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T DP VYRARRE $\square$ TR $\square A R T Y R H G Q P \square P R \square E$
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$R G D Y S K 母 D A Q Y V V K Q D W D A$
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P Q WQD YTA D EHA T WK ML
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VT Y GE GERPPRGNYARAADYTCEQDWGAYTPAQHDD


$V$ I GAS ERPPRGDYARAADYTCAQAYDS



90
100
110
120
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 K E H S GFTI R PVVAGYLS PRDFLAGLAFRVFHCTQYVRHSSD

 K K CTGFS L R R PVA GLL
 $\begin{array}{lllllllllll}K & K & R & T & G & W & V & V & A & V & P \\ T & G & L & V & P \\ C & G & G & R & L & R & P & V & Q & G & L \\ L\end{array}$

 $\begin{array}{llllllllllll}K & R & K & T & G & F & T & R & P & V & A & G \\ K & Y & L & S \\ K & R & G & F & T & L & R & P & V & A & G & Y \\ L & S\end{array}$ K S R S G F T $L$ | $Q$ | $R$ | $T$ | $T$ | $G$ | $F$ | $R$ | $L$ | $R$ | $P$ | $V$ | $A$ | $G$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $K$ | $E$ | $L$ | $L$ | $S$ |  |  |  |  |  |  |  |  |
| $K$ | $G$ | $F$ | $T$ | $L$ | $R$ | $P$ | $V$ | $A$ | $G$ | $L$ | $L$ | $S$ |



K
$M K A T G W Q V V A V P G L V P D D V F F D H L A N R R F V A G N F I P R R D Q$

K R K T G F QL L R P V A G Y L S P R D F L S Gll A F R V F H C T Q Y




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QUERY
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KDAQQKDREFAKTLNR
EEAKDKLRAYARTI
EDAKKKLIAFA
EEAKQQMREFAAT!

EDAKEKFRR
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E EAKEKMREFACT
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EDALQKFRSWVAESDRR
EDAKVK L Q
Q Q $\square F D A T A D D F A P V Y D R \square A D R P D \square P P D A V L A G D R V L$
A DAKEK $\operatorname{DR}$ A Y VAGI
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UniRef9O_U1KMK

YK QLKELIFPTHACREHIIEAFKDCGYRETNIIPQLEDVISNFIL FKRQVRLLKDRVVPVFLDHVDGLAMAGDGI PDFRRLNDIL
 FNNVLDLMPKHFCMEYRDAFKMLGFTADK: PQLKDMNEFL FNTVVDLVPKHACVEYRRTFRKLQFESHRIPQLQEVSEFL YTRQTALLKGRVCDEFLEGVERLNLSPESVPSFEAVNEQL YARQMEVLQGRACNEFMEGLTRLPIEPHRVPVFDELNQAL
 YERQSALLPGLASQAFDDALPSLGVRDRIPRFDEDNERL YKTDRNLYPDYACKQYINSLQLLEFREDSVPQLQDVSNFL YERQSALGPGLACDEFIAALPKLGVKDRIPRFDEVNEHL YARQAALLPGRACDEYLASMDALALSPTGVPDFETLSARL YARQTALLEGRAADAFVAGMKRLTLPADRVPSFEDVNRQL
YNELTRLYPTHACAEFNYDFPLLGYGPDR\|PQLQEVSNFL YTYLNKLYDTHACTEHVHNLRLLGYSANNIP FERQRSVLQGRACEEFLVAQDAMGMIAQQ1P FRQREIAKGRASEVALKAMAELELSASGIPNMAELSDKL YNQLLNLFPTHACKQHIQAFQMLGYKPDN:| PQLEDVSNFL
YRKLHTLYPSYACKEFLDAFQHLGYAEDHIP
YLTLRDLYATHACSEHLEAFRLLGYSPDNIP

YERQAQALKGRACDEFFEGLDHLDLNDGGI PDLEKLNKKL YaRQLRQLPGLACQAFTDAVEQLGAPDRIPRFSDISARL

 YKRQTGMLGGRACDEFYDGLKQLGTDKGGIPDFRELNPKL FERQARILRDRAVPAFIDGLSGLGIAADGVPEFERLSDVL
 YKTLKRLHATHACKVYKDNFQRLGYSPNKI PQLQTVSEFL YARQSALVETHACASYRAGLAKLNC AQG:PQFGDANAVL
FQRQRELLPGRACSAFLDAQHALGMTPDAIPRFDQLNRHL
YNSGKLLYKSYACQQYIDAFNELEYTDKSI PQLENVSNFL FLRMQELPGRACSAFVKAMNELQLSASGIPDMEKLSDLL YARQMALVPGRACEEFLHALGHLA AADGUPRFADITDRL YRELTKLYETHACKEHLENLKLLGYKESDLPQLDELSKFL
 YDRQAE WPRBACDAFLHGLDALDLHGAGIPDFRPMNEK

YSTLK SLYPG HACKEYLDAFHLLEYSENN P
YERQTALGPGRVCDAFMDGMRALDMARRVP
HERQAAQLPGLACEEFMAAVEQLGBPSQPP
FRELNKLYPTHACREYLKNLPLLGYREDNIPQLEDVSEKL
 FTQLRDLYKTHACREFNDSFTLLGYQTDNIPQREDVSNFL YRKLVELYPTHACRQHVEVFQTLGYSPDSIP LQKQWGLLEGRACDEYLHGLELLNLDSDRLP
YDRQMKVLQGRAAPEHFKGLELLNMS DEIP
FEROTALPQLACREFVEGMALPLSADAPDRRMNEKL
 I
I R R R SAL YQRQSALVQAFACAAFIEALPCLGAQQRIP


FDRQLKLIKNRACDQYHDGLDULQLSNDR:P

 Y N S L T S L Y Q T H S C K E H l $\quad$ E G L L K L L G Y S A D E V P






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KRKTGFQ|LRPVVGLLISARDFLAS|LAFRVFQCTQYVVHGSK HKATGWTVVAVPGLVPDATFFEQLANRRFPSTCFIRTPEE
 HKATGWEIVAVPGLIPELPFFTLLANRKFPVTDWIRKPEE

 KQQTGFQLRPVAGLLSARDFLASLAFRVFQCTQYIRHSSS
 $M V L T G W Q V V A V P G L V P D A V F F E H L A N R R F P A G N F I \quad R R P D Q$ KERTGFTLLRPTAGLLDARDFDACLAFRVFPTTQYLRHPSA HKATGWEVVAVPGLIPEVPFFTLLSQRRFPVTDWI RTAAE SALTGWRVVPVAGLVPDDVFFEHLANRRFPAGAFIRPEEE
 K S CTGFTLRPVAGLLSSRDFLAGLAFRVFHCTQYDRHSST RKHTGFTLRPAAGLLTARDFLASLAFRVFQSTQYVRHNNS KKRTGFQLRPVAGLLSARDFLASLAFRVFQCTQYVRHGSK
 KKRTGFSLRPAAGLLTSRDFLASLAHRVFQCTQYVRHSSS

 MRHTGWQVVAVPGLVPDEVFFEHLANRRFPAGNFIRSPQQ SAATGWRLVAVPGLVPELTFFTHLAHRRFPVTVWLREPEE HALTGWEVVMVPHLVPDDVFFTHLANRRFPAGRFIRGADQ SKATGWQIVGVPGLIPEEAFFALLAQRKFPVTDWIRTPEE

UniRef90_K1QYX8
UniRef90_A8U178
UniRef90_D7PVG6
UniRef90_J9K5N6
UniRef90_E6V8F6
UniRef90_UPI00022C8DB5
UniRef90_W6X6V6
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UniRef90_D2XNL7
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UniRef90_U1N8J1
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UniRef90_R7UY37
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UniRef90_T1IS97
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UniRef90_B1Y214
UniRef90_UPI000473FB51
UniRef90_UPI000476A1FB
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UniRef90_T1G3S8



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| :---: | :---: |
| UniRef90＿K1QYX8 | EDMMQKMR <br>  EDAKDKLRQYAQGL |
|  |  |
| UniRef90－J9K5N6 |  |
| UniRe990－E6V8F6 |  |
| Re | AKEKFRRWVSTMS |
| UniRet90－W6X6V6 ${ }^{\text {U }}$ | LF AATQD岛ERLSQA乌RDLTP回GAGDIVSTDTVI |
| D2 |  |
| Ref90－Q9X | A SAKNKLKSWAATINR |
| Ref90 ${ }^{\text {－} 0} 0$ |  |
|  | DQLLRVTETDFGPLYQRLAGAEDUPDAA\｜LPEDMVF |
| iRef90－UPIOO | A |
| niRef90 UP | PLEACYRDFGP YDHLRSQSDLAPHETAPGDAL |
| C5 | EQLFALAKVDARALARRLKGLAEHPAGAVLAGDRVL |
|  | DAKDKFRRWVS |
|  |  |
| niRef90－R7U | DALIQATAADFTALYTQLQQAQALPAGRVQ |
| Ref90－A0A059 | DA ARA |
| Ref90 T11S |  |
| iRef90－Q0ANJ2 | EELMEATYADFAPLYESLPGRPEYKPSDLLDTDRV QDSKDK |
| iRef90－Q4SDY9 |  |
|  | LAALAQLDFAPAYQRAALLAAELEPSEVLPSDR |
| UP | QQLFEETEPDFTPVYARLKALAALPADTL |
| Ref90 UPIO | RQLFDATAPDFTPVYAAVRQQPLVEAGUVLDGERCF |
|  |  |
| iRef90－T1G3 |  |
|  |  |
|  | LFEMTARDFTPLYAQMQGMPEFAA |
| Ret90 UP |  |
| Ref90－I3TIA8 | EELFEETAQDFQP Y |
| iRef90－UP10003E | QALGDACYRDFDPUYDDVRGRPADEPHEUTDADRLI |
|  |  |
|  | EDMMTKMRQYVAST |
| ${ }^{6}$ |  |
|  | ESCKDLIRR |
| UniRef90－T1CZ |  |
| P100 | EQMKKQVKKFALTTLNQNL |
|  | TLLKDCYEDFTGVYEKLVGLT DLSPSDLIP EDHLT |
|  | AQLFDATAPDFTPLYGRAAFQPDUAPGTVLPGEHD■ |
| E6P |  |
| iRef90－A0A017H | EDLIFELLRTDFPALYDRVRAQPEGSPFRIEPEDEVI |
|  | SDAKDKLR |
|  |  |
|  | GL |
|  |  |
| E9FIL1 | D DLKQAQTTEDFAPGYADLVALPDYDTDTपAPEDRVL |
|  |  |
| UniRet90－V5PXA4 |  |
|  | KQLFELANSDVMAMVKEAKRLGLHKP <br> KQLFDATAPDFGPI <br> EDAKEKMREFAKTI |
| 何－－V8P6G9 |  |
|  | ESCKELIKGFTM |
|  |  |
| UniRef90 W4ZC85 | EDAKEKLR R |
|  |  |
|  | DSDAK |
| SiRef90－UPIO00477 | DELMEATGQDFDPDYAKLKGVPDTKPDTLVDGDKV |
| UniRef90－C9Y612 | RQLFDDIAUDFAPLYARVKTGEPLPADAQLPGEINI |
| Ref90－UP100 |  |
| UniRet90－Q2SN |  |
| iRef90－A1W | RQLFDMTAADFTPDYEQLRGLPAWAADERVAG KEAED\｜VRHF |
| iRRef9－U61TG3 |  |
|  |  |
| UniRef90－K1ZY |  |
|  | DDLFDKSQLDLMAMVQQARSLGLHAP |
| iRef90－UP1000 | DQLFAI ADMDI MAEVHKAQQLGLFAPA |
| K2A |  |
|  | DVLYELIDMDLIGLIRESRKLGEYAPAYPVNGE |
| K2B | DVLFKLTEMDLIGGLDREARELGMYEP |
| UniRef90－A6P4D3 |  |
| G4 | DNLFD A QMDDMALVEEAKKLGRYEP |
| UniRef90－J21FL1 |  |
| UniRef90－F7RWN8 | NELFEADMDIMAMVHEAMELGLFEP |
|  | EDLIFRACEPDFTPLYERVKQSGEDEAGQAATGDR |
|  |  |
|  | ESMKRELRNYTNT |
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UniRef90 A4CDB0
UniRef90_UPIO002658BCD UniRef90-G1L5Z0 UniRef90_U5KL75 UniRef90 TOR069 UniRef90-UPIOOO3011EA9 UniRef90-Q3JXT1 UniRef90 U5KLU6 UniRef90-A0KYY9 UniRef90-G5EED8 UniRef90-O96370 UniRef90 U5KLSO UniRef90-W1N162 UniRef90-Q15RI1 UniRef90 Q9KLB8 UniRef90 UPI0003701C1C UniRef90-F6AGD8 UniRef90_UPIO0036C57E2 UniRef90 V8NZSO UniRef90-V8NZSO UniRef90-H2YFM9 UniRef90 UPI00037BC322 UniRef90 Q084Y4 UniRef90-E5SML6 UniRef90-UPIo0036C872B UniRef90 U4K6N2 UniRef90-E5KBU4 UniRef90-K6YRZ8 UniRef90 G4CF65 UniRef90 UPI000331549E UniRef90-R1GNV1 UniRef90-M3YQ60 UniRef90 Q2G3F1 UniRef90-UPI0002F8782E UniRef90-H5TBB2 UniRef90-A0A016RZM2 UniRef90_N2J1R7 UniRef90-TOHR72 UniRef90-M4B3S3 UniRef90-C5LZT0 UniRef90 K8YPQ2 UniRef90-W9BUR7 UniRet90_J3AEU3 UniRef90_14MWX0 UniRet90_A3QCV4 UniRef90_O6L144 UniRef90 UPI00021A3F85 UniRef90 M1 V580 UniRef90-N9TWH0 UniRef90 B7G1T1 UniRef90 E5KBU3 UniRef90- V9ZYY4 UniRef90_UPI00037BF164 UniRef90-A0A044VHV5 UniRef90-T1BTF1 UniRef90-WOB776 UniRef90-Езвммо UniRef90 UPIO003620A3E UniRef90-A4BG27 UniRef90-M4AM48 UniRef90_UPIO0035E1848 UniRef90 UPI00047681C5 UniRef90-U2Y9N3 UniRef90-TOMKY8 UniRef90 B9JHZ5 UniRet90_E1SPG5 UniRef90-F2PEA9 UniRef90 M1F6Z1 UniRei90-UPIOOO2FAF4F2 UniRef90-G9ET14 UniRef90-F5ZE08 UniRef90-K2BNE0 UniRef90-12GP76 UniRef90_UPI00035F8B04 UniRef90 B0X4K6 UniRef90-J2LIN6 UniRef90_UPIO0037CF308 UniRef90-J91430 UniRef90 L1JJA2 UniRef90-A8FXG4 UniRef90-F5SSC0

YRARRKKDAEVAFDYKEGQPDADYTPDEVKTWGIV GEQQPDADYTPDEVKTWGGV devyrrrrrelvskaksykagdpiplidy TQQENEVWTTV DQVYRARRN ELSE $\square A A N Y R Q G Q P I$ HYSEDETQTWGAV VTAKLKEQFDAGLETRAYDARMPQPLARYGDVDHAVWTQL EVYRARRREUVAKAKNYGDPDPVVDYTEEENRVWTVV DTEYRQRRMMAELAHNYKHGEPDPRTEYTSSERKTWGII KEYRKRRMMFADIAYKWGQQIPIVEYTEDEKTTWGRIV DEQYRRRREVSKAQNYKWGQPUPIIDYTAEENSVWTTV


RSRAMTQYHSKPVSEHGHIDWDQDEHAVWHEL
$M K A S Q Y V A R Q P D A N G F$
MKS SKYQARKPDESGF DPVYRARR KEFADDAYNYRHPDPRV DPVYRARRKEFAD:AYNYRHPVPRVT AYQAKTP
TATKY $\square$ A HQPDA
PAKKPSKYQARQPDAYGF
D $\square E$ Y K R R R R $\square$ A D $\square$ AK $\square \mathrm{HK} \square \mathrm{GEP} \square \mathrm{P}$

## $Y$ VAREADAD GF



VYRKRRKYFADLAMNYKHPD
RYVSHQPDA
 S Y P
DAAY $\square$ ARRQFNDHA $\square E Y R H G D P \square P I V E Y T E E E N Q R W Q S L$
ATDWT DPQDWASYSDDEHGVWNTL
$A T D W T \square P Q D W A S Y S A E E H A T W D R L$
$A R N Y R Q G I P Y L D Y Y E D E V K T W G V I$
 DPVYRARREDA QIARQYRHGETIP HUA YMPAEIAATWSAV VIPDVPAQTFVAPSHLGEDWLEPQQR

WD H
Q GVI Q YPDNEHEDWQAL
RRKVFAEDAMNYKVGDDDPNVEYTK QEDETWKY
DAYRKRREVIANAAARYKHGDSLVDYTAAELDTWRTV

 MASRYTAHQPGI HYSEEE QGTWQIL $\square R R R E E \square N N \square A K A Y K Y G D N \square P N V E Y S P E E H K T W E T V$ DAQGRVAYDAEENATWAML
 QYVA H QPF I RWS DTENHTWKALL A A P Y L I E Q A WA DYTPEQHA $\square W A E L$ R G D Y E A A A A DYTVVQQDCAAYTVPE ED SVVWR DLL VY R K R R K Y F A DL A M N Y K H P $\square P$ K VE F T E E E $\square K T W G T V$


DEEYKRRKE $\square$ AEVARSYKHGQK $\square$ AHMNYTKQETEAWTAV KYVSRQPFDNYSDEEHSTWSTL QGYVSYSAEENKVWT L K Y T A HLDPHVHYTPEETSVWHDL Q N Y SKY T P D D Q A V WK L L
 ADYTCPQNYAAYTAQDHETYRRLL


IDD Y S QD E H H I WQ T L
GEYRKRRAK LAQQA $\square$ NYR $\square G Q P Q T E Y T E D E V K T W G \square V$ D Q A Y K D R R M TQYVARKPDAHG VI A YPDQENEI WAEL D Q D Y R A R R E I A GA A L GWKPGQPDPRID Y T E TE NE I WR T V

K A T N Y T A RLP D A N G F
WEKFTET DHEII WK T L IQYP QNEHD I WQ E L

TPRGDYAHCDADYTCAQQWARYTPQEHE|L|FAR|L

## UniRef90 A4CDB0

 Unirefgo_A4CDB0UniRefgo UPIOOO2658CD
UniRef90-G1L5Z0 UniRef90-G1L5Z0 UniRef90- TORO69 UniRef90_UPIOOO3011EA9 UniRef90-Q3JXT1 UniRef90-U5KLU6 UniRef90-AOKYY9 UniRef90-G5EED8 UniRef90-U5KLS0 UniRef90-W1N162 UniRef90-Q15RII UniRef90_-99KLB8 UniRef9O-UP10003701C1C UniRef90-F6AGD8 UniRef90-UPIOOO36C57E2 UniRef90 V8NZSO UniRef90-V8NZSO UniRef90-UP100037BC322 UniRef90_Q084Y4 UniRef90-E5SML6 UniRef90-UP100036C872B UniRef90-U4K6N2 UniRef90_E5KBU4 UniRef90-K6YRZ8
UniRet90 G4CF65 UniRef90-UPIO00331549E UniRef90-R1GNV1
UniRef90 M3YQ60 UniRef90-Q2G3F1 UniRef90-UPGIOOO2F8782E UniRef90-H5TBB2 UniRef90-A0A016RZM2 UniRe990 N2J1R7 UniRef90-TOHR72
UniRef90-M4B3S3 UniRef90-C5LZT0 UniRef90-K8YPQ2 UniRef90-W9BUR7 UniReffo-J3AEU3 UniRef90-A3QCV4 UniRef90-O6L144 UniRet90-UPI00021A3F85 UniRe90_M1V580 UniRef90-B7G1T1 UniRef90-E5KBU3 UniRef90-UPIOOO37BF164 UniRef90-AOA044VHV5 UniRef90_T1BTF1 UniRef90- WoB776
UniRef90 E3BMMO UniRef90-UPIO003620A3E UniRef90-A4BG27 UniRef90-M4AM48 UniRet90-UPIOOO35E1848 UniRef90 UPIOOO47681C5 UniRef90-U2Y9N3 UniRef90-TOMKY8 UniRef90 B9JHZ5 UniRef90-E1SPG5
UniRef90-F2PEA9 UniRef90_M1F6Z1 UniRef90-B6DT73 UniRef90-UPIO002FAF4F2 UniReffo-G9ET14 UniRef90-F5ZE08 UniRef90_K2BNEO
UniRef90_l2GP76 UniRef90-UPIOOO35F8B04 UniRef90_B0X4K6 UniRef90-J2LIN6 UniRef90-UPIO0037CF308 UniRef90_J91430 UniRef90-LiJJA2 UniRef90-F5SSC0 UniRet90-UPIO00288F7B4 UniRef90_B8LE69 UniRef90_A1S7S1 UniRet90-E9UU95 UniRef90-UP100037FFC89 UniRef90-A8GYB6 UniRef90-B8CLA0 UniRef90 UPIOOO395D222
UniRet90-D5W759
 YTEVKRLAPTHSCAEFNRGLETLGYGPHAIPQLQAVSDFL
 YNRIKDTWAQFACDEFNNALPMLGYSPTNDPQAHDISTFL MERQVELLPGRVCQEYLDGMERLALPDERIPQLAEVDAVL YDHLTKLYPTHACEQYNYVFPLLVLSRTHMPQLRDVSDFL YARQAVKLPGRACKEYLQGLAALAMPKDRDPQLAE:DKVL YRKLRELHKKHACKQFLDNFELLGYSENNLPQLEDICKFL YDHLTQMYPTHACEEYNYVFPLMVLNRTHMPQLAEVSAFL MERQLALIEGRVCQQYLDGLERLALPSEDPQLADVDRVL FHQQKGLLNGRACDEYLQGLALLNLPEDRVPQLAEVNAVL
 YHRQ1 ELLKGRACDEYMNGIEELAMPSDRIPQLDEVNQVL FRELKTLYPTHACYEHNHVFPLLGYQEDNDPQLEDVSNF YTYLRGLHATHACKDFQDNFNVLGYSPNE:|rQLQKVSTFL YQRQVTNMPGRACQAYLQGLDALGMSVDRAPQLPEDDKVL


##  <br> $Y$ $Y$ $Y$

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\section*{UniRef90 A4CDB0} UniRef90_UPIO002658BCD UniRef90_G1L5z0 UniRef90- ToR069 UniRef90-UPIOOO3011EA9 UniRef90-Q3JXT1 UniRef90-U5KLU6 UniRef90-AOKYY9 | UniRef90-G5EED8 |
| :--- |
| UniRet90 |
| 106370 | UniRef90-O96370

UniRef90 U5KLSo UniRef90_W1N162 UniRef90-Q15RII UniRef90-Q9KLB8 UniRef90-UP10003701C1C UniRef90-F6AGD8 UniRef90-UPIO0036C57E2 UniRef90-V8NZS0 UniRef90_V8NZSO UniRef90-H2YFM9 UniRef90_UPIO0037BC322 UniRef90_Q084Y4 UniRef90-E5SML6 UniRef90-UPIOOO36C872B UniRef90_U4K6N2 UniRef90-E5KBU4 UniRef90-K6YRZ8 UniRef90-G4CF65
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UniRef90_W9BUR7 UniRet90-J3AEU3 UniRef90 14 MWXO UniRef90_A3QCV4 UniRef90_UPIO0021A3F85 UniRef90-M1V580 UniRef90-N9TWHO UniRef90-B7G1T1
UniRef90 E5KBU3 UniRef90_V9ZYY4 UniRef90-UPIO0037BF164 UniRef90-T1BTF1 UniRef90-Wob776 UniRef90-ЕзВМм UniRee90_UPI0003620A3E UniRef90-A4BG27 UniRef90-M4AM48 UniRef90-UPIO0035E1848 UniRef90_UPIOOO47681C5 UniRef90_U2Y9N3 UniRet90-TOMKY8 UniRef90 B9JHZ5 UniRef90-E1SPG5
UniRef90_F2PEA9 UniRef90-M1F6Z1 UniRef90 B6DT73 UniRef90-UPIO002FAF4F2 UniRefofo-G9ETI4 UniRef90-F5ZE08
UniRef90_K2BNE0 UniRef90-12GP76 UniRef90-UPI00035F8B04 UniRef90_B0X4K6 UniRef90-J2LIN6 UniRef90-UPIO0037CF308 UniRer90_J91430 UniRef90-LiJJA2 UniRef90-F5SSC0 UniRef90-UPI000288F7B4 UniRef90-B8LE69 UniRef90-10YV42 UniRef90-E9UY95 UniRef90-UPIOOO37FFC89 UniRef90-A8GYB6 UniRef90-B8CLAO UniRef90_UPIOOO395D222 UniRef90_D5WZ59

## R

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110
120 KRKSGFRLRPASGLLTARDFLASLAFRVFQCTQYVRHPSN K E R T G F Q L
 R D A T G WE TA Q V
 Q A T T G WK TA A V P A LI K A KT GFRVRPVA GYL K A R T GF C L R PV A GYL H NATGFTVRPVAGLL

 K A K TGWEVVV P V Q A A A A L $\begin{array}{lllllllllll}Q & A & A & T & G & W & Q & A & Q & V & P \\ K & A & L & I \\ K & G & K & T & G & W & G & V & A & R & V \\ P & A & L & \end{array}$ R S C T G F R $\left\lvert\, \begin{aligned} & \text { L } \\ & R\end{aligned}\right.$
 RKE T G WEVVA A V P A L I
 <br> \section*{} <br> \section*{}



ERTTGWRVAQVPALL
KECTGFTLRPVSGLL ARRTDFRLRPVAGL
QADTGWTVVPVPMLI
MKATGWQVVAVSGLI
I SRTTGWQVARVPALI QQATGWKTAAVPALI
$K E T G G W E C V E P A C L$
$K G R T G Y Q L C P V V G W I$ SECTGWOLRPVMGLL
RECTGWSVAAVPALI MQQTNFRMRPVAGLL QHYTGWK RERTGWECAAVPAL
QRRTGTGRPCTGLL RESTGVEVVPVPALI
 MDATGWQTAAVPALI KEHTGFQLRPVAGLL GHATGWGAAAVPALI
 NETTGFGVEGVPA
EAATGWRTARVPALL
LDATGWQCVAVPAL RERTGFTIRPVAGYL K QLTGWQVENVPALI SAETGWQAAPVAALI MRVSGWTVVTVPAL KATTGWQCYPVPALL RKNTGFTLRPAAGL
 VPASGWRLVAVPGFL EEKTGFTVRPVAGL DETGGWKTSAVPALI MKATGWQVVAVPGLI QLQTNFRLRPVAGL
$R R E T G W Q U P V A G L L$ LDTTGWKTAAVPAL KPLIGFEYVPAAGIVPLEEFYGSLADGQFHSTQYLRHHAV YEATGFGVESVPAVIPPKDFFSULANRRFPAATFIRGRQD
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180
190
200
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Unireso_dsw<59

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A QLFALADLDARALAARLAGAPEHAAGAVLDGDHVL
PDAQRKLE E
$D M \square D E \| A K M D \square M A Y V A K A R Q L G \square F A P$
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EDATRQMREFVRTI
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QRL F A LA A Q Q D
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EDAKQKLRKYASTISR
D DAL
ED 1 Y N TMMDSNTIERTHEAMELGDFAA
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QQL Q D L T E I D D M M S K V R R E A

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SQly EATRE
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A dLeAlVEQd円EALILKAKSLGDFPPA

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K D A
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DYL F E LADMDI MS LVNKAKGLGGYPA
SELYQLLD GNIQDLLDQATRLGEYPP
E QL F Y SV S E
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A ALLADVMTRDLSTLVETLQAQPTLSPDRLYDGD
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DF LDE E I ARMD $\square$ MQSVTRARQLGLHAP
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I HYSDHEHETWS IL DPDYRRRRE $\square$ A GPA $\square$ RWKPGEPVPQVEYTDAENEIWRTV QQAQHYDQYQPEEHQUWQUL EYRKRRSFDSD DAFNFREGVPRVEYTSQEVATWKEV DNVYRRRKYFVDVAMSYKYGQPIPRVEYTEEETKTWGVV DPAYK QRRAWDAEMAKTHRDPQPDVEYSPAEVATWDAV VE WS AEEDQTWSEL

KSTKYVAKDADAE $D P D Y R A R R N$ A $\square A A D A L G Y T P G \square P R V D Y T E E E Q R V W R M V$

PDGRFDYTAEEHDTWGT $T$
Y Q AKVPDANGF HAHGYLDEHGFi DPAYLARREDAAAALAWEPGTPVPLI GYPDEENRIWHDL VDDADYRTRRNADAALALDYRPGVPRIDYTAEENEVWR A VDDA GWVE WS LIE E DA I WHDL

TT WS A E E NALWH QL
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ASYRQGQPYVDYNELETQTWN TL

PEGYRLDESDF DADSWQLKR QP D YT PAEHARWRLL
IH WSAEENGVWEHL
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GHIA WT E VEDETWQRL
QSYHKYTAADHVMWRRL
DPAYRARRSH $\square$ AAAA $\square$ NAPAGT VPVIDYTEDEHR $\square$ WR LC

DAMPKSTKY $\square$ AK QPDA $\square G F$
$Y$ V $\operatorname{RAPDARG}$
L P N H L R QF
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DD Y S A E E D A V WRDL

$\square K$ P
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 S S R QL G NL S E Y A C S E Y Q Q G|LKA L


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## $$
\begin{gathered} v \\ i \\ i \end{gathered}
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 <br> <br> }$V$ V RV L P E IIE K HA A R E Y I E G L K K VI G L R R D R L P
















 M R Q N H H A L L






 UniRef90_U5BU96

## UniRef90 L8JDV3 UniRef90－Q1GTB6 UniRef90－D2QTZ6

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－

RKTTGWEC｜V｜E｜V｜PALI｜DFDRFFSLLLAAKRFP｜V｜ATF｜L｜RRREE K P A S G WEVVAVP GWIPNAPFFEHLANRRFPAANFVRPPEQ


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## ス

 $\begin{array}{lllllllllll}\text { E K A T } & \text { G } W \text { W } & V & E & P & V & A & A & V & I \\ D & R & E & T & G & W & Q & I & A & P & V \\ P & A & L & I\end{array}$ S R LS GF QLY P A A GLVVSF D HFFALLLANKKFPAAAFLASRQE

 K E R S GF TVVRPVA GYLSPRDFLAGLAYRVFBCTQYIABGS D

 $G E T T$ G W Q L E P V P A L I D F D H F F S L L A S K R F P V A T F L R T A E D
 QALTVGWSVEPVPALIGFSQFFSMLANRTFPAASFIRSRED A P L S GF RYVPAA G L V P L R R F F G SFA E S VF H S T Q Y I R H H S A

 | $A$ | $D$ | $L$ | $G$ | $A$ | $G$ | $Q$ | $G$ | $V$ | $A$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $T$ | $K$ | $I$ | $G$ | $W$ |  |  |  |  |  |

 FP LT G WS YA A A P G L V P LAR E F Y GALLGERRVF H S T Q Y L R H P S Q

 $M E T T$ G W Q V Q P V P A L I D F D R F F D L L A N K K F P V A T F L R T R D E Q L H S G F R L R P V L G G L V S A R D F LAA C L A L R V F P C T Q Y V R H H S F K K T T $\quad$ E W Q




 RSTTGWNLIRPVAGLMHPRHFLAGLAFKHFHSTQYMRHPSK

 LE S T G WCMMVP VIPA LI D F S T F F T M L S N K Q F P A A S F I R S E E E
 KAIT GWS LVVVPGL HE A T G WK V A K V P

 $\begin{array}{lllllll}Q & E T & G W K & V & A & V & P \\ K & G & G & G & G & Q & M \\ V & P & V & G\end{array}$ KP AT GWTVVVPVPEL $\begin{array}{llllllllllll}G & D T & T & G & H & L & E & P & V & P & A & L \\ I \\ S & E & L & G & R & Y & V & P & A & A & G & L \\ V\end{array}$
 $\begin{array}{lllllllllll}Y & Q & A & G & W & C & A & E & V & P & A \\ R & A & L & T & G & W & S & V & E & V & V \\ P & G & L & I\end{array}$ $R P L T$
$R$
$K$

$K$ | $A$ | $K$ | $T$ | $G$ | $W$ | $V$ | $Q$ | $V$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $G$ | $P$ | $G$ | $L$ | $I$ |  |  |  |
| $G$ | $M T$ | $G$ | $W R$ | $V$ | $P$ | $V$ | $P$ |

 \begin{tabular}{llllllll}
$K$ \& $E$ \& $I$ \& $G$ \& $W A$ \& $A$ \& $V$ \& $A$ <br>
$V$ \& $V$ \& $G$ \& $F$ <br>
$H$ \& $K$ \& $L$ \& $T$ \& $G$ \& $W$ \& $E$ \& $V$ <br>
$Y$ \& $V$ \& $V$ \& $P$ \& $G$ \& $L$ <br>
$S$ \& $K$ \& $S$ \& $T$ \& $G$ \& $W$ \& $G$ \& $V$ <br>
\hline

 

$A$ \& $K$ \& $S$ \& $G$ \& $G K$ \& $I$ \& $H$ \& $V$ \& $V$ \& $P$ <br>
$S$ \& $G$ \& $L$ \& $I$ <br>
$S$ \& $I$ \& $G$ \& $W$ \& $A$ \& $A$ \& $I$ \& $V$ \& $D$ \& $G$ <br>
\hline
\end{tabular}


 K A K T G F R V R PVVA G Y L S A R D F LAA GLLA F R VFA C T Q Y V R H H A D K E IG WA AVAV D GFIIP PNA F ME F QA Y NV LVIAAS DI R QLE H

 SERTGWGVRAVP
 K E $\square$ G W A A V A V D G F I P P P N A F F M A P S G W G A V S T I RKATGWQLEPVAGM
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UniRef90_C9P8B8 UniRef90_C5C2X6
UniRef90 UPI00040 UniRef90-UPI00040B15D5 UniRef90_S7QCM5 UniRef90_UPI0003B55D77 UniRef90_A8HQD7 UniRef90_UPI0003184A56 UniRef90_DOI5S9 UniRef90_UPI00037D99BC UniRef90_UPI00047C5376 UniRef90_Q5Z1A5 UniRef90-B4H8R6 UniRef90_A0A037ZG18 UniRef90_U4TLX0 UniRef90_G2DS77 UniRef90_U5ERH7 UniRef90_UPI0003632089 UniRef90_B7VU36
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UniRef90_UPI00036364ED
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 T E A A L K F L L A D V F W WF S M E F GlVV R E R G E


K

## T

P E D HV $V$ W $\begin{aligned} & \text { W } \\ & \text { L } \\ & \text { A } \\ & \text { R } \\ & \text { L }\end{aligned}$
S
D
K

| D |
| :---: |
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$\stackrel{P}{P}$

N P
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| KE $\square$ GWAAVAV <br> RQRTGFGFTLA |
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Q
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## K

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PFFSEDPDIFHDILGHVPLLTNEPFCRFLTEFSIIALKAD PFYTPEPDMVHELLGHMAMFADPHFAQFSEEDGLASLGAS
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S DAKDKLRS YATR IQR
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D DL F K SL E GLEA CLRANLED IPLDDPTVLLDT
E E A I V K L R A Y T S T L

K QL F D A T A P DF E PIV E DVVA GRPELTT EVRLPS DRVF
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A H L N M V L E E F A N K M A L R T G G L S G I
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DE A L D K $\quad$ KK A Y $\square \mathrm{S} \mathrm{T} \square \mathrm{E}$ K
A Y L M E VL E EF S S TMALLRK G GF
D H L F E L V DEELE TWM K A GK LDD NVAPGEPVVSE
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E QL DE EVNHFGNTMAFRQGGTEADE
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NRLLEVLEEFASTMAFRRGGAESLL
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P QLY $\quad$ V T P N FA Y L N L VL E E F M A L R T G GL
D HLLYE LVGR
Q NLVQVLGAFADTLSYRKGGSES I
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$G H L E D V V G T F F A A C D D E V P E R M L$
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E QL DE EVVTRFGESMAFRQGGTVAIIE
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D EVVEDTVGSFWDT
P QLY $V$ VTPDFS Y L M L V L E E F
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P HLLMQVLEEFANTLSLRKGGRKGIE
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30 LP K HL L K F V VK QP Y EEYTS QN QAVWRYV DGAYLRRRRDDLVAAEGHRVGTPSPTVEYTEAEHATWRTA ASLPAHLRQFVKLQDYNQYTPRDHAVWRFL
 $M N I P S H L R E F V V D Q E Y E K Y T P D N Q A V W R Y V$ VY R K R RKYFA D LAMNYKHPDPKVEFTEEE】KTWGTV $K E Y R K R R M M F A D D A Y K W G Q Q i P D V E Y T E D E K T T W G R I$


Y V R R RDA LVA $\square$ A DGHRDPSPSVRYTEADEHETWRCV


TDTAY EKRREE TA A LSSA DVTVPVPVVEYVDWEHEVWRLA P SHLQKY V PSPTQRADDRLPAHLRRYVAEQDYGAYTPRDHAVWRHIII
 R A E RE RVGTRAF R P GR PLLP DF GY S S E E D A L L W S R V

MQQNYEAYQAEDQAVWQLL
 HPQNYLGYTQEEKESWKTLL
E Y R K R R A Q $\square$ S E L A F N Y K H P L P C VE Y TAE E $\square$ T T WRE V
VYRKRREEFAD $\square A Y N Y G Q P \square P R D Q Y T S E E \square R T W G \square V$ NHPMGAPYVAYTEDEDRTWRTVV $H G V P P V Q E P Y$ GPVDQEVWRHLL
D QA YRRRKMMAE $\square$ AFHYKHGEP PRRVEYRADEDATWREVV T DKEYRRRRK I A D MAFTYRHNKS IPRVVYSEDEDKTWKHV RLE Y P QEDHDTWAAL

D Q A YRRRK L $\square$ AD $\square$ AF QYKHGDP $\square$ PR VEYTAEE $\square$ AT WKE $V$ D QVYRRRKYFVEVAMNYKFGQPDPRVEYTPEEVRTWGVV



Y T A Y QP V DH Y P DEDHGTWQ L ANKYYSMDQ I HNYTEEENK $\square$ WA TA MQQDYDDYSDEDQQTWRRL
T T A D $\square$ R A ERERVCS A YEAGGPLPWFEYSEEEDALWTQI
DEEYRRRRMMAD $\square$ AFNYKWGQQ $\square P F \square D Y T E T E K M T W G C V$ GRVEWSREEDA IWRDLL FS EEDHSIWWNTL


 $D P A Y R A R R D \square S Q \square A F D Y K H G Q A D P R V E Y T P D E V K T W G \square V$ MKRSKELFESHDVTS GK DP I IQYTKNE QETWDLV

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FRELTKLYPTHACREYLKNDPLLGYREDNVPQLEDVSLFL CARQVPRLDRYACRLFREGFRKLNLDLQRLPDPVQVSERL YRTLSNLYPTHACRQFLEALGQLEYGEDKUPQLGEVSAFL FRELHKLYPSHACREYLKNLPLL YRDLKTLHNKFACKEFLDNFKLLGYSEKQTPQLEDTSKLK TARQLGALEGRACDEYLAGLABLGLPRDRIPQLAEINAVL
 VELQFPLLQAHACTAFQEGYALLEPHDRTVPRLEDVARLL MTALTRALADTAHPVYLEGLARTGLALDHEPSULDEMNSCL



FHDCKDSGPTD CNEHWEGTELLNMPTSQLPGLETपNVQL MRKNVNYLSRVAHESYLNGLEKTGTSTDDIPSMYGMNRIL LNSRLPLWKAYCPQVFFEYLEALHLVKGSAIDFDLINNIL

\WEAHCPQVFCEY【DALH【EGSGATDFDHTNSVI
WGILTDLYPTLACNEYNEVLTELRYGPDKIPQVAEVNEYI YRSMKALMKTHACQEFIEALEELNYGPDSIPQLEDVSNFL



YDKLCTRAEKYNCRDYTRCLQLLDDNME VPT DAQLNRKT LEAAVRGAPG AEPEFRAALEELAYSASALPQASHVSQLL

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UniRef90
V5HXB7 UniRef90-J9HVZ7 UniRef90- DoZYX2 UniRef90-A0A017PKR1 UniRef90-W8K0D9 UniRef90 J9EF89 UniRef90-I3BZK9 UniRef90-S4R936

ELSEMAOVRN WWSVEYG GPGENPKIYGAGMDSTK SRDALDLISRLYWFTLEFGVAWEEDRPKAYGAALLSSYGE DTEKLDQLQREYWFTVEFGVAKEQGSVQSYGAGULSSSGE DPDASEEEARLYWWTAEYGLI GSVASPRIYGAGLLSSSVGE
EEAVQKLLAT
PEVVFDSKSTCYFFTTEFGLCRQDNQपKAYGAGLLSSVAE
D EADEKLDSTLYWFTVEFG
AEEESTRAARLYWWTAEYGLVGSTDQPRTYGAGTLSSTGE
 E

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 AVSESTELA EPSEAALLTRL DSEQ EAQLATM SDEVRTAI DKADRWF HPDAVAA FRLF NKKALAGGARC SAEARTAL DEDIDEKLSTCFHW KEERVFLARLYWFTVEFGLLATAKGLRTYGGGTLSSTGE DED DKLATLYFFTVEFGLCKQDGMLRVYGAGLLSSVAE TEEEDEKLAATLYWFT DERQQLGTARI WWFSTEFGLLRENGELKVLGAGLLSSPGE EPSEITLIRNLHWWTVEYGLIGTVESPKIYGAGLLSSDGE SLGHLANLARLYWYTVEFGLMETKAGLRIYGAGUVSSRTE
D EQ DEQLATMYWFT\EFGLCRQNGQपKA $\square G A G L L S S Y G E$ DERQR $\square E \square A R \square W W Y S \square E F G L I R E D G E \square R A F G A G L L S S \square G E$
DDD VNKLATCYFFTVEFGLCKQDGRLSAYGAGLLSSVSE EKD CNALIRHYFFTFEFGLLVEGENLKAYGAGLLSCFDE KEERVGUARLYWFTVEFGLI DPKAl DY KRVYWHTVQYGLI EANKS DRDYGAHMDTSRNE SDQLRTALARLFWFTMEVGAVMEEGRDRVCGAALLSSASA QPSEAALLTRLHWWTVEYGLVGELEDYRLFGAGLLSSLGE E
PKQR A Y L A R LYY WF TVEFGLVKEGDKP
NEKYRDH乌KRLAWYSSEFALIREHGEपKAFGAGLISS DSE
TEEQLE\|LTDVYWKAFETGFПKQKNEFKAПGGAVLSSHSE DKSEYSWL TRLYWFTVEFGLI REGHEDKALGSGLASSPGE HNPEDARLIRFSWFTTEVGVVRQNGN RAYGGALDSSSKE S
RRAKETYTSRCFWFTVENGLIEEQGKRKAYGAATLSSTEQ KDRYISVITQCFWFSVETGLI KKHGEKKAYGAALLSSPVD ERSNVLASSRCFWFTVENGLIEKQGKRKAYGAALLSSTDQ KRAKEIYI SRCFWFTVESGLIEEQGKRKAYGAAVLSSTEQ HDDRMPLIRSCSRHSC
d EQTELTIDAYWKVFEMGFTKQKSEDRADGGAVLSSSDE EKSNLTALTRCFWFTVESGLI ENHEGRKAYGAVLISSPQE
 EKD EDKRTCVERGYWYSVESGLDRENDGVRUYGGALATSEQE NTD VQLLAESFYSVCEFAL
DY $\backslash Q S E L M R \amalg W F Y V I E F G V L K N K E R \square C V F G G G A \square S S D K F$
lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
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jpssm


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UniRef90-K413S4
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पQHA $\square$ SDKAVIKPF $\square P M K V I N E E C L V T T F Q N G Y F E T S S F$
AVHCLT PAVRKLPDTVACADADYDTTRMPQLFRARF SRHCLTDAVVKH PFDLEHALQTKQDVTNMQKELFVIPNF TKHVFQNPEVQVVPFDLDTVLAQDFVITEVQMKYFAIRDF LRQL S SRAELRPWDLTAIASQSYRAAGYQPALYAVRSLG LNYSVRSPEPQRLPGSGERAMRTLYKDDSYQHTYFVIDDL LKHALSGNS
LDHF RSAEFRPLSDESLVDVKYDDTTYQPLLFEADSM SQWCLSDN VKK PR SL ALI HQSYDITEPQPQLYVARDF

 LMVC F
SRSCDDDGAVRKDPDTVEAVNTPYDDTRPQPQLFVARSC ME SFEDAELRDFRVEDVDASDTDDSTCQPVLYVADSV AAHALSGD ALMQDFDLDTVFRTPYRDDIVQPTYFVIDGF STQVHKGQNCEFRPFLLESVLKHHFHKHEMQSVYYYLDNF而 MNS LLAD ADLRPFRVGDVIECDVDDGRCQPVLFVADSV
TAYALGSQ PVLQPFDP TEVLRTPYRПDDMQPTYFVLPEL LRHAVTTPE KTMRFEPG】TCKQECIITAFQNAYYYTDS


LLHADNPETP RYEFDTERVADTASAPYGYHEHYFDLNSL SAWCMTK KVNKRPYSIEAAMTPFDDTKPQPQLFVTPDF S IFALDDPSPNRLGFDLERVMRTPYRUDDFQQVYFVIPSU
पMHAC SDKPQHEAFDPQRTA LQKYEDFDYQP पYFVADS $\square$ $\square D H A F A P D T P R V P F D R R \| A N P G A A Y S M H E T Y F \square L E D \square$ LQHALSS SANDPFDPTVTCNQECMDTTFQHVYYVADSF LKFSVSSD AKICRFEPDDVIEDEPEVTKFQKCYFYSMTD
ASYA DNAGVPKY DHNVS GTMDTPYVKNHFQEKYFVISSY DRYAAGDAAP VRPFDLAQ|VATQPHYEDLQPFFVAIDSF MESLADGD

पS SVMNGSVP LLPFT पDNVIPHDKSVWSHNDQ $\square$ F $\square$ ES $\square$
LMNAL NNKQYПNRDELINYQQKSQTDDLQNQYFYDEDL LDHSINEPTVVRKPFDIDDLRTPYRIDNNQPIYFA
LTHMSTTPGVVKAFKFEDVVKSK $\mathrm{L}^{\mathrm{L}} \mathrm{DKTLQEVFYAVESF}$
LTYTFNNN VFVSPFKTEH TQRPCNPNSTQTTFF\| IRDF LTH $\square F$ STKATHYCWNDEKVILQDFDPSHLQNDAFVIRDF LSYTFNNNKVFISPFKTEH1IQRPCNPKSLQTTFFVIRDF LSHTFNNN VFVSPFKTEHIIQRPCNPNADQTTLFIIIRDF

LQNALQQNE KTNKLELLNYQKSNDEDESDQNQY
LRHAFIDN VRVLPLELDQIRQPFNTSTPQETLFSTRHF
LSHVKK KKSFIAPWNLELI QCPFYPSTPQSTFFALRDF

SK DFKKGK $\square$ N $\square$ FEFSMSK $\square$ RDEK $\square$ S $\square E G N P E N \square F Y F D S Y$

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|  | 260270 |
| :---: | :---: |
| UniRef90_UPI000366D739 | A HLLEDFLLGEFFTTI |
| UniRef90_UPI0003696026 | A Y L LVLDEFANTMALLRNGGL |
| UniRef90-V6L3A3 | PRLA DFLH GF L |
| UniRef90-K4IBS4 | EILIFDSLK |
| UniRef90-K4KN08 | K HL T QVLET F A H GMAYRKGGA GS LR |
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| UniRef90-G4VR64 | E D A T R Q M R QVF |
| UniRef90_Q8MJD2 |  |
| UniRef90_L7UKA7 | E H L E E V S EF E S T L A WK R G G |
| UniRef90_C4L0X0 <br> UniRef90-UPI000360C396 | ETLSSSVVDE $\quad L E G R M A \square R K G G \square E S V A K A L$ |
| UniRef90_K0JRE2 | D HLEEAL H GF LDNFNENTRTHLGLPA |
| UniRef90-A0DG89 |  |
| UniRef90-A0A031HAG9 | Q QLF DLTA A D F P LY R Q LR D Q P TVA A D A L P GEVAL |
| UniRef90_M1F6X4 |  |
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| UniRef90-M4VB84 | K HLS EVLEELS ETMAYK $\square$ G GRQGLD |
| UniRef90_UPI00040C2650 | DHLFEVLEAFEATLGWRRGGEEALRARTV |
| UniRef90_A4A633 | RHMSQVLEEFAATMAARRGGADSLR |
| UniRef90_B7RYU0 | KHLS QVLEEFAESMCFRKGGAASLRTA |
| UniRef90_A0A024MPF4 | Q $\square$ T V $\mathrm{V}^{\text {V }}$ AQGMCFRKGGAES $\square$ R |
| UniRef90-UPIO00466AC48 | S QMMDAV ERFLDA |
| UniRef90-UPI000372C637 | DQLAGLLDNDFAAVIA Q A R A M G D L P A |
| UniRef90-H6L3H9 | QSLF GLL K |
| UniRef90-X6NPB1 | ESAK QKLQEYATSL |
| UniRef90-UPI0004706760 | K QLTEINE HLESRLDEL |
| UniRef90-M7AKC2 | D H MLDVVRRFLVT |
| UniRef90-UPI000440BC9F |  |
| UniRef90_UPI0003611C8F | D E L P R $\square$ A E Q D $\square$ M T MVIA E A R R L G L R P P |
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| UniRef90-X0N292 | S HLLEDALGAFCA |
| UniRef90-Q9AG78 | E EIESALA DLDALLV |
| UniRef90-M7B6W9 | S D AKDKLRS Y A A |
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| UniRef90_Q95LQ6 |  |
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| UniRef90-A9WKC2 | EHVA A $\square$ L R D Y A M ${ }^{\text {E }}$ |
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| UniRef90-L7KNG9 | D A M $\square$ A EV R H F $\square$ E GVVD |
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| UniRef90-UPI0003FC2847 |  |
| UniRef90-Q822G6 | DELNA |
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| UniRef90_FOT4M7 | S ELNDVAEKMHLFLEQGRLDF 1 VF GP H DVYY Y D 1 |
| UniRef90_W4X104 | E DAKEKFRRWVATMSR |
| UniRef90-Q255G4 |  |
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| UniRef90-DOZYX2 | DELVELTT |
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| UniRef90-I3BZK9 | A D L K A ELKK T F |
| UniRef90-S4R936 |  |
| UniRef90_E3BHJO | K K M $\square$ S $\square$ |

A H L
PRLAD A L H GF L
FSLK
EHLFEVLAEFESTLSWKRGGTEALRARTV
EDATRQMRQVF
E H L F EVLSEFESTLAWKRGG
ETLSSVLDE LDEGRMA $\square$ RKGG $\square E S V A K A L$
AELWKVVDELEA
$D E V \square A L G B A$
QQL/FDLTAADFEP $\square Y$ R Q $\square R D Q P T V A A D A L L P G E V A \square$
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KHLSEVLEELSETMAYKLGGRQGLD
DHLF EVLEAFEATLGWRRGGEEALRARTV
KHLSQVLEEFAESMCFRKGGAASLRTA
QH LT QVLEVFAQGMCFRKGGAES LR
S QMMD AVE RF LAA
DQLA GLLDNDFAAVIA QARAMGDLLPA
Q
K QLTE ITNE
D H MLD V V R R FLVT
$D E \square Y R \square A E Q D \square M T M V A E A R R \square G \square R P P$
EAKEKMRA FANQLQR
SHLEDAGAFCA
E E I E S A L A A D L D A LV
D H LR S VYY E YAE LE GLP

QTLQDVTLRDFGPLYDRLTGADDLGIAEITAADRVI
FDAVTKDRVFA
EHVAA $\square$ LR DYAAME
EEAKNKMREFAKTL
E QLLA S MD T T K S ELLA NRLK
D ALAPLPA ALERLRGAPA
D A M L A EVRHF REGVVD
KHMSQULEEFAATMAARTGGAQGLR

D D LT Y E L E RYFES LP K VSEEVEQLTAEELLRD
E E $\square$ T EKVK QKF

DELNA $\square$ SEQMHQFLNQGQLDF $\ V F G P H D \square Y Y P D \square V$
E ELPTTVDSMLDLLNRGLLDFENL
EDAKEKFRRWVATMSRGRLF GPHDVYYQD
SELDND DSKKMHLT LIEKGRLDFVVFGPHDVYYPDVI

DELVELT
Y ELYEI SE $\square$ MHFF $\square E Q G R \square D S \square T \square N S H T T Y D S D$

A D L K A ELKK T F
K K M $\square$ S $\square$
lupas_21
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[^1]:    lupas＿21
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    lupas＿28
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    solo
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[^2]:    lupas_21
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