

UniprotKB ID	Entry name	organism	full name	oglcnacscore	oglcnac sites	phosphorylation sites	PMIDS	sequence	intracellular	extracellular	cytosol	nucleus	mitochondrion	en re
Q8WZ42	TITIN_HUMAN	Homo sapiens	Titin	29.37524	T671;T826;S1571;T3501;S4651;T4659;S7330;S7613;S10385;S10781;T12007;S13236;T14312;T14674;T18269;S28157;S28450;S33976	S263;S265;T267;S6920;S9122;S11503;T12007;S12009;S12022;T30443;T32341;S33245;S33247;S33602;S33614	30379171;26374642;28411811;31637018;29237092;30059200;38253038;25367160;37217939;29351928	MTTQAPTFTQPLQSVVVLEGSTATF EAHISGFPEVPSWFRDQGVISTSTL PGVQISFSDGRAKLTIPAVTKANSGR YSLKATNGSQATSTAEELVKAETAP PNFVQRLQSMTVRQGSQVRLQVRV TGIPTPVVKFYRDGAEIQSSLDQFISQ EGDLYSLLIAEAYPEDSGTYSVNATN SVGRATSTAEELLVQGEVEVPKAKTKT IVSTAQISESRQTRIEKKIEAHFDARS IATVEMVIDGAAGQQLPHKTPPRIPP KPKSRSPTPPSIAAKAQLARQSPSPI RHSPPVVRHVRAPTSPVRSVSPAAR ISTSPIRSRSPLLMRKTQASTVATG PEVPPPWKQEGYVASSSEAEEMRETT LTTSTQIRTEERWEGRYGVQEQVTIS GAAGAAASVSASASYAAEAVATGAK EVKQDADKSAAVATVVAAVDMARVR EPVISAVEQTAQRITTTAVHIQPAQE QVRKEAEKTAVTKVVAADKAKEQE LKSRTKEVITTKQEQMHVTHEQIRK ETEKTFFVKVVISAAKAKEQETRISE EITKKQKQVTQEAIRQETITTAASMV VVATAKSTKLETVPGAQEETTTQD QMHLSEYKIMKETRKTVPKVVIVATP KVKEQDLVSRGREGITTKREQVQITQ EKMRKAEKTAALSTIAVATAKAKEQ ETILRTRETMATRQEQIQVTHGKVD VGKAAEAVATVVAAVDQARVREPRE PGHLEESYAQQTTLEYGKERISAAK VAEPPQRPASEPHVVPKAVKPRVIQA PSETHIKTTDQKGMHISSQIKKTTDL TTERLVHVDKRPTASPHFTVSKISV PKTEHGYEASIAGSAIATLQKELSAT SSAQKITKSVKAPTVPKSETRVRAEP TPLPQFPFADTPDTYKSEAGVEVKKE VGVSTGTTVREERFEVLHGREAKVT ETARVPAPVEIPVTPPLVSLGKNVT VIEGESVTLTECHISGYSPPTVWYRE DYQIESSIDFQITFQSGIARLMIREAF AEDSGRFTCSAVNEAGVTSTSCYLA VQVSEEFEKETTAVTEKFTTEEKRFV ESRDVVMTDTSLTEEQAGGPEPAAP YFITKPVVQKLVEGGSVVFQCGQVGG NPKPHVYWKSGVPLTTGYRYKVS NKQTECKLVISMTPADDAGEYTTIV RNKHGETSASASLLEEADYELLMKS QOEMLYQTOVTAQVQEPKVGETAPG FVYSEYEKEYEKEQALIRKMAKDT VVVRTYVEDQEFHISSFEERLIKEIEY RIUKTTLEELLEEDGEEKMAVDISES EAVESGFDSRIKNYRILEGMGVTFH CKMSGYPLPKIAWYKDGKRIKHGER YQMDFLQDGRASLRIPVVLPEDEGIY TAFASNIKNAICSGKLYVEPAAPLG APTYIPTLEPVSRIKSLSPRSVRSPIR MSPARMSPARMSPARMSPARMSPG RRLEETDESQERLYKPVFVLPVVF KCLEGTARFDLKVGRMPMPETFWF HDGQQIVNDYTHKVVIKEDGTQSLII VPATPSDSGEWTVVAQNRAGRSSIS VILTVEAVEHQVKPMFVEKLNKVN KEGSRLEMKVRATGNPNPDIVWLK NSDIIVPHKYPKIRIEGKGEAALKID STVSQDSAWYTATAINKAGRDTTRC KVNVEVEFAEPEPERKLIIPRGTYRA KEIAAPELEPLHLRYGQEQWEEGDL YDKEKQKQKPFKFKKLTSLRLKRFGP AHFECRLTPIGDPTMVVWELHDGKP LEAANRLRMINEFGYCSLDYGVAYS RDSGIITCRATNKYGTDHTSATLIVK DEKSLVEESQLPEGRKGLQRIEELER MAHEGALTGVTTDQKEKQKPDIVLY PEPVRVLEGETARFRVTVGYQPK VNWYLNGLIRKSKFRVRYDGIHY LDIVCKSYDTEGKVTAEENPEGVIE HKVKLEIQREDFRSVLRRAPPEPRP EFHVHEPGKLFQFEVQKVDPRVDTTE TKEVVKLKRAERITHEKVPSESEELR SKFKRRTEEGYEAITAVELKSRKKD ESYEELLRKTKDELLHWTKELTEEE	None	None	None	None	None	N

KKALAEEGKITIPTFKPKDIELSPSME  
APKIFERIQSQTVGQSDAHFRVRVV  
GKPDPECEWYKNGVKIERSDRIVWY  
WPEDNVCELVIRDVTAEDSASIMVK  
AINIAGETSSHAFLLVQAKLITFTQ  
ELQDVVAKEKDTMATFECETSEPFV  
KVWYKDGMEVHEGDKYRMHSDR  
KVHFLSILTIDTDAEDYSCVLVEDE  
NVKTTAKLIVEGAVVEFVKELQDIEV  
PESYSGELECIVSPENIEGKWYHND  
VELKSNKGYTTSRRGRQNLTVKDV  
TKEDQGEYSFVIDGKKTCKLKMKP  
RPIAILQGLSDQKVCEDIVQLEVKV  
SLESVEGVWMKDGQEVQPSDRVHI  
VIDKQSHMLLIEDMTKEDAGNYSFT  
IPALGLSTSGRVSVYSVDVITPLKDV  
NVIEGTKAVLECKVSPDVTSVKWY  
LNDEQIKPDDRVAIVKGTQORLVIN  
RTHASDEGPYKLIVGRVETNCNLSV  
EKIKIIRGLRDLTCTETQNVVFEVELS  
HSGIDVLWNFKDKEIKPSSKYKIEAH  
GKIYKLTVLNMMKDDGKTYFYAGE  
NMTSGKLTVAGGAIKPLTDQTVAE  
SQEAVFECEVANPDSKGEWLRDGG  
HLPLTNNIRSESDGHKRRLIIAATKL  
DDIGEYTYKVATSKTSAKLKVEAVKI  
KKTLLNLTVTETQDAVFTVELTHPN  
VKGVQWIKNGVLESNEKYAISVKG  
TIYSLRIKNCIVDESIVYGFRLGRLGA  
SARLHVETVKIIKPKDVTALENATV  
AFEVSVSHDTPVVKWFHKSVEIKPS  
DKHRLVSEKRVHKLMLQNISPSDAG  
EYTAVVQGLECKAKLFVETLHITKTM  
KNIEVPETKTASFCEVSHFNVPSM  
WLKNGVEIEMSEKFKIVVQGLHQL  
IIMNTSTEDSAEYTFVCGNDQVSATL  
TVTPIMITSMLKDINAEEKDTITFEVT  
VNYEGISYKWLKNGVEIKSTDKCQM  
RTKKLTHSLNIRNVHFGDAADYTFV  
AGKATSTATLYVEARHIEFRKHIDI  
KVLEKKRAMFECEVSEPDITVQWM  
KDDQELQITDRIKIQKEKYVHRLIPS  
TRMSDAGKYTVVAGGNVSTAKLFVE  
GRDVRIRSIKKEVQVIEKORAVVEFE  
VNEDDVAHWYKDGEIINFQVQER  
HKYVVERRIHRMFISETRQSDAGEY  
TFVAGRNRSSVTLYVNAPEPPQVLQ  
ELQPVTVQSGKPARFCAVISGRPPQK  
ISWYKEEQLLSTGFKCKFLHDGQEY  
TLLLIEAFPEDAAVYTCEAKNDYGVA  
TTSASLSVEPEVSPDQEMPVYPPA  
IITPLQDITVTEGQPARFQCRVSGTD  
LKVSWYSKDKKIKPSRFRMTQFED  
TYQLEIAEAYPEDEGTYTFVASNAV  
QVSSANLSLEAPESILHERIEQEI  
MEMKEFSSSFLSAEEEGLHSAELQL  
SKINETLELSESPVYPTKFDSEKEG  
TGPIFIKEVSNADISMGDVATLSVTVI  
GIPKPKIQWFFNGVLLTPSADYKFVF  
DGDDHSLIILFTKLEDEGEYTCMAS  
NDYKGTICSAYLKINSKGEHGDDET  
ESAVAKSLEKLGGPCPPHFLKELKPI  
RCAQGLPAIFEYTVVGEPAPTVWFK  
ENKQLCTSVYIHHNPNNGSGTFIVN  
DPQREDSGLYICKAENMLGESTCAA  
ELLVLEEDTDMTDPCKAKSTPEAP  
EDFPQTPKGPVEALDSEQEIATFV  
KDTILKAALITEENQQLSYEHIAKAN  
ELSSQLPLGAQELQSILEQDKLTPES  
TREFLCINGSIHFPQLKEPSPNLQLO  
IVQSQKTFKSGILMPEEPETQAVLS  
DTEKIFPSAMSIEQINSLTVEPLKTL  
AEPEGNYQSSIEPPMHSYLTVAEE  
VLSPEKTVSDTNREQRVTLOKQEA  
QSALILSLSLAEGHVESLQSPDVMIS  
QVNYEPLVPSEHSCTEGGKILIESAN  
PLENAGQDSAVRIEKGSLRFPLALE  
EKQVLLKEEHSNVMPPDQIIESK  
REPVAIKVQEVQGRDLLSKESLLSG  
IPEEQRLNLKIQICRALQAAVASEQP  
GLFSEWLRNIEKVEEAVNITQEPR  
HIMCMYLVTSAKSVTEEVTHIEDVD  
PQMANLKMELRDALCAIIEEDILT

AEGPRIQQAKTSLQEEMDSFSGSQ  
KVEPITEPEVESKYLISTEEVSYFNVO  
SRVKYLDATPVTKGVASAVVSDDEKQ  
DESLKPSEEKESSESSTEEVATVK  
IQEAEGGLIKEDGPMIHTPLVDTVSE  
EGDIVHLTTSITNAKEVNWYFENKL  
VPSDEKFKCLQDQNTYTLVIDKVNT  
EDHQGEYVCEALNDSGKTATSAKLT  
VVKRAAPVIKRKIEPLEVALGHLAKF  
TCEIQSAPNVRWFQWFKAGREIYESD  
KCSIRSSKYSSLEILRTQVVDCEGYT  
CKASNEYSVSTATLTVTEAYPPTF  
LSRPKSLTTFVVGKAAKFICTVTGTPVI  
ETIWQKDGAAALSPSPNWRISDAENK  
HILELNLTIQDRGVYSCASNKFGA  
DICQAELIHKPHFIKELEPVQSAIN  
KKVHLEQVDEDRKVTVTWSDKGQ  
KLPPGKDYKICFEDKIATLEIPLAKL  
DSGTYVCTASNEAGSSSCSATVTVR  
EPPSFVKVDPVSYMLPGESARLHC  
KLKGSPIQVTWFKNNKELSESNTV  
RMYFVNSEAILDITDVKVEDSGSYSC  
EAVNDVGSDESCSTEIVIKEPPSFIKTL  
EPADIVRGTNALLQCEVSGTGPFEIS  
WFKDKKQIRSSKKYRFLFSQKSLVCL  
EIFSFNSADVGEYECVVANVEVGKCG  
CMATHLLKEPPTFVKVDDLIALLGG  
QTVTLQAAVRGSEPISVTWKMGQEV  
IREDGKIKMSFNSNGVAVLHDPVQISF  
GGKYTCLAENEAGSOTVSGELIVKEP  
AKIIERAELIQVTAGDPATLEYTVAGT  
PELKPKWYKDRPLVASKKYRISFK  
NNVAQLKFYSAEHLHDSGQYTFEISN  
EVGSSCETTFTVLDRDIAPFFTKPL  
RNVDSVNGTCRLDCKIAGSLPMRV  
SWFKDGKEIAASDRYRIAFVEGTASL  
EIIRVDMNDAGNFTCRATNSVGSKD  
SSGALIVQEPFSFVTKPGSKDVLPGS  
AVCLKSTFQGSTPLTIRWFKGNKEL  
VSGGSCYTTKEALESLELYLVKTS  
SGTYTCKVSNVAGGVECSANLKVKE  
PATFVEKLEPSQLLKKGDATQLACK  
VTGTPPKITWFANDREIKESSKHRM  
SFVESTAVLRLTDVGIEDSGEYMCEA  
QNEAGSDHCSSIVIVKESYFTKEFK  
PIEVLKEYDVMLLAEVAGTPPFEITW  
FKDNTILRSGRKYTFIQDHLVSLQI  
LKFVAADAGEYQCRVTNEVGSICS  
ARVTLREPPSFIKKIESTSSLRGGTAA  
FQATLKGSLPITVTLKSDSEITEDD  
NIRMTFENNVAISLYLGSIEVKHDGK  
YVCQAKNDAGIQRCSALLSVKEPATI  
TEEAVSIDVTQGD PATLQVKFSGTKE  
ITAKWFKDGGQELTLGSKYKISVTDV  
SILKIISTEKKDSEGYTFEVQNDVGR  
SSCKARINVLDLIIPPSTKLLKMD  
SIKGSFIDLECIVAGSHPIQWFKDD  
QEISASEKYKFSFHDNTAFLEISQLE  
GTDSTYTCSATNKAGHNOCSGHLT  
VKEPPYFVEKQSQDVPNTRVQLK  
ALVGGTAPMTIKWFKDNKELHSGAA  
RSVWKKDDTSTLELFAAKATDSGTYI  
CQLSNDVGTATSKATLKVKEPPQFIK  
KPSFVVLVRNGQSTTFECQITGTPKI  
RVSWYLDGNEITAIQKHGISFIDGLA  
TFQISGARVENSCTYVCEARNDACT  
ASCSIELKVKEPPTFIRELKPVEVVKY  
SDVELECEVTGTPPFEVTVLKNRE  
IRSSKTYLTDREVFNHITKCDPS  
DTGEYQCVSNNEGGSCSCSTRVALK  
EPPSFIKKIENTTTLKSSATFQSTVA  
GSPPISTWLKDDQILDEDDNVISF  
VDSVATLQIRSVDNHSGRYTCQAK  
NESGVERCYAFLLVQEPAQIVEKAKS  
VDVTEKDPMTLECVVAGTPELKVW  
LKDGKQIVPSRYFSMSFENNVA SFRI  
QSVMKODSGQYTFKVENDFGSSSC  
DAYLRVLDQNIPPSFTKLTMKMDKV  
LGSSIHMECKVSGSLPISAQWFKDG  
KEISTSAKYRLVCHERSVSLVNNLE  
LEDTANYTCKVSNVAGDDACSGILT  
VKEPPSFLVKPGRQQAIPDSTVEFKA  
ILKGTPTPKWFKDDVELVSGPKCF

IGLEGSTSFNLNYSVDASKTGOYTCH  
VTNDVGSDSCTTMLLVTEPPKFVK  
LEASKIVKAGDSSRLECKIAGSPEIRV  
VWFRNEHELPAADKYRMTFIDSVAV  
IQMNNLSTEDSGDFICEAQNAPAGST  
SCSTKVIVKEPPVFSFPPIVETLKNA  
EVSLECELSGTPPFVWVYKDKRQL  
RSSKKYKIASKNFHTSIHILNVDTSI  
GEYHCKAQNEVGSDDTCVCTVCLKEP  
PRFVSKLNSLTVVAGEPAELQASIEG  
AQPIFVOWLKEKEEVIRESENIRITFV  
ENVATLQFAKAEPANAGKYICQIKN  
DGGMRENMATLMVLEPAVIVEKAG  
PMTVTVGETCTLECKVAGTPELSVE  
WYKDGKLLTSSQKHKFSFYNKISSL  
RILSVERQDAGTYTFQVQNNVGKSS  
CTAVVDVSDRAVPPSFTRRLKNTGG  
VLGASCILECKVAGSSPISVAWFHEK  
TKIVSGAKYQTFSDNVCTLQLNSLD  
SSDMGNYTCVAANVAGSDECAVLT  
VQEPSPFVKEPEPELVLPKGNVTFTS  
VIRGTPPFKVNWFRGARELVKGDRC  
NIYFEDTVAEELFNIDISQSGEYTCV  
VSNNAGQASCTTRLFVKEPAFLKR  
LSDHSVEPGKSILESTYGTLPISVT  
WKKDGFNITTSEKCNIVTTEKTCILE  
ILNSTKRDAGQYSCEIENEAGRVC  
GALVSTLEPPYFVTELEPLEAAGDS  
VSLQCQVAGTPEITVSWYKGDTKLR  
PTPEYRTYFTNNVATLVFNKVNIND  
SGEYTCKAENSIGTASSKTVFRIQER  
QLPPSFARQLKDIEQTVGLPVLTCR  
LNGSAPIQVCWYRDGVLLRDDENLQ  
TSFVNDVATLKILQTDLSHSGQYSCS  
ASNPLGTASSARLTAREPKKSPFFD  
IKPVSDVIGESADFECHVGAQPM  
RITWSKDNKEIRPGGNYTITCVGNTP  
HLRILKVGKGDGQYTCQATNDVKG  
DMCSAQLSVKEPPKFVKLEASKVA  
KQGESIQLECKISGSPEIKVSWFRND  
SELHESWKYNMSPINSVALLTINEA  
SAEDSGDYICEAHNGVDASCSTAL  
TVKAPPVFTQKPSVGALEKSDVILQ  
CEISGTPPFVWVKDRKQVRNSKK  
FKITSKHFDLSLHILNLEASDVGEYH  
CKATNEVGSDDTCSCSVKFEPPRFV  
KKLSDTSTLIGDAVELRAIVEGFQFIS  
VVWLKDRGEVIRESENTRISFIDNIA  
TLQLGSPASNSGKYICQIKNDAGM  
RECSAVLTVLEPARIIEKPEPMTVTT  
GNPFALECVVTGTPELSAKWFKDG  
ELSAKHHITFINKVASLIPCAEM  
SDKGLYSFEVKNSVGKSNCTVSVHV  
SDRIVPPSFIRKLDVNAIGASVVLE  
CRVSGSAPISVGFQDNEIVSGPK  
CQSSFSENVCTLNLSSLEPSDTGIY  
CVAANVAGSDECSAVLTVQEPSPFE  
QTPDSVEVLPGMSTLFTSVIRGTPPF  
KVKWFKGSRELVPGESCNISLEDFV  
TELELFEVQPLESGDYSLVTDNDAG  
SASCTHLFVKEPATFVKRLADFSVE  
TGSPIVLEATYGTPPISVSWIKDEYL  
ISQSERCSITMTEKSTILEIESTIEDY  
AQYSLIENEAGQDICEALVSVLEPP  
YFIEPLEHVEAVIGEPATLOCKVDGT  
PEIRISWYKEHTKLRAPAYKMQFK  
NNVASLVINKVDHSDVGEYSCKADN  
SVGAVASSAVLVKARKLPPPFARKL  
KDVHETLGFVAFECRINGSEPLQV  
SWYKDGVLKDDANLQTSFVHNVA  
TLQILQTDQSHIGQYNCASNPLGTA  
SSAKLILSEHEVPPFFDLKPVVDL  
ALGESGTFKCHVTGTAPIKITWAKD  
NREIRPGGNYKMTLVENTATLTVLK  
VGKGDAGQYTCYASNIAGKDCSAQ  
LGVQEPFRFIKLEPSRIVKQDEFTR  
YECKIGGSPEIKVLWYKDETEIQESS  
KFRMSFVDSVAVLEMHNLVSVEDSG  
DYTCEAHNAAGSASSSTSLKVKPEPI  
FRKKPHPIETLKGADVHLECELOQT  
PPFHVSWYKDKRELRSQKGYKIMSE  
NFLTSIHILNVDAADIGEYQCKATND  
VGSDDTCVGSIALKAPPRFVKLSDIS

TVVGKEVQLQTTIEGAEPISVVWFKD  
KGEIVRESDNWISYSENIATLQFSR  
VEPANAGKYTCQIKNDAGMQECFAT  
LSVLEPATIVEKPEKIKVTTGDTCTLE  
CTVAGTPELSTKWFKDGKELTSDNK  
YKISFFNKVSLKIINVAPSDSGVYSF  
EVQNPVKGKDSCTASLQVSDRTVPPS  
FTRKLKETNGLSGSSVVMECKVYGS  
PPISVSWFHGNEISSGRKYQTTLTD  
NTCALTVMLEESDSGDYTCIATNM  
AGSDECSAPLTVREPPSFVKQPDPM  
DVLGTNTVFTSIVKGTPPFSVSWFK  
GSSELVPGDRCNVSLDSVAELELF  
DVDTSQSGEYTCIVSNEAGKASCTT  
HLYIKAPAKFVKRLNDYSIEKGKPLIL  
EGTFTGTPPISVTWKKNGINVTPSQR  
CNITTTKSAILEIPSSTVEDAGQYNC  
YIENASGKDCSAQIILLEPPYFVKQL  
EPVKVSVGDSASLQOQLAGTPEIGVS  
WYKGDTKLRPTTTYKMHFRNNVAT  
LVFNQVDINDSGEYICKAENSVEV  
SASTFLTVOEQKLPFSRQLRDVQ  
ETVGLPVVFDCAISGSEPIVSWYKD  
GKPLKDSPNVQTSFLDNTATLNIFKT  
DRSLAGQYSCTATNPIGSASSARLI  
LTEGKNPPFFDIRLAPVDVVGESAD  
FECHVTGTQPIKVSWAKDSREIRSG  
GKYQISYLENSAHLTVLKVDKGDSG  
QYTCYAVNEVGKDSCTAQLNIKERLI  
PPSFTKRLSETVEETEGNSFKLEGRV  
AGSQPITVAWYKNNIEIQPSTNCEIT  
FKNNTLVLRKAGMNDAGLYTCK  
VSNDAQSALCTSSIVIKEPKPPVFD  
QHLTPVTVEGEYVQLSCHVQGSEP  
IRIQWLKAGREIKPSDRCSFSFASGT  
AVLELRDVAKADSGDYVCKASNVA  
SDTTKSKVTIKDKPAVAPATKKAADV  
GRLFFVSEPPQIRVVEKTATFIAKV  
GGDPIPNNKWTGKWRQLNQGGRV  
FIHQKGDDEAKLEIRDTTKTDGGLYRC  
VAFNEHGEIESNVNLQVDERKKQEK  
IEGDLRAMLKKTPIKKGAGEEEID  
IMELLKNVDPKKEYKYARMYGITDF  
RGLLQAFELLKQSQEEETHRLEIEEI  
ERSERDEKFEELVFSFIQRLSQTEP  
VTLIKDIENQTVLKDNDVFEIDIKIN  
YPEIKLSWYKGTLEKLEPSDKFEISIDG  
DRHTLRVKNQCQLKQGNRVLVCGP  
HIASAKLTVIEPAWERHLQDVTLEKG  
QTCTMTCQFSVPNVKSEWFRNRGRL  
KQGRHKTEVEHKVHKLTIADVRAE  
DQGQYTCYEDLETSaelrieaepio  
FTKRIQNIIVSEHQSATFECEVSFDD  
AIVTWYKGPTELTESQYNFRNDGR  
CHYMTIHNVTPDDEGVYSVIARLEP  
RGEARSTAEALYLTKEIKLELPPDIP  
DSRVPIPTMPIRAVPPEIIPPVAPPI  
PLLLPTPEEKKPPPKRIEVTKKAVKK  
DAKKVVAKPKEMTPREEIVKPPPT  
TLIPAKAPEIIDVSSKAEEVKIMTITRK  
KEVQKEEAUYEKKQAVHKEKRVFI  
ESFEEPYDELEVEPYTEPFEPYEE  
PDEDYEEIKVEAKKEVHEEWEEEDFE  
EGQYEEEREEGYDEGEEWEEAYQE  
REVIQVQKEVYEEESHERKVPKVP  
KKAPPPKVIKKPVIEKIEKTSRRMEE  
EKVQVTKVPEVSKKIVPQKPSRTPVQ  
EEVIEVKVPAVHTKKMVISSEKMF  
ASHTEEEVSVTPEVQKEIVTEEKIH  
VAISKRVPPPKVPELPEKPAPEEVA  
PVPKPKVEPPAPKVPVPPKVPPEE  
KKPVVPKKEPAAPPKVPVPPKVPV  
EEKIPVPAKKEAPPKVPVQKGV  
VTEKITIVTQREEPPAVPEIPKKK  
VPEERKVPVRKEEVPVPPKVPALPK  
KPVPEEKVAVVPVAKKAPPRAEVS  
KKTVVEEKRFVAAEKLFAVPQRVE  
VTRHEVSAEEWSYSEEEGVSSISVY  
REEEREEEEAEVTEYEVMEPEEY  
VVEEKLHIISKRVEAEPAEVTERQEK  
KIVLKPPIAKIEPPPAKVPAPKKIV  
PEKKVPAPVPPKKEKVPVPPKVP  
PVPEKKVPPKVIKMEELPAKVTERH

MQITQEEKVLVAVTKKEAPPKARVP  
EEPRAVPEEKVLKLPKREEEPPAK  
VTEFRKRVRVKEEKVSIAPKREPQPI  
KEVTIMEEERAYTLEEEAVSVQRE  
EEYEEYDYKEFEYEPTEEDYDQY  
EYEEERYERYEHEEYITEPEKPIP  
KVPPEEPVPTKPKAPPKAVLKKAVPE  
EKVPVPIPKLKPVPKPEEKVVF  
EEKIRISITKREKEQVTEPAKVPK  
PKRVAAEEKVVPKKEVAPVVRVPEV  
PKELEPEEVAFEVEEVVTHVEEYLVEE  
EEEEIHVEEFITEEEVVPVVKVPE  
VPRKVPPEEKKVPVVKKEAPPKAV  
PEVPKPEEKVPLIPKKEKPPPAKV  
PEVPKKVPPEKVPVVPKKEAPP  
KVPEVKKVPPEKVPVPAKKEVAP  
PAKVPEVKKLIPPEEKPTVPKKEV  
APPPKVPKREVPVVPVLPQEEV  
FEEVPEEVLPEEEVLPPEEVL  
PEEEVLPPEEIPPEEVPPEEY  
VPEEEFVPEEVLPEVKVPVPA  
VPEIKKVTTEKVVIPKKEAPPKAV  
PEVPKKVEEKRIILPKKEEVLPEVTE  
EPEEPISEEEIPEEPPSIEVEEVAP  
PRVPEVIKAVPEAPTPVKKVEAPP  
AKVSKKIPPEKVPVQKKEAPPKAV  
PEVPKKVPPEKVLVVKKEAVPPAKGR  
TVLEEKVSAFRQEVVKERLELEV  
EAEVEEIPPEEEFHEVEEYFEEGEFH  
EVEEFIKLEQHRVEEHRVKEVHRV  
IEVFEAEVEVEFKKAPKPGPEISE  
KIIPPKPPTKVVPKKEAPPKVEVPK  
KIVVEEKVRVPEEPRVPTKVPEVLP  
PKEVPEKVPVPAKKEAPPKVP  
EAPKEVPEKVPVPPKPEVPTK  
VPEVPAAVPEKVPPEIPKPESEPP  
PEVPEAPKEVPEKVPAAAPPKPEV  
TPVKVPEAPKEVPEKVPVPPKPE  
EVPTKVPEVPAVPEKVPPEIAPP  
KPESEVPEVEPEEVALEPPAEVV  
EEPEPAAPPQVTPPKKVPPEKKA  
VVAKKPELPPVKVPEVPEVPEKVP  
PLVVPKKEAPPKVPPEVPEVPEKVP  
KVAVPKPEVPPAKVPEVPEKVPLEE  
KPAVVPPEAESEPPPEVEEPEEIA  
EEEIAPEEKPVPVAEEEEPEVPPPA  
VPEEPKIIPEKVPVVKKEAPPKPE  
PEPEKVPKLPKRPVPPPPAPKPE  
DVKEKIFQLKAIKPKKVPKQVPEK  
VELTPLKVPGGKVRKLLPERKPEP  
KEEVVLKSVLRKRPPEEPEKVEPKL  
EKVKKAVPEPPPKVPEVEVPTVT  
KREKIPPEPTKVPEIKPAIPLAPEPK  
PKPEAEVTKIPVPEEPTIAAPVT  
VPVVGKAAEAKPKEAAKPKGPIK  
VPKTPSIEAERRKLRPGSGGKPP  
DEAPFTYQLKAVPLKFVKEIDILTE  
SEFVGSSAIFCLVSPSTAITWMKD  
GSNIRESPKHRFIADGDRKLHIIDV  
QLSDAGEYTCVLRGKNEKTSTAKL  
VVEELPVRVKTLEEEVTVKGQPLY  
LSCELNKERDVWRKDGKIVVEKPG  
RIVPGVIGLMRALTINDADDDAGTY  
TVTVENANNLECSSCVKVEVIRDW  
LVKPIRDQHVKPKGTAFACDIKDT  
PNIKWFKGYDEIPAEPNDKTEILRDG  
NHLYLKIKNAMPEIAEYAVEIEGKR  
YPAKLTGGERVELLKPIEDVTIYEKE  
SASFDAEISEADIPGQWKLKCELLRP  
SPTCEIKAEGGKRFLTLHKVLDQA  
GEVLYQALNAITAITVKEIELDFAV  
PLKDVTPERRQARFECVLTREANVI  
WSKGPDIKSSDKFDIADGKHHILVI  
NDSQFDDEGVYTAEVGKKTARLF  
VTGIRLKFMSPLEDQTVKEGETATFV  
CELSHEKMHVVWFKNDAKLHSTR  
VLISSEKTHKLEMKVTLDDISQIK  
AQVKELSSAQKLEADPYFTVKLH  
DKTAVEKDEITLKEVSKDVPKWF  
KDGEIIVSPKYSIKADGLRRILKIK  
ADLKDGEYVDCGTDKTKANVTVE  
ARLIKVEKPLYGVEVFGETAHFEIE  
LSEPVDVHGQWKLKGQPLTASPDEII

EDGKKHILHNCQLGMTGEVSFQA  
ANAKSAANLKVKELPLIFITPLSDVK  
VFEKDEAKFECEVSREPKTFRWLKG  
TQEITGDRFELIKDGTKHSMVIKSA  
AFEDEAKYMFEAEDKHTSGKLIIEGI  
RLKFLTPLKDVTAKEKESAVFTVELS  
HDNIRVKWFKNDQRLHTRSVSMQ  
DEGKTHSITFKDLSIDDTSQIRVEAM  
GMSSEAKLTVLEGDYPYFTGKLDQYT  
GVEKDEVILQCEISKADAPVWFKD  
GKEIKPSKNAVIKADGKKRMLILKKA  
LKSIDIGQYTCDCGTDKTSGLDIEDR  
EIKLVRPLHSVEVMEETETARFETEIS  
EDDIHANWKLKGEALLQTPDCEIKE  
EGKIHSLVLHNCRLDQTTGGVDFQAA  
NVKSSAHLRVKPRVIGLLRPLKDVTV  
TAGETATFDCELSYEDIPVWYLKGG  
KLEPSDKVVPRESEKGVHTLRLRVK  
LEDAGEVQLTAKDFKTHANLKVKEP  
PVEFTKPLEDQTVEEGATAVLECEVS  
RENAKVWFKNGTEILKSKYEIVA  
DGRVRKLVHDCPTEDIKTYTCDAKD  
FKTSCNLNVVPPHVEFLRPLTDLQV  
REKEMARFECELSRENAKVWFKD  
GAEIKKGKDYIISKGAVRILVINKCL  
LDDEAEYSCEVRTARTSGMLTVLEE  
EAVFTKNLANIEVSETDTIKLVCEVS  
KPGAIEVIWYKGEIEIETGRYEILTEG  
RKRLVIQNAHLEDAGNYNCRPLSS  
RTDGKVKVHELAAEFISKPNLEILE  
GEKAEFVCSISKEFPVQWKRDDKT  
LESGDKYDVIADGKKRVLVVKDATL  
QDMGTYYVMVGAARAAHLTVIEKL  
RIVVPLKDRVKEQQEVVFNCEVNT  
EGAKAKWFRNEEAIFDSSKYIILQKD  
LVYTLRIRDAHLDDQANYNVSLTNH  
RGENVKSAANLVEEEDLRIVEPLKD  
IETMEKKSVTFWCKVNRNLNVTLKW  
KNGEEVFPDNRVSYRVDKYKHMILT  
KDCGFPDEGEYIVTAGQDKSVAELLI  
IEAPTEFVHELEDQTVTEFDDAVFSC  
QLSREKANVKWYRNGREIKEGKYYK  
FEKDGSIHRLIHKCRLDDECEYACG  
VEDRKSARLFEVEIPVEIHRPPQDIL  
EAPGADVFLAELNKDKVEVQWLR  
NNMVVVQGDKHQMMSEKIHRLQI  
CDIKPRDQGEYRFIAKDKEARAKLEL  
AAAPKIKTADQDLVVDVGGKPLTMVV  
PYDAYPKAEAEWFKENEPLSTKTIDT  
TAEQTSFRILEAKKGDGGRYKIVLQ  
KHGKAEGFINLKVIDVPGVPRNLEVT  
ETFDGEVSLAWEEPITDGGSKIIYV  
VERRDIKRTWVLATDRAESCEFTV  
TGLQKGGVEYLFVRSARNRVGTGEP  
VETDNPVEARSKYDVPGPPLNVTITD  
VNRFGVSLTWEPPYDGGAEITNYVI  
ELRDKTSIRWDTAMTVRAEDLSATV  
TDVVEGQEYSFRVRAQNRIGVGKPS  
AATPFVKVADPIERPSPVNLTSDDQ  
TQSSVQLKWEPPPLKDGGSPILGYIIE  
RCEEGKDNWIRCNMMLVPELTYKVT  
GLEKGNKYLYRVSANRAGVSDPSE  
ILGPLTADDAFVEPTMDLSAFKDGLE  
VIVPNPITILVPSTGYPRPTATWCFGD  
KVLETGDRVKMKTLSAYAELVISPSE  
RSDKGIYTLKLENRVKTHSCEIDVNI  
ARPSAPKELKFGDITKDSVHLTWEPP  
DDDGGSPLTGYVVEKREVSRTWTK  
VMDFVTDLEFTVPLVQGEYLFKV  
CARNKCGPEPAYVDEPNMSTPAT  
VPDPPENVKWRDRTANSIFLTDWPP  
KNDGGSRIKGYIVERCPRGSDKWVA  
CGEPVAETKMEVTGLEEGKWYAYRV  
KALNRQGASKPSRPTTEEIQAVDTQE  
APEIFLDVKLLAGLTVKAGTKIELPAT  
VTGKPEPKITWTKADMILKQDKRITI  
ENVPKKSTVIVDSKRSDTGTIIEAV  
NVCGRATAVVENVLDPGPPAAFD  
ITDVTNESCLLTWNPPRDDGGSKIT  
NYVVERRATDSEVWHKLSSTVKDTN  
FKATKLPINKEYIFRVAENMYGVGE  
PVQASPIITAKYQFDPGPPTRLEPSDI  
TKDAVTLTWCEPDDGGSPITGYWV

ERLDPDTDKWVRCNKMPVKDITYR  
 VKGLTNKKYFRVLAENLAGPGKP  
 SKSTEPILIKDPIDPPWPPGKPTVKDV  
 GKTSVRLNWTKPEHDGGAKIESYVI  
 EMLKTGTDEWVRAEGVPTTQHLLP  
 GLMEGQEYSFRVRAVNKAGESEPSE  
 PSDPVLCREKLYPPSPRWLEVINIT  
 KNTADLKWTVPEKDDGSPITNYIVEK  
 RDVRRKGWQTVDDTTVKDTKCTVPL  
 TEGSLYVFRVAEAENIGQSDYTEIED  
 SVLAKDTFTTPGPPYALAVDDVTKRH  
 VDLKWEPPKNDGGRPIQRYVIEKKE  
 RLGTRVVKAGKTAGPDCNFRVTDVI  
 EGTEVQFQVRAENEAGVGHPSSEPT  
 ILSIEDPTSPSPPLDLHVTDAGRKHI  
 AIAWKPPPEKNNGGSPHGYHVMCPV  
 GTEKWMRVNSRPIKDLKFKVEEGVV  
 PDKEYVLRVRAVNAIGVSEPEISEN  
 VVAKDPDCKPTIDLETHDIIVIEGKEL  
 SIPVPFRAVPVPTVSWHKDGKEVKA  
 SDRLTMKNDHISAHLEVPKSVRADA  
 GIYTITLENKLGSAASINVKVIGLPG  
 PCKDIKASDITKSSCKLTWEPPEFDG  
 GTPILHYVLERREAGRRTYIPVMSGE  
 NKLSTVTKDLIPNGEYFFRVKAVNK  
 VGGGEYIELKNPVIAQDPKOPDPPV  
 DVEVHNPTAEAMTITWKPLYDGGG  
 KIMGYHIEKIAKGEERWKRCEHLVP  
 ILTYTAKGLEEGKEYQFRVRAENAAG  
 ISEPSRATPPTKAVDPIDAPKILRTS  
 LEVKGDEIALDASISGSPYITITWIK  
 DENVIVPEIEIKKRAAPLVRRRKGEVQ  
 EEEFVVLPLTQRLSIDNSKKGESQLR  
 VRDSLPRDHGLYMIKVENHDHGIKA  
 PCTVSVLDTPGPPINFFVEDIRKTSVL  
 CKWEPPLDDGGSEIINYLEKKDKTK  
 PDSEWIVVTSTLRHCKYSVTKLIEGK  
 EYLFVRVAENRFGPPPCVSKPLVA  
 KDPFGPPDAPDKPIVEDVTSNSMLV  
 KWNEPKDNGSPILGYWLEKREVNST  
 HWSRVNKSLLNALKANVDGLLEGL  
 TYVFRVCAENAAGPGKFSPPSDPKT  
 AHDPIPPGPPIPRVTDTSSTTIELEW  
 EPPAFNGGGEIVGYFVDKQLVGTNE  
 WSRCTEKMIKVRQYTVKEIREGADY  
 KLRVSAVNAAGEGPPGETQPVTVAE  
 PQEPPAVELDVSVKGGIQIMAGKTLR  
 IPAVVTGRPVPTKVWTKEEGELDKD  
 RVVIDNVGTSKSELIKDALRKDHGRY  
 VITATNSCGSKFAAARVEFVDPGPGV  
 LDLPVVTNRKMCLLNWSDPEDDG  
 GSEITGFIERKDAKMHTWROPIETE  
 RSKCDITGLEGQYKFRVIAKNKFG  
 CGPPVEIGPILAVDPLGPPTSPELTY  
 TERTKSTITLDWKEPRNNGGSPIQGY  
 HIEKRRHDKPDERVNRKLCPTTFL  
 VENLDEHQMIEFRVAVNEIGESE  
 SLPLNVVIQDDEVPTIKRLRSVRGD  
 TIKVKAGEPVHIPADVTGLPMPKIEW  
 SKNETVIEKPTDALQITKEEVSSEA  
 KTELSIPKAVREDKGYTVTASNRLG  
 SVFRNVHVEVYDRPSPRNLAVTDI  
 KAESCYLTDAPLDNNGGSEITHYVID  
 KRDAKRKAWEVEVTNTAVEKRYGI  
 WKLPNGQYEFVRVAVNKYGISDEC  
 KSDKVIQDPYRLPGPPGPKVLART  
 KGSMVLSWTPPLDNGGSPITGYWLE  
 KREEGSPYWSRVSRAPITKVGLKGV  
 EFNVPRLLEGVYQFRAMAINAAGI  
 GPPSEPSDPEVAGDPIFPFGPPSCPE  
 VKDKTKSSISLGWKPPAKDGGSPIK  
 YIVEMQEEGTTDWKRVNEPKLITT  
 CECVVPNLKELRKYRFRVAVNEAG  
 ESEPSDITGEPATDIQEEPEVFIDIG  
 AQDCLVCKAGSQIRIPAVIKGRPTPK  
 SSWEFDGKAKKAMKDVHDIPEDA  
 QLETAENSSVIIIPECKRSHGTGYSIT  
 AKNKAGQKTANCRVKVMDVPGPPK  
 DLKVS DITRGSRLSWKMPDDDG  
 DRIKGYVIEKRTIDGKAWTKVNPDCG  
 STIFVVPDLLSEQQYFRVRAENRF  
 GIGPPVETIQRRTARDPIYPPDPIKL  
 KIGLITKNTVHLSWKPPKNDGGSPV

THYIVECLAWDPTGTKEAWRQC  
KRDVEELQFTVEDLVEGGEYFRVK  
AVNAAGVSKPSATVGPVTVKDOTCP  
PSIDLKEFMEVEEGTNVIVAKIKGV  
PFPTLTWFKAPPKPDNKEPVLVYDT  
HVNKLVDDTCTLVIQSRSDTGL  
YTITAVNNLGTASKEMRLNVLGRPG  
PPVGPIKFESVSADQMTLSWFPK  
DGGSKITNYVIEKREANRRTWVHVS  
SEPKECTYTIPKLEGEHYVFRMAQ  
NKYGIGEPLDSEPETARNLFSVPGAP  
DKPTVSSVTRNSMTVNWEEPEYDG  
GSPVTGYWLEMKDTTSKRWKRVNR  
DPIKAMTLGVSYKVTGLIEGSDYQFR  
VYAINAAGVGPASLPSDPATARDPIA  
PPGPPFKVTDWTKSSADLEWSPPL  
KGGGSKVTGYIVEYKEEGKEEWEKG  
KDKEVRGTKLVVTGLKEGAFYKFRV  
RAVNIAGIGEPGEVTDVIEMKDRLVS  
PDLQLDASVRDRIVVHAGGVIRIAYV  
SGKPPPTVTWNNERTLPQEATIT  
TAISSMVIKNCORSHQGVYLLAK  
NEAGERKKTIVDVLDPVGPVGTPL  
AHNLTNESCKLTWFSPEDDGGSPIT  
NYVIEKRESDRRAWTPVYTVTRON  
ATVQGLIQKAYFFRIAENSIGMGP  
FVETSEALVIREPITVPERPEDLEVKE  
VTKNVTLTWNPPKYDGGSEHNYVL  
ESRLIGTEKFHKVTNDNLLSRKYTVK  
GLKEGDTYEYRVSANVIGQGKPSF  
CTKPITCKDELAPPTLHLDFRDKLTI  
RVGEAFALTGRYSGKPKPKVSWFKD  
EADVLEDDRTHIKTTPATLAEKIK  
KRSDSGKYCVVENSTGSRKGCQV  
NVVDRPGPPVGPVSFDEVTKDYMVI  
SWKPLDDGGSKITNYIEKKEVGKD  
VWMPVTSASAKTCKVSKLEGGDY  
IFRIHAENLYGSDPLVSDSMKAKDR  
FRVPDAPDQPIVTEVTKDSALVTWN  
KPHDGGKPTNYILEKRETKRWA  
RVTKDPHYPYTKFRVPDLLEGQYEF  
RVSAENEIGIGDPSPPSKPVFAKDPIA  
KPSPPVNEAIDTTCNSVDLTWQPP  
RHDGSKILGYIVEYQKVGDEEWRR  
ANHTPESCPETKYKVTGLRDGQTYK  
FRVLAVNAAGESDPAHVPEPVLVKD  
RLEPPELILDANMAREQHIKVGDTL  
RLSAIHKVPPKVTWKKEDRDAPT  
ARIDVTPVGSKLEIRNAAHEDGGIYS  
LTVENPAGSKTVSVKVLVLDKPGPPR  
DLEVSEIRKDSCLTWKEPLDDGGS  
VITNYVVERRDVASAQWSPLSATSK  
KSHFAKHLNEGNQYLFRVAENQ  
YGRGPFVETPKPIKALDPLHPPGPPK  
DLHHVDVDKTEVSLVWKNKPPDRDGG  
SPITGYLVEYQEEGTQDWIKFKTVTN  
LECVVTGLQQKTYRFRVKAENIVG  
LGLPDTTPIECQEKLVPPSVELDVKL  
IEGLVVKAGTTVRFPAIRGVPVPTAK  
WTTDGEIKTDEHYTVETDNFSSVL  
TIKNCLRRDTGEYQITVSNAAAGSKTV  
AVHLTVLDPGPPPTGINILDVTPH  
MTISWQPPKDDGGSPVINIVYKQD  
TRKDTWGVVSSGSSKTKLIPHLOK  
GCEYVFRVAENKIGVGPPLDSTPTV  
AKHKFSPPSPGKPVVTDITENAATV  
SWTLPKSDGGSPITGYMERREVTG  
KWVRVNKTPADLKFRVTGLYEGNT  
YFRVFAENLAGLSKPSSSDPKAC  
RPIKPPGPPINPKLKDKSRETADLVW  
TKPLSDGGSPILGYVVECCQKPGTAQ  
WNRINKDELIRQCAFRVPLIEGNE  
YRFRIKAANIVGEGEPRELAESVIK  
DILHPPVELDVTCDRVITRVGQTI  
RILARVGRPEPDITWTKGKVLVRE  
KRVDLIQDLPRVELQIKEAVRADHGG  
YIISAKNSSGHAQGSAINVLDLDRPGP  
CQNLKVTNVTKENCTISWENPLDN  
GGSEITNFIVEYRKPQKWSIVASD  
VTKRLIKANLLANNEYFRVCAENK  
VGVGPTIETKTPILAINPIDRPGEPEN  
LHIADKGTFFVYLKWRPPDYDGGSP  
NLSYHVERRLKGSDDWERVHKGSIK

ETHYMVDRCVENQIYEFVRVQTKNEG  
GESDWVKTEEVVVKEDLQKPVLDLK  
LSGVLTVKAGDITRLEAGVRGKPFPE  
VAWTKDKDATDLTRSPrVKIDTRAD  
SSKFSLTKAKRSDGGKYVVTATNTA  
GSFVAYATVNVLDKPGPVRNLKIVDV  
SSDRCTVCWDPPEDDGGCEIQNYL  
EKCETKRMVWSTYSATVLTGPTVTV  
RLIEGNEYIFRVAENKIGTGPPTES  
KPIAKTKYDKGRPDPEVTKVSKE  
EMTVVWNPPEYDGGKSITGYFLEKK  
EKHSTRWVPVNSAIPERRMKVQN  
LLPDHEYQFRVKAENEIGEPSSLPS  
RPVVAKDPIEPPGPTNFRVVDTKH  
SITLWGWKPVYDGGAPHIGYVEMRP  
KIADASPDEGWKRCNAAAQLVRKEF  
TVTSLDENQEYEFRVCAQNVGIGR  
PAELKEAIKPEILEPPEIDLASMRK  
LVIVRAGCPIRLFAIVRGRPAKVTW  
RKVGIDNVVRKGOVDLVTMAFLVI  
PNSTRDDSGKYSLLVNPAGEKAVF  
VNVRLDTPGPVSDLKVSVDVTKTSC  
HVSWAPPENDGGSQVTHYIVEKREA  
DRKTWSTVTPVEKKT SFHVNTLVPG  
NEYFRVTAVNEYGPGVPTDVPKPV  
LASDPLSEPDPRKLEVTEMTKNSA  
TLAWLPPLRDGGAKIDGYITSYREEE  
QPADRWTEYSVVKDLSLVTLGKEG  
KKYFRVAARNAVGVSLPREAEVY  
EAKEQLLPPKILMPEQITIKAGKRLI  
EAHVYGKPHPTCKWKKGEDEVVTSS  
HLAVHKADSSSILIKDVRKDSGY  
SLTAENSSGTDTOQIKVVMADAPG  
PQPPFDISDIDACSLSWHIPLEDG  
GSNITNYIVEKCDVSRGDWVTALAS  
VTKTSRVRGKLPQGEYIFRVAENR  
FGISEPLTSPKMVAQFPFVGPSEPKN  
ARVTKVKNKDCIFVAWDRPDSGGSP  
IIGYLIERKERNLLWVKANDTLVRS  
TEYPCAGLVEGLEYSFRIYALNKAGS  
SPPSKPTEYVTARMPVDPGKPEVID  
VTKSTVSLIWARPKHDGGSKIIGYFV  
EACKLPDGKWVRCNTAPHQIQOEY  
TATGLEEKAQYQFRAIARTAVNISPP  
SEPSDPVTLAENVPPRIDLSVAMKS  
LLTVKAGTNVCLDATVFGKPMPTVS  
WKKDGTLLKPAEGIKMAMQORNLC  
LELFSVNRKDSGDYITTAENSSGSKS  
ATIKLVLDKPGPPASVKINKMYSR  
AMLSWEPPLEDGGSEITNYIVDKRE  
TSRPNWAQVSATVPITSCSVEKLIEG  
HEYQFRICAENKYGVGDPVFTEPAIA  
KNPYDPPGRCDPPVISITKDHMTV  
SWKPPADDGGSPITGYLLEKRETQA  
VNWTKVNRKPIHRTLKATGLQEGT  
EYEFVRTAINKAGPGKPSDASKAAYA  
RDPQYPPGPAFPKVYDTRSSVSL  
WGKPAYDGGSPHIGYLVEVKRADSD  
NWWRCNLPQNLQKTRFEVTGLMED  
TOYQFRVYAVNKIGYSDPSDVPDKH  
YPKDILIPPEGELDADLRKTLILRAGV  
TMRLYVPVKGRRPPKITWSKPNVNL  
RDRIGLDIKSTDFDTFLRCENVNKYD  
AGKYLLTLENSCGKKEYTIVVKVLD  
PGPPVNVTVKEISKDSAYVTWEPPII  
DGGSPHINVVQKRDAERKSWSTVTT  
ECSKTSFRVANLEEGKSYFFRVFAE  
NEYGIGDPGETRDAVKASQTPGPVV  
DLKVRVSKSSCSIGWKKPHSDGGG  
RIIGYVDFLTEENKQWRVMKSLSL  
QYSAKDLTEGKEYTFRVSAENENGE  
GTPSEITVVARDDVAPDLDLKGLPD  
LCYLAKENSNFRLKIPKGPAPSVS  
WKKGEDPLATDTRVSVESAVNTLI  
VYDCQKSDAGKYTITLKNVAGTKEG  
TISIKVVGKPIPTGPIKFDEVTAEAM  
TLKWAPPKDDGGSEITNYILEKRDSV  
NNKWVTCASAVQKTFRVRTLHEG  
MEYTFRVSANKEYGVGELKSEPIV  
ARHPFDVDPAPPPNIVDVRHDSVS  
LTWTDPKKTTGGSPITGYHLEFKERN  
SLLWKRANKTPIRMDFKVTGLTEG  
LEYEFRVMAINLAGVGKPSLPSEPVV

ALDPIDPPGKPEVINITRNSVTLIWTE  
PKYDGGHKLTYIVEKRDLPKSWM  
KANHVNVPECAFTVTDLVEGGKYEF  
RIRAKNTAGAISAPSESTETIICKDEY  
EAPTIVLDPPTIKDGLTIKAGDTIVLNAI  
SILGKPLPKSSWSKAGKDIRPSDITOI  
TSTPTSSMLTIKYATRKDAGEYTTITAT  
NPPFGTKVEHVKVTVLDPVPPGPVEI  
SNVSAEKATLTWTPPLEDGGSPIKSY  
ILEKRETSRLLWTVVSEDIQSCRHVA  
TKLIQGNEYIFRVSAVNHYGKGEVQ  
SEPVKMVDRFPGPPPEKPEVSNVT  
KNTATVSWKRPVDDGGSEITGYHVE  
RREKKS LRWVRAIKTPVSDLRCKVT  
GLQEGSTYEFVSAENRAGIGPPSEA  
SDSVLMKDAAYPPGPPSNPHVTDIT  
KKSASLAWGKPHYDGGLEITGYVVE  
HOKVGDEAWIKDITGTALRITQFVV  
PDLQTKKEYNFRISAINDAGVGEPAV  
IPDVEIVEREMAPDFELDAELRRTL  
VRAGLSIRIFVPIKGRPAEVTWTKD  
NINLKNRANIENTESFTLLIPECNR  
YDTGKFVMTIENPAGKKS GFVNRV  
LDTGPGVNLNRPDTITKDSVTLHWD  
LPLIDGGSRTINYIVEKREATRKSYST  
ATKCHKCTYKVTGLSEGCEYFFRV  
MAENEYGIGEPTETTEPVKASEAPSP  
PDSL NIMDITKSTVSLAWPKPKHDG  
GSKITGYVIEAQRKGSQDQWTHITVK  
GLECVVRNLT EGEYTFQVM AVNSA  
GRSAPRESRPVIVKEQTMLPELDR  
GIYQKLVIAKAGDNIKVEIPLGRPKP  
TVTWKKGQILKQTORVNFETTATS  
TILNINECVRSDSGPYPLTARNIVGE  
VGDVITIQVHDIPGPTGPIKFEVSS  
DFVTFSDWPPENDGGVPISNYVEM  
RQTDSTTWVELATTVIRTTYKATRLT  
TGLE YQFRVKAQNRVGVGPGITSACI  
VANYPFKVPGPGTPQVAVTKDSM  
TISWHEPLSDGGSPILGYHVERKER  
NGILWQTVSKALVPGNIFKSSGLTD  
GIAYEFRVIAENMAGKSKPKPSEP  
MLALDIDPPGKPVPLNITRHTVTLK  
WAKPEYTGGFKITSYIVEKRDLPNGR  
WLKANFSNILENEFTVSGLTEDAAY  
EFRVIAKNAAGAISPPSEPSDAITCRD  
DVEAPKIKVDVKFKDTVILKAGEAFR  
LEADVSRPPPTMEWSKDGKELEGT  
AKLEIKIADFSTNLV NKDSTRRDSGA  
YTLLATNPGGFAKHIFNVKLD RPPG  
PEGPLAVTEVTSEKCVLSWFPPLDD  
GGAKIDHYIVQKRETSRLAWTNVAS  
EVQVTKLKVTKLLK GNEYIFRVMAV  
NKYGVGEPLSEPV LAVNPGPPDP  
PKNPEVTTITKDSMVVCWGH PDSGD  
GSEIINYIVERRDKAGQRWIKCNKKT  
LTDLRYKVSGLTEGHEYEFRI MAEN  
AAGISAPSPTS PFYKACDTVFKPGPP  
GNPRVLDTSRSSISIAWNKPIYDGG  
EITGYMVEIALPEE DEWQIVTPPAGL  
KATSYTTGLTENQYKIRIYAMNSE  
GLGEPALVPGTPKAEDRMLPPEIELD  
ADLRKVVTIRACCTLR LRFVPIKGRPA  
PEVKWARDHGESLDKASIESTSSYTL  
LIVGNVNRFD SGKYLTVENSSGSKS  
AFVNVRVLDTPGPPQDLKVKEVTKT  
SVTLTWDPPLDGGSKIKNYIVEKRE  
STRKAYSTVATNCHKTSWKVDQLQE  
GCSYFRVLAENEYIGLPAETAESV  
KASERPLPPGKITLMDVTRNSVLS  
WEKPEHDGGSRLIGYIVEMQTKGSD  
KWATCATVKVTEATITGLIQGEYSF  
RVSAQNEKGISDPRQLSVPVIAKDLV  
IPPAFKLLFNTFTVLAGEDLKVVDVFI  
GRPTPAVTWHKDNVPLKQTRVNA  
ESTENNSLLTIKDACRE DVGHYVVK  
LTNSAGEAIETLNVIVLDKPGPPTGP  
VKMDEV TADSITLSWGP PKYDGGSS  
INNYIVEKRDTSTTTWQIVSATVART  
TIKACRLKTGCEYQFRIAENRYGKS  
TYLNSEPTVAQYPFKVP GPPGTPVVT  
LSSRDSMEVQWNEPISDGGSRVIGY  
HLERKERN SILWVKLNKTPIQTKFK

TTGLEEGVEYEFVRVSAENIVGIGKPS  
KVSECYVARDPCDPPGRPEAIIVTRN  
SVTLQWKKPTYDGGSKITGYIVEKKE  
LPEGRWMKASFTNIIDTHFEVTGLV  
EDHRYEFRIARNAAGVFSEPEST  
GAITARDEVDPFRISMDPKYKDTIVV  
HAGESFKVDADYKPIPTIQWIKGD  
QELSNARLEIKSTDFATSLSVKDAV  
RVDSGNYLAKNVAGERSVTVNVK  
VLDRPGPEGPVVISVGTAEKCTLAW  
KPPLQDGGSDIINYIVERRETSRLW  
TVVDANVQTLCKVTKLLENEYTF  
RIMAVNKYGVGEPLSEPVVAKNPF  
VVPDAPKAPEVTTVTKDSMIVVWER  
PASDGGSEILGYVLEKRDKEGIRWTR  
CHKRLIGELRLRVTLIENHDYEFVR  
SAENAAGLSEPPSAYQKACDPIYK  
PGPPNNPKVIDITRSSVFLSWSKIY  
DGGCEIQGYIVEKCDVSVGEWTMCT  
PPTGINKTNIEVEKLEKHEYNFRIC  
AINKAGVGEHADVPPIIVEEKELEAP  
DIDLDELRLKIINIRAGGSLRFLVPIK  
GRPTPEVKWGVKVDGEIRDAIHDVTS  
SFTSLVLDNVNRYDSGKYTLTLENS  
SGTKSAFVTVRVLDTSPPPVNLKVT  
ITKDSVSITWEPPLDGGSKKNYIVE  
KREATRKSAAVVTNCHKNSWKIDQ  
LQEGCSYFRVTAENEYIGLPAQTA  
DPIKVAEVPQPPGKITVDDVTRNSVS  
LSWTKPEHDGGSKIIQYIVEMQAKH  
SEKWSECARVKSQAQVITNLQGEE  
YLFRRVAVNEKGRSDPRSLAVPIAK  
DLVIEPDVKPAFSSYSVQVQODLKIE  
VPISGRPKPTITWTKDGLPLKQTTRI  
NVTDSLDTLSIKETHKDDGGQYGI  
TVANVVGQKTASIEIVTLDKPDPKPG  
PVKFDDVSAESITLSWNPPLYTGCC  
QITNYIVQKRDTTIVVDVVSATVAR  
TTLKVTKLKTGTEYQFRIFAENRYGQ  
SFALESDPIVAQYYPYKEPGPPTPFA  
TAISKDSMVIQWHEPVNNGGSPVIG  
YHLERKERNLWTKVNTIHDQF  
KAQNLEEGIEYFRVYAENIVGVGKA  
SKNSECYVARDPCDPPGTPEPIMVK  
RNEITLQWTKFVYDGGSMITGYIVEK  
RDLDPGRWMKASFTNVIETQFTVSG  
LTEDQRYEFRIAKNAAGAIKPSDS  
TGPITAKDEVELPRISMDPKFRDTIV  
VNAGETFRLEADVHGKPLPTIEWLR  
GDKEIEESARCEIKNTDFKALLIVKD  
AIRIDGGQYILRASNVAGSKSFPVNV  
KVLDRPGPEGPVQVTGVTSEKCSL  
TWSPPLODGGSDISHYVVEKRETSR  
LAWTVVASEVVTNSLKVTKLLEGNE  
YVFRIMAVNKYGVGEPLSAPVLMK  
NPFVLPGPPKSLEVTNIAKDSMTVC  
WNRPDSDDGSEIIGYIVEKRDRSGIR  
WIKCNKRRTDLRLRVTLTEDHEY  
EFRVSAENAAGVGEPSPATVYKAC  
DPVFKPGPPTNAHIVDTTKNSITLAW  
GKPIYDGGSEILGYVVEICKADEEEW  
QIVTPQTGLRVTRFEISKLTEHQEYKI  
RVCALNKVGLGEATSVPGTVKPEDK  
LEAPELDDSELKRGIVVRAGGSARI  
HIPFKGRPTPEITWSREEGEFTDKVQ  
IEKGVNYTQLSIDNCDRNDAGKYILK  
LENSGSKSAFVTVKVLDTPGPPQN  
LAVKEVRKDSAFVWEPPIIDGGAKV  
KNYVIDKRESTRKAYANVSSKCSKTS  
FKVENLTEGAIYFRVMAENEFVGV  
VPVETVDAVKAAPPSPGKVTLTDV  
SQTASLMWEKPEHDGGSRLVGYV  
VEMQPKGTEKWSIVAESKVCNAVVT  
GLSSGQEQFRVKAYNEKGS DPRV  
LGVPIAKDLTIQPSLKLFPNTYSIQ  
GEDLKIEIPVIGRPRPNISVWKDGP  
LKQTRVNVEETATSTVLHIKEGNK  
DDFGKYTVTATNSAGTATENLSVIVL  
EKP GPPVGPVRFDEVSADFVVISWE  
PPAYTGGCQISNYIVEKRDTTTTTWH  
MVSATVARTTIKTKLKTGTEYQFRIF  
AENRYGKSAPLDSKAVIVQYPPKEPG  
PPGTPFVTSISKDQMLVQWHEPVND

GGTKIIGYHLEQKEKNSILWVKNLNT  
PIQDTKFKTTGLDEGLEEFKVAEN  
IVGIGKPSKSECFVARDPCDPPGRP  
EAVITRNNVTLKWKPAYDGGSKIT  
GYIVEKDLDPDRWMAKASFTNVLET  
EFTVSGLVEDQRYEFRVIARNAAGN  
FSEPSDSSGAITARDEIDAPNASLDP  
KYKDVIIVHAGETVFLADIRGKPIP  
DVVWSKDGKELEETAARMEIKSTIQ  
KTLVVKDCIRTDGGQYILKLSNVGG  
TKSIPITVKVLDPRGPPPEGLKVTGVT  
AEKCYLAWNPPQLDGGANISHYIEK  
RETSRLSWTQVSTEVQALNYKVTKL  
LPGNEYIFRVMVAVNKYGIGEPLESGP  
VTACNPKYPPGPPSTPEVSAITKDSM  
VVTWARPVDDGGTEIEGYILEKRDK  
EGVRWTKCNKKTLLDLRLRVTLGTE  
GHSYEFRAAENAAGVGEPSVVF  
YRACDALYPPGPPSNPKVTDTSRSSV  
SLAWSKPIYDGGAPVKGYVVEVKEA  
AADEWTTCTPPTGLQGKQFTVTKLK  
ENTEYNFRCAINSEGVGEPATLPGS  
VVAQERIEPPEIELDADLRKVVVLR  
SATLRLFVTIKGRPEPEVKWEKAEGI  
LTDRAQIEVTSFTMLVIDNVTRFDS  
GRYNLTLENNSGSKTAFVNVVRLDS  
PSAPVNLTIREVKKDSVTLSEWPLLI  
DGGAKITNYIVEKRETTKAYAITTN  
NCTKTTFRLENLQEGCSYFRVLASN  
EYGIGLPAETTEPVKVSEPPPLPPGRV  
TLVDVTRNTATIKWEKPESDGGSKIT  
GYVVMQTKGSEKWTCTQVKTLEA  
TISGLTAGEEYFRVAAVNEKGRSDP  
RQLGVPVIARDIEIKPSVELPFHTFN  
VKAREQLKIDVPFKGRPQATVNWWRK  
DGQTLKETTRVNVSSSKTVTSLSIKE  
ASKEDVGTIELCVSNSAGSITVPITII  
VLDRPDPGPIRIDEVSCDSITISWNP  
PEYDGGCQISNYIVEKKETTSTTWHI  
VSQAVARTSIKIVRLTTGSEYQFRVC  
AENRYGKSSYESSAVVAEYPPSPPG  
PPGTPKVHATKSTMLVTWQVPVND  
GGSRVIGYHLEYKERSILWSKANKI  
LIADTQMKVSGLDEGLMYEYRVYAE  
NIAGIGKCSKSCPEVPARDPCDPPGQ  
PEVTNITRKSVSLSKWSKPHYDGGAKI  
TGYIVERRELPDGRWLKCNNTNIQE  
TYFEVTELTEDQRYEFRVARNAAD  
SVSEPESTGPIHVKDDVEPPRVMMMD  
VKFRDVIVVKGAEVLKINADIAGRPL  
PVISWAKDGEIEERARTEIISTDNHT  
LLTVKDCIRRTDGOYVLTILKNVAGTR  
SVAVNCKVLDKPGPPAGPLEINGLTA  
EKCSLSWGRPQEDGGADIDYIIVEK  
RETSHLAWTICEGELQMTSCKVTKL  
LKGNEYIFRVTGVNKYGVGEPLESVA  
IKALDPFTVSPPTSLEITSVTKESMT  
LCWSRPESDGGSEISGYIHERREKNS  
LRWVRVKNKPVYDLRVKSTGLREGC  
EYEVRYAENAAGLSLPSSETSPLIRA  
EDPVFLPSPSPKIVDSGKTTITIAW  
VKPLFDGGAPITGYTVEYKSDDDTD  
WKTSIQSLRGTEYITISGLTTGAEYVF  
RVKSVNKVGASDPSDSDPQIAKER  
EEEPLFDIDSEMRKTLIVKAGASFTM  
TVPFRGRPVPNVLWSKPDIDLRTRA  
YVDTTDSRTSLTIENANRNDSGKYTL  
TIQNVLSAASLTLVVKVLDTPGPPPTNI  
TVQDVTKESAVLSWDVPENDGGAPV  
KNYHIEKREASKKAWVSVTNNCNR  
LSYKVTNLQEGAIYYFRVSGENEFGV  
GIPAETKEGVKITEKPSPEKLGVTISI  
SKDSVSLTWLKEPHDGGSRIVHYVV  
EALEKGQKNWVKCAVAKSTHHVVS  
GLRENSYFFRVFAENQAGLSDPRE  
LLLPLVLIKEQLEPPEIDMKNFPSTV  
YVRAGSNLKVDPISGKPLPKVTLRSR  
DGVPLKATMRFNTEITAENLTINLKE  
SVTADAGRYEITAANSSGTTKAFINIV  
VLDRPDPPTGPVVISDITEESVTLKW  
EPPKYDGGSQVTNYILLKRETSTAV  
WTEVSATVARTMMKVMKLTGEEY  
QFRIKAENRFGISDHIDSACVTVKLP

YTPGPPSTPWVNTVRESITVGVH  
EPVSNNGGSVAVGYHLEMKDRNSIL  
WQKANKLVIRTTFFKVTITISAGLIYE  
FRVYAENAAGVGKPSHPSEPLAIDA  
CEPPRNVRITDISKNSVLSWQQPAF  
DGGSKITGYIVERRDLPDGRWTKASF  
TNVTETQFIISGLTQNSQYEFVRFAR  
NAVGSISNPSEVVGPICTIDSYGGPVI  
DLPLEYTEVVKYRAGTSVKLRAGISG  
KPAPTIEWYKDDKELQTNALVCVEN  
TTDLASILIKDADRLNSGCYELKLRN  
AMGSASATIRVQILDKPGPPGGPIEF  
KTVTAEKITLLWRPPADDGGAKITHY  
IVEKRETSRVVWSMVSEHLECIITT  
TKIIKGNFYFRVRAVNKYGIGEPLES  
DSVVAKNAFVTPGPPGIPEVTKITKN  
SMTVVWSRPIADGGSDISGYFLEKR  
DKKSLGWFKVLKETIRDTRQKVTGL  
TENS DYQYRVCVNAAGQGPSEPS  
EFYKAADPIDPPGPPAKIRIADSTKSS  
ITLGSWKPVDGGSVAVTYVVEIRQG  
EEEEWTTVSTKGEVRTTEYVVSNLK  
PGVNYFRVSAVNCAGQGEPIEMNE  
PVQAKDILEAPEIDLVALRTSVIAKA  
GEDVQVLIPFKGRPPPTVTRKDEK  
NLGSDARYSIENTDSSLLTIPQVTR  
NDTGKYILTIENGVGEPKSSVSVKV  
LDTPAACQKLQVHVSRGTVLLWD  
PPLIDGGSPHNYVIEKRDAKRTWSV  
VSHKCSSTFKLIDLSEKTPFFFRVL  
AENEIGIGEPCEETTEPVKAAEVPAPIR  
DLSMKDSTKTSVILSWTKPDFDGGG  
VITEYVVERKKGGEQVWSHAGISKT  
CEIEVSQLKEQSVLEFRVFAKNEKGL  
SDPVTIGPITVKELIITPEVDLSDIPGA  
QVTVRIGHNVHLELPYKGPKPSIS  
WLKDG LPLKESEFVRFSTENKITLS  
IKNAKKEHGGKYTVILDNAVCRIVP  
ITVITLGPSPKPGPIRFDEIKADSVIL  
SWDVPEDNGGGEITCYSIEKRETSQ  
TNWKMVCSSVARTFKVNPVLKDA  
EYQFRVRAENRYGVSQPLVSSIIVAK  
HQFRIPGPPGKPVYVNTSDGMSLT  
WDAPVYDGGSEVTGFHVEKKERNISI  
LWQKVNTPISGREYRATGLVEGLD  
YQFRVYAENSAGLSSPSDPSKFTLAV  
SPVDPPGTPDYIDVTRETTILKWNPP  
LRDGGSKIVGYSIEKRQGNERNWVRC  
NFTDVSECQYTVTGLSPGDREYFRII  
ARNAVGTISPPSQSSGIIMTRDENVP  
PIVEFGPEYFDGLIISGESLRIKALV  
QGRPVPRVTWFKDGVIEKRMNME  
ITDVLGSTS LFRDATTRDRHGVYVTE  
AKNASGSAKAEIKVKVQDTPGKVVG  
PIRFTNITGEKMTLWWDAPLNDGCA  
PITHYIIEKRETSRLAWALIEDKCEAQ  
SYTAIKLINGNEYQFRVSAVNFVGVG  
RPLDSDPVVAIQYTVDPAPGPEPS  
NITGNSITLTWARPESDGGSEIQYI  
LERREKKSTRVVKVSKRPISETRFK  
VTGLEGNEYEFHVMAENAAGVGP  
ASGISRLIKREPVPNPPTVVVKT  
DTSKTTVSLAWSKPVFDGGMHIGYI  
IEMCKADLGDWHKVNAAECVKTRY  
TVTDLQAGEEYKFRVSAINGAGKGD  
SCEVTGTIKAVDRLTAPELDIDANFK  
QTHVVRAGASRLFIAYQGRPTPTAV  
WSKPDSNLSLRADIHTTDSFSTLTV  
NCNRNDAGKYTLTVENNSGSKSITF  
TVKVLDTGPPGPITFKDVTGRSATL  
MWDAPLLDGGARIHHYVVEKREAS  
RRSWQVISEKTRQIFKVNDLAEGV  
PYYFRVSAVNEYGVGEPYEMPEPIVA  
TEQPAPRRLDVVDTSKSSAVLAWL  
KPDHDGGSRTGYLLEMROKGSDF  
WVEAGHTKQLTFTVERLVEKTEYEF  
RVKAKNDAGYSEPREAFSSVUIKEPO  
IEPTADLTGITNQLITCKAGSPFTIDV  
PISGRPAKVTWKLEEMRLKETDRV  
SITTTKDRTTLVKDSMRGDSGRYFL  
TLENTAGVKTFVTVVIGRPGPVTG  
PIEVSSVSAESCVLSWGEPKDDGGT  
EITNYIIVEKRESGTTAWQLVNSSVKK

TQIKVTHLTKYMEYSFRVSSENRFG  
VSKPLESAPIIAEHPPFVPPSAPTRPEV  
YHVSANAMSIRWEEPHYDGGSKIIG  
YWVEKKERNLILVWKENKVPCLC  
NYKVITGLVEGLEQFRTYALNAAGV  
SKASEASRPIMAQNPVDAPGRPEVT  
DVTRSTVSLIWSAPAYDGGSKVVGVI  
IERKPVSEVGDGRWLKCNITVSDN  
FFTVTALSEGDTYEFRLAKNAAGVI  
SKGSESTGPVTCRDEYAPPAELDA  
RLHGDVITRAGSDLVDAVGGK  
EPKIITWTKGDKELDLCEKVSQYTGK  
RATAVIKFCDRSDSGKYTLTVKNASG  
TKAVSVMVKVLDSGPGKLTVSRV  
TQEKCTLAWSLPQEDGGAEITHYIVE  
RRETSRLNWVIVEGECPTLSYVVTRL  
IKNNEYIFRVRVAVNKYGPVPESEF  
IVARNSTFTIPSPGPEEVTGKEHIII  
QWTKPESDGGNEISNYLVDKREKKS  
LRWTRVNKDYVVYDTRLKVTSLMEG  
CDYQFRVTAVNAAGNSEPSEASNFI  
SCREPSYTPGPPSAPRVDDTKHSIS  
LAWTKPMYDGGTDIVGYVLEMQEK  
DTDQWYRVHTNATRINTEFTVPDLK  
MGQKYSFRVAAVNVKGMSEYSEIA  
EIEPVERIEIPDLELADDLKKTVTIRA  
GASLRLMVSVSGRPPPVITWSKQID  
LASRAIIDTTESYLLIVDKVNRDAG  
KYTIEAENQSGKKSATVLKVYDTPG  
PCPSVKVKEVSRDSVITWEIPTIDG  
GAPVNNYIVEKREAAAMRAFKTVTTK  
CSKTLYRISGLVEGTMYFRVLPENI  
YGIGEPCESTDAVLVSEVPLVPAKLE  
VVDVTKSTVTLAWEKPLYDGGSRLLT  
GYVLEACKAGTERWMKVVLKPTVL  
EHTVTSLNEGEQYLFRIAQNEKGV  
SEPRETVTAVTVQDLRVLPTIDLSTM  
PQKTIHVAGRPVELVIAGRPPPPAA  
SWFFAGSKLRESERVTVETHKVAK  
LTIRETTIRDTEGTYLELKNVTGTTSE  
TIKVIILDKPGPPTGPIKIDEIDATSI  
SWEPPELDGGAPLSGYVVEQRDAHR  
PGWLPVSESVTRSTFKFTRLTEGNE  
YVFRVAATNRFGIGSYLQSEVIECRS  
SIRIPGPPETLQIFDVSRDGMTLWY  
PPEDDGGSOVTGYIVERKEVRADRW  
VRVNVKVPVMTRYRSTGLTEGLEYE  
HRVTAINARGSGKPSRPSKPIVAMDP  
IAPPQKPNPRVTDTRTSVSLAWSV  
PEDEGGSKVTGYLIEMQKVDQHEW  
TKCNTTPTKIREYTLTHLPQGAERYF  
RVLACNAGGPGPEAEVPGTVKVTM  
LEYPDYELDERYQEGIFVRQGGVIRL  
TIPKGGPPICKWTKEGQDISKRAMI  
ATSETHTELVIKEADRGDSGTYDLVL  
ENKCGKKAUYIKVRVIGSPNSPEGPL  
EYDDIQVRSVRVSWRPADDGGADI  
LGYILERREVPKAAWYIDSRVGTG  
LVVKGLKENVEYHFRVSAENQFGIS  
KPLKSEEPVTPKTPLNPPPPSNPPE  
VLDVTKSSVLSWSRPKDDGGSRTV  
GYIERKETSTDKWVRHNKTQITTT  
MYTVTGLVPAEYQFRIIAQNDVGLS  
ETSPASEPVCKDPFDKPSQPGELEI  
LSISKDSVTLQWEKPECDDGGKEILGY  
WVEYRQSGDSAWKKSNERIKDKQ  
FTIGLLEATEYEFVFAENETGLSR  
PRRTAMSIKTKLTSGEAPGIRKEMK  
DVTTKLGEAAQLSCQIVGRPLPDIKW  
YRFGKELIQSRKYMSSDGRTHTLT  
VMTEEQEDEGVYTCIATNEVGEVET  
SSKLLLQATPQFHPGYPLKEKYYGAV  
GSTLRLHVMYIGRPVPMATWFGHQ  
KLLQNSSENTIENTEHTHYLVMKNV  
QRKTHAGKYKVLNSNVGTVDAILD  
VEIQDKPDKPTGPVIEALLKNSAVIS  
WKPPADDGGSWITNYVVEKCEAKE  
GAEWQLVSSAISVTTCRIVNLTENAG  
YYFRVSAQNTFGISDPLEVSSVVIKS  
PFEKPGAPGKPTITAVTKDSCVVAWK  
PPASDGGAKIRNYLEKREKKQNKW  
ISVTTEEIRETVFSVKNLIEGLEYEFR  
VKCENLGGESEWSEISEPITPKSDVP

IQAPHFKEELRNLNVRYSNATLVC  
KVTGHPKPIVKWYRQGKEIADGLKY  
RIQEFKGGYHQLIIASVTDATVYQ  
VRATNQGGSVSGTASLEVEVPAKIH  
LPKTLEGMGAVHALRGEVVSIIKIPFS  
GKPDPIVITWQKGODLIDNNGHYQVI  
VTRSFTSLVFPNGVERKDAGFYVVC  
AKNRFIDQKTVELDVADVPDPRG  
VKVSDVSRDSVNLTWTEPASDGGSK  
ITNIVEKCATTAERWLRVQARETR  
YTVINLFGKTSYOFRIAENKFGLSK  
PSEFSEPTITKEDKTRAMNYDEEVD  
ETREVSMTKASHSSTKELYEYKYMIA  
EDLGRGEFGIVHRCVETSSKTYMA  
KFVKVKGTDQVLVKEISILNIARHR  
NILHLHESFESMEELVMIFEFISGLD  
IFERINTSAFELNEREIVSYVHVQCE  
ALQFLHSHNIGHFDIRPENIYQTRR  
SSTIKIIEFGQARQLKPGDNFRLFTA  
PEYYAPEVHQHDVVSTATDMWSLG  
TLVYVLLSGINPFLAETNQIENIM  
NAEYTFDEEAFKEISIEAMDVDRLL  
VKERKSRMTASEALQHPWLKQKIER  
VSTKVIRTLKRRYYHTLIKKDLNMV  
VSAARISCGGAIRSQKGVSAKVVA  
SIEIGPVSQIMHAVGEEGGHVKYV  
CKIENYDQSTQVTWYFGVRQLENSE  
KYEITYEDGVAILYVKDITKLDGTYR  
CKVNDYGEDSSYAELFVKGVREYV  
DYYCRRTMKIKRRTDTMRLLERPP  
EFTLPLYNKTAYVGENVRFVTTIVH  
PEPHVTWYKSGQKIKPGDNDKTYF  
ESDKGLYQLTINSVTTDDDAEYTVVA  
RNKYGEDSCKAKLTVTLHPPPTDST  
LRPMFKRLLANAECQEGQSVCFEIR  
VSGIPPTLKWEKDGQPLSLGPN