

**Supplementary Table S1. *Mycobacterium tuberculosis* peptides binding to MHC class II**

monomers (HLA DRB1\*0101, DRB1\*1501, and DRB1\*0401)

<b>HLA DR1</b>	<b>HLA DR2</b>	<b>HLA DR4</b>	<b>HLA DR4 cont.</b>
YNGWDINTPAFEWYY	VPLRAIPLLGNPLAD	AYVRSCPGYTLDYNA	DVPRSGRRSVAVTPE
AYVRSCPGYTLDYNA	FAAFPSFAGLRPTFD	AYGSFVRTVSLPVGA	SEGGCWRTFLTCDAN
FVYAYVRSCPGYTLD	DGVGALLRYAATNRL	PYNHMEVGSPYAVEY	ELHRAGAALDYSALY
AYGSFVRTVSLPVGA	LLKQYGPLTPARAVA	FVYAYVRSCPGYTLD	AHLTGNAAMGAFTIP
VMPVGGQSSFYSWDWY	IEYRSLARVYGAGTP	SEFAYGSFVRTVSLP	AVTITGTRIDIPLN
DWDFNIRCFSPALV	AMAAAATPYVGWLAA	MAKQAQYVAQLHVWA	VSARNTAVCAPTTGV
ERPLLFALQCMPLNW	YNTAIVGLGTPALVS	ERPLLFALQCMPLNW	NEDVIVRELTEVQGE
HMEVGSPYAVEYVWG	IRGTFKSVAVKAPGF	SSAGLMVAAAAPYVA	GLTPISLGSSSDLRV
WDINTPAFEWYYQSG	LTEGMRFDKGYISGY	LAAPVTHIWYFKGVP	LYRPLIFALYCLPLN
PYNHMEVGSPYAVEY	CAPILGGYPAVLTSF	DQILPVYAEYQQRSE	FLAEKTVKKNYVSRL
VGGQSSFYSWDWYSPA	WIQKYIFPGGLLPST	DGRSEFAYGSFVRTV	LVLDTSSSFYRTPQG
IEYRSLARVYGAGTP	AFISGNFNSGVLWRG	VVPLIDLEMRRPTYV	TIPTGPIHIGLPLSL
AVFNFPNGTHSWEY	FVYAYVRSCPGYTLD	VAAASPYVAWMSVTA	LQGDVVKFRGFDNWE
CPAVIAPLMPNRLQA	QDLPLLVLRAIPLL	GSSAMILAAYHPQQF	QVGDRVGGFSEGGCW
EMWAQDAAVMYSYEG	VVLPWDGRNHYLAAV	AITRVVVRDQPARQL	LLTIKSDDTVGRVKV
LVRHDRAYSGYIPIL	FLAEKTVKKNYVSRL	VGSPYAVEYVWGRQV	FPANSLNLDVFGVT
AFISGNFNSGVLWRG	TVLPQILPTIPLNI	VGGRSIGVYAVNYPA	AKGLSTHEGALLSER
WRGNYEGLFSYSYSL	GLIFVIQVYRHMLSP	QGIEGTIHAVYYPG	GQVTSGLTAGVWQGA
GMPVLFWLDPYRPH	GGTDSLPLPNIPLL	YPYVVPLIDLEMRRP	FSLGPLVVPDIVIPA
LLKQYGPLTPARAVA	TVTTGIVSALNRPVS	EGLPPGSALLVVKRG	DVVQHVARRPGESPP
VGSPYAVEYVWGRQV	AIVGLGTPALVSGAG	SDPAYNINISLPSYY	ANVSRRAKVDVLIVH
FTFMDYEQDWDGVAI	AMILAAYHPQQFIYA	YRVLWQAAGPDTISG	GSLGLMTSVLMTADG
DHTLYADVPELMPY	ILGGYPAVLTSFVFS	GQQQTYSQQFDWRYP	LQSLGADIASEQAVL
GQQQTYSQQFDWRYP	FGNLLSFASLPTVGQ	VFLPSMTIGGQTYTI	VPDSSVPIIIPPTP
NYEGLFSYSYSLDVP	MVIPPIVFLPSMTIG	PTWWHSLPTDRPIIY	FQDPSGGSRVTVQVTL
LAAPVTHIWYFKGVP	MKAIADIEAYPQWIS	AVIPGYPVAGQVWEA	DGTSAAAKNTPGSIT
ERFTGDEVTYRADIY	SSAGLMVAAAAPYVA	AMILAAYHPQQFIYA	VRTAVVAANLPELVE
EGGYVWACKNYDGDV	PYIAIANAYWSPQAR	VANNTLWVYCGNGT	LLLKVKEDIAAEYGR
LATYAFLPIVRAFAE	APLLATYAFLPIVRA	AHVVRPFVLRSLDP	VPAARPDAVLDVRL
GLIFVIQVYRHMLSP	RPWHIGLYGNAGGLG	VKGAWVLARYDDGRP	VTPAARALPLTSLTS
MNNLALWSRPVWDVE	DTNIKLPNISASVP	IRGTFKSVAVKAPGF	VIVRELTEVQGEVVD
YIAIANAYWSPYAQR	SYIITGGLGGLGLFF	GGNIMAHVSYVQSGM	DVAVLDVRLPDGNGI
HGLIGFGESYMAGEW	TVLPFTGLNTPLAVA	AYNINISLPSYYPDQ	KADLLVGVNVLSTI
YAQQQQQTYSQQFDW	DWDFNIRCFSPALV	AFISGNFNSGVLWRG	VYATLGTSGGRNLLQ
DMVAACLKWEGGYVW	LADIAPMTPKVPPYS	QEQRAGGACTITVHP	VANIVDVATGEVLLT
FRSGYLDVYQWTLIR	LLSFASLPTVGQVTA	VAAAGYLVLRPSWSP	SRLGYLLDLAPKDLE
LKWEGGYVWACKNYD	YIAIANAYWSPYAQR	TAVQGIEGTIHAVY	PLGLEGTVTTGIVSA
LTEGMRFDKGYISGY	DAADKVLGYRNWLGL	GRNHYLAAVYRTDLA	KSTDKTLHSVKVIPS
GMRFDKGYISGYFVT	LQGDVVKFRGFDNWE	GDPIEYRSLARVYGA	VGEAFVDSLTSQVGG
MSAEQPTIHYTLTDE	TVLPFTGIDFRLSPS	LKWEGGYVWACKNYD	TSALSGKLNPDVNLV
GIPYIAIANAYWSPY	LNHQITFSLGPLVVP	MTELVTKAFPPYVVV	AGFTAPATLLSALG
VPIHDYGEINGQFFV	LAAPVTHIWYFKGVP	RPGNYRYAINNSFGF	MRLSLTALSAGVGAV
TWWDLSLPTDRPIVYA	VDNQCQSILGYVVRW	IAASYDAGVLTVRVA	DRLVSAATATGLPLR
QDLPLLVLRAIPLL	ERPLLFALQCMPLNW	EEGAYAFETLVRHDR	GFTIPGGTLIPQLPL
VAAAGYLVLRPSWSP	GMRFDKGYISGYFVT	IEYRSLARVYGAGTP	GNVNGVTLYTSGTG
WDPWPPTTFGYHEFF	MAKQAQYVAQLHVWA	HPIVFGHAVRIFYKD	ALVAAVRSKAPGATV
WDGVAITLWTSQLYR	LAAYHPQQFIYAGSL	SYDAGVLTVRVAGAY	DALRIVMADRPLTN
CAMFTDLLAQPTPAW	KADVYGNTLGLFPF	GLIFVIQVYRHMLSP	LENADLSLLGKARKV

DTGITYQAWQAQWNQ	GDPIEYRSLARVYGA	AMAAQLQAVPGAAQY	IDHFGNRRRLRTVGEL
VYARVNPFGFIETPY	MAAIATFAAPVALAA	RACACLQPHDPAFTF	GVLSNGVDISGMFNV
QGIEGTIYHAVYYPG	EVLLKIAQGRLFYNT	MSDAVPQVGSQFGPY	LRNVAAGANPLGLKR
PSQFFPFTGLNSLTY	ASPVAQSYLRNFLAA	LPVTVIAATAGRNHL	LGADIASEQAVLSSA
TVLPFTGLNTPLAVA	ITLFPGGTLFPANSL	DWDFNIRCFSPALV	YRTDLADRVDTLVGA
NLVDTLNGGEYTVFA	PEWNEGVKGAWVLAR	CAPILGGYPAVLTSP	LRVQPVLAIGSPLG
EAGFRSGYLDVYQWT	VGGRSIGVYAVNYPA	FGFGGHNVAIAFGRY	RSVCPMVVAPGGTFE
VDNQCQSILGYVVRW	EVQIGKFRVLVLTGP	GINYRVLWQAAGPDT	AYDQPATTVALGRSV
FDKGYISGYFVTDPE	ERVVVSQVLRSPGVY	GYPVLTSPVSFLQR	VGNVGLSTIAGRLLG
PTWWHSLPTDRPIIY	PSERFFGNLTQGRFY	YIAIANAYWSPYAQR	LFLHSGLIALLPDLA
LYADVPELMPYDLP	VSLPIFGFGGAPGFG	VDSAGNVYVTSEGMY	VTYELAVDLAVPMIG
VERQIHEIVRAYEWA	PGSIDAITLFPGGTL	EGTYIHAVYYPGENQ	PTIGTAVSARNTAVC
CWQPITRDLWPAPYL	RITPKDVIDVRSVTT	EMECWAMQAYGAAYT	VAQQFEAEIGRGSGL
ADAYPTVDYAFQYDG	PVALAAYPITGKLS	LDPSRYEVHFACDPR	LPLLAPMSEVAGRLA
VGGRSIGVYAVNYPA	EKTVKNYVSRLLAKL	GSIVYKPKMHGPAE	QLPDTNIIKLPNISA
MTPKVPYYSATLFDP	DTVIYSKYGGTEIKY	TVLPFTGLNTPLAVA	ADVSPHLLTHAVEQ
PYAVEYVWGRQVGDN	FTLPGERIHVVFRSD	VTGCAETPGCVAYIG	IGSPLGLEGTVTTGI
SGNFSNGVLRWDYE	TGIVSALNRPVSTTG	YDRTQDVAVLQLRGA	GDMAGYAGTLQSLGAG
GTEIKYNGEYLLIS	VYARVNPFGFIETPY	WAGRLRRLLEQASV	LIATNLLGQNTPAIA
ILYAVRWPDPWPTTF	GILWRGNYEGLAGFS	DETAWRNGDWYVARL	VAVLQLRGAGGLPSA
VYGNTRLGLFPFRRG	WDGVAITLTSQLYR	DNRGSQFYLAMYWAQ	RTWRTGRQATLLAL
VYLLDGLRAQDDYNG	AAATPYVGWLAATAA	AFEWYYQSGLSIVMP	NQAKYVSDTRDVLRA
AYAFETLVRHDRAYS	AKFILVDVPRYIHLI	ASPYVAVMSVTAGQA	AGIAYDQPATTVALG
LADIAPMTPKVPPYS	IATFAAPVALAAYPI	ERVVVSQVLRSPGVY	DSSDCGTIRVGSFRG
KADVYGNTRLGLFPF	QLVASQSFAAKAGL	AYETAYGLTVPPPVI	PAIQALNRDFTLPE
PEWNEGVKGAWVLAR	VPHGESGK VIGIRVF	LDPSRYEVHFACDPRG	PIAVPSVTIPALTA
SEFAYGSFVRTVSLP	NEGVKGAWVLARYDD	SITYNEWSFAQAQHL	AGYAGTLQSLGAEIA
AKFILVDVPRYIHLI	LSRMPDLRCLILTSY	STAYLQYTSGSTRTP	VPEMFRELVLGAGS
EGTYIHAVYYPGENQ	AHVVRPFVLARSLDP	LSRMPDLRCLILTSY	VTIQPVVAAAATGDL
GDPIEYRSLARVYGA	AAVDAADKVLGYRNW	AYSEAGFRSGYLDVY	CPMVVAPGGTFESIT
GLFSYSYSLDVPRIT	PITRDLWPAPYL VMD	NARTADGINYRVLWQ	GDMAGYTGTQSLGA
DPAFTFMDYEQDWDG	GTAFLRVLNRDRNYT	RFGEMECWAMQAYGA	FEETFEVTAAPVAV
PSERFFGNLTQGRFY	AYVRSCPGYTLDYNA	CWPAAPRSVGVPLYL	TCELSRVEDVLGLP
AIAVNEAEYGEWMAQ	IDAITLFPGGTLFPA	QSAWQGDTGITYQAW	PGTNWIGQAAEAYLN
EYAEMWAQDAVMYS	PILHRRRREFKARAA	IATFAAPVALAAYPI	SQLASMGSSQAQLIS
MAKQAQYVAQLHVWA	GGNIMAHVSYVQSGM	TIFREPIVISNPRL	LQGADLTVIGARDDL
AQIADLDQEYDDFWD	QEGLDQYGSIPPKS	TYALTNATMPYVLEL	INISLPSYYPDQKSL
APLLATY AFLPIVRA	VSTLIVEPVMGPAAA	YLQFRGEFTPKTQLT	PRGTQAVVLKVYQNA
DGMFKDEFERYEEEE	GPGQEGLDQYGS IPL	QFNASPV AQSYLRNF	TPGYAQGQQQYTSQQ
TDGSITYNEWSFAVG	VAAAGYLVLRPSWSP	DTGITYQAWQAQWNQ	RYPPSPPPQPTQYRQ
RPGNYRYAINNSFGF	KLLAGSTTSTVLPFT	VYARVNPFGFIETPY	LNGLIQFDAAIQPGD
PTCSQYAVDALTEYG	GMPVLFWLDPYRPH	HYLAAVYRTDLADR	LMILIATNLLGQNT
VSYGSVVSTLIVEPW	GIRLVIVL VRRWPKV	REPIVISNPRLVPG	VQRHPRSLFPFESL
GLATAEDIRQWSYGE	LIKDMLILPYDIRL	SMAGSSAMILAAYHP	LDGDEMTRVIWKLK
ANHEYLGPVLWSPAG	GTIRNILGGTIFREP	GPPPATVIRLSYPY	HGVGVKCATITPDEA
SGNFSNGILWRGNFE	GGEVSILQPFTVAPI	EVQIGKFRVLVLTGP	ASRMPVLSKTVEVTA
AFEWYYQSGLSIVMP	AYGSFVRTVSLPVGA	EVLLKIAQGRLFYNT	SIMAI VADIERYPEW
NEGVKGAWVLARYDD	WAGRLRRLLEQASV	KADVYGNTRLGLFPF	IAATQA EYAEMWAQD
WTGDHHLVGFYSYI	VVLKVYQNAGGTHPT	GMRFDKGYISGYFVT	GIEKAVEKVETLLK
GYLDVYQWTLIREGP	FGVRLVKLLYRLERP	TFTIVAIGTYCPAVI	SALLQTTDGSITYNE
VEYVPSSEVDYMDVS	SLGFGNLLSFASLPT	RPKRPGSYPIVLATY	PGERIHVVFRSDESG
CRIFTDGDYTYLADV	NCQSILGYVVRWVDQ	RPWHIGLYGNAGGLG	GPVVMQLMEAAKPFV
AYNINISLPSYYPDQ	PPIVFLPSMTIGGQT	AGVLTVRVAGAYKAP	SCGRVVRVTGRASAR
VSPFGLFPDWDWAE	NPIASIFAWTRGLQH	CPAVIAPLMPNRLQA	VSSPDVLT TYILLPS

FSNGVLWRGDYEWGLW	PSEDAQVAVYRAALA	CWAMQAYGAAAYTLQE	LPFNGLYQPQGLAVD
VFGHAVRIFYKDAFA	NTARPHWIGLYGNAG	DTVIYSKYGGTEIKY	RMTTQDVEAITPQTL
VDPRIYHILIPANVNA	KPAALVHGMFVALPA	PSERFFGNLTQGRFY	KIDRLLDVAGVQQGS
LSGSEEDETAWRNGD	HPIVFGHAVRIFYKD	MVIPPVFLPSMTIG	VAAAGFGHRVEIDL
ILTRFGFSIPQLGFT	AGVLTVRVAGAYKAP	QAYRKPITYDTLWQA	FTFMDYEQDWDGVAI
NAFLTALTNAGIAYD	VNKIRGTFKSVAVKA	LNVMEEHQVRRVPVI	GIDKVQPAVFAVQVA
TATAGELARDSIYYV	LHSVKVIPSRGAWLE	VPHGESGK VIGIRVF	VHPLLGSHVRLTEEP
EVLKIAQGRIFYNT	PITISPITLFPQNF	AGIPYIAIANAYWSP	ADAIRAMSNAEHTGK
TNDGVIFFNPGELL	IGKFRVFLTGPKQG	MTDVTGQVVLGWKVS	ERAGAGVLLRTERLN
EYKEVEILEADDEGY	WSTPAVTIFPNGISI	ARVYGAGTPCALGSA	LGWNLCRIFTDGDHT
DETAWRNGDWYVARL	GPYQLLRLGRGGMG	ERDRLVSRLLTLGW	DEIREEVDNQCQIL
LDVAEGDTVIYSKYG	YNGWDINTPAFEWYY	VDNQCQILGYVVRW	GLSGGSTIPAIPGL
DMLILPYLDIRLDYY	AGIPYIAIANAYWSP	PANHRYLGPVLWSPD	QASSPMVGTLSGLGN
YELNITSATYQSAIP	SMAGSSAMILAAYHP	EADLDVLDDEHGTVLL	LASGVLNSGVDISGM
YNTAIVGLGTPALVS	EIGKADVYGNTRLGL	FETLVRHDRAYSYI	SGFGNFGAGSSGWWN
NARTADGINYRVLWQ	PANHRYLGPVLWSPD	GFVTAPTQGIHTG	NSLLNLDVFGTPGA
GILWRGNYEGLFSYS	RKYIAADRKILNEIA	LPVYAEYQQRSEKVL	ANFGLFNSSYNTGI
APTNAAFSKLPASTI	CPAVIAPLMPNRLQA	ATYEIVCSKYPDATT	GVASTGLVNAGGFNT
TSEIEPFIVWTSSGA	DISVAARILAEFPDY	VDTLNSGQYTVFAPT	SITSRMAEINGMSRD
DTGITYQGWQTQWNQ	LKLISPYSDNAVFR	PNVAITRVVVRDQPA	VGLSTIAGRLLGSVP
KYGGTEIKYNGEYEL	HIGLYGNAGGLGPTQ	SLPAALRACACLQPH	LSGKLNPDVNLVDTL
WAGRLRLLVEQASV	NAFLTALTNAGIAYD	PAPDGYPIIYIYAI	DEDEGKRIPLDVAEG
VTGCAETPGCVAYIG	ENAMEQFVYAYVRSC	ILGGYPAVLTSPVSF	EHLRDDMVAACLKW
PAPDGYPIIYIYAI	PIQILPTIPLNIHQT	APLLATYAFPIVRA	YVWACKNYDGDVQSD
AMILAAYHPQFIYA	LPVTVIAATAGRNHL	TATAGELARDSIYYV	YEDIVGLERLYAENP
VAMNNGMEDLLIWEF	FRSGYLDVYQWTLIR	YIGISFLDQASRGL	LDQASQRGLGEAQLG
IAAAEAEYEQIWAQD	DRMFLAEKTVKNYVS	LTNATMPYVLELADH	WNLVVFVGPVAVTYN
WQGDGTGITYQAWQAQ	EQQLRARQVAAAAGF	GIDDSPAQVAVRWA	GVPSRGLGYLLDLAPK
DTYSPFLFCTIRNFY	LDQYGSIPKSFQA	KPAALVHGMFVALPA	FSIPQLGFTLSGATP
TPEQRPLYRRDGSYI	GGALYSIGGILYAVR	AQQLVLSADNMREYL	FGIARAASDPGLTQT
AQFGGQRFGECECWA	IVLATYEIVCSKYPDG	LAAYHPQFIYAGSL	MNIGQILETHLWCA
YQNFAVTNDGVIFFF	TPEQRPLYRRDGSYI	MASTFTIVAIGTYCP	TIRNFYDADPLAKAA
APGCWQPITRDLWPA	SMYSYPAMTANVGD	AFSRPGLPVEYLQVP	SLLSPLALATNGAAI
IGGILYAVRWPDPWP	TRARISGMPVLFWLD	CWQPITRDLWPAPYL	FAAFLDETMTYSCAM
PANHRYLGPVLWSPD	ILTRFGFSIPQLGFT	LYLAYSEAGFRSGYL	AALAGMRREQLPHG
EEGAYAFETLVRHDR	LLRTERLKSQRVAGA	IVLATYEIVCSKYPDG	FAHWPRAGQLPVSAI
GEVLLTENVEAGDIW	SLTGAAQRAGLELLP	VFGHAVRIFYKDAFA	VSFGQVTSGLTAGVW
EQPTIYTLTDEAPL	GSSAMILAAYHPQQF	FTLPGERIHVVFRSD	AFNTPALNIHQIPLG
WDLCRIFTDGDYTYL	SILGYVVRWVDQGVG	LVRHDRAYSYIPIIL	PGSIDAITLFPGGTL
DQILPVYAEYQQRSE	DSLLPLNIPLEIYA	DSPAAQVAVRWAARD	GHAGDMAGYAGTLQS
TRARISGMPVLFWLD	EMTAVQRSFNRTLLS	ERFTGDEVTYRADIY	EIAVEQAALQSAWQG
GFGNFGAGSSGWWNQ	RAQGACTITVHPLLG	GGALYSIGGILYAVR	VVVGTDGSDSSMRV
ATLFDPREQPVCDGA	PPFRLPLLFNALG	VYGNTRLGLFPFRRG	AQIAGADAKLIASA
DTVIYSKYGGTEIKY	PEFSELFAAFPSFAG	WDGVAITLWTSQLYR	GNSLKVGNADVCCGG
YHPQQFIYAGLSALS	NTPAFEWYYQSGLSI	YHPQQFIYAGLSALS	PAVSQFNARTADGIN
MKAADIEAYPQWIS	LSQDRFADFPALPLD	YELNITSATYQSAIP	TTVTFSDGRTPFTV
SSAWQGDGTGITYQGW	DALRIVMADSRPLTN	ESSAAFQAAHARFVA	PLDPSAMVAQVGPQV
VNLVDTLNSGQYTVF	VFGHAVRIFYKDAFA	ATVVTGKARTTVARD	EAYQGVQKWDATAT
KDFDGRSEFAYGSFV	IGPYNLRYRVLADWD	RVQRVVGSAAPASLG	QANAHGQKVQAAGNN
IVLATYEIVCSKYPDG	RSLARVYGAGTPCAL	GIPYIAIANAYWSPY	EARRGLERGLNALAD
RYRVLADWDFNIRCF	PLIFALYCLPLNWL	EAGFRSGYLDVYQWT	SLGIIVGIDDSAAQ
RPTQPGSYPIVLATY	NLCRIFTDGDHTLYA	EAPYELNITSATYQS	AGRLTEPHIVPIHDY
AYSEAGFRSGYLDVY	IVLATYEIVCSKYPD	PYIAIANAYWSPQAR	GPLAADSRGGNWP
DDLGVNVNGLSDLY	SGNFSNGILWRGNFE	WQGDGTGITYQGWQTQ	SPAVPNALQASLGA

NYEGLAGFSFGYPIP	SVTLSVEQRLARQR	TADGINYRVLWQAAG	LGWTSEQIVERFGFS
IVLATYEIVCSKYPD	PQLVVPVLNARFALN	ENAMEQFVYAYVRSC	YVAQKRKISDGDKLA
YPTVDYAFQYDGVND	VKGAWVLARYDDGRP	NFVRSSNLKFQDAYN	GDFQHTTEEAIRMNC
SIMAIVADIERYPEW	PNIPLEYYAARFITP	RSLARVYGAGTPCAL	LVYSDGTATGAADPR
FDPREQPVCDGAYWV	TQAVVLKVYQNAGGT	AFAMTVPPSLVAANR	IGFGESYMAGEWSSK
DEALYTEDRAWTEAV	RRATIEQLLTIPLAK	AHFTGAFGPVVVPPI	EALPERERTVLVLRP
NFPNGTHSWEYWGA	RPGNYRYAINNSFGF	DTNIIKLPNISASVP	RLLAKSLARLRDQLE
AAAIAAVEAEYELMW	VDPRIYIHLIPANVNA	MTPKVPYYSATLFDP	RIFYKDAFAKHQELF
RLAGIPYIAIANAYW	ARLAGIPYIAIANAY	QTFTSIAISMYCPSV	AGGLASPYVVTGLNN
QSAWQGDGTGITYQAW	LYLAYSEAGFRSGYL	IVLATYEIVCSKYPD	MLRDMGVEHVYDSRS
EKIFGPTRDWECYCG	SLPAALRACACLQPH	IGGILYAVRWPDPWP	GLSSLGWDLCRIFTD
TWYSVGRIYNAGDLF	SDTCIECPDGTVGEI	FGNFGANMSGWWNQA	FACDPRYNQLGLPLP
DQEYDDFWDEDGEVM	IYSKYGGTEIKYNGE	AVHDTLFCVANMPA	GGSLTTQQUALVAGVP
ESIRDFARASFSYGL	GLFSYSYSLDVPRIT	GFSSMLWGGGSLPTI	VSNSLVAHMKPGAVL
YAFLPIVRAFAEPAG	APLDGVGALLRYAAT	MSFVTIQPVVLAAT	YNKVRGDKVIAYARK
YDDFWDEDGEVMRDY	KVLAAMYQGTIKTWD	GYTATFLETSPQFFP	PNGISIPNNPLALLA
FLAEGGEIMITPEEG	DPITIFPGGFTIDPL	LATYAFPLIVRAFAE	AGLAGVGNIGLNAG
CDFYEEQMQDAFETG	DVKRFRGFDNWEGBA	EYAARFITPVHPGYT	STGMSSGGFVTAPTQG
LFCTIRNFYDADPLA	GTAVRAFMQAAIGPG	SGNFSNGILWRGNFE	IGPATIIPPIHIPSI
SGNFSNGILWRGNYE	ALAVAVSPPAAAAGDL	TPIGDPIEYRSLARV	PLLGHLSWELAIPM
EIGKADVYGNTRLGL	SLSVYARVNPFGFIE	KVSHPIVFGHAVRIF	QSSFYSDWYSPACGK
VAVTPEQRPLYRRDG	VGSPYAVEYVWGRQV	PITRDLWPAPYLVMD	ANRAVKPTGSAAGL
FGFGGHNVAIAFGRY	SAHIQRTVASCNTR	VVAGEPRPGNYRYAI	AAPSIPAANMPPGSV
PITRDLWPAPYL VMD	LYSIGILYAVRWPD	MMGNAFLTALTNAGI	AAKVVPSVVMLETDL
RITPKDVIDVRSVTT	FGFGGHNVAIAFGRY	GLFSYSYSLDVPRIT	PSGGSRTVQVTLGKA
GVPLYLLLGWVAVVWY	MASTFTIVAIGTYCP	SITYNEWSFAVGKQL	MNNLALWSRPVWDVE
TGDEVTYRADIYALA	FAAPVALAAYPITGK	ARASSRYGHWPPAVA	VPGWTKPIVIGRHAF
LSRMPDLRCLILTSY	YRVLWQAAGPDTISG	EIGKADVYGNTRLGL	SGSTAQENAMEQFVY
FGNFGANMSGWWNQA	AFEWYYQSGLSIVMP	LTEGMRFDKGYISGY	QPGSYPIVLATYEIV
EVQIGKFRVLVFLTGP	ATIATFEMRYLQSLP	IVISNVPRLVPGWTK	GPGQEGLDQYGS IPL
YLDIRLDYYDLGIEH	FDKGYISGYFVTDPE	WQGDGTGITYQAWQAQ	PVAITIDSVGQTIAG
DTNIIKLPNISASVP	RPTQPGSYPIVLATY	AMAAAATPYVWGLAA	ALSAGVGAVAMSLTV
VEQASVILRRITIDAD	VLMYSGAGSSPLLAA	ITPEEGAYAFETLVR	VRDQPARQLVQRSEE
YLDVYQWTLIREGPP	GAAQRAGLELLPFGG	AVFNFPNGTHSWEY	QATTILRRGD NATLL
SPYAQRFRPLPDIW	LIVEPWMGPAAAAMA	KVSDLKSSTAVIPGY	KLAAGSKTQTVLPFT
QAYRKPITYDTLWQA	ITLFPAQNFNTTFPV	SDALRQTARQLATWV	IPSRGAWLEFDVDKR
ILPYLDIRLDYYDLG	AAEYGRLRHGQILFT	FSVSGSQTYGVDVVG	ADLDERGIVRIGAEV
LDPSRYEVHFACDPRG	IAASYDAGVLTVRVA	GRSGEPFPYPVTVGY	PAHAAHHLVEGVARV
VDYAFQYDGVNDFPK	NARTADGINYRVLWQ	LMASDFHAFSAAPNF	VVASYNEFGGLSNTI
DNRGSQFYLAMywaQ	DEIHTSMEAGPMVRK	RPTQPGSYPIVLATY	RAGHAITRAIQLAGL
SITYNEWSFAVGKQL	SLLKSLEGTYRLAP	PPGSALLVVKRGPNA	MGGVPGVEPADVVVI
RPKRPGSYPIVLATY	IGGILYAVRWPDPWP	GEAATLAHVVRPFVL	IPAFGGGTAIPISVG
WTSSGAIGPTWYSVG	VAVTPEQRPLYRRDG	AACKWEGGYVWACK	GPPFFGLGVVNISGIE
VGATSEIEPFIVWTS	MPDLRCLILTSYTS	NSWVDVFAHWPRAGG	VGSVNVGFGNVGDFN
HTKHyrVvSKPAALV	VVSQLVRS PGVYFDE	AALVGALSVPHSWTT	DHHGLVGFYSIEIT
LSIVMPVGGQSSSFYS	AVERAGAGVLLRTER	KEDEYPSTAYLQYTS	GVLNVGSGISGLYNT
GSQFYLAMywaQELA	MGSVELPAKQVNSEL	VYLLDGLRAQDDYNG	NYEGLFSYSYSLDVP
YQEINFCKTNGQFD	GGLPAFTLFPGLLNI	LGALQAGRIAVPLSV	FGYPIPLFPAVGADV
IGPYNLRYRVLADWD	YDDFWDEDGEVMRDY	GIRLVIVLRRRWPVK	LPAATADAYATTEAV
VFGGKYVSLTTPKNP	DVSVLTAARFTAHTK	GLELLPFGGRFVEIG	AMMAHAGDMAGYAGT
QSSFYSWYSPACGK	AMEDLVRAYHAMSS	PATVIRLSDYPYVVP	FGNLLSFASLPTVGQ
IAPMTPKVPYYSATL	GKPTSTNPIASIFAW	LPTDRPIIYATLGSS	VQFQSGGNNSPAVYL
FTDGDYTYLADVPEL	TVGQVVVLGWKVS DLK	GVRLAFVCAVDMPY L	PSPPPQPTQYRQPYE
KALCDFYEEQMQDAF	YAINNSFGFGGHNVA	QEITRGRCAAISVPG	NAQLVGVNSAIATLG

AVLSSAWQDGTGITY	RYRVLADWDFNIRCF	AKFILDVDPRYIHLI	TDDQVTIDAAYAIAIKK
GLAGFSFGYPIPLFP	LDPSRYEVHFACDPRG	EFRVAITPAGVAELT	KLESVVIATVESGKM
SPELFACTIRNFYDAD	YHPQQFIYAGSLSAL	ILYAVRWPDPWPTTF	LVLADNMREYLAAG
GRSGEPFPYPVTVGY	MHVVVASYNEFGGLS	DVSVLTAARFTAHTK	GTVATTPASSPVTLA
SITYNEWSFAQAHL	TFTIVAIGTYCPAVI	RLAGIPYIAIANAYW	ASFLDQVHFQPLPPA
LYSIGGILYAVRWPD	LPIVRAFAEPAGIKI	IFAVVRGTATNQDGR	WNNPAIQALNRDFTL
YPYVVPLIDLEMRRP	GQQQTYSQQFDWRYP	LTYHVIAGQASPSRI	LDAILAGASGYVVKD
FNKLLGPLPFPHPI	SPNGTIRNILGGTIF	ILTRFGFSIPQLGFT	LIALPPDLASGVVQP
GRNHYLAAVYRTDLA	SNVQLNPFVNLKLQ	GTAFLRVLNRDRNYT	YNYMAPERFTGDEVT
PLIFALYCLPLNWL	GRNHYLAAVYRTDLA	GLVIGICAPILGGYP	VTDFNNRVVTLAAGS
YYSATLFDPREQPVC	GINYRVLWQAAGPDT	RRPTYVFAAVDHTGA	YEDAIIILSNRLVEED
YRVLWQAAGPDTISG	PTWWHSLPTDRPIY	EFEGELPRLFVVTRQ	ERLRWLVAEAGPFAS
VLADWDFNIRCFNSP	EFEGELPRLFVVTRQ	VQAAMEDGYRVFADV	AGFGHRVEIDLCDYR
RIPLDVAEGDTVIYS	GNRIFAVVRGTATNQ	LPVEDMPFLADGTPV	QGEPVDIGGYYAPDS
MWELYLAYSEAGFRS	LSKTVEVTADAASIM	VFVMAAPGQPLPTLP	TAVMRPSKTFNAALE
MGQGNDLVLDTSSFY	AGVNELVRVYVAQKR	ATIATFEMRYLQSLP	CVEQYRQDQFARLDA
GGALYSIGGILYAVR	PAVAKVPRGPLAAAS	EGGYVWACKNYDGDV	KVQPAVFVAVQVALAA
LHAWSVDVSEWPGI	AVFNFPNGTHSWEY	FRSGYLDVYQWTLIR	GAGVLLRTERLNTEG
IPPPNSALVSWLPFY	RPKRPGSYPIVLATY	THSWEYWGACLNAMK	NLCRIFTDGDHTLYA
FIVWTSSGAIGPTWY	QGIEGTIHAVYYPG	WTSSGAIGPTWYSVG	AFNSGSFNNGALWTG
GVLWRGDYEWGLS	STAYLQYTSWSTRTP	RKYAADRKILNEIA	LNLDFVFGTGPATIP
DISVAARILAEFPDY	VAAIKEFFGTSQLSQ	DTLFCYVANMPASVP	LIEDLARRAVQTDAAE
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WDADDYYDPEPGVPG	AYNINISLPSYYPDQ	GSRFLLDQAITSAGR	ARRNIAVHYDLSNDL
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FAVTNDGVIFFFNPG	VSYGSVVSTLIVEPW	QAGLEKLGSQLRGRD	NLLQVVLNALADLPV
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EMECWAMQAYGAAAYT	ERDRLVSERLLTLGW	VWYTATILHNAGVTA	GVANPGSYNTGSFNV
KEDEYPSTAYLQYTS	HYLAAVYRTDLADRV	HTKHRYRVVSKPAALV	FFNTGTGNWGLFNNG
HYLAAVYRTDLADRV	SAAIDSDRWPAVAKV	LEMRRPTYVFAAVDH	IDAITLFPGGTLFPA
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FETLVRHDRAYSYI	TDEAPLATYAFLPI	DTADRLVSAATATGL	LTNAGIAYDQPATTV
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MASTFTIVAIGTYCP	APAPPPFRLPLLNVN	MSEVAGRLAAQVGAY	PEVATWLEVLPPGV
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TAVAAICHYIAMWVW	SDALRQTARQLATWV	GSGQTYGVDVVGYDR	AMAAPMFSHIPTLN
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IVDVATGEVLLTENV	LSLSVSARLAGIPYI	AAPEPVARRQRILFV	PTYDLPANHEYLGPV
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AGELARDSIYYVDAN	IIKLPNISASVPQLV	MGSVELPAKQVNSEL	VLWSPDVKPPTW WHS
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VNEAEY GEMWAQDAA	AQLVVVGSRGRGGYA	AAGTAAQA AVVRFQE	VPSVTIPALTAARAV
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WISEYKEVEILEADD	LPNISASVPQLVA AI	FDPREQPVCDGAYWV	LDQYGSIP LPKSFQA
GAAQRAGLELLPFGG	ALVSAPAGGRAAHAD	LLSFASLPTVGQVTA	LVLDTDSFYR PKRPG
VVPLIDLEMRRPTYV	VNLVDTLNSGQYTVF	HLIGPPPATVIRLSD	TSQAATFAANRLDHA
TRYMHVVVASYNEFG	APTNAAFSKLPASTI	SGNFSNGVLWRGDYE	PNIPLE YAARFITP
QQLSGSEEDETA WR	YELNITSATYQSAIP	VSYGSVVSTLIVEPW	WIQKYIFPGLLPST
SVGRIYNAGDLFVGG	RLLVEQASVILRRTI	GVIFFNPGELLPEA	LAGSSYHTLSIDSGG
LRGLLTELHRAGAAL	LDPSRYEVHFACDPR	AALQSAWQGD TGITY	KTIVLKPEVPLDDGD
VKGAWVLARYDDGRP	VHKPVTAGWNGY GDF	IYFDVTGPSPTIVAM	PHENELIKKVKTYLK
VANIVDVATGEVLLT	VERQIHEIVRAYEWA	DNWIVGASNSTGMSG	TVYVATSKPGQP PET
FLDEMTYSCAMFTD	SYLRNFLAAPPQRA	AAAAA AAAAA PYAGW	EIAPDVVVGDNRLSL
ELFDDLGVNVNNGLS	VFLPSMTIGGQTYTI	ACGGRIVLTARSQPN	LFVAEAVTLAHVVRP
AVIPGYPVAGQVWEA	DALARRIGRHGLIGF	DESYKVTGTAPIYEI	NQSLIINLGLADVGS
GVSGFGNFGAGSSGW	IAITYNIKGVSTLNL	NATVYMIDSVLMPPA	TGQANYGFAVPDIPI
SASIGTLGFTIPGFT	KTFEIPEDGVANIVD	RVVVRDQPARQLVQR	LLSALGITGQFRFGP
LDGLRAQDDYNGWDI	TGSIALAITN TARPW	GMPVLFWLDPYRPHE	DAYATTEAVNVVATG
YEEQMQDAFETGV M F	DTYSPELFACTIRNFY	FDSMTQTQIAERVGI	GDMAGYAGTLQSLGA
LQGDV KRFRGFDNWE	DRFADFPALPLDPSA	NPIASIFAWTRGLQH	LERPVG DSSDCGTIR
ELHRAGAALDYSALY	AIPLTSATLGGLALP	VSARLAGIPYIAIAN	LCKTTSNFIWGQLL
QEQRAGACTITVHP	PYNHMEVGS PYAVEY	RNTVQFAAAVQAAME	QLVAAGGGPSQLASM
EASDISVAARILAEF	FTGLIAIHGLKASDV	VGLGNVNGVT LGYTS	KVYQNAGGTHPTTTY
FRHHAHTIPSERFF	INLSRNESASFEDLA	IAITYNIKGVSTLNL	IPGVIPTMTPPPGMV



GPVLWSPAGKPPTWW	MTDVTGQVVLGWKVS	LGPVLWSPDVKPPTW	SIGLGAIPVDQAKR
YILLVSSKVSTVKDL	LQERVIRPSYGLAEA	RTDLLSTLPQRVAVR	GTVTRHYRQYQAGKP
RRSVAVTPEQRPLYR	NTGAFISGNFNGVL	AWVLARYDDGRPSQV	ERYPEWNEGKGAWW
PGGSFNTAVASVVAR	VLNRDRNYTAPGGGQ	LSIVMPVGGQSSFYS	EMWAQDAAVMYSYEG
LPNISASVPQLVAAI	EIPPDRWDADDYYDP	GFGPIAVPSVTIPAL	LFNLWGPAFHERYPN
NEDVIVRELTEVQGE	LSELGEPVDRVARAD	FSTPPITIDRIPLNL	QALNRDFTLPERIH
SLPAALRACACLQPH	EAHGTGTPIGDPIEY	PLPVVFPVQGELSK	SAHIQRTVASCNTR
PFGFIETPYRKVVVDG	RACACLQPHDPAFTF	FASLPTVGQVTATMG	PLLGNPLADLIQPD
ALYPAGRLVDAPLPA	DAKLIASAYLPQHE	IVAIGTYCPAVIAPL	DKDMTYAAPLFTVTA
DIVIPAFGGGTAIPI	LRAAEDDCPPPGYDI	AVNGTAMRESFAERG	GLTHKRRLSALGPGG
VYVADRGNRRVVKLA	ASAPESSPGDAEVP	VVAPGGTFESITSRM	HACTAVAAICHYIAM
IGPFRIEPIVPAVV	AGSYTPFALLALPAH	TGDEVTYRADIYALA	GEVLLTENVEAGDIW
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FGVRLVKLLYRLERP	WDINTPAFEWYYQSG	AQRRFPLPDVIWTRL	SAAPNFAFELAAARR
AQRRFPLPDVIWTRL	DGMFKDEFERVYEEE	LHSVVKVPSRGAWLE	EAHGTGTPIGDPIEY
AFNSGSFNNGALWTG	ANSGNVDTGALMSGNG	YAFLPIVRAFAEPAG	GTSEORDERDLVSR
GSLPTIGPLYSSKTI	PVPEPMVKMLLNNVL	CVLGECTGAPPYRA	AEHTGKLVLDVPRSG
PEQDWLNSEEFDAI	AMSLTVGAGVASADP	GSWLTMIRLAKCGPW	ASTGQRSRGPSSKFRM
VEAEYELMWAADVAA	MSSLGSSLGSSGLGG	ARLAGIPYIAIANAY	IAYETVQTADGALPL
EVLYELSPIEDFSGS	MLRDMGVEHVYDSRS	SVTLSVEQQLARQR	VGNLRIARVLYDFVN
RSVGVPLYLLLGWVA	VPIHDYGEINGQFFV	ASAFQSVVWGLTVGS	AAVDAADKVLGYRNV
NFEQLMSGYFADTDG	LCKTTSNFIWGQLLL	AFIGEHEPSDLVYGD	VLNRDRNYTAPGGGQ
TTVLPFNGLYQPQGL	CTHYPLAEAADAIRA	VTLAHVVRPFALAQS	VGEQLSGLSSAGTAL
WDSLGEFLALGAGFE	YILLVSSKVSTVKDL	FVALPAATADAYATT	ANSGNVDTGALMSGNG
GFGPFPEFPAIPGFP	YFAAYVITSVDEEMR	EPRVLVRRKAGEVEY	FFNSGAGGVSGFGNF
IRGTFKSVAVKAPGF	VMPVGGQSSFYSDWY	APPPIAHSTVLVAPV	GTGSTGLFNAGGFTT
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LAFVCAVDMPLYLTV	DEALYTEDDRAWTEAV	LDVAEGDTVIYSKYG	AVCAPITGVLPPAAN
TIPLNIHQTFSLGPL	GFSSMLWGGGSLPTI	ELTSAAVSYGSSVST	RPVIGAPVDALVNLA
GPYQLLRLLGRGGMG	GLPSNMDQHLNMEAL	TGKIYFDVTGPSPTI	GFPEFPAIPGFPALP
VATGEVLLTENVEAG	LIATGEQVLVNEHLI	LLGPLPFPHPIHTV	RRAVQTDAAEVVLPWD
LGPVLWSPDVKPPTW	ALGITGQFRFGPITV	AVERAGAGVLLRTER	VLANGDEVQIGKFR
HIPQLVASQSFAAAK	ERAGLEVRDVHPSHY	FEATLAATVSPAMVA	MIGTAAAVVLPGLVG
QAWQAQWNQAMEDLV	PTCSQYAVDALTEYG	HMEVGSPIYAVEYVWG	FLENFVRSSNLKFQD
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ENAMEQFVYAYVRSC	DDGQEQRAQGACTIT	MESRVTPVAVIGMGC	TVTTGIVSALNRPVS
FGEPSSGFSSMLWGG	YTPFALLALPAHDGR	TLAATVSPAMVAANR	NHVIAGATDINAHSV
AVHDTLFCVANMPA	FFGTSQLSQFMDQNN	GLVGFSYSIEITGST	LQLRGAGGLPSAAIG
EKIPLLGHLSWELA	ANHEYLGPVLWSPAG	VTIPTITTSPIPLKI	LTVRVAGAYKAPAET
AAVEAAEEQSEFDVI	GNNSPA VYLLDGLRA	EVHFACDPRFNKLLG	QFEAAGLTYEHLRID
ATPADAYPTVDYAFQ	PLRLVYSDGTATGAA	VVGDNRSLSVSARL	AISMYCPSVMADVAS
EDRQSLSWTLESSSL	FRHHAIHTIPSERFF	IGRHGLIGFGESYMA	AAPEIQLAVQATPTF
VADLVLVAPGSIPIT	HMEVGSPIYAVEYVWG	GTAVSARNTAVCAPT	YQQRSEKVLTEYNNK
GVYAVNYPASDDYRA	LEMRRPTYVFAAVDH	SLSVYARVNPFGFIE	CVAYIGISFLDQASQ
SVTLSVEQQLARQR	TSEIEPFIVWTSSGA	PTFAVHDTLFCVAN	ISMIDGPAPDGYPII
VPSVTIPALTAARAV	KLLSSILTYHVIAGQ	MGQGNDLVLDTSSFY	DSLTSQVGGRSIGVY
EYPSTAYLQYTSGST	PLTLVHAVSPEVATW	VKVIPSRGAWLEFDV	YPASDDYRASASNGS
LPIVRAFAEPAGIKI	AQLASGNLGSNGVGV	VVGTRQTLQGASVTV	YDGVNDFPKYPLNVF
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FSNGILWRGNYEGLA	AIELPAISFSQSIPI	PRQMVS VATAMIPFL	DSIARQTCGDFELVL
EAPYELNITSATYQS	GLNVGITIPEFPIHW	LSLSVSARLAGIPYI	NLAELGRLTQLPDTN

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DWDQAYRKPITYDTL	EALPERERTVLVLR	CGGVSTANATVYMID	RVAQQLLSGSEEDET
IAATQAEYAEMWAQD	NTGFLDRTRGDEIHTS	VKPENILVTASDFAY	FLAEGGEIMITPEEG
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VPGRSVSRWGGFLDD	DIRQWSYGEVKKPET	LPVEYLQVPSMGR	TETKNNFRVAITPA
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VAAEGPFASVYFDDS	HAVRIFYKDAFAKHQ	GKSPGFGTTVDFPAV	VCAVDMPLYLTVELIE
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AEHTGKLVLDVPRSG	SAAPNFAFELAARRT	IHIPSIPLGFAAIGH	GVNLPGTAVVPLHRS
SIARAKGAEIFATAG	APGCWQPITRDLWPA	ADVPELVPTYNLPAN	LARDSIYYVDANASI
WGGGSLPTIGPLYSS	AYAFETLVRHDRAYS	LQTTDGSITYNEWSF	RPGLDELSFTLTGNP
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PDRWDADDYYDPEPG	MELARAVKDVGAGRS	KLTADGVLTAPQCTH	HTHDGTRTWRTRGRA
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DSLPTDRPIVYATLG	LSGSEEDETAWRNGD	PGGTFESITSRMAEI	PINSADALVA AVRSK
RWLRDFFGPAATTDW	LGDFEVFARMWELYL	ASVGSLSVPQAWAAA	GFAIPIGQAMAIAAGQ

SIGLGFAIPVDQAKR	QIADRMFLAEKTVKN	KDFDGRSEFAYGSFV	GGGSPTVHIGPTAFL
WRSLDVEMTAVQRSF	RDQARRNIAVHYDLS	LFVGEAATLAHVVRP	LPGVSEHLKLNKQVL
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GYGVDIVLNSLTGAA	LMDAAIFKDTLIMSY	ATYEIVCSKYPSQV	QPVTVLLKALGWTS
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RSVSRWGGFLDDVAG	DVSGGLPAFTLFPGG	ASCRFVPTCSQYAVD	STGLFNAGGFTTGLA
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GYISGYFVTDPERQE	MGQGNDLVLDTSFFY	SGQTVLPFTGIDFRL	SVPANVSRRAKVDVL
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LFVTAEFINNTGEI	LFVTAEFINNTGEI	LAFVCAVDMPYLTVE	FSAASAFQSVVWGLT
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GTSEDERDRLVSR	PLLEYAARFITPVHP	TSTNPIASIFAWTRG	VHSEIVPAAA VPTLV
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KTNSLLTSILTYHV	IPANADGELYVIAGD	AVKVTLGPKGRNVVL	VNDFPKYPLNVFATA
VAVLQLRGAGGLPSA	ANSGNVNTGAFISGN	IRQAGVQYSRADEEQ	AGILFLHSGLIALLP
AFSRPGLPVEYLQVP	AARKLETGDQGASLA	IGPYNLRYRVLADWD	GIDFRLSPSGVAVDS
EFPIHWTSTGGIGPI	ILPYLDIRLDYYDLG	VLSWLSDHQVHNVA	AAPRSVGVPLYLLLG
LTNATMPYVLELADH	IAATQAEYAEMWAQD	IGRHAFGDQYRATNF	TLPQRVAVRVSQ LHA
VWYTATILHNAGVTA	EPWMGPAAAAAMAAAA	VDPRIYHLIPANVNA	CAMFTDLLAQPTPAW
SDALRQTARQLATWV	GIGLVAGLIAPPLAV	DHSRDQARRNIAVHY	ELGRLTQLPDTNIIK
CAPILGGYPAVL TSP	TQTGTAVGTYN YMAP	NFQLSQGGQGF AIP	ISASVQLVAAIKEL
ERDERDRLVSRLLT	TIFREPVISNV PRL	PIHLGLTGQANYGFA	IKERYARCLGSAVNP
LPDVIWTR LFGVRLV	GGAAPVSAGVGHAA L	TDGSITYNEWSFAVG	KAVNPESTFSRIYQE
GLELLPFGGRFVEIG	GVSIKEIELEDPYE	VAAELTSAAVS YGSV	GLREVADGDALYDAA
AYETAYGLTVPPPVI	VSARLAGIPYIAIAN	LNSGQYTVFAPTNA A	VQFAAAVQAAMEDGY
WVA VWYTATILHNAG	KRRQPVTVLLKALGW	PGFTIPTGPIHIGLP	ACLRAYQCPLL LHA
ASDFAYLVDFGIARA	EVGDGEAGSWLLIDT	AAAGSFASVTTGLAG	PEVDTNRLMVSIGTG
YDGVNDFPKYPLNVF	QEMLNVMEEHQVRRV	AATLHALHYHQVDVA	GLERHAKAGVMT PVS
GFSSMLWGGGSLPTI	YQEIINFCKTNGQFD	LYADVPELMPTYDLP	GEPRPGNYRYAINNS
CWPAAPRSVGVPLYL	YYSATLFDPREQPVC	GMLAIGAVTIAV VSA	KNVPANAFVADY LPG
NTARPHWIGLYGNAG	LTKNEDVIVRELTEV	DIASERTAPSRACQG	KNNEFRVAITPAGVA
NSWVDVFAHWPR AQG	LYLLGWVAVWYTAT	LLVVG NVGLSTIAGR	PTTYDHPTFAVHDTL
DPITIFPGGFTIDPL	GTGSGAGIAQAAAAGT	TIIYTLTDEAPLLAT	LNIPQNAIPLTIDAS
ATMPYVLELADHGWR	LDGLRAQDDYNGWDI	MLPRSPIVRIVSDST	PLGFQVPGSIDAITL
ASAFQSVVWGLTVGS	SAGTVGLIKAILSLR	QVVLNALADLPVTVI	LSLTIPGFTIPGGTL
SLLKSLEGT YRLAP	VVPVLNARFALNAAN	NFPNGTHSWEYWGA	AMEDLVRAYHAMSS T
RPSFSFFAVGPDGMP	AWGKGASETFNGG V	VNKIRGTFKSVAVKA	MSAYKTVVVGTDGSD
GEAATLAHVVRPFVL	TSYTSDEAMLDAILA	FALAQSLDPSRYEVH	IEMLTTLPKFPGLP
FAAFPSFAGLRPTFD	IHWTSTGGIGPIIP	TSEQIVERFGFSEIM	IRGSVTPAVSQFNAR
FYLAMYWAQELAAQT	GRSGEPFPYPVTVGY	HHDMVPLAQIYNNRA	ATIPQGEQSTGKIYF
VGWANMGLGNIGFGN	AGADAKLIIASAYLP	GQTYTIPLDTPPAPA	GLILTNNHVIAAAA K
DAEVVLPWDGRNHYL	QLHVWARREHPTYED	TAYGLTVPPP VIAEN	SASLVAAAQMWD SVA
SMLWGGGSLPTIGPL	NLVDTLNGGEYTVFA	TVLP IQILPTIPLNI	TDWYRPVAGDFTPAA

NGDEVQIGKFRVLVFL	VLADWDFNIRCFNSNP	LPSQDLPLLVPLRAI	TIAYDEEARGLERG
LFPDLPSFPGFPGFP	WQGDGTITYQGWQTQ	SLTGAAQRAGLELLP	RCGSPAOWLPTVFGP
FAYLVDFGIARAASD	PLLLAAAGCGSKPPS	PANAFVADYLPGEAA	TYNIKGVSTLNLDDGP
FKVRPSFSFFAVGPD	AIAELRHLNPLNIVN	AQFGGQRFGECECWA	PLPPGVLRWQQDHGR
VDVFAHWPRAGQLPV	DETAWRNGDWYVARL	TTSEQHQAATILRRG	GLATAEDIRQWSYGE
VNDFPKYPLNVFATA	SIIDIPALPGFGNST	VNLVDTLNSGQYTVF	LAAGNEVVVFGTSQS
VFLPSMTIGGQTYTI	SYDAGVLTVRVAGAY	RLDTAVQGIEGTYIH	LKLISPYSDNAVFR
IYATLGSSGGKNNL	NFIWQLLLLGEGIP	NATVYMIDTVLMPPA	TPLAVAVDSDRTVYV
LRISLSVSARLAGIP	RNILGGTIFREPIVI	MHVVVASYNEFGGLS	VAQANSPIDADGRFV
PFTGIDFRLSPSGVA	KYGGTEIKYNGEYEL	NLVDTLNGGEYTVFA	SPELFACTIRNFYDAD
HPTYEDIVGLERLYA	VAAICHYIAMWVVFV	VGATSEIEPFIVWTS	YTPFALLALPAHDGR
QVLSGAEFRQAARRL	LTVRVAGAYKAPAET	SQFNARTADGINYRV	PEVVFVSGEVRSRTD
GPRKSALDEEEIWDL	FRLVFLTGPKQGEDD	TAQENAMEQFVYAYV	DPRAPSLFIHRPDAL
NTGAFISGNFNSGVL	GTAVLAGASLVAVSW	RHAKAGVMTPVSACA	HTGLRIVDAASLRPH
MSFVTIQPVVLAAT	DPAFTFMDYEQDWDG	FTDGDYTLYADVPEL	ISNFHSPSDVIVDAS
LLGPLPFPHHIHTV	GAKIVEVVAGGAAAN	ATVIDLSTSAMPNAV	SPGDAEVPRLFMLS
STGLFNAGGFTTGLA	IGIGITGNGQIGFGK	TQTGTAVGTYNMAP	QDCVAASDLAYTLAR
EIPEDGVANIVDVAT	IVDAGDRVEAGQVIA	PLPDVPWTRFFGVVP	RPAVYAPKSALGHSV
SSAGLMVAAAAPYVA	NFEGFLGLNVGITIP	GVPLYLLLGWVAVWY	GAVESILTVLALRDQ
VLMVVGCLGSGRWPG	NFAGIEAAAASAIQGN	NTPAFEWYYQSGLSI	ARKFLDDSVPLSSGS
FPFRRLTFFYYDLA	KVVREIVSGLGLKEA	KYIFPGGLLPSTQAI	PILHRRRREFKARAA
PDYLTEEQRVPDNLA	SAAIAATQAEYAEMW	GQRCAPVFMMAAPGQ	MNFPVLPPEINSVLM
IEPFIVWTSSTAIGP	KTNSLLTSILTYHV	PPTPGIGNTTVPSS	PAVTIFPNGISIPNN
FVEEFDLPVRIGGHL	ASGNLGSNGVGVGNI	PGQPLPTLPVPLVRD	LLASASIGTLGFTIP
EYAARFITPVHPGYT	MNFAVLPPEVNSARI	CRIFTDGDYTLYADV	LPAISFSQSIPIDIP
KAVNPESTFSRIYQE	LTPKVIATNKARAL	LNIHQTFSLGPLVVP	TIGGQTYTIPLDTPP
AGILFLHSGLIALLP	VVPLIDLEMRRPTYV	TIGQAEQAAMSAQAF	NVGFNGSGLGAALGI
LHFPGFITPTGPIHI	PGLPDIPGLPDFKWP	DAEFCGRIHTRYSSA	TWYSVGRIYNAGDLF
ASVGSLSVPQAWAAA	NEGVITVEESNTFGL	MYAGPGSASLVAAAQ	LEAAGDKKIGVIKVV
IGLFNSGTGNIGFFNG	PRYASRMPVLSKTVE	ADGRFVEPRVLVRRK	KGLEKIPLGLHLWSW
DGGILTRFGFSIPQL	NGMSRDMASTFTIVA	PGLTQTGTAVGTYNV	FRADFLSELDAPAQA
EGGEIMITPEEGAYA	AAVEAAEEQSEFDVI	AVLTSPVSFLQRPAR	KTNSLLTSILTYHV
TLIMSYEWPEDRQSL		GLAVDTQGAVYVADR	QVVLGWKVSCLKSSST
GVLDIPITIFPGGFTI		LAAAGCGRIVLTARS	GAAASLVGFNRAPAG
GSGVLNFGSGVSGLY	<b>HLA DR1 cont.</b>	ATDINAFSVGSGQTY	GPVAASAAPSIPAAN
PIIIVPPTPGFGNAT	DEVFARMWELYLAYS	WGGGSLPTIGPLYSS	IPIGQAMAIAQIRS
SPGDAEVPRLFMLS	SAAPNFAFELAARRT	PPEVNSARIFAGAGL	PSSKLGGLWKTVSPH
VGNLRIARVLYDFVN	RFVEPRVLVRRKAGE	IYATLGSSGGKNNL	SNVPRLVPGWTKPIV
TVYVTFDFNNRVVTLA	FALLALPAHDGRVVL	VEYVPSSEVDYMDVS	HAFGDQYRATNFKVD
RFDVKTGSDFVSFAV	GAPNRVSFAKLREPL	STNNDPAGACRPFD	TVTLTFTPADGSAPI
QDEWAGRLRRLLEVEQ	LTGDNQGTIGGLNSG	NCQSILGYVVRWVDQ	WGGSGSEAYQGVQOK
FVRNVGHMLMTNDIAV	PVLPPEINSVLMYSG	TVGLIKAILSLRHGV	FGDVAHGAMIRAQA
SPNGTIRNILGGTIF	VGHGDRGPVWVFSGQ	LVLTTTAGGLASPYV	LVSSKVSTVKDLLPL
VWAVVGAIAIVLVAI	LHSVKVIPSARGAWLE	GTGVIDPNGVVLTN	ALSTLVVNKIRGTFK
AAIGPGQEGLDQYGS	RNTVQFAAAVQAAME	PPTVHSEIVPAAAVP	LTVGAGVASADPVDA
SQYAVDALTEYGLLR	AACLKWEGGYVWACK	TVYVTFDFNNRVVTLA	FAAVDHTGADVVKLYQ
AEELVFSYDDMRARG	PGLTQTGTAVGTYNV	RQAVPLVRSEAPLVG	TDTLGDVDAGLDQIE
ALGITGQFRFGPITV	LNVMEEHQVRRVPVI	NMQRQAVPLVRSEAP	VLADWDFNIRCFNSNP
FFPFTGLNSLTYDVS	KGTFIINGTERVVVS	VYVADRGNRRVVKLA	LFPILELGTSAKMLS
LSGIGISLLSPLALA	GVGNIGFANTGTNNL	VGWANMGLGNIGFGN	AGHAKPCAGGATSL
ASGFANFGTQLSGIL	MHVVVASYNEFGGLS	SSLLTSILTYHVVAG	STASAGTVGLIKAIL
DTLFCVANMPASVP	NAIAGILFLHSLGIA	GYISGYFVTDPERQE	DALKSHGPQGTECAS
SYIITGGLGGLGLFF	GNWGLFNSGSYNTGI	VVVPPIPVLAINAHL	TAATAHATAWYGLND
TFTIVAIGTYCPAVI	FGNTTADVDRGGPY	DRTVYVADRGNDRVV	LARIMGASITSDGFH

LQERVIRPSYGLAEA	AMTANVGD MAGYTGT	GESGKVIGIRVFSRE	AGFPQHIESALRLVC
ENYIAQTRDKFLSAA	AQLVVVGSRGRGGYA	EFPIHWTSTGGIGPI	VAFTCELF SRVEDVL
DAADKVLGYRNWLGL	TIPEFPIHWTSTGGI	IKKHGVGVKCATITP	SSQLLANWLRHG VIT
PGIGNTTTVPSSGFF	IGRHGLIGFGESYMA	DVETGLFVPQAVTPW	NTTFVPGPFPLGVV
AVRDSRPAVGQRGRA	TVLPIQILPTIPLNI	WHS LPTDRPIIYATL	GILWRGNYEGLFSYS
RVVVRDQPARQLVQR	TPIGDPIEYRSLARV	YYAPDSDMTTAVMRP	DVPRITILDAHFTGA
SAAVSFGQVTSGLTA	LLPFGGRFVEIGKAD	IKSDDTVGRVKVYEA	TSTLPLGTPALV SGL
ITPEEGAYAFETLVR	ALVSWLFPYHDMGLV	ATTVFGGKYVSLTTP	GLAGFSFGYPIPLFP
QPGTPGYAQGQQQTY	NGE EYLILSARDVLA	FAVTNDGVIFFFNPG	HGMFVALPAATADAY
RYLQAASNGAWGKGA	RFGFSIPQLGFTLSG	GQYTVFAPTNAAFSK	MGRDIKVFQSGGN
CVAYIGISFLDQASQ	LFDGRSGEPFPYPVT	FQVPGSIDAITLFPG	ENYIAQTRDKFLSAA
IGIGITGNQIGFGK	LFVGEAATLAHVVRP	RYTCERLVRGLDTIA	TPREAPYELNITSAT
RDLLSRMPDLRCLIL	DSLTSQVGGRSIGVY	SILGYVVRWVDQGVG	TLGADSADAQSGSIG
LFNSGTGNFGLFNSG	MGTQLLASEPVFAAT	CCSGVATAAPKTYCE	RVVALGQTVQASDSL
FNAASQAFNTPALNI	PLPDVPWTRFFGVVRP	FSNGILWRGNYEGLA	AIAVNEAEY GEMWAQ
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GTAVSARNTAVCAPT	AAPEPVARRQRILFV	VVLKVYQNAGGTHPT	IEHRDATDDQVTIDA
FQVPGSIDAITLFPG	VFVMAAPGQPLPTLP	PDVLT TYILLPSQDL	PRYASRMPVLSKTVE
VGVG NIGNDNIGNAN	LRIVDAASLRPHYAE	DDLGVNVNNGLS DLY	AAGAKERQLATSLR
IIVGIDDSPAAQVAV	NHLKNVPANAFVADY	NRPDGGILTRFGFSI	APTLDELKLEGDEAT
RIYNAGDLFVGGNII	TYALTNATMPYVLEL	SRQSCGRVVRVTGRA	IVKVALEAPLKQIAF
LVLTTTAGGLASPYV	VKEVAKKTDDVAGDG	RDFFGPAATTDWYRP	LNAQTGVYEDLLAAG
RLVKLLYRLERPLLF	ARSLDPSRYEVHFAC	VSGLLNQASSPMVGT	TLAETGSTLLYPLFN
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AGSYTPFALLALPAH	VQFAAAVQAAMEDGY	EYTVFAPTNAAFD KL	LAERLAGWQERYPNV
FEWLIGSPRWRESAA	GFPEFPAIPGFPALP	FLRVLNRDRNYTAPG	EIVRAYEWAHDMVMP
FARMWELYLAYSEAG	QTYGVDVVGYDRTQD	AAIS IARAKGAEIFA	NIGNANIGFNGR GDA
DAEFCGRHTRYSSA	LYRPLIFALYCLPLN	RLVGIVTEADIARHL	IGNIGDRNLGIGNTG
NLGSNGVGVGNIGND	AVERAGAGVLLRTER	FGPVVVPPIVLAIN	LTGAPPYRADSVERL
AIPSIHLGIDPTFDV	GLLDVQTDSEFWLIG	TGAFGPVVVPPIPVL	PALDQVI AKGMAKNP
FLRVLNRDRNYTAPG	AGEVEYVPSEVDYM	TGIVSALNRPVSTG	AAPL FVTAEFINNNT
VVGDNRLSLSVSARL	PILHRRRREFKARAA	ITPVHPGYTATFLET	TLFQTLT SIAEKVDP
RVVKLAAGSKTQTVL	LFNLWGPAFHERYPN	LRIGLATAEDIRQWS	RMELLAKSGKTIVLK
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GQYTYIPLDTPPAPA	ERYPEWNEG VKGAWV	SGVEGLPPGSALLVV	RPSYGLAEATVYVAT
LVRGLDTIAATGNIL	NTRLGLFPFRRGLTF	GFTIPAAPLPLTIDI	VIGMGCRLPGGINSP
SMAGSSAMILAAYHP	YTPFALLALPAHDGR	VGGNIISGIPTLSTT	LVL DVPRSGRRSVAV
IDGPAPDGYPIINYE	ATDINAFSVSGQTY	DKTLHSV KVIPSRGA	MLEM RTHVETETGIR
SFPGFPGFPEFPAIP	FSTPPITIDRIPLNL	KVLAAMYQGTIKTWD	ICGGVETRIEAVPIA
GSVGF GPIAVPSVTI	SGAIGPTWYSVGRIY	VVISAPQGLE YV VAF	IAADRKILNEIAPDV
STTIGPVSLPIFGFG	VLAGASLVAVSWAVG	QPATTVALGRSVCPM	LSSLGWNL CRIFTDG
YVIAGDIPLINIPPT	TRFLGVRLVKLLYRL	GLSDLYSKIESLPAS	ARVLYDFVNNEALPG
AVDGAGTVYVTD FNN	TRINQSFPVTVNWST	PLRLVYSDGTATGAA	AAAIAAVEAEYELMW
YDPEGPVGRSVSRW	WRGDYEWLWGLSGGS	IYNTSTLPLGTPALV	ILPPIHLGLTGQANY
LETPSQFFPFTGLNS	LDLAPKDEKIIYFA	IAYARKFLDDSVPLS	TGVLPAAANDVSVLT
GQNAAAIAAVEAEYE	EFRQAARRLAEAFGP	RKIPLTLVHAVSPEV	LFPDLPSPFGPFGFP
TIHYTLTDEAPLLAT	GTGTPIGDPIEYRSL	GLGLPPPWPQALPRL	AIPGFPALPGLPSIP
IYNTSTLPLGTPALV	VTLAHVVRPFALAQS	QPGTVTLTFTPADGS	DAEVLPWDGRNHYL
KNNEFRVAITPAGVA	AAIFKDTLMSYEWEP	KLLSSILTYHVIAGQ	QLNAMKGD LQSSLGA
AIMPWEGHNYEDIAI	PNFAFELAARRTTDD	KDTKAVNPESTFSRI	VLLCCSGVATAAPKT
YSLDVPRITILDAH F	IKERYARCLGSAVNP	TGHQVGD RVGGFSEG	QPGTPGYAQGQQQTY
DSPAAQVAVRWAARD	SAGTVGLIKAILSLR	VERQIHEIVRAYEWA	VLAIGSPLGLEGTVT
VIWTRLFGVRLVKLL	YLQFRGEFTPKTQLT	KLLAGSTTSTVLPFT	VTAGQAE LTAQVRV
TVGLIKAILSLRHGV	RSLARVY GAGTPCAL	VGSWIGSSAGLMVAA	TLPVQRHPRSLFPEF

SGIAMAVVGGALLYL	SPVTLAETGSTLLYP	MKEGRYEVRAELPGV	SEAI AASYDAGVLTV
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LNLGSLSGIYNTST	NITDELIDRDWSPKV	VYAPKSALGHVSVGAV	DPVDAKALGQSVCP
VQFQSGGNNSPAVYL	TGTWLLFLGADDSLY	PIPLKIDVSGGLPAF	PSVMADVASGNLPA
ADVLTKNEDVIVREL	VANNTLWVYCGNGT	ALAVAVSPPAAAGDL	ARMLMDAAIFKDTLI
NNLGIGLTGDNQTGIG	TGLFVPQAVTPWPNG	QPTPAWTELAQAQR	ALNGMPAGLLSGMAL
AVLPPEVNSARIFAG	ACRPFDRDRDGFVFG	EKIFGPTRDWECYCG	KPPPAIKIDPPPPQ
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FLALGAGFEDIGIKT	FVRSEGCAMVLLKRL	VLNARFALNAANARW	YRASASNGSDDASAH
GPFGLGVVNISGIE	STGTTVLPFNGLYQP	APWGIAVDEAGTVYV	RDLLSRMPDLRCLL
SDFVKKFEETFEVTA	QGNSDRRAPKAVKEY	GLNVGITIPEFPIHW	GSVSSGLLRHAHCPV
ANYGFAVPDIPAI	RCGSPA WDLPTVFGP	GTAVRAFMQAAIGPG	TTVLPFNGLYQPQGL
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IATFAAPVALAAYPI	QLMSGYFADTDGIPP	GLLPPEVNSSRMYSG	VRLHEGQTTMTVPGG
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LKACIKAAAADR VVFI	ILPTIPLNIHQTFSL	NQSFPVTVNWSTPAV	VSADYITVMHDNGTR
ANVSRRAKVDVLIVH	SGGSGQPSIIDAAIA	DTRKHRVVALKLISP	PFLADGTPVDIILNT
GNVGFNGIGDANFGL	GTGNIGFFNTGTGNW	RFVEIGKADVYGNTR	GIGLVAGLIAPPLAV
SGTGNFGVFNSGSYN	FFNSGTGNFGVFNSG	NIGLIGLSVYARVN	LAGALPGIVGGAPNP
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LNAGLGNVGNYNVGL	DALARRIGRHGLIGF	LEEFDHQLTRIELRR	PRDDLIQVARVGLVN
VVLPWDGRNHYLA AV	AMSNLLGQNA AIAA	VNMNAQLVGVNSAIA	LDIANIFAPNLGERL
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IAYARKFLDDSVPLS	FVLARSLDPSRYEVH	VKKFEETFEVTA AAP	EHFASLADVLTKNED
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VLAIGSPLGLEGTVT	PLTPARAVAIVRQIA	YNTAIVGLGTPALVS	FADTDGIPPNSALV
DPERQEA VLEDPYIL	PNPYTYPENLPRVNA	TPVDIILNTHGVPRR	WMHLMASDFHAFSAA
GLPSLFGFNLLSFAS	LLRTERLKSQRVAGA	RKTGELDNRGSQFYL	LRGLLTELHRAGAAL
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LDIHETMVPIPIVFL	GPVWVFSGQGSQWAA	SEEAQLVVVGSRGRG	LSGSEEDETA WRNGD
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VCAVDMPYLTVELIE	SRYEVHFACDPRYNQ	LLKQYGPLTPARAVA	FGGRFVEIGKADVYG
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ASIFAWTRGLQHRGK	LRCLILTSYTSDEAM	ALGRSVCMPMVVAPGG	GTGNIGFFNTGTGNW
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GTGSTGLFNAGGFTT	AFQYDGVNDFPKYPL	LTTYILLPSQDLPLL	TGIGGLNSGAGNIGL
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EGWGKSPGFGTTVDF	SAHIQRTVASCNTR	YDHPTFAVHDTLFC	AMMARDTAEAAKWGG
AAANSWVDVFAHWPR	KNVPANAFVADYLPG	EYLQVPSPSMGRDIK	YKTVVVGTGDSSSM
VLNSLTGAAQRAGLE	HACTAVAAICHYIAM	EYLVRLHEGQTTMTV	DRAAQIAGADAKLII
TTSEQHQA TILRRG	QFTAQIADLDQEYDD	DGGILTRFGFSIPQL	LTTLPKFPLPGLPS
FGNTGTNNLIGLGT-G	CIKAAADR VVFINTG	LLGWVAVWYTATILH	IIDGLWPKLPDIPI
SGIRTLDDPFVEEFD	TSTNPIASIFAWTRG	ANLGRAASVGSLSVP	LRDELPLGLPATG
DESYKVTGTAPIYEI	PWILAYEDHNVDAGL	VEAITPQTLINIRPV	PYLTVELIEDLARRA
VNKIRGTFKSVAVKA	VSLPIFGFGGAPGFG	SGIPTLSTTGPVHAV	PNAGSRFLLDQAITS
LLASASIGTLGFTIP	QFEAAGLTYEHLRID	LVDFGIARAASDPGL	TKPVSQDTSKPKATS
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ISAAQVNYNLPGVSE	SPSRKTGELDNRSQ	SSRYGHWVPAVAVGC	PKTTVTFSDGRTAP
PTISVQIQVAIPLTS	QVVLNALADLPVTVI	SDIFLDDVTVSRRHA	DDAVVRELELPGIDVD
SAKVDCGGKTLKAS	HLIGPPPATVIRLSD	RLTQLPDTNIIKLPN	GPFGGAAAPVSAGVGH
IHELVNIGPFRIEPI	NTGGFNPGSINTGWF	GAVAMSLTVGAGVAS	EDDRAWTEAVIGNRRR
GVLNVGSGISGLYNT	FNSGTGNIGFFNSGTG	IVGASNSTGMSGGFV	GGQVISEEVGLTLEN
FWDEDEGEVMRDYRLR	NRVSFAKLREPLEVP	DSLPTDRPIVYATLG	AAGTTASPGAASGPK
EVTYRADIYALACVL	YQPQLAVDGAGTVY	VGITIEFPIHWTST	VNVFEQACPGQTLNY
NVTGSVGFPIAVPS	APNAAPEPVARRQRI	ELMPTYDLPANHEYL	AQYIGLVESVAGSCN
TDLPTPISVIFRSO	LWVYCGNGTPNELGG	NNQVVLPTDITAPW	LSFTLTGNPNRPDGG
TIFPNGISIPNNPLA	IVKDAPIRDWVKLAV	PIDADGRFVEPRVLV	ADTAGRLTEPHIVPI
LSLTIPGFTIPGGTL	GEPKPGNYRYAINNS	KKIGVIKVVREIVSG	AVAVDSDRTVYVADR
VDVSEWPGIDWPATQ	FTDLAQPTPAWTEL	FGEPSSGFSSMLWGG	GRHGKNGVIGKILPV
FNTGLANAGSYNTGS	PIHLGLTGQANYGFA	PGVLRWQQDHGRHLI	FGNTTADVFDGRGGPY
LPAGHGLNAQTGVYE	PWPTTFGYHEFFHAC	CIKAAADR VVFINTEG	LFCTIRNFYDADPLA
GQNSAAIAATQAEYA	NIGFFNSGTANFGLF	GPYLQRGVADLVPTA	FALLALPAHDGRVVL
DTLWQADTDPLPVVF	GSPLFPDLPSFPGFP	PVISEHRLVGIVTEA	TKIDGVGYPVHKPVT
TNDGVSAIEIELED	RWLVAEAGPFASVYF	VFLVDDHEVRRGLV	HGLIGFGESYMAGEW
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