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GLPPEEVERIRAFLERIRGRALEVHDLKTRAGPRSFLE ALDDDERQAIVDIV HAWPGVSGVHDLRTRQSGPTRFIQ GLSPAEVSR1 RKT AEAGGGRALEVHDKKTRKAGNRAFLE
G A
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A

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##  <br> A

 34$\stackrel{A}{\mathrm{G}}$



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| $A$ | $L$ | $D$ | $E$ | $E$ | $I$ | $E$ | $R$ | $l$ | $K$ | $E$ | $I$ | $A$ | $S$ | $Q$ | $H$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $L$ | $P$ | $D$ | $E$ | $E$ | $L$ | $E$ | $A$ | $P$ |  |  |  |  |  |  |  |
| $S$ | $M$ | $A$ | $C$ | $C$ | $L$ | $S$ | $V$ |  |  |  |  |  |  |  |  |
| $A$ | $P$ | $P$ | $A$ | $E$ | $N$ | $A$ | $K$ | $L$ | $M$ | $A$ | $L$ | $L$ | $L$ | $G$ | $I$ |
| $A$ | $V$ | $P$ | $A$ | $E$ | $E$ | $E$ | $E$ | $A$ | $I$ | $K$ | $Q$ | $A$ | $I$ |  |  |
| $A$ | $A$ | $N$ | $G$ |  |  |  |  |  |  |  |  |  |  |  |  |

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$\begin{array}{llllllll}\text { R } & \text { I } & I & S & S & H & A \\ R & H & A & M & S & E & H & A \\ R & A & A & C & L & S & V \\ T & D & I & V & A & A & W \\ R & Q & A & L & H & Q & A & V \\ L & N & I & I & R & Q & N & T \\ A & S & V & L & L & G & S \\ K & E & A & S & L & S & \square\end{array}$
G E

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| $\mathrm{G} A$ | E |
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ALPLE E $\square E Q I E$ QVI Q S QPNILGFHDLRTRRSGA』RFI Q
ALPPEDQEQI KEILATYQQQGIRKHALRSRMAGRRRFVS




S



L
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AIP PQ Q LDDPIKQTI LQV
SLPASEEEKIKGIISDHYL
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GVNNHK
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$\begin{array}{llll} & G & A & 1 \\ P & R & V & L \\ G & G\end{array}$
GVELDSETVR1 RDLISTNAC
F H A
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GVLGIH GLLRTREA GSTRFI Q
$\square P$




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ALPDDERATHDGVLAAHRAA
GVD PHTDAQLRRVISEEA

AVPLIEEMLLVI KKVIRRHAG
MSEEDQTKI RDULKEY
ALEPDEEAAVREAIATHSV
$\qquad$ ${ }_{P}^{P}$
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A
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GALGVHDLKSRRAGAAAFI D

 A L $\begin{array}{rl}G S & G \\ P G V & G \\ G & H\end{array}$
LPDEDRRKIRATVLN N

| $L$ | $D$ | $V$ | $E$ | $D$ | $R$ | $K$ | $R$ | $V$ | $R$ | $A$ | $A$ | $V$ | $M$ | $S$ | $C$ | $E$ |  |
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| $L$ | $P$ | $P$ | $E$ | $D$ | $E$ | $A$ | $K$ | $I$ | $E$ | $G$ | $V$ | $L$ | $D$ | $R$ | $F$ | $R$ | $A$ |



| $L$ | $P$ | $E$ | $S$ | $E$ | $Q$ | $M$ | $Q$ | $L$ | $V$ | $C$ | $E$ | $V$ |  |  |
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| $L$ | $V$ | $D$ | $V$ | $S$ | $E$ | $Q$ | $M$ | $L$ | $K$ | $L$ | $A$ | $C$ | $E$ | $V$ |








## ,









C H I
F H MVVV P E M M P V G E A H D
F H L E L D D HLSS FI E A H Ql
F HVVIV P GQWTVVLVKHKV C D H L



M H I EVV P G S M S I D A A H M I A D E V E A T L G E H FP D T E I I I H M D P
F HVVWV D A N M T V R Q A H R V M D D I E A T I H A E F P D V E I L I H T D P



LV P GR W I K Q G H D LA E K E E K D L R A A LAB G T V F L H P E P




F T L





L H V L V P G G W T V Q Q G H D WV E R L





F H L T V P G D S S V N D S H E L T D R I E A A L K S K L G R I F V T I H V E P


CHLEMDGDMSLYNAHKISDEIAFEILQEFPEAEI II HQD
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 M H L I L D K H M P L N K A H A I C D Q L E A T I K H Q L G T C D V I I H L E P








$L H L$ L L D D E M H L S E S H K I A D N R E A A L R Q A I P GA D I V I M Q D P
F H M E V P G D ITTVMA Q A H K V V E G V E R A L H K A F P K V E V L I H L D P $F H V \operatorname{V}$ F P G N WTVVQ Q GHE L C E E I E LIA I E R V L P G S H V L T H L E P $L H V L V P G G W S V K E G H D Y C E T I E R E I A A L V P E S H V P T H L E P$
 A HVVLVDP DMP L W A A H A I A T E A E R A I K R E L G E T L V T I M V E P


 $L H L E L D E T L L L R E A B A \| A D E L E N A V M A L F D D A E V I I H E D P$ F H V E V $\operatorname{D}$ G K L S S V D V G H D I G D A A E A A V R L L












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MDPED I 1 RTASSV SKEMVDDHYRRULSY DAELYKELKDTILQ

## ■APELSERMH

DAELVQQQNDMVLAY GFDEGQLQKFKETVLTV ALDEEMVIDNISIFMSHKD S TTDNLEQE: GQRI CSY

## A

ACDDEMEDALLKKCAD
SPKEMEDETVACASS
SKEFLK V VETVNSY
AVDSELLLQII HVIQKV
 SVSPDTLASFKTLYG
E EHVSGVHDLIIHNYGPR1MAS VHSFHHKKTREAANKIFVE $S C D E E V E R K M A D I I L S$
SOME ALDDAESVAKLVSLLNSQA DGVDGMHDLQVHSYGPRTFAS QEGVLGVDLLRTRVFGNTYVD
E
$\qquad$ KGVLGVHQURSRGREDDINDD DGVQKIHQLRSRFMGSDVLI D

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## GFNEQEDE EYRNDTLEV

DDEADVERVVITNRHRSKGVLNCHDI ASRGVGRQVFI E ACDEETEKAVKGTVLSTSPGVVRIDGLKTRRFGPRMYVD SLPEDELEAVHTILC AEP GVGPEEQQQMLDSVMAHDD GFDETRMQSFKEIVLNVA GVDDQTRQDIKATIAKTQ SVDPELVKE: EDMASSF MTD GFNEEELQQYRDDVLEVAD A $A$ $\qquad$ SVEVSTLERLRNTVLAVVS
AADPELAKEDREQVESYQ GFDEQTLTAYKHEVAAMVD GADETTRAELEQVVCSVS

AEEVEVVESV





RARHSGSFHFVD
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VEPDLLAEFRSLVASV
GFNEQE|LEAYKNYVLE

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 AHVELDSDLSLVESHELAENVMTTLREKLKKVQATI LHLVVPRYQHIDYVHDLCEHISDEIKASGPHTDILTHAEP HAEIPADINIMTVHNI DDRAEREISEKL GVYLVVHMDP IVILVDPTLDVRSSHG|SDKVENVLTEKYDVFGAHVHCEP VHAEVPANVDVVSHDI DDNI EREVGAEM GDNLVI HMDP VDVRTDGNRTVVEAHELTGVIERRLRRAFGNTHIVIHVEP MHLRMPGDIDLMTSHEHATNIEHELRRRFGRTHINIHVEP CHVEVPSDRDLVSVHDMDDSIENELHQKYGHCINVIHMDP
 ITVVTVSPQ KLDMDPEMTVKRSHAIATQVKEEIFDQFNNVDVMI HTNP LRVGVPADLTI QEGHDILRKIKKTI MEKHPNVEVLIHLNP
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 VVVSVSSKLNVIEGHDITMNI EEKLRSELNITEVVI HVEP V HVEMAAEGDAMKNHDVDDNI ERDFMNDEGLHMIVHFDP LHMVVDAD DLPKAHRITELVEEHLERRFGPVRCTIHLEP VTVVVDSDMSLDEAHHVCDNVEHHLCDK GUSSSVYVHPEP FHFTMPYYFTLEEAHREDDEVTRLVQQNDPHAEFS HGDP MEDAVDPDLNLQQAHADSREVHDTVEEQFPQVACAVQVNP VHVVVPNDWSVVQAHSLADRIEKRINEELDPAQTVVHIDP VHIMVGPRISVSEGHRISESVAKTLRQSRPELEVLVHVDP VVVEVSAELSVGESHEI SDEI EKRMLEEHQI GNVHVHDEP VHILVDKFSTASEGHYIAEDVKSNTYHNDDNIDITVHVD
 VYTEVPGALSVGEGHDIAVNAHNRVLTSHTVLNVIGHDDP VHLDFPGSMSI KEAHDI ALLADNRLKAKGNVLSVTTHFDP LHAEVPYTMNLLAAHDIDDAEHRVAGQLGHCGISTHMDP FHI RLDPEDNVVQGHEVARAVRRALLAGGKGVDAMVHVEP GHVTVSPDMRTDEAHRVADNVEKILRDDSFEDVDVVVHIVEP IHAEVPRDEDMEVSHE:DDRIEREVSKK TGVFLVIHMDP VTIVVKPNLSLYEAHQI CDRVEHHLHEK GISSVYVHPEP MH| KVDGRITVDEGHAVADAVEDALYALGPBDDVLVHVDP LNISLKKDMKLSRAHEI SDKVEDELKKRTPQIEVBIHEEP LHAVIDGNDSVKEGHAISHLLKDTLKEALPQLNILIHEEP CHLTLPWYFDVREAHQEIDQLEDLVKARFGDLELFVHAD IVILVNGNLDI RDAHDISTKVENLLLEKHQTFDVHVHVEP
 VHVEIDQRNSSDQAHAISDAVEAALVSELNALATIHLDP VEIRMDPDKTLVEAHDTAEMVHDMUEKTFPKVHCMVHVNP VHIEVNESWSLSQAHEVIDAIEHDFQRND QVELVCHLDP LHVLVDPQMTVMDAHGLGDEVEAAVQARFPQVEVLVHIEP VEI SVDKDLSLIEAHNI SENVHSQI ESKLKRVHCMVHVNP CVIYTSPTLPLYRAHHLADDAETAGRDQSEHVEVFVHVEP VHCEVPAEEDVLVSHDITDNIERDFQRDMGGVQLVHLDP CHVEVDSKGDLVFLHDKIDQLEHELRNELDNVHLTVHLD

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 D DEEDE：K K K M


EVTKQVIQTASQV
G L D A QVA HIERLVSEL
PASDRERV信LREN
GFDPDLLASYRQSIGLNH
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G $\square \mathrm{E}$ DHAI INQQ VDILNEHRQ GLS QEDTEMLKSIVARDT SADNDTVNKI DK SILDV DEVAATHARVEEAARE
GПHQEKLLK HE U QSVS PGVVGYDKCFVRKMGFDYYVD DGVRDVHGLRSRHMAEEALI D PAVEGI HDLTVYYDGTDLEVE PKVADIPA RARTSTHHIFLD

 | E E E K |
| :--- | :--- | PEVKEVKRLGGRRSGRFSFVE

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$\qquad$ E
SVISDERLAAFETVILSV AVEPEVLADTHRTLEEFR SDELIQQEQNIILQ E
 P
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$\square A E A$
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UniRef90_F8FMW6 B

1


20 R H P A $V$ V V D $\quad$ I K H

GVIAVVHDTSVHDYGANKVV|S K G V K D TE K L F I R K A G M K Y HV D


 A A P K E R F A A | A | $N$ | $G$ | $l$ | $H$ | $D$ | $V$ | $H$ | $N$ | $V$ | $R$ | $V$ | $R$ | $D$ | $T$ | $E$ | $A$ | $G$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $E$ | $I$ | $V$ | $N$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $D$ | $R$ | $I$ | $K$ | $A$ | $I$ | $D$ | $T$ | $V$ | $R$ | $A$ | $S$ | $H$ | $L$ | $S$ | $M$ | $G$ | $Y$ |
| $M$ | $M$ | $E$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | WNH DP

 E GV $\mathrm{R}^{1} \mathrm{~S} \vee$
 P F V R A I D TVVRAYSGPRLIVE

 L L T Q Y K Q TVLK F Q A
D E ALL L N DMA S E L N E KR S A D WIDD I H N AKVIDKY GN F L YM D
 S I D K K M E ERVLGQV

$\qquad$
LHE E D T L L S L
R E ㅂ
ALSETEVAAlJRTLAEASPP

 A R P R P

## D E K T I N M $\square$ T E Q I K

SVDETTHDTILNLVRNY

| $S$ | $D$ | $D$ | $E$ | $T$ | $T$ | $H$ | $D$ | $T$ | $L$ | $N$ | $L$ | $V$ | $R$ | $N$ | $Y$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $S$ | $L$ | $D$ | $Y$ | $E$ | $T$ | $L$ | $S$ | $K$ | $V$ | $E$ | $K$ | 1 | $I$ | $D$ | $D$ | $T$ |
| $S$ | $M$ | $D$ | $D$ | $E$ | $T$ | $K$ | $Q$ | $K$ | $L$ | $L$ | $D$ | $V$ | $K$ | $N$ | $Y$ |  |



 SI NKE DKDKVLAI IDDRH | $G$ | $L$ | $S$ | $V$ | $D$ | $E$ | $V$ | $D$ | $S$ | $I$ | $R$ | $Q$ | $V$ | $I$ | $D$ | $D$ | $T$ | $Q$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $A$ | $I$ | $D$ | $P$ | $A$ | $V$ | $T$ | $E$ | $A$ | $A$ | $E$ | $Q$ | $T$ | $L$ | $L$ | $D$ | $T$ |  | A I D P AVVEAAE QTLLD TAA P P

GFDEDKLLDLRSTDART D E
 P GV R A D TVVRAYHS GPNYFV E

NETVRDRDMVIARNSSLAVHHVTVHDLGAK ELV $\square D T E T \square Q E Y V A V V K E F$ N E V V K R I 1
 $S V N E Q Y E E R I E T I A L G V A$

S S K I
S V

 A V D P A L V D T A E R TVVRKV | $A$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $A$ | $D$ | $P$ | $E$ | $L$ | $V$ | $D$ | $Q$ | $A$ | $E$ | $R$ | $A$ | $L$ | $R$ | $A$ | $V$ |
| $L$ | $H$ | $E$ | $E$ | $D$ | $T$ | $L$ | $E$ | $F$ | $K$ | $K$ | $I$ | $V$ | $K$ | $N$ | $V$ |

G G
E D
G K
P
D G
P G $A \square D G \vee L A \vee N$
SADPEF LAN IRRD IANQYHPELYADI
V H N
 AVDPALVDKVEHVLRDTMPGVTGVGTVRMRWQGHSGRAE

SAEPEF $\square$ NR $\quad \square K V C L D H$


$$
D D R \prod S H \prod D T V Y
$$

S P SFI D P DVK DVGEIAVYGFGSKFLVVE

DKKLL K K L S F Y L N E K R D P L I E Q L D T I R AF H F G E N FL V E
 GLESEVVVTRIAE IVRQ


| D P V F | E K L R D F T N N N |
| :---: | :--- | :--- | :--- | :--- |

T P
EVVKR I
$G$ VD P A F VD A A E A A L A D
T Q E L L A A R


ALRESVFDRVRAVAARSN
SVDPALVDTAEHAL
PEEVVVDEDAETMIMDR Q

V D P KI K A K $\square E A A L K A H D Q$ SVAPELVERASRALE GH AV D P S L V D R A E Q A L A S T A TVVA H S S K
DKEMEDKDGA V MQQ D K E M R S R I G E E A L A R H A A G T L T S S I H D VDP QLEA DMK KTVVTVK E S V $\operatorname{V}$ F D R R V

40

 P |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $N$ | $V$ | $F$ | $L$ | $D$ | H S |

K
V
K
P $\begin{array}{lll}P & G & V \\ K & D_{1} & R\end{array}$



 P E V K K I Q H FN S T P V G Y K Y Q I S | $G$ | $V$ | $G$ | $S$ | $L$ | $H$ | $E$ | $L$ | $R$ | $T$ | $R$ | $R$ | $M$ | $A$ | $H$ | $R$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $G$ | $V$ | $L$ | $V$ | $D$ |  |  |  |  |  |  |  |  |  |  |  |
| $T$ | $G$ | $L$ | $R$ | $V$ | $R$ | $L$ | $R$ | $W$ | $I$ | $G$ | $H$ | $R$ | $I$ | $V$ | $A$ |


 D $\sqrt{D}$

[^0]
 $\xrightarrow[S]{S}$

 . $\mathrm{G} V \mathrm{~T}$ D V G R G K T K Q M G R K V W A D | 1 |
| :--- |
| $Y$ |
| S | Y E


 STM

## 












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$\square$ DGVLGTGQVRMRW SASPEFLQLVTYTCVTHHR eavrellathightlorat

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 GIDKKTQAA】EKIVTDLVDGELLAVRNVRGVKCGGQTNGD
STDEKTYNETTT\VQN GFNPRリRKE！VKNIQEV N

## A A L

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FDPQVEDRFRQAAEDF
AASPADRSVLDY IVMRFAE
SADDSSDQERMCCETHS S
SAPREFVNKCIYVSLTH D EHEAEFMDTIQRVH

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## \footnotetext{  

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 Evidy $\frac{T}{D}$

为 | $D$ | $L$ | $L$ | $K$ | $V$ | $D$ | $S$ | $V$ | $H$ | $A$ | $H$ | $W$ | $G$ | $E$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | $D$ | $L$ | $F$ | $V$ | $E$ |  |  |  |  |  |  |  |  |
| $P$ | $E$ | $V$ | $E$ | $R$ | $V$ | $L$ | $E$ | $L$ | $K$ | $A$ | $H$ | $Y$ | $N$ |
| $G$ | $N$ | $V$ | $V$ | $T$ | $L$ | $E$ |  |  |  |  |  |  |  | $A E^{P}$

 | $R$ | $Q K \vee$ |
| ---: | :--- |
| $G$ | $D$ |
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