQVYRMDTTVNALAAAKDPES
AFFKRLEGLQPCEVSELKAGTHIFAVYGDNFFKTASYTIEALCAKTYEDTTEKLKEIEAQ
ILRKRNELRQFETEYRKALARFQEVTNRYTQEKQTVDELLKQRDTIHSTFSVVKTPSGNN
LSNGSSSKAQGDESKGDGDSAGEEGGTENRDKSKRKWFNLNLKGSDKKLG
>O9LK23

MGSGQWHMEKRSTLKNDSFVKEYNPVTETGSLSIIVLGASGDLAKKKTFPALFNLFHQGF
LNPDEVHIFGYARSKITDEELRDKIRGYLVDEKNASKKTEALSKFLKLIKYVSGPYDSEE
GFKRLDKAILEHEISKKTAEGSSRRLFYLALPPSVYPPVSKMIKAWCTNKSDLGGWTRIV
VEKPFGKDLESAEQLSSQIGALFEEPQIYRIDHYLGKELVQNMLVLRFANRLFLPLWNRD
NIANVQIVFREDFGTEGRGGYFDEYGIIRDIIQNHLLQVLCLVAMEKPISLKPEHIRDEK
VKVLQSVIPIKDEEVVLGQYEGYRDDPTVPNDSNTPTFATTILRINNERWEGVPFILKAG
KAMSSKKADIRIQFKDVPGDIFKCQNQGRNEFVIRLQPSEAMYMKLTVKQPGLEMQTVQS
ELDLSYKQRYQDVSIPEAYERLILDTIRGDQQHFVRRDELKAAWEIFTPLLHRIDKGEVK
SVPYKQGSRGPAEADQLLKKAGYMQTHGYIWIPPTL

>P20075

MASRKDERAAKEERAQAAAELAAKELRDVNQDRERGIKVVEHKEEVSGGPGVIGSILKSV
QGTLGQAKEVVVGKAHDTAEVSRENTDYAYDKGREGGDVAAQKAEEAKEKAKMAKDTTMG
KAGEYKDYTAQKAEEAKEKAAQKAEETKEKAGEYKNYTAQKAGEAKDTTLGKAGEYKDYA
AQKAAEAKDTTAQKAAEAKEKTGEYKDYAAQKAAEAKVLAAQKAAEAKDTTGKDGEYKDY
AAQKAAEAKDATMQKTGEYKDYAAQKTAETKDATMEKAKEYKEYAAQKAAEAKDATMQKT
GEYKDYSAQKAAETKDATMEKTKEYKDYTAQKAAETKDATMEKAKEAKDTTVQKTGEYKD
YAAEKAKEGKDVTVEKAKEGKDTTVGKMTELKDSAADAARKAMDMFLGKKEEVKGKAGET
AEAAKEKYEDTEFAARKKMEELKLQEEGVKDEAKQRAEADRETAGDRGSAAKGTIFGAMG
SVKDAIVGKLTMPSDVVKDKQQQEAVIKVDETRPGAVAEALKAADQMHGQAFNDVGKMGD
EEVIVERKETRQGKM

>Q8LDP4

MAKASFILLGTLFLFGAIASIQAKEDLKEVTHKVYFDVEIDGKSAGRVVIGLFGKAVPKT AENFRALCTGEKGVGKSGKPLHYKGSKFHRIIPSFMIQGGDFTHGNGMGGESIYGQKFAD ENFKLKHTGPGVLSMANSGEDTNGSQFFITTVTTSWLDGRHVVFGKVVQGMDVVYKIEAE GKOSGTPKSKVVIADSGELPL

>020YF3

MGSSSLLLFPSSSSSATHSSYSPSSSSHAITSLLPPLPSDHHLLLYLDHQEQHHLAAAMV RKRPASDMDLPPPRRHVTGDLSDVTAAAAGAPTLSASAQLPALPTQLPAFHHTDMDLAAP APPAPQQVAAGEGGPPSTAWVDGIIRDIIASSGAAVSVAQLIHNVREIIRPCNPDLASIL ELRLRSLLNSDPAPPPPPSHPALLPPDATAPPPPPTSVAALPPPPPAQPDKRRREPQCQ EQEPNQPQSPKPPTAEETAAAAAAAAAAAAAAAKERKEEQRRKQRDEEGLHLLTLLLQCA ESVNADNLDEAHRALLEIAELATPFGTSTQRVAAYFAEAMSARLVSSCLGLYAPLPSPSP AGARVHGRVAAAFQVFNGISPFVKFSHFTANQAIQEAFEREERVHIIDLDIMQGLQWPGL FHILASRPGGPPRVRLTGLGASMEALEATGKRLSDFADTLGLPFEFCPVADKAGNLDPEK LGVTRREAVAVHWLRHSLYDVTGSDSNTLWLIQRLAPKVVTMVEQDLSHSGSFLARFVEA IHYYSALFDSLDASYSEDSPERHVVEQQLLSREIRNVLAVGGPARTGDVKFGSWREKLAQ SGFRVSSLAGSAAAQAALLLGMFPSDGYTLIEENGALKLGWKDLCLLTASAWRPIQASGR

MSSEKVRASHILIKHQGSRRKSSWKDPDGSLISATTRDDAVSQLQSLRQELLSDPASFSD LASRHSHCSSAKRGGDLGPFGRGQMQKPFEEATFALKVGEISDIVDTDSGVHIIKRTG >08W5S1

MADFQTSTQRAKWIFTPQKLAERYKAANQRAVQMLEKCGTTQVEVDASGSLTYPKDKVGS GDQADKKLKPLSADEERFMRAFYEAKVQEVCSAFAFPHKIQATALQYFKRFYLQWSVMQH HPKEIMLTCVYAACKIEENHVSAEEIGKGINQDHRIILKYEMAVLQSLEFDLIVYAPYRA IEGFVNNMEEFLQARDDEIQKLESLLKGATAEADKVMLTDAPLLFPPGQLALASLRIANG VLGVIDFDRYLENIVSQPNSEHTTSELTKLLDNIEYLVKNYKCPSEKDMKHINRKLKSCL GHSSSHDESKKREKRSKHKSHRSSNDTPNGAPPPIG

>P42791

MGIDLIAGGKSKKTKRTAPKSDDVYLKLTVKLYRFLVRRTNSKFNGVILKRLFMSKVNKA PLSLSRLVEFMTGKEDKIAVLVGTITDDLRVHEIPAMKVTALRFTERARARIEKAGGECL TFDQLALRAPLGQNTVLLRGPKNSREAVKHFGPAPGVPHSHSKPYVRAKGRKFEKARGKR KSRGFKV

>039214

MASATVDFGIGRILSVLENETLLLSGVHGEIDKMKKELLIMKSFLEDTHKHGGNGSTTTT TOLFOTFVANTRDLAYOIEDILDEFGYHIHGYRSCAKIWRAFHFPRYMWARHSIAOKLGM VNVMIQSISDSMKRYYHSENYQAALLPPIDDGDAKWVNNISESSLFFSENSLVGIDAPKG KLIGRLLSPEPORIVVAVVGMGGSGKTTLSANIFKSOSVRRHFESYAWVTISKSYVIEDV FRTMIKEFYKEADTQIPAELYSLGYRELVEKLVEYLQSKRYIVVLDDVWTTGLWREISIA LPDGIYGSRVMMTTRDMNVASFPYGIGSTKHEIELLKEDEAWVLFSNKAFPASLEOCRTO NLEPIARKLVERCOGLPLAIASLGSMMSTKKFESEWKKVYSTLNWELNNNHELKIVRSIM FLSFNDLPYPLKRCFLYCSLFPVNYRMKRKRLIRMWMAQRFVEPIRGVKAEEVADSYLNE LVYRNMLOVILWNPFGRPKAFKMHDVIWEIALSVSKLERFCDVYNDDSDGDDAAETMENY GSRHLCIQKEMTPDSIRATNLHSLLVCSSAKHKMELLPSLNLLRALDLEDSSISKLPDCL VTMFNLKYLNLSKTOVKELPKNFHKLVNLETLNTKHSKIEELPLGMWKLKKLRYLITFRR ${\tt NEGHDSNWNYVLGTRVVPKIWQLKDLQVMDCFNAEDELIKNLGCMTQLTRISLVMVRREH}$ GRDLCDSLNKIKRIRFLSLTSIDEEEPLEIDDLIATASIEKLFLAGKLERVPSWFNTLON LTYLGLRGSQLQENAILSIQTLPRLVWLSFYNAYMGPRLRFAQGFQNLKILEIVQMKHLT EVVIEDGAMFELQKLYVRACRGLEYVPRGIENLINLQELHLIHVSNQLVERIRGEGSVDR SRVKHIPAIKHYFRTDNGSFYVSLSS

>P41127

MKHNNVIPNGHFKKHWQNYVKTWFNQPARKTRRIARQKKAVKIFPRPTSGPLRPVVHGQ TLKYNMKVRTGKGFTLEELKAAGIPKKLAPTIGIAVDHRRKNRSLEGLQTNVQRLKTYKT KLVIFPRRARKVKAGDSTPEELANATQVQGDYLPIVREKPTMELVKLTSEMKSFKAFDKI RLERTNKRHAGARAKRAAEAEKEEKK

>09XG54

MENKVVEEKQVDKIPLMSPCKMGKFELCHRVVLAPLTRQRSYGYIPQPHAILHYSQRSTN GGLLIGEATVISETGIGYKDVPGIWTKEQVEAWKPIVDAVHAKGGIFFCQIWHVGRVSNK DFQPNGEDPISCTDRGLTPQIRSNGIDIAHFTRPRRLTTDEIPQIVNEFRVAARNAIEAG FDGVEIHGAHGYLIDQFMKDQVNDRSDKYGGSLENRCRFALEIVEAVANEIGSDRVGIRI SPFAHYNEAGDTNPTALGLYMVESLNKYDLAYCHVVEPRMKTAWEKIECTESLVPMRKAY KGTFIVAGGYDREDGNRALIEDRADLVAYGRLFISNPDLPKRFELNAPLNKYNRDTFYTS DPIVGYTDYPFLETMT

>P37392

MREILHIQGGQCGNQIGAKFWEVVCAEHGIDSTGRYGGDNELQLERVNVYYNEASCGRFV
PRAVLMDLEPGTMDSVRSGPYGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELIDSVLDVV
RKEAENCDCLQGFQVCHSLGGGTGSGMGTLLISKIREEYPDRMMLTFSVFPSPKVSDTVV
EPYNATLSVHQLVENADECMVLDNEALYDICFRTLKLTTPSFGDLNHLISATMSGVTCCL
RFPGQLNSDLRKLAVNLIPFPRLHFFMVGFAPLTSRGSQQYRALTVPELTQQMWDAKNMM
CAADPRHGRYLTASAMFRGKMSTKEVDEQMINVQNKNSSYFVEWIPNNVKSTVCDIPPTG
LKMASTFIGNSTSIQEMFRRVSEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVS
EYOOYODATADEDGYEYEDEEEIGEEA

>08GYN5

MARSNVPKFGNWEAEENVPYTAYFDKARKTRAPGSKIMNPNDPEYNSDSQSQAPPHPPSS RTKPEQVDTVRRSREHMRSREESELKQFGDAGGSSNEAANKRQGRASQNNSYDNKSPLHK NSYDGTGKSRPKPTNLRADESPEKVTVVPKFGDWDENNPSSADGYTHIFNKVREERSSGA NVSGSSRTPTHOSSRNPNNTSSCCCFGFGGK

>P19825

MAHQHTISGLVGKLITESEVNCNADKYYQIFKHHEDLPSAIPHIYTSVKAVEGHGTTSGC VKEWCYILEGKPLTVKEKTTYNDETRTINHNGIEGGMMNDYKKFVATLVVKPKANGQGSI VTWIVDYEKINEDSPVPFDYLAFFQQNIEDLNSHLCASD

>P08688

MTKTGYINAAFRSSQNNEAYLFINDKYVLLDYAPGTSNDKVLYGPTPVRDGFKSLNQTVF GSYGVDCSFDTDNDEAFIFYEKFCALIDYAPHSNKDKIILGPKKIADMFPFFEGTVFENG IDAAYRSTRGKEVYLFKGDQYARIDYETNSMVNKEIKSIRNGFPCFRNTIFESGTDAAFA SHKTNEVYFFKGDYYARVTVTPGATDDQIMDGVRKTLDYWPSLRGIIPLEN >O9SWI1

MVTLTPSSASTPKTSFDFMKNNNSHSSLYVSSSSYLSSKEDALVTTKKLMEPSKTLNMSI
NPKQEEFGDEKKMVKKAPEDPEIGVFGAEKYFNGDMDSDQGSSVLSLTNPEVERTVVDSK
QSAKKSTGTPSVRSESSWNSQSVLLQNKLVNSCNSSFKEKKNSNGQIQKVTNNKKSFLAN
LGCKCACSDGDSVDVEEKTSVKRSADPNISVITMRSSADMNTELIKIQKQEELSQRKSLE
VFGSPVAIEKKSSVVQKKLPLPPWKSRTEEDDTKSEGSDSSSDLFEIEGLTGNPKPFLTR
QGSDPASPTCYAPSEVSVEWSIVTASAADFSVMSECATSPVRRNRPTQIPRIPITAKSAP
QRRKSSSSSGGNGFLMSCKSHKSVMVSGDLDRRSSMNKTQPSYVPRFPMETTKPKSFETR
RRISNSSISHTQSSLLYSQ

>Q84M92

MYGGDEVSAIVVDLGSHTCKAGYAGEDAPKAVFPSVIGAVDGVEAMDVDVDSTKTNSNSE
DSKTESEKEKSKRKLYVGSQAMSYRRDHMEVLSPIKDGIVSDWDLVDNIWEHAFKSCLMI
DPTEHPMLLAEPPLNTQQQREKAAELMFEKYKVPALFMAKNPVLTSFATGRATSLVVDCG
GGSTTISPVHDGYVLQKAVVSSPLGGEFLTDCLLKSLESKGIKIRPRYSFKRKEVRAGEF
QVEDVDIPDTTESYKLFCQRMIVGDIKDSICRVPDTPYDDKSYSNIPTTSYELPDGQTLE
IGADRFKVPDVMFNPSIVQTIPGMEKYAEMIPSVRGLPHMVMESINKCDVDIRRELYSSI
LLAGGTSSMQQLKERLEKDLIEESPHSARVKVLASGNTTERRFSVWIGGSILASLGSFQQ
MWFSKSEYEEHGASYIQRKCP

>056WK6

MAQEEVQKSADVAAAPVVKEKPITDKEVTIPTPVAEKEEVAAPVSDEKAVPEKEVTPEKE APAAEAEKSVSVKEEETVVVAEKVVVLTAEEVQKKALEEFKELVREALNKREFTAPVTPV KEEKTEEKKTEEETKEEEKKEETTTEVKVEEEKPAVPAAEEEKSSEAAPVETKSEE
KPEEKAEVTTEKASSAEEDGTKTVEAIEESIVSVSPPESAVAPVVVETVAVAEAEPVEPE
EVSIWGVPLLQDERSDVILTKFLRARDFKVKEALTMLKNTVQWRKENKIDELVESGEEVS
EFEKMVFAHGVDKEGHVVIYSSYGEFQNKELFSDKEKLNKFLSWRIQLQEKCVRAIDFSN
PEAKSSFVFVSDFRNAPGLGKRALWQFIRRAVKQFEDNYPEFAAKELFINVPWWYIPYYK
TFGSIITSPRTRSKMVLAGPSKSADTIFKYIAPEQVPVKYGGLSKDTPLTEETITEAIVK
PAANYTIELPASEACTLSWELRVLGADVSYGAQFEPTTEGSYAVIVSKTRKIGSTDEPVI
TDSFKVGEPGKIVITIDNQTSKKKKVLYRFKTQ

>P42798

MVRISVLNDALKSMYNAEKRGKRQVMIRPSSKVIIKFLIVMQKHGYIGEFEYVDDHRSGK IVVELNGRLNKCGVISPRFDVGVKEIEGWTARLLPSRQFGYIVLTTSAGIMDHEEARRKN VGGKVLGFFY

>Q40987

MAFYRTNLPTRELFSLVSVVIVLLATNINSVQALSFNFTKLTTANSGVTFQGDAQILPSG LIALTKSSPFPPGQYFTTVGRALSSNLVPLWDSATGKAASFVTSFSFVIDTTEGPITDGL IFFIAPPGTVIPQNSTTPFLGVVDSETSINRFVGLEFDLYRNSWDPEGRHIGIDINSIIS TKTVTYNLVSGSLTKVIIIYDSPSSTLSAAIIYENGKISTISQVIDLKTVLPNTVQIGLS AATLTGESYSIHSWSFVSDLETTASYVSNI

>P48534

MGKSYPTVSPDYQKAIEKAKRKLRGFIAEKKCAPLILRLAWHSAGTFDSKTKTGGPFGTI KHQAELAHGANNGLDIAVRLLEPIKEQFPIVSYADFYQLAGVVAVEITGGPEVPFHPGRE DKPEPPPEGRLPDATKGSDHLRDVFGKAMGLSDQDIVALSGGHTIGAAHKERSGFEGPWT SNPLIFDNSYFTELLTGEKDGLLQLPSDKALLTDSVFRPLVEKYAADEDVFFADYAEAHL KLSELGFAEA

>023627

MRIFSTFVFHRRQQIFNLRQFQTTTILRNPISIAPIQIPMDATEQSLRQSLSEKSSSVEA
QGNAVRALKASRAAKPEIDAAIEQLNKLKLEKSTVEKELQSIISSSGNGSLNREAFRKAV
VNTLERRLFYIPSFKIYSGVAGLFDYGPPGCAIKSNVLSFWRQHFILEENMLEVDCPCVT
PEVVLKASGHVDKFTDLMVKDEKTGTCYRADHLLKDYCTEKLEKDLTISAEKAAELKDVL
AVMEDFSPEQLGAKIREYGITAPDTKNPLSDPYPFNLMFQTSIGPSGLIPGYMRPETAQG
IFVNFKDLYYYNGKKLPFAAAQIGQAFRNEISPRQGLLRVREFTLAEIEHFVDPENKSHP
KFSDVAKLEFLMFPREEQMSGQSAKKLCLGEAVAKGTVNNETLGYFIGRVYLFLTRLGID
KERLRFRQHLANEMAHYAADCWDAEIESSYGWIECVGIADRSAYDLRAHSDKSGTPLVAE
EKFAEPKEVEKLVITPVKKELGLAFKGNQKNVVESLEAMNEEEAMEMKATLESKGEVEFY
VCTLKKSVNIKKNMVSISKEKKKEHQRVFTPSVIEPSFGIGRIIYCLYEHCFSTRPSKAG
DEQLNLFRFPPLVAPIKCTVFPLVQNQQFEEVAKVISKELASVGISHKIDITGTSIGKRY
ARTDELGVPFAITVDSDTSVTIRERDSKDQVRVTLKEAASVVSSVSEGKMTWQDVWATFP
HHSSAAADE

>Q9T052

MAYHPVYNETMSMGGGSSNEFGQWLDKQLVPFDTSSGSLRVELLHGNLDIWVKEAKHLPN MDGFHNTLVGGMFFGLGRRNHKVDGENSSKITSDPYVTVSISGAVIGRTFVISNSENPVW MQHFDVPVAHSAAKVHFVVKDSDIIGSQIIGAVEIPTEQLCSGNRIEGLFPILNSRGKPC KQGAVLSLSIQYIPMERMRLYQKGVGFGVECVGVPGTYFPLRKGGRVTLYQDAHVDDGTL PSVHLDGGIQYRHGKCWEDMADAIRRARRLIYITGWSVFHPVRLVRRNNDPTQGTLGELL

KVKSQEGVRVLVLVWDDPTSRSLLGFSTKGLMNTSDEETRRFFKHSSVQVLLCPRYGGKG
HSFIKKSEVETIYTHHQKTMIVDAEAAQNRRKIVAFVGGLDLCNGRFDTPKHPLFRTLKT
IHKDDFHNPNFVTTADDGPREPWHDLHSKIDGPAAYDVLANFEERWMKASKPRGIGRLRT
SSDDSLLRLDRIPDIMGLSEASSANDNDPESWHVQVFRSIDSSSVKGFPKDPKEATGRNL
LCGKNILIDMSIHAAYVKAIRSAQHFIYIENQYFLGSSFNWDSNKNLGANNLIPMEIALK
IANKIRAREKFAAYIVIPMWPEGAPTSNPIQRILYWQHKTMQMMYQTIYKALVEVGLDGQ
LEPQDFLNFFCLGTREVGTREVPDGTVSVYNSPRKPPQLNAAQVQALKSRRFMIYVHSKG
MVVDDEFVLIGSANINQRSLEGTRDTEIAMGGYQPHHSWAKKGSRPRGQIFGYRMSLWAE
HLGFLEQEFEEPENMECVRRVRQLSELNWRQYAAEEVTEMPGHLLKYPVQVDRTGKVSSL
PGYETFPDLGGKIIGSFLVVEENLTI

>038707

MAKSSEIEHPVKAFGWAARDTTGLLSPFKFSRRATGEKDVRLKVLFCGVCHSDHHMIHNN WGFTTYPIVPGHEIVGVVTEVGSKVEKVKVGDNVGIGCLVGSCRSCESCCDNRESHCENT IDTYGSIYFDGTMTHGGYSDTMVADEHFILRWPKNLPLDSGAPLLCAGITTYSPLKYYGL DKPGTKIGVVGLGGLGHVAVKMAKAFGAQVTVIDISESKRKEALEKLGADSFLLNSDQEQ MKGARSSLDGIIDTVPVNHPLAPLFDLLKPNGKLVMVGAPEKPFELPVFSLLKGRKLLGG TINGGIKETQEMLDFAAKHNITADVEVIPMDYVNTAMERLVKSDVRYRFVIDIANTMRTE ESLGA

>Q8VXU6

MDSNWINCPSVFSSSSSSRRCQSRSDLYLGGGYEDLEGEDDLKAEFICPFCAEDFDIVG LCCHIDEEHPVEAKNGVCPVCTKRVGLDIVGHITTQHANFFKVQRRRRLRRGGYSSTYLA LKKELREANLQSLLGGSSSFTSSTNIDSDPLLSSFMFNSPSVNQSANKSATPVTVGNAAT KVSIKESLKRDIQEAPLSGEDQEKAKKSEFVRGLLLSTMLEDDF

>P12783

MATKRSVGTLGEADLKGKKVFVRADLNVPLDDAQKITDDTRIRASIPTIKYLLEKGAKVI
LASHLGRPKGVTPKFSLKPLVARLSELLGLEVVMAPDCIGEEVEKLAAALPDGGVLLLEN
VRFYKEEEKNDPEFAKKLASVADLYVNDAFGTAHRAHASTEGVTKFLRPSVAGFLMQKEL
DYLVGAVANPKKPFAAIVGGSKVSSKIGVIESLLAKVDILILGGGMIFTFYKAQGLAVGK
SLVEEDKLELATSLIETAKSKGVKLLLPTDVVVADKFAADAESKIVPATAIPDGWMGLDV
GPDSIKTFAEALDTTKTVIWNGPMGVFEFEKFAAGTDAIAKQLAELTGKGVTTIIGGGDS
VAAVEKAGLADKMSHISTGGGASLELLEGKPLPGVLALDEA

>Q9FVL0

MGTLDTKGFTEEQEALVVKSWNAMKKNSAELGLKLFLKIFEIAPSAQKLFSFLKDSKVPL EQNTKLKPHAMSVFLMTCESAVQLRKSGKVTVRESSLKKLGANHFKYGVVDEHFEVTKFA LLETIKEAVPEMWSPAMKNAWGEAYDOLVNAIKSEMKPSS

>P27058

MGTPSYDIKNKGDDMQEEPKVKLHHEKGGDEKEKIIEKETPSQDINNKDTISSYVLRDDT QEIPKMEHEEGGYVKEKIVEKETISQYIIKIEGDDDAQEKLKVEYEEEEYEKEKIVEKET PSQDINNKGDDAQEKPKVEHEEGDDKETPSQDIIKMEGEGALEITKVVCEKIIVREDLAV QSKPPSKRDPPKMQTDNNKL

>048963

MEPTEKPSTKPSSRTLPRDTRGSLEVFNPSTQLTRPDNPVFRPEPPAWQNLSDPRGTSPQ PRPQQEPAPSNPVRSDQEIAVTTSWMALKDPSPETISKKTITAEKPQKSAVAAEQRAAEW GLVLKTDTKTGKPQGVGVRNSGGTENDPNGKKTTSQRNSQNSCRSSGEMSDGDVPGGRSG IPRVSEDLKDALSTFQQTFVVSDATKPDYPIMYASAGFFNMTGYTSKEVVGRNCRFLQGS
GTDADELAKIRETLAAGNNYCGRILNYKKDGTSFWNLLTIAPIKDESGKVLKFIGMQVEV
SKHTEGAKEKALRPNGLPESLIRYDARQKDMATNSVTELVEAVKRPRALSESTNLHPFMT
KSESDELPKKPARRMSENVVPSGRRNSGGGRRNSMQRINEIPEKKSRKSSLSFMGIKKKS
ESLDESIDDGFIEYGEEDDEISDRDERPESVDDKVRQKEMRKGIDLATTLERIEKNFVIT
DPRLPDNPIIFASDSFLELTEYSREEILGRNCRFLQGPETDLTTVKKIRNAIDNQTEVTV
QLINYTKSGKKFWNIFHLQPMRDQKGEVQYFIGVQLDGSKHVEPVRNVIEETAVKEGEDL
VKKTAVNIDEAVRELPDANMTPEDLWANHSKVVHCKPHRKDSPPWIAIQKVLESGEPIGL
KHFKPVKPLGSGDTGSVHLVELVGTDQLFAMKAMDKAVMLNRNKVHRARAEREILDLLDH
PFLPALYASFQTKTHICLITDYYPGGELFMLLDRQPRKVLKEDAVRFYAAQVVVALEYLH
CQGIIYRDLKPENVLIQGNGDISLSDFDLSCLTSCKPQLLIPSIDEKKKKKQQKSQQTPI
FMAEPMRASNSFVGTEEYIAPEIISGAGHTSAVDWWALGILMYEMLYGYTPFRGKTRQKT
FTNVLQKDLKFPASIPASLQVKQLIFRLLQRDPKKRLGCFEGANEVKQHSFFKGINWALI
RCTNPPELETPIFSGEAENGEKVVDPELEDLQTNVF

>050016

MIRFILLQNRQGKTRLAKYYVPLEDSEKHKVEYEVHRLVVNRDPKFTNFVEFRTHKVIYR RYAGLFFSICVDITDNELAYLECIHLFVEILDHFFSNVCELDLVFNFHKVYRYLILDEFI LAGELQETSKRQ

>049044

MGVIKAVAVINGNNNVKGSLQFIQDSTGVTHVKGRITGLTPGLHGFHIHALGDTTNGCNS TGPHFNPLKKDHGAPFDTERHAGDLGNVVAGADGVAEVSVRDTQIPLSGQHSILGRAVVV HADQDDLGRTGHELSKTTGNAGARVRCGIIGLQASV

>042806

MANIDIEGILKQQQPYDGRVPKTKIVCTLGPASRSVEMTEKLLRAGMNVARFNFSHGTHD
YHQETLNNLKTAMHNTGILCAVMLDTKGPEIRTGFLKDGKPIQLKEGQEVTITTDYDIKG
DPEMISMSYKKLPVHLKPGNTILCSDGTITLTVLSCDPDAGTVRCRCENTATLGERKNVN
LPGVVVDLPTLTEKDKEDILGWGVPNKIDMIALSFVRKGSDLVNVRKVLGPHAKNIQLMS
KVENQEGVLNFDEILRETDAFMVARGDLGMEIPVEKIFLAQKMMIYKCNLVGKPVVTATQ
MLESMIKSPRPTRAEATDVANAVLDGTDCVMLSGESAAGAYPELAVKIMARICIEAESSL
DYGAIFKEMIRSTPLPMSPLESLASSAVRTANKAKAKLIVVLTRGGSTAKLVAKYRPAVP
ILSVVVPVLSTDSFDWTCSDETPARHSLIYRGLIPILGEGSAKATDAESTEVILEAALKS
ATERALCKPGDAVVALHRIGAASVIKICIVK

>Q8VYK7

MAKSSFKQEHDLEKRRAEAARIREKYPDRIPVIVEKAEKSDIPTIDKKKYLVPADLTVGQ FVYVIRKRIKLSAEKAIFIFVDNVLPPAGALMSSVYEEKKDDDGFLYVTYSGENTFGFGS P

>P34923

MVGSAKIKVGINGFGRIGRLVARVALERDDIELVAINDPFITPEYMTYMFKYDSTHGQWK KTEVTLHSEGHLTFGGNPVAVYACRDPSEIPWGKHGADFVVESTGVFTDKDKAAAHLKGG AKKVVISAPSKDAPMFVMGVNENKYSDEDIVSNASCTTNCLAPLAKVINDKFGILEGLMT TVHATTATQKTVDGPSSKDWRGGRSAATNIIPSATGAAKAVGKVLPELNGKLTGMAFRVP TTDVSVVDLTVRLEKPASYDAIKTAIKEASEGQMKGILGYTEDDVVSTDFITDSRSSIFD AKAGIALSDTFVKLVAWYDNEWGYSNRVVDLIVHMAKQGTSQ

>P38414

MASLLFGRGQKLKGTVILMQKNVLDINALTAAQSPSGIIGGAFGVVGSIAGSIIDTATAF
LGRSVRLRLISATVADASGKGKVSKEAFLEGLLTSIPTLGDKQSAFSVHFEWDSNMGTPG
AFYIENFMQGGEFFLVSLTLDDVPNVGSIKFACNSWIYNDKKYQSDRIFFANKTYLPSAT
PAPLVSYRQEELKTLRGDGTGERQEWDRIYDYDVYNDLGAPDQKATLGRPVLGGSSTLPY
PRRGRTGRKKTVKEPQSESRSDTVYLPRDEAFGHVKSSDFLVYILKSASQNIVPQLRSVV
TLQLNNPEFNTFEDVRSLYDGGIKLPTDVLSKISPIPLFSELFRSDGEAALKFPPPKVIQ
VDHSAWMTDEEFAREMIAGVNPHIIKEVLSFPIKSKLDSQLYGDNTSKITKEHLEPNLGG
VTVEGAIQTNRLFTPDHHDALFPYLRKINATATKAYATRTVLFLQDNGTLKPLAIELSTP
HPDGDSFGPVSKVYLPASEGVEASIWLLAKAFVVVNDSCYHQLVSHWLNTHAVVEPFIIA
TNRHLSVVHPIHKLLLPHYRDTMNINALARNVLVNAEGIIESTFLWGNYAMEMSAVVYKD
WVFPDQGLPNDLIKRGVAVKDPSSPHGVRLLIEDYPYASDGLEIWAAIKSWVEEYVNFYY
KSDAAIAQDAELQAFWKELVEVGHGDLKSATWWFKMQNRKELIEACSILIWIASALHAAV
NFGQYPYGGYILNRPTKSRKFMPEKGTPEYDDLAKNYEKAYLRTITPKNDTLTDLTIIEV
LSRHASDEQYLGERIEGDDWTTDSVPKEAFKRFGKKLAEIEEKLTQRNNDESLRNRYGPV
KMPYTLLYPSSEEGLTCRGIPNSISI

>Q9ZNR6

MADQAMTDQDQGAVTLYSGTAITDAKKNHPFSVKVGLAQVLRGGAIVEVSSVNQAKLAES
AGACSVIVSDPVRSRGGVRRMPDPVLIKEVKRAVSVPVMARARVGHFVEAQILESLAVDY
IDESEIISVADDDHFINKHNFRSPFICGCRDTGEALRRIREGAAMIRIQGDLTATGNIAE
TVKNVRSLMGEVRVLNNMDDDEVFTFAKKISAPYDLVAQTKQMGRVPVVQFASGGITTPA
DAALMMQLGCDGVFVGSEVFDGPDPFKKLRSIVQAVQHYNDPHVLAEMSSGLENAMESLN
VRGDRIQDFGQGSV

>084KG5

MGEVAKEEVEERRSIVAVNPQPSKGLVSSAVDLIEKAVVYLFHDKSKPCHYLSGNFAPVV
DETPPCPDLPVRGHLPECLNGEFVRVGPNPKFMPVAGYHWFDGDGMIHGMRIKDGKATYA
SRYVKTSRLKQEEYFEGPKFMKIGDLKGFFGLFMVQMQLLRAKLKVIDVSYGVGTGNTAL
IYHHGKLLALSEADKPYVVKVLEDGDLQTLGLLDYDKRLSHSFTAHPKVDPFTDEMFTFG
YAHTPPYVTYRVISKDGVMRDPVPITIPASVMMHDFAITENYSIFMDLPLYFQPKEMVKG
GKLIFSFDATKKARFGVLPRYAKDDSLIRWFELPNCFIFHNANAWEEGDEVVLITCRLEN
PDLDMVNGAVKEKLENFKNELYEMRFNMKTGAASQKQLSVSAVDFPRINESYTTRKQRYV
YGTILDNITKVKGIIKFDLHAEPEAGKKKLEVGGNVQGIFDLGPGRYGSEAVFVPRERGI
KSEEDDGYLIFFVHDENTGKSEVNVIDAKTMSAEPVAVVELPNRVPYGFHAFFVNEEQLQ
WOOTDV

>A2YDY2

MASEKKQSNPMREIKVQKLVLNISVGESGDRLTRASKVLEQLSGQSPVFSKARYTVRSFG IRRNEKIACYVTVRGEKAMQLLESGLKVKEYELLRRNFSETGCFGFGIQEHIDLGIKYDP STGIYGMDFYVVLERAGYRVARRRRCKSRVGIQHRVTKEDAMKWFQVKYEGVILNKAQAN TS

>P25892

MAETNPELSDLMAQTNKKIVPKFTEIFPVEDVNYPYSAFIASVRKDVIKHCTDHKGIFQP VLPPEKKVPELWFYTELKTRTSSITLAIRMDNLYLVGFRTPGGVWWEFGKAGDTHLLGDN PRWLGFGGRYQDLIGNKGLETVTMGRAEMTRAVNDLAKKKKMATLEEEEVQMQMQMPEAA ELAAAAAAADPQADTKSKLVKLVVMVCEGLRFNTVSRTVDAGFNSQHGVTLTVTQGKQVQ KWDRISKAAFEWADHPTAVIPDMQKLGIKDKNEAARIVALVKNQTTAAAAAATAASADND DDEA

>065735

MSNFKSKYHDELIANAAYIGTPGKGILAADESTGTIGKRLASINVENVETNRRALRELLF
TAPNVLQYLSGVILFEETLYQSTAAGKPFVDVLNEAGVLPGIKVDKGTVELAGTDGETTT
QGLDGLGARCAKYYEAGARFAKWRAVLKIGPNEPSLSILSIENAYGLARYAVICQENGLV
PIVELEILVDGSHDIHKCAAITERVLAATYKALSDHHVLLEGTLLKPNMVTPGSDSPKVA
PEVVAEHTVRALQRTVPAAVPAVVFLSGGQSEEEATVNLNAINQVKGKKPWTLSFSFGRA
LQQSTLKAWSGKEENVKNAQDALLTRAKANSEATLGTYKGNSQLGEGASESLHVKDYKY
>O2OSB9

MPNVVDPPQISFAAKDMDLTEWEGDILAVLVTETDVSKATSSSSRFTNAAAALAKLDGEL
GGLLSEASAEEEFAGRAGQSVALRLPTAPGLHGFKRVCLVGVGNNMPSSAAACRSTGETI
AAVAKSAQARSAAVALASPPPGWVQGEDLRLNAAAAVASGVVLGLHEDRRYKSDSKKVHL
KQVDLIGFGSGQEMGRKLQYANHVSSAVIFAKELVNSPANVLTPAVLAEEASNIASSYSD
VLTATILDEEKCRELKMGSYLAVAAASANPPHFIHLCYKPPGGNVKRKLAIVGKGLTFDR
FYLSLDNLLIVTKFVCIGGYNIKIGAVTTIELMKKDMGGSAALFGAAKALGQIKPPGVEV
HFISAACENMISGTGMRPGDIVTASNGKTIEVDNTDAEGRLTLADALVYACKLGVDKIID
LATLTGYCRIALGPSIAGILTPSDELDKEVAAAYEASGEKFWRLPLEESYWEQMKSSVAD
MLNTGSPLGGAITAGLFLKQFVDEKVKWMHVDMAGPVWNYKKQEATGFGVSTLVEWVLIN
SS

>A3AZ88

 ${\tt MSCCGGNCGCGSGCQCGGGCKMFPDVEATATTKTFVLAAPSNKASSGGMEMAVESGE} \\ {\tt NGGCGCNTCKCGTSCSGCSCCSCN}$

>Q9SBK6

MEVMRILHMNKGNGETSYAKNSIVQSNIISLGRRVMDEALKKLMIRNSEILSFGIADLGC SSGPNSLLSISNIVETIQNLCHDLDRPVPELSLSLNDLPSNDFNYIFASLPEFYDRVKKR DNNYESLGFEHGSGGPCFVSAVPGSFYGRLFPRRSLHFVHSSSSLHWLSQVPCGEVNKKD GVVITADLDNRGKIYLSKTSPKSAHKVYALQFQTDFSVFLRSRSEELVPGGRMVLSFLGR SSPDPTTEESCYQWELLAQALMSLAKEGIIEEENIDAFNAPYYAASPEELKMAIEKEGSF SIDRLEISPVDWEGGSISDDSYDIVRFKPEALASGRRVAKTIRAVVEPMLEPTFGQKVMD ELFERYAKLVGEYVYVSSPRYTIVIVSLLRMG

>P42801

MFIESFKVESPNVKYTENEIHSVYDYETTEVVHEKTVNGTYQWIVKPKTVKYDFKTDIRV
PKLGVMLVGLGGNNGSTLTAGVIANKEGISWATKDKVQQANYFGSLTQASSIRVGSFNGE
EIYAPFKSLLPMVNPDDVVFGGWDISDMNLADAMARARVLDIDLQKQLRPYMENIVPLPG
IFDPDFIAANQGSRANHVIKGTKKEQVDHIIKDMREFKEKNKVDKVVVLWTANTERYSNV
VVGMNDTMENLMESVDRDEAEISPSTLYAIACVLEGIPFINGSPQNTFVPGLIDMAIRNN
VLIGGDDFKSGQTKMKSVLVDFLVGAGIKPTSIVSYNHLGNNDGMNLSAPQTFRSKEISK
SNVVDDMVASNGILFEPGEHPDHVVVIKYVPYVADSKRAMDEYTSEIFMGGKNTIVMHNT
CEDSLLAAPIILDLVLLAELSTRIQFKSEGEGKFHSFHPVATILSYLTKAPLVPPGTPVI
NALSKORAMLENIMRACVGLAPENNMIMEFK

>P30792

MGSSGFSWTLPDHPKLPKGKSVAVVVLDGWGEANPDQYNCIHVAQTPVMDSLKNGAPEKW RLVKAHGTAVGLPSDDDMGNSEVGHNALGAGRIFAQGAKLVDQALASGKIYDGDGFNYIK ESFESGTLHLIGLLSDGGVHSRLDQLQLLLKGVSERGAKKIRVHILTDGRDVLDGSSIGF VETLENDLLELRAKGVDAQIASGGGRMYVTMDRYENDWDVVKRGWDAQVLGEAPYKFKSA LEAVKTLRAQPKANDQYLPPFVIVDDSGNAVGPVLDGDAVVTINFRADRMVMLAKALEYA DFDNFDRVRVPKIRYAGMLQYDGELKLPSRYLVSPPEIDRTSGEYLVKNGIRTFACSETV KFGHVTFFWNGNRSGYFDATKEEYVEVPSDSGITFNVAPNMKALEIAEKARDALLSGKFD QVRVNLPNGDMVGHTGDIEATVVACKAADEAVKIILDAVEQVGGIYLVTADHGNAEDMVK RNKSGKPLLDKNDRIQILTSHTLQPVPVAIGGPGLHPGVKFRNDIQTPGLANVAATVMNL HGFEAPADYEQTLIEVADN

>08LAD0

MTVGVLALQGSFNEHIAALRRLGVQGVEIRKADQLLTVSSLIIPGGESTTMAKLAEYHNL FPALREFVKMGKPVWGTCAGLIFLADRAVGQKEGGQELVGGLDCTVHRNFFGSQIQSFEA DILVPQLTSQEGGPETYRGVFIRAPAVLDVGPDVEVLADYPVPSNKVLYSSSTVQIQEED ALPETKVIVAVKQGNLLATAFHPELTADTRWHSYFIKMTKEIEQGASSSSSKTIVSVGET SAGPEPAKPDLPIFO

>0500Y9

MAIRKLLLLLKPIDPYPFLQTEGASLIKNPQVLQYLESRCKVHKNAIKFCQEILSKKPVE
WKPISRNDLSHPIRDVDMVITVGGDGTLLHASHFIDDSVPVLGVNSDPTQAHEVEELSDQ
FDASRSTGHLCAATVENFEQVLDDILFGRVVPAKVSRISLKLNSETLLSHALNDILIAQP
CPAAVSRFSFKIKNKDGASSPKTVNCRSSGLRICTAAGSTAAMQSAGGFVMPMLSRDLQF
MVREPISPGSTASLMHSTFKPDQFMDVNWYSDHGTIYIDGCQVQHSVQLGDTIEISSDAP
VLNVFLSHGISQIRSRY

>09XFA2

MASPNGGVTTYDYHDSDSAAPVNAQTIEELHSLQRKAATTTKDGASPLQSISASLASLAR
EYGPNLVKGDPEATKGAPPVPIKHQQPSAAAATIAASDSSLKFTHVLYNLSPAELYEQAF
GQKKSSFITSTGALATLSGAKTGRSPRDKRVVKDETTSQELWWGKGSPNIEMDERQFVIN
RERALDYLNSLDKVYVNDQFLNWDSENRIKVRIITSRAYHALFMHNMCIRPTEEELESFG
TPDFTIYNAGEFPANRYANYMTSSTSINISLARREMVILGTQYAGEMKKGLFGVMHYLMP
KRGILSLHSGCNMGKEGDVALFFGLSGTGKTTLSTDHNRLLIGDDEHCWSDNGVSNIEGG
CYAKCIDLSQEKEPDIWNAIKFGTVLENVVFNERTREVDYADKSITENTRAAYPIEFIPN
AKIPCVGPHPKNVILLACDAYGVLPPVSKLNLAQTMYHFISGYTAIVAGTEDGVKEPTAT
FSACFGAAFIMYHPTKYAAMLAEKMQKYGATGWLVNTGWSGGRYGVGNRIKLPYTRKIID
AIHSGELLNASYKKTEVFGLEIPTAINGVPSEILGPVNTWTDKAAYKETLLKLAGLFKNN
FEVFASYKIGNNNSLTEQILAAAPNF

>09SWR3

MAAVTGLYGSIDEFLNHCSQSGDSAYSALRSLLERLEKPDTRTEARIFLAHLQKKLDNDG
ASQRCLETYHFQIQDIYLDRNEGTGYQNRKKFTMMVIPSIFMPEDWSFTFYEGINRHPDS
IFKDKTVAELGCGNGWISIAIAEKWLPLKVYGLDINPRAVKISWINLYLNAFDEDGQPVY
DSESKTLLDRVEFYESDLLSYCRDNHIELERIVGCIPQILNPNPDAMSKLVTENASEEFL
HSLSNYCALQGFVEDQFGLGLIARAVEEGIDVIKPMGIMIFNMGGRPGQGVCKRLFERRG
LSVNKLWQTKILQASDTDISALVEIEKNNPHRFEFFMGLVGDRPICARTAWAFGKACGRI
SHALSVYSCQLRHPNEVKKIFEFLKNGFHDISNSLDLSFEDDSVADEKIPFLAYLAGVLK
DGSRFPYEPPTGNKRFRDLIASFMKTYHHVPLSTDNVAIFPSRATAIENSLRLFTPRLAI
VEEHLTCNLPRQWLTSLEIEQTRDSKTPIDGITVIEAPRQSDLMIELIKKLKPQVVVTGI
AQFEAVTSSAFEHLLRVTREIGSRLFIDISDQFELSSLPSSIGVLKYLARTPLPSHAAII
CGLLRNRVYTDLEVAFVISEEQTIFDALTRTVELLQGNTALISQYYYGCLFHELLSFQIP

DRRQTAEREAENVEASDIDMIGFSSSAISVLSQSELSVRVTEKSSLLHMDVDQIFLPTPT
PVKAAIFESFARQNVTETECDVTPILRQFILNTWNFSVEHSAEFIYADFPLALFNKLVLC
CIEEGGSLCMPAGSNGNYAAAAKFLNANIMSIPTEAEVGFKLTAKQLSSVLETVHKPWVY
ISGPTINPTGLLYSNEEMKSLLTVCARYGARTIIDTSFSGIKFNSQDWDGWNLDASLAGL
TGNPSFSVCLLGGLFFKIPTGGLSYGFLVLKSGFLADSFRSSFSGLNKPHNTVRYTAKKL
LELGEQKGNLTGAAQGQEKLLATRLKRLKETLENCGWEVIEARGGVSVIAKPSAYLGKNI
KLEKDGSTWVTKLDGTNIREAMLRATGLCINGPSWTGIPDYCRFTFALEDGDFDRALDCI
VKFNOLVK

>05XPJ9

MPLTRYQSRNEYGLADPDLYQAADKDDPEALLEGVAMAGLVGILRQLGDLAEFAAEMFHD LHEEVMATASRSHGLMARVQQLEAEFPSIEKALLCQTDHSPFFSNKGVEWHPNLQLEQSV VTSGDLPRCVMDSYEECRGPPRLFLLDKFDISGAGACLKRYTDPSFVRLETSSYEESWDD IQREKKSQKAKRRASQWRNGGTPENALSSHAKLHELFLEEHLEAHHSDPARVVKLKTRKL DGCSLISKSGESYMEKFVQTRVDSKISYEIITQNPGLLTWNMDSARDVVTDIPEISMVGA MDKSHGGSRAEVSFPSEOENVANVNMNGGFIEKDIETVPESTYNEVRGTTITODSOTVLN GKPGFFQORSYSEDLTSEADNYVDAPATMESETETDDECRPKSRSDTLKDGNHHIYSDAV EERMEDPPOFSFSHSNGNTPVSENGRSSFGKKSTSYSYSDTASISIDDOSDGEKLSGCLP ${\tt STSSFKSELVDSMSHVTPEANKVSHDLNVQESVSSSNVDGOTSLSSNGTCSSPRPVSOND}$ OSCSLTVOSLASEVVETSPELVRLDLMKGGNDGRKVDPFDSSKSCASFDAKNSDLPSETS SISSTSEGSRCDSTIEKNCMVASNLVNSGTSPQAFVDSQTGKQLPIADTDFETNSIVACS EVLANSGSDPEERDGRCLTGKLVPCSAGVGMEVSPDTPSKVCGPSSADGIHLKDTLDDET DCVSVTNVVVDVDSKNSVADVGSQSSVADIDSQSSVAEISDEHSCAFGNTADVSVSESHE DTLENGMSVPSDFNSGVEKLAGDASPTCSKCDDHISHEGFHDLSGLDNATTDIVPNVELD VSDNDNDTSSGGVNHAVSLSSTRGKGSLPWISTNTYOSSSDAGEIFHDTVVESDGTLLED NNPESEIKMHKSPLEVSSEGLSTEPDNKDVESIESTSPKPSLDQRNRDTETKSPGESILD DNCIDSTQVYNLNLLESEAIDQAVREQTSYASHEVADEELLQSNVFRGLEFEPQSAGLEF APQSAGIELNRPKQELNLDPTFPSFGFIPETIPPNPEDMPPLPPMQWLIGKVPHSFPTFM GESVETSSSALSAAPPIGSSLNVOIGSPPSELSVSLGSDESERLPGGFVHNASEKPLOSS IQFPTMSTDLNSQYDSSELPTIPYQECIEDFGSEENNLLADHAAQNHELVYSQASSLQLP OVKHEDFKDDADVHESOSSSDDHHCPETKSLTPTOSTKVEDKGHSVPDASNAETAESSNT SVOKINPVSVGDAMWPVSCFSVAPTLDTYKTEVVPTVRLPRPRSPLVDAVAAHDRRKMKK VSEMVHPPIKSKQDDKDSLLAQIRNKSVNLKPAVTTRPSIQTGPRTDLRVAAILEKANTI RMAMAGSDEDEDSDSWSDS

>P49202

MGSLVQGDDFQHILRLLNTNVDGKNKIMYAMTAIRGIGRRFSNLVCKKAEVDLRKAAGEC SADELERMMGIVANPRAYKIPDWFLNRQKDHKTGRFSQLTSSQLDTVMRDDLERLKKIRG HRGLRHYWGLRVRGOHTKTTGRAGKTVGVAKKK

>Q9FK12

MDEYIDFRPLKYTEHKTSMTKYTKKSSEKLSGGKSLKKVSICYTDPDATDSSSDEDEEDF LFPRRVKRFVNEITVEPSCNNVVTGVSMKDRKRLSSSSDETQSPASSRQRPNNKVSVSG QIKKFRGVRQRPWGKWAAEIRDPEQRRRIWLGTFETAEEAAVVYDNAAIRLRGPDALTNF SIPPQEEEEEEEPEPVIEEKPVIMTTPTPTTSSSESTEEDLQHLSSPTSVLNHRSEEIQQ VQQPFKSAKPEPGVSNAPWWHTGFNTGLGESDDSFPLDTPFLDNYFNESPPEMSIFDQPM DQIFCENDDIFNDMLFLGGETMNIEDELTSSSIKDMGSTFSDFDDSLISDLLVA >P80196

MMKSQKKLLIKIIVVQCLLVLCVTSQDFDFFYFVQQWPASYCDTRRSCCYPTTGKPDEDF SIHGLWPNYKDGKWPQNCDRESSLDESEFSDLISTMEKNWPSLACPSSDGLKFWSHEWLK HGTCSALNQHAYFQTALDFKTKSNLLQNLNNAGIKPRNGDYYGVESIKKAIEKGVGHTPF IECNVDSQGNHQLYQVYLCVDSSASKFIDCPIFPHGGKCGSKIEFPSFSTNDDHDEF >Q38869

MEKPNPRRPSNSVLPYETPRLRDHYLLGKKLGQGQFGTTYLCTEKSSSANYACKSIPKRK
LVCREDYEDVWREIQIMHHLSEHPNVVRIKGTYEDSVFVHIVMEVCEGGELFDRIVSKGC
FSEREAAKLIKTILGVVEACHSLGVMHRDLKPENFLFDSPSDDAKLKATDFGLSVFYKPG
QYLYDVVGSPYYVAPEVLKKCYGPEIDVWSAGVILYILLSGVPPFWAETESGIFRQILQG
KIDFKSDPWPTISEGAKDLIYKMLDRSPKKRISAHEALCHPWIVDEHAAPDKPLDPAVLS
RLKQFSQMNKIKKMALRVIAERLSEEEIGGLKELFKMIDTDNSGTITFEELKAGLKRVGS
ELMESEIKSLMDAADIDNSGTIDYGEFLAATLHINKMEREENLVVAFSYFDKDGSGYITI
DELQQACTEFGLCDTPLDDMIKEIDLDNDGKIDFSEFTAMMKKGDGVGRSRTMRNNLNFN
IAEAFGVEDTSSTAKSDDSPK

>P54609

MSTPAESSDSKSKKDFSTAILERKKSPNRLVVDEAINDDNSVVSLHPATMEKLQLFRGDT
ILIKGKKRKDTVCIALADETCEEPKIRMNKVVRSNLRVRLGDVISVHQCPDVKYGKRVHI
LPVDDTVEGVTGNLFDAYLKPYFLEAYRPVRKGDLFLVRGGMRSVEFKVIETDPAEYCVV
APDTEIFCEGEPVKREDEERLDDVGYDDVGGVRKQMAQIRELVELPLRHPQLFKSIGVKP
PKGILLYGPPGSGKTLIARAVANETGAFFFCINGPEIMSKLAGESESNLRKAFEEAEKNA
PSIIFIDEIDSIAPKREKTNGEVERRIVSQLLTLMDGLKSRAHVIVMGATNRPNSIDPAL
RRFGRFDREIDIGVPDEIGRLEVLRIHTKNMKLAEDVDLERISKDTHGYVGADLAALCTE
AALQCIREKMDVIDLEDDSIDAEILNSMAVTNEHFHTALGNSNPSALRETVVEVPNVSWN
DIGGLENVKRELQETVQYPVEHPEKFEKFGMSPSKGVLFYGPPGCGKTLLAKAIANECQA
NFISVKGPELLTMWFGESEANVREIFDKARQSAPCVLFFDELDSIATQRGGGSGGDGGGA
ADRVLNQLLTEMDGMNAKKTVFIIGATNRPDIIDSALLRPGRLDQLIYIPLPDEDSRLNI
FKAALRKSPIAKDVDIGALAKYTQGFSGADITEICQRACKYAIRENIEKDIEKEKRRSEN
PEAMEEDGVDEVSEIKAAHFEESMKYARRSVSDADIRKYQAFAQTLQQSRGFGSEFRFEN
SAGSGATTGVADPFATSAAAAGDDDDLYN

>09SYT0

MATLKVSDSVPAPSDDAEQLRTAFEGWGTNEDLIISILAHRSAEQRKVIRQAYHETYGED LLKTLDKELSNDFERAILLWTLEPGERDALLANEATKRWTSSNQVLMEVACTRTSTQLLH ARQAYHARYKKSLEEDVAHHTTGDFRKLLVSLVTSYRYEGDEVNMTLAKQEAKLVHEKIK DKHYNDEDVIRILSTRSKAQINATFNRYQDDHGEEILKSLEEGDDDDKFLALLRSTIQCL TRPELYFVDVLRSAINKTGTDEGALTRIVTTRAEIDLKVIGEEYQRRNSIPLEKAITKDT RGDYEKMLVALLGEDDA

>P34937

MGRKFFVGGNWKCNGTVEQVEAIVQTLNAGQIVSPDVVEVVVSPPYVFLPIVKAKLRPEI QVAAQNCWVKKGGAFTGEVSAEMLANLGVPWVILGHSERRSLLGESSEFVGEKVAYALAQ GLKVIACVGETLEQREAGSTMEVVAEQTKAIAGKIKDWSNGVVAYEPVWAIGTGKVATPA QAQEVHANLRDWLKTNVSPEVAESTRIIYGGSVTGASCKELAAQADVDGFLVGGASLKPE FIDIINAAAVKSA

>P12365

MDPYKHRPSSAFNAPYWTTNSGAPVWNNDSSLTVGARGPILLEDYHCEKLANFDRERIPE
RVVHARGASAKGFFEVTHDITHLTCADFLRAPGVQTPVIVRFSTVIHERGSPETLRDPRG
FAVKFYTREGNWDLVGNNFPVFFIRDGIKFPDMVHALKPNPRTHIQDNWRILDFFSHHPE
SLHMFSFLFDDVGIPADYRHMDGSGVHTYTLVSRAGTVTYVKFHWRPTCGVRSLMDDEAV
RCGANHSHATKDLTDAIAAGNFPEWTLYIQTMDPEMEDRLDDLDPLDVTKTWPEDTFPLQ
PVGRLVLNRNIDNFFAENEQLAFCPGLIVPGIYYSDDKLLQTRIFSYSDTQRHRLGPNYL
LLPANAPKCAHHNNHYDGSMNFMHRHEEVDYFPSRYDAVRNAPRYPIPTAHIAGRREKTV
ISKENNFKQPGERYRAMDPARQERFITRWVDALSDPRLTHEIRTIWLSNWSQADRSLGQK
LASRLSAKPSM

>P48407

MSVGMGIDLEAFRKSQRADGFASILAIGTANPPNVVDQSTYPDYYFRVTNNEDNTDLKDK FKRICERSAIKKRHMYLTEEILKKNPELCAFLEVPSLDTRQAMLAAEVPRLGKEAAEKAI EEWGQPKSRITHLIFCTTTTPDLPGADFEVAKLLGLHPSVKRVGVFQHGCFAGGTVLRLA KDLAENNRGARVLVVCSENTAVTFRGPSETHLDGLVGLALFGDGASALIVGADPIPQVEK PCFEIVWTAQTVVPNSDGAISGKLREVGLTFQLKGAVPDLISTNIEKCLVEAFSQFNISD WNQLFWIAHPGGHAILDQVEASLNLDPTKLRATRHVMSEYGNMSSACVHFILDETRKASR ONGCSTSGGGFOMGVLFGFGPGLTVETVVLKSIPFP

>P31166

MQTIIISPLVSHRLCLARAVPCNRLLNNHHRAPPSIRLSNHRSTTSLRLFSSAAASRDSE MATEDVQDPRIAKIASSIRVIPDFPKPGIMFQDITTLLLDTEAFKDTIALFVDRYKDKGI SVVAGVEARGFIFGPPIALAIGAKFVPMRKPKKLPGKVISEEYSLEYGTDTIEMHVGAVE PGERAIIIDDLIATGGTLAAAIRLLERVGVKIVECACVIELPELKGKEKLGETSLFVLVK SAA

>08LBI1

MVFVKSTKSNAYFKRYQVKFRRRRDGKTDYRARIRLINQDKNKYNTPKYRFVVRFTNKDI VAQIVSASIAGDIVKASAYAHELPQYGLTVGLTNYAAAYCTGLLLARRVLKMLEMDDEYE GNVEATGEDFSVEPTDSRRPFRALLDVGLIRTTTGNRVFGALKGALDGGLDIPHSDKRFA GFHKENKQLDAEIHRNYIYGGHVSNYMKLLGEDEPEKLQTHFSAYIKKGVEAESIEELYK KVHAAIRADPNPKKTVKPAPKQHKRYNLKKLTYEERKNKLIERVKALNGAGGDDDDEDDE

>09SE42

MAAAAAKIAPSMLSSDFANLAAEADRMVRLGADWLHMDIMDGHFVPNLTIGAPVIQSLR KHTKAYLDCHLMVTNPSDYVEPLAKAGASGFTFHIEVSRDNWQELIQSIKAKGMRPGVSL RPGTPVEEVFPLVEAENPVELVLVMTVEPGFGGQKFMPEMMEKVRALRKKYPSLDIEVDG GLGPSTIDVAASAGANCIVAGSSIFGAAEPGEVISALRKSVEGSONKS

>065743

 $\label{thm:construction} \begin{matrix} MVLKTELCRFSGAKIYPGRGIRFIRGDSQVFLFVNSKCKRYFHNRLKPSKLTWTAMFRKQ\\ HKKDAAQEAVKKRRRATKKPYSRSIVGATLEVIQKKRTEKPEVRDAAREAALREIKERIK\\ KTKDEKKAKKAEVASKAQKSQGKGNVQKGALPKGPKMGGGGGKA\\ \end{matrix}$

>P28011

MASQNITPSPTASSDSVFAHLVRAPEDPILGVTVAYNKDPSPIKLNLGVGAYRTEEGKPL VLDVVRRVERQLLNDMSRNKEYIPIVGLADFNKLSAKLIFGADSPAIQENRVTTVQGLSG TGSLRVGGEFLAKHYHQRIIYLPTPTWGNHTKVFNLAGLTVKTYRYYAPATRGLDFQGLL EDLGSAPSGSVVLLHACAHNPTGVDPTLEQWEQIRQLIRSKSLLPFFDSAYQGFASGSLD ADAQPVRLFVADGGELLVAQSYAKNMGLYGERVGALSIVSKSADVSSRVESQLKLVIRPM YSSPPIHGASIVAAILKDRDLYNDWTIELKAMADRIINMRQQLFDALRARGTPGDWSHII KQIGMFTFTGLNPEQVSILTKEYHIYLTSDGRISMAGLSSKTVPHLAHAIHAVVTRVA >08W575

MIGAVNSVEAVITSIQGLSGSPEDLSALHDLLRGAQDSLRAEPGVNFSTLDQLDASKHSL
GYLYFLEVLTCGPVSKEKAAYEIPIIARFINSCDAGQIRLASYKFVSLCKILKDHVIALG
DPLRGVGPLLNAVQKLQVSSKRLTALHPDVLQLCLQAKSYKSGFSILSDDIVEIDQPRDF
FLYSYYGGMICIGLKRFQKALELLYNVVTAPMHQVNAIALEAYKKYILVSLIHNGQFTNT
LPKCASTAAQRSFKNYTGPYIELGNCYNDGKIGELEALVVARNAEFEEDKNLGLVKQAVS
SLYKRNILRLTQKYLTLSLQDIANMVQLGNAKEAEMHVLQMIQDGQIHALINQKDGMVRF
LEDPEQYKSSEMIEIMDSVIQRTIGLSKNLLAMDESLSCDPLYLGKVGRERQRYDFGDDF
DTVPOKFSM

>Q8LPU4

MALKQKDTDAAATATGTKKRRRVFFSDTDAGVEANECMKVFLVWNPGEVSSVDCTAIQPF
DLNHFFGEDGKIYGYKNLKINVWISAKSFHGYADVSFDETSDGGKGITDLKPVLQNIFGE
NLVEKEEFLHTFSKECEYIRTAVTNGSAIKHDGSYESDPAVEIVRVELQGAAAFLYSRLV
PLVLLLVEGSTPIDIGEHGWEMLLVVKKATQEAGSKFELLGFAAVHNFYHYPESIRLRIS
QILVLPPYQGEGHGLGLLEAINYIAQSENIYDVTIESPSDYLQYVRSSIDCLRLLMFDPI
KPALGAIVLSLKETNLSKRAQSLRMVPPADLMETVRQKLKINKKQFLRCWEILVFLSLDS
QDHKSMDNFRACIYDRMKGEILGSASGTNRKRLLQMPTSFNKEASFAVYWTQEIEDEDEQ
TVEQQPEDLKTQEQQLNELVDIQIEEIAGVAKNVTSRCKDKMTELVVQ
>P46011

MSMQQETSHMTAAPQTNGHQIFPEIDMSAGDSSSIVRATVVQASTVFYDTPATLDKAERL LSEAAENGSQLVVFPEAFIGGYPRGSTFELAIGSRTAKGRDDFRKYHASAIDVPGPEVER LALMAKKYKVYLVMGVIEREGYTLYCTVLFFDSQGLFLGKHRKLMPTALERCIWGFGDGS TIPVFDTPIGKIGAAICWENRMPSLRTAMYAKGIEIYCAPTADSRETWLASMTHIALEGG CFVLSANQFCRRKDYPSPPEYMFSGSEESLTPDSVVCAGGSSIISPLGIVLAGPNYRGEA LITADLDLGDIARAKFDFDVVGHYSRPEVFSLNIREHPRKAVSFKTSKVMEDESV >004847

MPKSWPIVISSHSFCFLPNSEQERKMKDLNFHAATLSEEESLRELKAFDETKAGVKGIVD
TGITKIPRIFIDQPKNLDRISVCRGKSDIKIPVINLNGLSSNSEIRREIVEKIGEASEKY
GFFQIVNHGIPQDVMDKMVDGVRKFHEQDDQIKRQYYSRDRFNKNFLYSSNYVLIPGIAC
NWRDTMECIMNSNQPDPQEFPDVCRDILMKYSNYVRNLGLILFELLSEALGLKPNHLEEM
DCAEGLILLGHYYPACPQPELTFGTSKHSDSGFLTILMQDQIGGLQILLENQWIDVPFIP
GALVINIADLLQLITNDKFKSVEHRVLANKVGPRISVAVAFGIKTQTQEGVSPRLYGPIK
ELISEENPPIYKEVTVKDFITIRFAKRFDDSSSLSPFRLNN

>039097

MGDKNDDDKNIEIWKIKKLIKSLEAARGNGTSMISLIMPPRDQVSRVTKMLGDEYGTASN IKSRVNRQSVLGAITSAQQRLKLYNRVPPNGLVLYTGTIVNEDGKEKKVTIDFEPFRPIN ASLYLCDNKFHTEALNELLESDDKFGFIVMDGNGTLFGTLSGNTREVLHKFSVDLPKKHG RGGQSALRFARLRMEKRHNYVRKTAELATQYYINPATSQPNVSGLILAGSADFKTELSQS DMFDPRLAAKILNVVDVSYGGENGFNQAIELSAEILANVKFIQEKRLIGKYFEEISQDTG KYVFGVEDTLNALESGAIETLIVWENLDINRYVMKNSATGETVIKHLNKEQEANTENFKV ADSDLALDVEEKLSLLEWLANEYRRFGCALEFVTNKSQEGSQFCRGFGGIGGILRYQLDM

TAFDSEDGEALDDDSE

>09FVU9

MEGSSSTIARKTWELENSILTVDSPDSTSDNIFYYDDTSQTRFQQEKPWENDPHYFKRVK ISALALLKMVVHARSGGTIEIMGLMQGKTDGDTIIVMDAFALPVEGTETRVNAQDDAYEY MVEYSQTNKLAGRLENVVGWYHSHPGYGCWLSGIDVSTQRLNQQHQEPFLAVVIDPTRTV SAGKVEIGAFRTYSKGYKPPDEPVSEYQTIPLNKIEDFGVHCKQYYSLDVTYFKSSLDSH LLDLLWNKYWVNTLSSSPLLGNGDYVAGQISDLAEKLEQAESHLVQSRFGGVVPSSLHKK KEDESQLTKITRDSAKITVEQVHGLMSQVIKDELFNSMRQSNNKSPTDSSDPDPMITY >P43254

MEEISTDPVVPAVKPDPRTSSVGEGANRHENDDGGSGGSEIGAPDLDKDLLCPICMQIIK
DAFLTACGHSFCYMCIITHLRNKSDCPCCSQHLTNNQLYPNFLLDKLLKKTSARHVSKTA
SPLDQFREALQRGCDVSIKEVDNLLTLLAERKRKMEQEEAERNMQILLDFLHCLRKQKVD
ELNEVQTDLQYIKEDINAVERHRIDLYRARDRYSVKLRMLGDDPSTRNAWPHEKNQIGFN
SNSLSIRGGNFVGNYQNKKVEGKAQGSSHGLPKKDALSGSDSQSLNQSTVSMARKKRIHA
QFNDLQECYLQKRRQLADQPNSKQENDKSVVRREGYSNGLADFQSVLTTFTRYSRLRVIA
EIRHGDIFHSANIVSSIEFDRDDELFATAGVSRCIKVFDFSSVVNEPADMQCPIVEMSTR
SKLSCLSWNKHEKNHIASSDYEGIVTVWDVTTRQSLMEYEEHEKRAWSVDFSRTEPSMLV
SGSDDCKVKVWCTRQEASVINIDMKANICCVKYNPGSSNYIAVGSADHHIHYYDLRNISQ
PLHVFSGHKKAVSYVKFLSNNELASASTDSTLRLWDVKDNLPVRTFRGHTNEKNFVGLTV
NSEYLACGSETNEVYVYHKEITRPVTSHRFGSPDMDDAEEEAGSYFISAVCWKSDSPTML
TANSQGTIKVLVLAA

>P93804

MGLFTVTKKATTPFDGQKPGTSGLRKKVTVFQQPHYLQNFVQSTFNALPVDQVRGATIVV SGDGRYFSKDAVQIITKMAAANGVRRVWVGQNSLMSTPAVSAVIRERVGADGSKATGAFI LTASHNPGGPKEDFGIKYNMGNGGPAPESVTDKIFSNTTTISEYLISEDLPDVDISVVGV TSFSGPEGPFDVDVFDSSVDYIKLMKTIFDFEAIKKLLTSPKFTFCYDALHGVAGAYAKH IFVEELGADESSLLNCVPKEDFGGGHPDPNLTYAKELVERMGLGKSSSNVEPPEFGAAAD GDADRNMILGKRFFVTPSDSVAIIAANAVQSIPYFASGLKGVARSMPTSAALDVVAKNLN LKFFEVPTGWKFFGNLMDAGMCSICGEESFGTGSDHIREKDGIWAVLAWLSIIAFKNKDN LGGDKLVTVEDIVRQHWATYGRHYYTRYDYENVDAGAAKELMANLVSMQSSLSDVNKLVK EIRSDVSEVVAADEFEYKDPVDGSVSKHQGIRYLFGDGSRLVFRLSGTGSVGATIRVYIE QYERDSSKTGRDSQDALAPLVDVALKLSKMQEYTGRSAPTVIT

>P46302

MDTQVKLAVVVKVMGRTGSRGQVTQVRVKFLDDQNRLIMRNVKGPVCEGDILTLLESERE ARRLR

>Q9XGN1

MDNSAPDSLSRSETAVTYDSPYPLYAMAFSSLRSSSGHRIAVGSFLEDYNNRIDILSFDS DSMTVKPLPNLSFEHPYPPTKLMFSPPSLRRPSSGDLLASSGDFLRLWEINEDSSTVEPI SVLNNSKTSEFCAPLTSFDWNDVEPKRLGTCSIDTTCTIWDIEKSVVETQLIAHDKEVHD IAWGEARVFASVSADGSVRIFDLRDKEHSTIIYESPQPDTPLLRLAWNKQDLRYMATILM DSNKVVILDIRSPTMPVAELERHQASVNAIAWAPQSCKHICSGGDDTQALIWELPTVAGP NGIDPMSVYSAGSEINQLQWSSSQPDWIGIAFANKMQLLRV

>009152

MSVSCCCRNLGKTIKKAIPSHHLHLRSLGGSLYRRRIOSSSMETDLKSTFLNVYSVLKSD

LLHDPSFEFTNESRLWVDRMLDYNVRGGKLNRGLSVVDSFKLLKQGNDLTEQEVFLSCAL GWCIEWLQAYFLVLDDIMDNSVTRRGQPCWFRVPQVGMVAINDGILLRNHIHRILKKHFR DKPYYVDLVDLFNEVELQTACGQMIDLITTFEGEKDLAKYSLSIHRRIVQYKTAYYSFYL PVACALLMAGENLENHIDVKNVLVDMGIYFQVQDDYLDCFADPETLGKIGTDIEDFKCSW LVVKALERCSEEQTKILYENYGKPDPSNVAKVKDLYKELDLEGVFMEYESKSYEKLTGAI EGHOSKAIQAVLKSFLAKIYKROK

>P15494

MGVFNYETETTSVIPAARLFKAFILDGDNLFPKVAPQAISSVENIEGNGGPGTIKKISFP EGFPFKYVKDRVDEVDHTNFKYNYSVIEGGPIGDTLEKISNEIKIVATPDGGSILKISNK YHTKGDHEVKAEQVKASKEMGETLLRAVESYLLAHSDAYN

>Q9SYM4

MPGNKYNCSSSHIPLSRTERLLRDRELREKRKSNRARNPNDVAGSSENSENDLRLEGDSS ROYVEOYLEGAAAAMAHDDACEROEVRPYNRORLLVVANRLPVSAVRRGEDSWSLEISAG GLVSALLGVKEFEARWIGWAGVNVPDEVGQKALSKALAEKRCIPVFLDEEIVHQYYNGYC NNILWPLFHYLGLPOEDRLATTRSFOSOFAAYKKANOMFADVVNEHYEEGDVVWCHDYHL MFLPKCLKEYNSKMKVGWFLHTPFPSSEIHRTLPSRSELLRSVLAADLVGFHTYDYARHF VSACTRILGLEGTPEGVEDOGRLTRVAAFPIGIDSDRFIRALEVPEVIOHMKELKERFAG RKVMLGVDRLDMIKGIPOKILAFEKFLEENANWRDKVVLLQIAVPTRTDVPEYOKLTSOV HEIVGRINGRFGTLTAVPIHHLDRSLDFHALCALYAVTDVALVTSLRDGMNLVSYEFVAC QEAKKGVLILSEFAGAAQSLGAGAILVNPWNITEVAASIGQALNMTAEEREKRHRHNFHH VKTHTAQEWAETFVSELNDTVIEAQLRISKVPPELPOHDAIQRYSKSNNRLLILGFNATL TEPVDNQGRRGDQIKEMDLNLHPELKGPLKALCSDPSTTIVVLSGSSRSVLDKNFGEYDM WLAAENGMFLRLTNGEWMTTMPEHLNMEWVDSVKHVFKYFTERTPRSHFETRDTSLIWNY KYADIEFGRLOARDLLOHLWTGPISNASVDVVOGSRSVEVRAVGVTKGAAIDRILGEIVH SKSMTTPIDYVLCIGHFLGKDEDVYTFFEPELPSDMPAIARSRPSSDSGAKSSSGDRRPP SKSTHNNNKSGSKSSSSSNSNNNNKSSORSLOSERKSGSNHSLGNSRRPSPEKISWNVLD LKGENYFSCAVGRTRTNARYLLGSPDDVVCFLEKLADTTSSP

>P45432

MERDEEASGPMMEMCTNGGEETSNRRPIISGEPLDIEAYAALYKGRTKIMRLLFIANHCG
GNHALQFDALRMAYDEIKKGENTQLFREVVNKIGNRLGEKYGMDLAWCEAVDRRAEQKKV
KLENELSSYRTNLIKESIRMGYNDFGDFYYACGMLGDAFKNYIRTRDYCTTTKHIIHMCM
NAILVSIEMGQFTHVTSYVNKAEQNPETLEPMVNAKLRCASGLAHLELKKYKLAARKFLD
VNPELGNSYNEVIAPQDIATYGGLCALASFDRSELKQKVIDNINFRNFLELVPDVRELIN
DFYSSRYASCLEYLASLKSNLLLDIHLHDHVDTLYDQIRKKALIQYTLPFVSVDLSRMAD
AFKTSVSGLEKELEALITDNQIQARIDSHNKILYARHADQRNATFQKVLQMGNEFDRDVR
AMLLRANLLKHEYHARSARKL

>Q43621

MARKMLNDGEPDLKKGEEQGKVYDFDLFIIGAGSGGVRAARFSSNFGAKVGICELPFHPI
SSETIGGVGGTCVIRGCVPKKILVYGASYGGELQDARNFGWELNENVDFNWKKLLQKKTD
EINRLNGIYKRLLSNAGVKLFEGEGKIASPNEVEVTQLDGTKLSYSAKHILIATGSRAQR
PNIPGQELGITSDEALSLEEFPKRAVILGGGYIAVEFASIWRGMGSSVNLVFRKELPLRG
FDDEMRAVVARNLEGRGINLHPRTNLAQLIKTEDGIKVITDHGEELIADVVLFATGRSPN
SKRLNLEKVGVEFDKAGAIVVDEYSRTNIPSIWAVGDVTNRLNLTPVALMEASLFAKTVF
GGQASKPDYNDIPYAVFCIPPLSVVGLSEEQAVEQTKGDVLIFTSTFNPMKNTISGRQEK

TVMKLVVDAQTDKVLGASMCGPDAPEIVQGIAIAIKCGATKAQFDSTVGIHPSSAEEFVT MRSETRRVTGGVKPKTNL

>040577

MASAAVANYEEEIVRPVADFSPSLWGDQFLSFSIKNQVAEKYAKEIEALKEQTRNMLLAT
GMKLADTLNLIDTIERLGISYHFEKEIDDILDQIYNQNSNCNDLCTSALQFRLLRQHGFN
ISPEIFSKFQDENGKFKESLASDVLGLLNLYEASHVRTHADDILEDALAFSTIHLESAAP
HLKSPLREQVTHALEQCLHKGVPRVETRFFISSIYDKEQSKNNVLLRFAKLDFNLLQMLH
KQELAQVSRWWKDLDFVTTLPYARDRVVECYFWALGVYFEPQYSQARVMLVKTISMISIV
DDTFDAYGTVKELEAYTDAIQRWDINEIDRLPDYMKISYKAILDLYKDYEKELSSAGRSH
IVCHAIERMKEVVRNYNVESTWFIEGYTPPVSEYLSNALATTTYYYLATTSYLGMKSATE
QDFEWLSKNPKILEASVIICRVIDDTATYEVEKSRGQIATGIECCMRDYGISTKEAMAKF
QNMAETAWKDINEGLLRPTPVSTEFLTPILNLARIVEVTYIHNLDGYTHPEKVLKPHIIN
LLVDSIKI

>042539

MKQFWSPSSINKNKAMVENLQNHGIVTSDEVAKAMEAVDRGVFVTDRSSAYVDSPMSIGY NVTISAPHMHAMCLQLLEKHLKPGMRVLDVGSGTGYLTACFAVMVGTEGRAIGVEHIPEL VASSVKNIEASAASPFLKEGSLAVHVGDGRQGWAEFAPYDAIHVGAAAPEIPEALIDQLK PGGRLVIPVGNIFQDLQVVDKNSDGSVSIKDETSVRYVPLTSREAQLRGD >P52580

MASEKSKILVVGGTGYLGRHVVAASARLGHPTSALVRDTAPSDPAKAALLKSFQDAGVTL LKGDLYDQASLVSAVKGADVVISVLGSMQIADQSRLVDAIKEAGNVKRFFPSEFGLDVDR TGIVEPAKSILGAKVGIRRATEAAGIPYTYAVAGFFAGFGLPKVGQVLAPGPPADKAVVL GDGDTKAVFVEEGDIATYTVLAADDPRAENKVLYIKPPANTLSHNELLSLWEKKTGKTFR REYVPEEAVLKQIQESPIPLNIILAIGHAAFVRGEQTGFEIDPAKGVDASELYPDVKYTT VDEYLNRFL

>07G188

MSGYVGVVVSDPWLQSQFTQVELRTLNSKYVSVKNQNGKVTIEDLPPLFAKLKALSATFK
EDEIKGMLGELGSDTSTDVSFEEFLKIYLNLLSKAAEKSGGHHKNSSSFLKACTTTLLHT
IYQSEKGPFVQHINRYLGDDPFLKQFLPLDPHSNQLYELVKDGVLLCKLINVAVPGTIDE
RAINTKRVLNPWERNENHTLCLNSAKAVGCSVVNIGTQDLAEGRPHLVLGLISQLIKIQV
LADLNLKKTPQLVELLEDSDDVEELLRLPPEKVLLKWMNFHLKKGGYKKTVSNFSADLKD
AQAYAFLLNVLAPEHCDPATLDAKDPLERAELVLSHAERMNCKRYLTAEEIVEGSSTLNL
AFVAQIFHERNGLNKDGKYAFAEMMTEDVETCRDERCYRLWINSLGIDSYVNNVFEDVRN
GWILLEVLDKVSPSSVNWKHASKPPIKMPFRKVENCNQVIKIGKQLKFSLVNVAGNDIVQ
GNKKLILGLLWQLMRFHMLQLLKSLRSRTLGKEMTDADILSWANRKVRTMGRKLQIESFK
DKSLSSGLFFLNLLWAVEPRVVNWNLVTKGETDDEKRLNATYIVSVARKLGCSVFLLPED
IVEVNQKMILILTASIMYWSLQRHSRESSDSSSTQSTTTTCTSTASSPAPSVTEEEEVSS
LSGEVTSLAVGDAVSEITTVSEEASIE

>004630

MLLRLTARSIRRFTTSSSSLPLLSSSSFCTVPTMAANHPKDEAYLSAVIPKRIKLFEQIQ
ANQLENLKSLPHDPIKVTLPDGNVKEGKKWETTPMDIAAQISKGLANSALISAVDDVLWD
MNRPLEGDCKLELFKFDSDKGRDTLWHSSAHILGQALEQEYGCQLCIGPCTTRGEGFYYD
GFYGELGLSDNHFPSIEAGAAKAAKEAQPFERIEVTKDQALEMFSENNFKVELINGLPAD
MTITVYRCGPLVDLCRGPHIPNTSFVKAFKCLRASSAYWKGDKDRESLORVYGISYPDOK

QLKKYLQFLEEAKKYDHRLLGQKQELFFSHQLSPGSYFFLPLGTRVYNRLMDFIKNQYWH RGYTEVITPNMYNMELWQTSGHADNYKDNMFTFNIEKQEFGLKPMNCPGHCLIFQHRVRS YRELPMRLADFGVLHRNEASGALSGLTRVRRFQQDDAHIFCTTEQVKGEVQGVLEFIDYV YKVFGFTYELKLSTRPEKYLGDLETWDKAEADLKEAIEAFGKPLVLNEGDGAFYGPKIDI TVSDAMNRKFQCATLQLDFQLPIRFNLEYAAEDEAKKSRPVMIHRAVLGSVERMFAILLE HYKGKWPFWISPRQAIVCPISEKSQQYAEKVQKQIKDAGFYVDADLTDRKIDKKVREAQL AQYNYILVVGETEAATGOVSVRVRDNAAHSVKSIEDLLEEFKAKTAEFV

>081644

 ${\tt MSTKVLDPAFQGAGQKPGTEIWRIENFEAVPVPKSEHGKFYMGDTYIVLQTTQNKGGAYL}$ FDIHFWIGKDTSQDEAGTAAVKTVELDAVLGGRAVQHREIQGHESDKFLSYFKPCIIPLE GGVASGFKTVEEEVFETRLYTCKGKRAIRLKQVPFARSSLNHDDVFILDTEEKIYQFNGA NSNIQERAKALEVVQYLKDKYHEGTCDVAIVDDGKLDTESDSGAFWVLFGGFAPIGRKVA NDDDIVPESTPPKLYCITDGKMEPIDGDLSKSMLENTKCYLLDCGAEIYIWVGRVTQVDE RKAASOSAEEFLASENRPKATHVTRVIOGYESHSFKSNFDSWPSGSATPGNEEGRGKVAA LLKOOGVGLKGIAKSAPVNEDIPPLLESGGKLEVWYVNGKVKTPLPKEDIGKLYSGDCYL VLYTYHSGERKDEYFLSCWFGKKSIPEDODTAIRLANTMSNSLKGRPVOGRIYEGKEPPO FVALFOPMVVLKGGLSSGYKSSMGESESTDETYTPESIALVOVSGTGVHNNKAVOVETVA ${\tt TSLNSYECFLLQSGTSMFLWHGNQSTHEQLELATKVAEFLKPGITLKHAKEGTESSTFWF}$ ALGGKONFTSKKASSETIRDPHLFSFAFNRGKFOVEEIYNFAQDDLLTEDIYFLDTHAEV FVWVGQCVEPKEKQTVFEIGQKYIDLAGSLEGLHPKVPIYKINEGNEPCFFTTYFSWDAT KAIVQGNSFQKKASLLFGTHHVVEDKSNGGNQGLRQRAEALAALNSAFNSSSNRPAYSSQ DRLNESHDGPRORAEALAALSSAFNSSSSSTKSPPPPRPVGTSQASQRAAAVAALSQVLV AENKKSPDTSPTRRSTSSNPADDIPLTEAKDEEEASEVAGLEAKEEEEVSPAADETEAKO ETEEOGDSEIOPSGATFTYEOLRAKSENPVTGIDFKRREAYLSEEEFOSVFGIEKEAFNN LPRWKQDLLKKKFDLF

>082803

MAEEVEEERLKYLDFVRAAGVYAVDSFSTLYLYAKDISGPLKPGVDTIENVVKTVVTPVY YIPLEAVKFVDKTVDVSVTSLDGVVPPVIKQVSAQTYSVAQDAPRIVLDVASSVFNTGVQ EGAKALYANLEPKAEQYAVITWRALNKLPLVPQVANVVVPTAVYFSEKYNDVVRGTTEQG YRVSSYLPLLPTEKITKVFGDEAS

>P83326

MAFSYCSSSLFVSLLLVILFISPLSQRPSVKAENHLISEICPKTRNPSLCLQALESDPRS ASKDLKGLGQFSIDIAQASAKQTSKIIASLTNQATDPKLKGRYETCSENYADAIDSLGQA KQFLTSGDYNSLNIYASAAFDGAGTCEDSFEGPPNIPTQLHQADLKLEDLCDIVLVISNL LPGSK

>P04711

MASTKAPGPGEKHHSIDAQLRQLVPGKVSEDDKLIEYDALLVDRFLNILQDLHGPSLREF
VQECYEVSADYEGKGDTTKLGELGAKLTGLAPADAILVASSILHMLNLANLAEEVQIAHR
RRNSKLKKGGFADEGSATTESDIEETLKRLVSEVGKSPEEVFEALKNQTVDLVFTAHPTQ
SARRSLLQKNARIRNCLTQLNAKDITDDDKQELDEALQREIQAAFRTDEIRRAQPTPQAE
MRYGMSYIHETVWKGVPKFLRRVDTALKNIGINERLPYNVSLIRFSSWMGGDRDGNPRVT
PEVTRDVCLLARMMAANLYIDQIEELMFELSMWRCNDELRVRAEELHSSSGSKVTKYYIE
FWKQIPPNEPYRVILGHVRDKLYNTRERARHLLASGVSEISAESSFTSIEEFLEPLELCY
KSLCDCGDKAIADGSLLDLLRQVFTFGLSLVKLDIRQESERHTDVIDAITTHLGIGSYRE

WPEDKRQEWLLSELRGKRPLLPPDLPQTDEIADVIGAFHVLAELPPDSFGPYIISMATAP SDVLAVELLQRECGVRQPLPVVPLFERLADLQSAPASVERLFSVDWYMDRIKGKQQVMVG YSDSGKDAGRLSAAWQLYRAQEEMAQVAKRYGVKLTLFHGRGGTVGRGGGPTHLAILSQP PDTINGSIRVTVQGEVIEFCFGEEHLCFQTLQRFTAATLEHGMHPPVSPKPEWRKLMDEM AVVATEEYRSVVVKEARFVEYFRSATPETEYGRMNIGSRPAKRRPGGGITTLRAIPWIFS WTQTRFHLPVWLGVGAAFKFAIDKDVRNFQVLKEMYNEWPFFRVTLDLLEMVFAKGDPGI AGLYDELLVAEELKPFGKQLRDKYVETQQLLLQIAGHKDILEGDPFLKQGLVLRNPYITT LNVFQAYTLKRIRDPNFKVTPQPPLSKEFADENKPAGLVKLNPASEYPPGLEDTLILTMK GIAAGMONTG

>094JY4

 ${\tt MAKAGGITNAVNVGIAVQADWENREFISHISLNVRRLFEFLVQFESTTKSKLASLNEKLD}\\ {\tt LLERRLEMLEVQVSTATANPSLFAT}$

>039242

MCWISMSQSRFIIKSLFSTAGGFLLGSALSNPPSLATAFSSSSSSSAAAAVDMETHKTK
VCIVGSGPAAHTAAIYASRAELKPLLFEGWMANDIAPGGQLTTTTDVENFPGFPEGILGI
DIVEKFRKQSERFGTTIFTETVNKVDFSSKPFKLFTDSRTVLADSVIISTGAVAKRLSFT
GSGEGNGGFWNRGISACAVCDGAAPIFRNKPLVVIGGGDSAMEEANFLTKYGSKVYIIHR
RDTFRASKIMQQRALSNPKIEVIWNSAVVEAYGDENGRVLGGLKVKNVVTGDVSDLKVSG
LFFAIGHEPATKFLDGQLELDEDGYVVTKPGTTKTSVVGVFAAGDVQDKKYRQAITAAGT
GCMAALDAEHYLQEIGSQEGKSD

>048626

MPEIDALFESINVRDLLAGHDLNDPTTPLSAPDLRLLINRLESHSLRIKSKVQSYLVAHH
SDFSELFSLCQDTVSRTRLISDDVSDVLQLVSDRPIDVEIRSVVDEITEKTKEVKLKRES
LDLVNAIVGICEALQETKEALKNGRFRFAAERIRELKVVLRIGEEEDGEPVAYALLRKEW
SNCFDEIQEVLAKFMENAVRFELDSSRIRIKYQLSVGETAGIALSTVLEAMEVIGILDYG
LAKAADSIFKHVITPAVTHASTFAAVEDLCKSAGEVTEATLRLEQSSDHKFEDVDGDAMY
SGILKVVKFICSSLCFGNVTWIHSFGRLTWPRISELIISKFLSKVVPEDASKLADFQKII
ERTSQFEAALKELNFVSSSDAESRLSKYAEDVEVHFASRKKIEILAKARNLLLQCNFTIP
QDIAMRNAKHIVCLLFSSERCVVSEAASQLMNLVHKTLEDVCVSSARVASEFYNAARDSI
LLYEAVVPVKLEKQLDGLNEAAVLLHNDCLYLFEEILGLAFEYRASFPSSIKEYAVFADI
APRFKLMAEEVLQKQVHLVISSLREAIDSADGFQNTHQIKQFKSAEFSIDQVVFSLKNVH
MIWEPVLRPKTYKQSMCAVLESVFRRIARDILLLDDMAADETFELQKLIYLMLKNLSSVL
DSVRSADETSRPLDDIIPSLRKTRKLAELLDMPLMSITSAWESGELFRCNFTRTEVQDFI
KAIFTDSPLRKECLWRIDEVNO

>09C9C9

MESETLTAKATITTTLPSHDETKTESTEFEKNQKRYQDLISTFPHEKGWRPKEPLIEYG GYWWLPSLLEGCIHAQEFFQARPSDFLVCSYPKTGTTWLKALTFAIANRSRFDDSSNPLL KRNPHEFVPYIEIDFPFFPEVDVLKDKGNTLFSTHIPYELLPDSVVKSGCKMVYIWREPK DTFISMWTFLHKERTELGPVSNLEESFDMFCRGLSGYGPYLNHILAYWKAYQENPDRILF LKYETMRADPLPYVKSLAEFMGHGFTAEEEEKGVVEKVVNLCSFETLKNLEANKGEKDRE DRPGVYANSAYFRKGKVGDWSNYLTPEMAARIDGLMEEKFKGTGLLEHGK

>042688

MAAGSVGVFATDEKIGSLLDQSITRHFLSTVTDQQGKICAEYVWIGGSMHDVRSKSRTLS TIPTKPEDLPHWNYDGSSTGQAPGHDSEVYLIPRSIFKDPFRGGDNILVMCDCYEPPKVN PDGTLAAPKPIPTNTRFACAEVMEKAKKEEPWFGIEQEYTLLNAITKWPLGWPKGGYPAP QGPYYCSAGAGVAIGRDVAEVHYRLCLAAGVNISGVNAEVLPSQWEYQVGPCEGITMGDH MWMSRYIMYRVCEMFNVEVSFDPKPIPGDWNGSGGHTNYSTKATRTAPDGWKVIQEHCAK LEARHAVHIAAYGEGNERRLTGKHETSSMSDFSWGVANRGCSIRVGRMVPVEKSGYYEDR RPASNLDAYVVTRLIVETTILL

>P14624

 ${\tt MQIFVKTLTGKTITLEVESSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLADYN} \\ {\tt IQKESTLHLVLRLRGG}$

>043776

MDSSVSTEPLSKNALKREKKAKEKQLEQEKKAAAVAKRQMEQHNLPENDDLDPTQYLAN RLRNIESLRESGINPYPHKFFITMSIPEFISRYAHLNTGEFPEDIDMSLAGRVISKRASS SKLYFYELLGGGARVQVLASARDSDVDAVQFSNYQSGVKRGDIIGVRGYPGKSKRGELSI FAKPFIVLAPCLHMLPRRLTSSIVDETRTQNFQGITAYDTWTPGDLRNPESYVLRDQETR YRQRYLDLMMNPEVRALFRTRARIISYIRSFLDNLEFLEVETPSMNLTAGGASARPFITH HNELDTELLIRVSPELYLKKLVVGGFDRVYELGKHFRNEGMDLTHSPEFTMCELYMAYAD YNDLMDLTEQLLSGMVKDLTGSYKIRYHANGLDNEPIEIDFTPPFRKIDMLSELEKVANI SIPRDLSSESANKHLVDVCEKFDVKCPPPHTTTRLLDKLVGHFIEVNCINPTFIINHPEI MSPLAKSRRSEPGLTERFNLFVNRRELCDAYTELNDPTAQRERFAEQLKDRQLGDDEAMD LDESFITALEYGLPPTGGLGMGIDRLTMLLTDSQNVKEVILFPAMRLQ

>09SMZ4

MNSNGHEEEKKLGNGVVGILAETVNKWERRTPLTPSHCARLLHGGKDRTGISRIVVOPSA KRIHHDALYEDVGCEISDDLSDCGLILGIKOPELEMILPERAYAFFSHTHKAOKENMPLL DKILSERVTLCDYELIVGDHGKRLLAFGKYAGRAGLVDFLHGLGORKLILGYSTPFLSLG ASYMYSSLAAAKAAVISVGEEIASOGLPLGICPLVFVFTGTGNVSLGAOEIFKLLPHTFV EPSKLPELFVKDKGISQNGISTKRVYQVYGCIITSQDMVEHKDPSKSFDKADYYAHPEHY NPVFHEKISPYTSVLVNCMYWEKRFPCLLSTKOLODLTKKGLPLVGICDITCDIGGSIEF VNRATLIDSPFFRFNPSNNSYYDDMDGDGVLCMAVDILPTEFAKEASQHFGDILSGFVGS LASMTEISDLPAHLKRACISYRGELTSLYEYIPRMRKSNPEEAODNIIANGVSSORTFNI LVSLSGHLFDKFLINEALDMIEAAGGSFHLAKCELGQSADAESYSELEVGADDKRVLDQI IDSLTRLANPNEDYISPHREANKISLKIGKVOOENEIKEKPEMTKKSGVLILGAGRVCRP AADFLASVRTISSOOWYKTYFGADSEEKTDVHVIVASLYLKDAKETVEGISDVEAVRLDV SDSESLLKYVSQVDVVLSLLPASCHAVVAKTCIELKKHLVTASYVDDETSMLHEKAKSAG ITILGEMGLDPGIDHMMAMKMINDAHIKKGKVKSFTSYCGGLPSPAAANNPLAYKFSWNP AGAIRAGONPAKYKSNGDIIHVDGKNLYDSAARFRVPNLPAFALECFPNRDSLVYGEHYG IESEATTIFRGTLRYEGFSMIMATLSKLGFFDSEANOVLSTGKRITFGALLSNILNKDAD NESEPLAGEEEISKRIIKLGHSKETAAKAAKTIVFLGFNEEREVPSLCKSVFDATCYLME EKLAYSGNEODMVLLHHEVEVEFLESKRIEKHTATLLEFGDIKNGOTTTAMAKTVGIPAA IGALLLIEDKIKTRGVLRPLEAEVYLPALDILQAYGIKLMEKAE

>Q9LG26

MRRHKRWPLRSLVCSFSSSAAETVTTSTAASATAAFPLKHVTRSNFETTLNDLRSLVKAA DFVAIDLEMTGVTSAPWRDSLEFDRYDVRYLKVKDSAEKFAVVQFGVCPFRWDSRTQSFV SYPHNFFVFPRQELTFDPPAHEFLCQTTSMDFLAKYQFDFNTCIHEGISYLSRREEEEAS KRLKMLHGEDGIDSSGETEELKLVRLADVLFAARMEKLLNEWRSGLLHGGNASSEFPRIS NGSNQSMETVFHHMRPALSLKGFTSHQLRVLNSVLRKHFGDLVYIHSNDKSSSSRDIVVY

TDSDSDKENLMKEAKDERKRLAERKIQSAIGFRQVIDLLASEKKLIVGHNCFLDIAHVYS
KFVGPLPSTAEKFVASINSHFPYIVDTKILLNVNPMLHQRMKKSSTSLSSAFSSLCPQIE
FSSRSSDSFLQQRVNIDVEIDNVRCSNWNAGGKHEAGYDAFMTGCIFAQACNHLGFDFKQ
HSQLDDFAQNEKLEKYINRLYLSWTRGDIIDLRTGHSNADNWRVSKFKYENIVLIWNFPR
KLKARGIKECICKAFGSASVTSVYHVDDSAVFVLFKNSELVWDFLALKRQLESSDGPVSV
LHPLSKILEGGNTGAADYEAYKEICSSHVSEVMFSDQAETVGVKSRTRPNAQCETETREE
NTVTVTHKASDLIDAFLANRVEVETATSN

>093ZG7

MADTVEKVPTVVESSSSSTVEASNSAEKTEPTTEKKKWGDVEDDDDEEEAVSELNSLSIK
EEEKPDSILEEPEDSNIKAVTSGDTPYTSASRFEDLNLSPELMKGLYVEMKFEKPSKIQA
ISLPMIMTPPHKHLIAQAHNGSGKTTCFVLGMLSRVDPTLREPQALCICPTRELANQNME
VLQKMGKFTGITAELAVPDSTRGAPAATRGAPVSAHVVIGTPGTLKKWMAFKRLGLNHLK
ILVFDEADHMLATDGFRDDSLKIMKDIGRVNPNFQVLLFSATFNETVKDFVARTVKDPNQ
LFVKREDLALDSVKQYKVVCPKEQNKIEVIKDQIMELGDIGQTIIFVKTKASAQKVHKAL
AEMGYDVTSVHGNLTESDRDKIVKEFKECLTQVLIATDVIARGFDQQRVNLVVNYNLPTK
YETGEPDYEVYLHRVGRAGRFGRKGAVFNLLLDDGWDKEVMEKIEKYFEANVKEIKSWNS
EEEYKSALKEAGLLDE

>Q9SLN5

MASESDASSIATLSCARCEKPAHLQCPKCIDLKLPREQASFCTQECFKAAWSSHKSVHVK
AQLSSIGDQNSDLISQGWLYCVKKGQARTPKLPHFDWTGPLKQYPISTKRVVPAEIEKPD
WAIDGTPKVEPNSDLQHVVEIKTPEQIQRMRETCKIAREVLDAAARVIHPGVTTDEIDRV
VHEATIAAGGYPSPLNYYFFPKSCCTSVNEVICHGIPDARKLEDGDIVNVDVTVCYKGCH
GDLNETYFVGNVDEASRQLVKCTYECLEKAIAIVKPGVRFREIGEIVNRHATMSGLSVVR
SYCGHGIGDLFHCAPNIPHYARNKAVGVMKAGQTFTIEPMINAGGWRDRTWPDGWTAVTA
DGKRSAQFEHTLLVTETGVEVLTARLPSSPDVYPWLTK

>09SSX0

MSSAAAATRFIKCVTVGDGAVGKTCMLICYTCNKFPTDYIPTVFDNFSANVSVDGSVVNL GLWDTAGQEDYSRLRPLSYRGADVFILSFSLISRASYENVQKKWMPELRRFAPGVPVVLV GTKLDLREDRAYLADHPASSIITTEQGEELRKLIGAVAYIECSSKTQRNIKAVFDTAIKV VLQPPRHKDVTRKKLQSSSNRPVRRYFCGSACFA

>043272

MALAGTGVFAEILDGEVYRYYADGEWRTSASGKSVAIVNPTTRKTQYRVQACTQEEVNKA
MDAAKVAQKAWARTPLWKRADVLHKAAAILKEHKAPIAECLVKEIAKPAKDAVSEVVRSG
DLVSYTAEEGVRILGEGKLVVSDSFPGNERNKYCLSSKIPLGVVLAIPPFNYPANLAGSK
IGPALIAGNALVLKPPTQGAVAALHMVHCFHLAGFPKGLISCVTGKGSEIGDFLTMHPGV
NCISFTGGDTGIAISKKAGMVPLQMELGGKDACIVLEDADLDLVSANIVKGGFSYSGQRC
TAVKVVLIMESIADAVVQKVNAKLAKLKVGPPEDDSDITPVVTESSANFIEGLVMDAKEK
GATFCQEYRREGNLIWPLLLDHVRPDMRIAWEEPFGPVLPVIRINSVEEGIHHCNASNFG
LQGCIFTRDINKAILISDAMETGTVQINSAPARGPDHFSFQGLKDSGIGSQGITNSINMM
TKVKSTVINLPSPSYTMG

>P29333

MATPALISETEAWKDLKAHLEGIKRTHLRELMGDTERCQSMMVEFDNIFLDYSRQQASPD TINKLYKLAEAAHLKQKIDRMYNGDHINSTENRSVLHVALRAPRNSAICSDGKNVVPDVW NVLDKIKDFSERVRNGSWVGATGKELKDVIAVGIGGSFLGPLFVHTALQTDPEASKNARG RELRFLANVDPIDAARNISGLNPETTLVVVVSKTFTTAETMLNARTLREWISSALGVAAV
AKHMVAVSTNLPLVEKFGIDPNNAFAFWDWVGGRYSVCSAVGVLPLSLQYGFAVVEKFLQ
GAHNIDQHFSSAPFEKNIPVLLGLLSVWNVSFLGYPARAILPYSQALEKLAPHIQQVSME
SNGKGVSIDGLPLPFESGEIDFGEPGTNGQHSFYQLIHQGRVIPCDFIGVVKSQQPVYLK
GEVVNNHDELMSNFFAQPDALAYGKTPEELKKENVSEHLIPHKTFTGNRPCLSILLPTLD
AYRIGQLLAIYEHRVAVQGFVWGINSFDQWGVELGKSLATQVRKQLHASRVKGEPVEEGF
NFSTKTLLTRYLOATTDVPADPSTLLPNI

>022424

MARGLKKHLKRLNAPKHWMLDKLGGAFAPKPSSGPHKSRECLPLILIIRNRLKYALTYRE VISILMQRHVLVDGKVRTDKTYPAGFMDVISIPKTNENYRLLYDTKGRFRLHPIRDEDAK FKLCKVRSVQFGQKGIPYLNTYDGRTIRYPDPLIKANDTIKIDLETNKIVDFIKFDVGNV VMVTGGRNTGRVGVIKNREKHKGSFETIHVEDSLGHQFATRMGNVFTIGKGNKPWVSLPK GKGIKLSIIEEORKRDAAAOAAANA

>P53537

MGFKVETNGGDGSLVSAKVPPLANPLAEKPDEIASNISYHAQYTPHFSPFKFQLQQAYYA
TAESVRDRLIQQWNETYLHFHKVDPKQTYYLSMEFLQGRALTNAIGNLNIQDAYADALRK
FGLELEEITEQEKDAALGNGGLGRLASCFLDSMATLNLPAWGYGLRYRYGLFKQIITKEG
QEEVAEDWLEKFSPWEIVRHDVLYPIRFFGQVEVNPDGSRQWIGGEVIQALAYDVPIPGY
QTKNTISLRLWEAKACADDFDLFLFNDGQLESASVLHSRAQQICSVLYPGDATEGGKLLR
LKQQYFLCSASLQDIISRFKERRQGPWNWSEFPTKVAVQLNDTHPTLSIPELMRLLMDDE
GLGWDEAWAVTSKTVAYTNHTVLPEALEKWSQPVMWKLLPRHMEIIEEIDRRFVALISKT
RLDLEDEVSNMRILDNNLQKPVVRMANLCVVSSHTVNGVAQLHSDILKSELFASYVSIWP
TKFQNKTNGITPRRWINFCSPELSRIITKWLKTDKWVTNLDLLTGLREFADNEDLQAEWL
SAKRANKQRLAQYVLQVTGENIDPDSLFDIQVKRIHEYKRQLLNILGVIYRYKKLKEMSP
EERKSTTARTVMIGGKAFATYTNAKRIVKLVDDVGSVVNSDPEVNSYLKVVFVPNYNVSV
AEVLIPGSELSQHISTAGMEASGTSNMKFALNRVLIIGTLDGANVEIREEIGEENFFLFG
ATADEVPRLRKERENGLFKPDPRFEEAKKFIRSGVFGSYDYNPLLDSLEGNSGYGRGDYF
LVGYDFPSYMDAQEKVDEAYRDKKRWLKMSILSTAGSGKFSSDRTIAQYAKEIWNIEECR
VP

>08S3N1

METDSIDSVIDDDEIHQKHQFSSTKSQGGATVVISPATSVYELLECPVCTNSMYPPIHQC HNGHTLCSTCKSRVHNRCPTCRQELGDIRCLALEKVAESLELPCKYYNLGCLGIFPYYSK LKHESQCNFRPYSCPYAGSECAAVGDITFLVAHLRDDHKVDMHTGCTFNHRYVKSNPREV ENATWMLTVFQCFGQYFCLHFEAFQLGMAPVYMAFLRFMGDEDDARNYTYSLEVGGSGRK QTWEGTPRSVRDSHRKVRDSHDGLIIQRNMALFFSGGDKKELKLRVTGRIWKEQQNPDSG VCITSMCSS

>P93026

MKLGLFTLSFLLILNLAMGRFVVEKNNLKVTSPDSIKGIYECAIGNFGVPQYGGTLVGTV
VYPKSNQKACKSYSDFDISFKSKPGRLPTFVLIDRGDCYFTLKAWIAQQAGAAAILVADS
KAEPLITMDTPEEDKSDADYLQNITIPSALITKTLGDSIKSALSGGDMVNMKLDWTESVP
HPDERVEYELWTNSNDECGKKCDTQIEFLKNFKGAAQILEKGGHTQFTPHYITWYCPEAF
TLSKQCKSQCINHGRYCAPDPEQDFTKGYDGKDVVVQNLRQACVYRVMNDTGKPWVWWDY
VTDFAIRCPMKEKKYTKECADGIIKSLGIDLKKVDKCIGDPEADVENPVLKAEQESQIGK
GSRGDVTILPTLVVNNRQYRGKLEKGAVLKAMCSGFQESTEPAICLTEDLETNECLENNG

GCWQDKAANITACRDTFRGRLCECPTVQGVKFVGDGYTHCKASGALHCGINNGGCWRESR GGFTYSACVDDHSKDCKCPLGFKGDGVKNCEDVDECKEKTVCQCPECKCKNTWGSYECSC SNGLLYMREHDTCIGSGKVGTTKLSWSFLWILIIGVGVAGLSGYAVYKYRIRSYMDAEIR GIMAQYMPLESQPPNTSGHHMDI

>P42036

MSKRKTKEPKVENVTLGPAVREGEQVFGVVHVFASFNDTFIHVTDLSGRETLVRITGGMK VKADRDESSPYAAMLAAQDVAQRCKELGITAIHVKLRATGGNKTKTPGPGAQSALRALAR SGMKIGRIEDVTPIPTDSTRRKGGRRGRRL

>09LPM9

MAPSSSPLRTTSETDEKYANVKWEELGFALTPIDYMYVAKCRQGESFTQGKIVPYGDISI SPCSPILNYGQGLFEGLKAYRTEDDRIRIFRPDQNALRMQTGAERLCMTPPTLEQFVEAV KQTVLANKKWVPPPGKGTLYIRPLLLGSGATLGVAPAPEYTFLIYASPVGDYHKVSSGLN LKVDHKYHRAHSGGTGGVKSCTNYSPVVKSLLEAKSAGFSDVLFLDAATGRNIEELTACN IFIVKGNIVSTPPTSGTILPGVTRKSISELAHDIGYQVEERDVSVDELLEAEEVFCTGTA VVVKAVETVTFHDKKVKYRTGEAALSTKLHSMLTNIQMGVVEDKKGWMVDIDPCQG

>P12670

MGYLTSSFVLFFLLCVTYTYAATIEVRNNCPYTVWAASTPIGGGRRLNRGQTWVINAPRG
TKMARIWGRTGCNFNAAGRGTCQTGDCGGVLQCTGWGKPPNTLAEYALDQFSNLDFWDIS
LVDGFNIPMTFAPTKPSGGKCHAIHCTANINGECPRALKVPGGCNNPCTTFGGQQYCCTQ
GPCGPTELSKFFKKRCPDAYSYPQDDPTSTFTCPGGSTNYRVVFCPNGVADPNFPLEMPA
STDEVAK

>039255

MSAKKIVLKSSDGESFEVEEAVALESQTIAHMVEDDCVDNGVPLPNVTSKILAKVIEYCK RHVEAAASKAEAVEGAATSDDDLKAWDADFMKIDQATLFELILAANYLNIKNLLDLTCQT VADMIKGKTPEEIRTTFNIKNDFTPEEEEEVRRENQWAFE

>P15290

MGYSKTLVAGLFAMLLLAPAVLATDPDPLQDFCVADLDGKAVSVNGHTCKPMSEAGDDFL FSSKLAKAGNTSTPNGSAVTELDVAEWPGTNTLGVSMNRVDFAPGGTNPPHIHPRATEIG IVMKGELLVGILGSLDSGNKLYSRVVRAGETFLIPRGLMHFQFNVGKTEASMVVSFNSQN PGIVFVPLTLFGSNPPIPTPVLTKALRVEARVVELLKSKFAAGF

>09ZT50

MGLQGQLSDVSSDSIPLMLLSLLAVFINHLRSFLLRLTSKSNPNLPVDDVSIASGLANII VLADQLSLNRLFSYRCGDGGGGGSDCVVCLSKLKEGEEVRKLECRHVFHKKCLEGWLHQF NFTCPLCRSALVSDDCVSKTQRSVGRDLISCFSLH

>P25998

MGRLIRAQRKGAGSVFKSHTHHRKGPARFRSLDFGERNGYLKGVITEVIHDPGRGAPLAR VTFRYPFRYNHQKELFVAAEGMYTGQFVYCGKKATLMVGNVLPLRSIPEGAVVCNVEHKV GDRGVFARCSGAYAIVISHNPDNGTTRIKLPSGSKKIVPSGCRRMIGQVAGGGRTEKPML KAGNAYHKYRVKRNCWPKVRGVAMNPVEHPHGGGNHQHIGHASTVARDAPPGQKVGLIAG RRTGRLRGOAAATAAKADKA

>A2WWV5

MAGSGVLEVHLVDAKGLTGNDFLGEIGKIDPYVVVQYRSQERKSSVARDQGKNPSWNEVF KFQINSTAATGQHKLFLRLMDHDTFSRDDFLGEATINVTDLISLGMEHGTWEMSESKHRV VLADKTYHGEIRVSLTFTASAKAQDHAEQVGGWAHSFRQ MVGLEDDTERERSPVVENGFSNGSRSSSSSAGVLSPSRKVTQGNDTLSYANILRARNKFA DALALYEAMLEKDSKNVEAHIGKGICLQTQNKGNLAFDCFSEAIRLDPHNACALTHCGIL HKEEGRLVEAAESYQKALMADASYKPAAECLAIVLTDLGTSLKLAGNTQEGIQKYYEALK IDPHYAPAYYNLGVVYSEMMOYDNALSCYEKAALERPMYAEAYCNMGVIYKNRGDLEMAI TCYERCLAVSPNFEIAKNNMAIALTDLGTKVKLEGDVTQGVAYYKKALYYNWHYADAMYN LGVAYGEMLKFDMAIVFYELAFHFNPHCAEACNNLGVLYKDRDNLDKAVECYOMALSIKP NFAQSLNNLGVVYTVQGKMDAAASMIEKAILANPTYAEAFNNLGVLYRDAGNITMAIDAY EECLKIDPDSRNAGONRLLAMNYINEGLDDKLFEAHRDWGWRFTRLHPOYTSWDNLKDPE RPITIGYISPDFFTHSVSYFIEAPLTHHDYTKYKVVVYSAVVKADAKTYRFRDKVLKKGG VWKDIYGIDEKKIASMVREDKIDILVELTGHTANNKLGTMACRPAPVOVTWIGYPNTTGL PTVDYRITDSLADPPDTKOKOVEELVRLPDCFLCYTPSPEAGPVCPTPALSNGFVTFGSF NNLAKITPKVLOVWARILCAVPNSRLVVKCKPFCCDSIRORFLTTLEOLGLESKRVDLLP LILFNHDHMOAYSLMDISLDTFPYAGTTTTCESLYMGVPCVTMAGSVHAHNVGVSLLTKV GLGHLVAKNEDEYVOLSVDLASDVTALSKLRMSLRDLMAGSPVCNGPSFAVGLESAYRNM WKKYCKGEVPSLRRMEMLOKEVHDDPLISKDLGPSRVSVTGEATPSLKANGSAPVPSSLP TOSPOLSKRMDSTS

>Q43139

MDHAADAHRTDLMTITRHVLNEQSRNPESRGDFTILLSHIVLGCKFVASAVNKAGLAQLI GLAGETNVQGEEQKKLDVLSNEVFVKALVSSGRTCVLVSEEDEETTFVDPKLRGKYCVCF DPLDGSSNIDCGVSIGTIFGIYMIKDKDNVTLSDVLQPGKDMLAAGYCMYGSSCTLVLST GTGVNGFTLDPSLGEFILTHPDIKIPKKGKIYSVNEGNAKNWDVPVAKFVEKCKYPKDGS PPKSLRYIGSMVADVHRTLLYGGVFLYPADQKSPNGKLRVLYEVFPMSFLMEQAGGQSFT GKERALDLVPTKIHERSPIFLGSYDDVEEIKALYAEOAKSSSA

>Q06197

MAAFQKIKVANPIVEMDGDEMTRVIWKSIKDKLILPFLELDIKYYDLGLPYRDETDDKVT
IESAEATLKYNVAIKCATITPDEARVKEFGLKSMWKSPNGTIRNILNGTVFREPILCKNI
PRLVPGWTKAICIGRHAFGDQYRATDTVIKGAGKLKLVFVPEGQGEETEFEVFNFTGEGG
VSLAMYNTDESIRSFAEASMATALEKKWPLYLSTKNTILKKYDGRFKDIFQEVYEASWKS
KFEAAGIWYEHRLIDDMVAYALKSEGGYVWACKNYDGDVQSDFLAQGFGSLGLMTSVLVC
PDGKTIEAEAAHGTVTRHFRVHQKGGETSTNSIASIFAWTRGLAHRAKLDDNAKLLDFTE
KLEAACIGVVEAGKMTKDLALILHGSKLSREHYLNTEEFIDAVAAELSARLSA

>P48578

MGANSLPTDATLDLDEQISQLMQCKPLSEQQVRALCEKAKEILMDESNVQPVKSPVTICG
DIHGQFHDLAELFRIGGKCPDTNYLFMGDYVDRGYYSVETVTLLVGLKVRYPQRITILRG
NHESRQITQVYGFYDECLRKYGNANVWKIFTDLFDYFPLTALVESEIFCLHGGLSPSIET
LDNIRNFDRVQEVPHEGPMCDLLWSDPDDRCGWGISPRGAGYTFGQDISEQFNHTNNLKL
IARAHQLVMDGFNWAHEQKVVTIFSAPNYCYRCGNMASILEVDDCRNHTFIQFEPAPRRG
EPDVTRRTPDYFL

>004147

MEEVKKDVYSVWALPDEESEPRFKKLMEALRSEFTGPRFVPHVTVAVSAYLTADEAKKMF ESACDGLKAYTATVDRVSTGTFFFQCVFLLLQTTPEVMEAGEHCKNHFNCSTTTPYMPHL SLLYAELTEEEKKNAQEKAYTLDSSLDGLSFRLNRLALCKTDTEDKTLETWETVAVCNLN

>Q84JU6

MDTREINGFASAARSISLPTOPNYSSKPVOEALKHLASINLRELCNEAKVERCRATRDLA SCGRFVNYVLNPCGHASLCTECCQRCDVCPICRSTLPKFGDRLRLRLYYECVEAGLISRT HEEASQDSDEDEHQLAADVHRLYSLFDVAMNNNLISVVCHYITNVCMDETAVSSDPVIAF LLDEVVVKDWVKRTFRSTLAELOEIYNLETKEMOAWLDKLLRCSKOVAGICSVLEVMESA FKGSVSPQLQDVQTLRENIGKTKQHLDIMVWCIRHGFLDDVRSRYSNFTSWNALVGERKS NAVKRAWPDAVDOSSDCSVOSASLFIEDALENLEREPEYSOEIGADLEVGRLOKDKRSFL RSKIEGTSGSYPFENLRTAADMLFLHGGSDLVVAKQAIFLYYLFDRHWTTPEKYWKHTID DFAATFGITRHSLLESFVFYLLDDHSEEALOEACRILPEICGPETYPKVAOVLLERDNPE TALMVLRWSGRDGVSELVSIGEAVTALRVRVECGLLSEAFTYORTLCLKVKENNLKNGAV KHASDDLDIWSWTEWMEILVNEFCCLSIRRNLVDRIIELPWNPDEEKYLHRCLLDSATDD PSSAVGSLLVVFYLORYRYIOAYOVDLRLOKIEEAFVSDNOIGEEVMFRMRSOSHWRKEL VDRAIDILPVIQQQOVRSGOFSEMEDASEGAKKSDLPDAPDMITSSVPFATTNSVFLQSA NNARAREPVANNGSPFQPGHMIGNASHDLSHGRLFTNANRGQKSEVRSVTKNLKFGEMST PFKDLNRARGNSOLOGKRTEESSPEVNVDRYIENNMSSPYLRRITANNPVTVKSSSNHLN ${\tt GSSOKPESTFFGTRMOPDKDNFVDLDDPMDMSSSLKDNNNNVLATESRNNSGGLRWRSDE}$ TSDDEDELTSFGSMPVKGRRRRRFAAR

>Q8W2B8

MACINGENRDFSSSSSLSSLPMIVSRNFSARDDGETGDEFPFERIFPVYARGTLNPVADP
VLLDFTNSSYDPIWDSIREEAKLEAEEEPVLSSFLYASILSHDCLEQALSFVLANRLQNP
TLLATQLMDIFCNVMVHDRGIQSSIRLDVQAFKDRDPACLSYSSAILHLKGYLALQAYRV
AHKLWKQGRKLLALALQSRVSEVFGIDIHPAARIGKGILLDHGTGVVIGETAVIGDRVSI
LHGVTLGGTGKETGDRHPNIGDGALLGACVTILGNIKIGAGAMVAAGSLVLKDVPSHSMV
AGNPAKLIGFVDEQDPSMTMEHDATREFFQNVAVAYRETIPNGSSVSGSCRERRH
>004433

 ${\tt MVVLQPDFLSELTSMYERSTEKGSVWVTMKRSSMKCQARLKKMAAKGEAVEYRCLVRAT \\ {\tt DGKKNICTALSAKEYLKFQASYATVLKAHMHALKKRERKDKKKAAEVEKIPEKAPKKQKK } {\tt APSSKKSAGSKS} \\$

>Q9ZWR8

MEQIQMVKVLEKCQVTPPSDTTDVELSLPVTFFDIPWLHLNKMQSLLFYDFPYPRTHFLD
TVIPNLKASLSLTLKHYVPLSGNLLMPIKSGEMPKFQYSRDEGDSITLIVAESDQDFDYL
KGHQLVDSNDLHGLFYVMPRVIRTMQDYKVIPLVAVQVTVFPNRGIAVALTAHHSIADAK
SFVMFINAWAYINKFGKDADLLSANLLPSFDRSIIKDLYGLEETFWNEMQDVLEMFSRFG
SKPPRFNKVRATYVLSLAEIQKLKNKVLNLRGSEPTIRVTTFTMTCGYVWTCMVKSKDDV
VSEESSNDENELEYFSFTADCRGLLTPPCPPNYFGNCLASCVAKATHKELVGDKGLLVAV
AAIGEAIEKRLHNEKGVLADAKTWLSESNGIPSKRFLGITGSPKFDSYGVDFGWGKPAKF
DITSVDYAELIYVIQSRDFEKGVEIGVSLPKIHMDAFAKIFEEGFCSLS

>Q9FML6

MAINEPEFATAVAVATKKRTFKKFSFRGFNVDALLKMSNVDLAKLFNARVRRRFYRGLKK QPLILIKKLRRAKKEASDENKMKPEVVKTHLRNMIIVPEMIGSVVGVHNGKKFNEIVIKP EMIGHYLAEFSMTCKKVNHHRPRICGCCCFRRSTRFIPLR

>042484

MDFISSLIVGCAQVLCESMNMAERRGHKTDLRQAITDLETAIGDLKAIRDDLTLRIQQDG LEGRSCSNRAREWLSAVQVTETKTALLLVRFRRREQRTRMRRRYLSCFGCADYKLCKKVS

AILKSIGELRERSEAIKTDGGSIQVTCREIPIKSVVGNTTMMEQVLEFLSEEEERGIIGV
YGPGGVGKTTLMQSINNELITKGHQYDVLIWVQMSREFGECTIQQAVGARLGLSWDEKET
GENRALKIYRALRQKRFLLLLDDVWEEIDLEKTGVPRPDRENKCKVMFTTRSIALCNNMG
AEYKLRVEFLEKKHAWELFCSKVWRKDLLESSSIRRLAEIIVSKCGGLPLALITLGGAMA
HRETEEEWIHASEVLTRFPAEMKGMNYVFALLKFSYDNLESDLLRSCFLYCALFPEEHSI
EIEQLVEYWVGEGFLTSSHGVNTIYKGYFLIGDLKAACLLETGDEKTQVKMHNVVRSFAL
WMASEQGTYKELILVEPSMGHTEAPKAENWRQALVISLLDNRIQTLPEKLICPKLTTLML
QQNSSLKKIPTGFFMHMPVLRVLDLSFTSITEIPLSIKYLVELYHLSMSGTKISVLPQEL
GNLRKLKHLDLQRTQFLQTIPRDAICWLSKLEVLNLYYSYAGWELQSFGEDEAEELGFAD
LEYLENLTTLGITVLSLETLKTLFEFGALHKHIQHLHVEECNELLYFNLPSLTNHGRNLR
RLSIKSCHDLEYLVTPADFENDWLPSLEVLTLHSLHNLTRVWGNSVSQDCLRNIRCINIS
HCNKLKNVSWVQKLPKLEVIELFDCREIEELISEHESPSVEDPTLFPSLKTLRTRDLPEL
NSILPSRFSFQKVETLVITNCPRVKKLPFQERRTQMNLPTVYCEEKWWKALEKDQPNEEL
CYLPRFVPN

>09C5X3

MSYSDSSSHGGEYKNFRQITRERLLYEMLRSAKTGSSKSTWKVLIMDKLTVKIMSYAC KMADITQEGVSLVEDIFRRRQPLPSMDAIYFIQPTKENVIMFLSDMSGKSPLYKKAFVFF SSPVSKELVGHIKKDSSVLPRIGALREMNLEFFAIDSQGFITDHERALEDLFGDEETSRK GDACLNVMASRIATVFASLREFPAVRYRAAKSLDASTMTTLRDLIPTKLAAGIWNCLAKH KQSIENFPQTETCELLILDRSIDQIAPVIHEWTYDAMCHDLLNMEGNKYVHVIPSKSGGQ PEKKDVLLEEHDPIWLELRHAHIADASERLHDKMTNFLSKNKAAQLQGKRDGAELSTRDL QKMVQALPQYSEQIDKLSLHVEIARKLNDLIREQGLRELGQLEQDLVFGDAGMKDVIKYL STQEEASREGKLRLLMILATIYPEKFEGEKGQNLMKLAKLSSDDMTAVNNMSLLGSAVDA KKNTPGGFTLKFDLHKKKRAVRKERQEEAAWQLSRFYPMIEELIEKLSKGELPKEDFPCM NDPSPSFHGSTSLSSAASSSQGQAAQSMRSRRTPTWAKPRGSDDGYSSDSVLRHASSDFR KMGQRIFVFIVGGATRSELKVCHKLSTKLKREVILGSTSLDDPPQFITKLKLLTANDDLS LDDLQI

>09C5X4

MACFSNETQIEIDVHDLVEAPIRYDSIESIYSIPSSALCCVNAVGSHSLMSKKVKAQKLP MIEOFEIEGSGVSASDDCCRSDDYKLRIORPEIVRVYYRRRKRPLRECLLDOAVAVKTES VELDEIDCFEEKKRRKIGNCELVKSGMESIGLRRCKENNAFSGNKONGSSRRKGSSSKNO DKATLASRSAKKWVRLSYDGVDPTSFIGLQCKVFWPLDALWYEGSIVGYSAERKRYTVKY RDGCDEDIVFDREMIKFLVSREEMELLHLKFCTSNVTVDGRDYDEMVVLAATLDECODFE PGDIVWAKLAGHAMWPAVIVDESIIGERKGLNNKVSGGGSLLVQFFGTHDFARIKVKQAI SFIKGLLSPSHLKCKOPRFEEGMOEAKMYLKAHRLPERMSOLOKGADSVDSDMANSTEEG NSGGDLLNDGEVWLRPTEHVDFRHIIGDLLIINLGKVVTDSQFFKDENHIWPEGYTAMRK FTSLTDHSASALYKMEVLRDAETKTHPLFIVTADSGEOFKGPTPSACWNKIYNRIKKVON SDSPNILGEELNGSGTDMFGLSNPEVIKLVODLSKSRPSSHVSMCKNSLGRHONOPTGYR ${\tt PVRVDWKDLDKCNVCHMDEEYENNLFLQCDKCRMMVHAKCYGELEPCDGALWLCNLCRPG}$ APDMPPRCCLCPVVGGAMKPTTDGRWAHLACAIWIPETCLSDVKKMEPIDGVNKVSKDRW KLMCTICGVSYGACIQCSNNSCRVAYHPLCARAAGLCVELENDMSVEGEEADQCIRMLSF CKRHROTSTACLGSEDRIKSATHKTSEYLPPPNPSGCARTEPYNCFGRRGRKEPEALAAA SSKRLFVENOPYVIGGYSRLEFSTYKSIHGSKVSOMNTPSNILSMAEKYRYMRETYRKRL AFGKSGIHGFGIFAKLPHRAGDMMIEYTGELVRPSIADKREOLIYNSMVGAGTYMFRIDD

ERVIDATRTGSIAHLINHSCVPNCYSRVITVNGDEHIIIFAKRHIPKWEELTYDYRFFSI GERLSCSCGFPGCRGVVNDTEAEEQHAKICVPRCDLIDWTAE

>064394

MAASAATATAAAAVGAGEVISVHSLEQWTMQIEEANAAKKLVVIDFTASWCGPCRIMAP IFADLAKKFPAAVFLKVDVDELKPIAEQFSVEAMPTFLFMKEGDVKDRVVGAIKEELTTK VGLHAAQ

>0943Z6

MDSGTINIKKWVVIYPVYINSKKTVAEGRRISVSKSCENPNCIEISDCCKHLKLPSAVEI DKAYPRDFMQVGRVRVQLKREDGTLLNPAITSRKHLMQKIAELVPRHPERVKKQEAQKAK KQEPQATTSTSGTSSKSGKGGKKKR

>Q9LV58

MPSRYPGAVTQDWEPVVLHKSKQKSQDLRDPKAVNAALRNGVAVQTVKKFDAGSNKKGKS TAVPVINTKKLEEETEPAAMDRVKAEVRLMIQKARLEKKMSQADLAKQINERTQVVQEYE NGKAVPNOAVLAKMEKVLGVKLRGKIGK

>004522

MTIKVHGNPRSTATQRVLVALYEKHLEFEFVPIDMGAGGHKQPSYLALNPFGQVPALEDG EIKLFESRAITKYLAYTHDHQNEGTSLIHKEKHEMAAQLVWEEVEAHQFDPVASKLAWEL VFKGIFGMQTDTTVVEENEAKLAKVLDVYEARLTESEYLGANDSFTLVDLHHLPLLGYLM GTQVKKLFEERAHVSAWCKKILARPSWEKTLALQKQA

>08RY95

 $\verb|MDEVGAQVAAPMFIHQSLGRKRDLYYPMSNRLVQSQPQRRDEWNSKMWDWDSRRFEAKPV|$ DVEVQEFDLTLRNRSGEERGLDLNLGSGLTAVEETTTTTONVRPNKKVRSGSPGGNYPMC OVDNCTEDLSHAKDYHRRHKVCEVHSKATKALVGKOMORFCOOCSRFHLLSEFDEGKRSC ${\tt RRRLAGHNRRRKTTQPEEVASGVVVPGNHDTTNNTANANMDLMALLTALACAQGKNAVK}$ PPVGSPAVPDREQLLQILNKINALPLPMDLVSKLNNIGSLARKNMDHPTVNPQNDMNGAS PSTMDLLAVLSTTLGSSSPDALAILSOGGFGNKDSEKTKLSSYENGVTTNLEKRTFGFSS $\tt VGGERSSSSNQSPSQDSDSRGQDTRSSLSLQLFTSSPEDESRPTVASSRKYYSSASSNPV$ EDRSPSSSPVMQELFPLQASPETMRSKNHKNSSPRTGCLPLELFGASNRGAADPNFKGFG QQSGYASSGSDYSPPSLNSDAQDRTGKIVFKLLDKDPSQLPGTLRSEIYNWLSNIPSEME SYIRPGCVVLSVYVAMSPAAWEQLEQKLLQRLGVLLQNSPSDFWRNARFIVNTGRQLASH KNGKVRCSKSWRTWNSPELISVSPVAVVAGEETSLVVRGRSLTNDGISIRCTHMGSYMAM ${\tt EVTRAVCRQTIFDELNVNSFKVQNVHPGFLGRCFIEVENGFRGDSFPLIIANASICKELN}$ RLGEEFHPKSODMTEEOAOSSNRGPTSREEVLCFLNELGWLFOKNOTSELREOSDFSLAR FKFLLVCSVERDYCALIRTLLDMLVERNLVNDELNREALDMLAEIOLLNRAVKRKSTKMV ELLIHYLVNPLTLSSSRKFVFLPNITGPGGITPLHLAACTSGSDDMIDLLTNDPOEIGLS SWNTLRDATGQTPYSYAAIRNNHNYNSLVARKLADKRNKQVSLNIEHEVVDQTGLSKRLS LEMNKSSSSCASCATVALKYORRVSGSORLFPTPIIHSMLAVATVCVCVCVFMHAFPIVR **QGSHFSWGGLDYGSI**

>Q94AH6

MERKTIDLEQGWDYMQTGITKLKRILEGLNEPAFDSEQYMMLYTTIYNMCTQKPPHDYSQ QLYDKYREAFEEYINSTVLPALREKHDEFMLRELFKRWSNHKVMVRWLSRFFYYLDRYFI ARRSLPPLNEVGLTCFRDLVYNELHSKVKQAVIALVDKEREGEQIDRALLKNVLDIYVEI GMGQMERYEEDFESFMLQDTSSYYSRKASSWIQEDSCPDYMLKSEECLKKERERVAHYLH SSSEPKLVEKVQHELLVVFASQLLEKEHSGCRALLRDDKVDDLSRMYRLYHKILRGLEPV ANIFKQHVTAEGNALVQQAEDTATNQVANTASVQEQVLIRKVIELHDKYMVYVTECFQNH
TLFHKALKEAFEIFCNKTVAGSSSAELLATFCDNILKKGGSEKLSDEAIEDTLEKVVKLL
AYISDKDLFAEFYRKKLARRLLFDRSANDDHERSILTKLKQQCGGQFTSKMEGMVTDLTL
ARENQNSFEDYLGSNPAANPGIDLTVTVLTTGFWPSYKSFDINLPSEMIKCVEVFKGFYE
TKTKHRKLTWIYSLGTCHINGKFDQKAIELIVSTYQAAVLLLFNTTDKLSYTEILAQLNL
SHEDLVRLLHSLSCAKYKILLKEPNTKTVSQNDAFEFNSKFTDRMRRIKIPLPPVDERKK
VVEDVDKDRRYAIDAAIVRIMKSRKVLGHQQLVSECVEQLSRMFKPDIKAIKKRMEDLIT
RDYLERDKENPNMFRYLA

>09LN63

MTSDGATSTSAAAAAAMATRKPSWRERENNRRERRRRAVAAKIYTGLRAQGNYNLPK
HCDNNEVLKALCSEAGWVVEEDGTTYRKGHKPLPGDMAGSSSRATPYSSHNQSPLSSTFD
SPILSYQVSPSSSSFPSPSRVGDPHNISTIFPFLRNGGIPSSLPPLRISNSAPVTPPVSS
PTSRNPKPLPTWESFTKQSMSMAAKQSMTSLNYPFYAVSAPASPTHHRQFHAPATIPECD
ESDSSTVDSGHWISFQKFAQQQPFSASMVPTSPTFNLVKPAPQQLSPNTAAIQEIGQSSE
FKFENSOVKPWEGERIHDVAMEDLELTLGNGKAHS

>Q6EUP4

MSQPAELSREENVYMAKLAEQAERYEEMVEFMEKVAKTVDSEELTVEERNLLSVAYKNVI GARRASWRIISSIEQKEESRGNEDRCTLIKEYRGKIETELSKICDGILKLLDSHLVPSST APESKVFYLKMKGDYYRYLAEFKTGAERKDAAENTMVAYKAAQDIALAELPPTHPIRLGL ALNFSVFYYEILNSPDRACNLAKQAFDEAISELDTLSEESYKDSTLIMQLLRDNLTLWTS DISEDAAEEIKEAPKGESGDGO

>A2ZB00

MAAALTRPPPGTVQCFGRKKTAVAVSYCKPGRGLIKVNGVPIELIRPEMLRLKAFEPILL AGRSRFKDIDMRIRVRGGGKTSQIYAIRQAIAKALVAYYQKYVDEASKKEVKDIFARYDR TLLVADPRRCEPKKFGGRGARARFQKSYR

>004005

MPGITLGDTVPNLEVETTHDKFKLHDYFANSWTVLFSHPGDFTPVCTTELGAMAKYAHEF DKRGVKLLGLSCDDVQSHKDWIKDIEAFNHGSKVNYPIIADPNKEIIPQLNMIDPIENGP SRALHIVGPDSKIKLSFLYPSTTGRNMDEVLRALDSLLMASKHNNKIATPVNWKPDQPVV ISPAVSDEEAKKMFPOGFKTADLPSKKGYLRHTEVS

>P14713

MVSGVGGSGGGRGGEEEPSSSHTPNNRRGGEQAQSSGTKSLRPRSNTESMSKAIQQ
YTVDARLHAVFEQSGESGKSFDYSQSLKTTTYGSSVPEQQITAYLSRIQRGGYIQPFGCM
IAVDESSFRIIGYSENAREMLGIMPQSVPTLEKPEILAMGTDVRSLFTSSSSILLERAFV
AREITLLNPVWIHSKNTGKPFYAILHRIDVGVVIDLEPARTEDPALSIAGAVQSQKLAVR
AISQLQALPGGDIKLLCDTVVESVRDLTGYDRVMVYKFHEDEHGEVVAESKRDDLEPYIG
LHYPATDIPQASRFLFKQNRVRMIVDCNATPVLVVQDDRLTQSMCLVGSTLRAPHGCHSQ
YMANMGSIASLAMAVIINGNEDDGSNVASGRSSMRLWGLVVCHHTSSRCIPFPLRYACEF
LMQAFGLQLNMELQLALQMSEKRVLRTQTLLCDMLLRDSPAGIVTQSPSIMDLVKCDGAA
FLYHGKYYPLGVAPSEVQIKDVVEWLLANHADSTGLSTDSLGDAGYPGAAALGDAVCGMA
VAYITKRDFLFWFRSHTAKEIKWGGAKHHPEDKDDGQRMHPRSSFQAFLEVVKSRSQPWE
TAEMDAIHSLQLILRDSFKESEAAMNSKVVDGVVQPCRDMAGEQGIDELGAVAREMVRLI
ETATVPIFAVDAGGCINGWNAKIAELTGLSVEEAMGKSLVSDLIYKENEATVNKLLSRAL
RGDEEKNVEVKLKTFSPELQGKAVFVVVNACSSKDYLNNIVGVCFVGQDVTSQKIVMDKF

INIQGDYKAIVHSPNPLIPPIFAADENTCCLEWNMAMEKLTGWSRSEVIGKMIVGEVFGS
CCMLKGPDALTKFMIVLHNAIGGQDTDKFPFPFFDRNGKFVQALLTANKRVSLEGKVIGA
FCFLQIPSPELQQALAVQRRQDTECFTKAKELAYICQVIKNPLSGMRFANSLLEATDLNE
DQKQLLETSVSCEKQISRIVGDMDLESIEDGSFVLKREEFFLGSVINAIVSQAMFLLRDR
GLQLIRDIPEEIKSIEVFGDQIRIQQLLAEFLLSIIRYAPSQEWVEIHLSQLSKQMADGF
AAIRTEFRMACPGEGLPPELVRDMFHSSRWTSPEGLGLSVCRKILKLMNGEVQYIRESER
SYFLIILELPVPRKRPLSTASGSGDMMLMMPY

>09FVX0

MSSSSRNLSQENPIPRPNLAKTRTSLRDVGNRRAPLGDITNQKNGSRNPSPSSTLVNCSN KIGQSKKAPKPALSRNWNLGILDSGLPPKPNAKSNIIVPYEDTELLQSDDSLLCSSPALS LDASPTQSDPSISTHDSLTNHVVDYMVESTTDDGNDDDDDEIVNIDSDLMDPQLCASFAC DIYEHLRVSEVNKRPALDYMERTQSSINASMRSILIDWLVEVAEEYRLSPETLYLAVNYV DRYLTGNAINKQNLQLLGVTCMMIAAKYEEVCVPQVEDFCYITDNTYLRNELLEMESSVL NYLKFELTTPTAKCFLRRFLRAAQGRKEVPSLLSECLACYLTELSLLDYAMLRYAPSLVA ASAVFLAQYTLHPSRKPWNATLEHYTSYRAKHMEACVKNLLQLCNEKLSSDVVAIRKKYS OHKYKFAAKKLCPTSLPQELFL

>Q8LGE3

MSNIVVLDNGGGLIKAGQGGERDPTTVIPNCLYKPLSSKKFIHPSPLTTLSDEIDLTSAA VRRPIDRGYLINSDLQREIWSHLFTSLLHIAPSSSSLLLTEAPLSIPSVQRTTDELVFED FGFSSLYIAHPQSLVHLYEASRQPDSILSKTQCSLVVDCGFSFTHAVPVLHNFTLNHAIK RIDLGGKAFTNYLKELVSYRSINVMDETFLVDDAKEKLCFVSLDLLRDLRLARNGNTLIK STYVLPDGVTHTKGYVKDPQAAKRFLSLSEKESVVVMDKVGERKKADMNKNEIDLTNERF LVPETLFQPADLGMNQAGLAECIVRAINSCHSYLQPVLYQSIILTGGSTLFPQLKERLEG ELRPLVPDHFDVKITTQEDPILGVWRGGSLLASSPDFESMCVTKAEYEELGSARCRRRFF H

>P33444

MAVGKNKRISKGKKGGKKKAADPFAKKDWYDIKAPSVFSVRNVGKTLVTRTQGTKIASEG LEHRVFEISLADLQGDEDHSFRKIRLRAEDIQGKNVLTNFWGMDFTTDKLRSLVRKWQSL IEAHVDVKTTDSYTLRMFCIGFTKKRANQQKRTCYAQSSQIRQIRRKMREIMVNQAQSCD LKDLVQKFIPESIGREIEKATSSIYPLQNVFIRKVKILKAPKFDLGKLMEVHGDYNEDIG TKLDRPAEEAVAEPTEVIGA

>Q8GZA8

MANNEGEMQCGSMLFKQEELQEMSGVNVGGDYVEVMCGCTSHRYGDAVARLRVFPTGDLE
ITCECTPGCDEDKLTPAAFEKHSGRETARKWKNNVWVIIGGEKVPLSKTVLLKYYNESSK
KCSRSNRSQGAKVCHRDEFVGCNDCGKERRFRLRSRDECRLHHNAMGDPNWKCSDFPYDK
ITCEEEEERGSRKVYRGCTRSPSCKGCTSCVCFGCELCRFSECTCQTCVDFTSNVKA
>P28769

MSISAQNPDISGDRQSGQDVRTQNVMACQAVSNIVKTSLGPVGLDKMLVDDIGDVTITND
GATILRMLEVEHPAAKVLVELAELQDREVGDGTTSVVIVAAELLKRANDLVRNKIHPTSI
ISGYRLAMRESCKYIEEKLVTKVEKLGKVPLINCAKTSMSSKLISGDSDFFANLVVEAVL
SVKMTNQRGEIKYPIKGINILKAHGQSARDSYLLNGYALNTGRAAQGMPLRVSPAKIACL
DFNLQKTKMQLGVQVVVNDPRELEKIRQREADMTKERIEKLLKAGANVILTTKGIDDMAL
KYFVEAGAIAVRRVRKEDMRHVAKATGATLVTTFADMEGEETFDPAHLGSADEVVEERIA
DDDVILIKGTKTSSAVSLILRGANDYMLDEMERALHDALCIVKRTLESNTVVAGGGAVES

ALSVYLEHLATTLGSREQLAIAEFADALLIIPKVLAVNAAKDATELVAKLRAYHHTAQTK ADKKHYSSMGLDLVNGTIRNNLEAGVIEPAMSKVKIIQFATEAAITILRIDDMIKLVKDE SOGEE

>P22738

MSHRKFEHPRHGSLGFLPRKRASRHRGKVKAFPKDDPTKPCRLTSFLGYKAGMTHIVRDV EKPGSKLHKKETCEAVTIIETPPMVVVGVVGYVKTPRGLRSLCTVWAQHLSEELRRRFYK NWAKSKKKAFTRYSKKHETEEGKKDIQSQLEKMKKYCSVIRVLAHTQIRKMKGLKQKKAH LNEIQINGGDIAKKVDYACSLFEKQVPVDAIFQKDEMIDIIGVTKGKGYEGVVTRWGVTR LPRKTHRGLRKVACIGAWHPARVSYTVARAGQNGYHHRTEMNKKVYRVGKVGQETHSAMT EYDRTEKDITPMGGFPHYGIVKEDYLMIKGCCVGPKKRVVTLRQTLLKQTSRLAMEEIKL KFIDAASNGGHGRFOTSQEKAKFYGRTIKA

>P37223

MGGSNALNEMTNGSDGITGGVADVYGEEFATQDQLVTPWSFSVACGHSLLRDPQHNKGLA
FTEKERDAHFLRGLLPPVVLSQELQEKKFLTTLRQYQVPLQKYMAMMDLQERNEKLFYKL
LVDHVEELLPLVYTPTVGEGCQKYGSIFRRPQGLFISLKDKGRILELLRNWPEKKIQVIV
VTDGERILGLGDLGCQGMGIPVGKLSLYSALGGVCPSACLPITLDVGTNNQKLLDDEFYI
GLKQKRATGEEYAEFVQEFMSAVKQNYGEKILVQFEDFANHNAFELLEKYRTTHLVFNDD
IQGTASVVLAGLIASLKLLGGTLADHKFLFLGAGEAGTGIAELIALEMSKKTKAPVEQMR
KKIWLVDSKGLVVSSRKETLQQFKLPWAHEHEPITTLIDAVQAIKPTVLIGTSGKGKQFT
KEVVEAMANINAKPLILALSNPTSQSECTAEEAYTWSQGHAIFASGSPFDPVEYEGRTFV
PGQANNAYIFPGFGLGLIMCGAIRVHDDMLLAASEALASQVTGEHFIKGLIYPPFKDIRK
ISAHIAAGVAAKAYELGLASRLPQPADLVKFAESCMYNPTYRSFR

>094AA4

MSTVESSKPKIINGSCGYVLEDVPHLSDYLPGLPTYPNPLQDNPAYSVVKQYFVDADDSV
PQKIVVHKDGPRGIHFRRAGPRQKVYFESDEVHACIVTCGGLCPGLNTVIREIVSSLSYM
YGVKRILGIDGGYRGFYAKNTVSLDSKVVNDIHKRGGTILGTSRGGHDTTKIVDSIQDRG
INQVYIIGGDGTQRGASVIFEEIRRRGLKVAVIGIPKTIDNDIPVIDKSFGFDTAVEEAQ
RAINAAHVEAESIENGIGVVKLMGRYSGFIAMYATLASRDVDCCLIPESPFYLEGEGGLF
EYIEKRLKESGHMVLVIAEGAGQDLMSKSMESMTLKDASGNKLLKDVGLWLSQSIKDHFN
QKKMVMNLKYIDPTYMIRAVPSNASDNVYCTLLAQSAVHGAMAGYTGYISGLVNGRQTYI
PFYRITEKQNHVVITDRMWARLLSSTNQPSFLGPKDVFDNKEKPMSALLDDGNCNGVVDV
PPVTKEITK

>P93836

MGHQNAAVSENQNHDDGAASSPGFKLVGFSKFVRKNPKSDKFKVKRFHHIEFWCGDATNV
ARRFSWGLGMRFSAKSDLSTGNMVHASYLLTSGDLRFLFTAPYSPSLSAGEIKPTTTASI
PSFDHGSCRSFFSSHGLGVRAVAIEVEDAESAFSISVANGAIPSSPPIVLNEAVTIAEVK
LYGDVVLRYVSYKAEDTEKSEFLPGFERVEDASSFPLDYGIRRLDHAVGNVPELGPALTY
VAGFTGFHQFAEFTADDVGTAESGLNSAVLASNDEMVLLPINEPVHGTKRKSQIQTYLEH
NEGAGLQHLALMSEDIFRTLREMRKRSSIGGFDFMPSPPPTYYQNLKKRVGDVLSDDQIK
ECEELGILVDRDDQGTLLQIFTKPLGDRPTIFIEIIQRVGCMMKDEEGKAYQSGGCGGFG
KGNFSELFKSIEEYEKTLEAKQLVG

>09LZ98

MAVTEEEKKRNSTVEISGLRFTYPGIDGHPPPGSKPLIEDFSITLNSSDRCLLVGSNGAG KTTILKILGGKHMVEPHMVRVLGRSAFHDTGLTSSGDLCYLGGEWRRDVAFAGFEVPIOM DISAEKMIFGVAGIDPQRRDELIKVLDIDISWRLHKVSDGQRRRVQICMGLLKPFKVLLL
DEITVDLDVLARADLLKFLRKECEERGATIIYATHIFDGLEDWPTHIVYVANGKLQLALP
MEKVKETSKKSLMRTVESWLRKERDEERKRRKERKANGLPEFETRTEESRVTGDPARMLN
NGWAAGRLHSTVAGGEDNFVLSSNRVLR

>P36428

MRLVKAASLLISSTKPPSRVFYSSHLRRPFFSHFRFSSSSSTSSSVAVMPGSEPSETOWP AKRVRDTYVDFFRGKGHKFWPSSPVVPHNDPTLLFANAGMNQYKPIFLGTADPNTELSKL SRACNTOKCIRAGGKHNDLDDVGKDTYHHTFFEMLGNWSFGDYFKKEAIEWAWELLTKVY GLPTDRIYATYFGGDEKAGLOPDNEARDIWLKVLPSGRVLPFGCKDNFWEMGDTGPCGPC TEIHYDRIGNRDAASLVNNDDPTCLEIWNLVFIOFNRESDGSLKPLPAKHVDTGMGFERL TSVLONKMSNYDTDVFMPIFDDIOKATGARPYSGKVGPEDVDRVDMAYRVVADHIRTLSF AIADGSRPGNEGREYVLRRILRRAVRYGKEILKAEEGFFNGLVSSVIRVMGDVFTELKEH EKKITDIIKEEEASFCKTLAKGIEKFRKAGOAVOGNTLSGDDAFILWDTYGFPLDLTOLM AEERGLLVDVDGFNKAMEEARERSRSAQNKQAGGAIVMDADATSTLHKAGVSATDDSFKY IWFODHESELKAIYTGSTFLESSAASDNVGLVLGSTSFYAEOGGOIFDTGLIEGSFGTFN VCNVQIFGGFVLHIGYLSKETGEVSVGDKVICKVDYERRKLIAPNHTCTHMLNYALKEVL GDHIDQKGSIVLPEKLRFDFSHGKPVDPEDLRRIESIVNKQIKDELDVFSKEAVLSEAKR IKGLRAVFGEVYPDPVRVVSIGRKVEDLLADPENNEWSLLSSEFCGGTHITNTREAKAFA LLSEEGIAKGIRRVTAVTTECAFDALNAASLLEREVEDASRAEGSALEKKVSALKSRVDA AIIPAAKKADIRTKIASLQNEVRKAQKKIAEQNLKKSVKLATEAAESAASDGKTFCIIQL ${\tt DVGLDAAAVREAVSKVMEKKGMSIMVFSTDESTNKAVVCAGVPEKSDQFKPLDVTEWLTT}$ ALGPLKGRCGKGKGGLASGQGTDASQVQAALDMASSFASMKLN

>09LTR9

MADNNSPPGSVEQKADQIVEANPLVKDDTSLETIVRRFQDSMSEAKTHKFWETQPVGQFK
DIGDTSLPEGPIEPATPLSEVKQEPYNLPSVYEWTTCDMNSDDMCSEVYNLLKNNYVEDD
ENMFRFNYSKEFLRWALRPPGYYQSWHIGVRAKTSKKLVAFISGVPARIRVRDEVVKMAE
INFLCVHKKLRSKRLAPVMIKEVTRRVHLENIWQAAYTAGVILPTPITTCQYWHRSLNPK
KLIDVGFSRLGARMTMSRTIKLYKLPDAPITPGFRKMEPRDVPAVTRLLRNYLSQFGVAT
DFDENDVEHWLLPREDVVDSYLVESPETHDVTDFCSFYTLPSTILGNPNYTTLKAAYSYY
NVATQTSFLQLMNDALIVSKQKGFDVFNALDVMHNESFLKELKFGPGDGQLHYYLYNYRL
KSALKPAELGLVLL

>096247

MSEGVEAIVANDNGTDQVNGNRTGKDNEEHDGSTGSNLSNFLWHGGSVWDAWFSCASNQV
AQVLLTLPYSFSQLGMLSGIVLQIFYGLLGSWTAYLISVLYVEYRARKEKEGKSFKNHVI
QWFEVLDGLLGSYWKALGLAFNCTFLLFGSVIQLIACASNIYYINDHLDKRTWTYIFGAC
CATTVFIPSFHNYRIWSFLGLGMTTYTAWYLAIASIIHGQAEGVKHSGPTKLVLYFTGAT
NILYTFGGHAVTVEIMHAMWKPQKFKYIYLMATLYVFTLTIPSAAAVYWAFGDALLDHSN
AFSLMPKNAWRDAAVILMLIHQFITFGFACTPLYFVWEKVIGMHDTKSICLRALARLPVV
IPIWFLAIIFPFFGPINSAVGALLVSFTVYIIPSLAHMLTYRSASARQNAAEKPPFFMPS
WTAMYVLNAFVVVWVLIVGFGFGGWASVTNFVRQVDTFGLFAKCYQCKPAAAAAHAPVSA
LHHRL

>09C826

MSTNTESSSYSSLPSQRLLGKVALITGGATGIGESIVRLFHKHGAKVCIVDLQDDLGGEV CKSLLRGESKETAFFIHGDVRVEDDISNAVDFAVKNFGTLDILINNAGLCGAPCPDIRNY SLSEFEMTFDVNVKGAFLSMKHAARVMIPEKKGSIVSLCSVGGVVGGVGPHSYVGSKHAV LGLTRSVAAELGQHGIRVNCVSPYAVATKLALAHLPEEERTEDAFVGFRNFAAANANLKG VELTVDDVANAVLFLASDDSRYISGDNLMIDGGFTCTNHSFKVFR

>041764

MANARSGVAVNDECMLKFGELQSKRLHRFITFKMDDKFKEIVVDQVGDRATSYDDFTNSL PENDCRYAIYDFDFVTAEDVQKSRIFYILWSPSSAKVKSKMLYASSNQKFKSGLNGIQVE LQATDASEISLDEIKDRAR

>024047

MAVEPLRVLVTGAAGQIGYALVPMIARGIMLGANQPVILHMLDIPPAAEALNGVKMELVD
AAFPLLKGVVATTDAAEACKGVNVAVMVGGFPRKEGMERKDVMSKNVSIYKAQASALEQH
AAPNCKVLVVANPANTNALILKEFAPSIPEKNISCLTRLDHNRALGQISERLNVQVSDVK
NVIIWGNHSSTQYPDVNHATVKTQGVDKPVRELVADDAWLNGEFITTVQQRGAAIIKARK
LSSALSAASSACDHIHDWVLGTPEGTWVSMGVYSDGSYNVPAGIIYSFPVTCKNGEWTIV
OGLPIDDDSRKKMDATAAELVEEKTLAYSCLT

>022518

MATATNAAAAPPRQLSQKEADIQMMLAADVHLGTKNCDFQMERYIFKRRNDGIYIINLGK TWEKLQLAARVIVAIENPQDIIVQSARPYGQRAVLKFAQYTGAHAIAGRHTPGTFTNQLQ TSFSEPRLLILTDPRTDHQPIKEAALGNIPTIAFCDTDSPMRYVDIGIPANNKGKHSIGC LFWLLARMVLQMRGTIRPGLKWDVMVDLFFYREPEEAKQQEEEEAPAVDYAITDFNAGAI AADGQWPGTIDQSWSDAVPQPIPAVPGVNWGAPAEAPAAAGGDWGEAVPPPQQIPVPPSG IDTVOPSGWD

(5) \mathbb{S}_5 : 42 endoplasmic reticulum proteins

>09SLG2

MEAQNIFLYLLIVFLSLHFVFTTLKGRLSPANTRRLIRLHIPIKSPVAAAIFARKDTRE
FLDSSIKLVNEEDDFGFSFDFKPYMISKAETINRALDEAIPLIEPLNIHKAMRYAILAGG
KRVRPILCLAACELVGGEERLAIQAACAVEMIHTMSLIKDDLPCMDNDDLRRGKPTTHKV
FGESVAILSGGALLALAFEHLTEADVSSKKMVRAVKELAKSIGTKGLVAGQAKDLSSEGL
EQNDVGLEDLEYIHVHKTGSLLEASAVIGAVIGGGTEKEIEKVRNFARCIGLLFQVVDDI
LDETKSSEELGKTAGKDKVAGKLTYPKVIGVEKSKEFVEKLKRDAREHLQGFDSDKVKPL
IALTNFIANRNH

>Q9SE50

MVRFEKVHLVLGLALVLTLVGAPTKAQGPVCGAGLPDKFSRLNFPEGFIWGTATAAFQVE
GAVNEGCRGPSMWDTFTKKFPHRCENHNADVAVDFYHRYKEDIQLMKDLNTDAFRLSIAW
PRIFPHGRMSKGISKVGVQFYHDLIDELLKNNIIPLVTVFHWDTPQDLEDEYGGFLSGRI
VQDFTEYANFTFHEYGHKVKHWITFNEPWVFSRAGYDNGKKAPGRCSPYIPGYGQHCQDG
RSGYEAYQVSHNLLLSHAYAVDAFRNCKQCAGGKIGIAHSPAWFEPQDLEHVGGSIERVL
DFILGWHLAPTTYGDYPQSMKDRVGHRLPKFTEAEKKLLKGSTDYVGMNYYTSVFAKEIS
PDPKSPSWTTDSLVDWDSKSVDGYKIGSKPFNGKLDVYSKGLRYLLKYIKDNYGDPEVII
AENGYGEDLGEKHNDVNFGTQDHNRKYYIQRHLLSMHDAICKDKVNVTGYFVWSLMDNFE
WQDGYKARFGLYYIDFQNNLTRHQKVSGKWYSEFLKPQFPTSKLREEL

>0949U1

MMSFTTSLPYPFHILLVFILSMASITLLGRILSRPTKTKDRSCQLPPGPPGWPILGNLPE LFMTRPRSKYFRLAMKELKTDIACFNFAGIRAITINSDEIAREAFRERDADLADRPQLFI METIGDNYKSMGISPYGEQFMKMKRVITTEIMSVKTLKMLEAARTIEADNLIAYVHSMYQ
RSETVDVRELSRVYGYAVTMRMLFGRRHVTKENVFSDDGRLGNAEKHHLEVIFNTLNCLP
SFSPADYVERWLRGWNVDGQEKRVTENCNIVRSYNNPIIDERVQLWREEGGKAAVEDWLD
TFITLKDQNGKYLVTPDEIKAQCVEFCIAAIDNPANNMEWTLGEMLKNPEILRKALKELD
EVVGRDRLVQESDIPNLNYLKACCRETFRIHPSAHYVPSHLARQDTTLGGYFIPKGSHIH
VCRPGLGRNPKIWKDPLVYKPERHLQGDGITKEVTLVETEMRFVSFSTGRRGCIGVKVGT
IMMVMLLARFLQGFNWKLHQDFGPLSLEEDDASLLMAKPLHLSVEPRLAPNLYPKFRP
>P49333

MEVCNCIEPQWPADELLMKYQYISDFFIAIAYFSIPLELIYFVKKSAVFPYRWVLVQFGA
FIVLCGATHLINLWTFTTHSRTVALVMTTAKVLTAVVSCATALMLVHIIPDLLSVKTREL
FLKNKAAELDREMGLIRTQEETGRHVRMLTHEIRSTLDRHTILKTTLVELGRTLALEECA
LWMPTRTGLELQLSYTLRHQHPVEYTVPIQLPVINQVFGTSRAVKISPNSPVARLRPVSG
KYMLGEVVAVRVPLLHLSNFQINDWPELSTKRYALMVLMLPSDSARQWHVHELELVEVVA
DQVAVALSHAAILEESMRARDLLMEQNVALDLARREAETAIRARNDFLAVMNHEMRTPMH
AIIALSSLLQETELTPEQRLMVETILKSSNLLATLMNDVLDLSRLEDGSLQLELGTFNLH
TLFREVLNLIKPIAVVKKLPITLNLAPDLPEFVVGDEKRLMQIILNIVGNAVKFSKQGSI
SVTALVTKSDTRAADFFVVPTGSHFYLRVKVKDSGAGINPQDIPKIFTKFAQTQSLATRS
SGGSGLGLAISKRFVNLMEGNIWIESDGLGKGCTAIFDVKLGISERSNESKQSGIPKVPA
IPRHSNFTGLKVLVMDENGVSRMVTKGLLVHLGCEVTTVSSNEECLRVVSHEHKVVFMDV
CMPGVENYQIALRIHEKFTKQRHQRPLLVALSGNTDKSTKEKCMSFGLDGVLLKPVSLDN
IRDVLSDLLEPRVLYEGM

>P35016

MRKWTVPSVLFLLCPSLSSSCQGRKIHANAEADSDAPVDPPKVEDKIGAVPNGLSTDSDV
AKREAESMSMRNLRSDAEKFEFQAEVSRLMDIIINSLYSNKDIFLRELISNASDALDKIR
FLALTDKEILGEGDTAKLEIQIKLDKEKKILSIRDRGIGMTKEDLIKNLGTIAKSGTSAF
VEKMQTSGDLNLIGQFGVGFYSVYLVPDYVEVISKHNDDKQYIWESKADGAFAISEDVWN
EPLGRGTEIRLHLRDEAQEYLDEFKLKELVKRYSEFINFPIYLWASKEVEVEVPAEEDDS
SDDEDNKSESSSSEEGEEEETEKEEDEKKPKTKKVKETTYEWELLNDMKAIWLRNPKDVT
DDEYTKFYHSLAKDFSEEKPLAWSHFTAEGDVEFKAFTLLPPKAPQDLYESYYNSNKSNL
KLYVRRVFISDEFDELLPKYLNFLKGLVDSDTLPLNVSREMLQQHSSLKTIKKKLIRKAL
DMIRKIADEDPDEANDKDKKEVEESTDNDEKKGQYAKFWNEFGKSIKLGIIEDAANRNRL
AKLLRFESTKSEGKLTSLDQYISRMKSGQKDIFYITGTSKEQLEKSPFLERLTKKNYEVI
LFTDPVDEYLMQYLMDYEDKKFQNVSKEGLKIGKDSKDKELKESFKELTKWWKGALASEN
VDDVKISNRLANTPCVVVTSKYGWSSNMERIMQSQTLSDASKQAYMRGKRVLEINPRHPI
IKELRERVVKDAEDESVKQTARLMYQTALMESGFMLNDPKEFASSIYDSVKSSLKISPDA
TVEEEDDTEEAEAESGTTESSAAEDAGAETLDLKDEL

>P48630

MGLAKETTMGGRGRVAKVEVQGKKPLSRVPNTKPPFTVGQLKKAIPPHCFQRSLLTSFSY
VVYDLSFAFIFYIATTYFHLLPQPFSLIAWPIYWVLQGCLLTGVWVIAHECGHHAFSKYQ
WVDDVVGLTLHSTLLVPYFSWKISHRRHHSNTGSLDRDEVFVPKPKSKVAWFSKYLNNPL
GRAVSLLVTLTIGWPMYLAFNVSGRPYDSFASHYHPYAPIYSNRERLLIYVSDVALFSVT
YSLYRVATLKGLVWLLCVYGVPLLIVNGFLVTITYLQHTHFALPHYDSSEWDWLKGALAT
MDRDYGILNKVFHHITDTHVAHHLFSTMPHYHAMEATNAIKPILGEYYQFDDTPFYKALW
REARECLYVEPDEGTSEKGVYWYRNKY

>A2XMB2

 ${\tt MAAYTSKIFALFALIALSASATTAITTMQYFPPTLAMGTMDPCRQYMMQTLGMGSSTAMF\\ {\tt MSQPMALLQQQCCMQLQGMMPQCHCGTSCQMMQSMQQVICAGLGQQQMMKMAMQMPYMCN\\ {\tt MAPVNFQLSSCGCC}\\$

>08LG50

MVIAAAVIVPLGLLFFISGLAVNLFQAVCYVLIRPLSKNTYRKINRVVAETLWLELVWIV
DWWAGVKIQVFADNETFNRMGKEHALVVCNHRSDIDWLVGWILAQRSGCLGSALAVMKKS
SKFLPVIGWSMWFSEYLFLERNWAKDESTLKSGLQRLSDFPRPFWLALFVEGTRFTEAKL
KAAQEYAASSELPIPRNVLIPRTKSFVSAVSNMRSFVPAIYDMTVTIPKTSPPPTMLRLF
KGQPSVVHVHIKCHSMKDLPESDDAIAQWCRDQFVAKDALLDKHIAADTFPGQQEQNIGR
PIKSLAVVLSWACVLTLGAIKFLHWAQLFSSWKGITISALGLGIITLCMQILIRSSQSER
STPAKVVPAKPKDNHHPESSSOTETEKEK

>P93508

MANPKSLSLFLLSLLAIASAEVFFEERFEDGWENRWVKSDWKKDENTAGEWNYTSGKWNG
DPNDKGIQTSEDYRFYAISAEFPEFSNKDKTLVFQFSVKHEQKLDCGGGYMKLLSSSTDQ
KKFGGDTPYSIMFGPDICGYSTKKVHAILNYNDTNHLIKKEVPCETDQLTHVYTLVIRPD
ATYSILIDNVEKQTGSLYTDWDLLPPKKIKDPEAKKPEDWDEKEYIPDPEDKKPEGYDDI
PKEIPDPDAKKPEDWDDEEDGEWTAPTIANPEYKGPWKPKKIKNPNYKGKWKAPMIDNPD
FKDDPEIYVYPNLKYVGIELWQVKSGTLFDNVLICNDPEYAKQLAEETWGKNKDAEKAAF
EEAEKKKEEEESKDDPADSDADEDDDDADDTEGEDDGESKSDAAEDSAEDVHDEL

MVGSGAPQRGSAAATASMRRRKPTSGAGGGGASGGAAGSMLQFYTDDAPGLKISPNVVLI MSIGFIAFVAVLHVMGKLYFVK

>P17048

>P38389

 $\label{thm:mkiifvfalla} $$ MKIIFVFALLAIVACNASARFDPLSQSYRQYQLQSHLLLQQQVLSPCSEFVRQQYSIVAT $$ PFWQPATFQLINNQVMQQQCCQQLRLVAQQSHYQAISIVQAIVQQLQLQQFSGVYFDQTQ $$ AQAQTLLTFNLPSICGIYPNYYSAPRSIATVGGVWY $$$

>P35402

MNIFRFAGDMSHLISVLILLKIYATKSCAGISLKTQELYALVFLTRYLDLFTDYVSLYN SIMKIVFIASSLAIVWCMRRHPLVRRSYDKDLDTFRHQYVVLACFVLGLILNEKFTVQEV FWAFSIYLEAVAILPQLVLLQRSGNVDNLTGQYVVFLGAYRGLYIINWIYRYFTEDHFTR WIACVSGLVQTALYADFFYYYYISWKTNTKLKLPA

>P93339

MSVTELKERHMAATQTVNDLREKLKQKRLQLLDTDVSGYARSQGKTPVTFGPTDLVCCRI LQGHTGKVYSLDWTPEKNRIVSASQDGRLIVWNALTSQKTHAIKLPCAWVMTCAFSPSGH SVACGGLDSVCSIFNLNSPIDKDGNHPVSRMLSGHKGYVSSCQYVPDEDTHLITSSGDQT CVLWDITTGLRTSVFGGEFQFGHTADVQSVSISSSNPRLFVSGSCDTTARLWDTRVASRA QRTFYCHEGDVNTVKFFPDGNRFGTGSEDGTCRLFDIRTGHQLQVYYQPHGDGDIPHVTS MAFSISGRLLFVRYSNGDCYVWDTLLAKVVLNLGAVQNSHEGXISCLGLSADGXXLCTGS WDTNLKIWAFGGHRSVI

>Q8GYE0

MEIEEASRESGHVVCGSWIRRPKKVNWVLIAKASKRRGSSVSSPALLNIFSFDPITASLS SSPLATHTLKDSDGDPVAVSVHPGGDYFVCSTSKGGCKLFELVGGATGITILAKELLPLQ NAGLOKCMAFSFDGSKLAVGGVDGCLRIMEWPNLSVILDEPKAHKSIRDMDFSLDSEFLA TTSTDGSARIWKAEDGFPLSTLERSGDENIELCRFSKDGTKPFLFCAAQRGDTPMVNVYD ISTWKKLGFKKLSRKTASTMAVSLDGKYIALGGKDGDVSVAEVKTMEIYHYSKRLHLGQS IASLEFCPSERVMLTTSSEWGEMVTKLTVPKEWKEWQIYALLFCLFMASVIAAYVFFENS DSFWKLPMGKDQKRPKISLFGGSSSTPSEDHSRWNLDL

>08VXU6

MDSNWINCPSVFSSSSSSRRCQSRSDLYLGGGYEDLEGEDDLKAEFICPFCAEDFDIVG LCCHIDEEHPVEAKNGVCPVCTKRVGLDIVGHITTQHANFFKVQRRRRLRRGGYSSTYLA LKKELREANLQSLLGGSSSFTSSTNIDSDPLLSSFMFNSPSVNQSANKSATPVTVGNAAT KVSIKESLKRDIOEAPLSGEDOEKAKKSEFVRGLLLSTMLEDDF

>09LDU6

MAETVHSPIVTYASMLSLLAFCPPFVILLWYTMVHQDGSVTQTFGFFWENGVQGLINIWP RPTLIAWKIIFCYGAFEAILQLLLPGKRVEGPISPAGNRPVYKANGLAAYFVTLATYLGL WWFGIFNPAIVYDHLGEIFSALIFGSFIFCVLLYIKGHVAPSSSDSGSCGNLIIDFYWGM ELYPRIGKSFDIKVFTNCRFGMMSWAVLAVTYCIKQYEINGKVSDSMLVNTILMLVYVTK FFWWEAGYWNTMDIAHDRAGFYICWGCLVWVPSVYTSPGMYLVNHPVELGTQLAIYILVA GILCIYINYDCDRQRQEFRRTNGKCLVWGRAPSKIVASYTTTSGETKTSLLLTSGWWGLA RHFHYVPEILSAFFWTVPALFDNFLAYFYVIFLTLLLFDRAKRDDDRCRSKYGKYWKLYC EKVKYRIIPGIY

>Q84K11

MPGMEAENSNASRAEELKQLANEAFKGHKYSQAIDLYTQAIELNGENAVYYANRAFAHTK
LEEYGSAIQDGTRAIEIDPRYSKGYYRRGAAYLAMGKFKDALKDFQQVKKLCPNDPDATK
KLKECEKAVMKLKFEEAISVPESQRRSVADSIDYRSVGSGPGSSYVPTKTTAVSAAAALM
GVLVVYMGTKAATMVAAAASAALLVVLITFLWGRCSDGFFTKSRTLELEVEPQYAGARIE
GDVVTLDFVKKMLDDFKNQKNLHKRYAYQIVLQTREMLRALPSLVDIVVPEGKHFTVCGD
VHGQFYDLLNIFELNGLPSEDNPYLFNGDFVDRGSFSLEVILTLFAFKCMCPSAIHLARG
NHESKSMNKIYGFEGEVRSKLSEIFVELFAEVFCCLPLAHVINEKVFVVHGGLFSVDGVK
LSDIRAIDRFCEPPEEGLMCELLWSDPQPQPGRGPSKRGVGLSFGGDVTKRFLQENNLDL
VVRSHEVKDEGYEIEHDGKLITVFSAPNYCDQMGNKGAFIRFEAPDMKPNIVTFSAVPHP
DVKPMAYANNFLRMFS

>09M8W5

MMGVLKSAIGDMLMTFSWVVLSATFGIQTAAIISAGDFQAITWAPLVILTSLIFVYVSIF TVIFGSASFNPTGSAAFYVAGVPGDTLFSLAIRLPAQAIGAAGGALAIMEFIPEKYKHMI GGPSLQVDVHTGAIAETILSFGITFAVLLIILRGPRRLLAKTFLLALATISFVVAGSKYT GPAMNPAIAFGWAYMYSSHNTWDHIYVYWISSFVGALSAALLFRSIFPPPRPQKKKQKKA

>Q4G2J3

MAQAVEEWYRQMPIITRSYLTAAVVTTVGCTLEIISPYHLYLNPKLVVQHYEIWRLVTNF LYFRKMDLDFLFHMFFLARYCKLLEENSFRGRTADFFYMLLFGATVLTGIVLIGGMIPYI SETFARILFLSNSLTFMMVYVWSKHNPFIHMSFLGLFTFTAAYLPWVLLGFSILVGSSTW VDLLGMIAGHVYYFLEDVYPRMTGRRPLKTPSFIKALFADDNVVVAQPPNAGIGAGARFG AIGVDPQAQ

>09FZ33

MAIITEEEEDPKTLNPPKNKPKDSDFTKSESTMKNPKPQSQNPFPFWFYFTVVVSLATII FISLSLFSSQNDPRSWFLSLPPALRQHYSNGRTIKVQVNSNESPIEVFVAESGSIHTETV VIVHGLGLSSFAFKEMIQSLGSKGIHSVAIDLPGNGFSDKSMVVIGGDREIGFVARVKEV
YGLIQEKGVFWAFDQMIETGDLPYEEIIKLQNSKRRSFKAIELGSEETARVLGQVIDTLG
LAPVHLVLHDSALGLASNWVSENWQSVRSVTLIDSSISPALPLWVLNVPGIREILLAFSF
GFEKLVSFRCSKEMTLSDIDAHRILLKGRNGREAVVASLNKLNHSFDIAQWGNSDGINGI
PMQVIWSSEASKEWSDEGQRVAKALPKAKFVTHSGSRWPQESKSGELADYISEFVSLLPK
SIRRVAEEPIPEEVQKVLEEAKAGDDHDHHHGHGHAHAGYSDAYGLGEEWTTT
>064967

MEASRRSAVKPVIVLKPSKRFPLVEDTPGKASDALPLPLYLTNAVFFTLFFTVVYFLLSR
WREKIRASIPLHAVTFPEIVAIFAFVASLIYLLGFFGIDFVQSLIIRPSGDVWSGEDYEE
ENEVLLHEEDARTVPCGQALDCSVPSLPHMARNVTAQRLFDEKPVRVATEEDARKVSCGQ
AVDCSLHSLPPRPPIVTSQKLFHEKTVIVTTEEDEEIIKSVVAGTLPSYSLESKLGDCKR
AAAIRREALQRLTGRSLSGLPLDGFDYESILGQCCEMPVGYVQIPVGIAGPLLLNGREYS
VPMATTEGCLVASTNRGCKAIHLSGGATSILLKDGMTRAPVVRFSTAKRAAELKFYLEDP
ENFDTLAVVFNRSSRFGRLQSIKCAIAGKNLYLRFTCSTGDAMGMNMVSKGVQNVLDFLQ
TDFPDMDVIGISGNFCSDKKPAAVNWIEGRGKSVVCEAIIEGDVVRKVLKTSVESLVELN
MLKNLTGSAMAGALGGFNAHASNIVTAIYIATGQDPAQNVESSHCITMMEAVNDGKDLHI
SVTMPSIEVGTVGGGTQLASQSACLNLLGVKGASKDVAGANSRMLATIVTGAVLAGELSL
MSALAAGOLVKSHMKYNRSSKDMSNLSS

>Q8W037

MDDISVSKSNHGNVVVLNIKASSLADTSLPSNKHESSSPPLLSVHFLQKLLAELVGTYYL IFAGCAAIAVNAQHNHVVTLVGIAVVWGIVIMVLVYCLGHLSAHFNPAVTLALASSQRFP LNQVPAYITVQVIGSTLASATLRLLFDLNNDVCSKKHDVFLGSSPSGSDLQAFVMEFIIT GFLMLVVCAVTTTKRTTEELEGLIIGATVTLNVIFAGEVSGASMNPARSIGPALVWGCYK GIWIYLLAPTLGAVSGALIHKMLPSIQNAEPEFSKTGSSHKRVTDLPL

>Q03685

MAGAWKRRASLIVFAIVLFGSLFAFSIAKEEATKLGTVIGIDLGTTYSCVGVYKNGHVEI
IANDQGNRITPSWVAFTDGERLIGEAAKNQAAVNPERTIFDVKRLIGRKFDDKEVQRDKK
LVPYEIVNKDGKPYIQVKIKDGETKVFSPEEISAMILTKMKETAEAYLGKKIKDAVVTVP
AYFNDAQRQATKDAGVIAGLNVARIINEPTAAAIAYGLDKKGGEKNILVFDLGGGTFDVS
ILTIDNGVFEVLATNGDTHLGGEDFDQRIMEYFIKLIKKKHGKDISKDNRALGKLRREAE
RAKRALSSQHQVRVEIESLFDGVDFSEPLTRARFEELNNDLFRKTMGPVKKAMEDAGLEK
NQIDEIVLVGGSTRIPKVQQLLKDYFDGKEPNKGVNPDEAVAYGAAVQGGILSGEGGDET
KDILLLDVAPLTLGIETVGGVMTKLIPRNTVIPTKKSQVFTTYQDQQTTVTISVFEGERS
LTKDCRLLGKFDLTGIAPAPRGTPQIEVTFEVDANGILNVKAEDKASGKSEKITITNDKG
RLSQEEIERMVKEAEEFAEEDKKVKERIDARNSLETYVYNMRNQINDKDKLADKLESDEK
EKIETATKEALEWLDDNQSAEKEDYDEKLKEVEAVCNPIITAVYQRSGGAPGGASEESNE
DDDSHDEL

>Q05001

MDSSSEKLSPFELMSAILKGAKLDGSNSSDSGVAVSPAVMAMLLENKELVMILTTSVAVL
IGCVVVLIWRRSSGSGKKVVEPPKLIVPKSVVEPEEIDEGKKKFTIFFGTQTGTAEGFAK
ALAEEAKARYEKAVIKVIDIDDYAADDEEYEEKFRKETLAFFILATYGDGEPTDNAARFY
KWFVEGNDRGDWLKNLQYGVFGLGNRQYEHFNKIAKVVDEKVAEQGGKRIVPLVLGDDDQ
CIEDDFAAWRENVWPELDNLLRDEDDTTVSTTYTAAIPEYRVVFPDKSDSLISEANGHAN
GYANGNTVYDAQHPCRSNVAVRKELHTPASDRSCTHLDFDIAGTGLSYGTGDHVGVYCDN

LSETVEEAERLLNLPPETYFSLHADKEDGTPLAGSSLPPPFPPCTLRTALTRYADLLNTP
KKSALLALAAYASDPNEADRLKYLASPAGKDEYAQSLVANQRSLLEVMAEFPSAKPPLGV
FFAAIAPRLQPRFYSISSSPRMAPSRIHVTCALVYEKTPGGRIHKGVCSTWMKNAIPLEE
SRDCSWAPIFVRQSNFKLPADPKVPVIMIGPGTGLAPFRGFLQERLALKEEGAELGTAVF
FFGCRNRKMDYIYEDELNHFLEIGALSELLVAFSREGPTKQYVQHKMAEKASDIWRMISD
GAYVYVCGDAKGMARDVHRTLHTIAQEQGSMDSTQAEGFVKNLQMTGRYLRDVW
>09LTS3

MASYNLRSQVRLIAITIVIIITLSTPITTNTSPQPWNILSHNEFAGKLTSSSSVESAAT
DFGHVTKIFPSAVLIPSSVEDITDLIKLSFDSQLSFPLAARGHGHSHRGQASAKDGVVVN
MRSMVNRDRGIKVSRTCLYVDVDAAWLWIEVLNKTLELGLTPVSWTDYLYLTVGGTLSNG
GISGQTFRYGPQITNVLEMDVITGKGEIATCSKDMNSDLFFAVLGGLGQFGIITRARIKL
EVAPKRAKWLRFLYIDFSEFTRDQERVISKTDGVDFLEGSIMVDHGPPDNWRSTYYPPSD
HLRIASMVKRHRVIYCLEVVKYYDETSQYTVNEEMEELSDSLNHVRGFMYEKDVTYMDFL
NRVRTGELNLKSKGQWDVPHPWLNLFVPKTQISKFDDGVFKGIILRNNITSGPVLVYPMN
RNKWNDRMSAAIPEEDVFYAVGFLRSAGFDNWEAFDQENMEILKFCEDANMGVIQYLPYH
SSQEGWVRHFGPRWNIFVERKYKYDPKMILSPGQNIFQKINSS

>023051

MAETTSWIPVWFPLMVLGCFGLNWLVRKVNVWLYESSLGENRHYLPPGDLGWPFIGNMLS
FLRAFKTSDPDSFTRTLIKRYGPKGIYKAHMFGNPSIIVTTSDTCRRVLTDDDAFKPGWP
TSTMELIGRKSFVGISFEEHKRLRRLTAAPVNGHEALSTYIPYIEENVITVLDKWTKMGE
FEFLTHLRKLTFRIIMYIFLSSESENVMDALEREYTALNYGVRAMAVNIPGFAYHRALKA
RKTLVAAFQSIVTERRNQRKQNILSNKKDMLDNLLNVKDEDGKTLDDEEIIDVLLMYLNA
GHESSGHTIMWATVFLQEHPEVLQRAKAEQEMILKSRPEGQKGLSLKETRKMEFLSQVVD
ETLRVITFSLTAFREAKTDVEMNGYLIPKGWKVLTWFRDVHIDPEVFPDPRKFDPARWDN
GFVPKAGAFLPFGAGSHLCPGNDLAKLEISIFLHHFLLKYQVKRSNPECPVMYLPHTRPT
DNCLARISYO

>P11090

MARLSSLLSFSLALLTFLHGSTAQQFPNECQLDQLNALEPSHVLKAEAGRIEVWDHHAPQ
LRCSGVSFVRYIIESKGLYLPSFFSTARLSFVAKGEGLMGRVVLCAETFQDSSVFQPSGG
SPFGEGQGQGQGGGGQGQGQGQGQGQGQGQGQGQGGGGFRDMHQKVEHIRTGDTIATH
PGVAQWFYNDGNQPLVIVSVLDLASHQNQLDRNPRPFYLAGNNPQGQVWIEGREQQPQKN
ILNGFTPEVLAKAFKIDVRTAQQLQNQQDNRGNIIRVQGPFSVIRPPLRSQRPQEEVNGL
EETICSARCTDNLDDPSNADVYKPQLGYISTLNSYDLPILRFLRLSALRGSIRQNAMVLP
QWNANANAVLYVTDGEAHVQVVNDNGDRVFDGQVSQGQLLSIPQGFSVVKRATSEQFRWI
EFKTNANAQINTLAGRTSVLRGLPLEVISNGYQISLEEARRVKFNTIETTLTHSSGPASY
GGPRKADA

>A8MQY1

MMKGLIGYRFSPTGEEVINHYLKNKLLGKYWLVDEAISEINILSHKPSKDLPKLARIQSE
DLEWYFFSPIEYTNPNKMKMKRTTGSGFWKPTGVDREIRDKRGNGVVIGIKKTLVYHEGK
SPHGVRTPWVMHEYHITCLPHHKRKYVVCQVKYKGEAAEISYEPSPSLVSDSHTVIAITG
EPEPELQVEQPGKENLLGMSVDDLIEPMNQQEEPQGPHLAPNDDEFIRGLRHVDRGTVEY
LFANEENMDGLSMNDLRIPMIVQQEDLSEWEGFNADTFFSDNNNNYNLNVHHQLTPYGDG
YLNAFSGYNEGNPPDHELVMQENRNDHMPRKPVTGTIDYSSDSGSDAGSISTTSYQGTSS
PNISVGSSSRHLSSCSSTDSCKDLQTCTDPSIISREIRELTQEVKQEIPRAVDAPMNNES

SLVKTEKKGLFIVEDAMERNRKKPRFIYLMKMIIGNIISVLLPVKRLIPVKKL >09ZSY2

MSAKKLEGSSAPANRRDPYEVLCVSKDANDQEIKSAYRKLALKYHPDKNANNPDASELFK
EVAFSYSILSDPEKRRHYDNAGFEALDADGMDMEIDLSNLGTVNTMFAALFSKLGVPIKT
TVSANVLEEAMNGTVTVRPLPIGTSVSGKVEKQCAHFFGVTISEQQAESGVVVRVTSTAQ
SKFKLLYFEQDSSGGYGLALQEEREKTGKVTSAGMYFLHFQVYRMDTTVNALAAAKDPES
AFFKRLEGLQPCEVSELKAGTHIFAVYGDNFFKTASYTIEALCAKTYEDTTEKLKEIEAQ
ILRKRNELRQFETEYRKALARFQEVTNRYTQEKQTVDELLKQRDTIHSTFSVVKTPSGNN
LSNGSSSKAOGDESKGDGDSAGEEGGTENRDKSKRKWFNLNLKGSDKKLG

>07X9I4

MAETDVGSVKGKEKGSGKRWILLIGAIAAVLLAVVVAVFLNTQNSSISEFTGKICNCRQA
EQQKYIGIVEDCCCDYETVNRLNTEVLNPLLQDLVKTPFYRYFKVKLWCDCPFWPDDGMC
RLRDCSVCECPESEFPEVFKKPLSQYNPVCQEGKPQATVDRTLDTRAFRGWTVTDNPWTS
DDETDNDEMTYVNLRLNPERYTGYIGPSARRIWEAIYSENCPKHTSEGSCQEEKILYKLV
SGLHSSISVHIASDYLLDEATNLWGQNLTLLYDRVLRYPDRVQNLYFTFLFVLRAVTKAE
DYLGEAEYETGNVIEDLKTKSLVKQVVSDPKTKAACPVPFDEAKLWKGQRGPELKQQLEK
QFRNISAIMDCVGCEKCRLWGKLQILGLGTALKILFTVNGEDNLRHNLELQRNEVIALMN
LLHRLSESVKYVHDMSPAAERIAGGHASSGNSFWQRIVTSIAQSKAVSGKRS
>08VY97

MAPIFRSTSLIAFSLFFFFFASTLPISSGSEDSYTITGRVRVPASTVIGHAAKFSNIKVI LNGGQHVTFLRPDGYFTFHKVPAGTHLIEVYALGYFFSPVRVDVSARHRGKVQATLTETR RSLTELVLEPLRAEQYYEMREPFSVMSIVKSPMGLMVGFMVVVVFLMPKLMENIDPEEMK SAQEQMRSQGVPSLTSLLPASR

>P12412

MAMKKLLWVVLSLSLVLGVANSFDFHEKDLESESLWDLYERWRSHHTVSRSLGEKHKRF
NVFKANVMHVHNTNKMDKPYKLKLNKFADMTNHEFRSTYAGSKVNHHKMFRGSQHGSGTF
MYEKVGSVPASVDWRKKGAVTDVKDQGQCGSCWAFSTIVAVEGINQIKTNKLVSLSEQEL
VDCDKEENQGCNGGLMESAFEFIKQKGGITTESNYPYTAQEGTCDESKVNDLAVSIDGHE
NVPVNDENALLKAVANQPVSVAIDAGGSDFQFYSEGVFTGDCNTDLNHGVAIVGYGTTVD
GTNYWIVRNSWGPEWGEQGYIRMQRNISKKEGLCGIAMMASYPIKNSSDNPTGSLSSPKD
EL

>P46422

MAGIKVFGHPASIATRRVLIALHEKNLDFELVHVELKDGEHKKEPFLSRNPFGQVPAFED GDLKLFESRAITQYIAHRYENQGTNLLQTDSKNISQYAIMAIGMQVEDHQFDPVASKLAF EQIFKSIYGLTTDEAVVAEEEAKLAKVLDVYEARLKEFKYLAGETFTLTDLHHIPAIQYL LGTPTKKLFTERPRVNEWVAEITKRPASEKVQ

>P45434

MMNLRVLFLALLLLASPLLQVARCQSDAEDHSSLVDDVVGENTDDAVEEDDHDLDMNLSS FPGVETVCVFPKNSAKLVPAGEETELLVGLKNEGKTRVGVMGIRASVHLPYDHKLLVQNL TMLRLNNASIPTSLQATFPYIFAVSQYLQPGAFDLVGYIIYDVEGKPYQSVFYNGTIEVV ESGGLLSGESVFLLTLGIGLLLLLGLWAYSQVQRLTKKTKKVSKVEVGTRSTEASLDEWL EGTTLAKTSSGKTKNKKN

>Q8GSP8

MLRSAGRVAAVALLALFALGCVSAAAKPSTDRLVAAIKSKNLSAVVDALSVKGLDVNTPD

STRRLPLVEAARSRDARLVGALLDQGALARVSDGTTTPLHLSMQGGSAAIVKLLLAHGAD PNAKDKTGASARSTAAAVKELADLLKQWDARGAMAFEDEPGAWIREERDGQSYYWKPANG ESRWAVPPSCAWQRVTVQGHPIKYINSLTGQETTRVPPALAWARVTAADGSALWLNWASR VASAAATAPAELPAELAAELAMHPNRRWYNTATREYVYTDPAYATPWRELVDEASGAPFF FNVETGDTTWELPAALAWTEVIESSSGADGESGSGSEAGPRYFHNTVSGEVAWSAPEGSR HVFVEASAADL

>P33488

MVRRPATGAAPRPHLAAVGRGLLLASVLAAAASSLPVAESSCPRDNSLVRDISRMQQRN YGREGFSHITVTGALAHGTKEVEVWLQTFGPGQRTPIHRHSCEEVFIVLKGKGTLLLGSS SLKYPGQPQEVPVFQNTTFSIPVNDPHQVWNSNEHEDLQVLVIISRPPVKIFIYDDWSMP HTAAKLKFPYFWDEDCLPAPKDEL

>Q5NE24

MDLMDMDAINDLHFSGHSSLTNTPTSDEDYGCTWNHWSPIVNWDTFTGAPDDFHHLMDTI
IEDRTTVLEQLSPSITTTTTTTTTTTDEEEEEMETTTTTTTTAIKTHEVGDDSKGLKLVHL
LMAGAEALTGSTKNRDLARVILIRLKELVSQHANGSNMERLAAHFTEALHGLLEGAGGAH
NNHHHHNNNKHYLTTNGPHDNQNDTLAAFQLLQDMSPYVKFGHFTANQAIIEAVAHERRV
HVIDYDIMEGVQWASLIQSLASNNNGPHLRITALSRTGTGRRSIATVQETGRRLTSFAAS
LGQPFSFHHCRLDSDETFRPSALKLVRGEALVFNCMLNLPHLSYRAPESVASFLNGAKTL
NPKLVTLVEEEVGSVIGGFVERFMDSLHHYSAVFDSLEAGFPMQNRARTLVERVFFGPRI
AGSLGRIYRTGGEEERRSWGEWLGEVGFRGVPVSFANHCQAKLLLGLFNDGYRVEEVGVG
SNKLVLDWKSRRLLSASLWTCSSSDSDL

>Q8LDP4

MAKASFILLGTLFLFGAIASIQAKEDLKEVTHKVYFDVEIDGKSAGRVVIGLFGKAVPKT AENFRALCTGEKGVGKSGKPLHYKGSKFHRIIPSFMIQGGDFTHGNGMGGESIYGQKFAD ENFKLKHTGPGVLSMANSGEDTNGSQFFITTVTTSWLDGRHVVFGKVVQGMDVVYKIEAE GKOSGTPKSKVVIADSGELPL

>080458

MLSLLSSDSSLLSLLFLFLIPCLFITSYIGFPVFLLKLIGLIKIKAARDNEKRDEGTYVV REDGLQRELMPRHVAFILDGNRRWAKRAGLTTSQGHEAGAKRLIDIAELCFELGVHTVSA FAFSTENWGRDKIEIDNLMSLIQHYRNKSNIKFFHRSEVRVSVIGNKTKIPESLLKEIHE IEEATKGYKNKHLIMAVDYSGKFDIMHACKSLVKKSEKGLIREEDVDEALIERELLTNCS DFPSPDLMIRTSGEQRISNFFLWQLAYSELFFSPVFWPDFDKDKLLEALASYQRRERRFG CRV

>P92939

MGKGSEDLVKKESLNSTPVNSDTFPAWAKDVAECEEHFVVSREKGLSSDEVLKRHQIYGL
NELEKPEGTSIFKLILEQFNDTLVRILLAAAVISFVLAFFDGDEGGEMGITAFVEPLVIF
LILIVNAIVGIWQETNAEKALEALKEIQSQQATVMRDGTKVSSLPAKELVPGDIVELRVG
DKVPADMRVVALISSTLRVEQGSLTGESEAVSKTTKHVDENADIQGKKCMVFAGTTVVNG
NCICLVTDTGMNTEIGRVHSQIQEAAQHEEDTPLKKKLNEFGEVLTMIIGLICALVWLIN
VKYFLSWEYVDGWPRNFKFSFEKCTYYFEIAVALAVAAIPEGLPAVITTCLALGTRKMAQ
KNALVRKLPSVETLGCTTVICSDKTGTLTTNQMAVSKLVAMGSRIGTLRSFNVEGTSFDP
RDGKIEDWPMGRMDANLQMIAKIAAICNDANVEQSDQQFVSRGMPTEAALKVLVEKMGFP
EGLNEASSDGDVLRCCRLWSELEQRIATLEFDRDRKSMGVMVDSSSGNKLLLVKGAVENV
LERSTHIQLLDGSKRELDQYSRDLILQSLRDMSLSALRCLGFAYSDVPSDFATYDGSEDH

PAHQQLLNPSNYSSIESNLIFVGFVGLRDPPRKEVRQAIADCRTAGIRVMVITGDNKSTA
EAICREIGVFEADEDISSRSLTGIEFMDVQDQKNHLRQTGGLLFSRAEPKHKQEIVRLLK
EDGEVVAMTGDGVNDAPALKLADIGVAMGISGTEVAKEASDMVLADDNFSTIVAAVGEGR
SIYNNMKAFIRYMISSNIGEVASIFLTAALGIPEGMIPVQLLWVNLVTDGPPATALGFNP
PDKDIMKKPPRRSDDSLITAWILFRYMVIGLYVGVATVGVFIIWYTHSSFMGIDLSQDGH
SLVSYSQLAHWGQCSSWEGFKVSPFTAGSQTFSFDSNPCDYFQQGKIKASTLSLSVLVAI
EMFNSLNALSEDGSLVTMPPWVNPWLLLAMAVSFGLHFVILYVPFLAQVFGIVPLSLNEW
LLVLAVSLPVILIDEVLKFVGRCTSGYRYSPRTLSTKOKEE

>094CC0

MSRYFSFFLALFLHYRIIVASPFEGFDAEEDDVTDDSSHLLHHSLPPPLLTQSHSSLSD PDPEPESSAECKSDLITESDLEHQSDSKTPSSTPFEYWDEDEFEGLPVEIETLESPLIT ENGTHADPKTPDLKTSSEAQGDTNDQTKKKKSYAVEIACVCFLIALAINYFVGKRENESL ALAWAAKFASKDTIFQKNFSMLGVSELEDSPLLLKEALNVFKFYASGRRYCHGLLATMEL KSRHDLISRVFNLVVPCKDEITFEVYMNEETMDHVVFAMTKKKAAKTMQKEMRDLQRFAG IVSPPAGRKWVSEEFALISESKEVAADLITDTVLDQVFGDKAVDKYGKNFMSMHISDQHP GKHKKMMLFKFSLPDAKHMDDIVRLVALIPYYIDLVGRYRLSSQARNKTESGRQKAAEEA YKELHNARQEALQKKKAEKKKMMEEAEAKMSAEVIRKKEAKERARQVKKAVPKMKMSRSH

>Q8L586

MAAPRNLTGDGGARQLVKDEESPAASSAAKGLLNDDSPTGKRTKSERFPLSRWEFAVFFT
VFLVFTTGLFCIYLTMPAAEYGKLKVPRTISDLRLLKENLGSYASEYQARFILGYCSTYI
FMQTFMIPGTIFMSLLAGALFGVVRGFVLVVLNATAGACSCFFLSKLVGRPLVNWLWPEK
LRFFQAEIAKRRDRLLNYMLFLRITPTLPNLFINLSSPIVDIPFHVFFLATLVGLMPASY
ITVRAGLALGDLRSVKDLYDFKTLSVLFLIGSISIFPALLKRKRVYE

(6) \mathbb{S}_6 : 22 extracell proteins

>Q40966

MGITGMTYMFTMVLSLIVLIFSASTVGFDYFQFTQQYQPAVCNSNPTPCNDPTDKLFTVH GLWPSNRNGPDPEKCKTTTMNSQKIGNMTAQLEIIWPNVLNRSDHVGFWEREWLKHGTCG YPTIKDDMHYLKTVIKMYITQKQNVSAILSKATIQPNGNNRSLVDIENAIRSGNNNTKPK FKCQKNTRTTTELVEVTLCSNRDLTKFINCPHGPPKGSRYFCPANVKY

>P00693

MGKNGSLCCFSLLLLLLLAGLASGHQVLFQGFNWESWKQSGGWYNMMMGKVDDIAAAGVT
HVWLPPPSHSVSNEGYMPGRLYDIDASKYGNAAELKSLIGALHGKGVQAIADIVINHRCA
DYKDSRGIYCIFEGGTSDGRLDWGPHMICRDDTKYSDGTANLDTGADFAAAPDIDHLNDR
VQRELKEWLLWLKSDLGFDAWRLDFARGYSPEMAKVYIDGTSPSLAVAEVWDNMATGGDG
KPNYDQDAHRQNLVNWVDKVGGAASAGMVFDFTTKGILNAAVEGELWRLIDPQGKAPGVM
GWWPAKAATFVDNHDTGSTQAMWPFPSDKVMQGYAYILTHPGIPCIFYDHFFNWGFKDQI
AALVAIRKRNGITATSALKILMHEGDAYVAEIDGKVVVKIGSRYDVGAVIPAGFVTSAHG
NDYAVWEKNGAAATLORS

>Q9T0N8

MAVVYYLLAGLIACSHALAAGTPALGDDRGRPWPASLAALALDGKLRTDSNATAAASTD FGNITSALPAAVLYPSSTGDLVALLSAANSTPGWPYTIAFRGRGHSLMGQAFAPGGVVVN MASLGDAAAPPRINVSADGRYVDAGGEQVWIDVLRASLARGVAPRSWNDYLYLTVGGTLS NAGISGQAFRHGPQISNVLEMDVITGHGEMVTCSKQLNADLFDAVLGGLGQFGVITRARI
AVEPAPARARWVRFVYTDFAAFSADQERLTAPRPGGGGASFGPMSYVEGSVFVNQSLATD
LANTGFFTDADVARIVALAGERNATTVYSIEATLNYDNATAAAAAVDQELASVLGTLSYV
EGFAFQRDVAYAAFLDRVHGEEVALNKLGLWRVPHPWLNMFVPRSRIADFDRGVFKGILQ
GTDIVGPLIVYPLNKSMWDDGMSAATPSEDVFYAVSLLFSSVAPNDLARLQEQNRRILRF
CDLAGIQYKTYLARHTDRSDWVRHFGAAKWNRFVEMKNKYDPKRLLSPGQDIFN
>040161

MHTKIHLPPCILLLLFSLPSFNVVVGGDGESGNPFTPKGYLIRYWKKQISNDLPKPWFL
LNKASPLNAAQYATYTKLVADQNALTTQLHTFCSSANLMCAPDLSPSLEKHSGDIHFATY
SDKNFTNYGTNEPGIGVNTFKNYSEGENIPVNSFRRYGRGSPRDNKFDNYASDGNVIDQS
FNSYSTSTAGGSGKFTNYAANANDPNLHFTSYSDQGTGGVQKFTIYSQEANAGDQYFKSY
GKNGNGANGEFVSYGNDTNVIGSTFTNYGQTANGGDQKFTSYGFNGNVPENHFTNYGAGG
NGPSETFNSYRDQSNVGDDTFTTYVKDANGGEANFTNYGQSFNEGTDVFTTYGKGGNDPH
INFKTYGVNNTFKDYVKDTATFSNYHNKTSQVLASLMEVNGGKKVNNRWVEPGKFFREKM
LKSGTIMPMPDIKDKMPKRSFLPRVIASKLPFSTSKIAELKKIFHAGDESQVEKMIGDAL
SECERAPSAGETKRCVNSAEDMIDFATSVLGRNVVVRTTEDTKGSNGNIMIGSVKGINGG
KVTKSVSCHQTLYPYLLYYCHSVPKVRVYEADILDPNSKVKINHGVAICHVDTSSWGPSH
GAFVALGSGPGKIEVCHWIFENDMTWAIAD

>P28493

MANISSIHILFLVFITSGIAVMATDFTLRNNCPTTVWAGTLAGQGPKLGDGGFELTPGAS RQLTAPAGWSGRFWARTGCNFDASGNGRCVTGDCGGLRCNGGGVPPVTLAEFTLVGDGGK DFYDVSLVDGYNVKLGIRPSGGSGDCKYAGCVSDLNAACPDMLKVMDQNNVVACKSACER FNTDQYCCRGANDKPETCPPTDYSRIFKNACPDAYSYAYDDETSTFTCTGANYEITFCP >P33154

MNFTGYSRFLIVFVALVGALVLPSKAQDSPQDYLRVHNQARGAVGVGPMQWDERVAAYAR SYAEQLRGNCRLIHSGGPYGENLAWGSGDLSGVSAVNMWVSEKANYNYAANTCNGVCGHY TQVVWRKSVRLGCAKVRCNNGGTIISCNYDPRGNYVNEKPY

>P93164

MPNDSVLSLFFFVTLFTCLLSATSHDDHIFLPSQLHDDDSVSCTATDPSLNYKPVIGILT HPGDGASGRLSNATGVSYIAASYVKFVESGGARVIPLIYNESPENLNKKLDLVNGVLFTG GWAVSGPYLDTLGNIFKKALERNDAGDHFPVIAFNLGGNLVIRIVSEQTDILEPFTASSL PSSLVLWNEANAKGSLFQRFPSDLLTQLKTDCLVLHNHRYAISPRKLQYNTKLSDFFEIL ATSGDRDGKTFVSTARGRKYPVTVNLWQPEKNAFEWATSLKAPHTEDAIRVTQSTANFFI SEARKSTNTPDAQKVRDSLIYNYKPTFGGTAGKGYDQVYLFE

>P80691

VAPKPIVDIDGKPVLYGVDYFVVSAIWGAGGGGLTVYGPGNKKKCPLSVVQDPFDNGEPI IFSAIKNVKDNIVFESVDLNVKFNITINCNETTAWKVDRFPGVIGWTVTLGGEKGYHGFE STHSMFKIKKAGLPFSYKFHFCPSYPRTRLIPCNNVDIFFDKYRIRRLILTNDAKEFVFI KTNR

>005091

MELKFSTFLSLTLLFSSVLNPALSDLCNPDDKKVLLQIKKAFGDPYVLASWKSDTDCCDW YCVTCDSTTNRINSLTIFAGQVSGQIPALVGDLPYLETLEFHKQPNLTGPIQPAIAKLKG LKSLRLSWTNLSGSVPDFLSQLKNLTFLDLSFNNLTGAIPSSLSELPNLGALRLDRNKLT GHIPISFGQFIGNVPDLYLSHNQLSGNIPTSFAQMDFTSIDLSRNKLEGDASVIFGLNKT TQIVDLSRNLLEFNLSKVEFPTSLTSLDINHNKIYGSIPVEFTQLNFQFLNVSYNRLCGQ IPVGGKLQSFDEYSYFHNRCLCGAPLPSCK

>P33432

MKALFLIGLLALVASTAFAQYSEVVGSYDVAGGGGAQQCPVETKLNSCRNYLLDRCSTMK DFPVTWRWWKWWKGGCQELLGECCSRLGQMPPQCRCNIIQGSIQGDLGGIFGFQRDRASK VIQEAKNLPPRCNQGPPCNIPGTIGYYW

>09S7Y7

MASSSSLAFSLSLLLALILCFSPTQSYKTIGKGYRLVSIEESPDGGFIGYLQVKQKNKI YGSDITTLRLFVKHETDSRLRVHITDAKOORWEVPYNLLPREOPPOVGKVIGKSRKSPIT VQEISGSELIFSYTTDPFTFAVKRRSNHETLFNTTSSLVFKDQYLEISTSLPKEASLYGL GENSQANGIKLVPNEPYTLYTEDVSAINLNTDLYGSHPMYMDLRNVGGKAYAHAVLLLNS NGMDVFYRGDSLTYKVIGGVFDFYFIAGPSPLNVVDQYTQLIGRPAPMPYWSLGFHQCRW GYHNLSVVEDVVDNYKKAKIPLDVIWNDDDHMDGHKDFTLNPVAYPRAKLLAFLDKIHKI GMKYIVINDPGIGVNASYGTFORAMAADVFIKYEGKPFLAOVWPGPVYFPDFLNPKTVSW WGDEIKRFHDLVPIDGLWIDMNEVSNFCSGLCTIPEGKOCPSGEGPGWVCCLDCKNITKT RWDDPPYKINATGVVAPVGFKTIATSATHYNGVREYDAHSIYGFSETIATHKGLLNVOGK RPFILSRSTFVGSGQYAAHWTGDNQGTWQSLQVSISTMLNFGIFGVPMVGSDICGFYPQP TEELCNRWIEVGAFYPFSRDHANYYSPROELYOWDTVADSARNALGMRYKILPFLYTLNY EAHMTGAPIARPLFFSFPEYTECYGNSRQFLLGSSFMISPVLEQGKTEVEALFPPGSWYH MFDMTQAVVSKNGKRVTLPAPLNFVNVHLYQNTILPTQQGGLISKDARTTPFSLVIAFPA GASEGYATGKLYLDEDELPEMKLGNGOSTYVDFYASVGNGTMKMWSOVKEGKFALSKGWV IEKVSVLGLRGAGOVSEIQINGSPMTKKIEVSSKEHTYVIGLEDEEENKSVMVEVRGLEM LVGKDFNMSWKMGIN

>08GW72

MNSQITLFFFFFSILSLSQISNSSSLLKPHPCPILPLPSSQQLQWQLGSMAMFLHFGPNT
FTDSEWGTGKANPSIFNPTHLNASQWVQIAKDSGFSRVILTAKHHDGFCLWPSEYTDYSV
KSSQWRNGAGDVVAGLASAAKEAGIGLGLYLSPWDRHEQCYGKTLEYNEFYLSQMTELLT
KYGEIKEVWLDGAKGDGEKDMEYFFDTWFSLIHQLQPKAVIFSDAGPDVRWIGDEAGLAG
STCWSLFNRTNAKIGDTEPSYSQEGDGYGQDWVPAECDVSIRPGWFWHASESPKPAVQLL
DIYYNSVGRNCLFLLNVPPNSSGLISEQDIKVLEEFSEMKNSIFSNNLARKAFVNSSSIR
GDQSSQFGPKNVLEEGLDKYWAPEENQNEWVLYLEFKDLVSFNVLEIREPIHMGQRIASF
HLETRKTGSGEWERVVSGTTVGNKRLLRFLNVVESRSLKLVVDKARTDPLISYLGLYMDK
FSGSSRNTTKITITRTLKEEQQLHDL

>038716

MATVQKSQHSHFFLLVGCIVHLSNFCSTTTAQFDYFKLVLQWPNSYCSLKTTHCPRTRLP SQFTIHGLWPDNKSWPLSNCRDTSADVLKITDKGLIQDLAVHWPDLTRRQRKVPGQKFWV TQWKKHGACALPMYSFNDYFVKALELKKRNNVLDMLSRKSLTPGDQRVDVSDVNGAITKV TGGIAILKCPEGYLTEVIICFDPSGFPVIDCPGPFPCKDDPLEFQVLSRRKFQDL

>P93349

MGVKGLLFSIVLINLSLLGLCGYPRKPVDVPFWKNYEPSWASHHIKYLSGGSTVDLVLDR SSGAGFQSKKSYLFGHFSMKLKLVGGDSAGVVTAFYLSSNNAEHDEIDFEFLGNRTGQPY ILQTNVFTGGKGDREQRIYLWFDPTKGYHSYSVLWNTFQIVIFVDDVPIRAFKNSKDLGV KFPFNQPMKIYSSLWDADDWATRGGLEKTDWSNAPFTASYTSFHVDGCEAATPQEVQVCN TKGMRWWDQKAFQDLDALQYRRLRWVRQKYTIYNYCTDRKRYPTLPPECTKDRDI >Q94EG3

MAAFGINSKIFQSMEMAILFLLAISIDRYCFAADEDMLQDVCVADLHSKVKVNGFPCKTN FTAADFSSLAISKPGATNNKFGSVVTTANVEQVPGLNTLGVSLARIDYAPGGINPPHTHP RASEMVFVMEGELDVGFITTANVLVSKKIIKGEVFVFPRGLVHFQKNNGEVPAAVISAFN SQLPGTQSIPITLFGASPPVPDDVLAQTFQINTEDVQQIKSKFAPVKKF >O9FXE5

MNPILSSLFALSLLSSLSPSTHAHQCHFPAIFNFGDSNSDTGGLSAAFGQAGPPHGSSFF GSPAGRYCDGRLVIDFIAESLGLPYLSAFLDSVGSNFSHGANFATAGSPIRALNSTLRQS GFSPFSLDVQFVQFYNFHNRSQTVRSRGGVYKTMLPESDSFSKALYTFDIGQNDLTAGYF ANKTVEQVETEVPEIISQFMNAIKNIYGQGGRYFWIHNTGPIGCLAYVIERFPNKASDFD SHGCVSPLNHLAQQFNHALKQAVIELRSSLSEAAITYVDVYSLKHELFVHAQGHGFKGSL VSCCGHGGKYNYNKGIGCGMKKIVKGKEVYIGKPCDEPDKAVVWDGVHFTQAANKFIFDK IAPGLSKACKRO

>P81131

MMRKALLALCVATAFAVAQAQNVAYPNFPYCQCIKSPSPYSLEPVVKSNRTGQYCFTLRV
TKPSPSATGYCATKADIKKIEINVNQVCDVFGNVVNATLNGVPTKVGPAFDTPPDGPNTS
RILRFTQLNLGLDSDGAMLCITLGQNDKGKGCTTLEDLCAPPAGAPKGTCSLALFDSKPD
CCPISRVSPPAPPPPPPPPPPPPPPPPPPVAVPITPPCKTCVYATITALPPLLFPFQLTPSICQSV
ADKIAGDLEMIVTSYSIGYSGATITCSGNVIKVCASFSLPPGAPYTGLQADISNALTFWL
SLLAPSTGCPAYFANHQVTVTVGGDGDPNSVTCLEGTATTTCKPGNPDFPKCECETKPAA
TRFAALPTLTQEPGRPSNRTNSTLYCFTLQVVAPLNPNGLCGNTTTLLKAELWGNDIPTQ
RRKILALAFKAAGASSPLRYLSPSWGSAGEQTLKVSGLNWDASQADGAKICMELSNDTNL
KTFCNTGQDTCWINLFSPDKQCCPLFAASLTP

>P42820

MTLLLKNTLYLALIISVISSFPTSLFAQNCGCAPNLCCSNFGFCGTGTPYCGVGNCQSGP
CEGGTPTTPTTPTTPTTPGTGGGGSSVSDIVSQAFFDGIIGQAAASCPGKNFYTRAAFLS
AVDPKFGNEGSSDDNKREIAAFFAHISHETTNLCHIEERDGDVGDAYCDQDKAAQYPCAA
GKKYYGRGPLQLSWNYNYALAGQAIGFDGLGNPEKVATDVNTSFKAAMWFWMTNVHSVMN
QGFGATTKAINGALECNGQNQDQANDRIQFYKKYCADFGVAPGDNLTC

>P19172

MTNMTLRKHVIYFLFFISCSLSKPSDASRGGIAIYWGQNGNEGNLSATCATGRYAYVNVA FLVKFGNGQTPELNLAGHCNPAANTCTHFGSQVKDCQSRGIKVMLSLGGGIGNYSIGSRE DAKVIADYLWNNFLGGKSSSRPLGDAVLDGIDFNIELGSPQHWDDLARTLSKFSHRGRKI YLTGAPQCPFPDRLMGSALNTKRFDYVWIQFYNNPPCSYSSGNTQNLFDSWNKWTTSIAA QKFFLGLPAAPEAAGSGYIPPDVLTSQILPTLKKSRKYGGVMLWSKFWDDKNGYSSSILA SV

>P05117

MVIQRNSILLLIIIFASSISTCRSNVIDDNLFKQVYDNILEQEFAHDFQAYLSYLSKNIE SNNNIDKVDKNGIKVINVLSFGAKGDGKTYDNIAFEQAWNEACSSRTPVQFVVPKNKNYL LKQITFSGPCRSSISVKIFGSLEASSKISDYKDRRLWIAFDSVQNLVVGGGGTINGNGQV WWPSSCKINKSLPCRDAPTALTFWNCKNLKVNNLKSKNAQQIHIKFESCTNVVASNLMIN ASAKSPNTDGVHVSNTQYIQISDTIIGTGDDCISIVSGSQNVQATNITCGPGHGISIGSL GSGNSEAYVSNVTVNEAKIIGAENGVRIKTWQGGSGQASNIKFLNVEMQDVKYPIIIDQN YCDRVEPCIQQFSAVQVKNVVYENIKGTSATKVAIKFDCSTNFPCEGIIMENINLVGESG

KPSEATCKNVHFNNAEHVTPHCTSLEISEDEALLYNY

>09M099

MARTHFIFLLVALLSTTFPSSSSSREQEKDRIKALPGQPKVAFSQYSGYVNVNQSHGRA
LFYWLTESSSPSPHTKPLLLWLNGGPGCSSIAYGASEEIGPFRINKTGSNLYLNKFAWNK
DANLLFLESPAGVGYSYTNTSSDLKDSGDERTAQDNLIFLIKWLSRFPQYKYRDFYIAGE
SYAGHYVPQLAKKINDYNKAFSKPIINLKGFLVGNAVTDNQYDSIGTVTYWWTHAIISDK
SYKSILKYCNFTVERVSDDCDNAVNYAMNHEFGDIDQYSIYTPTCVAAQQKKNTTGFFVR
MKNTLLRRRLVSGYDPCTESYAEKYFNRPDVQRAMHANVTGIRYKWTACSDVLIKTWKDS
DKTMLPIYKELAASGLRIWIFSGDTDSVVPVTATRFSLSHLNLPVKTRWYPWYTDNQVGG
WTEVYKGLTFATVRGAGHEVPLFEPKRALILFRSFLAGKELPRSY
>P52399

MALCIKNGFLAAALVLVGLLMCSIQMIGAQSIGVCYGKIANNLPSEQDVINLYKANGIRK
MRIYYPDKNIFKALKGSNIEIILDVPNQDLEALANSSIANGWVQDNIRSHFPYVKFKYIS
IGNEVSPINNGQYSQFLLHAMENVYNALAASGLQDKIKVTTATYSGLLANTYPPKASIFR
GEFNSFINPIIQFLAQNNLPLLANVYPYFVHISNTADVPLSYALFTQRGKNSAGYQNLFD
AILDSMYFAVEKAGGPNVEIIVSESGWPSEGNSAATIENAQTYYRNLIDHVKRGAGTPKK
PGKSIETYLFAMFDENVKKGEITEKHFGLFSPDQRAKYQLNFNSLMPIYIDISRVI

(7) \mathbb{S}_7 : 21 Golgi apparatus proteins

>09M2Y6

MARRQVGSTRRVGDGGSFPFAGALHSKSRSSPLLSICLVLVGACLLIGYAYSGPGIFKSI KEVSKVTGDYSCTAEVQRAIPVLKKAYGDGMRKVLHVGPDTCSVVSSLLKEEETEAWGVE PYDIEDADSHCKSFVSKGLVRVADIKFPLPYRAKSFSLVIVSDALDYLSPKYLNKTVPEL ARVASDGVVLFAGLPGQQRAKVAELSKFGRPAKMRSASWWNRFFVQTNLEENDAPSKKFE QAVSKGLYKPACQVFHLKPLH

>09SA77

MFSFGRARSQGRQNRSMSLGGLDYADPKKKNNYLGKILLTASLTALCIFMLKQSPTFNTP
SVFSRHEPGVTHVLVTGGAGYIGSHAALRLLKESYRVTIVDNLSRGNLAAVRILQELFPE
PGRLQFIYADLGDAKAVNKIFTENAFDAVMHFAAVAYVGESTQFPLKYYHNITSNTLVVL
ETMAAHGVKTLIYSSTCATYGEPDIMPITEETPQVPINPYGKAKKMAEDIILDFSKNSDM
AVMILRYFNVIGSDPEGRLGEAPRPELREHGRISGACFDAARGIMPGLQIKGTDYKTADG
TCVRDYIDVTDLVDAHVKALQKAKPRKVGIYNVGTGKGSSVKEFVEACKKATGVEIKIDY
LPRRAGDYAEVYSDPSKIRKELNWTAKHTNLKESLETAWRWQKLHRNGYGLTTSSVSVY
>Q9SWH4

MATRNRTTVYRKHRDACKSARAPLSLSASDSFGGPVIEMVSGSFSRSNHSSYAPLNSYDP GPSSSDAFTIGMPPAWVDDSEEITFNIQKVRDKMNELAKAHSKALMPTFGDNKGIHREVE MLTHEITDLLRKSEKRLQMLSTRGPSEESNLRKNVQRSLATDLQNLSMELRRKQSTYLKR LQQQKEGQDEVDLEFNVNGKMSRLDEEDELGGMGFDEHQTIKLKEGQHVSAEREREIQQV LGSVNDLAQIMKDLSALVIDQGTIVDRIDYNVQNVSTSVEEGYKQLQKAERTQREGAMVK CATILLVLCLIMIVLLILKNILF

>Q8W486

 $\label{thm:light} {\tt MRRLGHHRLHGKTGGVGTKGMVAKLSIGVIVLLICTLSLLFSANIGSNREPTRPSKINVE} \\ {\tt ELWESAKSGGWRPSSAPRSDWPPPTKETNGYLRVRCNGGLNQQRSAICNAVLAARIMNAT} \\ {\tt LVLPELDANSFWHDDSGFQGIYDVEHFIETLKYDVKIVGKIPDVHKNGKTKKIKAFQIRP} \\ {\tt LVLPELDANSFWHDDSGFQGIYDVEHFIETLKYDVHTDSGFQGIYDVHTDSGFQ$

PRDAPIEWYLTTALKAMREHSAIYLTPFSHRLAEEIDNPEYORLRCRVNYHALRFKPHIM KLSESIVDKLRSOGHFMSIHLRFEMDMLAFAGCFDIFNPEEQKILRKYRKENFADKRLIY NERRAIGKCPLTPEEVGLILRAMRFDNSTRIYLAAGELFGGEQFMKPFRTLFPRLDNHSS VDPSEELSATSQGLIGSAVDYMVCLLSDIFMPTYDGPSNFANNLLGHRLYYGFRTTIRPD RKALAPIFIAREKGKRAGFEEAVRRVMLKTNFGGPHKRVSPESFYTNSWPECFCOMNPKK SSDKCPPNNVIEILDSRLESIRDPDSTSQTNSTVTGLER

>0941R4

MKLYEHDGVDLEDGKTVKSGGDKPIPRKIHNRALLSGLAYCISSCSMILVNKFVLSSYNF NAGIFLMLYONFVSVIIVVGLSLMGLITTEPLTLRLMKVWFPVNVIFVGMLITSMFSLKY INVAMVTVLKNVTNVITAVGEMYLFNKQHDNRVWAALFLMIISAVSGGITDLSFNAVGYA WQIANCFLTASYSLTLRKTMDTAKQVTQSGNLNEFSMVLLNNTLSLPLGLLLSYFFNEMD YLYQTPLLRLPSFWMVMTLSGLLGLAISFTSMWFLHQTGATTYSLVGSLNKIPLSIAGIV LFNVPTSLQNSASILFGLVAGVVFARAKMREKS

>0946Y7

MSSAQDPFYIVKEEIQDSIDKLQSTFHKWERISPDMGDQAHVAKELVATCGSIEWQVDEL EKAITVAAKDPSWYGIDEAELEKRRRWTSNARTOVRNVKSGVLAGKVSSGAGHASEVRRE LMRMPNSGEASRYDOYGGRDDDGFVOSESDROMLLIKOODEELDELSKSVORIGGVGLTI HDELVAQERIIDELDTEMDSTKNRLEFVQKKVGMVMKKAGAKGQMMMICFLLVLFIILFV LVFLT

>08RXL8

MSEGOKFOLGTIGALSLSVVSSVSIVICNKALISTLGFTFATTLTSWHLLVTFCSLHVAL WMKMFEHKPFDPRAVMGFGILNGISIGLLNLSLGFNSVGFYOMTKLAIIPCTVLLETLFF RKKFSRKIOFSLTILLLGVGIATVTDLOLNMLGSVLSLLAVVTTCVAOIMTNTIOKKFKV SSTQLLYQSCPYQAITLFVTGPFLDGLLTNQNVFAFKYTSQVVFFIVLSCLISVSVNFST FLVIGKTSPVTYQVLGHLKTCLVLAFGYVLLRDPFDWRNILGILVAVIGMVVYSYYCSIE TQQKASETSTQLPQMKESEKDPLIAAENGSGVLSDGGGGVQQKTVAPVWNSNKDFQA

>004300

MASLPKPTPLLKDELDIVIPTIRNLDFLEMWRPFFEQYHLIIVQDGDPSKVIKVPEGFDY ELYNRNDINRILGPKASCISFKDSACRCFGYMVSKKKYIYTIDDDCFVAKDPTGHEINAL EOHIKNLLSPSTPFFFNTLYDPYREGTDFVRGYPFSLREGVPTAVSHGLWLNIPDYDAPT OLVKPHERNTRFVDAVLTIPKGSLFPMCGMNLAFNRELIGPAMYFGLMGDGOPIGRYDDM ${\tt WAGWCIKVICDHLGYGVKTGLPYIWHSKASNPFVNLKKEYKGIFWQEEIIPFFQAATLSK}$ DCTSVQKCYIELSKQVKEKLGTIDPYFIKLADAMVTWVEAWDEINNNKSEETTSTKASEV AATK

>09SE83

MEAIDELSQLSDSMKQAASLLADEDPDETSSSKRPATFLNVVALGNVGAGKSAVLNSLIG HPVLPTGENGATRAPIIIELSRESSLSSKAIILQIDNKSQOVSASALRHSLQDRLSKGAS GKNRDEINLKLRTSTAPPLKLVDLPGLDQRIVDESMIAEYAQHNDAILLVIVPASQASEI SSSRALKIAKEYDPESTRTIGIIGKIDQAAENSKALAAVQALLSNQGPPKTTDIPWVAVI GOSVSIASAOSGSGENSLETAWRAESESLKSILTGAPOSKLGRIALVDTLASOIRSRMKL RLPSVLSGLQGKSQIVQDELARLGEQLVNSAEGTRAIALELCREFEDKFLLHLAGGEGSG WKVVASFEGNFPNRIKOLPLDRHFDLNNVKRVVLEADGYOPYLISPEKGLRSLIKIVLEL AKDPARLCVDEVHRVLVDIVSASANATPGLGRYPPFKREVVAIASAALDGFKNEAKKMVV ALVDMERAFVPPOHFIRLVORRMERORREEELKGRSSKKGODAEOSLLSRATSPOPDGPT

AGGSLKSMKDKPSPQDKETPEVSGLKTAGPEGEITAGYLMKKSAKTNGWSRRWFVLNEKT
GKLGYTKKQEERNFRGTITLEECTIEEIPEDEVEKSKSSKDKKANGPDSKGPGLVFKITC
KVPYKTVLKAHNALVLKAESVVDKNEWINKLQKVIQARGGQVGSVSMRQSLSEGSLDKMV
RKPIDPEEELRWMSQEVRGYVEAVLNSLAANVPKAVVLCQVEKAKEDMLNQLYSSISAIG
NERIESLIQEDQNVKRRRERYQKQSSLLSKLTRQLSIHDNRAAAASSYSDNSGTESSPRA
SGGSSGDDWMNAFNSAANGPSDSLSKYGSGGHSRRYSDPAQNGDAASPGSGSNRRTTPNR
LPPAPPPTGSAYRY

>07XJ98

MFPRVSMRRRSAEVSPTEPMEKGNGKNQTNRICLLVALSLFFWALLLYFHFVVLGTSNID
KQLQLQPSYAQSQPSSVSLRVDKFPIEPHAAPSKPPPKEPLVTIDKPILPPAPVANSSST
FKPPRIVESGKKQEFSFIRALKTVDNKSDPCGGKYIYVHNLPSKFNEDMLRDCKKLSLWT
NMCKFTTNAGLGPPLENVEGVFSDEGWYATNQFAVDVIFSNRMKQYKCLTNDSSLAAAIF
VPFYAGFDIARYLWGYNISRRDAASLELVDWLMKRPEWDIMRGKDHFLVAGRITWDFRRL
SEEETDWGNKLLFLPAAKNMSMLVVESSPWNANDFGIPYPTYFHPAKDSEVFEWQDRMRN
LERKWLFSFAGAPRPDNPKSIRGQIIDQCRNSNVGKLLECDFGESKCHAPSSIMQMFQSS
LFCLQPQGDSYTRRSAFDSMLAGCIPVFFHPGSAYTQYTWHLPKNYTTYSVFIPEDDVRK
RNISIEERLLQIPAKQVKIMRENVINLIPRLIYADPRSELETQKDAFDVSVQAVIDKVTR
LRKNMIEGRTEYDYFVEENSWKYALLEEGQREAGGHVWDPFFSKPKPGEDGSSDGNGGTT
ISADAAKNSWKSEORDKTO

>09LS42

MEVSQDGSERDKTPPPSSSSSSSSPIPVVTNFWKEFDLEKEKSLLDEQGLRIAENQENSQ
KNRRKLAESTRDFKKASPENKLSMFNSLLKGYQEEVDNITKRAKFGENAFLNIYQKLYEA
PDPFPALASIAEQDRKLSEVESENRKMKVELEEFRTEATHLKNQQATIRRLEERNRQLEQ
QMEEKIKEVVEIKQRNLAEENQKTMELLKDREQALQDQLRQAKDSVSTMQKLHELAQNQL
FELRAQSDEETAGKQSEVSLLMDEVERAQTRLLTLEREKGHLRSQLQTANEDTDNKKSDN
IDSNSMLENSLTAKEKIISELNMEIHNVETALANERESHVAEIKKLNSLLNKKDTIIEEM
KKELQERPSAKLVDDLRKKVKILQAVGYNSIEAEDWDAATTGEEMSKMESLLLDKNRKME
HEVTQLKVQLSEKASLLEKAEAKGEELTAKVNEQQRLIQKLEDDILKGYGSKERKGALFD
EWEFSEAGVAEQSEPMDQKHVPSEQDQSSMLKVICSQRDRFRARLRETEEEIRRLKEKIG
FLTDELEKTKADNVKLYGKIRYVQDYNHDKVVSRGSKKYVEDLESGFSSDVESKYKKIYE
DDINPFAAFSKKEREQRIKDLGIRDRITLSSGRFLLGNKYARTFAFFYTIGLHVLVFTCL
YRMSAYSYLSHGAEETLMTEATTNLPHGL

>Q56ZN6

MMMDEDVEQASLMSFNDRPRAFPNMRSKTYSPLIFRIIRKLNVRVLSIILLFCFGAIFYM
GASTSPIIVFVFTVCIISFLLSIYLTKWVLAKDEGPPEMVEISDAIRDGAEGFFRTQYST
ISKMAILLAFVILCIYLFRSLTPQQEAAGLGRAMSAYITVAAFLLGALCSGIAGYVGMWV
SVRANVRVSSAARRSAREALQIAVRAGGFSALVVVGMAVIGIAILYSTFYVWLGVGSPGS
MNVTDLPLLLVGYGFGASFVALFAQLGGGIYTKGADVGADLVGKVEQGIPEDDPRNPAVI
ADLVGDNVGDCAARGADLFESIAAEIISAMILGGTMAKKCKIEDPSGFILFPLVVHSFDL
IISSIGILSIKGTRDASVKSPVEDPMAVLQKGYSLTIILAVITFGASTRWLLYTEQAPSA
WFNFALCGLVGIITAYIFVWISKYYTDYKHEPVRTLALASSTGHGTNIIAGVSLGLESTA
LPVLTISVAIISAYWLGNTSGLVDENGIPTGGLFGTAVATMGMLSTAAYVLTMDMFGPIA
DNAGGIVEMSQQPESVREITDLLDAVGNTTKATTKGFAIGSAALASFLLFSAYMDEVSAF
ANVSFKEVDIAIPEVFVGGLLGAMLIFLFSAWACAAVGRTAQEVVNEVRROFIERPGIME

YKEKPDYSRCVAIVASAALREMIKPGALAIASPIVVGLVFRILGYYTGQPLLGAKVVASM LMFATVCGILMALFLNTAGGAWDNAKKYIETGALGGKGSEAHKAAVTGDTVGDPFKDTAG PSIHVLIKMLATITLVMAPVFL

>09SA23

MASSSDSWMRAYNEALKLSEEINGMISERSSSAVTGPDAQRRASAIRRKITIFGNKLDSL QSLLAEIHGKPISEKEMNRRKDMVGNLRSKANQMANALNMSNFANRDSLLGPDIKPDDSM SRVTGMDNQGIVGYQRQVMREQDEGLEQLEGTVMSTKHIALAVSEELDLQTRLIDDLDYH VDVTDSRLRRVQKSLAVMNKNMRSGCSCMSMLLSVLGIVGLAVVIWMLVKYM >09ZSY2

MSAKKLEGSSAPANRRDPYEVLCVSKDANDQEIKSAYRKLALKYHPDKNANNPDASELFK EVAFSYSILSDPEKRRHYDNAGFEALDADGMDMEIDLSNLGTVNTMFAALFSKLGVPIKT TVSANVLEEAMNGTVTVRPLPIGTSVSGKVEKQCAHFFGVTISEQQAESGVVVRVTSTAQ SKFKLLYFEQDSSGGYGLALQEEREKTGKVTSAGMYFLHFQVYRMDTTVNALAAAKDPES AFFKRLEGLQPCEVSELKAGTHIFAVYGDNFFKTASYTIEALCAKTYEDTTEKLKEIEAQ ILRKRNELRQFETEYRKALARFQEVTNRYTQEKQTVDELLKQRDTIHSTFSVVKTPSGNN LSNGSSSKAQGDESKGDGDSAGEEGGTENRDKSKRKWFNLNLKGSDKKLG

>Q9LK31

MANKPDHHHHHHQSSRRLMLVLYFTSVLGIGFIAAFLCLSSSIPSVSAVFSIWVPVNRPE
IQIPIIDSKIVQKRSKQSNDTKDHVRFLSAIFADIPAPELKWEEMESAPVPRLDGYSVQI
NNLLYVFSGYGSLDYVHSHVDVFNFTDNKWCDRFHTPKEMANSHLGIVTDGRYVYVVSGQ
LGPQCRGPTSRSFVLDSFTKTWLEFPSLPAPRYAPATQIWRGRLHVMGGSKENRNAVAFD
HWSIAVKDGKALDEWREEVPIPRGGPHRACVVANDKLLVIGGQEGDFMAKPNSPIFKCSR
RREIFNGEVYMMDEEMKWKMLPPMPKNNSHIESAWIIVNNSIVIVGGTTDWHPVTKRLVL
VGEIFRFQLDTLTWSVIGRLPYRVKTAMAGFWNGYLYFTSGQRDRGPDNPQPGKVIGEMW
RTKLKF

>09SEL5

MSDVFEGYERQYCELSTNLSRKCHSASVLSNGEEKKGKIAEIKSGIDEADVLIRKMDLEA RSLQPSAKAVCLSKLREYKSDLNQLKKEFKRVSSADAKPSSREELMESGMADLHAVSADQ RGRLAMSVERLDQSSDRIRESRRLMLETEEVGISIVQDLSQQRQTLLHAHNKLHGVDDAI DKSKKVLTAMSRRMTRNKWIITSVIVALVLAIILIISYKLSH

>05W7F2

MHFTKLDDSPMFRKQLQSMEESAEILRERSLKFYKGCRKYTEGLGEAYDGDIAFASALET
FGGGHNDPISVAFGGPVMTKFTIALREIGTYKEVLRSQVEHILNDRLLQFANMDLHEVKE
ARKRFDKASLTYDQAREKFLSLRKGTKSDVAAALEQELHTSRSMFEQARFNLVTALSNVE
AKKRFEFLEAVSGTMDAHLRYFKQGYELLHQMEPYINQVLTYAQQSRERSNYEQAALNEK
MQEYKRQVDRESRWGSNGSNGSPNGDGIQAIGRSSHKMIDAVMQSAARGKVQTIRQGYLS
KRSSNLRGDWKRRFFVLDSRGMLYYYRKQCSKPSGSGSQLSGQRNSSELGSGLLSRWLSS
NNHGHGGVHDEKSVARHTVNLLTSTIKVDADQSDLRFCFRIISPTKNYTLQAESALDQMD
WIEKITGVIASLLSSQVPEQRLPGSPMGSGHHRSASESSSYESSEYDHPTTEEFVCERSF
LGYNERPSRSFQPQRSIRKGEKPIDALRKVCGNDKCADCGAPEPDWASLNLGVLVCIECS
GVHRNLGVHISKVRSLTLDVKVWEPSVISLFQALGNTFANTVWEELLHSRSAIHFDPGLT
VSDKSRVMVTGKPSYADMISIKEKYIQAKYAEKLFVRRSRDSDFPQSAAQQMWDAVSGND
KKAVYRLIVNGDADVNYVYDQTSSSSLTLSRVILVPERPKREDVLLRLRNELLDRTGSSS
NISPEGSGGSSLLHCACEKADLGMVELLLQYGANVNASDSSGOTPLHCCLLRGKVTIARL

LLTRGADPEAMNREGKTALDIAAESNFTDPEVLALLSDTNGYNHRQC >Q6UDF0

MRNLIFEEPEGIPGNSSSSLRYAWQSIRAPVIIPLLKLAVIVCSVMSIMLFVERVAMAAV
ILIVKVLRKKRYTKYNLEAMKQKLERSKKYPMVLIQIPMYNEKEVYKLSIGAVCGLSWPA
DRFIVQVLDDSTNPVLRELVEMECQKWIQKGVNVKYENRRNRNGYKAGALKEGLEKQYVE
DCEFVAIFDADFQPDADFLWNTIPYLLENPKLGLVQARWKFVNSEECMMTRLQEMSLDYH
FSVEQEVGSSTYSFFGFNGTAGVWRIQAIKDAGGWKDRTTVEDMDLAVRASLHGWEFVFV
GDVKVKNELPSTFKAYRFQQHRWSCGPANLFKKMTKEIICCKRVPLLKRLHLIYAFFFVR
KIVAHWVTFFFYCIVIPACVIVPEVNLKKQIAIYIPATITILNAVSTPRSMHLLVLWILF
ENVMSLHRTKAAIIGLLEANRVNEWVVTEKLGNAMKQRNNARPSRASRFRIIERIHPLEI
IVGMYMLHCATYDLLFGHDHFFVYLLLQAGAFFTMGFGLVGTIVPT

>049048

MVLVTSVRDYINRMLQDISGMKVLILDSETVSNVSIVYSQSELLQKEVFLVEMIDSISVS KESMSHLKAVYFIRPTSDNIQKLRYQLANPRFGEYHLFFSNLLKDTQIHILADSDEQEVV QQVQEYYADFVSGDPYHFTLNMASNHLYMIPAVVDPSGLQRFSDRVVDGIAAVFLALKRR PVIRYQRTSDTAKRIAHETAKLMYQHESALFDFRRTESSPLLLVIDRRDDPVTPLLNQWT YQAMVHELIGLQDNKVDLKSIGSLPKDQQVEVVLSSEQDAFFKSNMYENFGDIGMNIKRM VDDFQQVAKSNQNIQTVEDMARFVDNYPEYKKMQGNVSKHVTLVTEMSKLVEARKLMTVS QTEQDLACNGGQGAAYEAVTDLLNNESVSDIDRLRLVMLYALRYEKENPVQLMQLFNKLA SRSPKYKPGLVQFLLKQAGVEKRTGDLFGNRDLLNIARNMARGLKGVENVYTQHQPLLFQ TMESITRGRLRDVDYPFVGDHFQQGRPQEVVIFMVGGTTYEESRSVALQNATNSGVRFIL GGTAVLNSKRFLKDLEEAQRISRSGSHMV

>P93026

MKLGLFTLSFLLILNLAMGRFVVEKNNLKVTSPDSIKGIYECAIGNFGVPQYGGTLVGTV
VYPKSNQKACKSYSDFDISFKSKPGRLPTFVLIDRGDCYFTLKAWIAQQAGAAAILVADS
KAEPLITMDTPEEDKSDADYLQNITIPSALITKTLGDSIKSALSGGDMVNMKLDWTESVP
HPDERVEYELWTNSNDECGKKCDTQIEFLKNFKGAAQILEKGGHTQFTPHYITWYCPEAF
TLSKQCKSQCINHGRYCAPDPEQDFTKGYDGKDVVVQNLRQACVYRVMNDTGKPWVWWDY
VTDFAIRCPMKEKKYTKECADGIIKSLGIDLKKVDKCIGDPEADVENPVLKAEQESQIGK
GSRGDVTILPTLVVNNRQYRGKLEKGAVLKAMCSGFQESTEPAICLTEDLETNECLENNG
GCWQDKAANITACRDTFRGRLCECPTVQGVKFVGDGYTHCKASGALHCGINNGGCWRESR
GGFTYSACVDDHSKDCKCPLGFKGDGVKNCEDVDECKEKTVCQCPECKCKNTWGSYECSC
SNGLLYMREHDTCIGSGKVGTTKLSWSFLWILIIGVGVAGLSGYAVYKYRIRSYMDAEIR
GIMAQYMPLESOPPNTSGHHMDI

>08H166

MSAKTILSSVVLVVLVAASAAANIGFDESNPIRMVSDGLREVEESVSQILGQSRHVLSFA RFTHRYGKKYQNVEEMKLRFSIFKENLDLIRSTNKKGLSYKLGVNQFADLTWQEFQRTKL GAAQNCSATLKGSHKVTEAALPETKDWREDGIVSPVKDQGGCGSCWTFSTTGALEAAYHQ AFGKGISLSEQQLVDCAGAFNNYGCNGGLPSQAFEYIKSNGGLDTEKAYPYTGKDETCKF SAENVGVQVLNSVNITLGAEDELKHAVGLVRPVSIAFEVIHSFRLYKSGVYTDSHCGSTP MDVNHAVLAVGYGVEDGVPYWLIKNSWGADWGDKGYFKMEMGKNMCGIATCASYPVVA

(8) \mathbb{S}_2 : 150 mitochondrion proteins

>P46269

MGKQPVKLKAVVYAISPFQQKIMPGLWKDLPGKIHHKVSENWISATLLLGPLVGTYSYVQ HFLEKEKLEHRY

>08L6J3

MSSTKTPISLTIKLNQFTDKPTGLDINRYHNSPIMWRNIIKQLSSRTPQKLLFSSKNRTY SFLGFGODSVFKDNTKFRSLIPISCSNIVMGFONLGEYLPGDEFLSRPLLKNOVNSNDFC CRKSYASVAEAVAVSSTDAEEDVSVVDEVQELLTELKKEEKKQFAFRRRKQRMLTSGMGH RKYOTLKRROVKVETEAWEQAAKEYKELLFDMCEQKLAPNLPYVKSLFLGWFEPLRDKIA EEQELCSQGKSKAAYAKYLYQLPADMMAVITMHKLMGLLMTGGDHGTARVVQAALVIGDA IEOEVRIHNFLEKTKKOKAEKDKOKEDGEHVTOEOEKLRKKVTNLMKKOKLRAVGOIVRR QDDSKPWGQDAKAKVGSRLIELLLQTAYIQPPANQLAVDPPDIRPAFLHSVRTVAKETKS ASRRYGIIQCDELVFKGLERTARHMVIPYMPMLVPPVKWTGYDKGGHLYLPSYVMRTHGA ROOREAVKRASRNOLOPVFEALDTLGSTKWRINKRVLSVIDRIWAGGGRLADLVDRDDAP LPEEPDTEDEALRTKWRWKVKSVKKENRERHSQRCDIELKLAVARKMKDEEGFFYPHNVD FRGRAYPMHPHLNHLGSDICRGVLVFAEGRPLGESGLRWLKIHLANLFAGGVEKLSLEGR IAFTENHMDDIFDSADKPLEGRRWWLNAEDPFOCLAVCINLSEAVRSSSPETSISHIPVH QDGSCNGLQHYAALGRDELGAAAVNLVAGEKPADVYSGIAARVLDIMKRDAQRDPAEFPD AVRARALVNOVDRKLVKOTVMTSVYGVTYIGARDOIKRRLKERGAIADDSELFGAACYAA KVTLTALGEMFEAARSIMTWLGECAKIIASENEPVRWTTPLGLPVVOPYRKIGRHLIKTS LOILTLOOETEKVMVKRORTAFPPNFIHSLDGSHMMMTAVACRRAGLNFAGVHDSYWTHA CDVDKLNRILREKFVELYETPILEKLLESFQTSYPTLLFPPLPERGDFDLRDVLESPYFF N

>Q8L785

MAILHFSLPLIVSFLRPHASPRFFLLPRSLSOSPFLSRRRFHRTSAVSSAAVHHOSYRNP DDDVTRAVSVPTFQQAIQRLQEYWASVGCAVMQPSNTEVGAGTMNPCTFLRVLGPEPWNV AYVEPSIRPDDSRYGENPNRLQRHTQFQVILKPDPGNSQQLFINSLSALGIDVTAHDIRF VEDNWESPVLGAWGLGWEIWMDGMEITQFTYFQQAGSLPLSPVSVEITYGLERIIMLLQE VDHFKKILYADGITYGELFLENEKEMSSYYLEHASVDRLQKHFDYFDEEARSLLALGLPI PAYDOLLKTSHAFNILDARGFIGVTERARYFGRMRSLAROCAOLWLATRESLGHPLGVAS EPVPPVCHRAALEKVAEKVSEDPRSFIIEIGTEEMPPQDVINASEQLRVLVLELLENQRL RHGAVKAFGTPRRLVVLVDAMSSKOLEEEVEVRGPPASKAFDDEGNPTKAAEGFSRRYGV PLEKLYRKVSGKTEYVHARVTEPARLALEVLSEDLPGILAKISFPKSMRWNSSVMFSRPI ${\tt RWVMALHGDLVVPFSFAGISSGNVSCGLRNTASASLLVQNAESYEDTMRNSGINIEIEER}$ KKIILEKSNALAKSVSGRLVVPONLLNEVANLVEAPVPLIGKFKESFLELPEELLTIVMO KHQKYFSIIDESGQLLPYFIAVANGAINEDVVKKGNEAVLRARYEDAKFFYEVDTRKRFS EFROOLOGILFHEKLGTMLDKMNRLKKMVSKLCLALKIDEDLLPVVEDAASLAMSDLATA VVTEFTALSGIMARHYALRDGYSEQIAEALLEITLPRFSGDVIPKTDAGMVLAIGDRLDS LVGLFAAGCOPSSTNDPFGLRRISYGLVOILVEKDKNVNFKRVLELAASVOPTKVEANTV EDVYOFVTRRLEOLLVDNGVSPEVVRSVLAERGNNPCLAARTAYKTEKLSKGEMFPKIVE AYSRPTRIVRGKDVGVGVEVDENAFETPQERTLWSTYTSIKDRIHTGIEIEDFTEISMQL VEPLEDFFNNVFVMVEEERVRKNRLALLNNIANLPKGVIDLSFLPGF

>P42055

MGKGPGLYTEIGKKARDLLYKDYQSDHKFSITTYSPTGVVITSSGSKKGDLFLADVNTQL KNKNVTTDIKVDTNSNLFTTITVDEAAPGLKTILSFRVPDQRSGKLEVQYLHDYAGICTS VGLTANPIVNFSGVVGTNIIALGTDVSFDTKTGDFTKCNAGLSFTNADLVASLNLNNKGD ${\tt NLTASYYHTVSPLTSTAVGAEVNHSFSTNENIITVGTQHRLDPLTSVKARINNFGKASAL} \\ {\tt LQHEWRPKSLFTVSGEVDTKSVDKGAKFGLALALKP}$

>09SAK4

MVIGAAARVAIGGCRKLISSHTSLLLVSSQCRQMSMDAQSVSEKLRSSGLLRTQGLIGGK
WLDSYDNKTIKVNNPATGEIIADVACMGTKETNDAIASSYEAFTSWSRLTAGERSKVLRR
WYDLLIAHKEELGQLITLEQGKPLKEAIGEVAYGASFIEYYAEEAKRVYGDIIPPNLSDR
RLLVLKQPVGVVGAITPWNFPLAMITRKVGPALASGCTVVVKPSELTPLTALAAAELALQ
AGVPPGALNVVMGNAPEIGDALLTSPQVRKITFTGSTAVGKKLMAAAAPTVKKVSLELGG
NAPSIVFDDADLDVAVKGTLAAKFRNSGQTCVCANRVLVQDGIYDKFAEAFSEAVQKLEV
GDGFRDGTTQGPLINDAAVQKVETFVQDAVSKGAKIIIGGKRHSLGMTFYEPTVIRDVSD
NMIMSKEEIFGPVAPLIRFKTEEDAIRIANDTIAGLAAYIFTNSVQRSWRVFEALEYGLV
GVNEGLISTEVAPFGGVKQSGLGREGSKYGMDEYLEIKYVCLGDMNRH

>09FN42

MMRGLVSGAKMLSSTPSSMATSIATGRRSYSLIPMVIEHSSRGERAYDIFSRLLKERIIC INGPINDDTSHVVVAQLLYLESENPSKPIHMYLNSPGGHVTAGLAIYDTMQYIRSPISTI CLGQAASMASLLLAAGAKGQRRSLPNATVMIHQPSGGYSGQAKDITIHTKQIVRVWDALN ELYVKHTGQPLDVVANNMDRDHFMTPEEAKAFGIIDEVIDERPLELVKDAVGNESKDKSS S

>P25076

MSLGKKIRIGFDGFGRINRFITRGAAQRNDSKLPSRNDALKHGLDGLGSAGSKSFRALAA IGAGVSGLLSFATIAYSDEAEHGLECPNYPWPHEGILSSYDHASIRRGHQVYQQVCASCH SMSLISYRDLVGVAYTEEETKAMAAEIEVVDGPNDEGEMFTRPGKLSDRFPQPYANEAAA RFANGGAYPPDLSLITKARHNGQNYVFALLTAYRDPPAGVSIREGLHYNPYFPGGAIAMP KMLNDGAVEYEDGIPATEAQMGKDVVSFLSWAAEPEMEERKLMGFKWIFVLSLALLQAAY YRRLRWSVLKSRKLVLDVVN

>09SJ12

MAYASRFLSRSKQLQGGLVILQQQHAIPVRAFAKEAARPTFKGDEMLKGVFFDIKNKFQA AVDILRKEKITLDPEDPAAVKQYANVMKTIRQKADMFSESQRIKHDIDTETQDIPDARAY LLKLQEIRTRRGLTDELGAEAMMFEALEKVEKDIKKPLLRSDKKGMDLLVAEFEKGNKKL GIRKEDLPKYEENLELSMAKAQLDELKSDAVEAMESQKKKEEFQDEEMPDVKSLDIRNFI

>Q949J1

MSFYRGTASHPWHDLHPGNDAPNFVSCVIEIPRGSKVKYELDKDTGLCFVDRILYSSVVY PHNYGFVPKTLCEDGDPLDVLVLMQEPVVPMCFLRAKPIGVMQMLDQGERDDKLIAVHAD DPEYKGFTDISQLPPHRLAEIKRFFEDYKKNEHKEVVVDDFLGAEEAKKVVKDSLNMYQE HYVPRKLRNVYE

>Q9FNC9

MAAKRIGAGKSGGGDPNILARISNSEIVSQGRRAAGDAVEVSKKLLRSTGKAAWIAGTTF LILVVPLIIEMDREAQINEIELQQASLLGAPPSPMQRGL

>Q9SMN1

MATSLARISKRSITSAVSSNLIRRYFAAEAVAVATTETPKPKSQVTPSPDRVKWDYRGQR QIIPLGQWLPKVAVDAYVAPNVVLAGQVTVWDGSSVWNGAVLRGDLNKITVGFCSNVQER CVVHAAWSSPTGLPAQTLIDRYVTVGAYSLLRSCTIEPECIIGQHSILMEGSLVETRSIL EAGSVLPPGRRIPSGELWGGNPARFIRTLTNEETLEIPKLAVAINHLSGDYFSEFLPYST IYLEVEKFKKSLGIAI

>099869

MSEFAPICIYLVISPLVSLIPLGLPFLFSSNSSTYPEKSSAYECGLDPSGDARSRVDIRF YLVSILFIIPDPEVTFSFPWAVPPNKIDPFGSWSMMAFLLILTIGSLYEWKRGASDRE >08LG77

MTMTAFLARRLIGNGSSQILGTSSSSSGPFISVSRAFFSSSTPIKATLFPGDGIGPEIAE SVKQVFTAADVVIDWDEQFVGTEVDPRTNSFLTWDNLQSVLKNKVGLKGPMATPIGKGHR SLNLTLRKELNLYANVRPCYSLPGYKTRYDDVDLITIRENTEGEYSGLEHQVVKGVVESL KIITRKASMRVAEYAFLYAKTHGRKKVSAIHKANIMQKTDGLFLQCCDEVAAKYPEIYYE KVVIDNCCMMLVKNPALFDVLVMPNLYGDIISDLCAGLVGGLGLTPSMNIGEDGIALAEA VHGSAPDIAGMNLANPTALLLSGVMMLRHLKLNKQAEQIHSAIINTIAEGKYRTADLGGS STTTDFTKAICDHL

>Q9ASY8

 ${\tt MESTISLKVNKGKGKGSKGASSSDDKSKFDVVKEWTNWSLKKAKVVTHYGFIPLVIFVGM} \\ {\tt NSDPKPHLFOLLSPV}$

>096252

MFKQASRLLSRSVAAASSKSVTTRAFSTELPSTLDSTFVEAWKKVAPNMDPPQTPSAFMK PRPSTPSSIPTKLTVNFVLPYTSELTGKEVDMVIIPASTGQMGVLPGHVPTIAELKPGIM SVHEGTDVKKYFLSSGFAFLHANSVADIIAVEAVPLDHIDPSQVQKGLAEFQQKLASATT DLEKAEAQIGVEVHSAINAALSG

>002500

MRLLAPAFKFHFKGGRRTMILSVLSSPALVSGLMVVRAKNPVHSVLFPILVFCDTSGLLI LLGLDFSAMISPVVHIGAIAVSFLFVVMMFNIQIAEIHEEVLRYLPVSGIIGLIFWWEMF FILDNETIPLLPTHRNTTSLRYTVYAGKVRSWTNLETLGNLLYTYYSVWFLVSSLILLVA MIGAIVLTMHRTTKVKRQDVFRRNALDSRSHIMNRTISPFGHSHRRSFSSGAGGPPDNYK ETFKMWI

>P08740

MIELDLCFGLLLLILFGLLSLRNGHVSLAHIRFICQCWLVMITPLEVQDFALCILTVVLL QSFHSFEALLFLLLAYIGQLYMMHSCNLVSFYVCLEAQTLCVVVLCGLLARGASTSFSVE AALKFLLLSAMVSGMALFWFSAMYQRTGSLDMVGQETFWILLVMLFKLGVAPMHMWSVDL YGSIPKSLLLYLSTAPKLSLFTFWASSWHHDFSVGVFILFSMFIGSIGAYGQPALRSLFA YSTINEIGLLLLAVETAGFHTLYQHLGIYIITQLLLWNLTDKRLFALCAVSLAGLPPFAG FFGKAWIFWHAMSVQAFSLLAAALFCTLLSLVYYLRVIRLFWTAPVHTAASFTGAPNQTT LTSACAVALAFAPVMLVKPFVI

>P52902

MALSRLSSSSSSNGSNLFNPFSAAFTLNRPISSDTTATLTIETSLPFTAHNCDPPSRSV
TTSPSELLSFFRTMALMRRMEIAADSLYKANLIRGFCHLYDGQEAVAVGMEAGTTKKDCI
ITAYRDHCTFLGRGGTLLRVYAELMGRRDGCSKGKGGSMHFYKKDSGFYGGHGIVGAQVP
LGCGLAFGQKYLKDESVTFALYGDGAANQGQLFEALNISALWDLPAILVCENNHYGMGTA
TWRSAKSPAYFKRGDYVPGLKVDGMDALAVKQACKFAKEHALKNGPIILEMDTYRYHGHS
MSDPGSTYRTRDEISGVRQERDPIERVRKLLLSHDIATEKELKDTEKEVRKEVDEAIAKA
KDSPMPDPSDLFSNVYVKGYGVEAFGVDRKEVRVTLP

>Q42577

MAMITRNTATRLPLLLQSQRAVAAASVSHLHTSLPALSPSTSPTSYTRPGPPSTSPPPPG

LSKAAEFVISKVDDLMNWARTGSIWPMTFGLACCAVEMMHTGAARYDLDRFGIIFRPSPR QSDCMIVAGTLTNKMAPALRKVYDQMPEPRWVISMGSCANGGGYYHYSYSVVRGCDRIVP VDIYVPGCPPTAEALLYGLLQLQKKINRRKDFLHWWNK

>09CAF6

 ${\tt MTPVLCHSTASIPNPNSLMSLSSTLRLSSSLLRRSFFRFPLTDPLCRLRRTEPSATRFFS}$ SRTPRSGKFVVGAGKRGDEOVKEESGANNGGLVVSGDESRIVPFELHKEATESYMSYALS VLLGRALPDVRDGLKPVHRRILFAMHELGMSSKKPYKKCARVVGEVLGKFHPHGDTAVYD SLVRMAQSFSLRCPLIQGHGNFGSIDADPPAAMRYTECRLDPLAEAVLLSDLDQDTVDFV ANFONSOKEPAVLPARLPALLLNGASGIAVGMATNIPPHNLGELVDVLCALIHNPEATLO ELLEYMPAPDFPTGGIIMGNLGVLDAYRTGRGRVVVRGKAEVELLDPKTKRNAVIITEIP YOTNKATLVOKIAELVENKTLEGISDIRDESDRNGMRVVIELKRGGDPALVLNNLYRHTA LOSSFSCNMVGICDGEPKLMGLKELLQAFIDFRCSVVERRARFKLSHAQQRKHIIEGIVV GLDNVDEVIELITKASSHSSATAALQSEYGLSEKQAEAILEITLRRLTALERKKFTDESS SLTEOITKLEOLLSTRTNILKLIEOEAIELKDRFSSPRRSMLEDSDSGDLEDIDVIPNEE MLMAVSEKGYVKRMKADTFNLOHRGTIGKSVGKLRVDDAMSDFLVCHAHDHVLFFSDRGI VYSTRAYKIPECSRNAAGTPLVOILSMSEGERVTSIVPVSEFAEDRYLLMLTVNGCIKKV SLKLFSGIRSTGIIAIQLNSGDELKWVRCCSSDDLVAMASQNGMVALSTCDGVRTLSRNT KGVTAMRLKNEDKIASMDIIPASLRKDMEEKSEDASLVKQSTGPWLLFVCENGYGKRVPL SSFRRSRLNRVGLSGYKFAEDDRLAAVFVVGYSLAEDGESDEOVVLVSOSGTVNRIKVRD ISIQSRRARGVILMRLDHAGKIQSASLISAADEEETEGTLSNEAVEAVSL

>Q04613

MRLSITNMDGRKMLFAAILSICALSSKKILIYNEEMIVALCFIGFIIFSRKSLGTTFKVT LDGSLQAIQEELQQFPNPNEVVLLESNEQQRLLRISLRICGTVVESLPMARCAPKCEKTV QALLCRNLNVKLATLTNAISSRRIRFQDDLVTKFYTLVGKQFAYSCISKAERVEFIRESL VVLRMVRGGVFS

>P83291

MATSFFRRLARSAPITFPVAFGSQSKSGSGAFRFSTGAIAALSGGFSYYYLTSGNNLVYL
DQAKEETGPKTALNPDKWLEFKLQDTARVSHNTQLFRFSFDPSAELGLHVASCLLTRAPL
GYNAEGKTKYVIRPYTPISDPEAKGYFDLLIKVYPDGKMSQHFASLKPGDVLEVKGPVEK
FKYSPNMKKHIGMIAGGSGITPMLQVIDAIVKNPEDNTQISLLYANVSPDDILLKQKLDV
LQANHPNLKIFYTVDNPTKNWKGGVGYISKDMALKGLPLPTDDTLILVCGPPGMMEHISG
GKAPDWSQGEVKGILKELGYTEEMVFKF

>P07513

MPFLVGLSPPFLYFELIGHFQVEPSPTPTIKGRKWWRLSLFLIFWGERRVKKETKANDC >048593

MAATFLPATSLRLTQNSTLRFLSFFTISNPSYSLFRPLRRRVLPPFDAFPANSRRRCFCT
AVSESLGSGDGNKVESYEKRFGSKVGEFRKKLRIAEVKGGADEGLSRVGQSLNIMGWVRT
LRSQSSVTFIEINDGSCLSNLQCVMTSDAEGYDQVESGSILTGASVSVQGTIVASQGTKQ
KVELKVEKIIVVGECDSSYPIQKKRVSREFLRTKAHLRPRTNTFGAVARVRNTLAYATHK
FFQESGFVWVASPIITASDCEGAGEQFCVTTLIPSSHENTDTSIDAIPKTKGGLIDWSQD
FFGKPAFLTVSGQLNGETYATALSDVYTFGPTFRAENSNTSRHLAEFWMIEPELAFADLD
DDMACATAYLQYVVKYVLDNCKEDMEFFDTWIEKGIIRRLSDVAEKEFLQLGYTDAIEIL
LKANKKFDFPVKWGLDLQSEHERYITEEAFGGRPVIIRDYPKEIKAFYMRENDDGKTVAA
MDMLVPRIGELIGGSQREERLEVLEARLDELKLNKESYWWYLDLRRYGSVPHAGFGLGFE

RLVQFVTGIDNIRDVIPFPRTPASAEF

>P26969

MERARRLANRATLKRLLSEAKONRKTESTSTTTTTPLPFSLSGSSSRYVSSVSNSILRGR ${\tt GSKPDNNVSRRVGGFLGVGYPSQSRSISVEALKPSDTFPRRHNSATPDEQTKMAESVGFD}$ TLDSLVDATVPKSIRLKEMKFNKFDGGLTEGOMIEHMKDLASKNKVFKSFIGMGYYNTHV PPVILRNIMENPAWYTOYTPYOAEISOGRLESLLNFOTMITDLTGLPMSNASLLDEGTAA AEAMSMCNNIQKGKKKTFIIASNCHPOTIDICOTRADGFELKVVVKDLKDIDYKSGDVCG VLVQYPGTEGEVLDYGEFIKKAHANEVKVVMASDLLALTVLKPPGEFGADIVVGSAQRFG VPMGYGGPHAAFLATSOEYKRMMPGRIIGVSVDSSGKOALRMAMOTREOHIRRDKATSNI CTAOALLANMAAMYAVYHGPEGLKAIAORVHGLAGVFALGLKKLGLEVODLGFFDTVKVK TSNAKAIADAAIKSEINLRVVDGNTITAAFDETTTLEDVDKLFKVFAGGKPVSFTAASLA PEFONAIPSGLVRESPYLTHPIFNTYOTEHELLRYIHRLOSKDLSLCHSMIPLGSCTMKL NATTEMMPVTWPSFTDLHPFAPTEQAOGYQEMFNNLGDLLCTITGFDSFSLQPNAGAAGE YAGLMVIRAYHLSRGDHHRNVCIIPASAHGTNPASAAMVGMKIVTIGTDAKGNINIEELK KAAEKHKDNLSAFMVTYPSTHGVYEEGIDDICKIIHDNGGOVYMDGANMNAOVGLTSPGW IGADVCHLNLHKTFCIPHGGGGPGMGPIGVKKHLAPFLPSHPVVPTGGIPAPENPOPLGS ISAAPWGSALILPISYTYIAMMGSQGLTDASKIAILNANYMAKRLESYYPVLFRGVNGTV AHEFIIDLRGFKNTAGIEPEDVAKRLMDYGFHGPTMSWPVAGTLMIEPTESESKAELDRF CDALISIRKEIAEVEKGNADVHNNVLKGAPHPPSLLMADAWTKPYSREYAAFPAAWLRGA KFWPTTGRVDNVYGDRNLVCTLLPASQAVEEQAAATA

>Q8LB02

MAFGLIGRVVGTKSSRLSTAARLIPARWTSTGSEAQSKASTGGGGASLKTFQIYRWNPDN PGKPELQDYKIDLKDCGPMVLDALIKIKNEMDPSLTFRRSCREGICGSCAMNIDGCNGLA CLTKIESGSKETTITPLPHMFVIKDLVVDMTNFYNQYKSIEPWLKRKNPASVPGKEILQS KKDRAKLDGMYECILCACCSTSCPSYWWNPESYLGPAALLHANRWISDSRDEYTKERLEA IDDEFKLYRCHTILNCARACPKGLNPGKQITHIKQLQKSG

>024495

MPVISKASSTTTNSSIPSCSRIGGQLCVWPGLRQLCLRKSLLYGVMWLLSMPLKTLRGAR
KTLKITHFCSISNMPSSLKIELVPCSKDNYAYLLHDEDTGTVGVVDPSEAAPVIEALSRK
NWNLTYILNTHHHDDHIGGNAELKERYGAKVIGSAVDKDRIPGIDILLKDSDKWMFAGHE
VRILDTPGHTQGHISFYFPGSATIFTGDLIYSLSCGTLSEGTPEQMLSSLQKIVSLPDDT
NIYCGRENTAGNLKFALSVEPKNETLQSYATRVAHLRSQGLPSIPTTVKVEKACNPFLRI
SSKDIRKSLSIPDSATEAEALRRIQRARDRF

>005492

MFPLNFHYEDVLRQDLLLKLNLANVMEVPGLCEIRIVPKTSSTYDFIIKNGKLAMEILRG QKFIQTERGSTGKSFRSNPFLESNKDKGYVSDLARQSILRGHGMSNFLVRILTVMSLLDS RVEIRENSIQFSMETEFCEFSPELEDHFEIFEHIRRFNVTIVTSANTQDETLLLWSGFLQ KDEGESFKWKTP

>042290

MAMKNLLSLARRSQRRLFLTQATRSSSSFSAIDSVPASASPTALSPPPPHLMPYDHAAEI IKNKIKKLENPDKRFLKYASPHPILASHNHILSAPETRVTTLPNGLRVATESNLSAKTAT VGVWIDAGSRFESDETNGTAHFLEHMIFKGTDRRTVRALEEEIEDIGGHLNAYTSREQTT YYAKVLDSNVNQALDVLADILQNSKFEEQRINRERDVILREMQEVEGQTDEVVLDHLHAT AFQYTPLGRTILGPAQNVKSITREDLQNYIKTHYTASRMVIAAAGAVKHEEVVEQVKKLF TKLSSDPTTTSQLVANEPASFTGSEVRMIDDDLPLAQFAVAFEGASWTDPDSVALMVMQT
MLGSWNKNVGGGKHVGSDLTQRVAINEIAESIMAFNTNYKDTGLFGVYAVAKADCLDDLS
YAIMYEVTKLAYRVSDADVTRARNQLKSSLLLHMDGTSPIAEDIGRQLLTYGRRIPTAEL
FARIDAVDASTVKRVANKYIYDKDIAISAIGPIQDLPDYNKFRRTYWNRY
>00WOF7

MVLPLFRRAAIARTSSLLRARLFAPASEFHSRFSNGLYHLDDKISSSNGVRSASIDLITR
MDDSSPKPILRFGVQNFSSTGPISQTVLAMPALSPTMSHGNVVKWMKKEGDKVEVGDVLC
EIETDKATVEFESQEEGFLAKILVTEGSKDIPVNEPIAIMVEEEDDIKNVPATIEGGRDG
KEETSAHQVMKPDESTQQKSSIQPDASDLPPHVVLEMPALSPTMNQGNIAKWWKKEGDKI
EVGDVIGEIETDKATLEFESLEEGYLAKILIPEGSKDVAVGKPIALIVEDAESIEAIKSS
SAGSSEVDTVKEVPDSVVDKPTERKAGFTKISPAAKLLILEHGLEASSIEASGPYGTLLK
SDVVAAIASGKASKSSASTKKKQPSKETPSKSSSTSKPSVTQSDNNYEDFPNSQIRKIIA
KRLLESKQKIPHLYLQSDVVLDPLLAFRKELQENHGVKVSVNDIVIKAVAVALRNVRQAN
AFWDAEKGDIVMCDSVDISIAVATEKGLMTPIIKNADQKSISAISLEVKELAQKARSGKL
APHEFQGGTFSISNLGMYPVDNFCAIINPPQAGILAVGRGNKVVEPVIGLDGIEKPSVVT
KMNVTLSADHRIFDGQVGASFMSELRSNFEDVRRLLL

>P19173

MAGGHVAHLVYKGPSVVKELVIGFSLGLVAGGFWKMHHWNSQRRTKEFYDMLEKGQISVV ADEE

>09LKA5

MATHTISRSILCRPAKSLSFLFTRSFASSAPLAKSPASSLLSRSRPLVAAFSSVFRGGLV
SVKGLSTQATSSSLNDPNPNWSNRPPKETILLDGCDFEHWLVVVEPPQGEPTRDEIIDSY
IKTLAQIVGSEDEARMKIYSVSTRCYYAFGALVSEDLSHKLKELSNVRWVLPDSYLDVRN
KDYGGEPFIDGKAVPYDPKYHEEWIRNNARANERNRRNDRPRNNDRSRNFERRENMAGG
PPPQRPPMGGPPPPPHIGGSAPPPPHMGGSAPPPPHMGQNYGPPPPNNMGGPRHPPPYGA
PPQNNMGGPRPPQNYGGTPPPNYGGAPPANNMGGAPPPNYGGGPPPQYGAVPPPQYGGAP
PQNNNYQQQGSGMQQPQYQNNYPPNRDGSGNPYQG

>P92983

MATRLLRTNFIRRSYRLPAFSPVGPPTVTASTAVVPEILSFGQQAPEPPLHHPKPTEQSH
DGLDLSDQARLFSSIPTSDLLRSTAVLHAAAIGPMVDLGTWVMSSKLMDASVTRGMVLGL
VKSTFYDHFCAGEDADAAAERVRSVYEATGLKGMLVYGVEHADDAVSCDDNMQQFIRTIE
AAKSLPTSHFSSVVVKITAICPISLLKRVSDLLRWEYKSPNFKLSWKLKSFPVFSESSPL
YHTNSEPEPLTAEEERELEAAHGRIQEICRKCQESNVPLLIDAEDTILQPAIDYMAYSSA
IMFNADKDRPIVYNTIQAYLRDAGERLHLAVQNAEKENVPMGFKLVRGAYMSSEASLADS
LGCKSPVHDTIQDTHSCYNDCMTFLMEKASNGSGFGVVLATHNADSGRLASRKASDLGID
KQNGKIEFAQLYGMSDALSFGLKRAGFNVSKYMPFGPVATAIPYLLRRAYENRGMMATGA
HDROLMRMELKRRLIAGIA

>P15688

MLSLTIKGKARRRKERAFGDRDFLTFSSKTKKTENVNLSFEKGTRFFDRGGMIFGPSPRS
ARWPIGIAAFGLCLLFLIKNSGSARESAGNNRKEGVHVAAASAPFLVNRAAGSATTTKER
IHFKITNASAMAACGMAGSDLFGYIIQVESGVTGTAGLMENNFHGSVQRALFSLRILRSL
RVNSLARIQNFWGPSIPSSSPAKTPLPFGLNIFFDSYMWAPDIYEGSPTPVTAFFSIAPE
RSISANILRVFIYGSYGATLQQIFFFCSIALRLRSTGAMANEGKASSSIGQLDYGGLYFV
LVLMWNREGIQSLLIGLFIYASMDDRCFAIVSALRQTRVKYIADLGALAKTNPISAITFS

ITMFSYAGIPPLAGFCSKFYLFFAALGCGAYFLAPVGVVTSVIGCWAAGRLPRVSQFGDR RQFSVHRTRSLPNQLRHGWECMLRKIGSSLIHQPSVYSISLYESTITTRDEPWFGEFELA LGVIGLPVTAHDRILRCSPPVVGTTRAGPGLNSER

>09LIG6

MKGIARLVTSLSRIGGRKVVSGTSTVTSSSSSSLLLSRRSLFISATNLLNSRTKDSALPS
LNSSLLAQKWNFLGGQRRTMFIQTQSTPNPSSLMFYPGKPVMEVGSADFPNVRSALGSPL
AKSIYSIDGVVRVFFGSDFVTVTKSDDVSWDILKPEIFAAVMDFYSSGQPLFLDSQAAAA
KDTAISEDDSETVAMIKELLETRIRPAVQDDGGDIEYCGFDPESGIVKLRMQGACSGCPS
SSVTLKSGIENMLMHYVSEVKGVEOEFDGEDEEGTLSGEMRVE

>09LSW8

MKILVAVKRVVDYAVKIRVKPDKTGVETQNVKMSMNPFCEIALEEALRIKEAGFAKEVIA
VSIGPSQCVDTLRTGLAMGADRGIHVETNSIFLPLTIAKILKSLADVENPGLIFLGKQAI
DDDCNQTGQMVAALLGWPQATFASKVVLDKDKNVATVDREVDGGLETLNVDLPAVITTDL
RLNQPRYASLPNIMKAKSKPIKKMTVQDLKVDIKSDIEILEVTEPPKRKSGVMVSSVDEL
IDKLKNEAHVV

>Q9FV50

MAGVKSLQPRLISSFLGNNSIRSTQPLIHLFRFDLGRRHVSMQLSRTFSGLTDLLFNRRN EDEVIDGKRKRLRPGNVSPRRPVPGHITKPPYVDSLQAPGISSGLEVHDKKGIECMRASG ILAARVRDYAGTLVKPGVTTDEIDEAVHNMIIENGAYPSPLGYGGFPKSVCTSVNECICH GIPDSRPLEDGDIINIDVTVYLNGYHGDTSATFFCGNVDEKAKKLVEVTKESLDKAISIC GPGVEYKKIGKVIHDLADKHKYGVVRQFVGHGVGSVFHADPVVLHFRNNEAGRMVLNQTF TIEPMLTIGSRNPIMWDDNWTVVTEDASLSAQFEHTILITKDGAEILTKC

>039218

MLRSSSPHINHHSFLLPSFVSSKFKHHTLSPPPSPPPPPPMAACIDTCRTGKPQISPRDS SKHHDDESGFRYMNYFRYPDRSSFNGTQTKTLHTRPLLEDLDRDAEVDDVWAKIREEAKS DIAKEPIVSAYYHASIVSQRSLEAALANTLSVKLSNLNLPSNTLFDLFSGVLQGNPDIVE SVKLDLLAVKERDPACISYVHCFLHFKGFLACQAHRIAHELWTQDRKILALLIQNRVSEA FAVDFHPGAKIGTGILLDHATAIVIGETAVVGNNVSILHNVTLGGTGKQCGDRHPKIGDG VLIGAGTCILGNITIGEGAKIGAGSVVLKDVPPRTTAVGNPARLLGGKDNPKTHDKIPGL TMDOTSHISEWSDYVI

>P46643

MALAMMIRNAASKRGMTPISGHFGGLRSMSSWWKSVEPAPKDPILGVTEAFLADPSPEKV
NVGVGAYRDDNGKPVVLECVREAEKRLAGSTFMEYLPMGGSAKMVDLTLKLAYGDNSEFI
KDKRIAAVQTLSGTGACRLFADFQKRFSPGSQIYIPVPTWSNHHNIWKDAQVPQKTYHYY
HPETKGLDFSALMDDVKNAPEGSFFLLHACAHNPTGVDPTEEQWREISQLFKAKKHFAFF
DMAYQGFASGDPARDAKSIRIFLEDGHHIGISQSYAKNMGLYGQRVGCLSVLCEDPKQAV
AVKSQLQQLARPMYSNPPLHGAQLVSTILEDPELKSLWLKEVKVMADRIIGMRTTLRESL
EKLGSPLSWEHVTKQIGMFCYSGLTPEQVDRLTSEYHIYMTRNGRISMAGVTTGNVGYLA
NAIHEVTKSS

>Q9C6I6

MTRTVLLRALTKNKFVASNAPRSISISITSLSRCISTLILAEHESGTIKPQTVSTVVAAN SLGESSSISLLLAGSGSSLQEAASQAASCHPSVSEVLVADSDKFEYSLAEPWAKLVDFVR QQGDYSHILASSSSFGKNILPRVAALLDVSPITDVVKILGSDQFIRPIYAGNALCTVRYT GAGPCMLTIRSTSFPVTPITANSESKKATVSQIDLSNFEDDSVSKSRYVGRSTQDTERPD ${\tt LGSARVVITGGRALKSVENFKMIEKLAEKLGGAVGATRAAVDAGYVPNDLQVGQTGKIVA}$ ${\tt PELYMAFGVSGAIQHLAGIKDSKVIVAVNKDADAPIFQVADYGLVGDLFEVIPELLEKLPEKK}$ ${\tt EKK}$

>037617

MNRNEISFIYYVKIKLYLYNSFFIMSYIEMVLAIPLLGAIALLFVPSWKTQTIRNIALNS
SLLTFLISLLLWIEFDSSSALFQFTDGVCSPNVYSDVTLAKAASSSSFSALNFALGVDGI
SLFFIILTTLLVPICILVSWNNIEVYVKEYCIAFLVLETLMLTVFSVLDLLLFYIFFESV
LIPMFIIIGVWGSRERKIRAAYQFFLYTLFGSVLMLLAILLIYFQTGTLDIEMLYLSDFS
ETRQCILWLAFFASFAVKVPMVPVHIWLPEAHVEAPTAGSVILAGILLKLGTYGFLRFSI
PLFPYACIYFTPLIYTMSVIAIVYTSCTTIRQIDLKKIIAYSSVAHMNFVTIGLFSQNTQ
GIEGSILLMISHGLVSPALFLCVGVLYDRHKTRLLRYYSGCGQTMPIFALLFVFFTMANI
SLPGTSSFPGEFLVFIGSYQNNSFVAFCAATGMVLGAAYALWLCNRLIYGVSKPDFINTW
SDVNRREFFMFAPLIAGILWIGVYPEPFLDAMHCSCIYLLYAQ

>049543

MASKVISATIRRTLTKPHGTFSRCRYLSTAAAATEVNYEDESIMMKGVRISGRPLYLDMQ
ATTPIDPRVFDAMNASQIHEYGNPHSRTHLYGWEAENAVENARNQVAKLIEASPKEIVFV
SGATEANNMAVKGVMHFYKDTKKHVITTQTEHKCVLDSCRHLQQEGFEVTYLPVKTDGLV
DLEMLREAIRPDTGLVSIMAVNNEIGVVQPMEEIGMICKEHNVPFHTDAAQAIGKIPVDV
KKWNVALMSMSAHKIYGPKGVGALYVRRRPRIRLEPLMNGGGQERGLRSGTGATQQIVGF
GAACELAMKEMEYDEKWIKGLQERLLNGVREKLDGVVVNGSMDSRYVGNLNLSFAYVEGE
SLLMGLKEVAVSSGSACTSASLEPSYVLRALGVDEDMAHTSIRFGIGRFTTKEEIDKAVE
LTVKQVEKLREMSPLYEMVKEGIDIKNIQWSQH

>P68209

MSRQVARLIGSLSSKARRCSTGGSEVFPSCQSLTSLTQSRSFASDPHPPAAVFVDKNTRV LCQGITGKNGTFHTEQAIEYGTKMVAGVTPKKGGTEHLGLPVFNSVAEAKADTKANASVI YVPAPFAAAAIMEGIEAELDLIVCITEGIPQHDMVRVKHALNSQSKTRLIGPNCPGIIKP GECKIGIMPGYIHKPGKIGIVSRSGTLTYEAVFQTTAVGLGQSTCVGIGGDPFNGTNFVD CLEKFFVDPQTEGIVLIGEIGGTAEEDAAALIKASGTEKPVVAFIAGLTAPPGRRMGHAG AIVSGGKGTAQDKIKSLNDAGVKVVESPAKIGSAMYELFQERGLLKQ

>023627

MRIFSTFVFHRRQQIFNLRQFQTTTILRNPISIAPIQIPMDATEQSLRQSLSEKSSSVEA
QGNAVRALKASRAAKPEIDAAIEQLNKLKLEKSTVEKELQSIISSSGNGSLNREAFRKAV
VNTLERRLFYIPSFKIYSGVAGLFDYGPPGCAIKSNVLSFWRQHFILEENMLEVDCPCVT
PEVVLKASGHVDKFTDLMVKDEKTGTCYRADHLLKDYCTEKLEKDLTISAEKAAELKDVL
AVMEDFSPEQLGAKIREYGITAPDTKNPLSDPYPFNLMFQTSIGPSGLIPGYMRPETAQG
IFVNFKDLYYYNGKKLPFAAAQIGQAFRNEISPRQGLLRVREFTLAEIEHFVDPENKSHP
KFSDVAKLEFLMFPREEQMSGQSAKKLCLGEAVAKGTVNNETLGYFIGRVYLFLTRLGID
KERLRFRQHLANEMAHYAADCWDAEIESSYGWIECVGIADRSAYDLRAHSDKSGTPLVAE
EKFAEPKEVEKLVITPVKKELGLAFKGNQKNVVESLEAMNEEEAMEMKATLESKGEVEFY
VCTLKKSVNIKKNMVSISKEKKKEHQRVFTPSVIEPSFGIGRIIYCLYEHCFSTRPSKAG
DEQLNLFRFPPLVAPIKCTVFPLVQNQQFEEVAKVISKELASVGISHKIDITGTSIGKRY
ARTDELGVPFAITVDSDTSVTIRERDSKDQVRVTLKEAASVVSSVSEGKMTWQDVWATFP
HHSSAAADE

>P38482

MLSSVRLAALRAGKTNSVFQAVRAFAAEPAAAATTDAGFVSQVIGPVVDVRFDGELPSIL SALEVQGHNVRLVLEVAQHMGDNTVRCVAMDSTDGLVRGQKVVNTGSPIKVPVGRGTLGR IMNVIGEPVDEQGPIECSEVWSIHREAPEFTEQSTEQEILVTGIKVVDLLAPYQRGGKIG LFGGAGVGKTVLIMELINNVAKAHGGFSVFAGVGERTREGNDLYREMIESGVIKLGDKRG ESKCTLVYGQMNEPPGARARVALTGLTVAEYFRDVEGQDVLLFVDNIFRFTQANSEVSAL LGRIPSAVGYQPTLATDLGGLQERITTTTKGSITSVQAVYVPADDLTDPAPATTFAHLDA TTVLSRSIAELGIYPAVDPLDSTSRMLNPNIIGAEHYNIARGVQKVLQDYKNLQDIIAIL GMDELSEEDKLTVARARKIQRFLSQPFQVAEVFTGTPGKYVDLKDTISAFTGILQGKYDD LPEMAFYMVGGIHEVVEKADKLAKDVAARKDESKKAKSSEALKDVPSLEKMAGEIKDEVI DADDSLEEDFKAEAISSENMVLNEKGEKVPLPKK

>037619

MALEKIITAPKYKNFTINFGPQHPAAHGVLRLVLEMNGEVVQRSDPHIGLLHRGTEKLIE
YKNYLQALPYFDRLDYVSMMCQEHAYSLAVEKLLNISKDIPLRAQYIRVLFSEITRILNH
LLAVTCHAMDVGALTPFLWGFEEREKLMEFYERVSGARMHAAYIRPGGVALDLPLGLCED
IYKFSKQFASRIDEIEEMLTSNRIWKQRLVDVGVVSAEQALDWSFSGVLLRGSGIAWDLR
KTQPYEVYDRMKFNIPVGTRGDCYDRYLIRVQEMRESLRIVMQTINEMSKGIIRLDDRKI
TPPTRDQMKQSMESLIHHFKFYTGGFVVPAGETYTAVEAPKGEFGVYLVSNGTSKPYRCK
IRAPGFAHLQGLDFMARNHMLADVVTIIGTQDIVFGEVDR

>Q8W487

MALAWCVVRRSASKFASVYGGRVRSISAVANRASLARNPSSIRPFVSRALNYSTAIDRIS SEQTLIRVIDSEINSALQSDNIDSDEEMTPGSFPFRIEDKPGNQNVTLTRDYNGEHIKVV VSMPSLVSDENDDDDDDDEGPSNESSIPLVVTVTKKSGLTLEFSCMAFPDEIAIDALSVK HPGDSLEDQLANEGPDFEDLDENLKKTFYKFLEIRGVKASTTNFLHEYMTRKVNREYFLW LKNVKEFMEO

>Q9SX77

MGTLGRAIHTVGNRIRGTAQAQARVGSLLQGSHHIEKHLSRHRTLITVAPNASVIGDVQI NKGSFISYASVSRDLQYPRAMGMGQVRRFSEDVSHMPEMEDSDVLNAFKDLMAADWAELP SAVVKDAKTAISKNTDDKAGQEALKNVFRAAEAVEEFGGILTSIKMEIDDSIGMSGEGVK PLPNDITDALRTAYQRYAEYLDSFEPEEVYLKKKVEMELGTKMIHLKMRCSGLGSEWGKV TVLGTSGLSGSYVEORA

>P32746

MAGRAATSSAKWAREFLFRRVSSNPLGATRNCSSVPGASSAPKVPHFSKRGRILTGATIG
LAIAGGAYVSTADEATFCGWLFNATKVVNPFFALLDAEFAHKLAVSAAARGWVPREKRPD
PAILGLEVWGRKFSNPIGLAAGFDKNAEATEGLLGMGFGFVEVGSVTPVPQEGNPKPRIF
RLSQEGAIINRCGFNSEGIVVVAKRLGAQHGKRMLAETSATSSSPSDDVKPGGKSGPGIL
GVNLGKNKTSEDAAADYVQGVHNLSQYADYLVINVSSPNTAGLRMLQGRKQLKDLVKKVQ
AARDEMQWGDEGPPPLLVKIAPDLSRGELEDIAAVALALHLDGLIISNTTVSRPDAVSNN
PVATETGGLSGKPLFALSTNMLRDMYTLTRGKIPLIGCGGVSSGEDAYKKIRAGATLVQL
YTGFAYGGPALIPQIKEELVKCLERDGFKSIHEAIGADHR

>P05499

MFRRIFLFDEDSLNSSVTSYTNASQSTTTIMDYSLKSSDTQGSSSGIFTDHPGLNPCSER IVELQYDIRLKLGALMPKESAQKVLEASEALHGESNNIAFLEYLLEDLQQNGVGGEAYKD AVDLSKDLVSSPLEQFEIISLIPMKIGNLYFSFTNPSLFMLLTLSLVLLLVYFVTKKGGG NSVPNAWQSLVELIYDFVLNPVNEQIGGLSGNVKQKFSPRISVTFTFSLFCNPQGMIPYS

FTVTSHFLITLGLSFSIFIGITIVGFQKNGLHFLSFLLPAGVPLPLAPFLVLLELIPYCF RALSSGIRLFANMMAGHSSVKILSGFAWTMLCMNDLLYFIGDLGPLFIVLALTGLELGVA ISQAHVSTILICIYLNDAINLHQSASFFIIEQKRV

>082067

 ${\tt MLKPKGKNTKKAAAADEDDGAVAVVGKFVKEWGTWTAKKAKVITHYGFIPLVIIIGMNSE} \\ {\tt PKPSLSQLLSPV} \\$

>Q9CA19

MLGLRRSATTLFDISQSLLRNVTFHGLRVQGIRVGNAEVPNNKPLKTGLQEVYGIGRRKS HQVLCHLGITNKLARDLTGKELIDLREEVGQHQHGDELRRRVGSEIQRLVEVDCYRGSRH RHGLPCRGQRTSTNARTKKGKAVAIAGKKKAPRK

>Q9XI00

MTSDALTIPSELESALRLRTVQYFITKRPWLDLYGVHVRPVPPFGSTSRKPHFDPALIHR CLPDELLFEVFARMMPYDLGRASCVCRKWRYTVRNPMFWRNACLKAWQTAGVIENYKILQ SKYDGSWRKMWLLRSRVRTDGLYVSRNTYIRAGIAEWKITNPVHIVCYYRYIRFYPSGRF LYKNSSQKLKDVAKYMNFKASKSENLYKGTYTLSMSDDKIEAAVLYPGTRPTVLRIRLRL RGTAIGANNRMDLLSLVTSGVNDEEISSTEEDILGLVEGWEDDETHNPDIPAVSHKRGMT AFVFVPFEEVDESVLNLPPEKMDYYVTG

>Q9S7E4

MAMRQAAKATIRACSSSSSSGYFARRQFNASSGDSKKIVGVFYKANEYATKNPNFLGCVE
NALGIRDWLESQGHQYIVTDDKEGPDCELEKHIPDLHVLISTPFHPAYVTAERIKKAKNL
KLLLTAGIGSDHIDLQAAAAAGLTVAEVTGSNVVSVAEDELMRILILMRNFVPGYNQVVK
GEWNVAGIAYRAYDLEGKTIGTVGAGRIGKLLLQRLKPFGCNLLYHDRLQMAPELEKETG
AKFVEDLNEMLPKCDVIVINMPLTEKTRGMFNKELIGKLKKGVLIVNNARGAIMERQAVV
DAVESGHIGGYSGDVWDPQPAPKDHPWRYMPNQAMTPHTSGTTIDAQLRYAAGTKDMLER
YFKGEDFPTENYIVKDGELAPQYR

>P27927

MEKHLVMYLTRKSIMLLRKYLLVTEFQVSKCGSHIVKIRRDVLYPKRTKYSKYSKCRCSR GREPDGTQLGFGRYGTKSSRAGRLSYRAIEAARRATIGQFRRAMSGQFRRNCKIWVRVLA DLPITGKPAEVRMGRGKGNPTGWIARVSTGQIPFEMDGVSLSNARQAARLAAHKPCSSTK FVOWS

>P05716

MSEKRNIRDHKRRLLAAKYELRRKLYKAFCKDSDLPSDMRDKLRYKLSKLPRNSSFARVR NRCISTGRPRSVYELFRISRIVFRSLASRGPLMGIKKSSW

>Q8GXR9

MAVLSSVSSLIPFSYGATRLTSKASLASRTSGFNLSSRWNSTRNSPMLYLSRAVTNNSGT
TEISDNETAPRTYSWPDNKRPRVCILGGGFGGLYTALRLESLVWPEDKKPQVVLVDQSER
FVFKPMLYELLSGEVDVWEIAPRFSDLLTNTGIQFLRDRVKTLLPCDHLGVNGSEISVTG
GTVLLESGFKIEYDWLVLALGAESKLDVVPGAMELAFPFYTLEDAIRVNEKLSKLERKNF
KDGSAIKVAVVGCGYAGVELAATISERLQDRGIVQSINVSKNILTSAPDGNREAAMKVLT
SRKVQLLLGYLVQSIKRASNLEEDEGYFLELQPAERGLESQIIEADIVLWTVGAKPLLTK
LEPSGPNVLPLNARGQAETDETLRVKGHPRIFALGDSSSLRDSNGKILPTTAQVAFQEAD
FTGWNIWAAINNRPLLPFRFQNLGEMMTLGRYDAAISPSFIEGLTLEGPIGHAARKLAYL
IRLPTDEHRFKVGISWFAKSAVDSIALLQSNLTKVLSGS

>006450

MASNAAVPFWRAAGMTYITYSNLCANMVRNCLKEPYRAEALSREKVHFSFSKWVDGKPQK PAIRSDTGEE

>P52424

MSLSACAELSRCFAAAASAKPNSGKSNSTAATSLVISSPIGHDGAVSSVSRSRKTSRIVA
EASQGLTYRDAGVDIDAGAELVRRIAKMAPGIGGFGGLYPLGDSYLVAGTDGVGTKLMLA
FETGIHDTIGIDLVAMSVNDIVTSGAKPLFFLDYFATGRLDVDVAEKVVKGIVDGCKQSD
CVLLGGETAEMPGLYKEGEYDLSGCAVGIVKKDSVINGKNIVAGDVIIGLPSSGVHSNGF
SLVRRVLAQSGLSLKDQLPGSNITLAEALMAPTVIYVKQVLDLISKGGVKGIAHITGGGF
TDNIPRVFPEGLGALIYDGSWEVPAVFRWLQEAGKIEDSEMRRTFNMGIGMILVVSPEAA
NRILENKGOADKFYRIGEIISGNGVTFS

>Q9GCB9

MTIHAAVIQKLLNTGAHLGRRAAEHHFKQYAYGTRNGMTIIDSDKTLICLRSAAHFVANL AHMRGNIFFVNTNPLFDEIIELTSRRIQGDSYNHNRAMNLWKMGGFLTNSYSPKKFRSRH KKLCFGPTTMPDCVVVFDSERKSSVILEASKLQIPVVAIVDPNVPLEFFEKITYPVPARD SVKFVYLFCNVITKCFVAEOMKLGIKEGSNEDLMKDLAA

>022043

MRPRYSLILSAMRLIRPSNRRLSSIASSDSEFISYMKNKAKSINKALDNSIPLCNNFVPL
WEPVLEVHKAMRYTLLPGGKRVRPMLCLVACELVGGQESTAMPAACAVEMIHAASLILDD
LPCMDDDSLRRGKPTNHKVFGEKTSILASNALRSLAVKQTLASTSLGVTSERVLRAVQEM
ARAVGTEGLVAGQAADLAGERMSFKNEDDELRYLELMHVHKTAVLVEAAAVVGAIMGGGS
DEEIERLKSYARCVGLMFQVMDDVLDETKSSEELGKTAGKDLITGKLTYPKVMGVDNARE
YAKRLNREAQEHLQGFDSDKVVPLLSLADYIVKRON

>042523

MSMMTVWALRRNVRRKNHSMLVRYISGSASMKPKEQCIEKILVANRGEIACRIMRTAKRL
GIQTVAVYSDADRDSLHVKSADEAVRIGPPSARLSYLSGVTIMEAAARTGAQAIHPGYGF
LSESSDFAQLCEDSGLTFIGPPASAIRDMGDKSASKRIMGAAGVPLVPGYHGHEQDIDHM
KSEAEKIGYPIIIKPTHGGGGKGMRIVQSGKDFADSFLGAQREAAASFGVNTILLEKYIT
RPRHIEVQIFGDKHGNVLHLYERDCSVQRRHQKIIEEAPAPNISEKFRANLGQAAVSAAR
AVGYYNAGTVEFIVDTESDQFYFMEMNTRLQVEHPVTEMIVGQDLVEWQIRVANGEPLPL
SQSEVPMSGHAFEARIYAENVPKGFLPATGVLNHYRPVAVSPSVRVETGVEQGDTVSMHY
DPMIAKLVVWGGNRGEALVKLKDCLSNFQVAGVPTNINFLQKLASHKEFAVGNVETHFIE
HHKSDLFADESNPAATEVAYKAVKHSAALVAACISTIEHSTWNESNHGKVPSIWYSNPPF
RVHHEAKQTIELEWNNECEGTGSNLISLGVRYQPDGSYLIEEGNDSPSLELRVTRAGKCD
FRVEAAGLSMNVSLAAYLKDGYKHIHIWHGSEHHQFKQKVGIEFSEDEEGVQHRTSSETS
SHPPGTIVAPMAGLVVKVLVENEAKVDQGQPILVLEAMKMEHVVKAPSSGSIQDLKVKAG
QQVSDGSALFRIKG

>P82873

MEFSTADFERLIMFEHARKNSEAQYKNDPLDSENLLKWGGALLELSQFQPIPEAKLMLND AISKLEEALTINPGKHQALWCIANAYTAHAFYVHDPEEAKEHFDKATEYFQRAENEDPGN DTYRKSLDSSLKAPELHMQFMNQGMGQQILGGGGGGGGGGMASSNVSQSSKKKKRNTEFT YDVCGWIILACGIVAWVGMAKSLGPPPPAR

>08LGI2

MNPTQKPEPVYDMVILGASGFTGKYVVREALKFLQTPSSSPLKSLALAGRNPTRLTQSLE WAARPNPPPSSVAILTADTSDPDSLRRLCTQTKLILNCVGPFRIHGDPVVSACADSGCDY LDISGEPEFMERMEANYHDRAEETGSLIVSACGFDSIPAELGLLFNAKQWVSPSVPNQIE
AYLSLESDKKIAGNFGTYESAVLGVANAEKLKELRRSRPRRPRPTICGPPAKGPTLENQK
TIGLWALKLPSADAVVVRRTLTTLTEKPHGLPGINESPEQIQKREAFWSSIKPAHFGVKI
TSKSLFGIFRYVTLGVSLGLLSKFSFGRWLLLKFPSVFSLGWFQKKGPSEEEVESATFKM
WFIGRGYSEESLASQGETKPDLEIITRISGPEIGYITTPITLVQCGLIVLGQRESLVKGG
VYTPGIVFGSTDIQORLEDNGISFELISKIKTQG

>P93655

MLKLFTSSASRVHHLTPVSRVVGSSPVESPLFKALSOITGWNRRSTSLGHRAFFCSEPTN GEAAAEAETKAVESDSEVSDSKSSSAIVPTNPRPEDCLTVLALPVPHRPLFPGFYMPIYV KDPKVLAALOESRRROAPYAGAFLLKDDPSADSSSSTDAEKNINELKGKELLNRLHEVGT LAQISSIQGDQVILVGHRRLRIKEMVSEEPLTVKVDHLKDNPFDMDDDVVKATSFEVIST LRDVLKTSSLWRDHVOTYTOHIGDFTYPRLADFGAAICGANRHOAOEVLEELDVHKRLRL TLELMKKEMEISKIOETIAKAIEEKISGEORRYLLNEOLKAIKKELGVETDDKSALSAKF KERIEPNKEKIPAHVLQVIEEELTKLQLLEASSSEFNVTRNYLDWLTILPWGNYSNENFD VARAOTILDEDHYGLSDVKERILEFIAVGRLRGTSOGKIICLSGPPGVGKTSIGRSIARA LNRKFFRFSVGGLADVAEIKGHRRTYVGAMPGKMVQCLKSVGTANPLVLIDEIDKLGRGH AGDPASALLELLDPEQNANFLDHYLDVTIDLSKVLFVCTANVIDMIPNPLLDRMEVISIA GYITDEKVHIARDYLEKTARGDCGVKPEQVEVSDAALLSLIENYCREAGVRNLQKQIEKI YRKIALKLVREGAVPEEPAVASDPEEAEIVADVGESIENHTVEENTVSSAEEPKEEAOTE KIAIETVMIDESNLADYVGKPVFHAEKLYEQTPVGVVMGLAWTSMGGSTLYIETTVVEEG EGKGGLNITGOLGDVMKESAOIAHTVARKIMLEKEPENOFFANSKLHLHVPAGATPKDGP SAGCTMITSLLSLATKKPVRKDLAMTGEVTLTGRILPIGGVKEKTIAARRSQIKTIIFPE ANRRDFDELAENVKEGLNVHFVDDYGKIFELAFGYDKQED

>P10329

 $\label{thm:main} \begin{tabular}{l} MFFENSAILL CALLSIA V GYTKSPFM SLMYSVMLFINSSFVLMMLGFEFLAL V NLLVYV GALAVLFLFVIM LLEIPATELRAYSRGWSTLGIFV FINGVFQITPSM GPRGIITGLPGAESITNLGHALYLYFADLLILNSL V LTVALFGRFAIA PVRTTGR$

>P22778

MAMTGRARSMGFSILQKALSSAQRSNAHRSILCPTLSNSELLRNYATASASKEQKIKVPL TMYGVSGNYASALYLAAVKSNTLEKVESELYDLVEASKKSPTFSQFMRDPSVPVDTRVNA IKEICAQAKFGDTTQNFLLILAENGRLKHIDRIVKRFKELTMAHRGEVKATVTTVIPLPA DEEKELKATLQEMVGQGKSVQIEQKIDPTILGGLVVEFGQKVFDMSIRTRARQMERFLRE PLNF

>008276

MATAALLRSLRRREFATSSISAYRTLASNTKPSWCPSLVGAKWAGLARPFSSKPAGNEII
GIDLGTTNSCVAVMEGKNPKVIENSEGARTTPSVVAFNQKGELLVGTPAKRQAVTNPTNT
LSGTKRLIGRRFDDPQTQKEMKMVPYKIVRGSNGDAWVEANGQQYSPTQIGAFILTKMKE
TAEAYLGKSINKAVITVPAYFNDAQRQAIKDAGAIAGLDVQRIINEPTAAALSYGMNSKE
GLVAVFDLGGGTFDVSILEISNGVFEVKATNGDTFLGGEDFDNALLEFLVSEFKRTEGID
LSKDKLALQRLREAAEKAKIELSSTSQTDINLPFITADASGAKHLNITLTRSKFETLVNH
LIERTRNPCKNCLKDAGVSLKDVDEVLLVGGMTRVPKVQEIVSEIFGKSPSKGVNPDEAV
AMGAALQGGILRGDVKELLLLDVTPLARGIETLGGIFTRLINRNTTIPTKKSQVFSTAAD
NQTQVGIKVLQGEREMASDNKLLGEFDLVGIPPAPKGYCPQIEVIFDIDANGMVTVSAKD
KATSKEQQITIRSSGGLSEDEIDKMVREAEMHAQRIKNARHLLISGIVQSTTIYSIEKSL

SEYKEKVPKEVVTEIETAISDLRAAMGTENIDDIKAKLDAANKAVSKIGEHMAGGSSGGA SGGGGAQGGDQPPEAEYEEVKK

>023138

>P05502

MASFDEAPPGNAKAGEKIFRTKCAQCHTVEAGAGHKQGPNLNGLFGRQSGTTAGYSYSAA NKNKAVEWEEKALYDYLLNPKKYIPGTKMVFPGLKKPQDRADLIAYLKESTAPK >P80269

MAAILARKSLSALRSRQLVLAGHTIEGTNGYNRTLLGTRSFATKHSFSTDKDDEEREQLA KELSKDWNSVFERSINTLFLTEMVRGLMLTLKYFFEKKVTINYPFEKGPLSPRFRGEHAL RRYATGEERCIACKLCEAICPAQAITIEAEEREDGSRRTTRYDIDMTKCIYCGFCQEACP VDAIVEGPNFEFATETHEELLYDKEKLLENGDRWETEIAENLRSESLYR >O9FT52

 ${\tt MSGAGKKIADVAFKASRTIDWDGMAKVLVTDEARREFSNLRRAFDEVNTQLQTKFSQEPE} $$ PIDWDYYRKGIGAGIVDKYKEAYDSIEIPKYVDKVTPEYKPKFDALLVELKEAEQKSLKE $$ SERLEKEIADVQEISKKLSTMTADEYFEKHPELKKKFDDEIRNDNWGY$

MTNLVRWLFSTNHKDIGTLYFIFGAIAGVMGTCFSVLIRMELARPGDQILGGNHQLYNVL
ITAHAFLMIFFMVMPAMIGGFGNWFVPILIGAPDMAFPRLNNISFWLLPPSLLLLLSSAL
VEVGSGTGWTVYPPLSGITSHSGGAVDLAIFSLHLSGVSSILGSINFITTIFNMRGPGMT
MHRLPLFVWSVLVTAFLLLLSLPVLAGAITMLLTDRNFNTTFFDPAGGGDPILYQHLFWF
FGHPEVYILILPGFGIISHIVSTFSRKPVFGYLGMVYAMISIGVLGFLVWAHHMFTVGLD
VDTRAYFTAATMIIAVPTGIKIFSWIATMWGGSIQYKTPMLFAVGFIFLFTIGGLTGIVL
ANSGLDIALHDTYYVVAHFHYVLSMGAVFALFAGFYYWVGKIFGRTYPETLGQIHFWITF
FGVNLTFFPMHFLGLSGMPRRIPDYPDAYAGWNALSSFGSYISVVGIRRFFVVVAITSSS
GKNKRCAESPWAVEQNPTTLEWLVQSPPAFHTFGELPTIKETQGELQTRK

MLGILRQRAIDGASTLRRTRFALVSARSYAAGAKEMTVRDALNSAIDEEMSADPKVFVMG
EEVGQYQGAYKITKGLLEKYGPERVYDTPITEAGFTGIGVGAAYAGLKPVVEFMTFNFSM
QAIDHIINSAAKSNYMSAGQINVPIVFRGPNGAAAGVGAQHSQCYAAWYASVPGLKVLAP
YSAEDARGLLKAAIRDPDPVVFLENELLYGESFPISEEALDSSFCLPIGKAKIEREGKDV
TIVTFSKMVGFALKAAEKLAEEGISAEVINLRSIRPLDRATINASVRKTSRLVTVEEGFP
QHGVCAEICASVVEESFSYLDAPVERIAGADVPMPYAANLERLALPQIEDIVRASKRACY

>P53665

RSK

>Q38799

MALRNAILRHLRVPVQTLGLNQSKIGFLGTIRSFSSHDDHLSREAVVDRVLDVVKSFPKV DPSKVTPEVHFQNDLGLDSLDTVEIVMAIEEEFKLEIPDKEADKIDSCSLAIEYVYNHPM SS

>Q8LCU7

MAALMESVVGRALKFSSTANFRSIRRGETPTLCIKSFSTIMSPPSKAIVYEEHGSPDSVT RLVNLPPVEVKENDVCVKMIAAPINPSDINRIEGVYPVRPPVPAVGGYEGVGEVYAVGSN VNGFSPGDWVIPSPPSSGTWQTYVVKEESVWHKIDKECPMEYAATITVNPLTALRMLEDF VNLNSGDSVVQNGATSIVGQCVIQLARLRGISTINLIRDRAGSDEAREQLKALGADEVFS ESQLNVKNVKSLLGNLPEPALGFNCVGGNAASLVLKYLREGGTMVTYGGMSKKPITVSTT SFIFKDLALRGFWLQSWLSMGKVKECREMIDYLLGLARDGKLKYETELVPFEEFPVALDK ALGKLGRQPKQVITF

>Q9XH48

 ${\tt MDSYSSPPMGGSGSSVSPEVMMESVKTQLAQAYAEELIETLRTKCFDKCVTKPGSSLGGS} \\ {\tt ESSCISRCVERYMEATAIISRSLFTQR}$

>P04709

MADQANQPTVLHKLGGQFHLRSIISEGVRARNICPSVSSYERRFATRNYMTQSLWGPSMS VSGGINVPVMQTPLCANAPAEKGGKNFMIDFMMGGVSAAVSKTAAAPIERVKLLIQNQDE MIKSGRLSEPYKGIVDCFKRTIKDEGFSSLWRGNTANVIRYFPTQALNFAFKDYFKRLFN FKKDRDGYWKWFAGNLASGGAAGASSLFFVYSLDYARTRLANDAKAAKGGGERQFNGLVD VYRKTLKSDGIAGLYRGFNISCVGIIVYRGLYFGLYDSIKPVVLTGNLQDNFFASFALGW LITNGAGLASYPIDTVRRRMMMTSGEAVKYKSSLDAFQQILKKEGPKSLFKGAGANILRA IAGAGVLSGYDQLQILFFGKKYGSGGA

>Q8VYE2

MASIVLRSRLLPRLAKLRSRNLRCFSAEASSTNSTSRYSGVTSTQSMFSDFPPPNQPPPP
PPPQVEAAAAAATGKERKGLKYLGYALLWALTGATAATGYASFAYTIDEVNEKTKAFRES
ATKTPVIKSSGIDVIDKYQTKLYSAAMTGSARAIDKYLELREIVEEQVKGFTEPLSEKLL
PDLHPAEQHVFTLVLDLNETLLYTDWKRERGWRTFKRPGVDAFLEHLGKFYEIVVYSDQM
EMYVLPVCEKLDPNGYIRYKLARGATKYENGKHYRDLSKLNRDPKKILFVSANAFESTLQ
PENSVPIKPYKLEADDTALVDLIPFLEYVARNSPADIRPVLASFERKDIAKEFIDRSIEY
QKRKQGQLGQGRFWRR

>Q04716

MARKGNPISVRLDLNRSSDSSWFSYYYGKSVYQDVNLRSYFGSIRPPTRLTFGFRLGRCI
ILHFPKRTFIHFFLPRRPRRLKRREKSRPVKEKGRWGAFGKVGPIGCLHSSDGTEEERNE
VRGRGAGKRVESIRLDDREKQNEIRIWPKKKQGYGYHDRSPSIKKNLSKSLRVSGAFKHP
KYAGIENDIAFLIENDDSFRKTNLFKFFFPKKSRSDRPTSHLLKRTLPAVRPSLNYSVMQ
YLLNTKNKIHFDPVVVLNHFVAPGVAEPSTMGGANAQGRSLDKRIASCIAFFVENSTSEK
KCLAEAKKRVTHFIRQANDLRFAGTTKTTISLFPFFGATFFFPRDGVGVYNNLFFEDARE
QLLGQLRRKCWNLMGKDKVMELIEKFIDLNRIGELIRGIEMMIEIILRNRRIPYGYNYYL
NEVKKMRSLLYNRTNTNTLIESVKIKSVYQSASPIAQDISFQPRNKTRSFRSIFSKIVKD
IPLVMKKGVEGIRICCSGRLEGAEIARTECGKYGKTSRNVFNQKIDYAPAEVSTRYGISG
VKVWISYSKKKKGRAISETYEI

>P68514

MITFFEKLSTFCHNLTPTECKVSVISFFLLAFLLMAHIWLSWFSNNQHCLRTMRHLEKLK IPYEFQYGWLGVKITIKSNVPNDEVTKKVSPIIKGEIEGKEEKKEGKGEIEGKEEKKEGK GEIEGKEEKKEVENGPRK

>009152

MSVSCCCRNLGKTIKKAIPSHHLHLRSLGGSLYRRRIQSSSMETDLKSTFLNVYSVLKSD LLHDPSFEFTNESRLWVDRMLDYNVRGGKLNRGLSVVDSFKLLKQGNDLTEQEVFLSCAL GWCIEWLQAYFLVLDDIMDNSVTRRGQPCWFRVPQVGMVAINDGILLRNHIHRILKKHFR DKPYYVDLVDLFNEVELQTACGQMIDLITTFEGEKDLAKYSLSIHRRIVQYKTAYYSFYL PVACALLMAGENLENHIDVKNVLVDMGIYFQVQDDYLDCFADPETLGKIGTDIEDFKCSW LVVKALERCSEEQTKILYENYGKPDPSNVAKVKDLYKELDLEGVFMEYESKSYEKLTGAI EGHOSKAIQAVLKSFLAKIYKROK

>049203

MSSQICRSASKAAKSLLSSAKNARFFSEGRAIGAAAAVSASGKIPLYASNFARSSGSGVA

SKSWITGLLALPAAAYMIQDQEVLAAEMERTFIAIKPDGVQRGLISEIISRFERKGFKLV GIKVIVPSKDFAQKHYHDLKERPFFNGLCDFLSSGPVIAMVWEGDGVIRYGRKLIGATDP QKSEPGTIRGDLAVTVGRNIIHGSDGPETAKDEISLWFKPQELVSYTSNSEKWLYGDN >039818

MASSLIAKRFLSSSLLSRSLLRPAASASHRSFDTNAMRQYDNRADDHSTDIDRHSERSFP STARRDDIFLRCVGSIFSDSEFEPGSEHDGPGHGQSVPLRVARDRSWRWSGRGWDARETE DALHLRVDMPGLAKEDVKISVEQNTLIIKGEGAKEGDEEESARRYTSRIDLPDKLYKIDQ IRAEMKNGVLKVVVPKMKEEERKDVISVKVE

>09LHE5

MADLLPPLTAAQVDAKTKVDEKVDYSNLPSPVPYEELHREALMSLKSDNFEGLRFDFTRA LNQKFSLSHSVMMGPTEVPAQSPETTIKIPTAHYEFGANYYDPKLLLIGRVMTDGRLNAR LKADLTDKLVVKANALITNEEHMSQAMFNFDYMGSDYRAQLQLGQSALIGATYIQSVTNH LSLGGEIFWAGVPRKSGIGYAARYETDKMVASGQVASTGAVVMNYVQKISDKVSLATDFM YNYFSRDVTASVGYDYMLRQARVRGKIDSNGVASALLEERLSMGLNFLLSAELDHKKKDY KFGFGLTVG

>038946

MNALAATNRNFRHASRILGLDSKIERSLMIPFREIKVECTIPKDDGTLVSYIGFRVQHDN
ARGPMKGGIRYHPEVDPDEVNALAQLMTWKTAVADIPYGGAKGGIGCSPRDLSLSELERL
TRVFTQKIHDLIGIHTDVPAPDMGTNAQTMAWILDEYSKFHGHSPAVVTGKPIDLGGSLG
REAATGRGVVFATEALLAEYGKSIQGLTFVIQGFGNVGTWAAKLIHEKGGKVVAVSDITG
AIRNPEGIDINALIKHKDATGSLNDFNGGDAMNSDELLIHECDVLIPCALGGVLNKENAG
DVKAKFIVEAANHPTDPDADEILSKKGVIILPDIYANAGGVTVSYFEWVQNIQGFMWEEE
KVNLELQKYMTRAFHNIKTMCHTHSCNLRMGAFTLGVNRVARATQLRGWEA
>004630

MLLRLTARSIRRFTTSSSSLPLLSSSSFCTVPTMAANHPKDEAYLSAVIPKRIKLFEQIQ
ANQLENLKSLPHDPIKVTLPDGNVKEGKKWETTPMDIAAQISKGLANSALISAVDDVLWD
MNRPLEGDCKLELFKFDSDKGRDTLWHSSAHILGQALEQEYGCQLCIGPCTTRGEGFYYD
GFYGELGLSDNHFPSIEAGAAKAAKEAQPFERIEVTKDQALEMFSENNFKVELINGLPAD
MTITVYRCGPLVDLCRGPHIPNTSFVKAFKCLRASSAYWKGDKDRESLQRVYGISYPDQK
QLKKYLQFLEEAKKYDHRLLGQKQELFFSHQLSPGSYFFLPLGTRVYNRLMDFIKNQYWH
RGYTEVITPNMYNMELWQTSGHADNYKDNMFTFNIEKQEFGLKPMNCPGHCLIFQHRVRS
YRELPMRLADFGVLHRNEASGALSGLTRVRRFQQDDAHIFCTTEQVKGEVQGVLEFIDYV
YKVFGFTYELKLSTRPEKYLGDLETWDKAEADLKEAIEAFGKPLVLNEGDGAFYGPKIDI
TVSDAMNRKFQCATLQLDFQLPIRFNLEYAAEDEAKKSRPVMIHRAVLGSVERMFAILLE
HYKGKWPFWISPRQAIVCPISEKSQQYAEKVQKQIKDAGFYVDADLTDRKIDKKVREAQL
AQYNYILVVGETEAATGQVSVRVRDNAAHSVKSIEDLLEEFKAKTAEFV

>Q8S944

MTIEEVSGETPPSTPPSSSTPSPSSSTTNAAPLGSSVIPIVNKLQDIFAQLGSQSTIALP QVVVVGSQSSGKSSVLEALVGRDFLPRGNDICTRRPLVLQLLQTKSRANGGSDDEWGEFR HLPETRFYDFSEIRREIEAETNRLVGENKGVADTQIRLKISSPNVLNITLVDLPGITKVP VGDQPSDIEARIRTMILSYIKQDTCLILAVTPANTDLANSDALQIASIVDPDGHRTIGVI TKLDIMDKGTDARKLLLGNVVPLRLGYVGVVNRCQEDILLNRTVKEALLAEEKFFRSHPV YHGLADRLGVPQLAKKLNQILVQHIKVLLPDLKSRISNALVATAKEHQSYGELTESRAGQ GALLLNFLSKYCEAYSSLLEGKSEEMSTSELSGGARIHYIFQSIFVKSLEEVDPCEDLTD

DDIRTAIQNATGPRSALFVPDVPFEVLVRRQISRLLDPSLQCARFIFEELIKISHRCMMN ELQRFPVLRKRMDEVIGDFLREGLEPSEAMIGDIIDMEMDYINTSHPNFIGGTKAVEAAM HQVKSSRIPHPVARPKDTVEPDRTSSSTSQVKSRSFLGRQANGIVTDQGVVSADAEKAQP AANASDTRWGIPSIFRGGDTRAVTKDSLLNKPFSEAVEDMSHNLSMIYLKEPPAVLRPTE THSEQEAVEIQITKLLLRSYYDIVRKNIEDSVPKAIMHFLVNHTKRELHNVFIKKLYREN LFEEMLQEPDEIAVKRKRTQETLHVLQQAYRTLDELPLEADSVSAGMSKHQELLTSSKYS TSSSYSASPSTTRSRRAGDOHONGYGF

>09L0I7

MSRFRSLLQASVNATKKALTWNVEEWVPPAEKHIFKFHSKEDLKKWHLYSDSEYGGVFSG NLSVDLSEGSKWNISRSGFCGMRSKKFDGFIDLDGYDAIALRIRGDGRCYISTIYTENWV NSPGQSEDNSWQAFVFAPKDSWYTAKIPLARYLPTWRGNVIDVEMEMNPGRVLGMSLSVN AEGGAVGAKSGAGDFRVEIDWIKALRLP

>Q9SHJ5

MVLPELLVILAEWVLYRLLAKSCYRAARKLRGYGFQLKNLLSLSKTQSLHNNSQHHLHNH
HQQNHPNQTLQDSLDPLFPSLTKYQELLLDKNRACSVSSDHYRDTFFCDIDGVLLRQHSS
KHFHTFFPYFMLVAFEGGSIIRAILLLLSCSFLWTLQQETKLRVLSFITFSGLRVKDMDN
VSRSVLPKFFLENLNIQVYDIWARTEYSKVVFTSLPQVLVERFLREHLNADDVIGTKLQE
IKVMGRKFYTGLASGSGFVLKHKSAEDYFFDSKKKPALGIGSSSSPQDHIFISICKEAYF
WNEEESMSKNNALPRERYPKPLIFHDGRLAFLPTPLATLAMFIWLPIGFLLAVFRISVGV
FLPYHVANFLASMSGVRITFKTHNLNNGRPEKGNSGVLYVCNHRTLLDPVFLTTSLGKPL
TAVTYSLSKFSEFIAPLKTVSLKRDRKKDGEAMQRLLSKGDLVVCPEGTTCREPYLLRFS
PLFAELTEDIVPVAVDARVSMFYGTTASGLKCLDPIFFLMNPRPVYCLEILKKLPKEMTC
AGGKSSFEVANFIQGELARVLGFECTNLTRRDKYLVLAGNEGIVR

>093Y32

MALRRCLPQYSTTSSYLSKIWGFRMHGTKAAASVVEEHVSGAEREDEEYADVDWDNLGFS
LVRTDFMFATKSCRDGNFEQGYLSRYGNIELNPAAGILNYGQGLIEGMKAYRGEDGRVLL
FRPELNAMRMKIGAERMCMHSPSVHQFIEGVKQTVLANRRWVPPPGKGSLYLRPLLFGSG
ASLGVAAASEYTFLVFGSPVQNYFKEGTAALNLYVEEVIPRAYLGGTGGVKAISNYGPVL
EVMRRAKSRGFSDVLYLDADTGKNIEEVSAANIFLVKGNTIVTPATSGTILGGITRKSII
EIALDLGYKVEERSVPVEELKEAEEVFCTGTAAGVASVGSITFKNTRTEYKVGDGIVTQQ
LRSILVGIOTGSIODTKDWVLOIA

>P26851

MDLVKYLTFSMILFLLGIWGIFLNRKNILIMLMSIELMLLAVNLNFLVFSVYLDDMMGQL FALFVLTVAAAESAIGLAILVITFRIRGTIAVEFINCMKG

>P93303

MPQLDKFTYFSQFFWLCLFFFTFYIFICNDGDGVLGISRILKLRNQLLSHRGKTIRSKDP NSLEDLLRKGFSTGVSYMYASLFEVSQWCKAVDLLGKRRKITLISCFGEISGSRGMERNI LYNISKSSPSNTGRWITCRNCRNDIMLIHVVHGQGSIK

>P34944

MDNQLFFKSLIATLPKWIHKCQTSKHENILYTNPNSLFQLLYFLKYHTNTRFKVLIDICG VDYPSRKRRFEVVYNLLSIDYNTRIRILTSVDEITPICSVVSIFPSAGWWERETWDMFGV YFSNHPDLRRILTDYGFEGHPLRKDFPLSGYVEVRYDDSEKRVVSEPIEMTQEFRYFDFA SPWEOMSRSDESNOK

>024164

MAPSAGEDKHSSAKRVAVIGAGVSGLAAAYKLKIHGLNVTVFEAEGKAGGKLRSVSQDGL
IWDEGANTMTESEGDVTFLIDSLGLREKQQFPLSQNKRYIARNGTPVLLPSNPIDLIKSN
FLSTGSKLQMLLEPILWKNKKLSQVSDSHESVSGFFQRHFGKEVVDYLIDPFVAGTCGGD
PDSLSMHHSFPELWNLEKRFGSVILGAIRSKLSPKNEKKQGPPKTSANKKRQRGSFSFLG
GMQTLTDAICKDLREDELRLNSRVLELSCSCTEDSAIDSWSIISASPHKRQSEEESFDAV
IMTAPLCDVKSMKIAKRGNPFLLNFIPEVDYVPLSVVITTFKRENVKYPLEGFGVLVPSK
EQQHGLKTLGTLFSSMMFPDRAPNNVYLYTTFVGGSRNRELAKASRTELKEIVTSDLKQL
LGAEGEPTYVNHLYWSKAFPLYGHNYDSVLDAIDKMEKNLPGLFYAGNHRGGLSVGKALS
SGCNAADLVISYLESVSTDSKRHC

>P26854

MNKLAGAELSTLLEQRITNYYTKLQVDEIGRVVSVGDGIARVYGLNKIQAGEMVEFASGV
KGMALNLENENVGIVIFGSDTAIKEGDIVKRTGSIVDVPVGKGMLGRVVDALGVPIDGKG
ALSAVERRVEVKAPGIIARKSVHEPMQTGLKAVDSLVPIGRGQRELIIGDRQTGKTAIA
IDTILNQKQINAQGTSDSEKLYCVYVAIGQKRSTVAQLVKILSEAGALEYSIIVAATASD
PAPLQFLAPYSGCAMGEYFRDNGMHALIIYDDLSKQSVAYRQMSLLLRRPPGREAFPGDV
FYLHSRLLERAAKMSDQTGAGSLTALPVIETQAGDVSAYIPTNVISITDGQIFLETELFY
RGSRPAINVGLSVSRVGSAAQLKAMKQVCGSLKLELAQYREVAAFAQFGSDLDAATQYLL
NRGARLTEILKQAQYSPIPIEKQIVVIYAAVKGYLDQIPVALITHYEQELLKSIDPGLLS
AIVQQKNITEQISSQLATFCQKFTQSFLATHQS

>09XIA7

MFPGMFMRKPDKAEALKQLRTHVALFGSWVVIIRAAPYVLSYFSDSKDELKIDF >082662

MRGLVNKLVSRSLSISGKWQNQQLRRLNIHEYQGAELMGKYGVNVPKGVAASSLEEVKKA
IQDVFPNESELVVKSQILAGGRGLGTFKSGLKGGVHIVKRDEAEEIAGKMLGQVLVTKQT
GPQGKVVSKVYLCEKLSLVNEMYFSIILDRKSAGPLIIACKKGGTSIEDLAEKFPDMIIK
VPIDVFAGITDEDAAKVVDGLAPKAADRKDSIEQVKKLYELFRKTDCTMLEINPLAETST
NQLVAADAKLNFDDNAAFRQKEVFAMRDPTQEDPREVAAAKVDLNYIGLDGEIGCMVNGA
GLAMATMDIIKLHGGTPANFLDVGGNASEHQVVEAFKILTSDDKVKAILVNIFGGIMKCD
VIASGIVNAAKEVALKVPVVVRLEGTNVEQGKRILKESGMKLITADDLDDAAEKAVKALA

>042686

MSLQSSIRADSNCTLPNNPVCVLLPVDFIVAAMASSTSSAMAKWAAQAARGFAAAAPSSG KGRKVAVLGAAGGIGQPLSMLMKMNSQVSSLSLYDIAGTPGVAADVSHINTKAQVKGFDK DGLAEALRGCDLVIIPAGVPRKPGMTRDDLFKINAGIVRDLVTAVGQHCPGAVLNIISNP VNSTVPIAAEQLKKMGVYDKRKVMGVTTLDVVRAKTFYAEKNGLDVASVDVPVVGGHAGV TILPLFSQATPKATMSAEVLDALTKRTQDGGTEVVQAKAGKGSATLSMAYAAALFADSCL RGLNGAPVVECTYVESTVTDAPYFASKVKLSTEGVDKIHDLGPLSDYEKAGLKAMMPELL ASIEKGVOFVKGA

>P46741

MNSTKIKEIEFQNVIVDPKINNLHLKTNTDISSNYYKAGTHIGHKSIHLSETHSWHPSMA QYHLGIRDNITICNVQQTQKCLSRAFYVLTQILDNGGNVLIVNTNPEFYKLSINSMKFIE KNLPFQTFSAISYCFYKWIGGTLTNYKQISKSIYCYVKFTQRCGKFCEKNNIDFTRYQKI KKCFQGYGSVSGDSIVMSLQKKPDVIFIFNPGDNKNLILEANRLQIPVIGCTDMSSNTNG ISYPIPCNNTSVEFTLYLYKKLYKVLHYISTKKK >082663

MWRCVSRGFRAPASKTSSLFDGVSGSRFSRFFSTGSTDTRSSYTIVDHTYDAVVVGAGGA
GLRAAIGLSEHGFNTACITKLFPTRSHTVAAQGGINAALGNMSEDDWRWHMYDTVKGSDW
LGDQDAIQYMCREAPKAVIELENYGLPFSRTEEGKIYQRAFGGQSLDFGKGGQAYRCACA
ADRTGHALLHTLYGQAMKHNTQFFVEYFALDLLMASDGSCQGVIALNMEDGTLHRFRSSQ
TILATGGYGRAYFSATSAHTCTGDGNAMVARAGLPLQDLEFVQFHPTGIYGAGCLITEGS
RGEGGILRNSEGERFMERYAPTAKDLASRDVVSRSMTMEIREGRGVGPHKDHIYLHLNHL
PPEVLKERLPGISETAAIFAGVDVTKEPIPVLPTVHYNMGGIPTNYHGEVVTIKGDDPDA
VIPGLMAAGEAACASVHGANRLGANSLLDIVVFGRACANRVAEISKPGEKQKPLEKDAGE
KTIAWLDRLRNSNGSLPTSTIRLNMQRIMQNNAAVFRTQETLEEGCQLIDKAWESFGDVQ
VKDRSMIWNSDLIETLELENLLINASITMHSAEARKESRGAHAREDFTKREDGEWMKHTL
GYWEDEKVRLDYRPVHMDTLDDEIDTFPPKARVY

>P46743

MKISLKCLNTHTAEIYRKCLLLSDSTVNVSSVDFTNQSKLNLLKQEKKSIESFNKNSLLN
ISNFRDLERQEKDIQKKTSKKVYKKSYSRSTKSIYSRTKIINERNKLHTLNQQIIFSTLA
RIHLKKKINLLFPVQEFLFELSKHRNKSAGSKSREYLEILLCVKKLKMFYGFIPLKQLHK
ILVQAKAMPGYFSKNFFSLIEKRLDVVLYRSGFTKTIVAARQACRHSQIYVNSKVCRIPS
TILESGDIISYKNQLDSLKTAEIKNNLFSNINTNVSGNEVSNNVSNKVSNKISSTLALNK
QSLLLLLFCAKSIYNESFFVSNKRKFKSNEVTFDNKKEITSAIDYTKYLQIKNSRKKYKL
ITLNNNLDSLSFNIFDKEILNSLSSKQNLPVNKQNIVEIENKKTNKFNTFSLLFQNLTSF
SKSIESYSSVLALKLQDHLLNIKGKRNEVSKNINKIERSQKDNVFINILQKINRPTHLEI
SSITNSIIFLYSPORIYLPFYVDIDILRKSL

>09SD80

MVNNVVSIEKMKALWHSEVHDEQKWAVNMKLLRALGMFAGGVVLMRSYGDLMGV >P46746

MLVKKSQISRKFIEKKSGIVHIQSTTNNTLITLTDLEGNTQFFVSAGTLGFKNSRKSTVY ASGAAAEALASKAFNEGYRTIIVKIKGLGYGKKSAIRGLQKSNLVIKQIQEVTPIAHNGC RPPKKRRV

>P49364

MRGGLWQLGQSITRRLANGGDKKAVARRCFATESELKKTVLYDFHVAHGGKMVPFAGWSM
PIQYKDSIMDSTLNCRQNGSLFDVSHMCGLSLKGKDVVSFLEKLVIADVAALAHGTGTLT
VFTNEKGGAIDDSVITKVTDDHLYLVVNAGCRDKDLAHIEEHMKAFKAKGGDVSWHIHDE
RSLLALQGPLAAPVLQHLTKEDLSKLYFGEFRVLDINGSQCFLTRTGYTGEDGFEISVPS
EHGVELAKALLEKSEGKIRLTGLGARDSLRLEAGLCLYGNDLEQHITPIEAGLTWAIGKR
RRAEGGFLGADVILKQLADGPSIRRVGFISSGPPPRSHSEIQDEGGNNIGEVTSGGFSPC
LKKNIAIGYVKSGLHKAGTKVKIIIRGKQNEGVVTKMPFVPTKYYKPS

>P46748

MKTLSILDTIIKIPEKIEIHPTTTEYIYTITGPLGSSSINLKKLDKNGIACINFDIQNKQ VLIRSLYPKYNGLYKKLIENKFLGVSRGFCVYLEIVGVGYRAALLSSSLQNSTKDTNDTI VLKLGHSHDIHYKVPNGVRVFLQSPSEICIFGVDLNQVTQVAHSIRNTRPPSVYKGKGIR YTNEKIVTKTGKRK

>P46749

MAIYKTKNTLKKMNLDYSFRTNSTLVSNSEMFSLLYADTTLQKYYKNIVCQDLCLKQDYK NIMECVSLNKIVCNTSSKHYAGEKESILPAFTALEMITGOKPKYTCAKKSISTFKLRONO ILGCKNSLRGNTMYRFLEKYISIVSTRIKDWSENYSSSNKSNSLTTAYNKDYVVLNSNLF PELQQHDELFQNVTGIEISFSTLSNNVKTSTKTSRYKKDGILLYSAFQMPK >043127

MAQILAASPTCQMRVPKHSSVIASSSKLWSSVVLKQKKQSNNKVRGFRVLALQSDNSTVN
RVETLLNLDTKPYSDRIIAEYIWIGGSGIDLRSKSRTIEKPVEDPSELPKWNYDGSSTGQ
APGEDSEVILYPQAIFRDPFRGGNNILVICDTWTPAGEPIPTNKRAKAAEIFSNKKVSGE
VPWFGIEQEYTLLQQNVKWPLGWPVGAFPGPQGPYYCGVGADKIWGRDISDAHYKACLYA
GINISGTNGEVMPGQWEFQVGPSVGIDAGDHVWCARYLLERITEQAGVVLTLDPKPIEGD
WNGAGCHTNYSTKSMREEGGFEVIKKAILNLSLRHKEHISAYGEGNERRLTGKHETASID
QFSWGVANRGCSIRVGRDTEAKGKGYLEDRRPASNMDPYIVTSLLAETTLLWEPTLEAEA
LAAQKLSLNV

>Q9LEV3

MQGVIRSFVSGGNVVKGSVLQHLRVINPAIQPSVFCSRSESTQPARMEESGFESTTISDV MKSKGKSADGSWLWCTTDDTVYDAVKSMTQHNVGALVVVKPGEQQALAGIITERDYLRKI IVQGRSSKSTKVGDIMTEENKLITVTPETKVLRAMQLMTDNRIRHIPVIKDKGMIGMVSI GDVVRAVVHEHREELQRLNAYIQGGY

>P51428

MTTKIRIVIRSFDHPFLENHFGGLPPYTWKIGLPESRVLYTVLRSPHIDKKSREQFEMEI KKKYLVIKTEKHELRKKFFWLKRQRLFGAQYEILFFCKTRSDKGKLQRLL

>094BZ7

MALLQRASYLRLYYLRLMGSRPRLFSSSLSPALHRHSSTLSSPPFSSPSFRLKFQLTS
VLSQRLIQRNAISSRFLSTEASQETTTSKGYSSEQIQVLEGLDPVRKRPGMYIGSTGSRG
LHHLVYEILDNAIDEAQAGYASKVDVVLHADGSVSVVDNGRGIPTDLHPATKKSSLETVL
TVLHAGGKFGGTSSGYSVSGGLHGVGLSVVNALSEALEVSVWRDGMEHKQNYSRGKPITT
LTCRVLPLESKGTKGTSIRFWPDKEVFTTAIEFDHNTIAGRIRELAFLNPKVTISLKKED
DDPEKTQYSEYSFAGGLTEYVSWLNTDKNPIHDVLGFRREINGATVDVALQWCSDAYSDT
MLGYANSIRTIDGGTHIEGVKASLTRTLNTLAKKSKTVKEKDISLSGEHVREGLTCIVSV
KVPNPEFEGQTKTRLGNPEVRKIVDQSVQEYLTEFLELHPDILESIISKSLNAYKAALAA
KRARELVRSKSVLKSSSLPGKLADCSSTDPEVSEIFIVEGDSAGGSAKQGRDRRFQAILP
LRGKILNIERKDEAAMYKNEEIQNLILGLGLGVKGEDFKKENLRYHKIIILTDADVDGAH
IRTLLLTFFFRYQRALFDAGCIYVGVPPLFKVERGKNAQYCYDDADLKKITSNFPANASY
NIQRFKGLGEMMPEQLWETTMNPETRILKQLVVDDIAEANMTFSSLMGARVDVRKELIKN
AATRINLORLDI

>P49727

MLRVAGRRLSSSLSWRPAAAVARGPLAGAGVPDRDDDSARGRSQPRFSIDSPFFVASRGF SSTETVVPRNQDAGLADLPATVAAVKNPNPKVVYDEYNHERYPPGDPSKRAFAYFVLSGG RFIYASLLRLLVLKFVLSMSASKDVLALASLEVDLSSIEPGTTVTVKWRGKPVFIRRRTE DDIKLANSVDVASLRHPEQDAERVKNPEWLVVIGVCTHLGCIPLPNAGDFGGWFCPCHGS HYDISGRIRKGPAPFNLEVPTYSFLEENKLLVG

>Q93XM7

MADAWKDLASGTVGGAAQLVVGHPFDTIKVKLQSQPTPAPGQLPRYTGAIDAVKQTVASE GTKGLYKGMGAPLATVAAFNAVLFTVRGQMEGLLRSEAGVPLTISQQFVAGAGAGFAVSF LACPTELIKCRLQAQGALAGASTTSSVVAAVKYGGPMDVARHVLRSEGGARGLFKGLFPT FAREVPGNATMFAAYEAFKRFLAGGSDTSSLGQGSLIMAGGVAGASFWGIVYPTDVVKSV >08L3X9

MATSNLRRHLSASRLRLNRFISTSSSYHSHRRVVVTGLGMVTPLGRGVETTWRRLIDGEC
GIRGLTLDDLKMKSFDEETKLYTFDQLSSKVAAFVPYGSNPGEFDEALWLNSKAVANFIG
YAVCAADEALRDAEWLPTEEEEKERTGVSIGGGIGSICDIVEAAQLICEKRLRRLSPFFI
PKILVNMASGHVSMKYGFQGPNHAAVTACATGAHSIGDATRMIQFGDADVMVAGGTESSI
DALSVAGFSRSRALSTKFNSSPQEASRPFDCDRDGFVIGEGSGVIVLEEYEHAKRRGAKI
YAELCGYGMSGDAHHITQPPEDGKGAVLAMTRALRQSGLCPNQIDYVNAHATSTPIGDAV
EARAIKTVFSEHATSGTLAFSSTKGATGHLLGAAGAVEAIFSILAIHHGVAPMTLNVKNP
DPIFDKRFMPLTTSKKMLVRTAMSNSFGFGGTNASLLFASI

>001607

MSGGRWISNLRQVFGRSRASISSSLLPFPPTSISSGFHVPRLLDAWKNPVAAAAAFRLPQ SSGFATMNQLIRHGREEKHRSDRKRALGKCPQKQGVCLRVSTRTPKKPNSALGKIAKVRL SNRNDVFAYIPGEGHNLQEHSMVLVRGGRVKDLPGVKFHCIRGVKDLLGIPDRRRGRSKY GAEKPKST

>Q9M7T0

MAMSILKLRNLSALRSAANSARIGVSSRGFSKLAEGTDITSAAPGVSLQKARSWDEGVSS KFSTTPLSDIFKGKKVVIFGLPGAYTGVCSQQHVPSYKSHIDKFKAKGIDSVICVSVNDP FAINGWAEKLGAKDAIEFYGDFDGKFHKSLGLDKDLSAALLGPRSERWSAYVEDGKVKAV NVEEAPSDFKVTGAEVILGOI

>Q8VY06

MLRSLTCSSTITSTSLFFRSFRQLPRSYLSPSSSTTVVGASGRNIRRLSTLEAAGRRLFL RRGLKLLSAASRGLNGOFSRLSIRAVATOSAPSSYPGODEAEKLGFEKVSEEFISECKSK AVLFKHKKTGCEVMSVSNDDENKVFGIVFRTPPKDSTGIPHILEHSVLCGSRKYPMKEPF VELLKGSLHTFLNAFTYPDRTCYPVASTNKKDFYNLVDVYLDAVFFPKCVDDVHTFOOEG WHYELNDPSEDISYKGVVFNEMKGVYSQPDNILGRVTQQALCPENTYGVDSGGDPKDIPK LTFEKFKEFHROYYHPSNARIWFYGDDDPVHRLRVLSEYLDMFDASPARDSSKVEPOKLF SRPRRIVEKYPAGEDGDLKKKHMVCLNWLLSDKPLDLQTQLALGFLDHLMLGTPASPLRK ILLESGLGEALVNSGMEDELLOPOFSIGLKGVSDDNVOKVEELVMNTLRKLADEGFDTDA VEASMNTIEFSLRENNTGSSPRGLSLMLOSIAKWIYDMDPFEPLKYEEPLKSLKARIAEK GSKSVFSPLIEEYILNNPHCVTIEMQPDPEKASLEEAEEKSILEKVKASMTEEDLTELAR ATEELRLKQETPDPPDALKCVPSLNLSDIPKEPIYVPTEVGDINGVKVLRNDLFTNNILY TEVVFDMGSVKHELLQLIPLFCQSLLEMGTQDLTFVQLNQLIGRKTGGISVYPLTSSVYG RDDPCSKIIVRGKSMVGRAEDLFNLMNCVLQEVRFTDQQRFKQFVSQSRARMENRLRGSG QGIAAARMDAMLNVAGWMSEQMGGLSYLEFLHTLEQKVDQDWEGISSSLEEIRRSFLSRN GCIVNMTADGKSLTNTEKYVGKFLDLLPENPSGELVTWDARLPLRNEAIVIPTOVNYVGK AGNIYSSGYKLDGSSYVISKHISNTWLWDRVRVSGGAYGGSCDFDSHSGVFSFLSYRDPN $\verb|LLKTLDIYDGTGDFLRGLDVDEDTLTKAIIGTIGDVDSYQLPDAKGYTSLLRHLLNVTDE|$ EROIRREEILSTSLKDFKEFAEAIDSVSDKGVAVAVASOEDIDAANRERSNFFEVKKAAL

>P26863

MSFSQLFPKYNSSFNPLRGSAIQCSVIQLQQNKVLVDTGLKTPIICFQHELKRVPITKQA RFHFGIEDVEVFGEPKMLLPKPLEIKCKRKLVWIELTKIWRSDQNLVKGFILNSVKGGYA VAIAGYIAFLPKSLLRSRKVFYSQWRIFSILNMKPKISNIVVKEIGDGKIDYFSPTKSHQ KQTKYLGAKLKHWRNMKKNTNVKKKYIFSEKVPTTKKTKQGFKHLGPKPLAYTEKKRETT KQSTKNNVFQLKDQGQGKSLVFVDVLTQSS

>084KJ5

MAASSLSLSSPLSNPLRRFTLHHLHLSKKPLSSSSLFLCSAAKMNDHIHRVPALTEEEID SVAIKTFERYALPSSSSVKRKGKGVTILWFRNDLRVLDNDALYKAWSSSDTILPVYCLDP RLFHTTHFFNFPKTGALRGGFLMECLVDLRKNLMKRGLNLLIRSGKPEEILPSLAKDFGA RTVFAHKETCSEEVDVERLVNQGLKRVGNSTKLELIWGSTMYHKDDLPFDVFDLPDVYTQ FRKSVEAKCSIRSSTRIPLSLGPTPSVDDWGDVPTLEKLGVEPQEVTRGMRFVGGESAGV GRVFEYFWKKDLLKVYKETRNGMLGPDYSTKFSPWLAFGCISPRFIYEEVQRYEKERVAN NSTYWVLFELIWRDYFRFLSIKCGNSLFHLGGPRNVQGKWSQDQKLFESWRDAKTGYPLI DANMKELSTTGFMSNRGRQIVCSFLVRDMGLDWRMGAEWFETCLLDYDPCSNYGNWTYGA GVGNDPREDRYFSIPKQAQNYDPEGEYVAFWLQQLRRLPKEKRHWPGRLMYMDTVVPLKH GNGPMAGGSKSGGGFRGSHSGRRSRHNGP

>P26867

MNLFGKSNFNCVFSSSLDWFHSSRLSEKVGTKKNRICRETESFYALCLSHRRYLCYALEG LLPSRPRGRRASTYNCSDNLGYIRGLNGKQKQLIKKLVHICMIDGKKTRSRAIVYKTFHR LAPHGDVIKLLVNAIENVKPICEVKKVRISGTTRLVPSIIATNRQETLAIRWMLESAAKR RMGKKSISLDQCLYAEILEASQKMGIARKKRDDLHKLAEANRSFSHYRWW

>P26868

MHTLSNLLSSIKNAQKAQKRVLYFSSFKKISKRKKRFVCSACKMMPRVFVSRLCWDFCRI LYNEGYIHGFSQEADGSLRIVLKYHSSGIGVIKKMKTISKPGFRIYSSKNRLSKKREGLG ITILSTSKGNLICDREAQKTNFGGGEILCQVF

>P18123

MTMDPTKFRPSSSHDTTVTTTNAGAPVWNDNEALTVGPRGPILLEDYHLIEKVAHFARER IPERVVHARGASAKGFFECTHDVTSLTCADFLRAPGVRTPVIVRFSTVIHERGSPETIRD PRGFAVKFYTREGNWDLLGNNFPVFFIRDGIKFPDVIHAFKPNPRSHVQEYWRVFDFLSH LPESLHTFFFLFDDVGVPSDYRHMEGFGVNTYTFVSAAGKAQYVKFHWKPTCGVRCILTD EEAALVGGRNHSHATQDLYDSIAAGSFPEWTLYVQVMDPDTEEQYDFDPLDDTKTWPEDL LPLRPVGRLVLDRNVDNFFNENEQLAFGPGLVVPGIYYSDDKMLQCRVFAYADTQRYRLG PNYLMLPVNAPRCAHHNNHYDGAMNFMHRDEEVDYYPSRHAPLRQAAPPTPLPPRPVAGR REKATIRKPNDFKQPGERYRSWDADRQDRFVRRFADSLGHPKVSQELRSIWIDLLAKCDA SLGMKIATRLNMKANM

>038813

MRRFNWVLRHVQARRTFDSAIGLRQGSQKPLFERYIHATGINNSSARNYYDVLGVSPKAT
REEIKKSFHELAKKFHPDTNRNNPSAKRKFQEIREAYETLGNSERREEYDKLQYRNSDYV
NNDGGDSERFRRAYQSNFSDTFHKIFSEIFENNQIKPDIRVELSLSLSEAAEGCTKRLSF
DAYVFCDSCDGLGHPSDAAMSICPTCRGVGRVTIPPFTASCQTCKGTGHIIKEYCMSCRG
SGIVEGTKTAELVIPGGVESEATITIVGAGNVSSRTSQPGNLYIKLKVANDSTFTRDGSD
IYVDANISFTQAILGGKVVVPTLSGKIQLDIPKGTQPDQLLVLRGKGLPKQGFFVDHGDQ
YVRFRVNFPTEVNERQRAILEEFAKEEINNELSDSAEGSWLYQKLSTG

>P09233

MALRTLASKKVLSFPFGGAGRPLAAAASARGVTTVTLPDLSYDFGALEPAISGEIMRLHH OKHHATYVANYNKALEOLETAVSKGDASAVVOLOAAIKFNGGGHVNHSIFWKNLKPISEG GGEPPHGKLGWAIDEDFGSFEALVKKMNAEGAALQGSGWVWLALDKEAKKVSVETTANQD PLVTKGASLVPLLGIDVWEHAYYLQYKNVRPDYLNNIWKVMNWKYAGEVYENVLA >P20115

MVFFRSVSAFTRLRSRVQGQQSSLSNSVRWIQMQSSTDLDLKSQLQELIPEQQDRLKKLK SEHGKVQLGNITVDMVIGGMRGMTGLLWETSLLDPEEGIRFRGLSIPECQKVLPTAQSGA EPLPEGLLWLLLTGKVPSKEQVEALSKDLANRAAVPDYVYNAIDALPSTAHPMTQFASGV MALQVQSEFQKAYENGIHKSKFWEPTYEDCLNLIARVPVVAAYVYRRMYKNGDSIPSDKS LDYGANFSHMLGFDDEKVKELMRLYITIHSDHEGGNVSAHTGHLVGSALSDPYLSFAAAL NGLAGPLHGLANQEVLLWIKSVVEECGEDISKEQLKEYVWKTLNSGKVIPGYGHGVLRNT DPRYVCQREFALKHLPDDPLFQLVSKLYEVVPPVLTELGKVKNPWPNVDAHSGVLLNHYG LTEARYYTVLFGVSRSLGICSQLIWDRALGLALERPKSVTMDWLEAHCKKASSA >064967

MEASRRSAVKPVIVLKPSKRFPLVEDTPGKASDALPLPLYLTNAVFFTLFFTVVYFLLSR WREKIRASIPLHAVTFPEIVAIFAFVASLIYLLGFFGIDFVQSLIIRPSGDVWSGEDYEE ENEVLLHEEDARTVPCGQALDCSVPSLPHMARNVTAQRLFDEKPVRVATEEDARKVSCGQ AVDCSLHSLPPRPPIVTSQKLFHEKTVIVTTEEDEEIIKSVVAGTLPSYSLESKLGDCKR AAAIRREALQRLTGRSLSGLPLDGFDYESILGQCCEMPVGYVQIPVGIAGPLLLNGREYS VPMATTEGCLVASTNRGCKAIHLSGGATSILLKDGMTRAPVVRFSTAKRAAELKFYLEDP ENFDTLAVVFNRSSRFGRLQSIKCAIAGKNLYLRFTCSTGDAMGMNMVSKGVQNVLDFLQ TDFPDMDVIGISGNFCSDKKPAAVNWIEGRGKSVVCEAIIEGDVVRKVLKTSVESLVELN MLKNLTGSAMAGALGGFNAHASNIVTAIYIATGQDPAQNVESSHCITMMEAVNDGKDLHI

SVTMPSIEVGTVGGGTQLASQSACLNLLGVKGASKDVAGANSRMLATIVTGAVLAGELSL

 ${\tt MSALAAGQLVKSHMKYNRSSKDMSNLSS}$

>P26360

MAMAALRREGRRLAAAPFTSPTPLNALRSSLVSPSEEIGLSGVRSISTQVVRNRMKSVKN IQKITKAMKMVAASKLRAIQTRAENSRGLWQPFTALLGDTPSVDVKKNVIITISSDKGLC GGINSTSVKTSRNIHKLNSGPEKENKYVILGEKAKAQLVRDSKKDIELIITELQKNPLNY TQVSVVADDILKNVEFDALRIVFNKFQSVVSFVPTMSTVLSPEVVERESESGGKLGDLDS YEIEGAESKSEVLQNLTEFQFSSVLFNAVLENACSEQGARMSAMDSSSRNAGEMLDRLTL TYNRTROASITTELIEIISGASALEG

>042191

MAFRQTLSIRSRLFARRNQPVYHIIPRESDHERDSFCQETSQRSYHSFLHQRSVNNSDFS
KVSGGSLHLPLAPTSGFAFYRYMSSAPGVGSEKIGVMSDIAEVITDSTLQDVPAQAAAAV
SEVTLAAADSFFPIAALQQCIDMVHTFTGFEWWASIVVATILIRSSTVPLLIKQMKDTTK
LALMRPRLESIREEMQNKGMDSVTMAEGQKKMKNLFKEYGVTPFTPMKGMFIQGPLFICF
FLAIRNMAEKVPSFQTGGALWFTDLTTPDSLYILPVITGLTFLITVECNAQEGMEGNPMA
GTVKTVCRVFALLTVPMTMSFPQAIFCYWITSNLFSLMYGLVIKRPQVKKMLRIPDLPPP
PPGQQPSFDLFSALKKMKAMTQDHTQNQIEPPSPVNPRLSSTSLSPVSKRLKALESQVKG
RKKNSSKKK

>Q9FE64

MAMARRSASRLLSSFRPFSLLLQPLDDAPSLSAAAAAASARRGMSSASALRARDEKEVAR WRESMDRMRNIGISAHIDSGKTTLTERVLYYTGRIHEIHEVRGRDGVGAKMDSMDLEREK GITIQSAATYCTWNGYQVNIIDTPGHVDFTIEVERALRVLDGAILVLCSVGGVQSQSITV DROMRRYEIPRVAFINKLDRMGADPWKVLNOARSKLRHHNAAVOVPIGLEEFEGLVDLV

ELKAYKFEGGSGQNVVASDVPSNMQDLVMEKRRELIEVVSEVDDQLAEAFLNDEPIQANQ
LKAAIRRATVARKFIPVYMGSAFKNKGVQPLLDGVLDYLPCPMEVESYALDQNKSEEKVL
LAGTPAEPLVALAFKLEEGRFGQLTYLRIYDGVIRKGDFIYNVNTGKKIKVPRLVRMHSN
EMEDIQEAHAGQIVAVFGVDCASGDTFTDGSVKYTMTSMNVPEPVMSLAVSPISKDSGGQ
FSKALNRFQKEDPTFRVGLDPESGETIISGMGELHLDIYVERIRREYKVDAKVGKPRVNF
RETITQRAEFDYLHKKQSGGQGQYGRVCGYIEPLPSESDGKFEFDNMIIGQAIPSNFIPA
IEKGFKEACNSGSLIGHPVENIRIVLTDGASHAVDSSELAFKLASIYAFRQCYAAARPVI
LEPVMKVELKVPTEFQGTVTGDMNKRKGIIVGNDQEGDDTVVVCHVPLNNMFGYSTALRS
MTOGKGEFSMEYLEHNTVSODVOMOLVNTYKASRGTE

>P27168

MSFTGIFHFFTNSPCDAAEPWQLGSQDAATPMMQGIIDLHHDIFFFLILILVFVSRILVR ALWHFHSKKNPIPQRIVHGTTIEILRTIFPSIIPMFIAIPSFALLYSMDEVVVDPAMTIK AIGHQWYRTYEYSDYNSSDEQSLTFDSYTIPEDDPELGQSRLLEVDNRVVVPAKTHLRII VTSADVPHSWAVPSSGVKCDAVPGRLNQISISVQREGVYYGQCSEICGTNHAFTPIVVEA VSRKDYGSRVSNOLIPOTGEA

>Q9ZUX4

MATRNALRIVSRRFSSGKVLSEEERAAENVFIKKMEQEKLQKLARQGPGEQAAGSASEAK VAGATASASAESGPKVSEDKNRNYAVVAGVVAIVGSIGWYLKAGGKKQPEVQE >P93033

MSIYVASRRLSGGTTVTALRYATSLRSYSTSFREERDTFGPIQVPSDKLWGAQTQRSLQN
FEIGGERERMPEPIVRAFGVLKKCAAKVNMEYGLDPTIGKAIMQAAQEVAEGKLNDHFPL
VVWQTGSGTQSNMNANEVIANRAAEILGRKRGEKCVHPNDHVNRSQSSNDTFPTVMHIAA
ATEINSRLIPSLKTLHSTLESKSFEFKDIVKIGRTHTQDATPLTLGQEFGGYATQVKYGL
NRVTCTLPRLYQLAQGGTAVGTGLNTKKGFDVKIAAAVAEETNLPFVTAENKFEALAAHD
ACVETSGSLNTIATSLMKIANDIRFLGSGPRCGLGELVLPENEPGSSIMPGKVNPTQCEA
LTMVCAQVMGNHVAVTVGGSNGHFELNVFKPVIASALLHSVRLIADASASFEKNCVRGIE
ANRERISKLLHESLMLVTSLNPKIGYDNAAAVAKKAHKEGCTLKEAALNLGVLTAEEFDT
LVVPEKMTGPSD

>P27456

MNQAMATPLSLSCCSPTLTRSTLFFTKTFPFSRSFSTPLPLSTKTLISLSPPHRTFAVRA
ESQNGADPARQYDFDLFTIGAGSGGVRASRFASNFGASSAVCELPFSTISSDTTGGVGGT
CVIRGCVPKKLLVYASKFSHEFEESNGFGWRYDSEPKHDWSSLIANKNAELQRLTGIYKN
TLKNAGVKLIEGRGKIVDAHTVDVDGKLYSAKHILVSVGGRPFIPDIPGKEYAIDSDAAL
DLPSKPQKIAIVGGGYIALEFAGIFNGLKSEVHVFIRQKKVLRGFDEEIRDFVAENMALR
GIEFHTEESPVAITKAADGSLSLKTNKGTEEGFSHIMFATGRSPNTKDLGLESVGVKVAK
DGSIEVDEYSQTSVPSIWAIGDATNRVNLTPVALMEGVALAKTLFQNEPTKPDYRAIPSA
VFSQPPIGGVGLTEEQAAEQYGDIDVFTANFRPMKATLSGLPDRVFMKLIVSAETNVVLG
LHMCGEDAAEIAQGFAVGIKAGLTKADFDATVGIHPTAAEEFVTMRTPTRKVRKNQASQG
KSDSKAKAVAGS

>P48502

MASSFSRWLVDPKKNPLAAIHMKTLSSRLRNYGLRHDDLYDPMYDLDVKEALNRLPREIV DARNQRLLRAMDLSMKHQYLPEDLQAMQTPFRNYLQEMLALVKRESAEREALGALPLYQR TLP

>P48504

MSDEEVVDPKATLEVSCKPKCVRQLKEYQACTKRVEGDESGHKHCTGQYFDYWHCIDKCV AAKLFDHLK

>P42043

MQATALSSGFNPLTKRKDHRFPRSCSQRNSLSLIQCDIKERSFGESMTITNRGLSFKTNV
FEQARSVTGDCSYDETSAKARSHVVAEDKIGVLLLNLGGPETLNDVQPFLYNLFADPDII
RLPRPFQFLQGTIAKFISVVRAPKSKEGYAAIGGGSPLRKITDEQADAIKMSLQAKNIAA
NVYVGMRYWYPFTEEAVQQIKKDKITRLVVLPLYPQYSISTTGSSIRVLQDLFRKDPYLA
GVPVAIIKSWYQRRGYVNSMADLIEKELQTFSDPKEVMIFFSAHGVPVSYVENAGDPYQK
QMEECIDLIMEELKARGVLNDHKLAYQSRVGPVQWLKPYTDEVLVDLGKSGVKSLLAVPV
SFVSEHIETLEEIDMEYRELALESGVENWGRVPALGLTPSFITDLADAVIESLPSAEAMS
NPNAVVDSEDSESSDAFSYIVKMFFGSILAFVLLLSPKMFHAFRNL

>P48505

MTSPAAAGNGLFKFLRPKLRPQSTDIQAAAGWGVAAVTGALWVIQPWDFLRKTFIEKQEE EK

>08RY99

MGRLSWASPIQRFRFFSYLSQLNGRRSVLACSGYENRYLSSLVEASDCELDEVPDDRKVA
EKDTALHLALSQLSGDFDKDSKLSLQRFYRKRRVSVISTGSLNLDLALGVGGLPKGRMVE
VYGKEASGKTTLALHIIKEAQKLGGYCAYLDAENAMDPSLAESIGVNTEELLISRPSSAE
KMLNIVDVLTKSGSVDVIVVDSVAALAPQCELDAPVGERYRDTQSRIMTQALRKIHYSVG
YSQTLIVFLNQVRSHVKSNMHFPHAEEVTCGGNALPFHAAIRLKMIRTGLIKTANKISGL
NVCVQVVKNKLAPGKKKSELGIHFGHGFYVEREVLELACEHGVILREGTSYFIEGEVIEG
KDAAEKYLVENKEALDTVVAILRNQLFKM

>P92812

MRQSIKGRALRHFTLSTGKSAGRNSSGRITVFHRGGGSKRLQRKIDLKRSTSSIGIVERI EYDPNRSSRIALVRWIEGVLPGRQRKFKTIEEFALPRKILESTTATIFCLFSFSSLSSPL AQGETASLSFGSSLGFPRIAVAGAKPAFFAERMREKKIGKKTFSLCEIRKWRTHCVLWAH RIKRKAALSWQSLRQQKTLELVGAAEHNESKLKADQGSLLPRQVLAYALCSGRPSYLHAS RSFYKALLPVEASRFGSLPAKPPIGEGPKDGAYKVDRAPVTYILASHQLEAGNMVINCDC SKPSKSGFLRPAQNAHTYLRFQELGRTVNKGRVEGGSQLAASWPRPPAYRHEILDLNSKV GNSIPLADIRMGTWVHDIECHPGQGAKLARAAGTYAKIIKEPASQCLVRLPSGVEKLIDS RCRATIGIVSNPNHGARKLRKAGQSRWSGRRPIVRGVAMNPVDHPHGGGEGRTKGGRPSV SPWGKPTKAGFRAGVGVGKRRI

>Q9LDD8

MLRILGRRVVSASKELTSIQQWRIRPGTDSRPDPFRTFRGLQKGFCVGILPDGVDRNSEA FSSNSIAMEGILSELRSHIKKVLAGGGEEAVKRNRSRNKLLPRERIDRLLDPGSSFLELS QLAGHELYEEPLPSGGIITGIGPIHGRICMFMANDPTVKGGTYYPITIKKHLRAQEIAAR CRLPCIYLVDSGGAYLPKQAEVFPDKENFGRVFYNESVMSSDGIPQIAIVLGSCTAGGAY IPAMADESVMVKGNGTIFLAGPPLVKAATGEEVSAEDLGGATVHCTVSGVSDYFAQDELH GLAIGRNIVKNLHMAAKQGMEGTFGSKNLVYKEPLYDINELRSIAPVDHKQQFDVRSIIA RIVDGSEFDEFKKQYGTTLVTGFARIYGQTVGIIGNNGILFNESALKGAHFIELCSQRKI PLVFLQNITGFMVGSRAEANGIAKAGAKMVMAVSCAKVPKITIITGASFGAGNYAMCGRA YSPDFMFIWPNARIGIMGGAQAAGVLTQIERATKKRQGIKWTEEEEEAFKKKTVDAYERE ANPYYSTARLWDDGVIDPCDTRKVLGLCLSAALNRPLEDTRFGVFRM

>P34899

MAMAMALRKLSSSVNKSSRPLFSASSLYYKSSLPDEAVYDKENPRVTWPKQLNSPLEVID PEIADIIELEKARQWKGLELIPSENFTSLSVMQAVGSVMTNKYSEGYPGARYYGGNEYID MAETLCQKRALEAFRLDPAKWGVNVQPLSGSPSNFQVYTALLKPHDRIMALDLPHGGHLS HGYQTDTKKISAVSIFFETMPYRLDESTGYIDYDQLEKSATLFRPKLIVAGASAYARLYD YARIRKVCDKQKAVLLADMAHISGLVAAGVIPSPFDYADVVTTTTHKSLRGPRGAMIFFR KGLKEVNKQGKEVFYDYEDKINQAVFPGLQGGPHNHTITGLAVALKQATTPEYRAYQEQV LSNSSKFAKALSEKGYDLVSGGTENHLVLVNLKNKGIDGSRVEKVLELVHIAANKNTVPG DVSAMVPGGIRMGTPALTSRGFVEEDFVKVAEYFDAAVSLALKVKAESKGTKLKDFVEAL OTSSYVOSEISKLKHDVEEFAKOFPTIGFEKATMKYNK

>P37221

MAIFSNQMRLSSTLLKRLHQRVAAAVNSSSSRNFTTTEGHRPTIVHKRSLDILHDPWFNK
GTAFSFTERDRLHIRGLLPPNVMSFEQQIARFMADLKRLEVQARDGPSDPYVLAKWRILN
RLHDRNETLYYKVLMENIEEYAPIVYTPTVGLVCQKYSGLFRRPRGMYFSAEDRGEMMSM
VYNWPADQVDMIVVTDGSRILGLGDLGIQGIGIAIGKLDLYVAAAGINPQRVLPVMIDVG
TDNENLLKDPLYLGLQDHRLDGEEYIEVIDEFMEAVFTRWPHVIVQFEDFQSKWAFKLLQ
RYRNNYRMFNDDIQGTAGVAIAGLLGAVRAQGRPMIDFPKMKIVVAGAGSAGIGVLNAAR
KTMARMLGNTEIAFESARSQFWVVDAKGLITEARENVDPDARPFARKIKEIERQGLSEGA
TLAEVVREVKPDVLLGLSACGGLFSKEVLEALKHSTSTRPAIFPMSNPTRNAECTPEEAF
SILGENIIFASGSPFKDVDLGNGHVGHCNQANNMFLFPGIGLGTLLSGSRIVSDGMLQAA
AECLAAYITEEEVLKGIIYPSISRIRDITKEVAAAVVKEAIEEDLAEGYREMDSRELRKL
DEAOISEFVENNMWSPDYPTLVYKKD

>P93834

MGKVAVATTVVCSVAVCAAAALIVRRRMKSAGKWARVIEILKAFEEDCATPIAKLRQVAD
AMTVEMHAGLASEGGSKLKMLISYVDNLPSGDETGFFYALDLGGTNFRVMRVLLGGKHDR
VVKREFKEESIPPHLMTGKSHELFDFIVDVLAKFVATEGEDFHLPPGRQRELGFTFSFPV
KQLSLSSGTLINWTKGFSIDDTVDKDVVGELVKAMERVGLDMLVAALVNDTIGTLAGGRY
TNPDVVVAVILGTGTNAAYVERAHAIPKWHGLLPKSGEMVINMEWGNFRSSHLPLTEYDH
SLDVDSLNPGEQILEKIISGMYLGEILRRVLLKMAEEAAFFGDIVPPKLKIPFIIRTPNM
SAMHSDTSPDLKVVGSKLKDILEVQTSSLKMRKVVISLCNIIASRGARLSAAGIYGILKK
IGRDATKDGEAQKSVIAMDGGLFEHYTQFSESMKSSLKELLGDEVSESVEVILSNDGSGV
GAALLAASHSOYLELEDDSETS

>P35480

MYRLISSIASKARVARNCTSQIGSRLSSTRNYAAKDIRFGVEGRALMLRGVEELADAVKV
TIPPKGRNVIIEQSWGAPKVTKDGVTVAKSIEFKDRVKNVGASLVKQVANRPTQLNRCLG
DGTTCATVLTRAIFTEGCKSVAAGMNAMDLRRGIKLAVDTVVTKLKSRARMISTSEEIAQ
VGTISANGDRELVTDCKAMESVGKEGVITIQDGKTLFNELEVVEGMKIDRGYISPYFITN
QKNQKCELEDPLILIHEKKISNLNSMVKVLELALKSQRSLLIVAADLESDALAVLILNKL
RAGIKVCAVKAPGFGENRKANMHDLATLTGAQVITEELGMNLEKIDLSMLGNCKKITVSK
DDTVFLGWGAGDKKAIGERCEQIRSMVEASESDYDKEKLQERLAKLSGGVAVLKIGGASE
SEVGEKKDRVTDALNATKAAVEEGIVPGGGVALLYASKELDKLSTANFDHKIGVQIIQNA
LKTPVYTIASNAGVEGAVIVGKLLESDNPDLGYDAAKGEYVDMVKSGIIDPVKVIRTALV
DAASVSSLLTTTEAVVTEIPTKEDASPAMGGGGGGMGGMGGMGGMGF

>P36428

MRLVKAASLLISSTKPPSRVFYSSHLRRPFFSHFRFSSSSSTSSSVAVMPGSEPSETOWP

AKRVRDTYVDFFRGKGHKFWPSSPVVPHNDPTLLFANAGMNQYKPIFLGTADPNTELSKL SRACNTOKCIRAGGKHNDLDDVGKDTYHHTFFEMLGNWSFGDYFKKEAIEWAWELLTKVY GLPTDRIYATYFGGDEKAGLQPDNEARDIWLKVLPSGRVLPFGCKDNFWEMGDTGPCGPC TEIHYDRIGNRDAASLVNNDDPTCLEIWNLVFIQFNRESDGSLKPLPAKHVDTGMGFERL TSVLONKMSNYDTDVFMPIFDDIOKATGARPYSGKVGPEDVDRVDMAYRVVADHIRTLSF AIADGSRPGNEGREYVLRRILRRAVRYGKEILKAEEGFFNGLVSSVIRVMGDVFTELKEH EKKITDIIKEEEASFCKTLAKGIEKFRKAGOAVOGNTLSGDDAFILWDTYGFPLDLTOLM AEERGLLVDVDGFNKAMEEARERSRSAQNKQAGGAIVMDADATSTLHKAGVSATDDSFKY IWFODHESELKAIYTGSTFLESSAASDNVGLVLGSTSFYAEOGGOIFDTGLIEGSFGTFN VCNVQIFGGFVLHIGYLSKETGEVSVGDKVICKVDYERRKLIAPNHTCTHMLNYALKEVL GDHIDQKGSIVLPEKLRFDFSHGKPVDPEDLRRIESIVNKQIKDELDVFSKEAVLSEAKR IKGLRAVFGEVYPDPVRVVSIGRKVEDLLADPENNEWSLLSSEFCGGTHITNTREAKAFA LLSEEGIAKGIRRVTAVTTECAFDALNAASLLEREVEDASRAEGSALEKKVSALKSRVDA AIIPAAKKADIRTKIASLQNEVRKAQKKIAEQNLKKSVKLATEAAESAASDGKTFCIIQL DVGLDAAAVREAVSKVMEKKGMSIMVFSTDESTNKAVVCAGVPEKSDOFKPLDVTEWLTT ALGPLKGRCGKGKGGLASGQGTDASQVQAALDMASSFASMKLN

>P39697

MAFCTKLGGHWKQGVNVPVSSMLGSLRYMSTKLYIGGLSPGTDEHSLKDAFSSFNGVTEA RVMTNKVTGRSRGYGFVNFISEDSANSAISAMNGQELNGFNISVNVAKDWPSLPLSLDES IEEAEKKENKMMSRSVWKDPFVDAFLMKKKNAALNRKIWSRRSTILPEYVDSAVRIYNGK THVRCKITEGKVGHKFGEFAFTRKVKKHAKAK

>Q940M2

MALQRQLLKRATSDIYHRRAISLLRTDFSTSPSIADAPPHIPPFVHQPRPYKGPSADEVL QKRKKFLGPSLFHYYQKPLNIVEGKMQYLYDESGRRYLDAFAGIVTVSCGHCHPDILNAI TEQSKLLQHATTIYLHHAIGDFAEALAAKMPGNLKVVYFVNSGSEANELAMMMARLYTGS LEMISLRNAYHGGSSNTIGLTALNTWKYPLPQGEIHHVVNPDPYRGVFGSDGSLYAKDVH DHIEYGTSGKVAGFIAETIQGVGGAVELAPGYLKSVYEIVRNAGGVCIADEVQTGFGRTG SHYWGFQTQDVVPDIVTMAKGIGNGLPLGAVVTTPEIASVLASKILFNTFGGNPVCSAGG LAVLNVIDKEKRQEHCAEVGSHLIQRLKDVQKRHDIIGDVRGRGLMVGIELVSDRKDKTP AKAETSVLFEOLRELGILVGKGGLHGNVFRIKPPMCFTKDDADFLVDALDYSISRL

>09LOL0

MALRMWASSTANALKLSSSASKSHLLPAFSISRCFSSVLEGLKYANSHEWVKHEGSVATI GITDHAQDHLGEVVFVELPEANSSVSKEKSFGAVESVKATSEILSPISGEVIEVNTKLTE SPGLINSSPYEDGWMIKVKPSSPAELEALMGPKEYTKFCEEEDAAH

>094A28

MYRRATSGVRSASARLSSSLSRIASSETASVSAPSASSLRNQTNRSKSFSSALRSFRVCS
ASTRWSHGGSWGSPASLRAQARNSTPVMEKFERKYATMASEHSYKDILTSLPKPGGGEYG
KYYSLPALNDPRIDKLPFSVRILLESAIRNCDNYQVTKDDVEKILDWENTSTKQVEIAFK
PARVILQDFTGVPVLVDLASMRDAVKNLGSDPSKINPLVPVDLVVDHSIQVDFARSEDAA
QKNLELEFKRNKERFTFLKWGSTAFQNMLVVPPGSGIVHQVNLEYLGRVVFNSKGFLYPD
SVVGTDSHTTMIDGLGVAGWGVGGIEAEAAMLGQPMSMVLPGVVGFKLDGKLKEGVTATD
LVLTVTQILRKHGVVGKFVEFYGEGMSELSLADRATIANMSPEYGATMGFFPVDHVTLEY
LKLTGRSDETVSMIESYLRANNMFVDYNEPQQERAYTSYLQLELGHVEPCISGPKRPHDR
VPLKDMKADWHACLDNPVGFKGFAVPKEKQEEVVKFSYNGQPAEIKHGSVVIAAITSCTN

TSNPSVMIGAALVAKKASDLGLKVKPWVKTSLAPGSRVVEKYLDRSGLRESLTKQGFEIV
GYGCTTCIGNSGNLDPEVASAIEGTDIIPAAVLSGNRNFEGRVHPQTRANYLASPPLVVA
YALAGTVDIDFEKEPIGTRSDGKSVYLRDVWPSNEEVAQVVQYSVLPSMFKSSYETITEG
NPLWNELSAPSSTLYSWDPNSTYIHEPPYFKNMTANPPGPREVKDAYCLLNFGDSVTTDH
ISPAGNIQKTSPAAKFLMDRGVISEDFNSYGSRRGNDEVMARGTFANIRIVNKLLKGEVG
PNTVHIPTGEKLSVFDAASKYKTAEQDTIILAGAEYGSGSSRDWAAKGPLLLGVKAVIAK
SFERIHRSNLAGMGIIPLCFKAGEDAETLGLTGHERYTVHLPTKVSDIRPGQDVTVTTDS
GKSFVCTLRFDTEVELAYYDHGGILPYVIRSLSAK

>043725

MVAMIMASRFNREAKLASQILSTLLGNRSCYTSMAATSSSALLLNPLTSSSSSSTLRRFR
CSPEISSLSFSSASDFSLAMKRQSRSFADGSERDPSVVCEAVKRETGPDGLNIADNVSQL
IGKTPMVYLNSIAKGCVANIAAKLEIMEPCCSVKDRIGYSMVTDAEQKGFISPGKSVLVE
PTSGNTGIGLAFIAASRGYRLILTMPASMSMERRVLLKAFGAELVLTDPAKGMTGAVQKA
EEILKNTPDAYMLQQFDNPANPKIHYETTGPEIWDDTKGKVDIFVAGIGTGGTITGVGRF
IKEKNPKTQVIGVEPTESDILSGGKPGPHKIQGIGAGFIPKNLDQKIMDEVIAISSEEAI
ETAKQLALKEGLMVGISSGAAAAAAIKVAKRPENAGKLIAVVFPSFGERYLSTPLFQSIR
EEVEKMOPEV

>Q9SWG0

MQRFFSARSILGYAVKTRRRSFSSRSSSLLFDDTQLQFKESVSKFAQDNIAPHAERIDKT
NSFPKDVNLWKLMGEFNLHGITAPEEYGGLGLGYLYHCIAMEEISRASGSVALSYGAHSN
LCINQLVRNGTAAQKEKYLPKLISGEHVGALAMSEPNAGSDVVGMKCKAEKVDGGYILNG
NKMWCTNGPSAETLVVYAKTDTKAGSKGITAFIIEKGMTGFSTAQKLDKLGMRGSDTCEL
VFENCFVPEENILDKEGKGVYVLMSGLDLERLVLAAGPLGIMQACLDNVLPYIRQREQFG
RPVGEFQFIQGKVADMYTALQSSRSYVYSVARDCDNGKVDPKDCAGTILCAAERATQVAL
QAIQCLGGNGYINEYATGRLLRDAKLYEIGAGTSEIRRIVIGRELFKEE

(9) \mathbb{S}_0 : 152 nucleus proteins

>P93045

MKGLVSTGWKGPVKFRMPTAENLVPIRLDIQFEGQRYKDAFTWNPSDPDNEVVIFAKRTV KDLKLPYAFVTQIAQSIQSQLSDFRAYEGQDMYTGEKIIPIKLDLRVNHTLIKDQFLWDL NNFESDPEEFARTLCKDLGVEDPEVGPAVAFAIREQLYEIAIQSVASARESRLSKKGRRG SDHGSASKASGLSMDLMKLFSFKSSVVRKRKDLDVYEPVVDLLTSEEVDALEAREERHAR

>022446

MDTGGNSLASGPDGVKRKVCYFYDPEVGNYYYGQGHPMKPHRIRMTHALLAHYGLLQHMQ
VLKPFPARDRDLCRFHADDYVSFLRSITPETQQDQIRQLKRFNVGEDCPVFDGLYSFCQT
YAGGSVGGSVKLNHGLCDIAINWAGGLHHAKKCEASGFCYVNDIVLAILELLKQHERVLY
VDIDIHHGDGVEEAFYATDRVMTVSFHKFGDYFPGTGHIQDIGYGSGKYYSLNVPLDDGI
DDESYHLLFKPIMGKVMEIFRPGAVVLQCGADSLSGDRLGCFNLSIKGHAECVKFMRSFN
VPLLLLGGGGYTIRNVARCWCYETGVALGVEVEDKMPEHEYYEYFGPDYTLHVAPSNMEN
KNSRQMLEEIRNDLLHNLSKLQHAPSVPFQERPPDTETPEVDEDQEDGDKRWDPDSDMDV
DDDRKPIPSRVKREAVEPDTKDKDGLKGIMERGKGCEVEVDESGSTKVTGVNPVGVEEAS
VKMEEEGTNKGGAEQAFPPKT

>P48513

MSDAFCSDCKRQTEVVFDHSAGDTVCSECGLVLESHSIDETSEWRTFANESGDNDPNRVG GPSNPLLTDGGLSTVIAKPNGGGGGEFLSSSLGRWQNRGSNPDRALIQAFKTIATMSDRL GLVATIKDRANEIYKRVEDQKSSRGRNQDALLAACLYIACRQEDKPRTVKEICSVANGAT KKEIGRAKEYIVKQLGLENGNAVEMGTIHAGDFMRRFCSNLCMNNQAVKAAQEAVQKSEE FDIRRSPISIAAAVIYIITQLSDDKKPLKDISLATGVAEGTIRNSYKDLYPHVSKIIPNW YAKEEDLKNLCSP

>08VWG3

MESPPLYEISSSSSEKPRHHFQSLDLFPNLNQNSCINNTLIEPLPLIDRINLNSNLDLN PNPLYAEEGEQEEEEEEDREVDVDLHIGLPGFGKPSNDAKQLKKRNGKEIATYDAGKG IENELSGKAYWIPAPEQILIGFTHFSCHVCFKTFNRYNNLQMHMWGHGSQYRKGPESLKG TQPRAMLGIPCYCCVEGCRNHIDHPRSKPLKDFRTLQTHYKRKHGHKPFSCRLCGKLLAV KGDWRTHEKNCGKRWVCVCGSDFKHKRSLKDHVKAFGSGHGPYPTGLFEEQASNSSVSET LFF

>P48732

MFTSGNVTARVFERQIRTPPPGASVNRARHFYENLVPSYTLYDVESPDHCFRKFTEDGLF
LISFSRNHQELIVYRPSWLTYSTTDDSTTTLPPLPRRASKFDSFFTQLYSVNLASSNELI
CKDFFLYHQTRRFGLFATSTAQIHDSSSPSNDAVPGVPSIDKITFVLLRLDDGVVLDERV
FLHDFVNLAHNMGVFLYDDLLAILSLRYQRIHLLQIRDSGHLVDARAIGYFCREDDELFL
NSSSQAMMSQDKSKQQSLSGSKEDDTGENGLRHSLSQPSGSNSFLSGVKQRLLSFIFREI
WNEESDNRVQSLKKKFYFHFQDYVDLIIWKVQFLDRQHLLIKFGSVDGGVTRSADHHPAF
FAVYNMETTDIVAFYQNSAEDLYQLFEQFSDHFTVSSSTPFMNFVTSHSNNVYALEQLKY
TKNKSNSFSQFVKKMLLSLPFSCQSQSPSPYFDQSLFRFDEKLISAADRHRQSSDNPIKF
ISRRQPQTLKFKIKPGPECGTADGRSKKICSFLFHPHLPLAISIQQTLFMPPSVVNIHFR
R

>Q93WK5

MNANEEGEGSRYPITDRKTGETKFDRVESRTEKHSEEEKTNGITMDVRNGSSGGLQIPLS
QQTAATVCWERFLHVRTIRVLLVENDDCTRYIVTALLRNCSYEVVEASNGIQAWKVLEDL
NNHIDIVLTEVIMPYLSGIGLLCKILNHKSRRNIPVIMMSSHDSMGLVFKCLSKGAVDFL
VKPIRKNELKILWQHVWRRCQSSSGSGSESGTHQTQKSVKSKSIKKSDQDSGSSDENENG
SIGLNASDGSSDGSGAQSSWTKKAVDVDDSPRAVSLWDRVDSTCAQVVHSNPEFPSNQLV
APPAEKETQEHDDKFEDVTMGRDLEISIRRNCDLALEPKDEPLSKTTGIMRQDNSFEKSS
SKWKMKVGKGPLDLSSESPSSKQMHEDGGSSFKAMSSHLQDNREPEAPNTHLKTLDTNEA
SVKISEELMHVEHSSKRHRGTKDDGTLVRDDRNVLRRSEGSAFSRYNPASNANKISGGNL
GSTSLQDNNSQDLIKKTEAAYDCHSNMNESLPHNHRSHVGSNNFDMSSTTENNAFTKPGA
PKVSSAGSSSVKHSSFQPLPCDHHNNHASYNLVHVAERKKLPPQCGSSNVYNETIEGNNN
TVNYSVNGSVSGSGHGSNGPYGSSNGMNAGGMNMGSDNGAGKNGNGDGSGSGSGSGSGNL
ADENKISQREAALTKFRQKRKERCFRKKVRYQSRKKLAEQRPRVRGQFVRKTAAATDDND
IKNIEDS

>P26307

MEASSGSSPPHSQENPPEHGGDMGGAPAEEIGGEAADDFMFAEDTFPSLPDFPCLSSPSS STFSSNSSSNSSSAYTNTAGRAGGEPSEPASAGEGFDALDDIDQLLDFASLSMPWDSEPF PGVSMMLENAMSAPPQPVGDGMSEEKAVPEGTTGGEEACMDASEGEELPRFFMEWLTSNR ENISAEDLRGIRLRRSTIEAAAARLGGGRQGTMQLLKLILTWVQNHHLQRKRPRDVMEEE AGLHVQLPSPVANPPGYEFPAGGQDMAAGGGTSWMPHQQAFTPPAAYGGDAVYPSAAGQQ YSFHQGPSTSSVVVNSQPFSPPPVGDMHGANMAWPQQYVPFPPPGASTGSYPMPQPFSPG FGGQYAGAGAGHLSVAPQRMAGVEASATKEARKKRMARQRRLSCLQQQRSQQLSLGQIQT SVHLQEPSPRSTHSGPVTPSAGGWGFWSPSSQQQVQNPLSKSNSSRAPPSSLEAAAAAPQ TKPAPAGARQDDIHHRLAAASDKRQGAKADKNLRFLLQKVLKQSDVGSLGRIVLPKKEAE VHLPELKTRDGISIPMEDIGTSRVWNMRYRFWPNNKSRMYLLENTGEFVRSNELQEGDFI VIYSDVKSGKYLIRGVKVRPPPAQEQGSGSSGGGKHRPLCPAGPERAAAAGAPEDAVVDG VSGACKGRSPEGVRRVRQQGAGAMSQMAVSI

>040SC8

MTSTAAEGAGSGSLNPPHSNPSGDGGPRIRSPPGKGNKPVALADITNTGKPNAARSITVP
DLVKENTKLLTLLNEKTKIIDLSRVEIYKLRLALQASKQQNLHLTQTNSQMLAEINTGKD
RIKMLQHELSCTTALLKVKDSELDRKKNAGNVQQKGVKSQVLKTKASTVAVEAHHVGDSV
TSGVEHHVVESQSAVSSNTVCQEPPQDGKQKRMPQRRRSSRLNQGSCEIRGVSQNTLHEN
PVVPVAPSTLSLEKQYGQTTGKHMKSLQNECSATVHEVIMASEFEKTEINELPQKTDLKE
IPEACSSETEVQSHKIGDKAFNSKQNHLTGSQSSLSFNTVDTPEPPEDNTVKRCSKKRSS
IEDVNAKLDTITSEPLRHEKKRKSRRKISARLNSVSSEHTDIVVETEHKDVIVSLAGSTS
NVSMEQRTNQEQDGDCFSRKSNENQILGRRSLRRAAEKVVSYKEMPLNVKMRRP

>08GWZ6

METTVKNSSSDGEWKVVLPSKGRQGRRRKPKPKGQAEEEEQPWKSDDLEIDPQRQARLKQ KMEISLKKIESSSFYTAFLEQLKSPEVSNQIRLVLGSETQLQMVMYGIGSIESYESPRFQ LSIAILMKREFDWVGDNIEVFDPVLSATESSYLESLGCSVLSVNEQARREALKPTLFFMP HCEANLYSNLLQANWRMDRLSKIALFGNSFQMYEEQVSFDAEVICATKRIIAAQRVTSEF AIETESDDYFAAFHDSSWHFFSSGIDSELPLFVSD

>022161

MSRRVRRKLEEEKGKDKVVVLPSYPETSISNEEDLVAPELLHGFVDWISLPYDTVLOLFT CLNYRDRASLASTCKTWRCLGASSCLWTSLDLRPHKFDASMAASLASRCVNLHYLRFRGV ESADSLIHLKARNLIEVSGDYCKKITDATLSMIVARHEALESLOLGPDFCERITSDAIKA VAFCCPKLKKLRLSGIRDVTSEAIEALAKHCPQLNDLGFLDCLNIDEEALGKVVSVRYLS VAGTSNIKWSIASNNWDKLPKLTGLDVSRTDIGPTAVSRFLTSSOSLKVLCALNCHVLEE DESLISYNRFKGKVLLALFTNVFDGLASIFADNTKKPKDIFAYWRELMKTTKDKTINDFI HWIEWIISHTLLRTAECNPEGLDDFWLNEGAALLLNLMOSSOEDVOERSATGLATFVVVD DENASIDCGRAEAVMKDGGIRLLLELAKSWREGLOSEAAKAIANLSVNANIAKSVAEEGG IKILAGLAKSMNRLVAEEAAGGLWNLSVGEEHKNAIAQAGGVKALVDLIFRWPNGCDGVL ERAAGALANLAADDKCSMEVAKAGGVHALVMLARNCKYEGVQEQAARALANLAAHGDSNN NNAAVGQEAGALEALVQLTKSPHEGVRQEAAGALWNLSFDDKNRESISVAGGVEALVALA OSCSNASTGLOERAAGALWGLSVSEANSVAIGREGGVPPLIALARSEAEDVHETAAGALW NLAFNPGNALRIVEEGGVPALVHLCSSSVSKMARFMAALALAYMFDGRMDEYALMIGTSS SESTSKNISLDGARNMALKHIEAFVLSFIDPHIFESPVVSSTPTMLAQVTERARIQEAGH LRCSGAEIGRFVTMLRNPDSTLKACAAFALLOFTIPGGRHAMHHVSLMONGGESRFLRSA AASAKTPREAKIFTKILLRNLEHHQAESSI

>Q9LRY0

MGKYIKKSKVAGAVSVKDKSHPPALGFRTRAAAAKNLALHRLRSHSDEADSFNYLQLRSR RLVKLPLLTNTRKQQKQQLIPSVNQCQTKNPRASSGPAKKLEPDTTTEEACGDNERISRS DCNFGDKGFDLESENRSMISDSKSIQSEIEDFFASAEQQQQRFFIQKYNFDIVSDNPLPG RYEWVKVMP

>Q8LJT8

MLKQFTHYCEMQAELIPEGPNGEGRLSNQNSNPNLLSSASISITQFPAKKPTRQWAAWTH
QEEESFFTALRQVGKNFEKITSRVQSKNKDQVRHYYYRLVRRMNKLLGPDLSLDAKNPKD
TNAAMLRWWSLLEKYSCKASKLHLKPRRFKLFIEALEHQLLKDRRKSIRKRTCQGENLSS
ASLGNISSHSRERGLDNRPFKLILSDGQNVKKLGPGRASTKHGESLSVNLGDEKEDTAFG
RGGRQRRKQGYRKWEKAAIDGVSLVADAAEHLERTSIDKDMDDQTDLGPTRYLTGKSPLS
LCSAGDVPLSDANMQFSAKLKLQLFPIDECTRRSLEMDKHNPHLELTLSNRKKISSVLEH
LNRKWGSSSCATGELLLFPYNARKETVTCHQRWTHDSFLSAAEVHSMVGSPSVFRLRYGW
FVHDASGSIISQVPTSDPCPSLEDDMNVDRLNEVNMLLTESGPLSVHSTAEQTTSVEPSQ
GLVCASGVHDRPARSRDDYEPASTSITPLEHLSGGNAQSPGEWADSLTNISIGDLLSEVP
DDIDSDGVDPPATEGSHYLLRDVPFTSDSFDAAIAAHILRHQNKPSAQLPLTSGSSSLWD
DEETRDAFSFQKNRFANSTELASVASPKGVGRVNGEPSQLVEASSGDEGSYNPHDDGDPM
EEGPADPHTMDSPGKTPCGLADVYWPDSLGPLDLDIRSSKYTDDLILSESLGGLSRLIAT
SLDAFONCSLFGFDNKKDKSNMV

>094JU3

MDIEQKQAEIIDQLVKRASTCKSEALGPLIIEATSHPSLFAFSEILALPNVAQLEGTTDS
VYLDLLRLFAHGTWGDYKCNATRLPHLSPDQILKLKQLTVLTLAESNKVLPYDTLMVELD
VSNVRELEDFLINECMYAGIVRGKLDQLKRCFEVPFAAGRDLRPGQLGNMLHTLSNWLNT
SENLLISIQDKIKWADNMSEMDKKHRKEAEEGVEEVKKSLSMKGDVDIRGNKEMFGEPSG
VMDYEEDGIRPKRRHPVTR

>P43299

MKDHDFDGDKGLAKGFLENFADANGRSKYMEILQEVSNRKIRAIQVDLDDLFNYKDESEE FLGRLTENTRRYVSIFSAAVDELLPEPTEAFPDDDHDILMTQRADDGTDNPDVSDPHQQI PSEIKRYYEVYFKAPSKGRPSTIREVKASHIGQLVRISGIVTRCSDVKPLMAVAVYTCED CGHEIYQEVTSRVFMPLFKCPSSRCRLNSKAGNPILQLRASKFLKFQEAKMQELAEHVPK GHIPRSMTVHLRGELTRKVSPGDVVEFSGIFLPIPYTGFKALRAGLVADTYLEATSVTHF KKKYEEYEFQKDEEEQIARLAEDGDIYNKLSRSLAPEIYGHEDIKKALLLLLVGAPHRQL KDGMKIRGDVHICLMGDPGVAKSQLLKHIINVAPRGVYTTGKGSSGVGLTAAVMRDQVTN EMVLEGGALVLADMGICAIDEFDKMDESDRTAIHEVMEQQTVSIAKAGITTSLNARTAVL AAANPAWGRYDLRRTPAENINLPPALLSRFDLLWLILDRADMDSDLELAKHVLHVHQTEE SPALGFEPLEPNILRAYISAARRLSPYVPAELEEYIATAYSSIRQEEAKSNTPHSYTTVR TLLSILRISAALARLRFSESVAQSDVDEALRLMQMSKISLYADDRQKAGLDAISDTYSII RDEAARSKKTHVSYANALNWISRKGYSEAQLKECLEEYAALNVWQIDPHTFDIRFI

>A1YKT1

MNNNIFSTTTTINDDYMLFPYNDHYSSQPLLPFSPSSSINDILIHSTSNTSNNHLDHHHQ
FQQPSPFSHFEFAPDCALLTSFHPENNGHDDNQTIPNDNHHPSLHFPLNNTIVEQPTEPS
ETINLIEDSQRISTSQDPKMKKAKKPSRTDRHSKIKTAKGTRDRRMRLSLDVAKELFGLQ
DMLGFDKASKTVEWLLTQAKPEIIKIATTLSHHGCFSSGDESHIRPVLGSMDTSSDLCEL
ASMWTVDDRGSNTNTTETRGNKVDGRSMRGKRKRPEPRTPILKKLSKEERAKARERAKGR
TMEKMMMKMKGRSQLVKVVEEDAHDHGEIIKNNNRSQVNRSSFEMTHCEDKIEELCKNDR
FAVCNEFIMNKKDHISNESYDLVNYKPNSSFPVINHHRSQGAANSIEQHQFTDLHYSFGA
KPRDLMHNYQNMY

>Q6L545

MAGSDEVNRNECKTVVPLHTWVLISNFKLSYNILRRADGTFERDLGEYLDRRVPANARPL

EGVSSFDHIIDQSVGLEVRIYRAAAEGDAEEGAAAVTRPILEFLTDAPAAEPFPVIIFFH
GGSFVHSSASSTIYDSLCRRFVKLSKGVVVSVNYRRAPEHRYPCAYDDGWTALKWVMSQP
FMRSGGDAQARVFLSGDSSGGNIAHHVAVRAADEGVKVCGNILLNAMFGGTERTESERRL
DGKYFVTLQDRDWYWKAYLPEDADRDHPACNPFGPNGRRLGGLPFAKSLIIVSGLDLTCD
RQLAYADALREDGHHVKVVQCENATVGFYLLPNTVHYHEVMEEISDFLNANLYY
>006364

MTQDVEMKEVPAPAPSNSVTAATPSTLQHLKEIASLIESGAYAREVRRILRAVRLTIALR
KKLNASVVNAFLNFSLVPGSEVHARLASYLPKEDEHDMEVDTAMSATTTLAKHSLPELEI
YCYLLVLIFLIDQKKYSEAKACSSASIARVKNLNRRTVEVLASRLYFYYSLSYELTGDLA
EIRGNLLALHRIATLRHDELGQETLLNLLLRNYLHYNLYDQAEKLRSKAPRFEAHSNQQF
CRYLFYLGKIRTIQLEYTDAKESXLQAARKAPVAALGFRVQCNKWAVIVRLLLGEIPERT
VFMQKGMEKALRPYFXLTNAVRIGDLELFRXVADKFASTFTADRTHNLIVRLRHNVIRTG
LRNISISYSRISLVDVARKLRLDSPNPVADAESIVSKAIRDGAIDATIDHANGWMVSKET
GDIYSTNEPQAAFNSRIAFCLNMHNEAVRALRFPANSHKDKESAEKRRERQQQEQELAKH
IAEEDDDEF

>Q9LX99

MADORSKTNRWNWEVSGFEPRKSSSNASFAESTGHRTTGPLLRRNSISTPSLPPKQAIAS KVNGLKEKVKLAKEDYLELROEATDLOEYSNAKLDRVTRYLGVLAEKSRKLDOFVLETEA RISPLINEKKRLFNDLLTAKGNIKVFCRARPLFEDEGPSVIEFPGDCTICVNTSDDTLSN PKKDFEFDRVYGPHVGQAALFSDVQPFVQSALDGSNVSILSYGQTNAGKTYTMEGSNHDR GLYARCFEELFDLANSDSTSTSRFSFSLSVFEIYNEQIRDLLSETQSNLPNINMDLHESV IELGQEKVDNPLEFLGVLKSAFLNRGNYKSKFNVTHLIVSIHIYYSNTITGENIYSKLSL VDLAGSEGLIMENDSGDHVTDLLHVMNSISALGDVLSSLTSGKDSIPYDNSILTRVLADS LGGSSKTLMIVNICPSVOTLSETISCLNYAARARNTVPSLGNRDTIKKWRDVASDARKEL LEKERENQNLKQEVVGLKKALKDANDQCVLLYSEVQRAWKVSFTLQSDLKSENIMLVDKH RLEKEQNSQLRNQIAQFLQLDQEQKLQMQQQDSAIQNLQAKITDLESQVSEAVRSDTTRT GDALQSQDIFSPIPKAVEGTTDSSSVTKKLEEELKKRDALIERLHEENEKLFDRLTERSM AVSTOVLSPSLRASPNIOPANVNRGEGYSAEAVALPSTPNKNNGAITLVKSGTDLVKTTP AGEYLTAALNDFDPEEYEGLAAIADGANKLLMLVLAAVIKAGASREHEILAEIRDSVFSF IRKMEPRRVMDTMLVSRVRILYIRSLLARSPELQTIRVSPVECFLEKPNTGRSKSTSRGS SPGRSPVRYLDTQIHGFKVNIKAERRNKLASVVSRMRGLEQDAGRQQVTGVKLREMQDEA KSFAIGNKALAALFVHTPAGELQRQIRLWLAENFEFLSVTSDDVSGGNGGQLELLSTAIM DGWMAGLGAAVPPHTDALGOLLSEYAKRVYTSOMOHMKDIAGTLAAEEAEDAGOVSKLRS ALESVDHKRRKILQQMKSDAALLNLEEGSSPIPNPSTAAEDSRLASLISLDGILKQVKEI TRQASVHVLSKSKKKALLESLDELTERMPSLLDIDHPCAQREIATAHQLVETIPEQEDTN ILEQSHDRRPSLESISSGETDVSQWNVLQFNTGSSAPFIIKCGGNNNSELVIKADARVQE PKGGEIVRVVPRPSVLVNMSLEEMKOMFVOLPEALSLLALARTADGTRARYSRLYKTLAM KVPSLKDLVSELE

>Q38847

MGRGKIEIKRIENANSRQVTFSKRRSGLLKKARELSVLCDAEVAVIVFSKSGKLFEYSST GMKQTLSRYGNHQSSSASKAEEDCAEVDILKDQLSKLQEKHLQLQGKGLNPLTFKELQSL EQQLYHALITVRERKERLLTNQLEESRLKEQRAELENETLRRQVQELRSFLPSFTHYVPS YIKCFAIDPKNALINHDSKCSLQNTDSDTTLQLGLPGEAHDRRTNEGERESPSSDSVTTN TSSETAERGDQSSLANSPPEAKRQRFSV >Q40478

MASPQENCTTLDLIRQHLLDDNVFMEHYCPQPILYSQSSSSSESLNSIASELNNETFSFE PTLKYADTAQSSNLDISSFFNNSKTEFDSFEFETKPNVSAARISSNSPKQTSFKERKPSL NIAIPMKQQEVVQKVEVVPTEKKHYRGVRQRPWGKFAAEIRDPNRKGTRVWLGTFDTAIE AAKAYDRAAFKLRGSKAIVNFPLEVANFKQQDNEILQPANSGRKRMRETENEEIVIKKEV KREERVPAAAAPLTPSSWSAIWEGEDGKGIFEVPPLSPLSPHMAYSQLVMI

>000265

MLELRLVQGGLLKKVLESIKDLVNDANFDCSASGFSLQAMDSSHVALVAVLLRSEGFEHY RCDRNISMGMNLGNMAKMLRCAGNDDIVTMKADDDGDVITFMFESPTQDKISDFEMKLMD IDSEHLGIPESEYEAIVRMPSAEFARICKDLSTIGDTVVISVTKEGVKFSTRGDIGTANI VCRQNTSVDKPEDATIIEMQETVSLTFALRYMNSFTKATPLANQVTISLSSELPVVVEYK IAEMGYIRYYLAPKIEEEDEAANYAQPAQNSAAAATSNNGTKKNEGNNKVDSKKRAIKSE FVDDSEAATDAQPQAKAKTKTEAGEDDDVEVMDTKPKNEPDDGDEVMETKPKTESNGEVE VMDIE

>04VYC8

MTMEPNPTSDHILDWLEGSVSFFPSFLDDPYNNGYIHEYEIWNQNQDISNQYQIDANTNS
SNATNSTTNIVAASTTTSTTSLEPNSFNNIPFSDLPKKRNAEDELSLKKQPQNQKNKRLK
SRPMNESDNGDAALEGTVVRKSGGNKKGAAKANGSNSNNGNNKDGRWAEQLLNPCAVAIT
GGNLNRVQHLLYVLHELASTTGDANHRLAAHGLRALTHHLSSSSSSTPSGTITFASTEPR
FFQKSLLKFYEFSPWFSFPNNIANASILQVLAEEPNNLRTLHILDIGVSHGVQWPTFLEA
LSRRPGGPPPLVRLTVVNASSSTENDQNMETPFSIGPCGDTFSSGLLGYAQSLNVNLQIK
KLDNHPLQTLNAKSVDTSSDETLIVCAQFRLHHLNHNNPDERSEFLKVLRGMEPKGVILS
ENNMECCCSSCGDFATGFSRRVEYLWRFLDSTSSAFKNRDSDERKMMEGEAAKALTNQRE
MNERREKWCERMKEAGFAGEVFGEDAIDGGRALLRKYDNNWEMKVEENSTSVELWWKSQP
VSFCSLWKLDKQPE

>094CL9

MSETKPKRDSEYEGSNIKRMRLDDDDDVLRSPTRTLSSSSSSSLAYSVSDSGGFCSVALS EEEDDHLSSSISSGCSSSETNEIATRLPFSDLEAHEISETEISTLLTNNFRKQGISSSEN LGETAEMDSATTEMRDQRKTEKKKKMEKSPTQAELDDFFSAAERYEQKRFTEKYNYDIVN DTPLEGRYOWVSLKP

>020YF3

MGSSSLLLFPSSSSSATHSSYSPSSSSHAITSLLPPLPSDHHLLLYLDHQEQHHLAAAMV RKRPASDMDLPPPRRHVTGDLSDVTAAAAGAPTLSASAQLPALPTQLPAFHHTDMDLAAP APPAPQQVAAGEGGPPSTAWVDGIIRDIIASSGAAVSVAQLIHNVREIIRPCNPDLASIL ELRLRSLLNSDPAPPPPPSHPALLPPDATAPPPPPTSVAALPPPPPAQPDKRRREPQCQ EQEPNQPQSPKPPTAEETAAAAAAAAAAAAAAAKERKEEQRRKQRDEEGLHLLTLLLQCA ESVNADNLDEAHRALLEIAELATPFGTSTQRVAAYFAEAMSARLVSSCLGLYAPLPSPSP AGARVHGRVAAAFQVFNGISPFVKFSHFTANQAIQEAFEREERVHIIDLDIMQGLQWPGL FHILASRPGGPPRVRLTGLGASMEALEATGKRLSDFADTLGLPFEFCPVADKAGNLDPEK LGVTRREAVAVHWLRHSLYDVTGSDSNTLWLIQRLAPKVVTMVEQDLSHSGSFLARFVEA IHYYSALFDSLDASYSEDSPERHVVEQQLLSREIRNVLAVGGPARTGDVKFGSWREKLAQ SGFRVSSLAGSAAAQAALLLGMFPSDGYTLIEENGALKLGWKDLCLLTASAWRPIQASGR

MSSEKVRASHILIKHQGSRRKSSWKDPDGSLISATTRDDAVSQLQSLRQELLSDPASFSD LASRHSHCSSAKRGGDLGPFGRGQMQKPFEEATFALKVGEISDIVDTDSGVHIIKRTG >O9LJD7

MMTPGGSGRLRPLPTAMYAGYSGTASSWVAKTSVSASGKRIQREMAELNIDPPPDCSAGP KGDNLYHWIATIIGPSGTPYEGGIFFLDIIFPSDYPFKPPKLVFKTRIYHCNVDTAGDLS VNILRDSWSPALTITKVLQAIRSIFLKPEPYSPALPVIARLYLTDREKHDEVAKEWTLRF AK

>039211

MDGATYQRFPKIKIRELKDDYAKFELRETDVSMANALRRVMISEVPTVAIDLVEIEVNSS VLNDEFIAHRLGLIPLTSERAMSMRFSRDCDACDGDGQCEFCSVEFRLSSKCVTDQTLDV TSRDLYSADPTVTPVDFTIDSSVSDSSEHKGIIIVKLRRGQELKLRAIARKGIGKDHAKW SPAATVTFMYEPDIIINEDMMDTLSDEEKIDLIESSPTKVFGMDPVTRQVVVVDPEAYTY DEEVIKKAEAMGKPGLIEISPKDDSFIFTVESTGAVKASQLVLNAIDLLKQKLDAVRLSD DTVEADDOFGELGAHMRGG

>08W5S1

MADFQTSTQRAKWIFTPQKLAERYKAANQRAVQMLEKCGTTQVEVDASGSLTYPKDKVGS
GDQADKKLKPLSADEERFMRAFYEAKVQEVCSAFAFPHKIQATALQYFKRFYLQWSVMQH
HPKEIMLTCVYAACKIEENHVSAEEIGKGINQDHRIILKYEMAVLQSLEFDLIVYAPYRA
IEGFVNNMEEFLQARDDEIQKLESLLKGATAEADKVMLTDAPLLFPPGQLALASLRIANG
VLGVIDFDRYLENIVSQPNSEHTTSELTKLLDNIEYLVKNYKCPSEKDMKHINRKLKSCL
GHSSSHDESKKREKRSKHKSHRSSNDTPNGAPPPIG

>P52914

MELLIKLITFLLFSMPAITSSQYLGNNLLTSRKIFLKQEEISSYAVVFDAGSTGSRIHVY
HFNQNLDLLHIGKGVEYYNKITPGLSSYANNPEQAAKSLIPLLEQAEDVVPDDLQPKTPV
RLGATAGLRLLNGDASEKILQSVRDMLSNRSTFNVQPDAVSIIDGTQEGSYLWVTVNYAL
GNLGKKYTKTVGVIDLGGGSVQMAYAVSKKTAKNAPKVADGDDPYIKKVVLKGIPYDLYV
HSYLHFGREASRAEILKLTPRSPNPCLLAGFNGIYTYSGEEFKATAYTSGANFNKCKNTI
RKALKLNYPCPYQNCTFGGIWNGGGGNGQKNLFASSSFFYLPEDTGMVDASTPNFILRPV
DIETKAKEACALNFEDAKSTYPFLDKKNVASYVCMDLIYQYVLLVDGFGLDPLQKITSGK
EIEYODAIVEAAWPLGNAVEAISALPKFERLMYFV

>P93203

MATSCFPPFSASSSSLCSSQFTPLLSCPRNTQICRKKRPVMASMHSENQKESNVCNRRSI
LFVGFSVLPLLNLRARALEGLSTDSQAQPQKEETEQTIQGSAGNPFVSLLNGLGVVGSGV
LGSLYALARNEKAVSDATIESMKNKLKDKEDAFVSMKKQFESELLSEREDRNKLIRREGE
ERQALVNQLKSAKTTVISLGQELQNEKKLAEDLKFEIKGLQNDLMNTKEDKKKLQEELKE
KLDLIQVLEEKITLLTTEIKDKEVSLRSNTSKLAEKESEVNSLSDMYQQSQDQLMNLTSE
IKELKDEIQKRERELELKCVSEDNLNVQLNSLLLERDESKKELHAIQKEYSEFKSNSDEK
VASDATLGEQEKRLHQLEEQLGTALSEASKNEVLIADLTREKENLRRMVDAELDNVNKLK
QEIEVTQESLENSRSEVSDITVQLEQLRDLSSKLEREVSKLQMELEETRASLQRNIDETK
HSSELLAAELTTTKELLKKTNEEMHTMSDELVAVSENRDSLQTELVNVYKKREHTRNELK
QEKTIVRTLEEELKFLESQITREKELRKSLEDELEKATESLDEINRNVLALAEELELATS
RNSSLEDEREVHRQSVSEQKQISQEAQENLEDAHSLVMKLGKERESLEKRAKKLEDEMAA
AKGEILRLRSQINSVKAPVEDEEKVVAGEKEKVNVOQ

>022607

MESDEAAAVSPQATTPSGGTGASGPKKRGRKPKTKEDSQTPSSQQQSDVKMKESGKKTQQ
SPSVDEKYSQWKGLVPILYDWLANHNLVWPSLSCRWGPQLEQATYKNRQRLYLSEQTDGS
VPNTLVIANCEVVKPRVAAAEHISQFNEEARSPFVKKYKTIIHPGEVNRIRELPQNSKIV
ATHTDSPDVLIWDVETQPNRHAVLGAANSRPDLILTGHQDNAEFALAMCPTEPFVLSGGK
DKSVVLWSIQDHITTIGTDSKSSGSIIKQTGEGTDKNESPTVGPRGVYHGHEDTVEDVAF
SPTSAQEFCSVGDDSCLILWDARTGTNPVTKVEKAHDADLHCVDWNPHDDNLILTGSADN
TVRLFDRRKLTANGVGSPIYKFEGHKAAVLCVQWSPDKSSVFGSSAEDGLLNIWDYDRVS
KKSDRAAKSPAGLFFQHAGHRDKVVDFHWNASDPWTIVSVSDDCETTGGGGTLQIWRMSD
LIYRPEEEVVAELEKFKSHVMTCASKP

>082491

MADSRNGNARAPPSGVPPKAGNTYSIDVKNFISRARALYEHWKKHSADLWGSADALAIAT PPASDDLRYLKSSALNIWLLGYEFPDTIMVFTKKOIHFLCSRNKASLLEVVKKPAHDELK LDVIMHVKPKGDDGTGLMDAIFRAIRDLSRGDGNDSQVVGHIAREAPEGKLLETWTERLK NANFOFVDITGGLSDLFAVKDDTEVMSVKKAAYLAYSVMKNVVVPNLESAIDEEKDVTHS ALMDLTEKAILEPTKASVKLKPENVDICYPPIFOSGGKFDLKPSAASNDELLTYDPASII ICAVGARYNSYCSNVARTYLIDATSLOSKAYEVLLKAHEAAIDALRSGRKINTVYQAALS VVEKNAPEFVDKLTKSAGTGIGLEFRESGLNINAKNDKVLRPKMAFNVSLGFONLECESE SRSKNKKFSLLLADTVLVTDOKPELLTKCSKSVKDVAYSFKEDEEEEKPRKKARTSGSEN YITKTALRSDDHVVSKEELRKQHQAELARQKNEETARRLAGDSSGAGDSRSTAKTSADVV AYKNVNDMPHKELMIQVDTRNEAVLLPIYGSLVPFHVATIRTVSGNQDTNRNCYIRIIFN VPGTPFNPHDSNSLKNQGAIYLKEVSFRTKDSRHSSEVTQQIKTLRRQVMARESERAERA TLVTOEKLOLAGNKFKPLRLSELWIRPPFSGRKKIPGTLEAHANGFRYSTTRPDERVDVL FANIKHAFFOPAEKEMITLLHFHLHNHIMVGTKKTKDVOFYVEVMDVVOSLGGGRRSAYD $\verb"PDEIDEEQRERDRKNKINMDFNHFANRVNDMWQLPQFASLDLEFDQPLRELGFHGVPHKT"$ SAFIIPTSSCLVELIEYPFLVVSLSEIEIVNLERVGFGQKNFDMAIIFKDFKKDVLRVDS VPTSSLEGIKEWLDTTDIKYYESKLNLNWROILKTITDDPOSFIDDGGWEFLNLDGSDSE SGGSEESDKGYEPSDVEVESESEDEASESESLVESDDDEEEDSEQESEEEKGKTWDELER EATNADREHGVESDSEEERKRRKMKAFGKSRPGTSGGGGSSSMKNMPPSKRKHR

>Q84M92

MYGGDEVSAIVVDLGSHTCKAGYAGEDAPKAVFPSVIGAVDGVEAMDVDVDSTKTNSNSE
DSKTESEKEKSKRKLYVGSQAMSYRRDHMEVLSPIKDGIVSDWDLVDNIWEHAFKSCLMI
DPTEHPMLLAEPPLNTQQQREKAAELMFEKYKVPALFMAKNPVLTSFATGRATSLVVDCG
GGSTTISPVHDGYVLQKAVVSSPLGGEFLTDCLLKSLESKGIKIRPRYSFKRKEVRAGEF
QVEDVDIPDTTESYKLFCQRMIVGDIKDSICRVPDTPYDDKSYSNIPTTSYELPDGQTLE
IGADRFKVPDVMFNPSIVQTIPGMEKYAEMIPSVRGLPHMVMESINKCDVDIRRELYSSI
LLAGGTSSMQQLKERLEKDLIEESPHSARVKVLASGNTTERRFSVWIGGSILASLGSFQQ
MWFSKSEYEEHGASYIQRKCP

>Q9XG57

 ${\tt MARMKHTARMSTGGKAPRKQLASKALRKAPPPPTKGVKQPTTTTSGKWRFARFHRKLPFQ} \\ {\tt GLVRKIWQDLKTHLRFKNHSVPPLEEVTEVYPCQTIGGCY}$

>Q7G7J6

MKREYQEAGGSSGGGSSADMGSCKDKVMAGAAGEEEDVDELLAALGYKVRSSDMADVAQK LEQLEMAMGMGGVSAPGAADDGFVSHLATDTVHYNPSDLSSWVESMLSELNAPLPPIPPA PPAARHASTSSTVTGGGGSGFFELPAAADSSSSTYALRPISLPVVATADPSAADSARDTK RMRTGGGSTSSSSSSSSSGGGASRGSVVEAAPPATQGAAAANAPAVPVVVVDTQEAGIR
LVHALLACAEAVQQENFAAAEALVKQIPTLAASQGGAMRKVAAYFGEALARRVYRFRPAD
STLLDAAFADLLHAHFYESCPYLKFAHFTANQAILEAFAGCHRVHVVDFGIKQGMQWPAL
LQALALRPGGPPSFRLTGVGPPQPDETDALQQVGWKLAQFAHTIRVDFQYRGLVAATLAD
LEPFMLQPEGEADANEEPEVIAVNSVFELHRLLAQPGALEKVLGTVHAVRPRIVTVVEQE
ANHNSGSFLDRFTESLHYYSTMFDSLEGGSSGQAELSPPAAGGGGGTDQVMSEVYLGRQI
CNVVACEGAERTERHETLGQWRNRLGRAGFEPVHLGSNAYKQASTLLALFAGGDGYRVEE
KEGCLTLGWHTRPLIATSAWRVAAA

>09FVL0

MGTLDTKGFTEEQEALVVKSWNAMKKNSAELGLKLFLKIFEIAPSAQKLFSFLKDSKVPL EQNTKLKPHAMSVFLMTCESAVQLRKSGKVTVRESSLKKLGANHFKYGVVDEHFEVTKFA LLETIKEAVPEMWSPAMKNAWGEAYDOLVNAIKSEMKPSS

>09M0V3

MSSWNYVVTAHKPTSVTHSCVGNFTSPQELNLIVAKCTRIEIHLLTPQGLQPMLDVPIYG RIATLELFRPHGEAODFLFIATERYKFCVLOWDPESSELITRAMGDVSDRIGRPTDNGOI GIIDPDCRLIGLHLYDGLFKVIPFDNKGQLKEAFNIRLEELQVLDIKFLFGCAKPTIAVL YODNKDARHVKTYEVSLKDKDFVEGPWSONSLDNGADLLIPVPPPLCGVLIIGEETIVYC SASAFKAIPIRPSITKAYGRVDVDGSRYLLGDHAGMIHLLVITHEKEKVTGLKIELLGET SIASTISYLDNAVVFVGSSYGDSOLVKLNLHPDAKGSYVEVLERYINLGPIVDFCVVDLE RQGQGQVVTCSGAFKDGSLRVVRNGIGINEQASVELQGIKGMWSLKSSIDEAFDTFLVVS FISETRILAMNLEDELEETEIEGFLSQVQTLFCHDAVYNQLVQVTSNSVRLVSSTTRELR DEWHAPAGFTVNVATANASOVLLATGGGHLVYLEIGDGKLTEVOHALLEYEVSCLDINPI GDNPNYSQLAAVGMWTDISVRIFSLPELTLITKEQLGGEIIPRSVLLCAFEGISYLLCAL GDGHLLNFOMDTTTGOLKDRKKVSLGTOPITLRTFSSKSATHVFAASDRPTVIYSSNKKL LYSNVNLKEVSHMCPFNSAAFPDSLAIAREGELTIGTIDDIQKLHIRTIPLGEHARRICH QEQTRTFGICSLGNQSNSEESEMHFVRLLDDQTFEFMSTYPLDSFEYGCSILSCSFTEDK NVYYCVGTAYVLPEENEPTKGRILVFIVEDGRLQLIAEKETKGAVYSLNAFNGKLLAAIN QKIQLYKWMLRDDGTRELQSECGHHGHILALYVQTRGDFIVVGDLMKSISLLLYKHEEGA IEERARDYNANWMSAVEILDDDIYLGAENNFNLLTVKKNSEGATDEERGRLEVVGEYHLG EFVNRFRHGSLVMRLPDSEIGQIPTVIFGTVNGVIGVIASLPQEQYTFLEKLQSSLRKVI KGVGGLSHEOWRSFNNEKRTAEARNFLDGDLIESFLDLSRNKMEDISKSMNVOVEELCKR VEELTRLH

>Q7XAK4

MKFRSDSSGGDEPRAPAAGDGGGGGDEPAKRQRTDPSSSSSQGEASSSSQPPPQQQQEEQ PPEDAGEGEQPRVPDLGEDLVFEVLRRAEARTLAAAACVSRGWRQLAEDERLWEAACVRE WANLGFSERQLRAVVLSLGGFRRLHAVYIRPLQWRGAGVPRQQGRRQPPVRLGRDQVQLS LSLFSIGFFQNMPCPKKDKGNDSDKNGGGQCG

>A2XLV9

MAGADVDVGTELRLGLPGGGGGAAEAAAKAAKRGFEETIDLKLKLPTAGMEEAAAGKAEA
PAAEKAKRPAEAAAADAEKPPAPKAQAVGWPPVRSFRRNIMTVQSVKSKKEEEADKQQQQ
PAANASGSNSSAFVKVSMDGAPYLRKVDLKMYNSYKDLSLALQKMFGTFTATGNNMNEVN
GSDAVTTYEDKDGDWMLVGDVPWQMFVESCKRLRIMKGSEAIGLAPRAKDKYKNKS
>Q9FN69

MATGONRTTVPENLKKHLAVSVRNIOWSYGIFWSVSASOSGVLEWGDGYYNGDIKTRKTI

QASEIKADQLGLRRSEQLSELYESLSVAESSSSGVAAGSQVTRRASAAALSPEDLADTEW
YYLVCMSFVFNIGEGMPGRTFANGEPIWLCNAHTADSKVFSRSLLAKSAAVKTVVCFPFL
GGVVEIGTTEHITEDMNVIQCVKTSFLEAPDPYATILPARSDYHIDNVLDPQQILGDEIY
APMFSTEPFPTASPSRTTNGFDQEHEQVADDHDSFMTERITGGASQVQSWQLMDDELSNC
VHQSLNSSDCVSQTFVEGAAGRVAYGARKSRVQRLGQIQEQQRNVKTLSFDPRNDDVHYQ
SVISTIFKTNHQLILGPQFRNCDKQSSFTRWKKSSSSSSGTATVTAPSQGMLKKIIFDVP
RVHQKEKLMLDSPEARDETGNHAVLEKKRREKLNERFMTLRKIIPSINKIDKVSILDDTI
EYLQELERRVQELESCRESTDTETRGTMTMKRKKPCDAGERTSANCANNETGNGKKVSVN
NVGEAEPADTGFTGLTDNLRIGSFGNEVVIELRCAWREGVLLEIMDVISDLHLDSHSVQS
STGDGLLCLTVNCKHKGSKIATPGMIKEALORVAWIC

>Q38859

MNAPERYERFVVPEGTKKVSYDRDTKIINAASFTVEREDHTIGNIVRMQLHRDENVLFAG YQLPHPLKYKIIVRIHTTSQSSPMQAYNQAINDLDKELDYLKNQFEAEVAKFSNQF >O8LK56

MNSRADPGDRYFRVPLENQTQQEFMGSWIPFTPKKPRSSLMVDERVINQDLNGFPGGEFV DRGFCNTGVDHNGVFDHGAHOGVTNLSMMINSLAGSHAQAWSNSERDLLGRSEVTSPLAP VIRNTTGNVEPVNGNFTSDVGMVNGPFTQSGTSQAGYNEFELDDLLNPDQMPFSFTSLLS GGDSLFKVROYGPPACNKPLYNLNSPIRREAVGSVCESSFOYVPSTPSLFRTGEKTGFLE QIVTTTGHEIPEPKSDKSMQSIMDSSAVNATEATEQNDGSRQDVLEFDLNKTPQQKPSKR KRKFMPKVVVEGKPKRKPRKPAELPKVVVEGKPKRKPRKAATQEKVKSKETGSAKKKNLK ESATKKPANVGDMSNKSPEVTLKSCRKALNFDLENPGDARQGDSESEIVQNSSGANSFSE IRDAIGGTNGSFLDSVSQIDKTNGLGAMNQPLEVSMGNQPDKLSTGAKLARDQQPDLLTR NOOCOFPVATONTOFPMENOOAWLOMKNOLIGFPFGNOOPRMTIRNOOPCLAMGNOOPMY LIGTPRPALVSGNQQLGGPQGNKRPIFLNHQTCLPAGNQLYGSPTDMHQLVMSTGGQQHG LLIKNQQPGSLIRGQQPCVPLIDQQPATPKGFTHLNQMVATSMSSPGLRPHSQSQVPTTY LHVESVSRILNGTTGTCQRSRAPAYDSLQQDIHQGNKYILSHEISNGNGCKKALPQNSSL PTPIMAKLEEARGSKRQYHRAMGQTEKHDLNLAQQIAQSQDVERHNSSTCVEYLDAAKKT KIOKVVOENLHGMPPEVIEIEDDPTDGARKGKNTASISKGASKGNSSPVKKTAEKEKCIV PKTPAKKGRAGRKKSVPPPAHASEIQLWQPTPPKTPLSRSKPKGKGRKSIQDSGKARGPS GELLCODSIAEIIYRMONLYLGDKEREOEONAMVLYKGDGALVPYESKKRKPRPKVDIDD ETTRIWNLLMGKGDEKEGDEEKDKKKEKWWEEERRVFRGRADSFIARMHLVOGDRRFSPW KGSVVDSVIGVFLTQNVSDHLSSSAFMSLAARFPPKLSSSREDERNVRSVVVEDPEGCIL NLNEIPSWOEKVOHPSDMEVSGVDSGSKEOLRDCSNSGIERFNFLEKSIONLEEEVLSSO DSFDPAIFQSCGRVGSCSCSKSDAEFPTTRCETKTVSGTSQSVQTGSPNLSDEICLQGNE RPHLYEGSGDVQKQETTNVAQKKPDLEKTMNWKDSVCFGQPRNDTNWQTTPSSSYEQCAT RQPHVLDIEDFGMQGEGLGYSWMSISPRVDRVKNKNVPRRFFRQGGSVPREFTGQIIPST PHELPGMGLSGSSSAVQEHODDTOHNOODEMNKASHLOKTFLDLLNSSEECLTROSSTKO NITDGCLPRDRTAEDVVDPLSNNSSLQNILVESNSSNKEQTAVEYKETNATILREMKGTL ADGKKPTSQWDSLRKDVEGNEGRQERNKNNMDSIDYEAIRRASISEISEAIKERGMNNML AVRIKDFLERIVKDHGGIDLEWLRESPPDKAKDYLLSIRGLGLKSVECVRLLTLHNLAFP VDTNVGRIAVRMGWVPLQPLPESLQLHLLELYPVLESIQKFLWPRLCKLDQRTLYELHYQ LITFGKVFCTKSRPNCNACPMRGECRHFASAYASARLALPAPEERSLTSATIPVPPESYP PVAIPMIELPLPLEKSLASGAPSNRENCEPIIEEPASPGOECTEITESDIEDAYYNEDPD EIPTIKLNIEOFGMTLREHMERNMELOEGDMSKALVALHPTTTSIPTPKLKNISRLRTEH

 ${\tt QVYELPDSHRLLDGMDKREPDDPSPYLLAIWTPGETANSAQPPEQKCGGKASGKMCFDET} \\ {\tt CSECNSLREANSQTVRGTLLIPCRTAMRGSFPLNGTYFQVNELFADHESSLKPIDVPRDW} \\ {\tt IWDLPRRTVYFGTSVTSIFRGLSTEQIQFCFWKGFVCVRGFEQKTRAPRPLMARLHFPASKLKNNKT} \\ {\tt KLKNNKT} \\ {\tt MARCHEST STREET STRE$

>094KE2

MDRNREARRVPMAAAGNGLSRRRHRAGSFRDSPEEEGPVELPEAARLRDRGGSNKKDRDR ERDRDRERERERDRENSRSKRRRGERLMMVHGNLDDGGDDSSEESVNDDEEYDDGG VGPPSSLKMLPPTSNNISAASFSSSLSNHHNGGSGNLHHHHHHSHNNNHORKNNFPPTKVF RSSPSPAPVSPLVSTWKAADEMIGVSVPRKARSACTKRPHESWASSTTGGGVFASGEOIH RQISSTSPANRVSPASILASPSPPAPTSPSSSSISVRKKLPSGTKQKPLPPKSSSSKLSS PVAVQDEIEIEIAEVLYGMMRMPSTSKQEAAGNDLTEAAKSTVEVKSRVSSPISNPQTLP OSSITLAANSSSSNVSAIAPKRKKPRHVKYEDDNSSRVTTIKSEAEAPSKSQVPFSNOLK SSGSGEGNSSVLDSIIPLTRESNASLDSEKKENNLSKDETILPKVESSSGFRSDGEGAKS SSPEKEKFEIDLMAPPPVRSSSERGGEMMECVAAEAKPKVTEVETEAKPLLKEDRSDPAI HDSQEKKRPRMVAEAEHHKFERNCELKLDLDKSDHVGLVNKHHVQKPPPQQQLSVPDKTA QASHLPLHMSMPGWPGGLPTMGYMAPTOGVVPTDTSSLSAAAMQPPPHLLFNQPRPKRCA THCYIARNIOSHOOFTKMNPFWPAAAGSAPMYGTKACNLSLMPPTELOGSVLGRSSNPVO ${\tt DKNSQSTSKSSETAQRNQLMLQQALPPGAANSILHGPTFIFPLGQQPHAAATIAAASVRP}$ PNSGITSSGPTATSTSMNGSASATPAGAPTMSFSYPAMPGNETQYLAILQNNGYPFPVPA HVGAQPAYRGAPGQPMPFFNGSFYSSQMIQPPHHQPQKQHQQQLTGQMLQSHAPNNQNGS ${\tt ASTGSSAAQKHLQNQQLRPPINHGNSQGFPTHKVQSQPLNFQQRQQPRENATQHSETVGE}$ DSPSTADSRGSRSNVAYGONYGMOMOPTNLGLMSSPAPGGGVVGSSSSHGEKKSOOOVSK AGVESFOSPGYAMTFATFNGANTAPTLNMSSIAONHAMFHSMPEAAROGYOMMAAOAAOO KMNYGASLEDGKSGSIGGAATANNTPEEQRKSGGGAIGKTSGGNGGQSIAFSNKQDLADA SVSAVTSGSIVDSSSRLLNLGSALPQSSGSLPTSHHQQLLQQQQQQHMQRSQSQQPYTTM YLOKOORYATSVAASAARTKGPVVSNGSGFPDHNMTTSPAGTTKFANANSGFPONLVOSS SNQVQSQQWKNNSPRTTNTTQAQSPSMLSPSTSVAAASSLRNIPHKQQSRPQQSQISFAA NSKPMTSGSPMOOVOGGTNHOAPSPPMLVGSPSTSSVSKNASGSPRTTASASSAANKGGO ASTTTHSASQPSKNLQPASAASSAGGRNNGPSVLGNPTTSSGSKSQQQQQLPKHGLQPQA QLFFSNPYMQAQHQHQQQQITISPSGGYYIQRHQQQSGSAPAVPVTGAVTATSDPAKAIA AASAANNMKGGGGMGKTOOHOLGPPGFTNVHAVSSAVOVKPVDOKOOAGE

>Q9ZSZ8

MEFSSQDDDFGGDDSAANATRASGNRRSFGDLEDDEDDIFGSTTVAPGVRTGMILSLRGS LKNCKDDLASCQNELESAKTEIQKWKSAFQNESFVPAGKSPEPRFLIDYIQNLKSSEKSL KEQLEIAKRKEASCIVQYAKREQEMAELKSAVRDLKSQLKPASMQARRLLLDPAIHEEFS RLKNLVEEKDKKIKELQDNIAAVTFTPQSKNGKMLMAKCRTLQEENEEIGHQAAEGKIHE LAIKLAMQKSQNAELRSQFEGLYKHMEELTNDVERSNETVIILQEKLEEKEKEIERVKKG LEIVSELVGDKKDEVDEIDEDAKEEIAGGE

>Q9S7T7

MLRLESLIVTVWGPATLLARKAPLGQIWMAATLHAKINRKKLDKLDIIQICEEILNPSVP MALRLSGILMGGVVIVYERKVKLLFDDVNRFLVEINGAWRTKSVPDPTLLPKGKTHARKE AVTLPENEEADFGDFEQTRNVPKFGNYMDFQQTFISMRLDESHVNNNPEPEDLGQQFHQA DAENITLFEYHGSFQTNNETYDRFERFDIEGDDETQMNSNPREGAEIPTTLIPSPPRHHD IPEGVNPTSPQRQEQQENRRDGFAEQMEEQNIPDKEEHDRPQPAKKRARKTATSAMDYEQ TIIAGHVYQSWLQDTSDILCRGEKRKVRGTIRPDMESFKRANMPPTQLFEKDSSYPPQLY QLWSKNTQVLQTSSSESRHPDLRAEQSPGFVQERMHNHHQTDHHERSDTSSQNLDSPAEI LRTVRTGKGASVESMMAGSRASPETINRQAADINVTPFYSGDDVRSMPSTPSARGAASIN NIEISSKSRMPNRKRPNSSPRRGLEPVAEERPWEHREYEFEFSMLPEKRFTADKEILFET ASTQTQKPVCNQSDEMITDSIKSHLKTHFETPGAPQVESLNKLAVGMDRNAAAKLFFQSC VLATRGVIKVNQAEPYGDILIARGPNM

>Q9FIE3

MQAASLSKIWRFDGNVGPENMDSSSFEDNECIETCKPNVLNVSERRELIHALSNQPEEAS
ELLNSWSRNEIMKIICAEMGKERKYTGLNKPKLIENLLNLVSRPLGETSCSDRRNSRKKE
KKMIGYIICCENLACRAALGCDDTFCRRCSCCICQKFDDNKDPSLWLTCDACGSSCHLEC
GLKQDRYGIGSDDLDGRFYCAYCGKDNDLLGCWRKQVKVAKETRRVDVLCYRLSLGQKLL
RGTTKYRNLLELMDEAVKKLEGDVGPLSGWAMKMARGIVNRLSSGVHVQKLCSQAMEALD
KVVSPSESVSGQGDKMTVRVEEIQARSVTVRVDSEEPSSSTQNKITGFRLFCRKSKDEEC
SSQGNCVVYLPETTSAIQGLEPDTEFCLRVVSFNEEGDLDESELRFTTLKDDGDEAGDQQ
SPLTNSSSGLCSNPSLPEDESNNVNKSCSKGNGDKDNTEHCSAGEVESELEEERLVKRKA
NKIDGRDLLVTPCKRDIYKGKQGGNKRFKSRTVSLNEKPEINNAANGVGDKDLGHIVKTI
RCLEEEGHIDKSFRERFLTWYSLRATHREVRVVKIFVETFMEDLSSLGQQLVDTFSESIL
SKRSSTNGVVPAGICLKLWH

>004479

MASSSTNSPCAACKFLRRKCQPECVFAPYFPPDQPQKFANVHKVFGASNVTKLLNELHPS QREDAVNSLAYEADMRLRDPVYGCVGVISLLQHQLRQLQIDLSCAKSELSKYQSLGILAA THQSLGINLLAGAADGTATAVRDHYHHHQFFPREQMFGGLDVPAGNNYDGGILAIGQITQ FOOPRAAAGDDGRRTVDPS

>09ATB4

MGRSRGNFQNFEDPTQRTRKKKNAANVENFESTSLVPGAEGGGKYNCDYCQKDITGKIRI KCAVCPDFDLCIECMSVGAEITPHKCDHPYRVMGNLTFPLICPDWSADDEMLLLEGLEIY GLGNWAEVAEHVGTKSKEQCLEHYRNIYLNSPFFPLPDMSHVAGKNRKELQAMAKGRIDD KKAEQNMKEEYPFSPPKVKVEDTQKESFVDRSFGGKKPVSTSVNNSLVELSNYNQKREEF DPEYDNDAEQLLAEMEFKENDTPEEHELKLRVLRIYSKRLDERKRRKEFIIERNLLYPNP FEKDLSQEEKVQCRRLDVFMRFHSKEEHDELLRNVVSEYRMVKRLKDLKEAQVAGCRSTA EAERYLGRKRKRENEEGMNRGKESGQFGQIAGEMGSRPPVQASSSYVNDLDLIGFTESQL LSESEKRLCSEVKLVPPVYLQMQQVMSHEIFKGNVTKKSDAYSLFKIDPTKVDRVYDMLV KKGIAQL

>Q0J4I1

MAALHHQAAAAPVTTTTDGGELRAMDLYEKLEKVGEGTYGKVYKAREKATGRIVALKKTR
LPEDDEGVPPTALREVSLLRMLSQDSHVVRLLDLKQGQNKEGQTILYLVFEYMDTDLKKF
IRAHRQNLQKIPVPTVKILMYQLCKGVAFCHGRGVLHRDLKPHNLLMDRKTMALKIADLG
LSRSFTVPLKKYTHEILTLWYRAPEVLLGAAHYSTPVDIWSVGCIFAELATNQPLFAGDS
EVQQLLHIFKLLGTPNEQVWPGVSKLPNWHEYPQWNPSKVSDLVHGLDADALDLLEKMLQ
YEPSKRISAKKAMEHPYFNDVNKELY

>Q0JBF0

MMSSAPETFSLDHLSQHQQQQPPPLAEQEQLCYVHCNFCDTILAVGVPCSSLFKTVTVRC GHCANLLSVNLRGLLLPAAASTANQLPFGQALLSPTSPHGLLDEVPSFQAPASLMTEQAS PNVSSITSSNSSCANNAPATSMASAANKATOREPOOPKNAPSANRTSEKRORVPSAYNRF IKDEIQRIKASNPDITHREAFSAAAKNWAHFPHIHFGLMPDQGLKKTGIQSQDGAGECML FKDGLYAAAAAAAATAASSMGVTPF

>09SBK6

MEVMRILHMNKGNGETSYAKNSIVQSNIISLGRRVMDEALKKLMIRNSEILSFGIADLGC
SSGPNSLLSISNIVETIQNLCHDLDRPVPELSLSLNDLPSNDFNYIFASLPEFYDRVKKR
DNNYESLGFEHGSGGPCFVSAVPGSFYGRLFPRRSLHFVHSSSSLHWLSQVPCGEVNKKD
GVVITADLDNRGKIYLSKTSPKSAHKVYALQFQTDFSVFLRSRSEELVPGGRMVLSFLGR
SSPDPTTEESCYQWELLAQALMSLAKEGIIEEENIDAFNAPYYAASPEELKMAIEKEGSF
SIDRLEISPVDWEGGSISDDSYDIVRFKPEALASGRRVAKTIRAVVEPMLEPTFGQKVMD
ELFERYAKLVGEYVYVSSPRYTIVIVSLLRMG

>Q9XGM2

MSREDFSDTLRVLVATDCHLGYMEKDEIRRHDSFKAFEEICSIAEEKQVDFLLLGGDLFH
ENKPSRTTLVKAIEILRRHCLNDKPVQFQVVSDQTVNFQNAFGQVNYEDPHFNVGLPVFS
IHGNHDDPAGVDNLSAIDILSACNLVNYFGKMVLGGSGVGQITLYPILMKKGSTTVALYG
LGNIRDERLNRMFQTPHAVQWMRPEVQEGCDVSDWFNILVLHQNRVKSNPKNAISEHFLP
RFLDFIVWGHEHECLIDPQEVSGMGFHITQPGSSVATSLIDGESKPKHVLLLEIKGNQYR
PTKIPLTSVRPFEYTEIVLKDESDIDPNDQNSILEHLDKVVRNLIEKASKKAVNRSEIKL
PLVRIKVDYSGFMTINPQRFGQKYVGKVANPQDILIFSKASKKGRSEANIDDSERLRPEE
LNQQNIEALVAESNLKMEILPVNDLDVALHNFVNKDDKLAFYSCVQYNLQETRGKLAKDS
DAKKFEEDDLILKVGECLEERLKDRSTRPTGSSQFLSTGLTSENLTKGSSGIANASFSDD
EDTTQMSGLAPPTRGRRGSSTANTTRGRAKAPTRGRGRGKASSAMKQTTLDSSLGFRQSQ
RSASAAASAAFKSASTIGEDDVDSPSSEEVEPEDFNKPDSSSEDDESTKGKGRKRPATTK
RGRGRGSGTSKRGRKNESSSSLNRLLSSKDDDEDEDDEDREKKLNKSQPRVTRNYGALRR

>Q8W420

MQNQMEWDSDSDLSGGDEVAEDGWFGGDNGAIPFPVGSLPGTAPCGFVVSDALEPDNPII
YVNTVFEIVTGYRAEEVIGRNCRFLQCRGPFTKRRHPMVDSTIVAKMRQCLENGIEFQGE
LLNFRKDGSPLMNKLRLVPIREEDEITHFIGVLLFTDAKIDLGPSPDLSAKEIPRISRSF
TSALPIGERNVSRGLCGIFELSDEVIAIKILSQLTPGDIASVGCVCRRLNELTKNDDVWR
MVCQNTWGTEATRVLESVPGAKRIGWVRLAREFTTHEATAWRKFSVGGTVEPSRCNFSAC
AVGNRIVIFGGEGVNMQPMNDTFVLDLGSSSPEWKSVLVSSPPPGRWGHTLSCVNGSRLV
VFGGYGSHGLLNDVFLLDLDADPPSWREVSGLAPPIPRSWHSSCTLDGTKLIVSGGCADS
GALLSDTFLLDLSMDIPAWREIPVPWTPPSRLGHTLTVYGDRKILMFGGLAKNGTLRFRS
NDVYTMDLSEDEPSWRPVIGYGSSLPGGMAAPPPRLDHVAISLPGGRILIFGGSVAGLDS
ASQLYLLDPNEEKPAWRILNVQGGPPRFAWGHTTCVVGGTRLVVLGGQTGEEWMLNEAHE
LLLATSTTAST

>Q9LRE6

MSSGGRGKRRGAPPPGPSGAAAKRAHPGGTPQPPPPAATAAAPVAEEEDMMDEDVFLDE
TILAEDEEALLLLDRDEALASRLSRWRRPALPADLASGCSRNVAFQQLEIDYVIGESHKV
LLPNSSGPAAILRIFGVTREGHSVCCQVHGFEPYFYISCPMGMGPDDISRFHQTLEGRMK
DSNRNSNVPRFVKRIELVQKQTIMHYQPQQSQPFLKIVVALPTMVASCRGILERGITIEG
LGSKSFLTYESNILFALRFMIDCNIVGGNWIEVPAGKYMKAARIMSYCQLELDCLYSDLV
SHAAEGEHSKMAPFRILSFDIECAGRKGHFPEPTHDPVIQIANLVTLQGEGQPFVRNVMT
LKSCSPIVGVDVMSFDTERDVLLAWRDFIREVDPDIIIGYNICKFDLPYLIERAEVLKIV

EFPILGRIRNSRVRVRDTTFSSRQYGMRESKDVAVEGRVQFDLLQAMQRDYKLSSYSLNS VSAHFLGEQKEDVHHSIISDLQNGNSETRRRLAVYCLKDAYLPQRLLDKLMYIYNYVEMA RVTGVPISFLLSRGQSIKVLSQLLRKAKQKNLVIPNIKGQASGQDTFEGATVLEARAGFY EKPIATLDFASLYPSIMMAYNLCYCTLVPPEDARKLNLPPESVNKTPSGETFVKPDVQKG ILPEILEELLAARKRAKADLKEAKDPFERAVLDGRQLALKISANSVYGFTGATVGQLPCL EISSSVTSYGRQMIEHTKKLVEDKFTTLGGYEHNAEVIYGDTDSVMVQFGVSTVEDAMKL GREAADYISGTFIKPIKLEFEKIYFPYLLISKKRYAGLYWTNPEKFDKMDTKGIETVRRD NCLLVKNLVTECLHKILVDRDVPGAVQYVKNTISDLLMNRVDLSLLVITKGLTKTGEDYA VKAAHVELAERMRKRDAATAPTVGDRVPYVIIKAAKGAKAYERSEDPIYVLDNNIPIDPQ YYLENQISKPLLRIFEPILKNASRELLHGSHTRAVSISTPSNSGIMKFAKKQLTCLGCKA VISGSNQTLCFHCKGREAELYCKTVGNVSELEMLFGRLWTQCQECQGSLHQDVLCTSRDC PIFYRRKAQKDMAEARVOLORWDF

>011207

MANKLKVDELRLKLAERGLSTTGVKAVLVERLEEAIAEDTKKEESKSKRKRNSSNDTYES
NKLIAIGEFRGMIVKELREEAIKRGLDTTGTKKDLLERLCNDANNVSNAPVKSSNGTDEA
EDDNNGFEEEKKEEKIVTATKKGAAVLDQWIPDEIKSQYHVLQRGDDVYDAILNQTNVRD
NNNKFFVLQVLESDSKKTYMVYTRWGRVGVKGQSKLDGPYDSWDRAIEIFTNKFNDKTKN
YWSDRKEFIPHPKSYTWLEMDYGKEENDSPVNNDIPSSSSEVKPEQSKLDTRVAKFISLI
CNVSMMAQHMMEIGYNANKLPLGKISKSTISKGYEVLKRISEVIDRYDRTRLEELSGEFY
TVIPHDFGFKKMSQFVIDTPQKLKQKIEMVEALGEIELATKLLSVDPGLQDDPLYYHYQQ
LNCGLTPVGNDSEEFSMVANYMENTHAKTHSGYTVEIAQLFRASRAVEADRFQQFSSSKN
RMLLWHGSRLTNWAGILSQGLRIAPPEAPVTGYMFGKGVYFADMFSKSANYCYANTGAND
GVLLLCEVALGDMNELLYSDYNADNLPPGKLSTKGVGKTAPNPSEAQTLEDGVVVPLGKP
VERSCSKGMLLYNEYIVYNVEOIKMRYVIOVKFNYKH

>Q9LHS9

MMDRGECLMSMKLRPMVTRPSSDGTLFWPFREERAFASAEEYGGGGGCMWPPRSYSCSFC GREFKSAQALGGHMNVHRRDRARLKQQSLSPSSTDQATPPECDRQQQVLDVGSKVLVQEE TRKPNGTKREISDVCNNNVLESSMKRYEHDNGEVKTDLSVGLLSTEFDPRKKQLINGSSS SWKRAKTDVSRFPMMLGLVIGISEINGHHEELDLELRLGADPPKVN

>09FF80

MERNGGHYTDKTRVLDIKPLRTLRPVFPSGNQAPPFVCAPPFGPFPPGFSSFYPFSSSQA
NQHTPDLNQAQYPPQHQQPQNPPPVYQQQPPQHASEPSLVTPLRSFRSPDVSNGNAELEG
STVKRRIPKKRPISRPENMNFESGINVADRENGNRELVLSVLMRFDALRRRFAQLEDAKE
AVSGIIKRPDLKSGSTCMGRGVRTNTKKRPGIVPGVEIGDVFFFRFEMCLVGLHSPSMAG
IDYLVVKGETEEEPIATSIVSSGYYDNDEGNPDVLIYTGQGGNADKDKQSSDQKLERGNL
ALEKSLRRDSAVRVIRGLKEASHNAKIYIYDGLYEIKESWVEKGKSGHNTFKYKLVRAPG
QPPAFASWTAIQKWKTGVPSRQGLILPDMTSGVESIPVSLVNEVDTDNGPAYFTYSTTVK
YSESFKLMQPSFGCDCANLCKPGNLDCHCIRKNGGDFPYTGNGILVSRKPMIYECSPSCP
CSTCKNKVTQMGVKVRLEVFKTANRGWGLRSWDAIRAGSFICIYVGEAKDKSKVQQTMAN
DDYTFDTTNVYNPFKWNYEPGLADEDACEEMSEESEIPLPLIISAKNVGNVARFMNHSCS
PNVFWQPVSYENNSQLFVHVAFFAISHIPPMTELTYDYGVSRPSGTQNGNPLYGKRKCFC
GSAYCRGSFG

>P52572

MPGLTIGDTVPNLELDSTHGKIRIHDYVGNGYVILFSHPGDFTPVCTTELAAMANYAKEF

 ${\tt EKRGVKLLGISCDDVQSHKEWTKDIEAYKPGSKVTYPIMADPDRSAIKQLNMVDPDEKDA}$ ${\tt QGQLPSRTLHIVGPDKVVKLSFLYPSCTGRNMDEVVRAVDSLLTAAKHKVATPANWKPGE}$ ${\tt CVVIAPGVSDEEAKKMFPQGFETADLPSKKGYLRFTKV}$

 $\verb|MDAFKEEIEIGSSVESLMELLDSQKVLFHSQIDQLQDVVVAQCKLTGVNPLAQEMAAGAL|$ SIKIGKRPRDLLNPKAVKYLQAVFAIKDAISKRESREISALFGITVAQVREFFVTQKTRV RKOVRLSREKVVMSNTHALODDGVPENNNATNHVEPVPLNSIHPEACSISWGEGETVALI PPEDIPPDISDSDKYFVENIFSLLRKEETFSGQVKLMEWIMQIQDASVLIWFLSKGGVLI LTTWLSOAASEEOTSVLLLILKVLCHLPLHKASPENMSAILOSVNGLRFYRISDISNRAK GLLSRWTKLFAKIQAMKKQNRNSSQIDSQSQLLLKQSIAEIMGDSSNPEDILSLSNGKSE NVRRIESSQGPKLLLTSADDSTKKHMLGSNPSYNKERRKVQMVEQPGQKAAGKSPQTVRI GTSGRSRPMSADDIOKAKMRALYMOSKNSKKDPLPSAIGDSKIVAPEKPLALHSAKDSPP IONNEAKTEDTPVLSTVOPVNGFSTIOPVNGPSAVOPVNGPLAVOPVNGPSALOPVNGPS AVIVPVQADEIKKPSTPPKSISSKVGVMMKMSSQTILKNCKRKQIDWHVPPGMELDELWR VAAGGNSKEADVORNRNRRERETTYOSLOTIPLNPKEPWDREMDYDDSLTPEIPSOOPPE ESLTEPODSLDERRIAAGAATTSSSLSSPEPDLELLAALLKNPDLVYALTSGKPSNLAGO DMVKLLDVIKTGAPNSSSSSNKQVEERVEVSLPSPTPSTNPGMSGWGQEGIRNPFSRQNQ VGTAVARSGTQLRVGSMQWHQTNEQSIPRHAPSAYSNSITLAHTEREQQQYMQPKLHHNL HFQQQQQQPISTTSYAVREPVGQMGTGTSSSWRSQQSQNSYYSHQENEIASASQVTSYQG NSQYMSSNPGYESWSPDNSPSRNQLNMRGQQQQASRKHDSSTHPYWNQNKRWR >P54609

MSTPAESSDSKSKKDFSTAILERKKSPNRLVVDEAINDDNSVVSLHPATMEKLQLFRGDT
ILIKGKKRKDTVCIALADETCEEPKIRMNKVVRSNLRVRLGDVISVHQCPDVKYGKRVHI
LPVDDTVEGVTGNLFDAYLKPYFLEAYRPVRKGDLFLVRGGMRSVEFKVIETDPAEYCVV
APDTEIFCEGEPVKREDEERLDDVGYDDVGGVRKQMAQIRELVELPLRHPQLFKSIGVKP
PKGILLYGPPGSGKTLIARAVANETGAFFFCINGPEIMSKLAGESESNLRKAFEEAEKNA
PSIIFIDEIDSIAPKREKTNGEVERRIVSQLLTLMDGLKSRAHVIVMGATNRPNSIDPAL
RRFGRFDREIDIGVPDEIGRLEVLRIHTKNMKLAEDVDLERISKDTHGYVGADLAALCTE
AALQCIREKMDVIDLEDDSIDAEILNSMAVTNEHFHTALGNSNPSALRETVVEVPNVSWN
DIGGLENVKRELQETVQYPVEHPEKFEKFGMSPSKGVLFYGPPGCGKTLLAKAIANECQA
NFISVKGPELLTMWFGESEANVREIFDKARQSAPCVLFFDELDSIATQRGGGSGGDGGGA
ADRVLNQLLTEMDGMNAKKTVFIIGATNRPDIIDSALLRPGRLDQLIYIPLPDEDSRLNI
FKAALRKSPIAKDVDIGALAKYTQGFSGADITEICQRACKYAIRENIEKDIEKEKRRSEN
PEAMEEDGVDEVSEIKAAHFEESMKYARRSVSDADIRKYQAFAQTLQQSRGFGSEFRFEN
SAGSGATTGVADPFATSAAAAGDDDDLYN

>Q9FT54

MADSVPGHVAGGGLQGFSVDAECIKQRVDEVLQWVDSLEHKLKEVEEFYSSIGVSNSGSI GKDTEKGRHVVGIRKIQQEAARREAVAAKRMQDLMRQFGTIFRQITQHKCAWPFMHPVNV EGLGLHDYFEVIDKPMDFSTIKNQMEAKDGTGYKHVMQIYADMRLVFENAMNYNEETSDV YSMAKKLLEKFEEKWAHFLPKVQEEEKIREEEEKQAAKEALLAKEASHIKTTRELGNEIC HANDELEKLMRKVVERCRKITIEEKRNIGLALLKLSPDDLQKVLGIVAQANPSFQPRAEE VSIEMDILDEPTLWRLKFFVKDALDNAMKKKKEEETKTRELSGAQKKEVSKKRNATTKLA ERKTKRSRI

>P16867

MAPKKEEKPASQAAEAPEVKAEAKPKAVKAPKKKEKKAPAKKVAKEPSAGGEDGDKKSKK KAKVAKSETYKLYIYKVLKQVHPDTGISSKAMSIMNSFINDIFEKVATEASKLSRYNKKP TVTSREIQTAVRLVLPGELAKHAVSEGTKAVTKFTSA

>09S775

MSSLVERLRIRSDRKPVYNLDDSDDDDFVPKKDRTFEQVEAIVRTDAKENACQACGESTN LVSCNTCTYAFHAKCLVPPLKDASVENWRCPECVSPLNEIDKILDCEMRPTKSSEQGSSD AEPKPIFVKQYLVKWKGLSYLHCSWVPEKEFQKAYKSNHRLKTRVNNFHRQMESFNNSED DFVAIRPEWTTVDRILACREEDGELEYLVKYKELSYDECYWESESDISTFQNEIQRFKDV NSRTRRSKDVDHKRNPRDFOOFDHTPEFLKGLLHPYOLEGLNFLRFSWSKOTHVILADEM GLGKTIQSIALLASLFEENLIPHLVIAPLSTLRNWEREFATWAPQMNVVMYFGTAQARAV IREHEFYLSKDQKKIKKKKSGQISSESKQKRIKFDVLLTSYEMINLDSAVLKPIKWECMI VDEGHRLKNKDSKLFSSLTQYSSNHRILLTGTPLQNNLDELFMLMHFLDAGKFGSLEEFQ EEFKDINQEEQISRLHKMLAPHLLRRVKKDVMKDMPPKKELILRVDLSSLQKEYYKAIFT RNYQVLTKKGGAQISLNNIMMELRKVCCHPYMLEGVEPVIHDANEAFKQLLESCGKLQLL DKMMVKLKEOGHRVLIYTOFOHMLDLLEDYCTHKKWOYERIDGKVGGAEROIRIDRFNAK NSNKFCFLLSTRAGGLGINLATADTVIIYDSDWNPHADLQAMARAHRLGQTNKVMIYRLI NRGTIEERMMOLTKKKMVLEHLVVGKLKTONINOEELDDIIRYGSKELFASEDDEAGKSG KIHYDDAAIDKLLDRDLVEAEEVSVDDEEENGFLKAFKVANFEYIDENEAAALEAQRVAA ESKSSAGNSDRASYWEELLKDKFELHQAEELNALGKRKRSRKQLVSIEEDDLAGLEDVSS DGDESYEAESTDGEAAGQGVQTGRRPYRRKGRDNLEPTPLMEGEGRSFRVLGFNQSQRAI FVOTLMRYGAGNFDWKEFVPRLKOKTFEEINEYGILFLKHIAEEIDENSPTFSDGVPKEG LRIEDVLVRIALLILVQEKVKFVEDHPGKPVFPSRILERFPGLRSGKIWKEEHDKIMIRA VLKHGYGRWQAIVDDKELGIQELICKELNFPHISLSAAEQAGLQGQNGSGGSNPGAQTNQ NPGSVITGNNNASADGAOVNSMFYYRDMORRLVEFVKKRVLLLEKAMNYEYAEEYYGLGG SSSIPTEEPEAEPKIADTVGVSFIEVDDEMLDGLPKTDPITSEEIMGAAVDNNQARVEIA OHYNOMCKLLDENARESVOAYVNNOPPSTKVNESFRALKSINGNINTILSITSDOSKSHE DDTKPDLNNVEMKDTAEETKPLRGGVVDLNVVEGEENIAEASGSVDVKMEEAKEEEKPKN **MV/VD**

>Q39234

MEMMSSSSSTTQVVSFRDMGMYEPFQQLSGWESPFKSDINNITSNQNNNQSSSTTLEVDA RPEADDNNRVNYTSVYNNSLEAEPSSNNDQDEDRINDKMKRRLAQNREAARKSRLRKKAH VQQLEESRLKLSQLEQELVRARQQGLCVRNSSDTSYLGPAGNMNSGIAAFEMEYTHWLEE QNRRVSEIRTALQAHIGDIELKMLVDSCLNHYANLFRMKADAAKADVFFLMSGMWRTSTE RFFQWIGGFRPSELLNVVMPYVEPLTDQQLLEVRNLQQSSQQAEEALSQGLDKLQQGLVE SIAIQIKVVESVNHGAPMASAMENLQALESFVNQADHLRQQTLQQMSKILTTRQAARGLL ALGEYFHRLRALSSLWAARPREHT

>Q8LBI1

MVFVKSTKSNAYFKRYQVKFRRRRDGKTDYRARIRLINQDKNKYNTPKYRFVVRFTNKDI VAQIVSASIAGDIVKASAYAHELPQYGLTVGLTNYAAAYCTGLLLARRVLKMLEMDDEYE GNVEATGEDFSVEPTDSRRPFRALLDVGLIRTTTGNRVFGALKGALDGGLDIPHSDKRFA GFHKENKQLDAEIHRNYIYGGHVSNYMKLLGEDEPEKLQTHFSAYIKKGVEAESIEELYK KVHAAIRADPNPKKTVKPAPKQHKRYNLKKLTYEERKNKLIERVKALNGAGGDDDDEDDE MADGHSFNNISLSGRGGKNPGLLKINSGGIQWKKQGGGKAVEVDRSDIVSVSWTKVTKSN
QLGVKTKDGLYYKFVGFRDQDVPSLSSFFQSSYGKTPDEKQLSVSGRNWGEVDLHGNTLT
FLVGSKQAFEVSLADVSQTQLQGKNDVTLEFHVDDTAGANEKDSLMEISFHIPNSNTQFV
GDENRPPSQVFNDTIVAMADVSPGVEDAVVTFESIAILTPRGRYNVELHLSFLRLQGQAN
DFKIQYSSVVRLFLLPKSNQPHTFVVISLDPPIRKGQTMYPHIVMQFETDTVVESELSIS
DELMNTKFKDKLERSYKGLIHEVFTTVLRWLSGAKITKPGKFRSSQDGFAVKSSLKAEDG
VLYPLEKGFFFLPKPPTLILHDEIDYVEFERHAAGGANMHYFDLLIRLKTDHEHLFRNIQ
RNEYHNLYTFISSKGLKIMNLGGAGTADGVAAVLGDNDDDDAVDPHLTRIRNQAADESDE
EDEDFVMGEDDDGGSPTDDSGGDDSDASEGGVGEIKEKSIKKEPKKEASSSKGLPPKRKT
VAADEGSSKRKKPKKKKDPNAPKRAMSGFMFFSQMERDNIKKEHPGIAFGEVGKVLGDKW
RQMSADDKEPYEAKAQVDKQRYKDEISDYKNPQPMNVDSGNDSDSN

>Q9SE43

MEMAVANHRERSSDSMNRHLDSSGKYVRYTAEQVEALERVYAECPKPSSLRRQQLIRECS
ILANIEPKQIKVWFQNRRCRDKQRKEASRLQSVNRKLSAMNKLLMEENDRLQKQVSQLVC
ENGYMKQQLTTVVNDPSCESVVTTPQHSLRDANSPAGLLSIAEETLAEFLSKATGTAVDW
VQMPGMKPGPDSVGIFAISQRCNGVAARACGLVSLEPMKIAEILKDRPSWFRDCRSLEVF
TMFPAGNGGTIELVYMQTYAPTTLAPARDFWTLRYTTSLDNGSFVVCERSLSGSGAGPNA
ASASQFVRAEMLSSGYLIRPCDGGGGSIIHIVDHLNLEAWSVPDVLRPLYESSKVVAQKMT
ISALRYIRQLAQESNGEVVYGLGRQPAVLRTFSQRLSRGFNDAVNGFGDDGWSTMHCDGA
EDIIVAINSTKHLNNISNSLSFLGGVLCAKASMLLQNVPPAVLIRFLREHRSEWADFNVD
AYSAATLKAGSFAYPGMRPTRFTGSQIIMPLGHTIEHEEMLEVVRLEGHSLAQEDAFMSR
DVHLLQICTGIDENAVGACSELIFAPINEMFPDDAPLVPSGFRVIPVDAKTGDVQDLLTA
NHRTLDLTSSLEVGPSPENASGNSFSSSSSRCILTIAFQFPFENNLQENVAGMACQYVRS
VISSVQRVAMAISPSGISPSLGSKLSPGSPEAVTLAQWISQSYSHHLGSELLTIDSLGSD
DSVLKLLWDHQDAILCCSLKPQPVFMFANQAGLDMLETTLVALQDITLEKIFDESGRKAI
CSDFAKLMQQGFACLPSGICVSTMGRHVSYEQAVAWKVFAASEENNNNLHCLAFSFVNWS
FV

>039238

MSDDMVLHFSSNSSNQSDHSLPDKIAKLEARLTGKTPSSAKPPQQQQQQQQQVSLWSSAS
AAVKVVTSTPPGLSETSISDSDDENTGDFLIRANTKKRQKVQESNNFSVVDHVEPQEAAY
DGRKNDAESKTGLDVSKKKQGRGRASSTGRGRGSKTNNDVTKSQFVVAPVSAASQLDASD
QKDFRPDGQLRNGECSLQDEDLKSLRAKIAMLEEELRKSRQDSSEYHHLVRNLENEVKDL
KDQEQQGKQKTTKVISDLLISVSKTERQEARTKVRNESLRLGSVGVLRTGTIIAETWEDG
QMLKDLNAQLRQLLETKEAIERQRKLLKKRQNGDKNDGTDTESGAQEEDIIPDEVYKSRL
TSIKREEEAVLRERERYTLEKGLLMREMKRIRDEDGSRFNHFPVLNSRYALLNLLGKGGF
SEVYKAYDLVDHRYVACKLHGLNAQWSEEKKQSYIRHANRECEIHKSLVHHHIVRLWDKF
HIDMHTFCTVLEYCSGKDLDAVLKATSNLPEKEARIIIVQIVQGLVYLNKKSQKIIHYDL
KPGNVLFDEFGVAKVTDFGLSKIVEDNVGSQGMELTSQGAGTYWYLPPECFELNKTPMIS
SKVDVWSVGVLFYQMLFGKRPFGHDQSQERILREDTIIKAKKVEFPVTRPAISNEAKDLI
RRCLTYNOEDRPDVLTMAODPYLAYSKK

>Q8W575

MIGAVNSVEAVITSIQGLSGSPEDLSALHDLLRGAQDSLRAEPGVNFSTLDQLDASKHSL GYLYFLEVLTCGPVSKEKAAYEIPIIARFINSCDAGQIRLASYKFVSLCKILKDHVIALG DPLRGVGPLLNAVOKLOVSSKRLTALHPDVLQLCLQAKSYKSGFSILSDDIVEIDQPRDF FLYSYYGGMICIGLKRFQKALELLYNVVTAPMHQVNAIALEAYKKYILVSLIHNGQFTNT LPKCASTAAQRSFKNYTGPYIELGNCYNDGKIGELEALVVARNAEFEEDKNLGLVKQAVS SLYKRNILRLTQKYLTLSLQDIANMVQLGNAKEAEMHVLQMIQDGQIHALINQKDGMVRF LEDPEQYKSSEMIEIMDSVIQRTIGLSKNLLAMDESLSCDPLYLGKVGRERQRYDFGDDF DTVPOKFSM

>Q8LPU4

MALKQKDTDAAATATGTKKRRRVFFSDTDAGVEANECMKVFLVWNPGEVSSVDCTAIQPF
DLNHFFGEDGKIYGYKNLKINVWISAKSFHGYADVSFDETSDGGKGITDLKPVLQNIFGE
NLVEKEEFLHTFSKECEYIRTAVTNGSAIKHDGSYESDPAVEIVRVELQGAAAFLYSRLV
PLVLLLVEGSTPIDIGEHGWEMLLVVKKATQEAGSKFELLGFAAVHNFYHYPESIRLRIS
QILVLPPYQGEGHGLGLLEAINYIAQSENIYDVTIESPSDYLQYVRSSIDCLRLLMFDPI
KPALGAIVLSLKETNLSKRAQSLRMVPPADLMETVRQKLKINKKQFLRCWEILVFLSLDS
QDHKSMDNFRACIYDRMKGEILGSASGTNRKRLLQMPTSFNKEASFAVYWTQEIEDEDEQ
TVEQQPEDLKTQEQQLNELVDIQIEEIAGVAKNVTSRCKDKMTELVVQ

>05YGP7

MNSNNWLAFPLSPTHSSLPPHIHSSQNSHFNLGLVNDNIDNPFQNQGWNMINPHGGGGEG
GEVPKVADFLGVSKSGDHHTDHNLVPYNDIHQTNASDYYFQTNSLLPTVVTCASNAPNNY
ELQESAHNLQSLTLSMGSTGAAAAEVATVKASPAETSADNSSSTTNTSGGAIVEATPRRT
LETFGQRTSIYRGVTRHRWTGRYEAHLWDNSCRREGQSRKGRQVYLGGYDKEEKAARAYD
LAALKYWGPSTTTNFPITNYEKEVEEMKNMTRQEFVASIRRKSSGFSRGASMYRGVTRHH
QHGRWQARIGRVAGNKDLYLGTFSTEEEAAEAYDIAAIKFRGLNAVTNFEINRYDVKAIL
ESNTLPIGGGAAKRLKEAQALESSRKREEMIALGSNFHQYGAASGSSSVASSSRLQLQPY
PLSIQQPFEHLHHHQPLLTLQNNNDISQYHDSFSYIQTQLHLHQQQTNNYLQSSSHTSQL
YNAYLQSNPGLLHGFVSDNNNTSGFLGNNGIGIGSSSTVGSSAEEEFPAVKVDYDMPPSG
GATGYGGWNSGESAQGSNPGGVFTMWNE

>09FVU9

MEGSSSTIARKTWELENSILTVDSPDSTSDNIFYYDDTSQTRFQQEKPWENDPHYFKRVK ISALALLKMVVHARSGGTIEIMGLMQGKTDGDTIIVMDAFALPVEGTETRVNAQDDAYEY MVEYSQTNKLAGRLENVVGWYHSHPGYGCWLSGIDVSTQRLNQQHQEPFLAVVIDPTRTV SAGKVEIGAFRTYSKGYKPPDEPVSEYQTIPLNKIEDFGVHCKQYYSLDVTYFKSSLDSH LLDLLWNKYWVNTLSSSPLLGNGDYVAGQISDLAEKLEQAESHLVQSRFGGVVPSSLHKK KEDESQLTKITRDSAKITVEQVHGLMSQVIKDELFNSMRQSNNKSPTDSSDPDPMITY >P43254

MEEISTDPVVPAVKPDPRTSSVGEGANRHENDDGGSGGSEIGAPDLDKDLLCPICMQIIK
DAFLTACGHSFCYMCIITHLRNKSDCPCCSQHLTNNQLYPNFLLDKLLKKTSARHVSKTA
SPLDQFREALQRGCDVSIKEVDNLLTLLAERKRKMEQEEAERNMQILLDFLHCLRKQKVD
ELNEVQTDLQYIKEDINAVERHRIDLYRARDRYSVKLRMLGDDPSTRNAWPHEKNQIGFN
SNSLSIRGGNFVGNYQNKKVEGKAQGSSHGLPKKDALSGSDSQSLNQSTVSMARKKRIHA
QFNDLQECYLQKRRQLADQPNSKQENDKSVVRREGYSNGLADFQSVLTTFTRYSRLRVIA
EIRHGDIFHSANIVSSIEFDRDDELFATAGVSRCIKVFDFSSVVNEPADMQCPIVEMSTR
SKLSCLSWNKHEKNHIASSDYEGIVTVWDVTTRQSLMEYEEHEKRAWSVDFSRTEPSMLV
SGSDDCKVKVWCTRQEASVINIDMKANICCVKYNPGSSNYIAVGSADHHIHYYDLRNISQ
PLHVFSGHKKAVSYVKFLSNNELASASTDSTLRLWDVKDNLPVRTFRGHTNEKNFVGLTV
NSEYLACGSETNEVYVYHKEITRPVTSHRFGSPDMDDAEEEAGSYFISAVCWKSDSPTML

TANSOGTIKVLVLAA

>024591

MEFWGLEVKPGSTVKCEPGYGFVLHLSQAALGESKKSDNALMYVKIDDQKLAIGTLSVDK NPHIQFDLIFDKEFELSHTSKTTSVFFTGYKVEQPFEEDEMDLDSEDEDEELNVPVVKEN GKADEKKQKSQEKAVAAPSKSSPDSKKSKDDDDSDEDETDDSDEDETDDSDEGLSSEEGD DDSSDEDDTSDDEEEDTPTPKKPEVGKKRPAESSVLKTPLSDKKAKVATPSSQKTGGKKG AAVHVATPHPAKGKTIVNNDKSVKSPKSAPKSGGSVPCKPCSKSFISETALQAHSRAKMG ASESOVO

>084077

MSLIRRSNVFDPFSLDLWDPFDGFPFGSGGSSSGSIFPSFPRGASSETAAFAGARIDWKE TPEAHVFKADVPGLKKEEVKVEVDDGNILQISGERNKEQEEKTDQWHRVERSSGKFLRRF RLPDNAKPEQIKASMENGVLTVTVPKEEAKKPDVKSIQISG

>032SG5

MTEDRAHKVADEPAASGRQSPERKKRKWDQPAEDLVSAAVTAAAVSGMPVMNFGALPGVV
LPGVTAYGAATLPSVVPVPYSLPPHIAPSVLQNAAAAAQKLSQAKIPDEVIAREIVINDA
DPSVRYKLTKRQTQEEIQKCTNTVIITRGKYHPPNLLPDGEKPLYLHISAGSQLKDTAER
IKAVDRAASMIEEILKQGTTSESISVPFSSSTGQAVRPFSASVFLGFDADPSLNITARIR
GPNDQYINHIMKETGVTVVLRGKDSENLGSCHSEASQQPLHLYLTSMHLKNLEAAKVLAE
NLLDTVAAEFGASRISSSKVYGAVPPPQQLLAGVDTSGTKSDVHYIVGPNVLSGATHSFA
STGVIAPVVAPAVTVQSGAPTYSGVPLPSNMAYPIPPANGGAFYSGYGDIYPQATPLQQL
AFTLKHASSSATQAVPVTSTPTSMATKGNSILDAEMDKRSRRKFQELPVSKGPATESQNS
QQGSKFVKTGLDSSGNIGSSSIAPPKKVHPGSNGMLPQEEADMPSHLSISTKMLPPPLKS
MLPLPPRSMPPPPPKSMPPPPPKFPSDEFLSRNENKFFPLKEPTAPPRSFDAISVLPSER
RPREPKEEKNKRHTCV

>Q9ZVD3

MAFAQSVYNQSSVLKINVMVVDDNRVFLDIWSRMLEKSKYREITVIAVDYPKKALSTLKN QRDNIDLIITDYYMPGMNGLQLKKQITQEFGNLSVLVMSSDPNKEEESLSCGAMGFIPKP IAPTDLPKIYQFALTYKRNGKSTLSTEQNQKDANVSVPQQIMLVPEQAYVLKTKKKNCSS KSDTRTVNSTNVSHVSTNGSRKNRKRKPKGGPSDDGESLSQPPKKKKIWWTNPLQDLFLQ AIQHIGYDKVVPKKILAIMNVPYLTRENVASHLQKYRLFVKRVVHQGRFSMLSDRGKDSM FRQTHIKEPYVNYYTPSTSWYETSLNNRSFYSESVHGHSRLLSEAREPVRYNQMSYNYMN RNISFENQPSQNEETRTVFEPPVMANKISQTSQVLGFGQLGPSAISGHNFNTNMMSSYGS LTPNQPGTSHFSYGMQSVLNNENATYNPQPPANATTQPNLDELPQLENLNLYNDLGNTSE LPYNISNFQSDDNKKQGEEDGDWTFVNINQDQSNGESSNTIATPETNTPNFNINPNQNQG OAVPEFTDWSFLDOOELVDDDFMNSLFNNDMN

>Q32SG6

MILEKPSWIRHEGLQIFSIDIQTGGLRFATGGGDQKVRIWSMESVHKDNTNNDSKQRLLA
TLRDHFGSVNCVRWAKHGRYLASGSDDQVILIHERKAGSGTSEFGSGEPPDAENWKVIMT
WRGHTADVVDLSWSPDDSTLASGSLDNTIHIWNMNNGICTAVLRGHTSLVKGVTWDPIGS
FIASQSDDKTVMIWRTSDWSLAHKTEGHWTKSLGSTFFRRLAWSPCCHFITTTHGFQKPR
HSAPVLERGEWAATFDFLGHNAPIVVVKFNNSTFRKNFSSDQDPKAAPVGWANGASKTPT
KEQQPYNVIAIGSQDRTITVWTTASARPLFVARHFFSQSVVDLSWSPDGYSLFACSLDGS
AANFHFEVKELGHRLSDSEMDEWKRNRYGDVGGRQSNLAESPAQLLLEQASAKQSAGEKV
TSIVEQGKAPPKVSAGVPNPGLVVLSLEVPEVSHEDSKKTAGPTADDVKKGNQLSSPVKQ

REYRRPDGRKRIIPEAVGFASNQDNIPNHSQNHPVNFSSLDQRMNGTKPSYGSNSNSNNC
GVKDRTSVTARANITESLVIQKASAGAGNDGRLSIEHTRSMAPSSLTPCSALSIHVINKN
GNEDALPVCLEARPVERGAGDMIGVGALSTKETEIKCIKGTKTLWSDRISGKVTVLAGNA
NFWAVGCEDGFLQVYTRCGVRAMPAMMMGSAAVFIDCDDSWKLLLVTGRGLMYIWNLYDR
ACILHDSLASLVASPDESSAKDAGTVKVISATFSRCGSPLVALASRHAFLYDMSLKCWLR
IADDCFPASNFASSFSFPQGGELGKLQIDIGKFMARKPIWSRVTDDGLQTRAHLENQLAS
SLALKSAQEYRQCLLSYVRFLAREADESRLREVCESFLGPPMGKVGSASPTDPKNLAWDP
DVLGMKKHKLLKEDILPSMASNRKVQRLLNEFMDLLLEYETDVTLIPQPGTEGNGNGNDK
VMTS

>P45432

MERDEEASGPMMEMCTNGGEETSNRRPIISGEPLDIEAYAALYKGRTKIMRLLFIANHCG
GNHALQFDALRMAYDEIKKGENTQLFREVVNKIGNRLGEKYGMDLAWCEAVDRRAEQKKV
KLENELSSYRTNLIKESIRMGYNDFGDFYYACGMLGDAFKNYIRTRDYCTTTKHIIHMCM
NAILVSIEMGQFTHVTSYVNKAEQNPETLEPMVNAKLRCASGLAHLELKKYKLAARKFLD
VNPELGNSYNEVIAPQDIATYGGLCALASFDRSELKQKVIDNINFRNFLELVPDVRELIN
DFYSSRYASCLEYLASLKSNLLLDIHLHDHVDTLYDQIRKKALIQYTLPFVSVDLSRMAD
AFKTSVSGLEKELEALITDNQIQARIDSHNKILYARHADQRNATFQKVLQMGNEFDRDVR
AMLLRANLLKHEYHARSARKL

>P42744

MQAVKRSRRHVEEEPTMVEPKTKYDRQLRIWGEVGQAALEEASICLLNCGPTGSEALKNL VLGGVGSITVVDGSKVQFGDLGNNFMVDAKSVGQSKAKSVCAFLQELNDSVNAKFIEENP DTLITTNPSFFSQFTLVIATQLVEDSMLKLDRICRDANVKLVLVRSYGLAGFVRISVKEH PIIDSKPDHFLDDLRLNNPWPELKSFVETIDLNVSEPAAAHKHIPYVVILVKMAEEWAQS HSGNLPSTREEKKEFKDLVKSKMVSTDEDNYKEAIEAAFKVFAPRGISSEVQKLINDSCA EVNSNSSAFWVMVAALKEFVLNEGGGEAPLEGSIPDMTSSTEHYINLQKIYLAKAEADFL VIEERVKNILKKIGRDPSSIPKPTIKSFCKNARKLKLCRYRMVEDEFRNPSVTEIQKYLA DEDYSGAMGFYILLRAADRFAANYNKFPGQFDGGMDEDISRLKTTALSLLTDLGCNGSVL PDDLIHEMCRFGASEIHVVSAFVGGIASOEVIKLVTKOFVPMLGTYIFNGIDHKSQLLKL

>Q9LR78

MAPDQSYQYPSPSYESIQTFYDTDEDWPGPRCGHTLTAVFVNNSHQLILFGGSTTAVANH
NSSLPEISLDGVTNSVHSFDVLTRKWTRLNPIGDVPSPRACHAAALYGTLILIQGGIGPS
GPSDGDVYMLDMTNNKWIKFLVGGETPSPRYGHVMDIAAQRWLVIFSGNNGNEILDDTWA
LDTRGPFSWDRLNPSGNQPSGRMYASGSSREDGIFLLCGGIDHSGVTLGDTYGLKMDSDN
VWTPVPAVAPSPRYQHTAVFGGSKLHVIGGILNRARLIDGEAVVAVLDTETGEWVDTNQP
ETSASGANRQNQYQLMRRCHHAAASFGSHLYVHGGIREDVLLDDLLVAETSQSSSPEPEE
DNPDNYMLLDDYLMDEPKPLSSEPEASSFIMRSTSEIAMDRLAEAHNLPTIENAFYDSAI
EGYVPLQHGAETVGNRGGLVRTASLDQSTQDLHKKVISTLLRPKTWTPPANRDFFLSYLE
VKHLCDEVEKIFMNEPTLLQLKVPIKVFGDIHGQYGDLMRLFHEYGHPSVEGDITHIDYL
FLGDYVDRGQHSLEIIMLLFALKIEYPKNIHLIRGNHESLAMNRIYGFLTECEERMGESY
GFEAWLKINQVFDYLPLAALLEKKVLCVHGGIGRAVTIEEIENIERPAFPDTGSMVLKDI
LWSDPTMNDTVLGIVDNARGEGVVSFGPDIVKAFLERNGLEMILRAHECVIDGFERFADG
RLITVFSATNYCGTAQNAGAILVIGRDMVIYPKLIHPHPPPISSSEEDYTDKAWMQELNI
EMPPTPARGESSE

>082804

MKRGKDEEKILEPMFPRLHVNDADKGGPRAPPRNKMALYEQLSIPSQRFGDHGTMNSRSN
NTSTLVHPGPSSQPCGVERNLSVQHLDSSAANQATEKFVSQMSFMENVRSSAQHDQRKMV
REEEDFAVPVYINSRRSQSHGRTKSGIEKEKHTPMVAPSSHHSIRFQEVNQTGSKQNVCL
ATCSKPEVRDQVKANARSGGFVISLDVSVTEEIDLEKSASSHDRVNDYNASLRQESRNRL
YRDGGKTRLKDTDNGAESHLATENHSQEGHGSPEDIDNDREYSKSRACASLQQINEEASD
DVSDDSMVDSISSIDVSPDDVVGILGQKRFWRARKAIANQQRVFAVQLFELHRLIKVQKL
IAASPDLLLDEISFLGKVSAKSYPVKKLLPSEFLVKPPLPHVVVKQRGDSEKTDQHKMES
SAENVVGRLSNQGHHQQSNYMPFANNPPASPAPNGYCFPPQPPPSGNHQQWLIPVMSPSE
GLIYKPHPGMAHTGHYGGYYGHYMPTPMVMPQYHPGMGFPPPGNGYFPPYGMMPTIMNPY
CSSQQQQQQPNEQMNQFGHPGNLQNTQQQQQRSDNEPAPQQQQQPTKSYPRARKSRQGS
TGSSPSGPQGISGSKSFRPFAAVDEDSNINNAPEQTMTTTTTTTTTTTTTTTTTTTDGGGVTR
VIKVVPHNAKLASENAARIFOSIQEERKRYDSSKP

>P41153

MEPNSSGSGKAAVGDGGGGGAPMLQPAPAPAPAPAPAPPFLVKTYDMVDDPSTDKIVS WSPTNNSFVVWDPPEFAKDLLPKYFKHNNFSSFVRQLNTYGFRKVDPDRWEFANEGFLRG QKHLLKSISRRKPAHGHAQQQQQPHGHAQQQMQPPGHSASVGACVEVGKFGLEEEVERLK RDKNVLMQELVRLRQQQQSTDNQLQGMVQRLQGMELRQQQMMSFLAKAVNSPGFLAQFVQ QQNESNKRIAEGSKKRRIKQDIESQDPSVTPADGQIVKYQPGINEAAKAMLRELSKLDSS PRLENFSNSPESFLIGDGSPQSNASSGRVSGVTLQEVPPTSGKPLLNTASAIAGQSLLPA TSEMQSSHLGTCSEIINNQLSNIIPLVGGEDLHPGSLSASDMIMPELSQLQGILPENNTD VIGCDSFMDTIAVEGKMGLDIGSLSPGADIDWQSGLLDEIQEFPSVGDPFWEKFLQSPSS PDAAMDDDISNTSETKPQINGWDKTQNMEHLTEQMGATNIKQQKHMI

>09ZNT9

MTLKAEVVENFSCPFCLIPCGGHEGLQLHLKSSHDAFKFEFYRAEKDHGPEVDVSVKSDT
IKFGVLKDDVGNPQLSPLTFCSKNRNQRRQRDDSNNVKKLNVLLMELDLDDLPRGTENDS
THVNDDNVSSPPRAHSSEKISDILTTTQLAIAESSEPKVPHVNDGNVSSPPRAHSSAEKN
ESTHVNDDDDVSSPPRAHSLEKNESTHVNEDNISSPPKAHSSKKNESTHMNDEDVSFPPR
TRSSKETSDILTTTQPAIVEPSEPKVRRVSRRKQLYAKRYKARETQPAIAESSEPKVLHV
NDENVSSPPEAHSLEKASDILTTTQPAIAESSEPKVPHVNDENVSSTPRAHSSKKNKSTR
KNVDNVPSPPKTRSSKKTSDILTTTQPTIAESSEPKVRHVNDDNVSSTPRAHSSKKNKST
RKNDDNIPSPPKTRSSKKTSNILATTQPAKAEPSEPKVTRVSRRKELHAERCEAKRLERL
KGRQFYHSQTMQPITFEQVMSNEDSENETDDYALDISERLRLERLVGVSKEEKRYMYLWN
IFVRKQRVIADGHVPWACEEFAKLHKEEMKNSSSFDWWWRMFRIKLWNNGLICAKTFHKC
TTILLSNSDEAGOFTSGSAANANNOOSMEVDE

>Q8LEA8

MAESVFSCIPEDVVFNIFFKLQDDPRNWARLACVCTKFSSIVRNVCCKTQCYSAIPTVIS
DLLPLPPSAAASASSSTAADSSLTPPGGWASLYKLAVCCPGLFHAGILLENSDFGLEREL
GPDQNLDPKPTTTDLALNDEEVSKPVGSGLETTSFWSLYDDLYTDTIPAPPPEDSIDDQE
EEIETSEIRPGRDLPVRKRRKICRSLGSHLASGGWNLSREQGNKLLASRFRGDCLYICNW
PGCIHVEEKRNYMLFRGVFKDFKRSRVWRTINDGNRSKTSGLKCAFCLCDETWDLHSSFC
LRRVFGFHDDGEPVVRAYVCENGHVSGAWTALPLYT

>P40280

MDSTGTGAGGKGKKGAAGRKVGGPRKKSVSRSVKAGLOFPVGRIGRYLKKGRYAQXVGTG

APVYLAAVLEYLAAEVLELAGNAARDNKKTRIIPRHVLLAIRNDEELGKLLGGVTIAHGG VLPNINPVLLPKKTAEKASSGGSKEAKSPKKAAKSPKKA

>08W1K8

MARGPGDTDMDEASADAAIPSSTPNPTVAFRCTHALSGHTKAVAAVKFSPDGSLLASGSA
DRTVALWDAATGARVNTLAGHSCGVSDVAWNPNGRYLATAADDHSLKLWDAETGACLRTL
TGHTNYVFCCNFDGAAGHLLASGSFDETLRLWDVRSGRCLREVPAHSDPVTSAAFSYDGS
MVVTSSLDGLIRLWDTQTGHCLKTLFDRDSPPVSFAAFTPNAKYVLCNTLDGRAKLWDYA
AGRTRRTYAGGHVNTQFCISSGFLGGSSSASFDLGCSMVVTGSEDGSLAAYDISTGHVVG
RGAAAAAAAEGGGDEGSAAAAAAGGVAGGHTAAVLSVNVHPSAPLVATGGHHPDNSVRVW
AASRTEPAAA

>024454

MGAAGSKLEKALGDQFPEGERYFGFENFGNTCYCNSVLQALYFCVPFREQLLEYYTSNKS
VADAEENLMTCLADLFSQISSQKKKTGVIAPKRFVQRLKKQNELFRSYMHQDAHEFLNYL
LNEVVDILEKEAKATKTEHETSSSSSPEKIANGLKVPQANGVVHKEPIVTWVHNIFQGIL
TNETRCLRCETVTARDETFLDLSLDIEQNSSITSCLKNFSSTETLHAEDKFFCDKCCSLQ
EAQKRMKIKKPPHILVIHLKRFKYIEQLGRYKKLSYRVVFPLELKLSNTVEPYADVEYSL
FAVVVHVGSGPNHGHYVSLVKSHNHWLFFDDENVEMIEESAVQTFFGSSQEYSSNTDHGY
ILFYESLGPTK

>P14624

MQIFVKTLTGKTITLEVESSDTIENVKAKIQDKEGIPPDQQRLIFAGKQLEDGRTLADYN IQKESTLHLVLRLRGG

>Q9FUY2

MSQTNWEADKMLDVYIHDYLVKRDLKATAQAFQAEGKVSSDPVAIDAPGGFLFEWWSVFW DIFIARTNEKHSEVAASYIETOMIKAREQOLQQSQHPQVSQQQQQQQQQQQQQQQQLLLQR $\verb"AQQQQQQQQHHHHQQQQQQQQQQQQQQQQQQHQNQPPSQQQQQQSTPQHQQQPTPQ"$ QQPQRRDGSHLANGSANGLVGNNSEPVMRQNPGSGSSLASKAYEERVKMPTQRESLDEAA MKRFGDNVGQLLDPSHASILKSAAASGQPAGQVLHSTSGGMSPQVQTRNQQLPGSAVDIK SEINPVLTPRTAVPEGSLIGIPGSNOGSNNLTLKGWPLTGFDOLRSGLLOOOKPFMOSOS FHQLNMLTPQHQQQLMLAQQNLNSQSVSEENRRLKMLLNNRSMTLGKDGLGSSVGDVLPN VGSSLQPGGSLLPRGDTDMLLKLKMALLQQQQQNQQGGGNPPQPQPQPQPLNQLALTNP QPQSSNHSIHQQEKLGGGGSITMDGSISNSFRGNEQVLKNQSGRKRKQPVSSSGPANSSG ${\tt TANTAGPSPSSAPSTPSTHTPGDVISMPNLPHSGGSSKSMMMFGTEGTGTLTSPSNQLAD}$ ${\tt MDRFVEDGSLDDNVESFLSQEDGDQRDAVTRCMDVSKGFTFTEVNSVRASTTKVTCCHFS}$ SDGKMLASAGHDKKAVLWYTDTMKPKTTLEEHTAMITDIRFSPSQLRLATSSFDKTVRVW DADNKGYSLRTFMGHSSMVTSLDFHPIKDDLICSCDNDNEIRYWSINNGSCTRVYKGGST QIRFQPRVGKYLAASSANLVNVLDVETQAIRHSLQGHANPINSVCWDPSGDFLASVSEDM VKVWTLGTGSEGECVHELSCNGNKFOSCVFHPAYPSLLVIGCYOSLELWNMSENKTMTLP AHEGLITSLAVSTATGLVASASHDKLVKLWK

>P62787

MSGRGKGGKGLGKGGAKRHRKVLRDNIQGITKPAIRRLARRGGVKRISGLIYEETRGVLK IFLENVIRDAVTYTEHARRKTVTAMDVVYALKRQGRTLYGFGG

>067Y93

MVRKYRKAKGIVEAGVSSTYMQLRSRRIVYVRSEKSSSVSVVGDNGVSSSCSGSNEYKKK ELIHLEEEDKDGDTETSTYRRGTKRKLFENLREEEKEELSKSMENYSSEFESAVKESLDC CCSGRKTMEETVTAEEEEKAKLMTEMPTESEIEDFFVEAEKQLKEKFKKKYNFDFEKEKP LEGRYEWVKLE

>067EU8

MSSAAQQQQKAAAAEQEEVEHGPFPIEQLQASGIAALDVKKLKDSGLHTVEAVAYTPRKD LLQIKGISEAKADKIIEAASKIVPLGFTSASQLHAQRLEIIQVTTGSRELDKILEGGIET GSITEIYGEFRSGKTQLCHTPCVTCQLPLDQGGGEGKALYIDAEGTFRPQRLLQIADRFG LNGADVLENVAYARAYNTDHQSRLLLEAASMMIETRFALMVVDSATALYRTDFSGRGELS ARQMHMAKFLRSLQKLADEFGVAVVITNQVVAQVDGSAMFAGPQFKPIGGNIMAHASTTR LALRKGRGEERICKVISSPCLAEAEARFOLASEGIADVKD

>P84634

MRDEVDLSLTIPSKLLGKRDREQKNCEEEKNKNKKAKKQQKDPILLHTSAATHKFLPPPL TMPYSEIGDDLRSLDFDHADVSSDLHLTSSSSVSSFSSSSSLFSAAGTDDPSPKMEKDP RKIARRYOVELCKKATEENVIVYLGTGCGKTHIAVMLIYELGHLVLSPKKSVCIFLAPTV ALVEQQAKVIADSVNFKVAIHCGGKRIVKSHSEWEREIAANEVLVMTPQILLHNLQHCFI KMECISLLIFDECHHAOOOSNHPYAEIMKVFYKSESLORPRIFGMTASPVVGKDGPPLDS FTYFSGSFQSENLSKSINSLENLLNAKVYSVESNVOLDGFVSSPLVKVYYYRSALSDASQ STIRYENMLEDIKORRANVYCLRFLEAAKIOLNSDHNVODEPVGKNPKSKICDTYLSMAA EALSSGVAKDENASDLLSLAALKEPLFSRKLVQLIKILSVFRLEPHMKCIIFVNRIVTAR TLSCILNNLELLRSWKSDFLVGLSSGLKSMSRRSMETILKRFOSKELNLLVATKVGEEGL DIQTCCLVIRYDLPETVTSFIQSRGRARMPQSEYAFLVDSGNEKEMDLIENFKVNEDRMN LEITYRSSEETCPRLDEELYKVHETGACISGGSSISLLYKYCSRLPHDEFFOPKPEFOFK PVDEFGGTICRITLPANAPISEIESSLLPSTEAAKKDACLKAVHELHNLGVLNDFLLPDS KDEIEDELSDDEFDFDNIKGEGCSRGDLYEMRVPVLFKOKWDPSTSCVNLHSYYIMFVPH PADRIYKKFGFFMKSPLPVEAETMDIDLHLAHORSVSVKIFPSGVTEFDNDEIRLAELFO EIALKVLFERGELIPDFVPLELQDSSRTSKSTFYLLLPLCLHDGESVISVDWVTIRNCLS SPIFKTPSVLVEDIFPPSGSHLKLANGCWNIDDVKNSLVFTTYSKOFYFVADICHGRNGF SPVKESSTKSHVESIYKLTEPQELDEYFIEIPPELSHLKIKGLSKDIGSSLSLLPSIMHR MENLLVAIELKHVLSASIPEIAEVSGHRVLEALTTEKCHERLSLERLEVLGDAFLKFAVS RHLFLHHDSLDEGELTRRRSNVYIRDQALDPTQFFAFGHPCRVTCDEVASKEVHSLNRDL GILESNTGEIRCSKGHHWLYKKTIADVVEALVGAFLVDSGFKGAVKFLKWIGVNVDFESL OVODACIASRRYLPLTTRNNLETLENOLDYKFLHKGLLVOAFIHPSYNRHGGGCYORLEF ${\tt LGDAVLDYLMTSYFFTVFPKLKPGQLTDLRSLSVNNEALANVAVSFSLKRFLFCESIYLH}$ EVIEDYTNFLASSPLASGOSEGPRCPKISPIKELIELCOSYKWDREISATKKDGAFTVEL KVTKNGCCLTVSATGRNKREGTKKAAQLMITNLKAHENITTSHPLEDVLKNGIRNEAKLI GYNEDPIDVVDLVGLDVENLNILETFGGNSERSSSYVIRRGLPOAPSKTEDRLPOKAIIK AGGPSSKTAKSLLHETCVANCWKPPHFECCEEEGPGHLKSFVYKVILEVEDAPNMTLECY GEARATKKGAAEHAAQAAIWCLKHSGFLC

>Q9LG26

MRRHKRWPLRSLVCSFSSSAAETVTTSTAASATAAFPLKHVTRSNFETTLNDLRSLVKAA
DFVAIDLEMTGVTSAPWRDSLEFDRYDVRYLKVKDSAEKFAVVQFGVCPFRWDSRTQSFV
SYPHNFFVFPRQELTFDPPAHEFLCQTTSMDFLAKYQFDFNTCIHEGISYLSRREEEEAS
KRLKMLHGEDGIDSSGETEELKLVRLADVLFAARMEKLLNEWRSGLLHGGNASSEFPRIS
NGSNQSMETVFHHMRPALSLKGFTSHQLRVLNSVLRKHFGDLVYIHSNDKSSSSRDIVVY
TDSDSDKENLMKEAKDERKRLAERKIQSAIGFRQVIDLLASEKKLIVGHNCFLDIAHVYS

KFVGPLPSTAEKFVASINSHFPYIVDTKILLNVNPMLHQRMKKSSTSLSSAFSSLCPQIE FSSRSSDSFLQQRVNIDVEIDNVRCSNWNAGGKHEAGYDAFMTGCIFAQACNHLGFDFKQ HSQLDDFAQNEKLEKYINRLYLSWTRGDIIDLRTGHSNADNWRVSKFKYENIVLIWNFPR KLKARGIKECICKAFGSASVTSVYHVDDSAVFVLFKNSELVWDFLALKRQLESSDGPVSV LHPLSKILEGGNTGAADYEAYKEICSSHVSEVMFSDQAETVGVKSRTRPNAQCETETREE NTVTVTHKASDLIDAFLANRVEVETATSN

>09SCJ9

MSRPNTRNKNKRQRPDAVDSSSQILRKIHEANDVTDDDINQLFMIWKPVCQGCRVNTRDN PNCFCGLVPPLNGSRKSGLWOKTSEIIOSLGPDPTLDRRDSESTPAGLTNLGATCYANSI LQCLYMNTAFREGVFSVEVHVLKQNPVLDQIARLFAQLHASQKSFVDSDAFVKTLELDNG VQQDTHEFLTLLLSLLERCLLHSGVKAKTIVQDLFSGSVSHVTTCSKCGRDSEASSKMED FYALELNVKGLKSLDASLNDYLSLEQLNGDNOYFCGSCNARVDATRCIKLRTLPPVITFO LKRCIFLPKTTAKKKITSSFSFPOVLDMGSRLAESSONKLTYDLSAVLIHKGSAVNSGHY VAHIKDEKTGLWWEFDDEHVSELGKRPCNEASSSTPOSESNGTASSGNITDGIOSGSSDC RSAIKSEVFSSSDAYMLMYSLRCDKOENOEGOKENPIDITKGEVKOLKGGYLPKHLSEWI NNMNAVFLESCKOYNLRKEKELNALTERROEVRTILSEAAVOSLEEOYFWISTDWLRLWA DTTLPPALDNTPLLCSHGKVHASKVNCMKRISELAWIKLESKFNGGPKLGKGDYCRDCLM DGARMVVSSDSYRDRRTFMKSIANDVLSGKCEDGMYYISRAWLQQWIKRKNLDAPTEADA GPTNAITCNHGELMPEOAPGAKRVVVPENFWSFLFEDALKVMSEDTLDCTCFPVDSSOCC HCTEVLSEVACFEDSLRTLKVKQRQNHEKLATGKGIPLTPQSRYFLLPSPWLVQWRIYIN MTGKNSSSAPEPERLDGVINTLKCKKHTRLLERLPELVCRRGSYFOKNPSTDKLTIIPEL DWKYFCDEWGGLMENGISAFIEVGNTDQSSSPDVIDLEKDSSPDDNMDVDAQQLILRASP EICEECIGERESCELMOKLSYSEGDVFVCFVRGKGAPKAMLEASDSSFEVDRRTSKRSRR TNYGNLTSLKVSATTTVYOLKMMIWELLEVMKENOELHKGSKVIDOESATLADMNIFPGD RLWVRDTEMHEHRDIADELCEKKPGAQDIEEGFRGTLLTGNISSEAC

>Q9C801

MKLSFSLPSKSKPKVTATTADGNNAVDDGTSKEFVTEFDPSKTLANSIPKYVIPPIENTW
RPHKKMKNLDLPLQSGNAGSGLEFEPEVPLPGTEKPDNISYGLNLRQKVKDDSIGGDAVE
ERKVSMGEQLMLQSLRRDLMSLADDPTLEDFESVPVDGFGAALMAGYGWKPGKGIGKNAK
EDVEIKEYKKWTAKEGLGFDPDRSKVVDVKAKVKESVKLDKKGVGINGGDVFFVGKEVRI
IAGRDVGLKGKIVEKPGSDFFVIKISGSEEEVKVGVNEVADLGSKEEEKCLKKLKDLQLN
DREKDKKTSGRGRGAERGSRSEVRASEKQDRGQTRERKVKPSWLRSHIKVRIVSKDWKGG
RLYLKKGKVVDVVGPTTCDITMDETQELVQGVDQELLETALPRRGGPVLVLSGKHKGVYG
NLVEKDLDKETGVVRDLDNHKMLDVRLDQVAEYMGDMDDIEY

>09C519

MDRGWSGLTLDSSSLDLLNPNRISHKNHRRFSNPLAMSRIDEEDDQKTRISTNGSEFRFP
VSLSGIRDREDEDFSSGVAGDNDREVPGEVDFFSDKKSRVCREDDEGFRVKKEEQDDRTD
VNTGLNLRTTGNTKSDESMIDDGESSEMEDKRAKNELVKLQDELKKMTMDNQKLRELLTQ
VSNSYTSLQMHLVSLMQQQQQQNNKVIEAAEKPEETIVPRQFIDLGPTRAVGEAEDVSNS
SSEDRTRSGGSSAAERRSNGKRLGREESPETESNKIQKVNSTTPTTFDQTAEATMRKARV
SVRARSEAPMISDGCQWRKYGQKMAKGNPCPRAYYRCTMATGCPVRKQVQRCAEDRSILI
TTYEGNHNHPLPPAAVAMASTTTAAANMLLSGSMSSHDGMMNPTNLLARAVLPCSTSMAT
ISASAPFPTVTLDLTHSPPPPNGSNPSSSAATNNNHNSLMQRPQQQQQMTNLPPGMLPH
VIGQALYNQSKFSGLQFSGGSPSTAAFSQSHAVADTITALTADPNFTAALAAVISSMING

TNHHDGEGNNKNQ

>P12959

MEHVISMEEILGPFWELLPPPAPEPEREQPPVTGIVVGSVIDVAAAGHGDGDMMDQQHAT EWTFERLLEEEALTTSTPPPVVVVPNSCCSGALNADRPPVMEEAVTMAPAAVSSAVVGDP MEYNAILRRKLEEDLEAFKMWRADSSVVTSDQRSQGSNNHTGGSSIRNNPVQNKLMNGED PINNNHAQTAGLGVRLATSSSSRDPSPSDEDMDGEVEILGFKMPTEERVRKKESNRESAR RSRYRKAAHLKELEDQVAQLKAENSCLLRRIAALNQKYNDANVDNRVLRADMETLRAKVK MGEDSLKRVIEMSSSVPSSMPISAPTPSSDAPVPPPPIRDSIVGYFSATAADDDASVGNG FLRLQAHQEPASMVVGGTLSATEMNRVAAATHCAGAMELIQTAMGSMPPTSASGSTPPPQ IMSCWVOMGPYTWTCIRHCGFRDRWEHFICRRR

>P26356

MAAAAVDPMVLGLGTSGGASGSGVVGGGVGRAGGGGAVMEGAQPVDLARHPSGIVPVLQN IVSTVNLDCRLDLKQIALQARNAEYNPKRFAAVIMRIRDPKTTALIFASGKMVCTGAKSE EHSKLAARKYARIVQKLGFPATFKDFKIQNIVASCDVKFPIRLEGLAYSHGAFSSYEPEL FPGLIYRMKQPKIVLLVFVSGKIVLTGAKVRDEIYAAFENIYPVLTEYRKSQQ >0604D0

MGRLDVAAAKRAYRKAEEVGDRREQARWANNVGDILKNHGEYVDALKWFRIDYDISVKYL PGKDLLPTCQSLGEIYLRLENFEEALIYQKKHLQLAEEANDTVEKQRACTQLGRTYHEMF LKSEDDCEAIQSAKKYFKKAMELAQILKEKPPPGESSGFLEEYINAHNNIGMLDLDLDNP EAARTILKKGLQICDEEEVREYDAARSRLHHNLGNVFMALRSWDEAKKHIEMDINICHKI NHVQGEAKGYINLAELHNKTOKYIDALLCYGKASSLAKSMODESALVEQIEHNTKIVKKS MKVMEELREEELMLKKLSAEMTDAKGTSEERKSMLQVNACLGSLIDKSSMVFAWLKHLQY SKRKKKISDELCDKEKLSDAFMIVGESYONLRNFRKSLKWFIRSYEGHEAIGNLEGOALA KINIGNGLDCIGEWTGALQAYEEGYRIALKANLPSIQLSALEDIHYIHMMRFGNAQKASE LKETIONLKESEHAEKAECSTODECSETDSEGHANVSNDRPNACSSPOTPNSLRSERLAD LDEANDDVPLISFLOPGKRLFKRKOVSGKODADTDOTKKDFSVVADSOOTVAGRKRIRVI LSDDESETEYELGCPKDSSHKVLRONEEVSEESMYFDGAINYTDNRAIODNVEEGSCSYT PLHPIKVAPNVSNCRSLSNNIAVETTGRRKKGSOCDVGDSNGTSCKTGAALVNFHAYSKT EDRKIKIEIENEHIALDSCSHDDESVKVELTCLYYLQLPDDEKSKGLLPIIHHLEYGGRV LKPLELYAILRDSSENVVIEASVDGWVHKRLMKLYMDCCOSLSEKPSMKLLKKLYISEVE DDINVSECELODISAAPLLCALHVHNIAMLDLSHNMLGNGTMEKLKOLFASSSOMYGALT $\verb|LDLHCNRFGPTALFQICECPVLFTRLEVLNVSRNRLTDACGSYLSTIVKNCRALYSLNVE|\\$ HCSLTSRTIOKVANALDSKSGLSOLCIGYNNPVSGSSIONLLAKLATLSSFAELSMNGIK LSSQVVDSLYALVKTPSLSKLLVGSSGIGTDGAIKVTESLCYQKEETVKLDLSCCGLASS FFIKLNODVTLTSSILEFNVGGNPITEEGISALGELLRNPCSNIKVLILSKCHLKLAGLL CIIQALSDNKNLEELNLSDNAKIEDETVFGQPVKERSVMVEQEHGTCKSVTSMDKEQELC ETNMECDDLEVADSEDEQIEEGTATSSSLSLPRKNHIVKELSTALSMANQLKILDLSNNG FSVEALETLYMSWSSSSSRTGIAQRHVKEETVHFYVEGKMCCGVKSCCRKD

>P93022

MKAPSSNGVSPNPVEGERRNINSELWHACAGPLISLPPAGSLVVYFPQGHSEQVAASMQK QTDFIPSYPNLPSKLICMLHNVTLNADPETDEVYAQMTLQPVNKYDRDALLASDMGLKLN RQPNEFFCKTLTASDTSTHGGFSVPRRAAEKIFPALDFSMQPPCQELVAKDIHDNTWTFR HIYRGQPKRHLLTTGWSVFVSTKRLFAGDSVLFIRDGKAQLLLGIRRANRQQPALSSSVI SSDSMHIGVLAAAAHANANNSPFTIFYNPRAAPAEFVVPLAKYTKAMYAQVSLGMRFRMI

>Q8GYJ3

MGKYIRKSKIDGAGAGAGGGGGGGGGGSSIALMDVVSPSSSSSLGVLTRAKSLALQQQQ
QRCLLQKPSSPSSLPPTSASPNPPSKQKMKKKQQQMNDCGSYLQLRSRRLQKKPPIVVIR
STKRRKQQRRNETCGRNPNPRSNLDSIRGDGSRSDSVSESVVFGKDKDLISEINKDPTFG
QNFFDLEEEHTQSFNRTTRESTPCSLIRRPEIMTTPGSSTKLNICVSESNQREDSLSRSH
RRRPTTPEMDEFFSGAEEEQQKQFIEKYNFDPVNEQPLPGRFEWTKVDD
>08S3N1

METDSIDSVIDDDEIHQKHQFSSTKSQGGATVVISPATSVYELLECPVCTNSMYPPIHQC HNGHTLCSTCKSRVHNRCPTCRQELGDIRCLALEKVAESLELPCKYYNLGCLGIFPYYSK LKHESQCNFRPYSCPYAGSECAAVGDITFLVAHLRDDHKVDMHTGCTFNHRYVKSNPREV ENATWMLTVFQCFGQYFCLHFEAFQLGMAPVYMAFLRFMGDEDDARNYTYSLEVGGSGRK QTWEGTPRSVRDSHRKVRDSHDGLIIQRNMALFFSGGDKKELKLRVTGRIWKEQQNPDSG VCITSMCSS

>Q08655

MEEEKHHHHHLFHHKDKAEEGPVDYEKEIKHHKHLEQIGKLGTVAAGAYALHEKHEAKKD PEHAHKHKIEEEIAAAAAVGAGGFAFHEHHEKKDAKKEEKKKLRGDTTISSKLLF >Q680Q4

MDLEANCKEKLSYFRIKELKDVLTQLGLSKQGKKQELVDRILTLLSDEQAARLLSKKNTV
AKEAVAKLVDDTYRKMQVSGASDLASKGQVSSDTSNLKVKGEPEDPFQPEIKVRCVCGNS
LETDSMIQCEDPRCHVWQHVGCVILPDKPMDGNPPLPESFYCEICRLTRADPFWVTVAHP
LSPVRLTATTIPNDGASTMQSVERTFQITRADKDLLAKPEYDVQAWCMLLNDKVLFRMQW
PQYADLQVNGVPVRAINRPGGQLLGVNGRDDGPIITSCIRDGVNRISLSGGDVRIFCFGV
RLVKRRTLQQVLNLIPEEGKGETFEDALARVRRCIGGGGGDDNADSDSDIEVVADFFGVN
LRCPMSGSRIKVAGRFLPCVHMGCFDLDVFVELNQRSRKWQCPICLKNYSVEHVIVDPYF
NRITSKMKHCDEEVTEIEVKPDGSWRVKFKRESERRELGELSQWHAPDGSLCPSAVDIKR
KMEMLPVKQEGYSDGPAPLKLGIRKNRNGIWEVSKPNTNGLSSSNRQEKVGYQEKNIIPM
SSSATGSGRDGDDASVNQDAIGTFDFVANGMELDSISMNVDSGYNFPDRNQSGEGGNNEV
IVLSDSDDENDLVITPGPAYSGCQTDGGLTFPLNPPGIINSYNEDPHSIAGGSSGLGLFN
DDDEFDTPLWSFPSETPEAPGFQLFRSDADVSGGLVGLHHHSPLNCSPEINGGYTMAPET

 ${\tt SMASVPVVPGSTGRSEANDGLVDNPLAFGRDDPSLQIFLPTKPDASAQSGFKNQADMSNG} \\ LRSEDWISLRLGDSASGNHGDPATTNGINSSHQMSTREGSMDTTTETASLLLGMNDSRQD\\ KAKKQRSDNPFSFPRQKRSNNEQDHQTRHRSLNKICIILCAGKN$

>Q9SF32

MVKKAKWLKNVKKAFSPDSKKLKHESVECQDSVISYPVLIATSRSSSPQFEVRVDEVNYE
QKKNLYPPSSDSVTATVAHVLVDSPPSSPESVHQAIVVNRFAGKSKEEAAAILIQSTFRG
HLARRESQVMRGQERLKLLMEGSVVQRQAAITLKCMQTLSRVQSQIRSRRIRMSEENQAR
HKQLLQKHAKELGGLKNGGNWNYSNQSKEQVEAGMLHKYEATMRRERALAYAFTHQQNLK
SFSKTANPMFMDPSNPTWGWSWLERWMAGRPWESSEKEQNTTNNDNSSVKNSTNRNSQGG
ETAKSSNRNKLNSSTKPNTPSASSTATRNPRKKRPIPSSIKSKSSDDEAKSSERNRRPSI
ARPSVSDDETLSSSTARRSSNLIPTTKSARGKPKSQTSSRVAVTTSTTEESSILPEKAPA
KKRLSTSASPAPKPRRSSAPPKVEKGVLKAERTP

>Q8S307

MTSDGATSTSAAAAAAAAAAAAARKPSWRERENNRRRERRRAVAAKIYTGLRAQGDYNLP
KHCDNNEVLKALCVEAGWVVEEDGTTYRKGCKPLPGEIAGTSSRVTPYSSQNQSPLSSAF
QSPIPSYQVSPSSSSFPSPSRGEPNNNMSSTFFPFLRNGGIPSSLPSLRISNSCPVTPPV
SSPTSKNPKPLPNWESIAKQSMAIAKQSMASFNYPFYAVSAPASPTHRHQFHTPATIPEC
DESDSSTVDSGHWISFQKFAQQQPFSASMVPTSPTFNLVKPAPQQMSPNTAAFQEIGQSS
EFKFENSOVKPWEGERIHDVGMEDLELTLGNGKARG

>024606

MMFNEMGMCGNMDFFSSGSLGEVDFCPVPQAEPDSIVEDDYTDDEIDVDELERRMWRDKM RLKRLKEQDKGKEGVDAAKQRQSQEQARRKKMSRAQDGILKYMLKMMEVCKAQGFVYGII PENGKPVTGASDNLREWWKDKVRFDRNGPAAITKYQAENNIPGIHEGNNPIGPTPHTLQE LQDTTLGSLLSALMQHCDPPQRRFPLEKGVPPPWWPNGKEDWWPQLGLPKDQGPAPYKKP HDLKKAWKVGVLTAVIKHMFPDIAKIRKLVRQSKCLQDKMTAKESATWLAIINQEESLAR ELYPESCPPLSLSGGSCSLLMNDCSQYDVEGFEKESHYEVEELKPEKVMNSSNFGMVAKM HDFPVKEEVPAGNSEFMRKRKPNRDLNTIMDRTVFTCENLGCAHSEISRGFLDRNSRDNH QLACPHRDSRLPYGAAPSRFHVNEVKPVVGFPQPRPVNSVAQPIDLTGIVPEDGQKMISE LMSMYDRNVQSNQTSMVMENQSVSLLQPTVHNHQEHLQFPGNMVEGSFFEDLNIPNRANN NNSSNNQTFFQGNNNNNNVFKFDTADHNNFEAAHNNNNNSSGNRFQLVFDSTPFDMASFD YRDDMSMPGVVGTMDGMOOKOODVSIWF

>039255

MSAKKIVLKSSDGESFEVEEAVALESQTIAHMVEDDCVDNGVPLPNVTSKILAKVIEYCK RHVEAAASKAEAVEGAATSDDDLKAWDADFMKIDQATLFELILAANYLNIKNLLDLTCQT VADMIKGKTPEEIRTTFNIKNDFTPEEEEEVRRENOWAFE

>P45951

MNNVLQFGLQSSAIYVAKFLVVPLRSLRVGSSFVGVGVGTRSFNKRLMSNATAFSINNSK RKELKIPGAAIDQNCHQMGSDTDRDEMGTLQDDRKEIEAMTVQELRSTLRKLGVPVKGRK QELISTLRLHMDSNLPDQKETSSSTRSDSVTIKRKISNREEPTEDECTNSEAYDIEHGEK RVKQSTEKNLKAKVSAKAIAKEQKSLMRTGKQQIQSKEETSSTISSELLKTEEIISSPSQ SEPWTVLAHKKPQKDWKAYNPKTMRPPPLPEGTKCVKVMTWNVNGLRGLLKFESFSALQL AQRENFDILCLQETKLQVKDVEEIKKTLIDGYDHSFWSCSVSKLGYSGTAIISRIKPLSV RYGTGLSGHDTEGRIVTAEFDSFYLINTYVPNSGDGLKRLSYRIEEWDRTLSNHIKELEK SKPVVLTGDLNCAHEEIDIFNPAGNKRSAGFTIEEROSFGANLLDKGFVDTFRKOHPGVV

GYTYWGYRHGGRKTNKGWRLDYFLVSQSIAANVHDSYILPDINGSDHCPIGLILKL >024463

MDMISGSTAATSTPHNNQQAVMLSSPIIKEEARDPKQTRAMPQIGGSGERKPRPQLPEAL KCPRCDSNNTKFCYYNNYSMSQPRYFCKACRRYWTHGGTLRNVPIGGGCRKNKHASRFVL GSHTSSSSSATYAPLSPSTNASSSNMSINKHMMMVPNMTMPTPTTMGLFPNVLPTLMPTG GGGGFDFTMDNQHRSLSFTPMSLPSQGPVPMLAAGGSEATPSFLEMLRGGIFHGSSSYNT SLTMSGGNNGMDKPFSLPSYGAMCTNGLSGSTTNDARQLVGPQQDNKAIMKSSNNNNGVS LLNLYWNKHNNNNNNNNNNNNNNKGO

>064MA3

MGVGGSFWDLLKPYARHEGAGYLRGRRVAVDLSFWVVSHSAAIRARSPHARLPHLRTLFF
RTLSLFSKMGAFPVFVVDGQPSPLKSQVRAARFFRGSGMDLAALPSTEAEASADALVQPR
NAKFTRYVEDCVELLEYLGMPVLRAKGEGEALCAQLNNQGHVDACITSDSDAFLFGAKTV
IKVLRSNCKEPFECYNMADIESGLGLKRKQMVAMALLVGSDHDLHGVPGFGPETALRFVQ
LFDEDNVLAKLYEIGKGVYPFIGVSAPNIDDLPSPSTKSLPRARSPHCSHCGHPGNKKNH
IKDGCNFCLVDSLENCVEKPAGFICECPSCDKARDLKVQRRNENWQIKVCKRIAAETNFP
NEEIINLYLNDDNLDNENGVPLLTWNKPDMEILVDFLSFKQNWEPAYIRQRMLPMLSTIY
LREMASSQSKSFLLYDQYKFHSIQRIKIRYGHPYYLVKWKRVTRSMISNDPPSKQTELEG
KNDKVEVLDGDDEVVDEEEEEPTMISETTELLDEPDVPQVLDDDKDCFLLTDEDIELVNA
AFPDEAQRFQEEQRLKEAKSIARKSKLNVAGFETPKGPRPSGVQLSIKEFYRSKKGLSGD
SGKDGSRKSSDVDLSKNLPKSVRRRLLFD

>Q8LGD5

MDPSEYFAGGNPSDQQNQKRQLQICGPRPSPLSVHKDSHKIKKPPKHPAPPPNRDQPPPY IPREPVVIYAVSPKVVHATASEFMNVVQRLTGISSGVFLESGGGGDVSPAARLASTENAS PRGGKEPAARDETVEINTAMEEAAEFGGYAPGILSPSPALLPTASTGIFSPMYHQGGMFS PAIPLGLFSPAGFMSPFRSPGFTSLVASPTFADFFSHIWDQD

>09ZT50

MGLQGQLSDVSSDSIPLMLLSLLAVFINHLRSFLLRLTSKSNPNLPVDDVSIASGLANII VLADQLSLNRLFSYRCGDGGGGGSDCVVCLSKLKEGEEVRKLECRHVFHKKCLEGWLHQF NFTCPLCRSALVSDDCVSKTQRSVGRDLISCFSLH

>096301

MVGLEDDTERERSPVVENGFSNGSRSSSSSAGVLSPSRKVTQGNDTLSYANILRARNKFA
DALALYEAMLEKDSKNVEAHIGKGICLQTQNKGNLAFDCFSEAIRLDPHNACALTHCGIL
HKEEGRLVEAAESYQKALMADASYKPAAECLAIVLTDLGTSLKLAGNTQEGIQKYYEALK
IDPHYAPAYYNLGVVYSEMMQYDNALSCYEKAALERPMYAEAYCNMGVIYKNRGDLEMAI
TCYERCLAVSPNFEIAKNNMAIALTDLGTKVKLEGDVTQGVAYYKKALYYNWHYADAMYN
LGVAYGEMLKFDMAIVFYELAFHFNPHCAEACNNLGVLYKDRDNLDKAVECYQMALSIKP
NFAQSLNNLGVVYTVQGKMDAAASMIEKAILANPTYAEAFNNLGVLYRDAGNITMAIDAY
EECLKIDPDSRNAGQNRLLAMNYINEGLDDKLFEAHRDWGWRFTRLHPQYTSWDNLKDPE
RPITIGYISPDFFTHSVSYFIEAPLTHHDYTKYKVVVYSAVVKADAKTYRFRDKVLKKGG
VWKDIYGIDEKKIASMVREDKIDILVELTGHTANNKLGTMACRPAPVQVTWIGYPNTTGL
PTVDYRITDSLADPPDTKQKQVEELVRLPDCFLCYTPSPEAGPVCPTPALSNGFVTFGSF
NNLAKITPKVLQVWARILCAVPNSRLVVKCKPFCCDSIRQRFLTTLEQLGLESKRVDLLP
LILFNHDHMQAYSLMDISLDTFPYAGTTTTCESLYMGVPCVTMAGSVHAHNVGVSLLTKV
GLGHLVAKNEDEYVQLSVDLASDVTALSKLRMSLRDLMAGSPVCNGPSFAVGLESAYRNM

 $\label{thm:ckgevpslrmeml} \textbf{WKKYCKGEVPSLRRMEMLQKEVHDDPLISKDLGPSRVSVTGEATPSLKANGSAPVPSSLP} \\ \textbf{TQSPQLSKRMDSTS}$

>09FGN8

MFVKRNPIRETTAGKISSPSSPTLNVAVAHIRAGSYYEIDASILPQRSPENLKSIRVVMV
SKITASDVSLRYPSMFSLRSHFDYSRMNRNKPMKKRSGGGLLPVFDESHVMASELAGDLL
YRRIAPHELSMNRNSWGFWVSSSSRRNKFPRREVVSQPAYNTRLCRAASPEGKCSSELKS
GGMIKWGRRLRVQYQSRHIDTRKNKEGEESSRVKDEVYKEEEMEKEEDDDDGNEIGGTKQ
EAKEITNGNRKRKLIESSTERLAQKAKVYDQKKETQIVVYKRKSERKFIDRWSVERYKLA
ERNMLKVMKEKNAVFGNSILRPELRSEARKLIGDTGLLDHLLKHMAGKVAPGGQDRFMRK
HNADGAMEYWLESSDLIHIRKEAGVKDPYWTPPPGWKLGDNPSQDPVCAGEIRDIREELA
SLKRELKKLASKKEEEELVIMTTPNSCVTSQNDNLMTPAKEIYADLLKKKYKIEDQLVII
GETLRKMEEDMGWLKKTVDENYPKKPDSTETPLLLEDSPPIQTLEGEVKVVNKGNQITES
PQNREKGRKHDQQERSPLSLISNTGFRICRPVGMFAWPQLPALAAATDTNASSPSHRQAY
PSPFPVKPLAAKRPLGLTFPFTIIPEEAPKNLFNV

>038819

MGKENAVSRPFTRSLASALRASEVTSTTQNQQRVNTKRPALEDTRATGPNKRKKRAVLGE
ITNVNSNTAILEAKNSKQIKKGRGHGLASTSQLATSVTSEVTDLQSRTDAKVEVASNTAG
NLSVSKGTDNTADNCIEIWNSRLPPRPLGRSASTAEKSAVIGSSTVPDIPKFVDIDSDDK
DPLLCCLYAPEIHYNLRVSELKRRPLPDFMERIQKDVTQSMRGILVDWLVEVSEEYTLAS
DTLYLTVYLIDWFLHGNYVQRQQLQLLGITCMLIASKYEEISAPRIEEFCFITDNTYTRD
QVLEMENQVLKHFSFQIYTPTPKTFLRRFLRAAQASRLSPSLEVEFLASYLTELTLIDYH
FLKFLPSVVAASAVFLAKWTMDQSNHPWNPTLEHYTTYKASDLKASVHALQDLQLNTKGC
PLSAIRMKYROEKYKSVAVLTSPKLLDTLF

>A8MOY1

MMKGLIGYRFSPTGEEVINHYLKNKLLGKYWLVDEAISEINILSHKPSKDLPKLARIQSE
DLEWYFFSPIEYTNPNKMKMKRTTGSGFWKPTGVDREIRDKRGNGVVIGIKKTLVYHEGK
SPHGVRTPWVMHEYHITCLPHHKRKYVVCQVKYKGEAAEISYEPSPSLVSDSHTVIAITG
EPEPELQVEQPGKENLLGMSVDDLIEPMNQQEEPQGPHLAPNDDEFIRGLRHVDRGTVEY
LFANEENMDGLSMNDLRIPMIVQQEDLSEWEGFNADTFFSDNNNNYNLNVHHQLTPYGDG
YLNAFSGYNEGNPPDHELVMQENRNDHMPRKPVTGTIDYSSDSGSDAGSISTTSYQGTSS
PNISVGSSSRHLSSCSSTDSCKDLQTCTDPSIISREIRELTQEVKQEIPRAVDAPMNNES
SLVKTEKKGLFIVEDAMERNRKKPRFIYLMKMIIGNIISVLLPVKRLIPVKKL

>P37218

MATEEPVIVNEVVEEQAAPETVKDEANPPAKSGKAKKETKAKKPAAPRKRSATPTHPPYF
EMIKDAIVTLKERTGSSQHAITKFIEEKQKSLPSNFKKLLLTQLKKFVASEKLVKVKNSY
KLPSGSKPAAAAVPAKKKPAAAKSKPAAKPKAAVKPKAKPAAKAKPAAKAKPAA
KAKPAAKAKPAAKAKPVAKAKPKAAAAAKPKAAVKPKAAPAKTKAAVKPNLKAKTTTAKV
AKTATRTTPSRKAAPKATPAKKEPVKKAPAKNVKSPAKKATPKRGRK

>Q84J70

MDSDSWSDRLASATRRYQLAFPSRSDTFLGFEEIDGEEEFREEFACPFCSDYFDIVSLCC HIDEDHPMEAKNGVCPVCAVRVGVDMVAHITLQHANIFKMHRKRKPRRGGSYSTLSILRR EFPDGNFQSLFGGSSCIVSSSSSSNVAADPLLSSFISPIADGFFTTESCISAETGPVKKT TIQCLPEQNAKKTSLSAEDHKQKLKRSEFVRELLSSTILDDSL

>Q84JU6

MDTREINGFASAARSISLPTQPNYSSKPVQEALKHLASINLRELCNEAKVERCRATRDLA SCGRFVNYVLNPCGHASLCTECCORCDVCPICRSTLPKFGDRLRLRLYYECVEAGLISRT HEEASQDSDEDEHQLAADVHRLYSLFDVAMNNNLISVVCHYITNVCMDETAVSSDPVIAF LLDEVVVKDWVKRTFRSTLAELQEIYNLETKEMQAWLDKLLRCSKQVAGICSVLEVMESA FKGSVSPOLODVOTLRENIGKTKOHLDIMVWCIRHGFLDDVRSRYSNFTSWNALVGERKS NAVKRAWPDAVDOSSDCSVOSASLFIEDALENLEREPEYSOEIGADLEVGRLOKDKRSFL RSKIEGTSGSYPFENLRTAADMLFLHGGSDLVVAKQAIFLYYLFDRHWTTPEKYWKHTID DFAATFGITRHSLLESFVFYLLDDHSEEALQEACRILPEICGPETYPKVAQVLLERDNPE TALMVLRWSGRDGVSELVSIGEAVTALRVRVECGLLSEAFTYORTLCLKVKENNLKNGAV KHASDDLDIWSWTEWMEILVNEFCCLSIRRNLVDRIIELPWNPDEEKYLHRCLLDSATDD PSSAVGSLLVVFYLQRYRYIQAYQVDLRLQKIEEAFVSDNQIGEEVMFRMRSQSHWRKEL VDRAIDILPVIQQQQVRSGQFSEMEDASEGAKKSDLPDAPDMITSSVPFATTNSVFLQSA NNARAREPVANNGSPFOPGHMIGNASHDLSHGRLFTNANRGOKSEVRSVTKNLKFGEMST PFKDLNRARGNSQLQGKRTEESSPEVNVDRYIENNMSSPYLRRITANNPVTVKSSSNHLN GSSOKPESTFFGTRMOPDKDNFVDLDDPMDMSSSLKDNNNNVLATESRNNSGGLRWRSDE TSDDEDELTSFGSMPVKGRRRRRFAAR

>0570C0

MQKRIALSFPEEVLEHVFSFIQLDKDRNSVSLVCKSWYEIERWCRRKVFIGNCYAVSPAT VIRRFPKVRSVELKGKPHFADFNLVPDGWGGYVYPWIEAMSSSYTWLEEIRLKRMVVTDD CLELIAKSFKNFKVLVLSSCEGFSTDGLAAIAATCRNLKELDLRESDVDDVSGHWLSHFP DTYTSLVSLNISCLASEVSFSALERLVTRCPNLKSLKLNRAVPLEKLATLLQRAPQLEEL GTGGYTAEVRPDVYSGLSVALSGCKELRCLSGFWDAVPAYLPAVYSVCSRLTTLNLSYAT VQSYDLVKLLCQCPKLQRLWVLDYIEDAGLEVLASTCKDLRELRVFPSEPFVMEPNVALT EQGLVSVSMGCPKLESVLYFCRQMTNAALITIARNRPNMTRFRLCIIEPKAPDYLTLEPL DIGFGAIVEHCKDLRRLSLSGLLTDKVFEYIGTYAKKMEMLSVAFAGDSDLGMHHVLSGC DSLRKLEIRDCPFGDKALLANASKLETMRSLWMSSCSVSFGACKLLGQKMPKLNVEVIDE RGAPDSRPESCPVERVFIYRTVAGPRFDMPGFVWNMDQDSTMRFSRQIITTNGL

>06NPP4

MADRGSFGFAPRLDIKQLLSEAQHRWLRPAEICEILRNHQKFHIASEPPNRPPSGSLFLF DRKVLRYFRKDGHNWRKKKDGKTVKEAHEKLKVGSIDVLHCYYAHGEDNENFORRCYWML EODLMHIVFVHYLEVKGNRMSTSGTKENHSNSLSGTGSVNVDSTATRSSILSPLCEDADS GDSRQASSSLQQNPEPQTVVPQIMHHQNASTINSYNTTSVLGNRDGWTSAHGNRVKGSNS QRSGDVPAWDASFENSLARYONLPYNAPLTOTOPSTFGLIPMEGKTEKGSLLTSEHLRNP LQSQVNWQTPVQESVPLQKWPMDSHSGMTDATDLALFGQGAHENFGTFSSLLGSQDQQSS SFQAPFTNNEAAYIPKLGPEDLIYEASANQTLPLRKALLKKEDSLKKVDSFSRWVSKELG EMEDLQMQSSSGGIAWTSVECENAAAGSSLSPSLSEDQRFTMIDFWPKWTQTDSEVEVMV IGTFLLSPQEVTSYSWSCMFGEVEVPADILVDGVLCCHAPPHEVGRVPFYITCSDRFSCS EVREFDFLPGSTRKLNATDIYGANTIETSLHLRFENLLALRCSVQEHHIFENVGEKRRKI SKIMLLKDEKEPPLPGTIEKDLTELEAKERLIREEFEDKLYLWLIHKVTEEGKGPNILDE DGOGVLHLAAALGYDWAIKPILAAGVSINFRDANGWSALHWAAFSGREDTVAVLVSLGAD AGALADPSPEHPLGKTAADLAYGNGHRGISGFLAESSLTSYLEKLTVDAKENSSADSSGA KAVLTVAERTATPMSYGDVPETLSMKDSLTAVLNATOAADRLHOVFRMOSFORKOLSELG GDNKFDISDELAVSFAAAKTKKSGHSSGAVHAAAVQIQKKYRGWKKRKEFLLIRQRIVKI OAHVRGHOVRKOYRAIIWSVGLLEKIILRWRRKGSGLRGFKRDTISKPTEPVCPAPOEDD

YDFLKEGRKQTEERLQKALTRVKSMAQYPEARAQYRRLLTVVEGFRENEASSSSALKNNT EEAANYNEEDDLIDIDSLLDDDTFMSLAFE

>09C5X4

MACFSNETQIEIDVHDLVEAPIRYDSIESIYSIPSSALCCVNAVGSHSLMSKKVKAQKLP MIEOFEIEGSGVSASDDCCRSDDYKLRIORPEIVRVYYRRRKRPLRECLLDOAVAVKTES VELDEIDCFEEKKRRKIGNCELVKSGMESIGLRRCKENNAFSGNKONGSSRRKGSSSKNO DKATLASRSAKKWVRLSYDGVDPTSFIGLOCKVFWPLDALWYEGSIVGYSAERKRYTVKY RDGCDEDIVFDREMIKFLVSREEMELLHLKFCTSNVTVDGRDYDEMVVLAATLDECODFE PGDIVWAKLAGHAMWPAVIVDESIIGERKGLNNKVSGGGSLLVOFFGTHDFARIKVKOAI SFIKGLLSPSHLKCKQPRFEEGMQEAKMYLKAHRLPERMSQLQKGADSVDSDMANSTEEG NSGGDLLNDGEVWLRPTEHVDFRHIIGDLLIINLGKVVTDSQFFKDENHIWPEGYTAMRK FTSLTDHSASALYKMEVLRDAETKTHPLFIVTADSGEOFKGPTPSACWNKIYNRIKKVON SDSPNILGEELNGSGTDMFGLSNPEVIKLVODLSKSRPSSHVSMCKNSLGRHONOPTGYR PVRVDWKDLDKCNVCHMDEEYENNLFLOCDKCRMMVHAKCYGELEPCDGALWLCNLCRPG APDMPPRCCLCPVVGGAMKPTTDGRWAHLACAIWIPETCLSDVKKMEPIDGVNKVSKDRW KLMCTICGVSYGACIOCSNNSCRVAYHPLCARAAGLCVELENDMSVEGEEADQCIRMLSF CKRHROTSTACLGSEDRIKSATHKTSEYLPPPNPSGCARTEPYNCFGRRGRKEPEALAAA SSKRLFVENOPYVIGGYSRLEFSTYKSIHGSKVSOMNTPSNILSMAEKYRYMRETYRKRL AFGKSGIHGFGIFAKLPHRAGDMMIEYTGELVRPSIADKREOLIYNSMVGAGTYMFRIDD ERVIDATRTGSIAHLINHSCVPNCYSRVITVNGDEHIIIFAKRHIPKWEELTYDYRFFSI GERLSCSCGFPGCRGVVNDTEAEEQHAKICVPRCDLIDWTAE

>Q84Y18

MPATAGRVRMPANNRVHSSAALQTHGIWQSAIGYDPYAPTSKEEPKTTQQKTEDPENSYA SFQGLLALARITGSNNDEARGSCKKCGRVGHLTFQCRNFLSTKEDKEKDPGAIEAAVLSG LEKIRRGVGKGEVEEVSSEEEEESESSDSDVDSEMERIIAERFGKKKGGSSVKKTSSVRK KKKRVSDESDSDSDSGDRKRRRRSMKKRSSHKRRSLSESEDEEEGRSKRRKERRGRKRDE DDSDESEDEDDRRVKRKSRKEKRRRSRRNHSDDSDSESSEDDRRQKRRNKVAASSDSEA NVSGDDVSRVGRGSSKRSEKKSRKRHHRKERE

>Q84VX3

MVKFAIINTLTVNETWAKLKSFGVMESSIEGSSESTTVTTSPSRRVRELLALCFSSVEEA
GGFQDFESFVTELVSCLDSLYENVALDANNELENDVIEEVLDEILKVLSSPQMDQDVIDA
LSFHLPKVTSKFADISSRCLQLVEEIVDRFVEACNPRDMLSILCEALDAARCYHSASTCS
TPLLHGLSKVFILIQRRHYEQLKVAVPIVLNVLKDISLETDVQVEDLFDKALGIASSIRD
VSSKLNNEEEAKVRCLLCLYVIQITAIISVSIRDKAASCIPLVIQLEPFLTSCGLTHLGL
ITGNDTEKLMSTVAGDDDEFITSFPDISLGASLLFICAKISHEVAEAANAVLGSVVDELQ
NNPVKRWQAYGMLKYILSSGDLLWEFKRHAIEFLLDITKGVTSSQCNDEQIDCSDYTPGI
YATLQAVTLLIMYAPDADLRKKTFEALKRVLSDIPAPHRFDVLRALVTNSRSPSMTAILL
GLVKDSMSKSSLQDTDCAAVDTHVIELVELVLRPPQGGPPLLPDQSDAILAALNLYRFAL
LFESRECEAGKERSKVGSDILSKKNLEKAYKEWLLPLRTLVSCSIAENLKEDHGQESSLD
DVGLLNPIELVLYRCIELVEEKLKSH

>Q38897

 $\label{thm:continuity} MARDQFYGHNNHHHQEQQHQMINQIQGFDETNQNPTDHHHYNHQIFGSNSNMGMMIDFSK\\ QQQIRMTSGSDHHHHHHQTSGGTDQNQLLEDSSSAMRLCNVNNDFPSEVNDERPPQRPSQ\\ GLSLSLSSSNPTSISLQSFELRPQQQQQQGYSGNKSTQHQNLQHTQMMMMMMNSHHQNNN\\ \\$

NNNHQHHNHHQFQIGSSKYLSPAQELLSEFCSLGVKESDEEVMMMKHKKKQKGKQQEEWD TSHHSNNDQHDQSATTSSKKHVPPLHSLEFMELQKRKAKLLSMLEELKRRYGHYREQMRV AAAAFEAAVGLGGAEIYTALASRAMSRHFRCLKDGLVGQIQATSQALGEREEDNRAVSIA ARGETPRLRLLDQALRQQKSYRQMTLVDAHPWRPQRGLPERAVTTLRAWLFEHFLHPYPS DVDKHILARQTGLSRSQVSNWFINARVRLWKPMIEEMYCEETRSEQMEITNPMMIDTKPD PDQLIRVEPESLSSIVTNPTSKSGHNSTHGTMSLGSTFDFSLYGNQAVTYAGEGGPRGDV SLTLGLQRNDGNGGVSLALSPVTAQGGQLFYGRDHIEEGPVQYSASMLDDDQVQNLPYRN LMGAOLLHDIV

>09C9E3

MSTGQAPEKSNFSQRCSLLSRYLKEKGSFGNINMGLARKSDLELAGKFDLKGQQNVIKKV ETSETRPFKLIQKFSIGEASTSTEDKAIYIDLSEPAKVAPESGNSQLTIFFGGKVMVFNE FPEDKAKEIMEVAKEANHVAVDSKNSQSHMNLDKSNVVIPDLNEPTSSGNNEDQETGQQH QVVERIARRASLHRFFAKRKDRAVARAPYQVNQHGSHLPPKPEMVAPSIKSGQSSQHIAT PPKPKAHNHMPMEVDKKEGOSSKNLELKL

>09LV58

MPSRYPGAVTQDWEPVVLHKSKQKSQDLRDPKAVNAALRNGVAVQTVKKFDAGSNKKGKS TAVPVINTKKLEEETEPAAMDRVKAEVRLMIQKARLEKKMSQADLAKQINERTQVVQEYE NGKAVPNQAVLAKMEKVLGVKLRGKIGK

>Q9SKK0

MSQIFSFAGENDFYRRGAIYPNPKDASLLLSLGSFADVYFPPSKRSRVVAPTIFSAFEKK
PVSIDVLPDECLFEIFRRLSGPQERSACAFVSKQWLTLVSSIRQKEIDVPSKITEDGDDC
EGCLSRSLDGKKATDVRLAAIAVGTAGRGGLGKLSIRGSNSAKVSDLGLRSIGRSCPSLG
SLSLWNVSTITDNGLLEIAEGCAQLEKLELNRCSTITDKGLVAIAKSCPNLTELTLEACS
RIGDEGLLAIARSCSKLKSVSIKNCPLVRDQGIASLLSNTTCSLAKLKLQMLNVTDVSLA
VVGHYGLSITDLVLAGLSHVSEKGFWVMGNGVGLQKLNSLTITACQGVTDMGLESVGKGC
PNMKKAIISKSPLLSDNGLVSFAKASLSLESLQLEECHRVTQFGFFGSLLNCGEKLKAFS
LVNCLSIRDLTTGLPASSHCSALRSLSIRNCPGFGDANLAAIGKLCPQLEDIDLCGLKGI
TESGFLHLIQSSLVKINFSGCSNLTDRVISAITARNGWTLEVLNIDGCSNITDASLVSIA
ANCQILSDLDISKCAISDSGIQALASSDKLKLQILSVAGCSMVTDKSLPAIVGLGSTLLG
LNLOOCRSISNSTVDFLVERLYKCDILS

>038899

MEDIENIEEDEYGFSRNYFLAKELGGASKRSAHKLSDIHIVDEQELRETASTIEMKHSKE ISELMSDYKTMYSKWVFELRCGFGLLMYGFGSKKALVEDFASASLTDYSVVVINGYLPSV NLKQVLLALAELLSELLKCKRKSSGSLSKGQETFPSRSMDDILSFLHGPQSGDKDCFICV VVHNIDGPALRDPESQQTLARLSSCSHIRLVASIDHVNAPLLWDKKMVHKQFNWLWHHVP TFAPYNVEGVFFPLVLAQGSTAQTAKTAAIVLQSLTPNGQNVFKILAEYQLSHPDEDGMP TDDLYSASRERFFVSSQVTLNSHLTEFKDHELVKTKRNSDGQECLNIPLTSDAIRQLLLD LNQ

>Q8RY95

MDEVGAQVAAPMFIHQSLGRKRDLYYPMSNRLVQSQPQRRDEWNSKMWDWDSRRFEAKPV DVEVQEFDLTLRNRSGEERGLDLNLGSGLTAVEETTTTTQNVRPNKKVRSGSPGGNYPMC QVDNCTEDLSHAKDYHRRHKVCEVHSKATKALVGKQMQRFCQQCSRFHLLSEFDEGKRSC RRRLAGHNRRRKTTQPEEVASGVVVPGNHDTTNNTANANMDLMALLTALACAQGKNAVK PPVGSPAVPDREQLLQILNKINALPLPMDLVSKLNNIGSLARKNMDHPTVNPQNDMNGAS

PSTMDLLAVLSTTLGSSSPDALAILSQGGFGNKDSEKTKLSSYENGVTTNLEKRTFGFSS
VGGERSSSSNQSPSQDSDSRGQDTRSSLSLQLFTSSPEDESRPTVASSRKYYSSASSNPV
EDRSPSSSPVMQELFPLQASPETMRSKNHKNSSPRTGCLPLELFGASNRGAADPNFKGFG
QQSGYASSGSDYSPPSLNSDAQDRTGKIVFKLLDKDPSQLPGTLRSEIYNWLSNIPSEME
SYIRPGCVVLSVYVAMSPAAWEQLEQKLLQRLGVLLQNSPSDFWRNARFIVNTGRQLASH
KNGKVRCSKSWRTWNSPELISVSPVAVVAGEETSLVVRGRSLTNDGISIRCTHMGSYMAM
EVTRAVCRQTIFDELNVNSFKVQNVHPGFLGRCFIEVENGFRGDSFPLIIANASICKELN
RLGEEFHPKSQDMTEEQAQSSNRGPTSREEVLCFLNELGWLFQKNQTSELREQSDFSLAR
FKFLLVCSVERDYCALIRTLLDMLVERNLVNDELNREALDMLAEIQLLNRAVKRKSTKMV
ELLIHYLVNPLTLSSSRKFVFLPNITGPGGITPLHLAACTSGSDDMIDLLTNDPQEIGLS
SWNTLRDATGQTPYSYAAIRNNHNYNSLVARKLADKRNKQVSLNIEHEVVDQTGLSKRLS
LEMNKSSSSCASCATVALKYQRRVSGSQRLFPTPIIHSMLAVATVCVCVCVFMHAFPIVR
OGSHFSWGGLDYGSI

>P25209

MAEAPASPGGGGGSHESGSPRGGGGGGSVREQDRFLPIANISRIMKKAIPANGKIAKDAK ETVQECVSEFISFITSEASDKCQREKRKTINGDDLLWAMATLGFEDYIEPLKVYLQKYRE MEGDSKLTAKSSDGSIKKDALGHVGASSSAAEGMGQQGAYNQGMGYMQPQYHNGDISNV >094AH6

MERKTIDLEQGWDYMQTGITKLKRILEGLNEPAFDSEQYMMLYTTIYNMCTQKPPHDYSQ
QLYDKYREAFEEYINSTVLPALREKHDEFMLRELFKRWSNHKVMVRWLSRFFYYLDRYFI
ARRSLPPLNEVGLTCFRDLVYNELHSKVKQAVIALVDKEREGEQIDRALLKNVLDIYVEI
GMGQMERYEEDFESFMLQDTSSYYSRKASSWIQEDSCPDYMLKSEECLKKERERVAHYLH
SSSEPKLVEKVQHELLVVFASQLLEKEHSGCRALLRDDKVDDLSRMYRLYHKILRGLEPV
ANIFKQHVTAEGNALVQQAEDTATNQVANTASVQEQVLIRKVIELHDKYMVYVTECFQNH
TLFHKALKEAFEIFCNKTVAGSSSAELLATFCDNILKKGGSEKLSDEAIEDTLEKVVKLL
AYISDKDLFAEFYRKKLARRLLFDRSANDDHERSILTKLKQQCGGQFTSKMEGMVTDLTL
ARENQNSFEDYLGSNPAANPGIDLTVTVLTTGFWPSYKSFDINLPSEMIKCVEVFKGFYE
TKTKHRKLTWIYSLGTCHINGKFDQKAIELIVSTYQAAVLLLFNTTDKLSYTEILAQLNL
SHEDLVRLLHSLSCAKYKILLKEPNTKTVSQNDAFEFNSKFTDRMRRIKIPLPPVDERKK
VVEDVDKDRRYAIDAAIVRIMKSRKVLGHQQLVSECVEQLSRMFKPDIKAIKKRMEDLIT
RDYLERDKENPNMFRYLA

>Q6EUP4

MSQPAELSREENVYMAKLAEQAERYEEMVEFMEKVAKTVDSEELTVEERNLLSVAYKNVI GARRASWRIISSIEQKEESRGNEDRCTLIKEYRGKIETELSKICDGILKLLDSHLVPSST APESKVFYLKMKGDYYRYLAEFKTGAERKDAAENTMVAYKAAQDIALAELPPTHPIRLGL ALNFSVFYYEILNSPDRACNLAKQAFDEAISELDTLSEESYKDSTLIMQLLRDNLTLWTS DISEDAAEEIKEAPKGESGDGO

>P14713

MVSGVGGSGGRGGGEEEPSSSHTPNNRRGGEQAQSSGTKSLRPRSNTESMSKAIQQ YTVDARLHAVFEQSGESGKSFDYSQSLKTTTYGSSVPEQQITAYLSRIQRGGYIQPFGCM IAVDESSFRIIGYSENAREMLGIMPQSVPTLEKPEILAMGTDVRSLFTSSSSILLERAFV AREITLLNPVWIHSKNTGKPFYAILHRIDVGVVIDLEPARTEDPALSIAGAVQSQKLAVR AISQLQALPGGDIKLLCDTVVESVRDLTGYDRVMVYKFHEDEHGEVVAESKRDDLEPYIG LHYPATDIPQASRFLFKQNRVRMIVDCNATPVLVVQDDRLTQSMCLVGSTLRAPHGCHSQ YMANMGSIASLAMAVIINGNEDDGSNVASGRSSMRLWGLVVCHHTSSRCIPFPLRYACEF
LMQAFGLQLNMELQLALQMSEKRVLRTQTLLCDMLLRDSPAGIVTQSPSIMDLVKCDGAA
FLYHGKYYPLGVAPSEVQIKDVVEWLLANHADSTGLSTDSLGDAGYPGAAALGDAVCGMA
VAYITKRDFLFWFRSHTAKEIKWGGAKHHPEDKDDGQRMHPRSSFQAFLEVVKSRSQPWE
TAEMDAIHSLQLILRDSFKESEAAMNSKVVDGVVQPCRDMAGEQGIDELGAVAREMVRLI
ETATVPIFAVDAGGCINGWNAKIAELTGLSVEEAMGKSLVSDLIYKENEATVNKLLSRAL
RGDEEKNVEVKLKTFSPELQGKAVFVVVNACSSKDYLNNIVGVCFVGQDVTSQKIVMDKF
INIQGDYKAIVHSPNPLIPPIFAADENTCCLEWNMAMEKLTGWSRSEVIGKMIVGEVFGS
CCMLKGPDALTKFMIVLHNAIGGQDTDKFPFPFFDRNGKFVQALLTANKRVSLEGKVIGA
FCFLQIPSPELQQALAVQRRQDTECFTKAKELAYICQVIKNPLSGMRFANSLLEATDLNE
DQKQLLETSVSCEKQISRIVGDMDLESIEDGSFVLKREEFFLGSVINAIVSQAMFLLRDR
GLQLIRDIPEEIKSIEVFGDQIRIQQLLAEFLLSIIRYAPSQEWVEIHLSQLSKQMADGF
AAIRTEFRMACPGEGLPPELVRDMFHSSRWTSPEGLGLSVCRKILKLMNGEVQYIRESER
SYFLIILELPVPRKRPLSTASGSGDMMLMMPY

>09C895

MENQESDEPMOKKPHLLDSVSPNSMARNSSPSHPIAKSVSFFDCDFSLLCLRLVDYEIDV DATVLOLONOKLVOOLDLOKKOLYDVESKIOELOLNOTSYDDELISVNOLWNOLVDDLIL LGVRAGANQEALNYLDIVDKKRVPPCAADETFLCRLLQVDSLDTSKSDEVVRKVEEALAL RHSSTMELMGLFENTIDTOKTKAESISOSLHAVKSTEDATIOLSSINDLMKEESKNLREM IDALHVRHKEHSEQIQAYISSHSTDQSELKHLKGQLEEIKAELEENRRKLITLKMQKDAA CEGHVTSPAIANGSLSPEKPVDKTKLRELKDSIDEIKIMAEGRLSELQASQEYNLSLSRQ CODIENELKDDOYIYSSRLYSLINDRIHHWNAELDRYKILTEAIQAERSFVMRRDKELNL RAESLEAANHKTTTVGSRIEVLEKKLOSCIIEKNGLELETEEAIODSERODIKSEFIAMA STLSKEMEMMEAQLKRWKDTAQDALYLREQAQSLRVSLSNKADEQKGLEDKCAKQMAEIK SLKALIEKLLKEKLQLQNLASICTRECNDDRGLAEIKDSQRKAQAQAEELKNVLDEHFLE LRVKAAHETESACOERLATAKAEIAELRTOLDLSEREVLELKEGIKVKEOEAEASIAEME TIGQAYEDMQTQNQHLLQQVAERDDYNIKLVSESVKTKHAYNTHLSEKQVMEKQLHQVNA SVENFKARIAHNEEOMKGCFSEAYKLIOEDRHLVISLETTKWEVADADKEFRWLKSAVSS SEKEYEQISRRTDDIKLELDDEREKKKLEEELMELNKELEELGSESVEAAIVRLQEEVKN CKNILKCGVCFDRPKEVVIVKCYHLFCQQCIQRSLEIRHRKCPGCGTAFGQNDVRLVKM >09SXZ2

 ${\tt MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLDLRPSQVQNKPRVEIGGED} \\ {\tt LRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV} \\ {\tt VFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLPVAAVFYNCQRESGCGGRRL} \\ {\tt MSINIRDPLIVSRVVGDVLDPFNRSITLKVTYGQREVTNGLPSQVQNKPRVEIGGED} \\ {\tt LRNFYTLVMVDPDVPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV} \\ {\tt VFILFRQLGRQTVYAPGWRQNFNTREFAEIYNLGLPVAAVFYNCQRESGCGGRRL} \\ {\tt MSINIRDPLIVSRVVGDVPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV} \\ {\tt MSINIRDPLIVSRVVGDVPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV} \\ {\tt MSINIRDPLIVSRVVGDVPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV} \\ {\tt MSINIRDPLIVSRVVGDPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV} \\ {\tt MSINIRDPLIVSRVVGDPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV } \\ {\tt MSINIRDPLIVSRVVGDPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV } \\ {\tt MSINIRDPLIVSRVVGDPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV } \\ {\tt MSINIRDPLIVSRVVGDPSPSNPHLREYLHWLVTDIPATTGTTFGNEIVCYENPSPTAGIHRV } \\ {\tt MSINIRDPLIVSRVVGDPSPTAGIHRV } \\ {\tt$

>0946J8

MKGASGAVKKKPQVLNEAGEAETAVETVGESRKISGDGGFGSDDGGGGGGGGGGGSGESILRE
IGDDRPTEDGDEEEEEDEDEDDGGDEEDEEGEGEGGQEERPKLDEGFYEIEAIRRKRVRK
GKVQYLIKWRGWPETANTWEPLENLQSIADVIDAFEGSLKPGKPGRKRKRKYAGPHSQMK
KKQRLTSTSHDATEKSDSSTSLNNSSLPDIPDPLDLSGSSLLNRDVEAKNAYVSNQVEAN
SGSVGMARQVRLIDNEKEYDPTLNELRGPVNNSNGAGCSQGGGIGSEGDNVRPNGLLKVY
PKELDKNSRFIGAKRRKSGSVKRFKQDGSTSNNHTAPTDQNLTPDLTTLDSFGRIARMGN
EYPGVMENCNLSQKTKIEELDITKILKPMSFTASVSDNVQEVLVTFLALRSDGKEALVDN
RFLKAHNPHLLIEFYEQHLKYNRTP

>Q8LGE3

MSNIVVLDNGGGLIKAGQGGERDPTTVIPNCLYKPLSSKKFIHPSPLTTLSDEIDLTSAA VRRPIDRGYLINSDLQREIWSHLFTSLLHIAPSSSSLLLTEAPLSIPSVQRTTDELVFED FGFSSLYIAHPQSLVHLYEASRQPDSILSKTQCSLVVDCGFSFTHAVPVLHNFTLNHAIK RIDLGGKAFTNYLKELVSYRSINVMDETFLVDDAKEKLCFVSLDLLRDLRLARNGNTLIK STYVLPDGVTHTKGYVKDPQAAKRFLSLSEKESVVVMDKVGERKKADMNKNEIDLTNERF LVPETLFQPADLGMNQAGLAECIVRAINSCHSYLQPVLYQSIILTGGSTLFPQLKERLEG ELRPLVPDHFDVKITTQEDPILGVWRGGSLLASSPDFESMCVTKAEYEELGSARCRRFF

>09F020

MFYSHCLVSRKGPLGAIWVAAYFFKKLKKSQVKATHIPSSVDQILQKELDALTYRVLAYL
LLGVVRIYSKKVDFLFDDCNKALIGVKEFVAKERNREKTGVSLPASIECFSIALPERFEL
DAFDLGVLEDFHGGNVKPHEDITLKDGSQETERMDMYSMERFDMEEDLLFTFHETFSTNH
NENKHESFAHDMELDAENVRDTTEEASVRVVEAEPLDSNEPSRDHQNASRHREDPESDDI
LLEPQMSEDIRIAQEEDTVRETICTIVQRLVDSHESSGDNLHRDGHTENLESEKTSKKTS
CEEMQHDRSLPSECGIPEAIHGIEDQPSGATRINGEKEIPEMSTLEKPEPVSVTGSRDLQ
EGVEKCRDHNEAEMADFELFHGSHKEQSETSEVNLHGSEKGFLSDMTVSKDPSSEFNATD
TPVTVTPKTPSRLKISEGGTSPQFSIIPTPAAKESSRVSRKRKCLIDDEVIIPNKVMKEM
IEDSSKLLAKRRNVPHTDCPERRTKRFANPFRSFLEPLIQYGSSDLQSLFCQPIKLKNWA
TTGTPKDTKIARHKEKSSLDTVRSPGVILSSDQTENTQEIMETPQAAALAGLKVTAGNSN
VVSVEMGASSTTSGTAHQTENAAETPVKPSVIAPETPVRTSEQTVIAPETPVVSEQVEIA
PETPVRESMSKRFFKDPGTCYKKSRPASPFTSFEEHPSVYYVENRDLDTILMNDEQVNAD
ERQDLQQETWSSRTRNVAKFLEKTFLEQREREEEEKVSLLQLCRGRTQKESARLFYETLV
LKTKGYVEVKONHPYSDVFLMRVSRPOKAC

>08GZA8

MANNEGEMQCGSMLFKQEELQEMSGVNVGGDYVEVMCGCTSHRYGDAVARLRVFPTGDLE
ITCECTPGCDEDKLTPAAFEKHSGRETARKWKNNVWVIIGGEKVPLSKTVLLKYYNESSK
KCSRSNRSQGAKVCHRDEFVGCNDCGKERRFRLRSRDECRLHHNAMGDPNWKCSDFPYDK
ITCEEEEERGSRKVYRGCTRSPSCKGCTSCVCFGCELCRFSECTCQTCVDFTSNVKA
>Q8RVQ9

MARTKHRVTRSQPRNQTDAAGASSSQAAGPTTTPTRRGGEGGDNTQQTNPTTSPATGTRR GAKRSRQAMPRGSQKKSYRYRPGTVALKEIRHFQKQTNLLIPAASFIREVRSITHMLAPP QINRWTAEALVALQEAAEDYLVGLFSDSMLCAIHARRVTLMRKDFELARRLGGKGRPW >09SOI2

MASSSSSERWIDGLQFSSLLWPPPRDPQQHKDQVVAYVEYFGQFTSEQFPDDIAELVRHQ
YPSTEKRLLDDVLAMFVLHHPEHGHAVILPIISCLIDGSLVYSKEAHPFASFISLVCPSS
ENDYSEQWALACGEILRILTHYNRPIYKTEQQNGDTERNCLSKATTSGSPTSEPKAGSPT
QHERKPLRPLSPWISDILLAAPLGIRSDYFRWCSGVMGKYAAGELKPPTIASRGSGKHPQ
LMPSTPRWAVANGAGVILSVCDDEVARYETATLTAVAVPALLLPPPTTSLDEHLVAGLPA
LEPYARLFHRYYAIATPSATQRLLLGLLEAPPSWAPDALDAAVQLVELLRAAEDYASGVR
LPRNWMHLHFLRAIGIAMSMRAGVAADAAAALLFRILSQPALLFPPLSQVEGVEIQHAPI
GGYSSNYRKQIEVPAAEATIEATAQGIASMLCAHGPEVEWRICTIWEAAYGLIPLNSSAV
DLPEIIVATPLQPPILSWNLYIPLLKVLEYLPRGSPSEACLMKIFVATVETILSRTFPPE
SSRELTRKARSSFTTRSATKNLAMSELRAMVHALFLESCAGVELASRLLFVVLTVCVSHE
AQSSGSKRPRSEYASTTENIEANQPVSNNOTANRKSRNVKGQGPVAAFDSYVLAAVCALA

CEVQLYPMISGGGNFSNSAVAGTITKPVKINGSSKEYGAGIDSAISHTRRILAILEALFS
LKPSSVGTPWSYSSSEIVAAAMVAAHISELFRRSKALTHALSGLMRCKWDKEIHKRASSL
YNLIDVHSKVVASIVDKAEPLEAYLKNTPVQKDSVTCLNWKQENTCASTTCFDTAVTSAS
RTEMNPRGNHKYARHSDEGSGRPSEKGIKDFLLDASDLANFLTADRLAGFYCGTQKLLRS
VLAEKPELSFSVVSLLWHKLIAAPEIQPTAESTSAQQGWRQVVDALCNVVSATPAKAAAA
VVLQAERELQPWIAKDDEEGQKMWKINQRIVKVLVELMRNHDRPESLVILASASDLLLRA
TDGMLVDGEACTLPQLELLEATARAIQPVLAWGPSGLAVVDGLSNLLKCRLPATIRCLSH
PSAHVRALSTSVLRDIMNQSSIPIKVTPKLPTTEKNGMNSPSYRFFNAASIDWKADIQNC
LNWEAHSLLSTTMPTOFLDTAARELGCTISLSO

>075RY2

MKLKMNKACDIASISVLPPRRTGGSSGASASGSVAVAVASQPRSQPLSQSQSFSQGASA
SLLHSQSQFSQVSLDDNLLTLLPSPTRDQRFGLHDDSSKRMSSLPASSASCAREESQLQL
AKLPSNPVHRWNPSIADTRSGQVTNEDVERKFQHLASSVHKMGMVVDSVQSDVMQLNRAM
KEASLDSGSIRQKIAVLESSLQQILKGQDDLKALFGSSTKHNPDQTSVLNSLGSKLNEIS
STLATLQTQMQARQLQGDQTTVLNSNASKSNEISSTLATLQTQMQADIRQLRCDVFRVFT
KEMEGVVRAIRSVNSRPAAMQMMADQSYQVPVSNGWTQINQTPVAAGRSPMNRAPVAAGR
SRMNQLPETKVLSAHLVYPAKVTDLKPKVEQGKVKAAPQKPFASSYYRVAPKQEEVAIRK
VNIQVPAKKAPVSIIIESDDDSEGRASCVILKTETGSKEWKVTKQGTEEGLEILRRARKR
RRREMOSIVLAS

>08L4H0

MFEKNGRTLLAKRKTQGTIKTRASKKIRKMEGTLERHSLLQFGQLSKISFENRPSSNVAS SAFQGLLDSDSSELRNQLGSADSDANCGEKDFILSQDFFCTPDYITPDNQNLMSGLDISK DHSPCPRSPVKLNTVKSKRCRQESFTGNHSNSTWSSKHRVDEQENDDIDTDEVMGDKLQA NQTERTGYVSQAAVALRCRAMPPPCLKNPYVLNQSETATDPFGHQRSKCASFLPVSTSGD GLSRYLTDFHEIRQIGAGHFSRVFKVLKRMDGCLYAVKHSTRKLYLDSERRKAMMEVQAL AALGFHENIVGYYSSWFENEQLYIQLELCDHSLSALPKKSSLKVSEREILVIMHQIAKAL HFVHEKGIAHLDVKPDNIYIKNGVCKLGDFGCATRLDKSLPVEEGDARYMPQEILNEDYE HLDKVDIFSLGVTVYELIKGSPLTESRNQSLNIKEGKLPLLPGHSLQLQQLLKTMMDRDP KRRPSARELLDHPMFDRIRG

>Q9S7B2

MKERQRWRPEEDAVLRAYVRQYGPREWHLVSQRMNVALDRDAKSCLERWKNYLRPGIKKG SLTEEEQRLVIRLQAKHGNKWKKIAAEVPGRTAKRLGKWWEVFKEKQQRELRDSRRPPPE PSPDERGRYEWLLENFAEKLVGERPQQAAAAPSPLLMAAPVLPPWLSSNAGPAAAAAAAV AHPPPRPPSPSVTLSLASAAVAPGPPAPAPWMPDRAAADAAPYGFPSPSQHGGAAPPGMA VVDGQALAELAECCRELEEGRRAWAAHRREAAWRLKRVEQQLEMEREMRRREVWEEFEAK MRTMRLEQAAAAERVERDHREKVAELRRDAQVKEEKMAEQWAAKHARVAKFVEQMGGCSR SWSSATDMNC

>Q9FEF8

MRPPVTGGRGGGFRGGRDGGGRGFGGGRSFGGGRSGDRGRSGPRGRGRAPRGRGGPPR
GGMKGGSKVIVEPHRHAGVFIAKGKEDALVTKNLVPGEAVYNEKRISVQNEDGTKVEYRV
WNPFRSKLAAAILGGVDNIWIKPGAKVLYLGAASGTTVSHVSDLVGPEGCVYAVEFSHRS
GRDLVNMAKKRTNVIPIIEDARHPAKYRMLVGMVDVIFSDVAQPDQARILALNASFFLKT
GGHFVISIKANCIDSTVAAEAVFQSEVKKLQQEQFKPAEQVTLEPFERDHACVVGGYRMP
KKQKTPAS

>P42774

MGTSEDKMPFKTTKPTSSAQEVPPTPYPDWQNSMQAYYGGGGTPNPFFPSPVGSPSPHPY MWGAQHHMMPPYGTPVPYPAMYPPGAVYAHPSMPMPPNSGPTNKEPAKDQASGKKSKGNS KKKAEGGDKALSGSGNDGASHSDESVTAGSSDENDENANQQEQGSIRKPSFGQMLADASS QSTTGEIQGSVPMKPVAPGTNLNIGMDLWSSQAGVPVKDERELKRQKRKQSNRESARRSR LRKQAECEQLQQRVESLSNENQSLRDELQRLSSECDKLKSENNSIQDELQRVLGAEAVAN LEQNAAGSKDGEGTN

>P49311

>Q9XF62

MSAQGQALQNHNNELVKCIEDLREKREEIIKQLREDDAEKAKITQELQILTKRLAQVNES IARKTETKNEYDKVISETEAAYLKILESSQTLLTVLKREAVNIAKKKQASS

(10) \mathbb{S}_{10} : 21 peroxisome proteins

>043743

MEFRGDAYKRIAMISAHLQPSFTPQMEAKNSVMGLESCRAKGGNPGFKVAILGAAGGIGQ
SLSLLMKMNPLVSLLHLYDVVNAPGVTADVSHMDTGAVVRGFLGAKQLEDALTGMDLVII
PAGVPRKPGMTRDDLFKINAGIVRTLCEGVAKCCPNAIVNLISNPVNSTVAIAAEVFKKA
GTYDPKKLLGVTTLDVARANTFVAEVLGLDPREVDVPVVGGHAGVTILPLLSQVKPPSSF
TPSEIEYLTNRIQNGGTEVVEAKAGAGSATLSMAYAAAKFADACLRGLRGDANVIECSFV
ASQVTELAFFATKVRLGRTGAEEVFQLGPLNEYERVGLEKAKEELAGSIQKGVDFIRK
>P05414

MEITNVNEYEAIAKQKLPKMVYDYYASGAEDQWTLAENRNAFSRILFRPRILIDVTNIDM TTTILGFKISMPIMIAPTAMQKMAHPEGEYATARAASAAGTIMTLSSWATSSVEEVASTG PGIRFFQLYVYKDRNVVAQLVRRAERAGFKAIALTVDTPRLGRREADIKNRFVLPPFLTL KNFEGIDLGKMDKANDSGLSSYVAGQIDRSLSWKDVAWLQTITSLPILVKGVITAEDARL AVQHGAAGIIVSNHGARQLDYVPATIMALEEVVKAAQGRIPVFLDGGVRRGTDVFKALAL GAAGVFIGRPVVFSLAAEGEAGVKKVLQMMRDEFELTMALSGCRSLKEISRSHIAADWDG PSSRAVARL

>Q84P23

MLTKTNDSRLIDRSSGFDQRTGIYHSLRPSLSLPPIDQPLSAAEFALSLLLKSSPPATAG
KNIEALTYLVNSSSGDNLTYGELLRRVRSLAVSLRERFPSLASRNVAFILSPSSLDIPVL
YLALMSIGVVVSPANPIGSESEVSHQVEVSEPVIAFATSQTVKKLQSSSLPLGTVLMDST
EFLSWLNRSDSSSVNPFQVQVNQSDPAAILFSSGTTGRVKGVLLTHRNLIASTAVSHQRT
LQDPVNYDRVGLFSLPLFHVFGFMMMIRAISLGETLVLLGRFELEAMFKAVEKYKVTGMP
VSPPLIVALVKSELTKKYDLRSLRSLGCGGAPLGKDIAERFKQKFPDVDIVQGYGLTESS
GPAASTFGPEEMVKYGSVGRISENMEAKIVDPSTGESLPPGKTGELWLRGPVIMKGYVGN
EKASAETVDKEGWLKTGDLCYFDSEDFLYIVDRLKELIKYKAYQVPPVELEQILHSNPDV
IDAAVVPFPDEDAGEIPMAFIVRKPGSNLNEAQIIDFVAKQVTPYKKVRRVAFINAIPKN
PAGKILRRELTKIAVDGNASKL

>080845

MGTTLDVSRAELALVVMYLNKAEARDKLCRAIQYGSKFLSGGOPGTAONVDKSTSLARKV

FRLFKFVNDLHGLISPVPKGTPLPLVLLGKSKNALLSTFLFLDQIVWLGRSGIYKNKERA ELLGRISLFCWMGSSVCTTLVEVGEMGRLSSSMKKIEKGLKNGNKYQDEDYRAKLKKSNE RSLALIKSAMDIVVAAGLLQLAPTKITPRVTGAFGFITSIISCYQLLPTRPKIKTP >P13443

MAKPVQIEVWNPNGKYRVVSTKPMPGTRWINLLIEQDCRVEICTEKKTILSVEDILALIG DKCDGVIGQLTEDWGEVLFSALSRAGGKAFSNMAVGYNNVDVNAANKYGVAVGNTPGVLT ETTAELAASLSLAAARRIVEADEFMRAGRYDGWLPNLFVGNLLKGQTVGVIGAGRIGSAY ARMMVEGFKMNLIYFDLYQSTRLEKFVTAYGEFLKANGEAPVTWRRASSMDEVLREADVI SLHPVLDKTTFHLVNKESLKAMKKDAILINCSRGPVIDEAALVDHLRDNPMFRVGLDVFE DEPYMKPGLADMKNAIIVPHIASASKWTREGMATLAALNVLGKIKGYPVWSDPNRVEPFL DENVSPPAASPSIVNAKALGNA

>P25890

MDPYKHRPSSAFNSPFWTTNSGAPVWNNNSSLTVGSRGPILLEDYHLVEKLAQFDRERIP ERVVHARGASAKGFFEVTHDISHLTCADFLRAPGVQTPVIVRFSTVIHERGSPETLRDPR GFAVKFYTREGNYDLVGNNFPVFFVHDGMNFPDMVHALKPNPQTHIQENWRILDFFYNFP ESLHMFSFLFDDVGVPQDYRHMDGFGVNTYTLINKAGKSVYVKFHWKPTCGVKCLLEEEA IQVGGSNHSHATKDLYDSIAAGNYPEWKLYIQTIDPAHEDRFEFDPLDVTKTWPEDIIPL QPVGRMVLNKNIDNFFAENEQLAFCPAIMLPGIYYSDDKMLQTRVFSYADSQRHRLGPNY LQLPVNAPKWSHHNNHHEGFMNAIHRDEEVNYFPSRHDTVRHAERVPIPTTHLSARREKC NIPKQNHFKQAGERYRTWAPDRQERFLRRWVEALSDTDPRITHEIRSIWVSYWSQADRSL GQKLASHLNMRPSI

>024174

MAAPSAIPRRGLFIGGGWREPSLGRRLPVVNPATEATIGDIPAATAEDVELAVSAARDAF
GRDGGRHWSRAPGAVRAKYLKAIAAKIKDKKSYLALLETLDSGKPLDEAAGDMEDVAACF
EYYADLAEALDGKQRAPISLPMENFESYVLKEPIGVVGLITPWNYPLLMATWKVAPALAA
GCTAVLKPSELASLTCLELGGICAEIGLPPGVLNIITGLGTEAGAPLASHPHVDKIAFTG
STETGKRIMITASQMVKPVSLELGGKSPLIVFDDVDIDKAVEWAMFGCFANAGQVCSATS
RLLLHEKIAKRFLDRLVAWAKSIKISDPLEEGCRLGSVVSEGQYQKIMKFISTARCEGAT
ILYGGARPQHLKRGFFIEPTIITNVSTSMQIWREEVFGPVICVKEFRTEREAVELANDTH
YGLAGAVISNDLERCERISKAIQSGIVWINCSQPCFVQAPWGGNKRSGFGRELGQWGLDN
YLSVKOVTKYCSDEPYGWYRPPSKL

>P08216

MGSLGMYSESGLTKKGSSRGYDVPEGVDIRGRYDEEFAKILNKEALLFIADLQRTFRNHI
KYSMECRREAKRRYNEGGLPGFDPATKYIRDSEWTCAPVPPAVADRRVEITGPVERKMII
NALNSGAKVFMADFEDALSPNWENLMRGQINLKDAVDGTISFHDRVRNRVYKLNDRTAKL
FVRPRGWHLPEAHIFIDGEPATGCLVDFGLYFFHNHANFRRSQGQGYGPFFYLPKMEHSR
EAKIWNSVFERAEKMAGIERGSIRATVLIETLPAVFQMNEILYELRDHSVGLNCGRWDYI
FSYVKTFQAHPDRLLPDRVLVGMTQHFMRSYSDLLIRTCHRRGVHAMGGMAAQIPIRDDP
KANEVALELVRKDKLREVKAGHDGTWAAHPGLIPACMEVFTNNMGNAPNQIRSMRRDDAA
NLTEEDLLQQPRGVRTMEGLRLNTRVGIQYLAAWLTGAGSVPLYNLAEDAATAEISRVQN
WQWLKYGVELDGDGLGVRVNKELFGRVVEEEMERIEREVGKERFKKGMYKEACKMFTRQC
TAPNLDDFLTLDAYNYIVIHHPRELSKL

>Q9ZS51

MGSSPPKKTTLORYLSOLOOHPLRTKAITAGVLSGVSDVVSOKLSGIOKIOLRRVLLKVI

FAGGFLGPAGHFFHTYLDKFFKGKKDTQTVAKKVILEQLTLSPLNHLLFMIYYGVVIERT PWTLVRERIKKTYPTVQLTAWTFFPVVGWINYKYVPLHFRVILHSLVAFFWGIFLTLRAR SMTLALAKAK

>004104

MAQQEVVEGFKFEQRHGKERVRVARVWKTRQGQHFVVEWRVGITLFSDCVNSYLRDDNSD IVATDTMKNTVYAKAKECSDILSAEDFAILLAKHFVSFYKKVTGAIVNIVEKPWERVIVD GQPHEHGFKLGSEKHTTEAIVQKSGSLQLTSGIEGLSVLKTTQSGFVNFIRDKYTALPDT RERILATEVTALWRYSYESQYSLPQKPLYFTEKYQEVKKVLADTFFGPPNGGVYSPSVQN TLYLMAKATLNRFPDIAYVSLKMPNLHFLPVNISNKDGPIVKFEDDVYLPTDEPHGSIQA SLSRIWSKI.

>064894

MASPGEPNRTAEDESQAAARRIERLSLHLTPIPLDDSQGVEMETCAAGKAKAKIEVDMGS
LSLYMRGKHREIQERVFEYFNSRPELQTPVGISMADHRELCMKQLVGLVREAGIRPFRFV
NEDPAKYFAIMEAVGSVDVSLAIKMGVQFSLWGGSVINLGTKKHRDRFFDGIDNVDYPGC
FAMTELHHGSNVQGLQTTATFDPITDEFIINTPNDGAIKWWIGNAAVHGKFATVFAKLVL
PTHDSRKTADMGVHAFIVPIRDLKSHKTLPGIEIHDCGHKVGLNGVDNGALRFRSVRIPR
DNLLNRFGEVSRDGKYKSSLPSINKRFAATLGELVGGRVGLAYSSASVLKIASTIAIRYS
LLRQQFGPPKQPEVSILDYQSQQHKLMPMLASTYAFHFSTMQLVEKYAQMKKTHDEELVG
DVHALSAGLKAYVTSYTAKSLSTCREACGGHGYAVVNRFGTLRNDHDIFQTFEGDNTVLL
QQVAAYLLKQYQEKFQGGTLAVTWNYLRESMNTYLSQPNPVTARWESADHLRDPKFQLDA
FQYRTSRLLQSVAVRLRKHTKNLGSFGAWNRCLNHLLTLAESHIESVILAQFIESVQRCP
NANTQATLKLVCDLYALDRIWNDIGTYRNVDYVAPNKAKAIHKLTEYLCFQVRNIAQELV
DAFDLPDHVTRAPIAMKSNAYSQYTQYIGF

>09FZF1

MATKAPEKITKPKDRDFLNHLETYLSKRDGVDKLLKISRYATKIILASSLIPETRSIIPR LKSFESSVGVSRKAFRLGKFVQDINALRSSRWDSNHELVLLIIAYGGEGLYYFVEQFIWL TKSGLIDAKHSKWLQKISAWAELVGYVGSVSIKIRDLRKLNDEESCVASTIEISVSRGLA CDGEDEKMKMIKEKKTLKVLSILQDLADGLMTIADIRDGKGVLSAPNVISSAGLFSAIVS THKNWISC

>P49299

MPTDMELSPSNVARHRLAVLAAHLSAASLEPPVMASSLEAHCVSAQTMVAPPELVKGTLT
IVDERTGKRYQVQVSEEGTIKATDLKKITTGPNDKGLKLYDPGYLNTAPVRSSISYIDGD
LGILRYRGYPIEELAESSTYVEVAYLLMYGNLPSQSQLADWEFAISQHSAVPQGLVDIIQ
AMPHDAHPMGVLVSAMSALSVFHPDANPALRGQDLYKSKQVRDKQIARIIGKAPTIAAAA
YLRLAGRPPVLPSSNLSYSENFLYMLDSLGNRSYKPNPRLARVLDILFILHAEHEMNCST
SAARHLASSGVDVFTALSGAVGALYGPLHGGANEAVLKMLSEIGTVNNIPEFIEGVKNRK
RKMSGFGHRVYKNYDPRAKVIRKLAEEVFSIVGRDPLIEVAVALEKAALSDEYFVKRKLY
PNVDFYSGLIYRAMGFPPEFFTVLFAIPRMAGYLAHWRESLDDPDTKIIRPQQVYTGEWL
RHYIPPNERLVPAKADRLGQVSVSNASKRRLSGSGI

>Q56YA5

MDYMYGPGRHHLFVPGPVNIPEPVIRAMNRNNEDYRSPAIPALTKTLLEDVKKIFKTTSG TPFLFPTTGTGAWESALTNTLSPGDRIVSFLIGQFSLLWIDQQKRLNFNVDVVESDWGQG ANLQVLASKLSQDENHTIKAICIVHNETATGVTNDISAVRTLLDHYKHPALLLVDGVSSI CALDFRMDEWGVDVALTGSQKALSLPTGLGIVCASPKALEATKTSKSLKVFFDWNDYLKF $\label{thm:condition} YKLGTYWPYTPSIQLLYGLRAALDLIFEEGLENIIARHARLGKATRLAVEAWGLKNCTQK\\ EEWISNTVTAVMVPPHIDGSEIVRRAWQRYNLSLGLGLNKVAGKVFRIGHLGNVNELQLL\\ GCLAGVEMILKDVGYPVVMGSGVAAASTYLQHHIPLIPSRI$

>043097

MAIYSAQAPNSILEEEARFEAEVSETQAWWNSTDLFRLTRRPYTARDVVRLRGSMRQSYA
SNEMAKKLWRTLKTHQANKTASRTFGALDPVQVSMMAKYLDSIYVSGWQCSSTHTTTNEP
GPDLADYPYDTVPNKVEHLFFAQQFHDRKQKEARMSMTREERSKTPYIDYLKPIIADGDT
GFGGATATVKLCKLFVERGAAGVHIEDQASVTKKCGHMAGKVLVSVGEHVNRMVAARLQF
DIMGVETLLVARTDAVAATLIQTNVDARDHQFILGATNPNLKGKPLADVLARAMASGKSG
ADLQAVEDEWMAMADLKLFSDCVVDGIKALNVSEQEKGRRLGEWMQQTGGNTGNVLSYYQ
AKELAEKLGISNLFWDWDLPRTREGFYRFQGSVKAAIVRGWAFGPHADIIWMETSSPDMV
ECRDFALGVKSKHPEIMLAYNLSPSFNWDASRMTDEQMKNFIPEIARLGYCWQFITLAGF
HADALVIDTFAKDFAQRGMLAYVEKIQRQEMMNGVDTLAHQKWSGANYYDQLLKTVQGGI
SATAAMAKGVTEDQFEETQSSTLALESNIGAGTVLAKSRM

>039659

MGSNAKGRTVMEVGTDGVAIITIINPPVNSLSFDVLFSLRDSYEQALRRDDVKAIVVTGA
KGKFSGGFDITAFGVLQGGKGEQPNVRNISIEMITDIFEAARKPAVAAIDGLALGGGLEV
AMACHARISTPTAQLGLPELQLGIIPGFGGTQRLPRLVGLSKALEMMLTSKPIKGQEAHS
LGLVDAIVPPEELINTARRWALEILERRRPWVHSLHRTDKLESLAEARKIFNLARAQAKK
QYPNLKHTIACIDAVETGVVSGPRAGLWKEAEEFQGLLHSDTCKSLIHIFFAQRSTTKVP
GVTDLGLVPRQIKKVAIVGGGLMGSGIATALILSNYHVVLKEVNDKFLQAGIDRVRANLQ
SRVKKGNMTNEKFEKSISLLKGVLNYESFKDVDMVIEAVIENVSLKQQIFSDLEKYCPPH
CMLATNTSTIDLELIGERIKSRDRIIGAHFFSPAHIMPLLEIVRTKHTAAQVIVDLLDVG
KNIKKTPVVVGNCTGFAVNRMFFPYSQAAILLAEHGVDPYQIDRAISKFGMPMGPFRLCD
LVGFGVAAATASQFVQAFPERTYKSMLIPLMQEDKNAGESTRKGFYVYDKNRKAGPNPEL
KKYIEKARNSSGVSVDPKLTKLPEKDIVEMIFFPVVNEACRVLAEGIAVKAADLDIAGVM
GMGFPSYRGGLMFWADSLGSNYIYSRLEEWSKQYGGFFKPCGYLAERAVQGATLSAPGGH
AKPRM

>Q56WD9

MEKAIERQRVLLEHLRPSSSSSHNYEASLSASACLAGDSAAYQRTSLYGDDVVIVAAHRT PLCKSKRGNFKDTYPDDLLAPVLRALIEKTNLNPSEVGDIVVGTVLAPGSQRASECRMAA FYAGFPETVAVRTVNRQCSSGLQAVADVAAAIKAGFYDIGIGAGLESMTTNPMAWEGSVN PAVKKFAQAQNCLLPMGVTSENVAQRFGVSRQEQDQAAVDSHRKAAAATAAGKFKDEIIP VKTKLVDPKTGDEKPITVSVDDGIRPTTTLASLGKLKPVFKKDGTTTAGNSSQVSDGAGA VLLMKRSVAMQKGLPVLGVFRTFAAVGVDPAIMGIGPAVAIPAAVKAAGLELDDIDLFEI NEAFASQFVYCRNKLGLDPEKINVNGGAMAIGHPLGATGARCVATLLHEMKRRGKDCRFG VVSMCIGTGMGAAAVFERGDGVDELRNARKVEAQGLLSKDAR

>Q96329

MAVLSSADRASNEKKVKSSYFDLPPMEMSVAFPQATPASTFPPCTSDYYHFNDLLTPEEQ
AIRKKVRECMEKEVAPIMTEYWEKAEFPFHITPKLGAMGVAGGSIKGYGCPGLSITANAI
ATAEIARVDASCSTFILVHSSLGMLTIALCGSEAQKEKYLPSLAQLNTVACWALTEPDNG
SDASGLGTTATKVEGGWKINGQKRWIGNSTFADLLIIFARNTTTNQINGFIVKKDAPGLK
ATKIPNKIGLRMVQNGDILLQNVFVPDEDRLPGVNSFQDTSKVLAVSRVMVAWQPIGISM
GIYDMCHRYLKERKOFGAPLAAFOLNOOKLVOMLGNVOAMFLMGWRLCKLYETGOMTPGO

ASLGKAWISSKARETASLGRELLGGNGILADFLVAKAFCDLEPIYTYEGTYDINTLVTGR EVTGIASFKPATRSRL

>042564

MAAPIVDAEYLKEITKARRELRSLIANKNCAPIMLRLAWHDAGTYDAQSKTGGPNGSIRN EEEHTHGANSGLKIALDLCEGVKAKHPKITYADLYQLAGVVAVEVTGGPDIVFVPGRKDS NVCPKEGRLPDAKQGFQHLRDVFYRMGLSDKDIVALSGGHTLGRAHPERSGFDGPWTQEP LKFDNSYFVELLKGESEGLLKLPTDKTLLEDPEFRRLVELYAKDEDAFFRDYAESHKKLS ELGFNPNSSAGKAVADSTILAQSAFGVAVAAAVVAFGYFYEIRKRMK

>09S850

MPGIRGPSEYSQEPPRHPSLKVNAKEPFNAEPPRSALVSSYVTPVDLFYKRNHGPIPIVD HLQSYSVTLTGLIQNPRKLFIKDIRSLPKYNVTATLQCAGNRRTAMSKVRNVRGVGWDVS AIGNAVWGGAKLADVLELVGIPKLTASTNLGARHVEFVSVDRCKEENGGPYKASITLSQA TNPEADVLLAYEMNGETLNRDHGFPLRVVVPGVIGARSVKWLDSINVIAEESQGFFMQKD YKMFPPSVNWDNINWSSRRPQMDFPVQSAICSVEDVQMVKPGKVSIKGYAVSGGGRGIER VDISLDGGKNWVEASRTQEPGKQYISEHSSSDKWAWVLFEATIDVSQTTEVIAKAVDSAA NVOPENVESVWNLRGVLNTSWHRVLLRLGHSNL

>Q9FEW9

MASSAQDGNNPLFSPYKMGKFNLSHRVVLAPMTRCRALNNIPQAALGEYYEQRATAGGFL
ITEGTMISPTSAGFPHVPGIFTKEQVREWKKIVDVVHAKGAVIFCQLWHVGRASHEVYQP
AGAAPISSTEKPISNRWRILMPDGTHGIYPKPRAIGTYEISQVVEDYRRSALNAIEAGFD
GIEIHGAHGYLIDQFLKDGINDRTDEYGGSLANRCKFITQVVQAVVSAIGADRVGVRVSP
AIDHLDAMDSNPLSLGLAVVERLNKIQLHSGSKLAYLHVTQPRYVAYGQTEAGRLGSEEE
EARLMRTLRNAYQGTFICSGGYTRELGIEAVAQGDADLVSYGRLFISNPDLVMRIKLNAP
LNKYNRKTFYTQDPVVGYTDYPFLQGNGSNGPLSRL

(11) \mathbb{S}_{11} : 39 plastid proteins

>P28643

MATATAAGCSGAVALKSLGGRRLCIPQQLSPVLAGFGSHAAKSFPILSTRSIATSGIRAQ
VATAEKVSAGAGQSVESPVVIVTGASRGIGKAIALSLGKAGCKVLVNYARSSKEAEEVSK
EIEAFGGQALTFGGDVSKEEDVEAMIKTAVDAWGTVDILVNNAGITRDGLLMRMKKSQWQ
EVIDLNLTGVFLCTQAAAKIMMKKKKGRIINIASVVGLVGNAGQANYSAAKAGVIGFTKT
VAREYASRNINVNAVAPGFISSDMTSKLGDDINKKILETIPLGRYGQPEEVAGLVEFLAI
NPASSYVTGOVFTIDGGMTM

>P28645

MALNLNPVSTPFQCRRLPSFSPRQTPSRRSPKFFMASTLSSSSPKEAESLKKPFSPPREV
HVQVTHSMPQEKIEIFKSLEGWAEENLLVHLKPVEKCWQPQDYLPDPASEDFRDQVKEIQ
ERAKEIPDDLYVVLVGDMITEEALPTYQTMLNTLDGAKDETGASPTSWAVWTRAWTAEEN
RHGDLLNKYLYLSGRVDMRSIEKTIQYLIGSGMDPRTENNPYLGFVYTSFQERATFVSHG
NSARLAKEHGDLKMAQICGIIASDEKRHETAYTKIVEKLFEIDPDATVLAFADMMKKKIS
MPAHLMYDGRDDNLFDHFSAVAQRLGVYTAKDYADILEFLVGRWEVEKLTGLSSEGQKAQ
DYVCSLPPRIRRLEERARERAKQAPSMPFSWIFDRQVKL

>085UK6

MLKNKTKKTEVYALCRHISLSADKARRVIDQIRGRSYEETLMILELMPYRACYPILKLVY SAASNAAYSMDSAEVNLVISKAEVNEGTITKKFKPRARGRSYVIKRTTCHITIVVKDISL

DKYEEIYSFKNPIWKNTIDVYSNGVVWHKK

>P31562

MERREGGRDNSSCSNVNQLFGVKDSESLLYDDVFIVRDRNGDSYFAYWDIEKNTFLSEPF
YSYRSRNSSYLPKIKAFMSEDRSQIHEVKNGFRSEDHSKINKINGVENLFHNYNMNVLTD
DYNFKMGMNGFHRPQSKIHINRFIDSYLQSQICIATTPGSGSDNDSYIHGSRVYGESESY
TRSEGRSSSIRTRTKGVELTLRERPGILDRTKKYMYLWLQCDNCYGLNYKKVLKSKMTIC
EQCGYHLQMSSSDRIELLIDPGTWDPMDEDMVSRDPIKFDSGGGEAYKDRLYFYQRKTGL
TEAVQTGIGQLNGIPVAIGVMDFKFMGGSMGSVVGEKITRLIEHATNKFLPLIIVSASGG
ARMQEGSLSLMQMAKISSALYDYQSNKRLVYVSILTSPTAGGVTASFGMLGDIIIVEPRA
YVAFAGKRVIEQTLNQTIPNDSQEAEFLFHKGLFDLIIPRHLLKSVISELFTLHDLFPLN
QNSNQYSQYRALLNPIF

>Q2EEW0

MDFISKTIGLRLGYNKTHKLIWSLSKNNPIFIQTNHFLEYIIKNDPFFCGLILIDFQLMQ YIVVHKNQLGNFSPLKNNLPNSINLFLKLKIATEIQSNFNSVFILEERLHFLFFKYLNKM KNLKMLNNLKIKVKIKFLNNPILEPQWIFYKLHQDLYKGINIRRALAKISSNVIKKGAEG VKIQIKGRINGVDKATVIVEEKGKMPLQNLSSEINYYSRALKTVYGLLGVKIWVFKGFLL

>Q2EEW1

MIYIPKKIRYRKHHRGRLKGVASKGNNLFFASCGLQALESSWITSQQMEAARRACTRKVK RHGKLFMRFFPDKPVTYRSAETRMGSGKGTPRDWVAVIKPGKILYELKGIPEPLARKALK LASAKLPLKTKFIFKKE

>Q2EEW2

MIQAQTILQVADNTGAKEIMCIRVLRGSSKKGARVGDIIVAVVKKTKKQTSVKKSEIVRA VIVRTRTTIHRANGMHLKFNENAAVLVTKELHPKGTRLFGPIPYECSEAGLNSIISLAPY II

>Q2EEW3

MKNDFFNYYKTKIIPQYLKDYNKKKALEVPVIKKIVISRGIGKANTLEINNYIEESIKEF LIMTGQKPKLNRAKKHIAAFKIKKKMILGLSVTLRGAKMYAFLYKFINIILPNIRQFQGI ENKQFDSLGNITFPIYSQSNIPELPYNPRVEKRGFNVTINIKAKNVSEAKALCAYLGFPI

>02EEW4

MPRDLFSDALTRLRNALRVNKQTVIIPFSNLNYSFSNILLEEHLLEKKTILSKKYIKLEG LKFYNKKSDHTLFNFFKNCQRLSKPSNRLYIKAGDIPLIDNGLGFVILSTSYGLMTGKKA RALNIGGELLCOFNFO

>02EEW6

MPFLLNNFKFSRFRSFATKLEKTKGFFNYQPLTKFKQKYSLDVAYVYIISSYNNTLISLT DFLGNVLKNESCGSCNYKGRFKRKFIASKQAAENIVSFCKFQRIKRLVIILHGYGKGSEM VIRTIREKELKILDIKIKDKKPYNGCROKKKRRI

>Q2EEW7

MLIKQLSSSYNEYNNNYAASFLIGPLPEGIAQSLGFNIRSVLLKEFPYFAVKNIRFNPEN NNYKTHIGTKESIETIINTILGIDFNYSFDFYKAMGLYKSKPKALFQENLSKAKFLCSAK QVGEGILYAKDLMLPVGIKCTTPYKIIAHVTKQNFLGFTFELGFLFGLNNNIKFENKLYS IKTYPIQNINIEIINSKKSFNLNSESIILSFTTKSSLQPIDVIKILSYLLLNKHLILIKA FQQFLD

>P30060

MPTIKQLIRKKRQPNLNVTKSPALRGCPQRRGTCTRVYTITPKKPNSALRKVARVRLTSG IEITAYIPGIGHNLQEHSSVLVRGGRVKDLPGVRYHIIRGTLDAVGVKDRQQGRSKYGVK IKNK

>O2EEW8

MTFNKKINEIITLLSDLNILELNSLINEIRNQFQIPDIVSTIQTGNKTKPEANIIEQKES AEIKKSNFELILQTVPTEKRVAVLKAIRNTTSLDLKGAKDSIADLPKKLLDNLSLEEAEK AKTLLEEAGATVILA

>09TJ06

MMLNLLQYPVIKTPKATRLLENNQYSFDIDKKLTKPQIKKLVEEYFNIKVLAINTHRPPR KIKRSGSAPRSKRVIITVSANINLLG

>P30061

MYKFKRSFRRRLSPIGSGNLIYYRNMSLISRFISEQGKILSRRVNRLTLKQQRLITIAIK QARILSLLPFINNEKQFERIESITRVKGFIKK

>O2EEW9

MKYFIIRSLINKSKNFYNTIIKYNKTKLFALELSIISPQEIQNSAEYKREDGSIVGKVED
STFYDLEKVNNKNLFSQQIFGPLIDFTCACGKKLNRKNKEINVCTKCGIEFLPSSIRSKR
KGYIKLNYAMLHPFYIDYCEKLLMKSKKSLHLLLNMDSFFYFPSYKNWVNFLSEKNHIYL
FLLKKILIYNRYSYIYKYSTFFKNRSKFPNNKKMNKLFFYNALGFYGLNSRKTWTVLDFI
KGYNFFLGNFSKYYKKLSWYAYQQKISLNKYKSNNISINNFIDNTFNFYKNEVNSLCFKV
GGDGIEMFFLQDMAVYSIINKFLKLRVLKLNNLINVNNKYYGKINTIIQNSKNYQYYFKH
FYLKKIAPVWMTLRRIPVLPPNLRPILDLSGKNYQKTASSGTLLFMRDIMHEGNLFISDI
NTFYREIIIHNKKAFNFFSSLPTLYYLNELNIEYVNSKLWLLKYYLMPIQKSITSLFDKN
PETINNFSNKKFTDLILDNVKPTSILDSLKGKYGKIRFNLLGKRVDYSGRSVIISAPHLK
IYECGIPYEMALTLYYPFLSEYFYKKNNNILKKNYNKSELVLYSKSLIFTKSLQSILLSH
PIIINRAPTLHRLGIQSFLPKLTHSKAIELHPLVCPAFNADFDGDQMAIHVPITEIAKLE
AIQLMASSLFVYAPASGLPLLIPTQDIILGFNFYTNDLLLKTSREDKSIKQAMNQGFINE
CHIPYWIKINTKDIFFKFLAYPLRNYIIPIELQLNIKGFSKIIRLNTFKVTNLVFDSLDL
LIKKNYISNWLILNNTKFKYLLISFLQNKNLLTNKQVYLRTTLGNIYFNKYLNL

>P30401

MSPQTETKASVGFKAGVKDYKLTYYTPDYETKDTDILAAFRVTPQPGVPPEEAGAAVAAE
SSTGTWTTVWTDGLTSLDRYKGRCYRIERVIGEKDQYIAYVAYPLDLFEEGSVTNLFTSI
VGNVFGFKALRALRLEDLRIPPAYTKTFQGPPHGIQVERDKLNKYGRPLLGCTIKPKLGL
SAKNYGRAVYECLRGGLDFTKDDENVNSQPFMRWRDRFLFCAEAIYKSQAETGEIKGHYL
NATAGTCEEMLKRALFARELGVPIIMHDYLTGGFTANTSLAHYCRENGLLLHIHRAMHAV
IDRQKNHGIHFRVLAKALRLSGGDHIHSGTVVGKLEGEREITLGFVDLLRDDFVEQDRSR
GIYFPQDWVSLPGVMPVASGGIHVWHMPALTEIFGDDSVLQFGGGTLGHPWGNAPGAVAN
RVALEACVQARNEGRDLAQEGNDILRQAGKWSPELAAACEVWKEIRFDFKPVDTLDPNDK
KQRDNEDTLADKLFGDKG

>09TJQ7

MTNFKDIIKKIEYKFSKHQLPDIKVGDLIRLGISIQESGKQRVQPFEGTVIALHKAGLNT TITVRKILQGIGVERVFPIHASCLTSIQVLRRSQVSRAKLYYLRNRTGKATRLKEKFEKL PPIWVNKLP

>Q9TIR8

MEQIRRYLQLERFQQHDFLYPXFFQEYIYVFAHGRGFSRSIWSENENTGYDNKSSLRVMK
RLITRMYQQNNFIILPNDFNKKNPFLAKKKFFYSQIIAEGFAFIVEIPFSLRFISYLEGK
KKIVKSQNLRSIHSIFPFLEDNFSHLNFVLDILILHPVHVEILVQILRYWVKDASSLHLL
RFFLNKYWNSLITPNKASSSLSKKNKRLFVFLYNSHVGGYESSFVFIRNQSSHLGSTPFG
VLLERIYFYGKIERLVNVFVKVKDFRTNLWFVKEPYIHYIRYQRKWILASKGTFLFVKKW
KCYLIIFWQWHFSLWFYPRRIYINQLSNHYFEFLGYLSNLRMTPSVVRSQSLENTFIINN
AIKKIDNFVPIISMIASLAKAKFCNVFGHPISKPVRADLSDSNIIDQFGCICRKFFHYYS
GSSKKKSLYRIKYILRLACARTLARKHKSTVRTFLKRLGSELLEEFLLSEEDVLFLTFPK
ASSSLOGVYRSRIWYLDIIYINDLVDHKYKL

>09TJ09

MSRRTAKKRIVMPDPVYKNSLLELIVRQVMRNGKKLLAYRIMYNSMIKIAEMTQKDPLD VLEKAIRNVTPLIEVKARRVGGSTYQVPLEVLPERGTTLAIRWILAACRKNRGKPMYIKL TNELIDASNKSGSAIKKKDEIHRMAEANKAFAKQRF

>P82412

MLSMAVQPNINAIAKPSIYQSPKLSLKPFKTPAFANPKPFFSSPSFSQLKKKNNWSLFVA PETISDVAIMGNEVDIDDDLLVNKEKLKVLVKPMDKPRLVLKFIWMEKNIGLALDQTIPG HGTVPLSPYYFWPRKDAWEELKVLLENKPWISQKQMIILLNQATDIINLWQQSGGNLAS >P30067

MTRIKRGYIARRRIKKFRLFASSFLNAHSRLTRTITQQKIRALVSSDRDRNNKKRKFRSL WITRINAVIREEGVSYSYKNFIYAQYKIQLLINRKILAQIAILNRNFFYMIFNEIRKEAD LKEYIRIN

>P30068

MAKSKDARVAVILECTSCIRNSVNKVLTGISRYITQKNRRNTPNRLELRKFCPYCYKHMI HGEIKK

>A8W3F3

MVREKITVSTRTLQWKCVESRTDSKRLYYGRFILSPLRKGQADTIGIAMRRALLAEIEGT RITRVKFAKASHEYSTIAGIQESVHEIFMNLKEIVLRSNLYGTCDASISIKGPGHVTAKD IILPPHVEIVDSTQHIAWLTEPIDLCIGLKIERNRGYFIKTHPNFEDGSYPIDAVFMPVR NANHSIHSYGNEKQEILFLEIWTNGSLTPKEALHEASRNLIDLFIPFLHMEEENLHLEDA DHTISLSPFTVYDKVAKLRKNKKKRSLESIFIDQLEFPPKIYNCLKKSNIFTLLDLLNNS OEDLIKIEHFRLEDVKOILGILGKHFALDLPKKKF

>P25699

MALAPSKVSPFSGFSLSDGVGAVRNPTCSVSLSFLNKKVGSRNLGVSASTVPLTGVIFEP FEEVKKEELAVPTAGQVSLARQYYADECESAINEQINVEYNASYVYHSLFAYFDRDNVAL KGFARFFKESSEEEREHAEKLMKYQNTRGGRVVLHPIKNVPSEFEHVEKGDALYAMELAL SLEKLVNEKLRSVHSVADRNKDPQLADFIESEFLSEQVEAIKKISEYVAQLRMVGKGHGV WHFDQSLLHDGHAA

>A7M988

MPIGVPRVRFQYRRDRSRVWIDIYNRLYRERCLFLAHVVESQIANQLVGLFIYLGVQDET KDIFLFINSPGGGIISGFAIYDTMQFVRPDIQTICVGLAASMGSFLLVGGAITKRLAFPH ARVMIHQPMSAFFETQTVEAILEAEELLKLRESLAKVYVQRTGKPDWVIAEDMERDVFLS ATEAOSYGIVDVVGVALASKG

>047032

MSRYRGPRLPIIRRLGELPGFSKKIDRNHTPPGOHGWKKKASDOKKSKESOYGIRLKEKO

KLRYNYGINERQLINYVREARRKGSTGEVLLQLLEMRLDNIIYRLGFAPTIPAARQLIN HGHINVNNKNINIPSYICKINDIISVLKNSQQLIKNYLQNGGISELSTCLNLNKEKLEAS INNIIPRDLVKLEINELLVIEYYSRKL

>O2EEX0

MIKTSQIAKYIFLLKKAEFIKSEKKHVILNKTTLKKMVFILQNKYDEQTVFFILEKLKEI GFHLATOSGLSLGIDDLKSFPDKKKLITETRTDLNNNEEHFLLONISPLEKSKYLITKWN DVNNFIIQRIKKVFLKKEPLNPLALMAFSGARGNISQVSQLIGLRGLMTDPLGKLVEFPI QGNFREGMTLTEYFISCYGARKGLVDTALRTATAGYLTRRLVYVVQHIFISIEDCNVTNG ISVEINEKSSNSLIGLTLLKNFYNKNIFIAKNTIISPTLVKLLLNSYNYLSHKKSIVCRS ILTCQLQHTLCQFCYGWDNARAKRVAIGEAIGIIAAQSIGEPGTQLTLRTFHTGGVGGFS GANWISYNSPFDGFIKFKKPVIGNILRSWIVMPHYTSLNLVYKLTPSFNELNLTLFIFDK LKNELYNKTLKNEGLLFVREGDFIKKGOLLFSEININFKNSNLLKTYIPYYSLETGLIIS PKLALNKYLYPLWIFLFNIIKLNLDSLNSKKFTVYKNYSILEKNDLIDLKTILFEIHFIQ KSKKFNLKKQEYLLYQNLKMSLCKSHYDYSTYKKLNVAFQQNNQKLNFFYNKKLKSSLVS NNINLLWTSSSYSINILTKSIFNIIVFEYLYLSLLIKNKYILWILSKNLKKKDKFHFFKY TSTSSSKIEIFRLNSKKNSLNIRKNKLFFYSONYKKNKVSNILFGNSIFLKFPLKKINTF FSOIKOKTINLKEKKTSNVEGEFIGFOLKNNIKFWYSISPNSLFSFKKDNKKNRYNFNFI RKNSNISGFLVSNTIKTFTLOKGIPLIFPSDTIYHKMEKDFIFKNELLCSFKSLKPETOD IIOGIPRVEKLLEGRPLPFYKPKVELYKIWOFFLKNLGFLKIKNSLFNLKKVESKVYLNN FKPNLNIGDICYLAYFHSKSNFGLDIASIISNVYLQEGVNISFKHIELIVRELTSLVEII NPGDSGFIVKEKIHWLLIYNYNKRLKSLNLKEISYMPIFLGMTEITKKKNSFGVAGSFON LREIIIDHTFTRKTDYLLGLHENVLFNKIIPAGTGFFF

>O2EEX2

MLLNDQKFLPINIHYLNQGRFDLNKLKNFNLLINQRENWRFFLINGLKLAFKEFEHFKIK NNNFIIDIVFQEKFLFFKQIRQAYLKKVETFGYNIFIPIIITQKILNKKNNLNLTFFKWL DLGILPSLSPKTSFYIDGISRAVSTOKKKSPGLMFDFDLTKKSSLEKREGEAFLKIIAPR GSWFKISYSEDHIIFIEIRNIAYKIPIFTFLCALGFSLESIFOFFNYNINNFKLIPNKYD NTNALIKARNDIFILYSDLLPLLNKTKKNFEIKYIINHYFFSYIWNSNTRYCGEATRLHL YNKVGSPLSLNSLFLEEIDFIYITKIFIYRLINNNFKDENNDNLKNMRFRNGGDYIYLQT ROGLFDFESFLNINLHNIENNSFFCNITTNKKKEDIYSIKKKKNIKNFNLSKISFLKHIL LKSWKSFFLSGTLSOFAENLNPLSYITHARRFTSLGPGSLKKAEASIEVRSINPSYNGRV CPIETPEGFNAGLVHSFSLYSFKGVNGELLLPFYFIYKNIKQSYYLPPIFFNIEEESNQS IITGDLIHEKWNDFLNKKLSLRNNFHLDKNDISKISFOSLSPYHMISLATSLIPFLEHND ANRALMGSNMOROTVPVLGAHNFIVRTGLDTKFFSDISSIPISOINGFNFESNNNYCYFY KIDNLITLNNISYNYIKKTNHNSLYINESIKKKNPWHOOGDFLINNSVIENGKLALGPNL LLAYLPWHGYNYEDAVIINERCVSQKILTSLHIITLTNSLELAYREINKKKEFFYEVPVK LEILFSFFAPFYYNLKYYKNOEFSOFEKKNPSYYTNNINIGTFLKKGDCIFSKCRIRFSF SRELRLOYKELFILLREAFPTFEDFKNFANIFAYDKYKOKLDRKKOKKNTRLKTDNFIFN KNSTLFKKHKLKALINYYNIEDSTIYAQKNQEGLIISKHLKKVPMTYTSITPFDLEEFLS TKESKKKEYYNLFFTKSINIEILOLRDIOLGDKCAGRHGNKGIISKICPINEMPLLPDGT PIDIILNPLGIPSRMNVGQIFESLLGLAGFYLNETYTINIFDEQFGLEASRSFVLSKLYK ASILSNKPWLFLKKNAGKTNIIDGLTGKYFQQPITIGYSSILKLIHMVTDKLHGRSIGGY STLTLQPTKGKSLLGGQRVGEMELWALQGYGASWALQELYTLKSDLVEARQHFQNYINSF NIESNIYDRNDISLTELESLIISDTFKPYTLECFLEDLKALCIYIDY

>Q2EEV7

MAREKFERIKPHINIGTIGHVDHGKTTLTAAITMALASIGNTKGKNYADIDSAPEEKARG
ITINTTHVEYETAKRHYAHVDCPGHADYIKNMITGAAQMDGAILVVSGADGPMPQTREHI
VLAKQVGVPSMVVFINKEDQVDDPEILELVELEVRDLLTSYKFEGEEVPVITGSALLALE
AFIKNPKILKGENPWVDKIYNLMDSVDSYIPTPVREIDKPFLMAIEDVFSISGRGTVATG
RIERGKIKMGDSIEIIGGSLRKTTTVTGIEMFQKTLTDGVAGDNVGILMRGIQKKEIDRG
MVLTKPKSIDPLTSFEAQVYLLTKEEGGRSKGFTIGYRPQFYVRTTDVTGAILNMLSDDN
TPLKIASPGDRITMSVKLIQPIALEKNMRFAIREGGKTVGAGVVSKLIN

>O2EEX3

MAKKSLIVREYKKNILVNKYYKKRLLLKSQLNNTINSTDCILKILNKLQKLPKKSSPTKL RNRCTLTGRARGVYSEYKISRFVFRNLALNGLLPGVFKASW

>Q2EEV8

MTLKKLNPITPGSRHRVIIDYSKQSKLLKPSTKNAPLKKNTLKIMTTEGRNFHGVITTRH RGGGHKRLYRIIEFNRNKLGVSGKVNNIEYDPNRTANIARIHYQDGSKKYIIHPEGLEKG ANIIASAIAPLSIGNSLPLKSIPIGTEIHNIEFHPGKGGQLARSAGTGALVSYKTNSFVT LKLPSGRSRYFDNKCWATIGKVSKAEHKFINLGKAGRSRWLGIRPTVRGSAQNAVDHPHG GGEGKAPIGRIPSTPWGKPALGIKTRHRKWSERFFKGLKKK

>P27068

MTRRYWNIDLEEMIGAGVSFGHGTRKWNPKMAPYISVKHKGIHFTNLTKTARFLSEACDL VFYAASRGKQFLIVDTKNKAADSAAWAAIKARCHCVNKKWPGGMLTNWSTTETRLHKLRD LIMEQKAGRLNRLKKKDEAAVKRQLARLQTYLGGIKYMTRLPDIVIIVDQHEEYKALHEC ITIGIPTIGLIDTNCDPDLADISIPANDDAISSIRLILNKLVFAICEGRSGYIIKNI >O2EEV9

MGINNINKIPVRNNKISFVAVHLIKALTSKKQEKLVKLQRKKKIISVIKTWSRSSTIVPL MIGEIIAVHNGREHIPVYITEEMVGFKLGEFATTRIWRGHLKKTTHKKNNKTYGLYF >P30070

MKEQKWIHEGLITESLTNGMFWVRLDNKDLIIGYVSGNIRHSFIRILPGDKVKIEVSRYN STRGRIIYRLRNKYYKD

>Q2EEX9

MLKNIIYSYITQLKNLLSKKLNVLCTFSAGQDSFFLLYCLIHIISNKNNKIKLQHNHHFL QSSNILSFWQCIKVASIFKIPLVINLLEINLANKDFMTENEARKWRYDSFLRNSLFQNEK PSIFIGHTGSDLLETFFWHFLRNSIIDYQLIKKKLLWNIPYYISNFSSVGYKNSSKVKIK LTNKKKKINCLINHNLMLNKAKKSFLKKDLTQLVLITRPLVNLHRQDIFLFRKNLKLPVI TDKSNDNNYYYRNRIRNILFPIMRILFNKKTDKNLIKLFL

>P32034

MYGWYELPKQEFLNSKQPVHIFTTKKYWILFRIGPERRRKAGMPKASIISFTRPNPVWER PVPKSLTGLFNVLYLLG

>P32035

MEYMKRVEYLYRSVMSYRTQLDIQLLRFELSGECLIDISKRWTIKPLSRFTQRGE >A7M934

MGQKINPLGLRLGTNQDHYSIWFSQPKAYSKSLQEDQKIRSFIRNYIKNMKISPSGVEGL ARISIYKRIELIEVRIFLGFPKLLLENRPEGLEELQITLQKELNCGNRRLNILITKVEKP YSNPNILAEFIAGQLKNRVSVRQAMKKAIELAEEADTKGIQVQVAGRLNGQDIARVQWIR EGRVPRQTIRATFDYCSYPVRTIYGILGIKIWIFVGEDK

(12) \mathbb{S}_{12} : 52 vacuole proteins

>P08031

MKVLIVALALLALAASAASSTSGGCGCQTPPFHLPPPFYMPPPFYLPPQQQPQPWQYPTQ PPQLSPCQQFGSCGVGSVGSPFLGQCVEFLRHQCSPAATPYGSPQCQALQQQCCHQIRQV EPLHRYQATYGVVLQSFLQQQPQGELAALMAAQVAQQLTAMCGLQLQQPGPCPCNAAAGG VYY

>09LDC0

MDESLEHQTQTHDQESEIVTEGSAVVHSEPSQEGNVPPKVDSEAEVLDEKVSKQIIKEGH GSKPSKYSTCFLHYRAWTKNSQHKFEDTWHEQQPIELVLGKEKKELAGLAIGVASMKSGE RALVHVGWELAYGKEGNFSFPNVPPMADLLYEVEVIGFDETKEGKARSDMTVEERIGAAD RRKMDGNSLFKEEKLEEAMQQYEMAIAYMGDDFMFQLYGKYQDMALAVKNPCHLNIAACL IKLKRYDEAIGHCNIVLTEEEKNPKALFRRGKAKAELGQMDSARDDFRKAQKYAPDDKAI RRELRALAEQEKALYQKQKEMYKGIFKGKDEGGAKSKSLFWLIVLWQWFVSLFSRIFRRH RVKAD

>P15797

MSTSSHKHNTPQMAAITLLGLLLVASSIDIAGAQSIGVCYGMLGNNLPNHWEVIQLYKSR NIGRLRLYDPNHGALQALKGSNIEVMLGLPNSDVKHIASGMEHARWWVQKNVKDFWPDVK IKYIAVGNEISPVTGTSYLTSFLTPAMVNIYKAIGEAGLGNNIKVSTSVDMTLIGNSYPP SQGSFRNDARWFTDPIVGFLRDTRAPLLVNIYPYFSYSGNPGQISLPYSLFTAPNVVVQD GSRQYRNLFDAMLDSVYAALERSGGASVGIVVSESGWPSAGAFGATYDNAATYLRNLIQH AKEGSPRKPGPIETYIFAMFDENNKNPELEKHFGLFSPNKQPKYNINFGVSGGVWDSSVE TNATASLVSEM

>P07052

 $\label{thm:condition} $$\operatorname{MNFLKSFPYAFLCFGQYFVAVTHAATFDIVNQCTYTVWAAASPGGGRQLNSGQSWSINV}$$ $$\operatorname{NPGTVQARIWGRTNCNFDGSGRGNCETGDCNGMLECQGYGKPPNTLAEFALNQPNQDFVD}$$ $$\operatorname{ISLVDGFNIPMEFSPTNGGCRNLRCTAPINEQCPAQLKTQGGCNNPCTVIKTNEFCCTNGPGSCGPTDLSRFFKARCPDAYSYPQDDPPSLFTCPPGTNYRVVFCP}$$$

>P04347

MGKPFFTLSLSSLCLLLLSSACFAITSSKFNECQLNNLNALEPDHRVESEGGLIETWNSQ
HPELQCAGVTVSKRTLNRNGSHLPSYLPYPQMIIVVQGKGAIGFAFPGCPETFEKPQQQS
SRRGSRSQQQLQDSHQKIRHFNEGDVLVIPLGVPYWTYNTGDEPVVAISPLDTSNFNNQL
DQNPRVFYLAGNPDIEHPETMQQQQQQKSHGGRKQGQHRQQEEEGGSVLSGFSKHFLAQS
FNTNEDTAEKLRSPDDERKQIVTVEGGLSVISPKWQEQEDEDEDEEYGRTPSYPPRRP
SHGKHEDDEDEEEDQPRPDHPPQRPSRPEQQEPRGRGCQTRNGVEENICTMKLHENIA
RPSRADFYNPKAGRISTLNSLTLPALRQFGLSAQYVVLYRNGIYSPDWNLNANSVTMTRG
KGRVRVVNCQGNAVFDGELRRGQLLVVPQNPAVAEQGGEQGLEYVVFKTHHNAVSSYIKD
VFRVIPSEVLSNSYNLGOSOVROLKYOGNSGPLVNP

>P07053

 ${\tt MGFFLFSQMPSFFLVSTLLLFLIISHSSHAQNSQQDYLDAHNTARADVGVEPLTWDNGVA}$ ${\tt AYAQNYVSQLAADCNLVHSHGQYGENLAQGSGDFMTAAKAVEMWVDEKQYYDHDSNTCAQ}$ ${\tt GQVCGHYTQVVWRNSVRVGCARVKCNNGGYVVSCNYDPPGNVIGQSPY}$

>P19825

MAHOHTISGLVGKLITESEVNCNADKYYOIFKHHEDLPSAIPHIYTSVKAVEGHGTTSGC

VKEWCYILEGKPLTVKEKTTYNDETRTINHNGIEGGMMNDYKKFVATLVVKPKANGQGSI VTWIVDYEKINEDSPVPFDYLAFFQQNIEDLNSHLCASD >P08688

MTKTGYINAAFRSSQNNEAYLFINDKYVLLDYAPGTSNDKVLYGPTPVRDGFKSLNQTVF GSYGVDCSFDTDNDEAFIFYEKFCALIDYAPHSNKDKIILGPKKIADMFPFFEGTVFENG IDAAYRSTRGKEVYLFKGDQYARIDYETNSMVNKEIKSIRNGFPCFRNTIFESGTDAAFA SHKTNEVYFFKGDYYARVTVTPGATDDQIMDGVRKTLDYWPSLRGIIPLEN

MRVLLVALALLALAASATSTHTSGGCGCQPPPPVHLPPPVHLPPPVHLPPPVHLPPPVHLPPPVHLPPPVHLPPPVHLPPPVHLPPPVHLPPPPCHYPTQPPRPQPHPCPCQQPHPSPCQLQGTCGVG STPILGQCVEFLRHQCSPTATPYCSPQCQSLRQQCCQQLRQVEPQHRYQAIFGLVLQSILQQPPQSGQVAGLLAAQIAQQLTAMCGLQQPTPCPYAAAGGVPH

>Q2V4F9

>P04706

MVAFGKYLQRKQIEEWSGYYINYKLMKKKVKQYAEQIQGGSQHPRHVLKDFSRMLDTQIE
TTVLFMLEQQGLLSGRLAKLRESHDAILEQPDISRIFELREAYRDVGRDLLQLLKFVELN
AIGLRKILKKFDKRFGYRFADYYVKTRANHPYSQLQQVFKHVGVGAVVGAISRNLHELQE
NEGSFYSIYDQPVLPAQDPVVEAINNAVDKLTFSTNFLNFLAQHALIMQDDLVTPSEDTI
DERSYHFNSLLLNLGNTFLYMVNTYIIVPTADDYSMSLGAAATVCGVVIGSMAVAQVFSS
VYFSAWSNKSYFKPLVFSSIALFIGNLMYALAYDANSIALLLLGRVCCGLGSARAVNRRY
ISDCVPLRIRMQASAGFVSASALGMACGPALAGLLQIKFKFYKFTFNQSTLPGWVMAVAW
LFYLVWLCISFREPLRDTEDGEKNNRNETTSDRVESSRVEEGLRLPLLITSGIKPEDEEE
CDESEESPEDSHKPANSFIEAYRLLTPSVKVQLLIYFMLKYSMEILLSESSVITSYYFSW
TTSSVAIFLACLGLTVLPINILVGSYISNMFEDRQILLTSEIIVFLGILFSFNLFVPYTV
PQYVISGLIMFVAAEVLEGVNLSLLSRVMSSRLSKGTYNGGLLSTEAGTLARVVADATIT
LGGYLGRGHLLNATLLPSLVICIGSIVATCCTYNSLY

>09M8U1

MSCDGGKPAPAKLGDEQLAELREIFRSFDQNKDGSLTELELGSLLRSLGLKPSQDQLDTL IQKADRNNNGLVEFSEFVALVEPDLVKCPYTDDQLKAIFRMFDRDGNGYITAAELAHSMA KLGHALTAEELTGMIKEADRDGDGCIDFQEFVQAITSAAFDNAWG

>P17990

MKILIILTILAMATTFATSEMQVNPSVQVQPTQQQPYPESQQPFISQSQQQFPQPQQPFPQQPPPQQPFPQQPPPQQPFPQQQPFPQSQQQCLQQPQHQFPQPTQQFPQRPLLPFTHPFLTFPDQLLPQPPHQSFPQPPQSYPQPPLQPFPQPPQQKYPEQPQQPFPWQQPTIQLYLQQQLNPCKEFLLQQCRPVSLLSYIWSKIVQQSSCRVMQQQCCLQLAQIPEQYKCTAIDSIVHAIFMQQGQRQGVQIVQQQPQPQQVGQCVLVQGQGVVQPQQLAQMEAIRTLVLQSVPSMCNFNVPPNCSTIKAPFVGVVTGVGGO

>P49175

MIPAVADPTTLDGGGARRPLLPETDPRGRAAAGAEQKRPPATPTVLTAVVSAVLLLVLVA
VTVLASQHVDGQAGGVPAGEDAVVVEVAASRGVAEGVSEKSTAPLLGSGALQDFSWTNAM
LAWQRTAFHFQPPKNWMNDPNGPLYHKGWYHLFYQWNPDSAVWGNITWGHAVSRDLLHWL
HLPLAMVPDHPYDANGVWSGSATRLPDGRIVMLYTGSTAESSAQVQNLAEPADASDPLLR
EWVKSDANPVLVPPPGIGPTDFRDPTTACRTPAGNDTAWRVAIGSKDRDHAGLALVYRTE
DFVRYDPAPALMHAVPGTGMWECVDFYPVAAGSGAAAGSGDGLETSAAPGPGVKHVLKAS
LDDDKHDYYAIGTYDPATDTWTPDSAEDDVGIGLRYDYGKYYASKTFYDPVLRRRVLWGW

VGETDSERADILKGWASVQSIPRTVLLDTKTGSNLLQWPVVEVENLRMSGKSFDGVALDR GSVVPLDVGKATQLDIEAVFEVDASDAAGVTEADVTFNCSTSAGAAGRGLLGPFGLLVLA DDDLSEQTAVYFYLLKGTDGSLQTFFCQDELRASKANDLVKRVYGSLVPVLDGENLSVRI LVDHSIVESFAQGGRTCITSRVYPTRAIYDSARVFLFNNATHAHVKAKSVKIWQLNSAYI RPYPATTTSL

>001594

MVESYKKIGSCNKMPCLVILTCIIMSNSLVNNNNMVQAKMTWTMKAAEEAEAVANINCSE
HGRAFLDGIISEGSPKCECNTCYTGPDCSEKIQGCSADVASGDGLFLEEYWKQHKEASAV
LVSPWHRMSYFFNPVSNFISFELEKTIKELHEVVGNAAAKDRYIVFGVGVTQLIHGLVIS
LSPNMTATPDAPESKVVAHAPFYPVFREQTKYFNKKGYVWAGNAANYVNVSNPEQYIEMV
TSPNNPEGLLRHAVIKGCKSIYDMVYYWPHYTPIKYKADEDILLFTMSKFTGHSGSRFGW
ALIKDESVYNNLLNYMTKNTEGTPRETQLRSLKVLKEVVAMVKTQKGTMRDLNTFGFKKL
RERWVNITALLDQSDRFSYQELPQSEYCNYFRRMRPPSPSYAWVKCEWEEDKDCYQTFQN
GRINTQNGVGFEASSRYVRLSLIKTQDDFDQLMYYLKDMVKAKRKTPLIKQLFIDQTETA
SRRPFI

>P59229

MASSGFSGDETAPFFGFLGAAAALVFSCMGAAYGTAKSGVGVASMGVMRPELVMKSIVPV VMAGVLGIYGLIIAVIISTGINPKAKSYYLFDGYAHLSSGLACGLAGLSAGMAIGIVGDA GVRANAQQPKLFVGMILILIFAEALALYGLIVGIILSSRAGQSRAE

>09C8G9

MGFEPLDWYCKPVPNGVWTKTVDYAFGAYTPCAIDSFVLGISHLVLLILCLYRLWLITKD HKVDKFCLRSKWFSYFLALLAAYATAEPLFRLVMRISVLDLDGAGFPPYEAFMLVLEAFA WGSALVMTVVETKTYIHELRWYVRFAVIYALVGDMVLLNLVLSVKEYYGSFKLYLYISEV AVOVAFGTLLFVYFPNLDPYPGYTPVGTENSEDYEYEELPGGENICPERHANLFDSIFFS WLNPLMTLGSKRPLTEKDVWHLDTWDKTETLMRSFQKSWDKELEKPKPWLLRALNNSLGG RFWWGGFWKIGNDCSQFVGPLLLNELLKSMQLNEPAWIGYIYAISIFVGVVLGVLCEAQY FQNVMRVGYRLRSALIAAVFRKSLRLTNEGRKKFQTGKITNLMTTDAESLQQICQSLHTM WSAPFRIIVALVLLYOOLGVASIIGALFLVLMFPIOTVIISKTOKLTKEGLORTDKRIGL MNEVLAAMDTVKCYAWENSFQSKVQTVRDDELSWFRKAQLLSAFNMFILNSIPVLVTVVS FGVFSLLGGDLTPARAFTSLSLFSVLRFPLFMLPNIITOMVNANVSLNRLEEVLSTEERV LLPNPPIEPGOPAISIRNGYFSWDSKADRPTLSNINLDIPLGSLVAVVGSTGEGKTSLIS ${\tt AMLGELPARSDATVTLRGSVAYVPQVSWIFNATVRDNILFGAPFDQEKYERVIDVTALQH}$ DLELLPGGDLTEIGERGVNISGGOKORVSMARAVYSNSDVCILDDPLSALDAHVGOOVFE KCIKRELGOTTRVLVTNOLHFLSOVDKILLVHEGTVKEEGTYEELCHSGPLFORLMENAG KVEDYSEENGEAEVDOTSVKPVENGNANNLOKDGIETKNSKEGNSVLVKREERETGVVSW KVLERYQNALGGAWVVMMLVICYVLTQVFRVSSSTWLSEWTDSGTPKTHGPLFYNIVYAL LSFGOVSVTLINSYWLIMSSLYAAKKMHDAMLGSILRAPMVFFOTNPLGRIINRFAKDMG DIDRTVAVFVNMFMGSIAQLLSTVILIGIVSTLSLWAIMPLLVVFYGAYLYYONTSREIK ${\tt RMDSTTRSPVYAQFGEALNGLSSIRAYKAYDRMAEINGRSMDNNIRFTLVNMAANRWLGI}$ RLEVLGGLMVWLTASLAVMONGKAANOOAYASTMGLLLSYALSITSSLTAVLRLASLAEN SLNSVERVGNYIEIPSEAPLVIENNRPPPGWPSSGSIKFEDVVLRYRPELPPVLHGVSFL ISPMDKVGIVGRTGAGKSSLLNALFRIVELEKGRILIDECDIGRFGLMDLRKVLGIIPOA PVLFSGTVRFNLDPFSEHNDADLWESLERAHLKDTIRRNPLGLDAEVTEAGENFSVGQRQ LLSLARALLRRSKILVLDEATAAVDVRTDVLIQKTIREEFKSCTMLIIAHRLNTIIDCDK

VLVLDSGKVQEFSSPENLLSNGESSFSKMVQSTGTANAEYLRSITLENKRTREANGDDSQ PLEGQRKWQASSRWAAAAQFALAVSLTSSHNDLQSLEIEDDNSILKKTKDAVVTLRSVLE GKHDKEIEDSLNQSDISRERWWPSLYKMVEGLAVMSRLARNRMQHPDYNLEGKSFDWDNV EM

>P23472

MAKRTQAILLLLAISLIMSSSHVDGGGIAIYWGQNGNEGTLTQTCSTRKYSYVNIAFLN KFGNGQTPQINLAGHCNPAAGGCTIVSNGIRSCQIQGIKVMLSLGGGIGSYTLASQADAK NVADYLWNNFLGGKSSSRPLGDAVLDGIDFDIEHGSTLYWDDLARYLSAYSKQGKKVYLT AAPQCPFPDRYLGTALNTGLFDYVWVQFYNNPPCQYSSGNINNIINSWNRWTTSINAGKI FLGLPAAPEAAGSGYVPPDVLISRILPEIKKSPKYGGVMLWSKFYDDKNGYSSSILDSVL FLHSEECMTVL

>P30941

MKCLFLLCLCLVPIVVFSSTFTSKNPINLPSDATPVLDVAGKELDSRLSYRIISTFWGAL GGDVYLGKSPNSDAPCANGIFRYNSDVGPSGTPVRFIGSSSHFGQGIFENELLNIQFAIS TSKLCVSYTIWKVGDYDASLGTMLLETGGTIGQADSSWFKIVKSSQFGYNLLYCPVTSTM SCPFSSDDOFCLKVGVVHONGKRRLALVKDNPLDVSFKOVO

>P46032

MGSIEEEARPLIEEGLILQEVKLYAEDGSVDFNGNPPLKEKTGNWKACPFILGNECCERL AYYGIAGNLITYLTTKLHQGNVSAATNVTTWQGTCYLTPLIGAVLADAYWGRYWTIACFS GIYFIGMSALTLSASVPALKPAECIGDFCPSATPAQYAMFFGGLYLIALGTGGIKPCVSS FGADQFDDTDSRERVRKASFFNWFYFSINIGALVSSSLLVWIQENRGWGLGFGIPTVFMG LAIASFFFGTPLYRFQKPGGSPITRISQVVVASFRKSSVKVPEDATLLYETQDKNSAIAG SRKIEHTDDCQYLDKAAVISEEESKSGDYSNSWRLCTVTQVEELKILIRMFPIWASGIIF SAVYAQMSTMFVQQGRAMNCKIGSFQLPPAALGTFDTASVIIWVPLYDRFIVPLARKFTG VDKGFTEIQRMGIGLFVSVLCMAAAAIVEIIRLHMANDLGLVESGAPVPISVLWQIPQYF ILGAAEVFYFIGQLEFFYDQSPDAMRSLCSALALLTNALGNYLSSLILTLVTYFTTRNGQ EGWISDNLNSGHLDYFFWLLAGLSLVNMAVYFFSAARYKQKKASS

>09SZW5

MAEGEESKKMNLQTSYFDVVGICCSSEVSIVGNVLRQVDGVKEFSVIVPSRTVIVVHDTF
LISPLQIVKALNQARLEASVRPYGETSLKSQWPSPFAIVSGVLLVLSFFKYFYSPLEWLA
IVAVVAGVFPILAKAVASVTRFRLDINALTLIAVIATLCMQDFTEAATIVFLFSVADWLE
SSAAHKASIVMSSLMSLAPRKAVIADTGLEVDVDEVGINTVVSVKAGESIPIDGVVVDGS
CDVDEKTLTGESFPVSKQRESTVMAATINLNGYIKVKTTALARDCVVAKMTKLVEEAQKS
QTKTQRFIDKCSRYYTPAVVVSAACFAVIPVLLKVQDLSHWFHLALVVLVSGCPCGLILS
TPVATFCALTKAATSGFLIKTGDCLETLAKIKIVAFDKTGTITKAEFMVSDFRSLSPSIN
LHKLLYWVSSIECKSSHPMAAALIDYARSVSVEPKPDIVENFQNFPGEGVYGRIDGQDIY
IGNKRIAQRAGCLTDNVPDIEATMKRGKTIGYIYMGAKLTGSFNLLDGCRYGVAQALKEL
KSLGIQTAMLTGDNQDAAMSTQEQLENALDIVHSELLPQDKARIIDDFKIQGPTMMVGDG
LNDAPALAKADIGISMGISGSALATETGDIILMSNDIRKIPKGMRLAKRSHKKVIENVVL
SVSIKGAIMVLGFVGYPLVWAAVLADAGTCLLVILNSMMLLRDEREAVSTCYRASTSSPV
KLEEDEVEDLEVGLLQKSEETSKKSCCSGCCSGPKDNQQK

>Q56XP4

MTMFASLTSKMLSVSTSDHASVVSLNLFVALLCACIVIGHLLEENRWMNESITALLIGLG TGVVILLISRGKNSHLLVFSEDLFFIYLLPPIIFNAGFOVKKKOFFRNFVTIMAFGAIGT VVSCTIISLGAIQFFKKLDIGTFDLGDFLAIGAIFAATDSVCTLQVLNQDETPLLYSLVF
GEGVVNDATSVVLFNAIQSFDLTHLNHEAAFQFLGNFFYLFLLSTGLGVATGLISAYVIK
KLYFGRHSTDREVALMMLMAYLSYMLAELFALSGILTVFFCGIVMSHYTWHNVTESSRIT
TKHAFATLSFLAETFIFLYVGMDALDIEKWRFVSDSPGTSVAVSSILMGLVMLGRAAFVF
PLSFLSNLAKKHQSEKISIKQQVVIWWAGLMRGAVSMALAYNKFTRSGHTELRGNAIMIT
STITVCLFSTMVFGMLTKPLIRYLMPHQKATTSTTSMLSDDSTPKSIHIPLLDGEQLDSF
ELPGSHQDVPRPNSLRGFLMRPTRTVHYYWRQFDDAFMRPVFGGRGFVPFVPGSPTERSS
HDLSKP

>022213

MGLTSSLRFHRQNNKTFLGIFMILVLSCIPGRTNLCSNHSVSTPKELPSSNPSDIRSSLV
SLDLEGYISFDDVHNVAKDFGNRYQLPPLAILHPRSVFDISSMMKHIVHLGSTSNLTVAA
RGHGHSLQGQALAHQGVVIKMESLRSPDIRIYKGKQPYVDVSGGEIWINILRETLKYGLS
PKSWTDYLHLTVGGTLSNAGISGQAFKHGPQINNVYQLEIVTGKGEVVTCSEKRNSELFF
SVLGGLGQFGIITRARISLEPAPHMVKWIRVLYSDFSAFSRDQEYLISKEKTFDYVEGFV
IINRTDLLNNWRSSFSPNDSTQASRFKSDGKTLYCLEVVKYFNPEEASSMDQETGKLLSE
LNYIPSTLFSSEVPYIEFLDRVHIAERKLRAKGLWEVPHPWLNLLIPKSSIYQFATEVFN
NILTSNNNGPILIYPVNQSKWKKHTSLITPNEDIFYLVAFLPSAVPNSSGKNDLEYLLKQ
NQRVMNFCAAANLNVKQYLPHYETQKEWKSHFGKRWETFAQRKQAYDPLAILAPGQRIFQ
KTTGKLSPIOLAKSKATGSPORYHYASILPKPRTV

>000326

MKLLHGLALVFLLAAASCKADEEITCEENNPFTCSNTDILSSKNFGKDFIFGVASSAYQI
EGGRGRGVNVWDGFSHRYPEKAGSDLKNGDTTCESYTRWQKDVDVMGELNATGYRFSFAW
SRIIPKGKVSRGVNQGGLDYYHKLIDALLEKNITPFVTLFHWDLPQTLQDEYEGFLDRQI
IQDFKDYADLCFKEFGGKVKHWITINQLYTVPTRGYAIGTDAPGRCSPMVDTKHRCYGGN
SSTEPYIVAHNQLLAHATVVDLYRTKYKFQKGKIGPVMITRWFLPFDESDPASIEAAERM
NQFFHGWYMEPLTKGRYPDIMRQIVGSRLPNFTEEEAELVAGSYDFLGLNYYVTQYAQPK
PNPYPSETHTAMMDAGVKLTYDNSRGEFLGPLFVEDKVNGNSYYYPKGIYYVMDYFKTKY
GDPLIYVTENGFSTPSSENREQAIADYKRIDYLCSHLCFLRKVIKEKGVNVRGYFAWALG
DNYEFCKGFTVRFGLSYVNWEDLDDRNLKESGKWYQRFINGTVKNAVKQDFLRSSLSSQS
OKKRFADA

>P18417

MANFSESKSMMAVFFMFFLLLLSSSSSSSSSSPILKKIFIESPSYAPNAFTFDSTDKGFY
TSVQDGRVIKYEGPNSGFTDFAYASPFWNKAFCENSTDPEKRPLCGRTYDISYDYKNSQM
YIVDGHYHLCVVGKEGGYATQLATSVQGVPFKWLYAVTVDQRTGIVYFTDVSSIHDDSPE
GVEEIMNTSDRTGRLMKYDPSTKETTLLLKELHVPGGAEISADGSFVVVAEFLSNRIVKY
WLEGPKKGSAEFLVTIPNPGNIKRNSDGHFWVSSSEELDGGQHGRVVSRGIKFDGFGNIL
QVIPLPPPYEGEHFEQIQEHDGLLYIGSLFHSSVGILVYDDHDNKGNSYVSS

>P06673

MKMVIVLVVWLALSAASASAMQMPCPCAGLQGLYGAGAGLTTMMGAGGLYPYAEYLRQPQ CSPLAAAPYYAGCGQTSAMYQPLRQQCCQQQMRMMDVQSVAQQLQMMMQLERAATASSSL YEPALMQQQQQLLAAQGLNPMAMMMAQNMPAMGGLYQYQYQLPSYRTNPCGVSAAIPPYY

>P15478

MATTNSFTILIFMILATTSSTFATLGEMVTVLSIDGGGIKGIIPATILEFLEGOLOEVDN

NTDARLADYFDVIGGTSTGGLLTAMITTPNETNRPFAAAKDIVPFYFEHGPKIFQSSGSI FGPKYDGKYLMQVLQEKLGETRVHQALTEVAISSFDIKTNKPVIFTKSNLAKSPELDAKM YDICYSTAAAPTFFPPHYFATNTSNGDKYEFNLVDGAVATVDDPALLSISVATKLAQVDP KFASIKSLNYKQMLLLSLGTGTTSEFDKTYTAEETAKWGTARWMLVIQKMTSAASSYMTD YYLSTAFQALDSQNNYLRVQENALTGTTTELDDASEANMQLLVQVGEDLLKKSVSKDNPE TYEEALKRFAKLLSDRKKLRANKASY

>08RUW5

MSLKIKFLLLLVLYHHVDSASIVKFLPGFEGPLPFELETGYIGIGEDENVQFFYYFIKSE
NNPKEDPLLIWLNGGPGCSCLGGIIFENGPVGLKFEVFNGSAPSLFSTTYSWTKMANIIF
LDQPVGSGFSYSKTPIDKTGDISEVKRTHEFLQKWLSRHPQYFSNPLYVVGDSYSGMIVP
ALVQEISQGNYICCEPPINLQGYMLGNPVTYMDFEQNFRIPYAYGMGLISDEIYEPMKRI
CNGNYYNVDPSNTQCLKLTEEYHKCTAKINIHHILTPDCDVTNVTSPDCYYYPYHLIECW
ANDESVREALHIEKGSKGKWARCNRTIPYNHDIVSSIPYHMNNSISGYRSLIYSGDHDIA
VPFLATQAWIRSLNYSPIHNWRPWMINNQIAGYTRAYSNKMTFATIKGGGHTAEYRPNET
FIMFORWISGOPL

>004057

MASYHSKAAFLCLFLLVSFNIVSSASNDGLLRVGLKKIKLDPENRLAARVESKDAEILKA
AFRKYNPKGNLGESSDTDIVALKNYLDAQYYGEIAIGTPPQKFTVIFDTGSSNLWVLCEC
LFSVACHFHARYKSSRSSSYKKNGTSASIRYGTGAVSGFFSYDNVKVGDLVVKEQVFIEA
TREPSLTFLVAKFDGLLGLGFQEIAVGNAVPVWYNMVEQGLVKEPVFSFWLNRNVEEEEG
GEIVFGGVDPKHYRGKHTYVPVTQKGYWQFDMGDVLIDGEPTGFCDGGCSAIADSGTSLL
AGPTPVITMINHAIGAKGVVSQQCKAVVAQYGQTIMDLLLSEADPKKICSQINLCTFDGT
RGVSMGIESVVDENAGKSSDSLHDGMCSVCEMTVVWMQNQLRQNQTKERIINYINELCDR
MPSPMGQSAVDCGQLSSMPTVSFTIGGKIFDLAPEEYILKVGEGPVAQCISGFTAFDIPP
PRGPLWILGDVFMGRYHTVFDFGKLRVGSAEAA

>Q9SYM4

MPGNKYNCSSSHIPLSRTERLLRDRELREKRKSNRARNPNDVAGSSENSENDLRLEGDSS ROYVEOYLEGAAAAMAHDDACEROEVRPYNRORLLVVANRLPVSAVRRGEDSWSLEISAG GLVSALLGVKEFEARWIGWAGVNVPDEVGQKALSKALAEKRCIPVFLDEEIVHQYYNGYC NNILWPLFHYLGLPOEDRLATTRSFOSOFAAYKKANOMFADVVNEHYEEGDVVWCHDYHL MFLPKCLKEYNSKMKVGWFLHTPFPSSEIHRTLPSRSELLRSVLAADLVGFHTYDYARHF VSACTRILGLEGTPEGVEDQGRLTRVAAFPIGIDSDRFIRALEVPEVIQHMKELKERFAG RKVMLGVDRLDMIKGIPOKILAFEKFLEENANWRDKVVLLQIAVPTRTDVPEYOKLTSOV HEIVGRINGRFGTLTAVPIHHLDRSLDFHALCALYAVTDVALVTSLRDGMNLVSYEFVAC OEAKKGVLILSEFAGAAOSLGAGAILVNPWNITEVAASIGOALNMTAEEREKRHRHNFHH VKTHTAQEWAETFVSELNDTVIEAQLRISKVPPELPQHDAIQRYSKSNNRLLILGFNATL TEPVDNOGRRGDQIKEMDLNLHPELKGPLKALCSDPSTTIVVLSGSSRSVLDKNFGEYDM WLAAENGMFLRLTNGEWMTTMPEHLNMEWVDSVKHVFKYFTERTPRSHFETRDTSLIWNY KYADIEFGRLQARDLLQHLWTGPISNASVDVVQGSRSVEVRAVGVTKGAAIDRILGEIVH SKSMTTPIDYVLCIGHFLGKDEDVYTFFEPELPSDMPAIARSRPSSDSGAKSSSGDRRPP SKSTHNNNKSGSKSSSSSNSNNNNKSSQRSLQSERKSGSNHSLGNSRRPSPEKISWNVLD LKGENYFSCAVGRTRTNARYLLGSPDDVVCFLEKLADTTSSP

>022218

MSNLLRDFEVEAKNPSLEARORWRSSVSIVKNRTRRFRNIRDLDKLADYENKKHOIOEKI

RVAFFVQKAALHFIDAAARPEYKLTDEVKKAGFSIEADELASMVRKNDTKSLAQKGGVEE LAKKVSVSLSEGIRSSEVPIREKIFGENRYTEKPARSFLMFVWEALHDITLIILMVCAVV SIGVGVATEGFPRGMYDGTGILLSILLVVMVTAISDYKQSLQFRDLDREKKKIIVQVTRD GSRQEISIHDLVVGDVVHLSIGDQVPADGIFISGYNLEIDESSLSGESEPSHVNKEKPFL LSGTKVONGSAKMLVTTVGMRTEWGKLMETLVDGGEDETPLOVKLNGVATIIGKIGLSFA VLTFVVLCIRFVLDKATSGSFTNWSSEDALTLLDYFAISVTIIVVAVPEGLPLAVTLSLA FAMKKLMSDRALVRHLAACETMGSSTCICTDKTGTLTTNHMVVNKVWICDKVQERQEGSK ESFELELSEEVQSTLLQGIFQNTGSEVVKDKDGNTQILGSPTERAILEFGLLLGGDFNTQ RKEHKILKIEPFNSDKKKMSVLIALPGGGARAFCKGASEIVLKMCENVVDSNGESVPLTE ERITSISDIIEGFASEALRTLCLVYKDLDEAPSGELPDGGYTMVAVVGIKDPVRPGVREA VQTCQAAGITVRMVTGDNISTAKAIAKECGIYTEGGLAIEGSEFRDLSPHEMRAIIPKIQ VMARSLPLDKHTLVSNLRKIGEVVAVTGDGTNDAPALHEADIGLAMGIAGTEVAKENADV IIMDDNFKTIVNVARWGRAVYINIOKFVOFOLTVNVVALIINFVSACITGSAPLTAVOLL ${\tt WVNMIMDTLGALALATEPPNEGLMKRAPIARTASFITKTMWRNIAGQSVYQLIVLGILNF}$ AGKSLLKLDGPDSTAVLNTVIFNSFVFCOVFNEINSREIEKINVFKGMFNSWVFTWVMTV TVVFQVIIVEFLGAFASTVPLSWOHWLLSILIGSLNMIVAVILKCVPVESRHHHDGYDLL **PSGPSSSNSA**

>P52706

MEKSTMSAILLVLHLFVLLLQYSEVHSLATTSNHDFSYLRFAYDATDLELEGSYDYVIVG
GGTSGCPLAATLSEKYKVLVLERGSLPTAYPNVLTADGFVYNLQQEDDGKTPVERFVSED
GIDNVRGRVLGGTSMINAGVYARANTSIYSASGVDWDMDLVNKTYEWVEDTIVFKPNYQP
WQSVTGTAFLEAGVDPNHGFSLDHEAGTRITGSTFDNKGTRHAADELLNKGNSNNLRVGV
HASVEKIIFSNAPGLTATGVIYRDSNGTPHRAFVRSKGEVIVSAGTIGTPQLLLLSGVGP
ESYLSSLNIPVVLSHPYVGQFLHDNPRNFINILPPNPIEPTIVTVLGISNDFYQCSFSSL
PFTTPPFSFFPSTSYPLPNSTFAHFASKVAGPLSYGSLTLKSSSNVRVSPNVKFNYYSNP
TDLSHCVSGMKKIGELLSTDALKPYKVEDLPGIEGFNILGIPLPKDQTDDAAFETFCRES
VASYWHYHGGCLVGKVLDGDFRVTGIDALRVVDGSTFPYTPASHPQGFYLMLGRYVGIKI
LQERSASDLKILDSLKSAASLVL

>Q9M3D6

MNLSLSGRKIAMTRVSAETQYITPIGSPTLDELLKDCDSFRKGDSGDGVKSDDPAHHIID
VEALYVKPVPYVLNFNNLQYDVTLRRRFGFSRQNGVKTLLDDVSGEASDGDILAVLGASG
AGKSTLIDALAGRVAEGSLRGSVTLNGEKVLQSRLLKVISAYVMQDDLLFPMLTVKETLM
FASEFRLPRSLSKSKKMERVEALIDQLGLRNAANTVIGDEGHRGVSGGERRRVSIGIDII
HDPIVLFLDEPTSGLDSTNAFMVVQVLKRIAQSGSIVIMSIHQPSARIVELLDRLIILSR
GKSVFNGSPASLPGFFSDFGRPIPEKENISEFALDLVRELEGSNEGTKALVDFNEKWQQN
KISLIQSAPQTNKLDQDRSLSLKEAINASVSRGKLVSGSSRSNPTSMETVSSYANPSLFE
TFILAKRYMKNWIRMPELVGTRIATVMVTGCLLATVYWKLDHTPRGAQERLTLFAFVVPT
MFYCCLDNVPVFIQERYIFLRETTHNAYRTSSYVISHSLVSLPQLLAPSLVFSAITFWTV
GLSGGLEGFVFYCLLIYASFWSGSSVVTFISGVVPNIMLCYMVSITYLAYCLLLSGFYVN
RDRIPFYWTWFHYISILKYPYEAVLINEFDDPSRCFVRGVQVFDSTLLGGVSDSGKVKLL
ETLSKSLRTKITESTCLRTGSDLLAQQGITQLSKWDCLWITFASGLFFRILFYFALLFGS
RNKRT

>Q8VYK7

MAKSSFKQEHDLEKRRAEAARIREKYPDRIPVIVEKAEKSDIPTIDKKKYLVPADLTVGQ

FVYVIRKRIKLSAEKAIFIFVDNVLPPAGALMSSVYEEKKDDDGFLYVTYSGENTFGFGS

>P22895

MGFLVLLLFSLLGLSSSSSISTHRSILDLDLTKFTTQKQVSSLFQLWKSEHGRVYHNHEE EAKRLEIFKNNSNYIRDMNANRKSPHSHRLGLNKFADITPQEFSKKYLQAPKDVSQQIKM ANKKMKKEQYSCDHPPASWDWRKKGVITQVKYQGGCGRGWAFSATGAIEAAHAIATGDLV SLSEQELVDCVEESEGSYNGWQYQSFEWVLEHGGIATDDDYPYRAKEGRCKANKIQDKVT IDGYETLIMSDESTESETEQAFLSAILEQPISVSIDAKDFHLYTGGIYDGENCTSPYGIN HFVLLVGYGSADGVDYWIAKNSWGFDWGEDGYIWIQRNTGNLLGVCGMNYFASYPTKEES ETLVSARVKGHRRVDHSPL

>039962

MKMKRSPYCFCCSFALLLLVSFLKDRHFCSADPTDGFTEVPLTEDNFVIQKPYDKPLNDR YSYKNGIRRLWVYENDKPFKVGSPTRPRTEIRIKGHDYSSGVWQFEGQVHVPEGTSGVTV MQVFGAVNKATALQLRVYNGDLKSYKSNSVATDIYNKWLRVNVIHKVGKGEITVFINGQQ KLVVNDDGPAEHYFKCGVYAAPDGSSNYMESRWKNIKLYKSDNKLEGCNNNHGTWLVQ >08H1Z0

MVAFLSAWPWENFGNLKYLLYAPLAAQVVYSWVYEEDISKVLWCIHILIICGLKALVHEL WSVFNNMLFVTRTLRINPKGIDFKQIDHEWHWDNYIILQAIIVSLICYMSPPLMMMINSL PLWNTKGLIALIVLHVTFSEPLYYFLHRSFHRNNYFFTHYHSFHHSSPVPHPMTAGNATL LENIILCVVAGVPLIGCCLFGVGSLSAIYGYAVMFDFMRCLGHCNVEIFSHKLFEILPVL RYLIYTPTYHSLHHQEMGTNFCLFMPLFDVLGDTQNPNSWELQKKIRLSAGERKRVPEFV FLAHGVDVMSAMHAPFVFRSFASMPYTTRIFLLPMWPFTFCVMLGMWAWSKTFLFSFYTL RNNLCQTWGVPRFGFQYFLPFATKGINDQIEAAILRADKIGVKVISLAALNKNEALNGGG TLFVNKHPDLRVRVVHGNTLTAAVILYEIPKDVNEVFLTGATSKLGRAIALYLCRRGVRV LMLTLSMERFQKIQKEAPVEFQNNLVQVTKYNAAQHCKTWIVGKWLTPREQSWAPAGTHF HQFVVPPILKFRRNCTYGDLAAMKLPKDVEGLGTCEYTMERGVVHACHAGGVVHMLEGWK HHEVGAIDVDRIDLVWEAAMKYGLSAVSSLTN

>039119

MATTMTRVSVGVVLFVLLVSLVAVSAARSGPDDVIKLPSQASRFFRPAENDDDSNSGTRW
AVLVAGSSGYWNYRHQADICHAYQLLRKGGLKEENIVVFMYDDIANNYENPRPGTIINSP
HGKDVYQGVPKDYTGDDVNVDNLFAVILGDKTAVKGGSGKVVDSGPNDHIFIFYSDHGGP
GVLGMPTSPYLYANDLNDVLKKKHALGTYKSLVFYLEACESGSIFEGLLPEGLNIYATTA
SNAEESSWGTYCPGEEPSPPPEYETCLGDLYSVAWMEDSGMHNLQTETLHQQYELVKRRT
APVGYSYGSHVMQYGDVGISKDNLDLYMGTNPANDNFTFADANSLKPPSRVTNQRDADLV
HFWEKYRKAPEGSARKTEAQKQVLEAMSHRLHIDNSVILVGKILFGISRGPEVLNKVRSA
GQPLVDDWNCLKNQVRAFERHCGSLSQYGIKHMRSFANICNAGIQMEQMEEAASQACTTL
PTGPWSSLNRGFSA

>Q9SCB9

MATRYWIAALPVADDNVAAGKTALWARLQEAISRHSFDTPLYRFTVPDLRPGTLDSLLAL SDDLVKSNIFIEGVSHKIRRQIEDLERAGGVEPGTLTVDGVPVDSYLTRFVWDEGKYPVN APLKETVASIQSQVAKIEDDMKVRVAEYGNVKSQLGAINRKQTGSLAVRDLSNLIKPEDM VTSEHLVTLLSIVPKYSQKDWLASYESLDTFVVPRSSKKLYEDNEYALYTVTLFAKVVDN FKVHAREKGFQIRDFEYSPEAQESRKQELEKLLQDQEVMRTSPIAMGAMLATVRVFSSWD AFSSAVRVFVESILRYGSACTVPVCCPSTIYKEREKSKEHLGRAMRQYQOLLEI

>P26587

MATSARRAYGFGRADEATHPDSIRATLAEFLSTFVFVFAAEGSILSLDKLYWEHAAHAGT
NTPGGLILVALAHAFALFAAVSAAINVSGGHVNPAVTFGALVGGRVTAIRAIYYWIAQLL
GAILACLLLRLTTNGMRPVGFRLASGVGAVNGLVLEIILTFGLVYVVYSTLIDPKRGSLG
IIAPLAIGLIVGANILVGGPFSGASMNPARAFGPALVGWRWHDHWIYWVGPFIGSALAAL
IYEYMVIPTEPPTHHAHGVHOPLAPEDY

>P11827

MMRARFPLLLLGVVFLASVSVSFGIAYWEKQNPSHNKCLRSCNSEKDSYRNQACHARCNL LKVEEEECEEGQIPRPRPQHPERERQQHGEKEEDEGEQPRPFPFPRPRQPHQEEEHEQK EEHEWHRKEEKHGGKGSEEEQDEREHPRPHQPHQKEEEKHEWQHKQEKHQGKESEEEEED QDEDEEQDKESQESEGSESQREPRRHKNKNPFHFNSKRFQTLFKNQYGHVRVLQRFNKRS QQLQNLRDYRILEFNSKPNTLLLPHHADADYLIVILNGTAILTLVNNDDRDSYNLQSGDA LRVPAGTTFYVVNPDNDENLRMIAGTTFYVVNPDNDENLRMITLAIPVNKPGRFESFFLS STQAQQSYLQGFSKNILEASYDTKFEEINKVLFGREEGQQQGEERLQESVIVEISKKQIR ELSKHAKSSSRKTISSEDKPFNLGSRDPIYSNKLGKLFEITQRNPQLRDLDVFLSVVDMN EGALFLPHFNSKAIVVLVINEGEANIELVGIKEQQQRQQQEEQPLEVRKYRAELSEQDIF VIPAGYPVMVNATSDLNFFAFGINAENNQRNFLAGSKDNVISQIPSQVQELAFPRSAKDI ENLIKSQSESYFVDAQPQQKEEGNKGRKGPLSSILRAFY

>09FRK5

MADSQNGKSAFFFFFVSLILLFLSPSYSDVTASESDPIPYENSDASPGVVTSSESDRQGV
SLHRLEELVRNLTELVARLDAKLSETPFKVKKEITRDEIEEKAKAFSVTKYSPFWSERFE
FTSAVKLDSEATCINVLPFRDHEGLSKYFAVGDSSGRVFVFLRNGDVLVEFFTTCDSPIT
AMVSYMSVYKNESFVVTGHQSGVILLHRLREGSIGEDLNSAVMENVGKFDGTEDGLQVTL
LEVHHVGRVRYILATDLSGKLTVFTENRTVYGSVSPTSRPLVFLKQRLLFLTETGAGSLD
LRSMKIRESECEGLNHSLARSYVFDASERTKAYGFTSEGEIIHVLLLGDIMNFKCRVRSK
KKVQMEEPVALQAIKGYLLIVNQEKVFVYNVSTQHYVRTTGPRLLFPAALEDIRSTFLSH
RESTKTTDHQKLEKVTPLIASDREKLLVMGLGDGYVATYKSKLPISKAEFNTMLWSSPVF
FFILFLFGAWHFFSKKKESLTAWGPDDPFSSTTMSSSSTTTAQNSSAFSESTRRNDDHMD
LRRRYVSPSRYPPGAATGAYRSVGSNDPSSRAPVETTNYRTTAQEMKYRGGSGLDSGGFG
KRRESLFGNNKALDDES

>08LBL1

MSSDAARTPLLPTEKIDTMAQDFNLNSRTSSSRKRRLRRSRSAPRGDCMYNDDVKIDEPP
PHPSKIPMFSDLNPNLRRVIMFLALYLTIGTLCFYLVRDQISGHKTSGVVDALYFCIVTM
TTVGYGDLVPNSSASRLLACAFVFSGMVLVGHLLSRAADYLVEKQEALLVRAFHLRQSFG
PTDILKELHTNKLRYKCYATCLVLVVLFIVGTIFLVMVEKMPVISAFYCVCSTVTTLGYG
DKSFNSEAGRLFAVFWILTSSICLAQFFLYVAELNTENKQRALVKWVLTRRITNNDLEAA
DLDEDGVVGAAEFIVYKLKEMGKIDEKDISGIMDEFEQLDYDESGTLTTSDIVLAQTTSQ
IOR

>Q8GTM0

MARSLCFMAFAILAMMLFVAYEVQARECKTESNTFPGICITKPPCRKACISEKFTDGHCS KILRRCLCTKPCVFDEKMTKTGAEILAEEAKTLAAALLEEEIMDN

>P93654

MSFQDLESGRGRSTRKFNGGRQDSTQAVASGIFQINTGVSTFQRLVNTLGTPKDTPELRE KLHKTRLHIGOLVKDTSAKLKEASETDHOSGVNPSKKIADAKLARDFQAVLKEFQKAQOT

AAERETTYTPFVPQSALPSSYTAGEVDKVPEQRAQLQESKRQELVLLDNEIAFNEAVIEE REQGIQEIHQQIGEVNEIFKDLAVLVNDQGVMIDDIGTHIDNSRAATSQGKSQLVQAAKT QKSNSSLTCLLLVIFGIVLLIVIIVLAA

>09ZT63

MESSSPHHSHIVEVNVGKSDEERIIVASKVCGEAPCGFSDSKNASGDAHERSASMRKLCI
AVVLCLVFMSVEVVGGIKANSLAILTDAAHLLSDVAAFAISLFSLWAAGWEATPRQTYGF
FRIEILGALVSIQLIWLLTGILVYEAIIRIVTETSEVNGFLMFLVAAFGLVVNIIMAVLL
GHDHGHSHGHGHGHDHHNHSHGVTVTTHHHHHDHEHGHSHGHGEDKHHAHGDVTEQLL
DKSKTQVAAKEKRKRNINLQGAYLHVLGDSIQSVGVMIGGAIIWYNPEWKIVDLICTLAF
SVIVLGTTINMIRNILEVLMESTPREIDATKLEKGLLEMEEVVAVHELHIWAITVGKVLL
ACHVNIRPEADADMVLNKVIDYIRREYNISHVTIQIER

>P19171

MPPQKENHRTLNKMKTNLFLFLIFSLLLSLSSAEQCGRQAGGALCPNGLCCSEFGWCGNT EPYCKQPGCQSQCTPGGTPPGPTGDLSGIISSSQFDDMLKHRNDAACPARGFYTYNAFIT AAKSFPGFGTTGDTATRKKEVAAFFGQTSHETTGGWATAPDGPYSWGYCFKQEQNPASDY CEPSATWPCASGKRYYGRGPMQLSWNYNYGLCGRAIGVDLLNNPDLVANDAVIAFKAAIW FWMTAQPPKPSCHAVIAGQWQPSDADRAAGRLPGYGVITNIINGGLECGRGQDGRVADRI GFYQRYCNIFGVNPGGNLDCYNQRSFVNGLLEAAI

>P58908

ADTIVAVELDSYPNTDIGDPNYPHIGIDIKSIRSKSTARWNMQTGKVGTVHISYNSVAKR LSAVVSYTGSSSTTVSYDVDLNNVLPEWVRVGLSATTGLYKETNTILSWSFTSKLKTNSI ADANSLHFTFNQFSQNPKDLILQGDATTDSDGNLELTKVSSSGDPQGNSVGRALFYAPVH IWEKSAVVASFDATFTFLIKSPDRDPADGITFFIANPDTSIPSGSGGRLLGLFPDAN >039649

MARLTSIIALFAVALLVADAYAYRTTITTVEVEENRQGREERCRQMSAREELRSCEQYLR QQSRDVLQMRGIENPWRREGGSFDECCRELKNVDEECRCDMLEEIAREEQRQARGQEGRQ MLQKARNLPSMCGIRPQRCDF

>08LG88

MNGGDVTVAGSDDLKSPLLPVVHNDEPFERQTVGQQLRTIFTPKNCYIALGPLLCAVVCL
CVDLGGDETTTARNMLGVLVWMFAWWLTEAVPMPITSMTPLFLFPLFGISAADDVANSYM
DDVISLVLGSFILALAVEHYNIHRRLALNITLVFCVEPLNAPLLLLGICATTAFVSMWMH
NVAAAVMMMPVATGILQRLPSSSSTTEVVHPAVGKFSRAVVLGVIYSAAVGGMSTLTGTG
VNLILVGMWKSYFPEADPISFSQWFFFGFPLALCIFVVLWCVLCVMYCPKGAGQALSPYL
HKSHLRRELDLLGPMNFAEKMVLAVFGGLVVLWMTRNITDDIPGWGRIFAGRAGDGTVSV
MMATLLFIIPSNIKKGEKLMDWNKCKKLPWNIVLLLGAGFAIADGVRTSGLAEVLSKGLV
FLETAPYWAIAPTVCLIAATITEFTSNNATTTLLVPLLIEIAKNMGIHPLLLMVPGAIGA
OFAFLLPTGTPSNVVGFTTGHIEIKDMIKTGLPLKIAGTIFLSILMPTLGAYVFASMGGV

>Q67VS5

MKSPSPVDPESPSSPDCKGGSSSKRRRLPWRMTMSLAYQSLGVVYGDLSTSPLYVYKAAF
AEDIQHSETNEEILGVLSFVFWTLTLVPLLKYVCVVLRADDNGEGGTFALYSLLCRHARA
ALLPPGGGGGGEPGDEDQFLDAGADKKAAANGNALALSGRGGGGGAAAGVRRLLERHKV
LQRVLLVLALVGTCMVIGDGVLTPAISVFSAVSGLELSMEKHQHKYVEVPIACFVLVCLF
CLOHYGTHRVGFLFAPIVITWLLCISMIGVYNIVHWEPNVYRALSPYYMYKFLKKTORGG

WMSLGGILLCITGSEAMFADLGHFNQLSIQIAFTCMVYPSLILAYMGQAAYLCKHHIIES
DYRIGFYVSVPEKIRWPVLAIAILAAVVGSQAVITGTFSMIKQCTALGCFPRVKIVHTSD
KVHGQIYIPEINWILMILCLAITIGFRDTKHLGNASGLAVITVMLVTTCLMSLVIVLCWH
KSIFLAFGFIIFFGTIEALYFSASLIKFREGAWVPIVLAFIFMAIMCIWHYGTIKKYEFD
LQNKVSINWLLGLSPNLGIVRVRGIGLIHTELDSGIPAIFSHFVTNLPAFHQVLIFLCIK
NVPIPHVSPEERFLVGRIGPKEYRIYRCIVRYGYHDVHKDDQEFEKELVCSVAEFIRSGA
AAAADAAASSKPKNVCGGGAEESEKEEEERMSVIPSGSIRMMEEDGGAGAPSSEDTVGGS
GSGSGRGSSRGGGGAREIMSPSPSPPPVVVAPRKRVRFVLPAASPRPDAGVREELQELMD
AREAGMAFILGHSYVKAKSGSSFFRRLVINFCYDFLRRNSRGPNYAVTIPHASTLEVGMI

>038882

MAQHLLHGTLHATIYEVDALHGGGVRQGFLGKILANVEETIGVGKGETQLYATIDLQKAR
VGRTRKIKNEPKNPKWYESFHIYCAHLASDIIFTVKDDNPIGATLIGRAYIPVDQVINGE
EVDQWVEILDNDRNPIQGGSKIHVKLQYFHVEEDRNWNMGIKSAKFPGVPYTFFSQRQGC
KVSLYQDAHIPDNFVPRIPLAGGKNYEPQRCWEDIFDAISNAKHLIYITGWSVYAEIALV
RDSRRPKPGGDVTIGELLKKKASEGVRVLLLVWDDRTSVDVLKKDGLMATHDEETENFFR
GSDVHCILCPRNPDDGGSIVQSLQISTMFTHHQKIVVVDSEMPSRGGSEMRRIVSFVGGI
DLCDGRYDTPFHSLFRTLDTVHHDDFHQPNFTGAAITKGGPREPWHDIHSRLEGPIAWDV
MYNFEQRWSKQGGKDILVKLRDLSDIIITPSPVMFQEDHDVWNVQLFRSIDGGAAAGFPE
SPEAAAEAGLVSGKDNIIDRSIQDAYIHAIRRAKDFIYVENQYFLGSSFAWAADGITPED
INALHLIPKELSLKIVSKIEKGEKFRVYVVVPMWPEGLPESGSVQAILDWQRRTMEMMYK
DVIQALRAQGLEEDPRNYLTFFCLGNREVKKDGEYEPAEKPDPDTDYMRAQEARRFMIYV
HTKMMIVDDEYIIIGSANINQRSMDGARDSEIAMGGYQPHHLSHRQPARGQIHGFRMSLW
YEHLGMLDETFLDPSSLECIEKVNRISDKYWDFYSSESLEHDLPGHLLRYPIGVASEGDI
TELPGFEFFPDTKARILGTKSDYLPPILTT

>P31414

MVAPALLPELWTEILVPICAVIGIAFSLFQWYVVSRVKLTSDLGASSSGGANNGKNGYGD
YLIEEEEGVNDQSVVAKCAEIQTAISEGATSFLFTEYKYVGVFMIFFAAVIFVFLGSVEG
FSTDNKPCTYDTTRTCKPALATAAFSTIAFVLGAVTSVLSGFLGMKIATYANARTTLEAR
KGVGKAFIVAFRSGAVMGFLLAASGLLVLYITINVFKIYYGDDWEGLFEAITGYGLGGSS
MALFGRVGGGIYTKAADVGADLVGKIERNIPEDDPRNPAVIADNVGDNVGDIAGMGSDLF
GSYAEASCAALVVASISSFGINHDFTAMCYPLLISSMGILVCLITTLFATDFFEIKLVKE
IEPALKNQLIISTVIMTVGIAIVSWVGLPTSFTIFNFGTQKVVKNWQLFLCVCVGLWAGL
IIGFVTEYYTSNAYSPVQDVADSCRTGAATNVIFGLALGYKSVIIPIFAIAISIFVSFSF
AAMYGVAVAALGMLSTIATGLAIDAYGPISDNAGGIAEMAGMSHRIRERTDALDAAGNTT
AAIGKGFAIGSAALVSLALFGAFVSRAGIHTVDVLTPKVIIGLLVGAMLPYWFSAMTMKS
VGSAALKMVEEVRRQFNTIPGLMEGTAKPDYATCVKISTDASIKEMIPPGCLVMLTPLIV
GFFFGVETLSGVLAGSLVSGVQIAISASNTGGAWDNAKKYIEAGVSEHAKSLGPKGSEPH
KAAVIGDTIGDPLKDTSGPSLNILIKLMAVESLVFAPFFATHGGILFKYF