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PHENVVL 10 10 R $\quad 20$

20 30
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 D K D S NGNAFQGBVI SDDDTSNSYVHASHKLVATIGGLEDVII
 D K D S D G NV T K G DVI L H E A R N C L V H S T N K L V S LI G I E DV V V
 K DGEGNAA D A DGNVL KGEVVLFEA

 D K DENGNTS K G DVI QHNSRNTVVVAENSLVVSTVGLDGGVV

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 D DKGNVV R R
DKDSEGNVL
D S S GNVL
K DVNGNSHT
ADGNGNC!E
DEQGNRV
$G \in A$ EKDENGNVNTGDVISHATTNCYISANNKLVTTVGV DADGNV A Q G DVVLDQ AHNVVVVRS D D R L V A V A G V V D D V V ADENGNRFEGEVLSYNAHNNYVKSEDRLTALVGIDENLIV DAEGNACVGD VLSQQDSQGCYIHAGSRLVT TLLGVKDLVV
 D K D D Q G NVI Q G DVI TTVIK S Q N N Y V F S E S R L V S L L G V D N L V V D K D A N G N AVVG D A L L E DVN N S Y I N S E G R L I S S V I G L D D V V V
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 D K D D A G N V T V G D V Y L N GVK N S M V R S E G R MV A A L GV E N L I K N K N G NV L Q G N V V E Q D S Q N N Y I $\quad$ R S E E N R L I A V I G V | $E$ | $K$ | $D$ | $A$ | $N$ | $G$ | $N$ | $A$ | $R$ | $G$ | $D$ | $V$ | $L$ | $T$ | $D$ | $K$ | $S$ | $S$ | $N$ | $S$ | $Y$ | $I$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $E$ | $Y$ | $S$ | $Q$ | $N$ | $R$ | $L$ | $V$ | $A$ | $A$ | $V$ | $G$ | $V$ | $H$ | $N$ | $L$ | $I$ |  |  |  |  |  |
| $E$ | $K$ | $D$ | $G$ | $Q$ | $G$ | $N$ | $V$ | $L$ | $S$ | $D$ | $V$ | $M$ | $V$ | $Q$ | $D$ | $T$ | $A$ | $N$ | $T$ | $F$ | $V$ |
| $R$ | $A$ | $E$ | $G$ | $R$ | $L$ | $V$ | $T$ | $T$ | $V$ | $G$ | $V$ | $E$ | $N$ | $L$ | $V$ |  |  |  |  |  |  |

 D NA GNVIK GKGDIIALDDNNNCYI QAEHKLI A TIIGLIKDVVV D D A GNVIMH G D A EKD DK GNSTFGDVLEHDCSNNYIRAEHKLVATVGVDNLVV
 DAAGNVI RGDVLI E GSKNSYVHADDRLVAVVGMDDVVV DNNKNVLKGDVIAQTTTNSYIHSQNKLIATVGVDNLVI DKDAD QNVVRGDVI AEQSKRCYI NAPERLVAAVGLEDLII


 K DVGGNVFK GDVVGQGTSNTYVYA ESRLVATLGVEDLVI DKDGNVIVGD $\begin{array}{llll}V & V & A D D & C \\ V & E \\ M & E & N\end{array}$
DK D S K GNVIR GDVLMENTSNSYIFS QNKLVATVGINDLVI
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K DGNAVSGM
EKDDAGNVTRGDVLMHNARDNDVFAEDCVVACVGVNDLIV
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D DLLGH V A I N A K E V V I SVID A G D C L L V Y G D N R L V
 D GDGNAFKGDVLSLSSNNNLVRADGRLVAIVGVNDLVV,
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D


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保
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D T D GNVLVGD
K S K N C I A Y G K D KL I A T I G L E N I I I D D GNVLVGD VLTE DA A GNRVVGKA』VVG EKNSEGNVHKGEVLS L
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D PNGNVLLGB
$A D G N \vee A, G D$
V VTHH



$D G Q G N V C D G D V L A R D T R D C L L M A Q S R L L A T V G V R D D V V$

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D E Q GNVTVGD
E A DERGNRI E GE


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D A Q N NRAAADA GVFVDTCNTVVQSDDRLVATVGVVSDLIV
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GNFI
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PD GHGNRVEGEALLHDVDNCY L
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EDGNV
D K A K GNI
EKDSSGNAQT
DK D GNVK I


F D GNANVLQ | $R$ | $G$ | $N$ | $V$ | $D$ | $A$ | $V$ |
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| $R$ | $D$ | $T$ |  |  |  |  |
| $R$ | $D$ | $V$ | $F$ | $V$ | $D$ | $N$ |
| $D$ | $G$ | $N$ | $A$ | $I$ | $T$ | $I$ |

D A DGNR
EKDANGNVT RGETVFLEAASSTFAH

D S D N N N L
D A T G N V A $T G G$
$\mathrm{E} G$
Q
D A T G NV A I G Q

DKHGNVI
ADGV ARGRVMFAG
A E GNVCHG


DEAGNA HQGDVLTTRSFNTLVHASSRLVAVVGVDNLVV

 D P D G N A A V
DK G A A V V V QH G CRD TLL Y

EKDENGNVKV
DENGNLQLGGEVV呙 G


K D N E G N S L K G K V I I E E Q T K N C Y L R S E E R L I V GII N L N N L V




DARGNA AQGNVLADIDCDNTVLI



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| UniRef90-FOLBR1 | $\checkmark A T K D A V L V V P K N R V Q D V$ |
| UniRef90-R9, | VETEDAVLVCDKSKAQEVK |
| UniR | VDTLDAVLVAHK |
| UniRee990-Q0 | VDTPDALLVAHPDRAQDV |
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| UniRef90-UP100035C7AA2 | I DTGDAVLVSDREHAQQVK |
| UniRef90-F7P1H5 | VQTrdavLVankdragdvk |
| UniRet90-G7 | VETADAVLVAHRDKAQDV |
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| UniRef90 UPIO003031B9A | VDTPDALLVADKARSQEVKYLYKELKA |
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| UniR | I ATHDAVLVLPRGDSQQVK |
| Un | VETKDAVMVADRRRAQEVK |
|  | VQTKDVVGCPKER |
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| UniRef90-B7R7A1 | VDTDDALLICSKDKV |
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| 8A | VETPDAILIVK |
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| Uni | VDTPDAVLVCPRDR |
| UniRef90-U | I ETPDAVLVADKSCSQDVKHLVNTL |
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|  | VETADA |
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| Unil | RDATLICAKDQVQRV |
|  | D |
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|  | VVNDDA |
| UniRei90 ${ }^{\text {A0A011TZ30 }}$ |  |
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| ef90-C84 |  |
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$D T H D T$
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SDGNS
KDNVINHGCSG
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DK $K A D G N V C Q G D A L L S G$
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NVILGDAD
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PDEQGVALSGAA TAI DC
DNA ILKRGDP $1 / \begin{aligned} & \text { C V V } \\ & \text { D } \\ & \text { D } \\ & \text { S }\end{aligned}$
DKDGAGNASTGDAI VKDSQGTLVSRRTIALDINDLI
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GNVKIA
P HTLVVDGKNNI LVSEDHLI AIMGLDDLIV DPDANGVVTSGEATALDCENSLLVRSDSEHIVGIVGLKNVMA


NVDLA K HVGild TK G GII FYAENEVIVTTIGLDEDVVV DTNGEATIGTVVDLDSRDNLLDNEGSVLAVVGMNDAMV DEAGNAK IGGKDIVRYECKNCVVHADESKVVVQGLDGYIV|



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$D D R H N A V G N$ NVRMYECNNCIVVHTPHKQAVIQGLIDGYII DQDDNQNTLLCDIRMFDCRNCIVHTDEKQVVIGGGLDGYIV
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$D$ VD GNAVVGG

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| UniRef90 J2K3C |  |
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| UniRef90-UPIO003644B6F | VETDDALLVCKLDDAQKVKDIVEQLK |
| UniRef90-B1X | QGDVTLI VDKHRTQDIK |
| UniRef90 R6YC | A K K GRLL CR |
| UniRef90 F3P8Z1 | V DTP |
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| UniRef90 A9B | GE |
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| UniRef90-UPI000478E6FF | ALTQDAVLVTRLDRAQDVKKVVDDL |
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| UniRet9 | VDTEDALLIAKKGSSQKV |
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La DALVATTG GSP I GRG

DTSNNAC
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 SNMVTPSNVGERGNLVYSTGPRVAVHDLEGIVV DASNNVIVTPSNVVLENCSNCLVIAEDDKI TLSDMESALV MTEDS
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