UniRef90_B8LW02 UniRef90-R8BD33 UniRef90-S8A2V2 UniRef90_R7YZ08 UniRef90-V5FR27 UniRef90_U7PZ40 UniRef90_D5GPU0 UniRef90-E4ZK5 UniRef90_W3WW98 UniRef90 S7ZS18 UniRef90_C8VG03 UniRef90_A0A017S6C8 UniRefgo_U1G9M9 UniRef90_K9FU79 UniRef90_G3JDL1 UniRef90-C5FUG5 UniRef90-G0S8W2 UniRef90_L8FTI2 UniRef90-12H7K6 UniRef90-UPIO001CBB040 UniRef90-U4L9T7 UniRef90-K2RF46 UniRef90_E1BSW0 UniRef90-K1 K5Q9 UniRef90-W9ZD12
UniRef90-D3TPD4 UniRef90_E7F5N2 UniRef90-N1J630 UniRef90-G3VQM5 UniRef90_A5E6N6 UniRef90-W2S5G2 UniRef90-W5N6C5 UniRef90-F7ARW2 UniRef90-Q6FV43 UniRef90-H2ARD1 UniRef90-M2N356
UniRef90 C3ZKQ4 UniRef90-C3ZKQ4
UniRef90 G1XAR1 UniRef90-A0A034WKD6 UniRef90-G3NLD3 UniRef90_F7CC22 UniRef90-B6JZT2 UniRef90_UPIO003D0F136 UniRef90-B4KJ99 UniRef90_V4BMI4 UniRef90_M3D5A1 UniRef90_T1P999 UniRef90_S2JPE2 UniRef90-Q29RBS
UniRef90-K0L023 UniRef90-W4YW13 UniRef90_N1PS27 UniRef90-M4AGF2 UniRef90_A7SHS1 UniRef90_F7DTR5
UniRef90 L7M513 UniRef90-H9JP43 UniRef90_G8ZXL5 UniRef90-S6EZ96
UniRef90 R4X899 UniRef90-B2APV8 UniRef90-F6WM96
UniRef90_C4YN46 UniRef90-B5X241 UniRef90_F8Q855 UniRef90-WOTCL3 UniRef90-UPI0002657E7B UniRef90-G8YQM6 UniRef90-UPIOOO4417037 UniRef90_G3AWW6 UniRef90_J3S3Z0 UniRef90_UPIO003EAB010 UniRef90_F0X9U4 UniRef90-G0W8N3 UniRef90_C4WRP4 UniRef90_C5MIET UniRef90-W5KFZ4 UniRef90-H3E174 UniRef90-E9HAJ6 UniRef90-K7IUI9
UniRef90_G8BEM5




10
20
30
sTegdce ${ }^{40}$
$\stackrel{40}{V}$ VNKDVAPWTKTYLQDTLSKISAEEDAKVEKVLSMDGDVDV VNKDVAAWAKQWFEENLSKLEVEDKAKVSKVISMDGDVDV
 VNKDASSWAKNYLQENLTTVSAEEDAKVEKILSMDGDVDV VNKDAAPWAKQWFEENLTKLSAEQNARISKVISSEGDVDV VNKNADEWAQEYFSEKLTGLSAEVSAKIDKVLSVEGDCDV VNKDVSGWTREYGEKELVQLSVEDSAKIDKVVSMDGDVDV V NKDAS GWARE Y L QEKVVTIVAE QDAKVVKVTTSMNGDVDV VNKDVSAWAKTYLKEKLRAVSAEEDAKVSDVLTMDGDVDV VNKDASSWARQYLENNLVGIAAEENANVSKVLTMDGDVDV VNKDASEWAKEYLGQTLTEVKAEESAAVTKVISMDGDVDV VNKDASGWAKEYLQKNLVGVSVESSAKVAKLLSMDGDVDV VNKDVSAWAKEWFEENLVKLQVEQKAKISKIQSMNGDVDV $V$ NKNVTS WAKA Y LEE NLVGI SAEENAKI NKLVRMDGDVDV VNKDAGAWTKKWLEENLTKLEAKETAKISRVINMDGDVEV
 V D K N C I D WAR QYF Q NE LT K L K I E Y F C E II S K V S Q V D G D C E V VNKDARDWTKDYFNQKLTTU VNKDASVWTKAYLEKNIKGN VMKDTASWAKDYLDAESKKVSAEENAQL
TEKNATPWSKERFQQLYKDFKAEENANTRLISMDGDVEV TERDVTSWSSEKLKELLMGTQVEGKCEITEVSKVEGEASI VNKDAAPWARQYLEDNIRVLNVEENAKLDKLTSMDGDVDV VDKNCLPWSKTYFDEKLVKLSAQNKVTVTEVSSVEGDVDV VNKDGAPWAKNWLEENVIGGSAEDSAKLTKLISMDGDVEV TERDATNWSSDKLKDLLMAVQVEGRCEVTEVSKMEGEASI TERDATSWSKGKLHELLVGIIVENECEISELKQVEGEASC VDKNCLGWAREYFQEKLVGGAAEGDCQVTSVKTVDGDCEV VNKDVSTWAQDYLSEHLVGGKASQDAE:CRLCMSMDGDVDV VNKDASAWAKEYFENNLIGTEAKDYVRIEKVLSVDGDVDV TEKNATPWSKDRLAQLFKGLKIEKECIVD TERDATSWSSDKLKSLLLGGRVEGSCEVT $V$ D K N C L D WA R K Y F N E H L V G L K T S E R A E I T S V



TEKNASYWSRDKLTEELLVTNVEVSNTCKMI VDKNCFNWAREYFNEKLTGGNTGEYAEVS



## VD

者
VEKNCTDWS

## VD





QUERY
UniRef90_B8LW02 UniRef90-R8BD33 UniRef90-R7YZ08 UniRef90-V5FR27
UniRef90 Y7PZ40 UniRef90-G9NMV6 UniRef90-D5GPU0 UniRefolo-E4ZK54 UniRef90_W3WW9 UniRef90-C8VG03 UniRee90-A0A017S6C8 UniRef90_U1G9M9 UniRef90-K9FU79 UniRef90-Q750P0 UniRef90-G3JDL 1 UniRet90_C5FUG5 UniRef90-GOS8W:
UniRef90-L8FTI2 UniRef90-A5D107 UniRef90-12H7K6 UniRef90_UPIo001 CBB040 UniRef90-U4L9T7 UniRe90-K2RF46 UniRef90-E1BSWO
UniRef90-K1X509 UniRet90_W9ZD12 UniRef90-D3TPD4
UniRef90-E7F5N2
UniRef90
N1J630 UniRef90 G3VQM5 UniRef90-A5E6N6 UniRef90-W2S5G22 UniRef90 W5N6C5 UniRef90-F7ARW2 UniRef90-Q6FV43 UniRe90--L2ARD UniRef90_M2N356
UniRef90 C3ZKQ4 UniRef90-G1XAR1 UniRe990_A0A034WKD6 UniRef90-G3NLD3
UniRef90 F7CC22 UniRef90 ${ }^{-}$E5S117
UniRef90- B6JZT2
UniRef90_UPIo003DOF136
UniRet90_B4KJ99
UniRef90 V4BMI4 UniRef90-C5DKV5
UniRef90 M3D51 UniRef90-T1P999
UniRef90-S2JPE2
UniRef90-Q29RBS UniRef90-W4YW13 UniRef90-N1PS27
UniRef90-M4AGF2
UniRef90-A7SHS 1
UniRef90-F7DTR5
UniRef90_L7M513
UniRef90-H9JP43
UniRef90-S6EZ96
UniRef90_R4X899
UniRet90_B2APV8 UniRef90-F6WM96
UniRef90 C4YN46
UniRef90_B5X241
UniRef90-F80855
UniRef90 WoTCL3
UniRef90 V
VKD60
UniRef90 UPI0002657E7B
UniRef90-G8YQM6
UniRef90-UPIO004417037
UniRet90_G3AWW
UniRef90-J3S3Z0
UniRef90-O9P782
UniRet90_UPI0003EAB010
UniRef90 FoX9U4
UniRef90-GOW8N3
UniRef90 ${ }^{\circ}$ C4WR4
UniRef90-C5MIE7
UniRef90-H3B869
UniRef90-W5KFZ4
UniRef90-H3E174
UniRef90 E9HAJ6
UniRef90-K7IUI9
UniRef90_G8BEM5

FGKDLLATHGND
पPKVLVEEHGKD LSPALIAEHGKD
 LGPALI AEHGKD GPALIAEHGKD Lagalvaehakd LAGALI AEHGKD FSGDLIAEHGKD LGPAVMEEHGKD LTPALIAEHGKD LAPALVAEHGKD LCPTLIHEHGKD LGPALIAEHAKD LTPALIAEHGKD FGKELLQAHGKD LAPALISEHGRD LSPALVAEHGKD LGPALVSEHGKD FGSDLITEHSSD FGKDLLTEHGND YGQDLKEFSQ FSGDLMAEHGKD YLKALKTEF GPALDAEHGKD LSPALIKEHGKD YIKELKEEYSK YVGFLKTEFTQ YIRTLKTEFTQ FGPDLIETNSRD LGPSSLIAEHGK
YVQSLKTEFTQ
YLKALKTEF FGPDLKTTHSSD FGQDLLDTHGND Y IKDLKTEFSQ FADALVEQHGKD YlKKLKEEYSK YVGFLKTEFTQ Y K KALKKTEF YLDELRKEFGQ YSKVLDDEHGAD Y 1 SALKTEFTQ
 FGPELLKTHAND LAPALIAEHGKD Y $\backslash \mathrm{KELKEEYSK}$
FSAAMIKENCED
YVKHLKTEFAQ
FGKDLDSTHASD
YTRALKKEFSQ
LAPALVTEHGKD
YVRDLKSDFSQ
FGPDLDETNSKD
YVHQLKTEF
YLRALKTEF
Y SALKKEFSQ
Y IRSLKEEFSK
FGHDLLVAHGSD
FGGDLEAEHAGD
FPEALVEAHGKD
YAPALKAEHGK
Y 1 SMLKTEFTQ
G GPDLDEGNSKD
FGPDLTEGNSKD
FPVALIDTHGKD
FPVALLDTHGKD
YIETLKTEFTQ
y L A ALRADYSO
FGHDLITTHSND
FPVAMLETHGKD
FGGVLIKTNSSD

FSQVLLQTHGDD
YLHSLRTEFTQ
LPAALIAEHG
FGKDLLVTHGSD
Y $\square$ K DLKEESK
FGKDLDETNSRD
YVRTLKTEFTQ
YVSHLKKEFSQ
YI RELKEEFSK
Y K S KKEDFTO
YVSSLKEEFTK
FGPDLIEMNSKD



|  |  |
| :---: | :---: |
| UniRef90_F9X6D0 |  |
| UniRef90 A0A026X249 | DISEVDIEITLKESTDEGEGIK |
| T11C42 |  |
| UniRef90 A0A024JHH2 <br> UniRe | SEESDYVFNVSSTKDKGEGDVVRDLVKKSEVTVGLRAALKQ |
| UniRef90- S2JY | TEIDDYVFNIQTN SGSGDEIKRLTRSD |
| UniRet90-GoVB | SERDDYQFEISIYKETSKLNEIKPKI REVLVPQLRDVFAQ |
| UniRef90-UPIO00258DB68 | NDTSEVDTElTLKDSTDEG |
| UniRef90_UPI0004410EOB | NTLDDYVYEWSLTTSSPAVD |
| UniRef90-J419Q4 | TLDDYAYEWSLTTASSPVNTLFALAKARLPTA |
| UniRef90-J7R002 | SSATDYQFDTSVYKETVKLNEVKETITRANLVPQL |
| UniRef90-UP10003EC29E5 | NDEDDLDRCVALCKDQP NTPLDDLMKTSGV |
|  |  |
|  | TPADYQFEVSIYKETSRDSCVKP |
| UniRef90-UPI00038EE9AA | NEVDDTEAEVNVSKKKGDGEILKD |
| UniRef90-A7TM67 | SEIDDYQFEISVYKETTKLIN |
| UniRef90-LOPFS7 | T DQYVFEIEVFSETKENQLIKEFIKSELV |
| UniRef90-T1G7H0 | ADSVDUNVSLKENQNDAYKLKEFIRNKGLQVIRRQL |
| UniRef90-Q6BJ21 | STEDDLQFDISIYNEDADSEKMR |
| UniRef90-UP1000455D2F8 | TTLDDYSYEWSLSTSSSPADALYTLARK |
| UniRefotosspn | LGPSDYVLETDLYEASKEKEPVKQFVREKLH |
| UniRef90-EOVNP2 | N |
| UniRef90-Q7PPSE | QS DS |
| UniRef90-Q6CEG4 | TEEDEYQFNVVITDDSFAKLPVKELVLSDIVPELRKRL |
| UniRef90-Q4S6F0 | NDMEDLDTCISLNKDEPD TPLTALMKTKGADKI |
| UniRef90-A0AO16UEP2 | NDASEIDVNVSIDTKGPHDAAI RQLLNKAGT |
| UniRef90-M7PHN | N DEYLFNIEIFSETKENQTIKG |
| UniRet90_J3JU76 | NEMSDLDUQVNLKDPDEEGELLRQUMLKK |
|  |  |
| T2M175 | EVVNVSAT GDSKNSEKLKQ VRT |
| UniRet90_S7R6M9 | NDVDDLVYEWSLISTDSSPADALFALAKKR |
| G5DY02 |  |
| UniRef90 UPIO003F163A2 | NEVDDT EVNMSKKKGDGDILKDLMKAA |
| UniRer90 - ${ }^{\text {U }}$ | NTADELEFEVTCGSSNLDDNETKEYMRKD |
| UniRef90-D8PUX3 | NTLDDVVYEWS何TS SPDVDAV |
| UniRef90-UPIO002034EF4 | NEVDD |
| UniRef90_G1KTN9 |  |
| UniRet90_G8BF |  |
| UniRef90 A0A015JS |  |
| UniRet90 K1QM | NDADEDDFNVTVSKDSDEAYKLKEFLRKTGLG |
| UniRef90 UPIO0044 | $\square \mathrm{T}$ L D DYVYNWSLSTDSTPADKL |
| UniRef90-A0A044UHK4 | -Vt |
| UniRet90_UP10003331B06 | SAKDAGHLEXNMSKKKGDG |
| P1000 | N |
| 00 | S L |
|  | DNLSDYVYDWSLTTSSTDVNALFALAKTR |
| UniRef90-J6F7B0 | QGLEDYQFQFSA DSSDGETL |
| UniRef90-UPIO004560653 | SSAAQSLYDAVRKERAPSLRP |
|  | 促 |
| A8Q914 |  |
| T1KAF4 | NDPEEI E |
| UniRet90 U5EP77 | NDVDEIDUQVT |
| UniRef90_UPI000388EB4B | NKISDTVSSSUSKKKGDGDVLMDLMRTE |
| UniRef90 F4P2W7 | TDINDVFNFTVEND |
| UniRef90 C1LNY |  |
| UniRef90-A8NE22 | DNLSEFEFKWSLRTSSPEVDAVFKLAKTRL |
| UniRef90-V2XBNO | VTLDDYSYHWSSLQNSPEIDALTSQMRKLVP |
| UniRef90-C4YCF4 | KDEDQFDVSVYETSGD DVRLLAKRK |
| UniRet90_UPI0003F49843 | TGLTEYTYNFRLTSDTPEAQAYFAI DRKSLPPILSEKFNA |
| UniRet90_K5X305 | DKLSDFVYEWSLSTSSAGADSVFALAKKSLCAAL |
|  | NDidele |
| UP100029 | VDDTEVNVS KKKGDGDILNDLMKTAGTA |
| UniRet90_F2TWE1 | YTPDEFEFEVNMSEETPARRAVKEMVRK |
| UniRet90-U1NGA8 |  |
| UniRef90-C1BUN6 UniRef90 F7BOFO | TDMRDVDJEVTAEDKSS |
| UniRet90-E6R0 | DGVSDYVYEFTVTS SSSASDELLSYIRKSFPPLLSDKFNS |
| UniRef90_UPI0004541AB1 |  |
| UniRef90-14DP00 | NDVSEVDMT |
| UniRef90-U6HH08 | YSPEEWDFDVSCQSTKPDANEVKEFLRTEGV |
| UniRet90-G3B7C8 | QEEDDYVFNVSSES |
| 8E1A7 | SSSPA |
| UniRet90-W7HW11 | A DS NE |
| UniRef90-G1TYY3 | NSVDEVETGVSLSKEPD |
| ef90-H2WIS7 | N |
| et90_C5M911 |  |
| riRef90_UP1000333 | NEIDDT EVKSSKKKGDGDILKDLMKTAGTAKVREAXGE |
| UniRef90-A9UYUs |  |
| UniRef90-UPI0003C803A7 | NEVDDTQANVS KKQGDENTLKDQMKTAGTAKVREALGD |
| UniRef90 G8YCl | QDEDDYVFNVDASEHASE |
|  |  |
| UniRef90-Q2GR |  |
| UniRef90-W4KMB7 | DYVYEWSLTSDAPSASV |
| iRef90-H0YJG7 | DEVElSVSLAKDEPDTNGVALMKEEGV |
|  |  |
| M5 |  |
|  |  |


| UniRef90_F9X6D0 |  |
| :---: | :---: |
| UniRef90-A0A026X249 | YVSSL |
| UniRef90-T11C42 | YVVML |
| UniRef90-A0A024JHH2 | FGKDL |
| UniRef90-UPI0003D0FFD8 | Y LK A |
| UniRef90- S2JY | LTRDLVDQHSD |
| UniRef90-G0V | FGKDLLDENGND |
| UniRef90-UPIOOO258DB68 | YVSSL |
| UniRef9O-UPIOOO4410EOB | FPAAI 1 D THGKD |
| UniRef90-J419Q4 | FPTAII DTHGKD |
| UniRef90-J7R002 | FGKDLLVTHGND |
| UniRef90-UPIO003EC29E5 | YVQRL |
| UniRef90-×12 | Y ${ }^{\text {deb }}$ |
| UniRef90-G8JT | LAAHGND |
| UniRef90-UP100038EE9AA | Y LK A |
| UniRef90-A7TM67 | FGKDLLIANGND |
| UniRef90-LOPF | LGEVLIETHGKD |
| UniRef90-T1G7H0 | Y ${ }^{\text {l }}$ ELK |
| UniRef90-Q6BJ21 | FGRDLTTTHSSD |
| UniRef90-UP1000455D2 | FPKAII DTHGKD |
| UniRet90-SsR |  |
| Ret90-EOVN |  |
| Q7 |  |
| x8882 |  |
| Q6CE |  |
| Ref90_Q4S |  |
| AOAO |  |
|  | ALIDAHGKD |
| UniRef90_J3JU7 | YVAS |
| 込 |  |
| T2M175 |  |
| iRet90_S7R6M9 |  |
| G5D |  |
| P10003 |  |
| UniRef90 B3G4 | Y |
| $\begin{aligned} & \text { UniRef90-U618F } \\ & \text { UniRef90- } \end{aligned}$ | LRNEYSKD |
| UniRef90-UP10002034 | YLKALKTEF |
| UniRef90-G1K |  |
| niRef90_G8BRJ5 | GKDLLKENGND |
| A0A015JS |  |
| UniRef90 K1QM | Y |
| DP10004408 | A |
|  |  |
| UniRef90 UPIOOO3331BC |  |
| UniRef90-UP |  |
| P1000441 |  |
|  | A |
| UniRef90-J6F7B0 | FRPELL |
| UP1000456 |  |
| 退90-K5W 27 |  |
| niRef90_A8Q914 |  |
| T1KAF4 |  |
| UEP | YVKSLKEDFAK |
| UniRef90-UP1000388EB4B | D |
|  |  |
| UniRef90 C1LNYO | YARQLKESYAQD |
| UniRef90-A8NE22 |  |
| iRef90-V2XBNO | FPAA |
| C4 | FGADL |
| UniRef90-UPIO003F49843 |  |
| UniRet90-K5 ${ }^{\text {a }}$ | SAI IDTHGKD |
|  |  |
| UniRef90-UPIO0029DAC40 |  |
| UniRet90-F2TWE1 |  |
| iRef90_U1NGA8 |  |
| UniRef90-C1 | Y V ${ }^{\text {a }}$ |
| UniRef90-F7e |  |
| UniRet90-E6R0 | FRPALLA |
| UP |  |
| iRe990-14DP | TRSLKEEFSK |
| UniRef90-U6HH08 | Y 1 TGDKHEYGKD |
| UniRef90-G33B7C8 |  |
| UniRef90-S8E1A7 | D |
| UniRef90-W7HW | DLMEQHGKD |
| UniRefolo-G1TIY3 |  |
|  |  |
| niRef90_C5M911 |  |
| RRef90_UP1000333 |  |
| UniRef90_A9UYU5 | WYREL |
| UniRef90_UPIOOO3C803A7 |  |
| UniRet90-G8 | D |
| UniRego-M |  |
| UniRef90-UPIO00359B138 |  |
| ef90-Q2GR |  |
| Ret90_W4KMB7 |  |
| Ref90_H0YJG7 |  |
|  |  |
| - |  |
| W1Q6S5 | NDLISENASD |




50
60
70

## 

S
S SK G K L I F FY E CNDS LIS WK GVIIK E G
 TQRGVTKCIF DLKI QVSATVKVNEVEEDSYTVTMACEEMD TVVRNKK RVVGY T Y E L T T L K K F Q G E W W






N R R G K I I C GY E L D D L G


> K ESG

GAKHK GLI E IPP SLSE E

 A QRGKMMCYFEDKLTLKWGGAD A GVVGKMTLPEVDHD S QRGKVICYF DLDLS FATEVEAES GNSVEGKVVVPELVH

 $N$ N R G K I I P G Y E L N L V V S WE G E V K E A D K IVE G NV E FP Y I A D E


 TVRNKKRVGYNYELSLRFRGEWEENKKVKGHLDIPEES FG


32A8AAD
N


 NKRGK I I P GYELE VGEIA YE GE CRGKACGGKVMMPYVADE













UniRef90 E9DYN5 UniRef90-A5E575 UniRef90_МзК4т3 UniRef90-12JXY1 UniRef90-A9U2Z8 UniRef90-KOKCH6 UniRef90-B9WIQ1 UniRef90_W6MQ99 UniRef90-F4RZQ2 UniRef90-UPIOOO4541275 UniRef90-11N9A4 UniRef90-E3L934 UniRef90-Q6BLM9 UniRet90-G7E5HO UniRef90-W6MGI9
UniRef90 UPIooot2 UniRef90-UPIOO042B8582 UniReffo-A3LV44
UniRef90-M4CRE2 UniRef90-G3AU25 UniRef90-UPIO00180BDCD UniRef90-M7X504 UniRef90-UPI0003D24F99 UniRef90-B3S6F4 UniRef90_G4TVM4 UniRef90-T11X34 UniRefoto G1MIU9 UniRef90-G8B5C3
UniRef90 C4R3R2 UniRef90-D7U888 UniRef90-s9WW13 UniRef90-UPIIOO23B475BD UniRet90_G4V7D7 UniRef90-MOSCO2 UniRef90- H2APF4 UniRef90-E9C501 UniRef90-C5DRA3 UniRef90-V4S6T4 UniRef90-T1DJK1
UniRef90 C1E3P9 UniRef90-C1C1C1 UniRef90_DOA023 UniRef90-Q9LHL7
UniRef90 A2AF81 UniRef90-W6K198 UniRef90-H8×8T0
UniRef90-D3BGT7 UniRef90_11HX33 UniRef90-GOU4C1 UniRef90-C5DEH5 UniRef90_S6EC90 UniRef90-A4RRA4 UniRef90 ${ }^{-K 4 D W Q 1}$
UniRefgo-K4D2D4 UniRef90-F6HLH5 UniRef90-Q6CTJ7 UniRef90-B9HBD2 UniRef90-J8Q060 UniRef90-K3YVU9
UniRef90-G5C1z1 UniRef90-D8S738 UniRef90-J7S3F7 UniRef90-KPIOOO32A8AAD UniRef90-l4YAN4 UniRef90-G8ZU34 UniRef90_12GZZ9
UniRef90_J3L9H2 UniRef90-A7TN68 UniRef90-Q01GC7 UniRef90- WOTKA1 UniRef90-A9NUD8 UniRe90_C6T150
UniRef90_GOUY7 Unineftoc-A8IXT4 UniRef90_G8BML8 UniRef90-W1PXB8
UniRef90_A0A022RIG9 UniRef90 V7BM99 UniRef90-M8A5N8 UniRef90_E1ZKG7
UniRef90_Q6FOW3 UniRef90-S8CPE5 UniRef90 ${ }^{-11 J F Z 6}$ UniRef90-W1PSW2 UniRef90-13T1P8 UniRef90-A0A059LJN4 UniRef90-D5ABN1 UniRef90_DABN1
UniRef90_B9SP99

90
100
110
120 QDED TEPEDYQFNLSSFDKED EKDRPXLRRNLIPQIREEVLDN ■T VDE YSYQWS LTTASSPADVVYKLAKTKL REALES KFA E


 N A D E D P E E V R V


 QE ED E Y V FFEI S AD D K K A E ELLD D L E V V D V K L L S D D K E L S Q Q L K Q Q

 E IDD D Q D E VSLLSEDK DLGQEDKHRDKK QFLQPPFQEKLLD
 NHDED P E I R I V V D T N T S E A E R L K A A V H S H G K R P L E A K F K A


QDEDEYEYVI EGNLD


 S E T DF E I K I D E F S GK K D Q

 N A DENPE DRV S VK DE GP LGKRLKDAMWVKGKPVI E EKVVV ND DDEVVELTVSVVDSNNASEKLKTFMYNVGRXYVKDEKQD NAGEEHEAKVLAAAGEGPDDRKVKEDMRLVALPKMAE GVAK T D 1 K DVDLEV TLD T DRSSAGALKEMMRGKGAEDLRERLAE SFRDE YDDVVTTTDNKDETQRAEAVVRAKGRAAVRGVI TK N A DE D P E I R F S VK D E G P $\square$ G R T L K E AMVVK K G K E II L E K V R V
 ELPNDFGIDVSCQEKGAAALRVEDAVRTAGRARVRAELRR

 SFRDEYEITVSVTENDEAS QRAEALVRSQGRSAVRDTITQQ DETDFEI RPEGFGDHH A
 NADEDPECVVVPANDTNEDARVKALI DKS VPRVLEGVRT NF R D E Y D I T V $\operatorname{SiV}$ T E N D A A S Q K A D T L M R S K GRTAAVRNVI T N NADEDPEVKVVSVKDE GPDGKRLKDAFVVKGKPFVLDEVKT NADEDPEVVKI LV K DE GPLGKRLKEAMVVAKGPVILEKVRV DESDFEVNLNSFGSNKNVVRDVVLERFV


 EDDFEI KVVS GLDARLTELVVKQQFVPSFRATLLE

 ETEDETQYR D
D E
D F E V S T T G F DK E F E P V

NADEDPECVAAPASDSTEDS IVREAVLKT LVP I LIE GV RT
 ELLD DLQVEVRLLSEARD LLHQDK T QMRKLFLQPVREKLLQ NFRDEYDVVI ASTTENNEASQKAEAGVRSKGRVVVREVIVTK NHDEDPEI RIVTDTNSSDAERLKQAIHSAGKKPVLEA

R








| UniRef90 E9DYN5 |  |
| :---: | :---: |
| UniRef90 A5E575 | FQSDLLEAHAKD |
| UniRef90-МзК4т3 | FQPDLLDAHAKD |
| UniRef90-12JXY1 | FGPTLIQVHGSD |
| UniRef90-M5FT04 | FPワAlIEVHGKD |
| UniRefoto- 9 O2I288 |  |
| UniRef90-K0KCH6 | FQKDLIDSHSKD |
| UniRet90-W6MQ99 | FQPDLLASH |
| UniRef90-F4RZQ | FPKAMVQEHGAD |
| UniRef90-UPI0004541275 | Y 1 GTLK |
| UniRef90-IIN9A4 | WVQSm |
| UniRef90-E3L934 | K Tldeha |
| UniRef90-_6BLM9 | FQGDLVNAHEKD |
| UniRef90 G7E5H0 | FPKSMI DVHGKD |
| UniRef90_W6MGI9 UniRei90 UPIOOO42B8582 | FGPKLLIKDHASE |
| UniRef90-A3LV44 | FQND\TESHAKD |
| UniRef90-M4C | FEQ |
| UniRef90-G3 | FQPDLLEAHAKD |
| UniRei90-UPIO000180BDCD | Y ${ }^{\text {d }}$ CLRHDFAK |
| UniRe90_M ${ }^{\text {a }}$ |  |
| UniRet90_UP10003D24F99 |  |
| UniRet90_B3S6F4 |  |
| UniRet90_G4TVM4 |  |
| UniRef90_D8TSG7 | FV |
| UniRef90-T11X34 | Y ${ }^{\text {a }}$ N AL |
| UniRef90-G1MIU9 |  |
| UniRet90-G8B5C3 | FQPD EAHAKD |
| UniRef90-D7U888 | FEEELKD ${ }^{\text {F }}$ ( ${ }^{\text {a }}$ |
| UniRef90-s9WW13 | FFDK1F |
| UniRef90-UP1000 | FEQEL |
|  | T L L |
| UniRef90-MOSCO2 | FEQELKD |
| UniRef90-A3LPP | FGTDL DN S S |
| UniRet90-H2AP54 | $Y$ NSDLTESSK |
| UniRe990_-E9C501 | Y |
| UniRe990_C5DRA3 | YQSDLMRAHSGD |
| UniRef90 - V4S6T4 | YVEA |
|  |  |
| UniRef90-C1C1C1 |  |
| UniRef90-D0A023 | Y FEEL |
| UniRef90-Q9LHL7 | YVEAM |
| UniRef90_A2AF81 | Y |
| UniRef90 W6K198 |  |
| UniRef90-H8X870 | FQPDL EAHAKD |
| UniRef90-D3BG7 |  |
| UniRe90-1H33 | F |
| UniRef90-GOU4C1 | YNED |
| UniRef90-V4WII5 | YQQD ${ }^{\text {a }}$ |
| UniRef90-S6EC90 | YOPDLLEAHGS |
| UniRef90-A4RRA4 | WVKEM |
| UniRet90_K4DWQ1 | YFNELFETY |
| UniRet90 K4D2L | - |
| UniRef90-F6HLH5 | YVQSM |
| UniRef90_Q6CTJ7 | YQQELDDSHSQD |
| UniRet90_B9HBD2 | F EQEL |
| UniRet90_J800 | YQDDLIKGHSKD |
| UniRef90 K3YVU9 | FEEELK |
| $\begin{aligned} & \text { UniRef90_G5C1Z1 } \\ & \text { UniRef90-D8S738 } \end{aligned}$ | Y Y ${ }_{\text {Y K }}$ |
| UniRef90-J7S3F7 |  |
| UniRef90-K7TVD2 | FVA A |
| UniRef90-UPIO0032A8AAD | WVESM |
| UniRef90-14YA | F PVDL |
| UniRef90-G82 | YQPTLIEEHSRD |
| UniRef90_12GZU9 | YQDDL |
| UniRef90-J3L9H2 | FEEEL |
| UniRef90_A7TN68 | D |
| UniRef90-Q01GC7 | F VKE |
| UniRef90-WOTK | YQQDLIDSHSRD |
| UniRef90 A9 | Y |
| UniRef90-C6T150 |  |
| UniRef90 GOUYE7 | EELFEAY |
| UniRef90-A81X |  |
| UniRef90-G8BML8 | YQTALLEEHSK |
| UniRee90-W1PXB8 | F |
| Uniree90-A0AO22RIG9 | WV |
| UniRef90-M8A5N8 | $Y \vee A A$ |
| UniRet90_E1ZKG7 | FVQEL |
| UniRet90-Q6FQw3 | YQKDLLEEHSRD |
| UniRet90_S8CPE5 |  |
| UniRet90-11JFZ |  |
| UniRef90_WiPSW2 | S |
| UniRef90 137 | FEQELK |
| UniRef90-A0A059LJN4 UniRef90-D5ABN1 |  |
|  |  |

 UniRef90-W7LUB3 UniRef90_R1C1F8 UniRef90_Q753G5 UniRef90-C1DY31 UniRef90-G8JQS9 UniRef90_G0W4L6 UniRef90-W1QJ87 UniRef90-M5VUM7 UniRef90_A4H9C6 UniRef90_A4S082
UniRef90 GOVK95 UniRef90-I1F6P2 UniRef90-S9VJ21
UniRef90_A81777 UniRef90_UPI000440B8A3 UniRef90 E9ARF8 UniRef90-I0Z813 UniRef90-A9S1D7 UniRef90_IOYIR6 UniRef90_Q015D0 UniRef90_D8S6K6
UniRef90 UniRef90_L9KFY6 UniRef90-G1M3D8 UniRef90_C0P4B1 UniRef90-D8U8Q4 UniRef90-C1FGV1 UniRef90_UPIO0042BA15E UniRef90_G5AXM4 UniRef90-C1N3Q2 UniRef90-D8RPX0
UniRef90_UPI000392EEF5
UniRef90_B3L4D4
UniRef90-B3L4D4
UniRef90_V9FZ34
UniRef90 E4Y2N2
UniRef90_A0A058ZFG1
UniRef90-UPIO004548CD4
UniRef90 F4Q2H0
UniRef90_UPI0003C293C1
UniRef90-G7YUN9
UniRef90 ROK012
UniRef90-A0A024FZI6
UniRef90_C1MQY0
UniRef90-J916C2
UniRef90-J916C2
UniRef90-13S710
UniRef90-12K3J8
UniRef90-R7QH33
UniRef90_FOZW85
UniRef90-HOYJU2
UniRef90 UPI000359C903
UniRef90-D7FQZ8
UniRef90-W7A985
UniRef90-W7A985
UniRef90-D2V0Y4
UniRef90-H3GE47
UniRef90_A0A024TXV2
UniRef90-K3WL21
UniRef90-M4BD12
UniRef90-V7PLB3
UniRef90-V7PLB3
UniRef90_UPI0001FE68F8
UniRef90-FOWQ61
UniRef90-W9QUG2
UniRef90-S8GS12
UniRef90-S8GS12
UniRef90_A0A024TC89
UniRef90-B7QDH7
UniRef90_UPI000443A366
UniRef90-FOV9X4
UniRef90-FOV9X4
UniRef90_R1DS52
UniRef90_Q012W8
UniRef90_H3GRS9
UniRef90-M5BRZ5
UniRef90-A0A024GSU4
UniRef90-K3W7J9
UniRef90-B6AFN2
UniRef90_Q55DB6
UniRef90_M4BXX9
UniRef90_H3GNP1

ETSYTE WAREKLGARFEGVATGDGGK\LSLETMKGDVTV VDKNTLPWTKEYMNGAFDNWAIENKYVVKSVSSVAGDSNV ERNMMGWGKDRMSQLLTADTSEGAARVVEISKFEGDASV

 V
E


``` 22EEF5
``` T E


E K C LT K WA Q E E LK N MLD T S T I Q L S N N I S L S S E V D G E A S S E K CLLTK WA QEELK N MLLDTSTILQLSNNUSLSSEVVDGEASS ERD KSEWAR E R L K H HL E S F S FE D EAKATSSFARCCDGEAKV
 EFDCMSWSKTK LAT T L IGDLLDDNDVAS IKTLVTVTGECSS

\begin{abstract}
EK DKSA WACDRLKESLE DAKYNVS LVVDSVVRCDGEAKV




\end{abstract}

TERDASNWSTEKLKALFLADRVENECEVTEVNKLDGEASD RDMTSWAK QRLE ELL LVGVESESVVKVVRVDKLEGDAEI

EKNLLNSWAN S R I K D L L G S L G S T G N A S VV D E V S K K C S G D A F V ERNMTDWAK GRLQELLGGLEEGAVIVVKKVTGLEGAAAV ER GATCWAKSRLTEELIRERELGGGVTVVDVNGCEGEANII E R GH T D WA K A R V E E L V V G V A G G G A A V V K E V V K T F K G D A TV V

\section*{UniRef90 W9SFX3}

UniRef90－R1DGJ6 UniRef90－A0AO22QATO UniRef90－W7LUB3 UniRef90－R1C1F8
UniRef90＿Q753G5 Uniinefoo－C1DY31 UniRef90－G8JOS9 UniRef90＿GOW4L6
UniRef90＿W1QJ87 UniRef90－M5VUM7 UniRef90－A4H9C6 UniRef90 A4S082
UniRef90 GoVk95 UniRef90－I1F6P2 UniRef90－S9VJ21
UniRef90
U81777 UniRef90－UPI000440B8A3 UniRet90－E9ARF8 UniRef90－10Z813
UniRef90－A9SID7 UniRef90＿10YIR6 UniRet90－Q015D0 UniRef90－D8S6K6
UniRef90 L8X6E8 UniRef90－L9KFY6 UniRef90－G1M3D8 UniRef90－COP4B1 UniRef90－D8U8Q4 UniRef90－C1FGV1 UniRef90－UPIO0042BA15E UniRef90－G5AXM4 UniRef90＿C1N3Q2
UniRet90－D8RPX0 UniRef90－G5BMM9 UniRef90－UPIOOO392EEF5 UniRef90－B3L4D4 UniRef90－B3L4D4 UniRef90＿－V9FZ34 UniRef90－E4Y2N2 UniRef90－A0A058ZFG1 UniRef90－UPIO004548CD4 UniRef90 F4Q2H0 UniRef90－UPI0003C293C1 UniReftoo－GYYUN9 UniRef90－ROKO12 UniRef90－AOAO24FZ16 UniRef90＿C1MQY0 UniRef90－＿9916C2 UniRef90－－9196C2 UniRef90－13S710
UniRef90－I2K3J8 UniRef90－R7QH33 UniRef90－FOZW85 UniRef90－HOYJU2 UniRef90－UPIOOO359C903 UniRet90 D7FQZ8 UniRef90 W7A985
UniRef90－W7A985 UniRef90－ToQLP4 UniRef90－D2VOY4 UniRef90－H3GE47 UniRef90－A0A024TXV2 UniRef90 K3WL21 UniRef90M4BD12
UniRef90＿V7PLB3 UniRef90－V7PLB3 UniRef90＿UPIO001FE68F8 UniRef90－FOWQ61
UniRef90＿W9QUG2 UniRef90＿S8GS12 UniRef90－S8GS12 UniRef90－A0A024TC89 UniRef90－B7QDH7 UniRef90＿UPI000443A366 UniRef90－FoV9X4 Uninefoc Fova4 UniRef90－Q012W8 UniRef90－H3GRS9 UniRef90－M5BRZ5 UniRef90 A0AO24GSU4
UniRef90－K3W7， UniRef90－K3W7J9
UniRef90＿B6AFN2 UniRef90－Q55DB6 UniRef90－M4BXX9
UniRet90－H3GNP1 UniRef90－UPIO003F176CB UniRef90－K7NZG8 UniRef90＿WGG237
UniRef9O＿C5KJJAO
 SNRGKRIVAYELDVKLKWQG SVDYDDVEGTLILPYVSED TVRNKKRVGYTYELALKVKGEWQENKKMKCHMVPMEFSEG QSRKQKRFDYELELTDRWEGQLFDAVEAKGRVKVPDLSEE SQRGKVICYFDLQLEFSVAAAAGDGEEDCGTVSUPEFDHD NTRNKKFAVFDLSVTCKWEGECVDAETAKGEVKLTEFASE SQRGKPICYFDVHVDVSLEVLGRNEEDEKGSLVIPEFMHD TQRGKVRCDFDLQVEFVVQIDGQGSVSEHTVRLVEFEHD AQRGKMMCYFELKMSLRWVGKMSGADQVRGKMEVAEVDHD
 SQRGKPTCYFDLQMDFSMQUINDEQEEQKGTLSVPEFMHD AQRGKMMCYFELHLTLKWKGVAGSDEEVSGKLEVPEVDHD GRRKKLITDYDCRVVLNWTGSTADGTTASGRLVIPEVSHE A RRKKMMCYYELKMKLKWVGKMADADQVQGKMEVAEVDHD NNRKKLIPSYELEEVGTWSGEVRDGESASGSFHLPYVADE
TTRNKKFAVFELLIVLDWRGTWEDGKEVKGEVKVSEYSS STRGKKFGCFDLSFTLRWEARLDDDDAVKGEVKVKEFCST TVRNKKR】GYSFD】TLGFQGSLDEFKDLTGTLKFLDASCG
NNRGKLTFFYEWS DRLNWTGTSKSGVQYKGPVEIPDVSDG SHKGKPIFFYE WNTKLGWKGTDKEGVKHKGLI EI TNLSEE TVRNKKRVGYNYELSLRFKGEWEENKK TVRGKKKYLYDFVFTLEWEAGLAGGAKAKGTLRYPDVTPD FVRGKKRCGFDFELQLA WKAVRPGADEDRGHCKVLNFSSD VVRGKPRHGFDFDVTLAWEGDGEDVKPVKGTVHIPEASRD SNRGKLI FFYEWSMKLNWTGTSKSGVQYKGHVEVPNHSD TVRGKRRVDYSFD LLDFDETNV KRCAGKVEVGEGEDVE T LRI RYVNTGTVKEGEKHKGSVEIPNLSE E

 SNRNKLIAYWDYSLELLKFKLKHKGNEESKGTIKCPNFSQE DNRGRリRTDFDLTLNFQWKATLASETTVSGNLKLMDFNQE MNRGKT \(\square F \square F E T T K A N W E G K Q P D D K P V K G E F I L T E Y E D E\) DVEVDEEREGTMKEGEKHKGYVEIPSRSEE
YSRGVKRCGFDTSVKFEWKSTRQDDDEVKGHVEI HDF DD S RNKKFAVFDLNITRKWEGTCEGDGEVKGEVKIAEFAST TIRKKQIFLFDYKLDIYFDAVHLTEPETKGRVTVDEF N RNKKRVSFTYELSLKVKGEWVIQGNKKDGGHIDVPEDSFG TQRGRVRCLIELVNFVVKVEKEGGEDSTXDISLPEFEHD YNRGVLKVLYDLKVCGKWSTRHEEKDERTHGETVEFKFE WSVKLNWTGTSKSGVQYKGHVEIPNLSDE NNRGKLITFFYEWTUKLNWTGKDQPGRQRRG SSRGKKRYMFDFRFELKWEAPDDDCGPAKGVLMYPDVGQD SLRKKK TIYYDK INCEWKAFKKNEMETTGHVTVNDVISD SGRKKKIIIYODKINCEWKAFKKNEMEITGHVTVNDVISD
 CVRGKKRFGFDFEFVIEWTVVGKDG YKGKLTFQDISND FSRGKKRCGYDVSKKFEWTSTRADGEEVTGHVEVHDF DD S SLRKKKUIIYDLKUGAEWKASKKNKNEAKGYISVNEIISD FPRGKKRAGYEFAAKVKVEVTPAGASSATGTLEFPYUCDD AVRGSKRYIYEFTFRLKCSLADNGDEKVEGYLKYDDFSSD TVRSKKRVGYTYELTFKVEGEWDEKKSVKGHED DPELSFG
 F SRGKKRCGYDLALEFEYEGHEGNS
NNRKKLIFFYEWAGEKKEKFSGG俍 SVRGKTVADDLAVKMQFEALVKSSRKCRGEVSVSDVSAE SVRGKTILAIDLAVKMQFEALVKSSRKCRGELSVSDVSAE VMRGKPRRGFDFELTLNWEGDDEQEVIIKGTVHVPEFSRD ALRGSKRYTYEFSFRMSWSGEDKDGSKAEGKLTHPEVSHE CVRGKKRFLYDFNFTLPFEVS GGGGTIYKGKYTMNE SSND SVRKKPRLAYEFNRTANWLARYGGNNDYKGKYTMNEDSND NNRGKTIFLYEDDVKMNWEVIITQKKTISGEFTVPYTSDE
 CVRGKKRYLFDFNFKLPFEVADSGGSTCKGSYEMNDYSND
 PVRGTARYVYD YK F KLLS T NVT F K G I I Q｜LNADVKVGDFAND


NAGEEHDAKVLNAKNGADDDRVKE I I RTVGLPMMWRADGE TDLDD R R DV AFTEPEPEREHLRSQM SQFLPKDRTQLEC N IVDEVVI SVVSLAKDEPDTN LVALMKEDGVKLLREAVGU


 N DPDEWDLTSTKYDKDEHYDEGLKFIVKKAHPVMRDKMEE
ETASDADFNDTVTGSSPHATKLRQLVRRDVLGAVVGFLGA NEVDDTEVNVS KKKGDGDILKDLMKTTGTAKVREALGE SETKPTVGVTVSGESNNSADKLKMLARAHGDPFI HSALQQ NEVDDTEINISS KKKGEGDVLKDLMKTEGTVKVREALKE
 MNGEDYEVTVSTEECSAHARDAKDAILN WEGQLREILAN NDEDEYEFKVVTASDGDADA QDDNEI D I DIVCEKKEEFVYQVKNVIKTKVQAEI
ELDDLQMEVRLNEASD】SHQDK】E\|LKLFLQPVREKLLQ QLDEDYHFQIK
LFDEDPEVSVGVDAKSRAVHEYRKAFADKVGPQDREQCRV


CDG VY DVECRVDSSTPTAARGFVDRHVRPEDREA
DDESKYTFQFVFDSAHPEGAAMNEVI RTEGPAQIEKIIET
 \(\square D Q G E F E I V N V D D D T K K N E H K V I K E T L R T K G L E T V\)

 YSADDYKYTYI FDNNTPEYSTI NNVIKSDIPPRKMNEIIDDS VSNHAYEDKLVFADK AAQALLDDYRSVFLDAVRTQF NDDDEVEVDVPSRYQTEYGKALHASLASTLRQEVAKRLAL E LD D L HQVD
SEDRDYTTSARLTD

NDMED DDDS

 GEDEECACEVKVSDRNSEHAPCVATLKKRCEDFLVRTLMT CGGDDVEAEVPSRYQSEGGKACHAMALSSSFRQALAAQLAT


 CGGEDYEISCRLTKKSSEQAAVQALVATK
KEVDDT EVNMSEKKGDGA ILK KLLRKAPGPTKVREALGD NAGEDPD 1 NI
T N G E D Y E I H V K S A T S S A Q D K T T V MEP Y T F HVNVV DP K E S VDRDT I RS I I IK S IVP QL N S KL D Q
\begin{tabular}{|c|c|}
\hline UniRef90_W9SFX3 & Y VE T M 130 \\
\hline UniRef90-R1DGJ6 & F Y S \({ }^{\text {l }}\) \\
\hline UniRef90-A0A022QAT0 & FEEELKD \\
\hline UniRef90-W7LUB3 & LAGAL \(\mathrm{LAEHGK}^{\text {A }}\) \\
\hline UniRef90-R1C1F8 & FVKELKET \\
\hline UniRef90_Q753G5 & Y Q S ALVAEHSKD \\
\hline UniRef90-C1DY31 & FAKEL \\
\hline UniRef90-G8JQS9 & YQSTLVDAHSKD \\
\hline UniRef90-G0W4L6 & Y Q NDLIKSHSSD \\
\hline UniRef90-W1QJ87 & FQNDLLAT \\
\hline UniRef90-M5VUM7 & Y VE S I \\
\hline UniRef90-A4H9C6 & F F D A L A E Y \\
\hline UniRef90-A4S082 & FCEELKE \\
\hline UniRef90_G0VK95 & YQDDL 1 T S H S K \\
\hline UniRef90-11F6P2 & Y LELLLKKDFA \\
\hline UniRef90-S9VJ21 & FFEKIFQ \\
\hline UniRef90-A81777 & LLEELK \\
\hline UniRef90-UPI000440B8A3 & F PVALVDVH G K D \\
\hline UniRef90_E9ARF8 & FFDALF \\
\hline UniRef90-10Z813 & F V K E L \\
\hline UniRef90_A9S1D7 & FEAELKE \\
\hline UniRef90_IOYIR6 & F VA EL \\
\hline UniRef90_Q015D0 & F CDELKA \\
\hline UniRef90_D8S6K6 & FEHELK \\
\hline UniRef90_L8X6E8 & F R T A MLD T HGKD \\
\hline UniRef90_L9KFY6 & \\
\hline UniRef90-G1M3D8 & Y L K P L K T E F T R \\
\hline UniRef90_C0P4B1 & \\
\hline UniRef90-W7TJD9 & FMAD \\
\hline UniRef90-D8U8Q4 & L L E ELKA \\
\hline UniRef90_C1FGV1 & I DK ELL \({ }^{\text {d }}\) \\
\hline UniRef90_UPI00042BA15E & Y L K Q F K E F \\
\hline UniRef90_G5AXM4 & \\
\hline UniRef90-C1N3Q2 & \EK E L \\
\hline UniRef90-D8RPX0 & FEKEIKE \\
\hline UniRef90-G5BMM9 & Y TSTLK T EFTQ \\
\hline UniRef90_UPIO00392EEF5 & Y L K ALK T E F \\
\hline UniRef90_B3L4D4 & FIS K M M E \\
\hline UniRef90-B3L4D4 & FIS K M M E \\
\hline UniRef90-V9FZ34 & WKQELLQ \\
\hline UniRef90_E4Y2N2 & Y G K L R S F A \\
\hline UniRef90_A0A058ZFG1 & FMEDL \\
\hline UniRef90-UPI0004548CD4 &  \\
\hline UniRef90-F4Q2H0 & Y 1 K ELKET Y \\
\hline UniRef90_UPI0003C293C1 & Y L K ALK \({ }^{\text {T D F }}\) \\
\hline UniRef90_G7YUN9 & Y K K L L HEEYSRD \\
\hline UniRef90_ROK012 & Y L K ALK K E F \\
\hline UniRef90-A0A024FZI6 & WREELL \\
\hline UniRef90_C1MQY0 & \\
\hline UniRef90-J916C2 & \\
\hline UniRef90-J916C2 & \\
\hline UniRef90-13S710 & F E Q E LK D \\
\hline UniRef90-12K3J8 & \\
\hline UniRef90-R7QH33 & F 1 K E \\
\hline UniRef90-F0ZW85 & FV S LLKKEF \\
\hline UniRef90-H0YJU2 & Y IS TLK T G H \\
\hline UniRef90-UPI000359C903 & \\
\hline UniRef90-D7FQZ8 & \\
\hline UniRef90-W7A985 & F 1 S K M M E \\
\hline UniRef90-W7A985 & FIS K M M \\
\hline UniRef90-T0QLP4 & WKTELLQ \\
\hline UniRef90-D2V0Y4 & F L L T R D \\
\hline UniRef90-H3GE47 & WKQELLQ \\
\hline UniRef90-A0A024TXV2 & F VT E \\
\hline UniRef90-K3WL21 & WKEELLQ \\
\hline UniRef90-M4BD12 & WKEELLQ \\
\hline UniRef90-V7PLB3 & F V EKMKQ \\
\hline UniRef90_V7PLB3 & F V E K M Q \\
\hline UniRef90_UPI0001FE68F8 & \\
\hline UniRef90_FOWQ61 & F E K E \\
\hline UniRef90_W9QUG2 & \\
\hline UniRef90-S8GS12 & \\
\hline UniRef90-S8GS12 & \\
\hline UniRef90_A0A024TC89 & WK Q DLLQ \\
\hline UniRef90-B7QDH7 & \\
\hline UniRef90_UPI000443A366 & Y VGF LK T E F T Q \\
\hline UniRef90_F0V9X4 & \\
\hline UniRef90-F0V9X4 & \\
\hline UniRef90-R1DS52 & L P P A L \\
\hline UniRef90-Q012W8 & 1 DSELEERASK \\
\hline UniRef90-H3GRS9 & FVQE \\
\hline UniRef90-M5BRZ5 & F R T A M L D A H G K \\
\hline UniRef90-A0A024GSU4 & F V R E \\
\hline UniRef90_K3W7J9 & F TQE \\
\hline UniRef90-B6AFN2 & F HDLLLEAESN \\
\hline UniRef90-Q55DB6 & F 1 KLLKKEF \\
\hline UniRef90_M4BXX9 & QLAAFVQEY \\
\hline UniRef90-H3GNP1 & \\
\hline UniRef90_UPIO003F176CB & Y LK A L R V \(\mathrm{V}^{\text {F }}\) \\
\hline UniRef90-K7NZG8 & \\
\hline UniRef90_W4G237 & WKQDLLQ \\
\hline UniRef90_C5KJA0 & F VTE \\
\hline
\end{tabular}

 VE K D C K E WT RVVF F E S E F V C G D D A N G V
 E K N Y T P \(\quad\) D S K \(\quad\) Q L I


EKDTTSWCNS QLRSRLVTVTSKYNVEVLSVEELTGDASV EKSFTEWSKTYY K E LLFEFVDVEEGI KLETVDEVKGEAFK



ERVVTKWAENKWNE IIT GVEGSMQAVLKAPEKLTGDAS I
EKNYT T DA R QLI E Q Ki K A
T

 E R G H T D WA R A R L EKPMTKWS EKPMTKWS QNEI K RLL L E SIITICSTTI E TNCLEWSRNFFTKQFS GlV

D ILS GE GEAK D
RDCLDWSRALLSKLLAGLEGGLTLRTTTLDKLDGEAYV EYDYSEWVHQQLKQELLRVQFKGAIKDDEVEKVDGTVYL
 EKDVSDWAKEALQGLLDSCKYEGSALVSKVATLEGHASA ERDMTKFAHDRVSELVRATGAPGLLVVKDIVDMSGEAS I
E R N
K N
E K C
E K C
E K D
E M D
E R N
E K D
E K D
E K D
E K D
E K D
E K Q
K N



 EK DVVS P WA R T R F A E R L Q E A S A E T K V E T T S VVGEVV G D A H L
E Y DVS S WA A K R L K EMLLS GLVSP WY F R DNSTEQVH GEATVV ET KLLDE WGRA RLK E L L H G L ELLDLDDA K V V V R EVVK G DC WV D K DVVS E T A R S T L K R L L L K V S E K G D DS I E S V D N L S G E A S V E Y D Y S D WVVHQ R L

 \(K N V S S T A T P L L Q Q Q L V L L D E G G H R I A A T S A T V T G E S D V V\) EKDVSEWAKKRFEQKLMGQFMQTEDKCKEVTGLTGDAQV
lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm
\begin{tabular}{|c|c|}
\hline & \\
\hline UniRef90_C1MSF9 & V/RGKNRHGFDF \\
\hline UniRet90-L11 & HLRGRLWPLCD RLVLSLEGTSGSEPPLTAEVVFPEVTVD \\
\hline UniRet90-K8 & \(N\) NRGKITPGYELELS DYE LEGERV GTMVLPYVSDE \\
\hline UniRet90_K3WMW6 & AVRGAKRYIFDFAFTLKCALLLLEN \\
\hline ef90_AOBV56 & NIRGKQVLIYDFDIEVEWHGVNQD \\
\hline UnRef90-UPIOOO350D478
UniRef90-TOPWJ1 & N|RGKVIPGYELLSLTLS SEAEAASESGAAEVAGAPYLADE \\
\hline UniRef90-1OYQU4 & IVRGKRRAGFDLTLEAWRAAMIG \\
\hline UniRef90-UP10003C27088 & - GTSLA GVTYK GYVEIPNLSDE \\
\hline UniRef90-B7FC & \\
\hline V6 & UVRNKLRSSFDFK KMKFSYLVAEKDTIKGTILEEPFCDE \\
\hline OY & VRSIEDLEVESWVAED \\
\hline UniRef90 D8UF34 & TTRNKRFAVFDLTLAATVWEGVAGGSSVKGD \\
\hline Ref90-S4 & ( \({ }^{\text {a }}\) AHKGTSKTGVKYNG\VNDPNLSEE \\
\hline UniRef90-M4B1D6 & CVRGKKRYLFDFNFKRPFEVSV \\
\hline UniRet90_A0CL58 & RGKQVLVYDFD EOVEWRG SNESDEAEGTYK \\
\hline UniRef90_M1VKB & NVRGKLRSSYDFKIKMNWTYKAAGKDPLLEGKAV \\
\hline UniRef90-L1J & R \\
\hline & RGKPR \\
\hline UniRef90-UPIOOO383 & G K F \\
\hline UniRef90-17J577 & \\
\hline 0-17J577 & \\
\hline & , \\
\hline RRef90 W5H & N \\
\hline & TA D G \\
\hline UniRet90-11 4497 &  \\
\hline UniRet90-LIGNJ 6 & \\
\hline UniRef90- TOQOB8 & AVRGAKRYIFDLLFTVECEWKATNGTEIQGQLKF \\
\hline UniRef90-UP100035117DA & N| RGKVIPGYEL \\
\hline & R \\
\hline UniRet90-Q22R57 & NVRGKQULCHYENVEVDKKAESDEEDADGYFK \\
\hline UniRef90--997244 & SLRKKKILMYDLKITSEWKAYQKNEIESKGHVSI \\
\hline UniRef90-W4GPE6 & AVRGAKRYIFDLAFTVDVT WTPTDAVPLQAT \\
\hline UniRet90_D8L & VKGKKRPGFDITLKKLKCATCDESEEAKGTVTIND \\
\hline UniRef90 FOWJ38 & CVRGRKRYGFDFSFELPFVVLTVEGHHTYKGSYTMHD \\
\hline UniRef90-B5 & ALAGKKRYIYDFHASLKYE ILNDGDEVSGSL \\
\hline UniRef90-Q5CNU3 & SVRKKPLLAYEFSLSGTWSVNEVESQKIL \\
\hline UniRefga &  \\
\hline UniRef90-U6M & K \\
\hline niRef90 G0Q & KQILCYDFNIEVEFIUGQN \\
\hline & TTRNKRFAVFDLTVSLAWEGRGEGGATARGEYRVEEVHST \\
\hline UniRef90 L1J11 & RGKKRAGVNWD DVVLDWQLRDYPDANGSLT \\
\hline UniRef90-F2URP9 & IVRGKPRVGFEYELELKFKGAVQVEV \\
\hline UniRet90-A2EL63 & SiRKNRSFEFTFDCKFKHNGM K S \\
\hline  & KGKMPPGYEIISLTPNWQGEAKDSQKVDDT \\
\hline UniRef90-Q4YLL2 &  \\
\hline 66 & NRKTLTFDLNAEADWKATARDQADSRGR \\
\hline & YVRGRVKSLCDLEITGQWSVCSEDEECIVQGTFS ELLLSGE \\
\hline UniRef90-C11 &  \\
\hline  & RGRRRFLFDFS \\
\hline UniRef90- X6NL46 & GKLRAGWDLNLKAKWKG VVDGKEVEGTISME \\
\hline UniRef90_17ISN6 & SVRGTKRYMFEFTCSTDLNVMFGDKEEYKLKLHLNDISSE \\
\hline ef90-G4YP55 & KKRYLFD \\
\hline UniRef90-C5z990
UniRef90 \({ }^{\text {B6AB53 }}\) & \\
\hline & \[
\stackrel{M}{\mathrm{D}}
\] \\
\hline iRef90_B6k & VVRGTKRFLFEFACTVVFEVSGKDGTKYKGELTLPEVSS \\
\hline
\end{tabular}

\footnotetext{
lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm
}
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{4}{|l|}{\multirow[t]{48}{*}{}} \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline & & & \\
\hline
\end{tabular}


EDSDEWGFEVECKKSRSEDQKARST■KKSVLGTVERVLKE
SALSELH LSVKVDKAGNNQAEDDADLKAC KPADLDVINA CELDLVDWIVDSGTPPGTGPLLDRFVRDAGLDDIHQKIDE
 LEENDYA DNDERTDESENDRFDYDS ILKKEGKEKIKELKN



\begin{tabular}{l}
\(G\) \\
\(C\) \\
\(C\) \\
\(T\) \\
\(N\) \\
\(T\) \\
\hline
\end{tabular}
CVLGDEEAEDSYGLEKNPQDEAVLNADSKFVQEVLRADQE CAEGEEEANKVRADDPSMRLETVHQGREAIHETIDD NYEEDFPIVI TCKKKAP
TAEEEDEVDIAWTSSPGDVETDASECRKALVMDVRKSVVK SGG D YDVEVVV DDDFEVD HITMNSKNKCGE FPEDMEMLVSSS

\section*{D S DD D WE Y E LT FTGGESAKKTAAKKVIR
NA DEDPK SMTKGGPVKDEYK}

S GMS WLQGSVS LNKPSP DFKPVVDEA DQKYKESTAEKDQA SS SCSISFYGDGPPQQRIDAAAKKEGPPLI RDLLQA PEISLTATTGDRQEAKNWLRQVLVDFIEQ NDDDEVEVIVHMAQEVPFKRAVCAAVKKVIVA RCEK CNEDDVDCSINFTGKHKHNHDLKDFV

\section*{E D S D D WLf EVSAKESQKEFDKGRRLIKKKVLDVIDRVLAE}
\(\square R T T R T T R \square T K K P S S A T E Q S A V Q A F V A K K G S G L Q K E L V R\)
 SSEED
SS SMD SFDVKAKAKAPATAAGKKAADADKSGKPA TRRAKDE DGKGETGSR \(\square K M K Q K Q P \square V D E C \square E A F K K Q L V H Q \| H Q F L S D\)

\footnotetext{
lupas_21
lupas_14
lupas_28
jnet
conf
sol25
sol5
sol0
jhmm
jpssm
}
\begin{tabular}{|c|c|}
\hline UniRef90_C1MSF9 & \DKELLA 130 \\
\hline UniRef90-L1IFF1 & F L D L \\
\hline UniRef90-K8EH75 & WEEEM \\
\hline UniRef90-K3WMW6 & F V K E \\
\hline UniRef90-A0BV56 & LMQE \(\square\) \\
\hline UniRef90-UPI000350D478 & FVAA M \\
\hline UniRef90-TOPWJ1 & F S T D \\
\hline UniRef90-IOYQU4 & LHQLLKE \\
\hline UniRef90_UPI0003C27088 & Y I S ALK K EFTQ \\
\hline UniRef90-B7FQ81 & WVQDFNEQY \\
\hline UniRef90_V6LXA7 & Y A D E \\
\hline UniRef90-FOYED0 & F ERE \\
\hline UniRef90_D8UF34 & CVRELRE \\
\hline UniRef90-A0A024GQV2 & F V V E \\
\hline UniRef90-S4R8C3 & Y MSKVKSEFTQ \\
\hline UniRef90-M4B1D6 & ELS R L \(\quad\) GVFVVND \\
\hline UniRef90-A0CL58 & LMQEI \\
\hline UniRef90-M1VKB6 & FQAEALQ \\
\hline UniRef90-V6TRS1 & Y E E T M \\
\hline UniRef90-L1J9D3 & \\
\hline UniRef90_A4S1S3 & \(\square \mathrm{D}\) D L CERASK \\
\hline UniRef90_UPI000383F4F4 & \\
\hline UniRef90-17J5Z7 & \(Y \| N L L K\) \\
\hline UniRef90-17J5Z7 & Y 1 NLLK \\
\hline UniRef90-F4J8L7 & Y V E A M \\
\hline UniRef90-UPIO00328B7E2 & Y LK A L K M A F \\
\hline UniRef90_W5HH42 & \\
\hline UniRef90-X6MRG0 & F \\
\hline UniRef90-11J497 & \\
\hline UniRef90-L1IGN6 & lVEEL \\
\hline UniRef90-K0ST28 & FVVLFRES Y \\
\hline UniRef90-T0Q0B8 & F V K E \\
\hline UniRef90_UPI00035117DA & F V A A M \\
\hline UniRef90_W7KAT9 & F Q E L L K H \\
\hline UniRef90-Q22R57 & \\
\hline UniRef90-O97244 & F 1 L K M R E \\
\hline UniRef90_O97244 & FILKMRE \\
\hline UniRef90-W4GPE6 & \(F \vee \mathrm{~A}\) E \\
\hline UniRef90_D8LX89 & \\
\hline UniRef90_FOWJ38 & FAAE \\
\hline UniRef90_B7G468 & WVR H F K T Y \\
\hline UniRef90-B5YLN9 & \\
\hline UniRef90_Q5CNU3 & \\
\hline UniRef90-K0T8Q0 & F VELIF N A E F \\
\hline UniRef90_A0A024TQK4 & \\
\hline UniRef90_U6MRL5 & F A Q \(\square\) R E S S \\
\hline UniRef90-G0QN30 & \\
\hline UniRef90-A8JIC5 & \\
\hline UniRef90-L1J1H6 & \\
\hline UniRef90-F2URP9 & \\
\hline UniRef90-A2EL63 & \\
\hline UniRef90-K7LCT5 & \\
\hline UniRef90_Q4YLL2 & \\
\hline UniRef90_U6L0Q0 & F LD D CK A \\
\hline UniRef90-U6L5Q4 & F A Q \(\square\) IRESSS \\
\hline UniRef90-M2XU39 & \\
\hline UniRef90-C1ED56 & F AKEL \\
\hline UniRef90_A3FPY6 & \\
\hline UniRef90-E1ZA29 & \\
\hline UniRef90-X6NL46 & F \\
\hline UniRef90_I7ISN6 & \\
\hline UniRef90-G4YPF5 & L IGVFAND \\
\hline UniRef90_C5Z990 & F \\
\hline UniRef90_B6AB53 & \\
\hline UniRef90-A7WQ61 & V R R M L E \\
\hline UniRef90_B6K996 & F S K \\
\hline lupas_21 & \\
\hline lupas_14 & \\
\hline lupas_28 & \\
\hline jnet & \\
\hline conf & 999999871599 \\
\hline sol25 & \(B \mathrm{~B}\) B B \\
\hline sol5 & B \\
\hline sol0 & B \\
\hline jhmm & - \\
\hline jpssm & \\
\hline
\end{tabular}```

