#### **Supporting Information**

# Structure of (*E*)-4-hydroxy-3-but-2-enyl 4-diphosphate reductase, the terminal enzyme of the non-mevalonate pathway

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#### Supporting methods and materials

Work under oxygen exclusion. All work requiring anaerobic conditions was carried out in a tent (Coy Laboratories, Inc., Grass Lake, USA) under an atmosphere of  $N_2 / H_2$ (95 % / 5 %). Residual O<sub>2</sub> inside the tent was removed with palladium catalysts. Buffers were degassed in an ultrasonic bath by passing a stream of helium through the liquid.

**Plasmid construction**. A synthetic gene encoding the LytB protein of *A. aeolicus* in the preferred codon usage of *E. coli* was produced by custom synthesis (Eurofins Medigenomix):

ccATGGTGGATATCATTATTGCCGAACATGCCGGTTTCTGTTTCGGTGTCAAAC GTGCAGTTAAGCTGGCGGAAGAGTCCCTGAAAGAGAGCCAAGGCAAAGTCT ATACCCTGGGCCCGATCATTCATAATCCGCAAGAAGTGAACCGCCTGAAAAA CCTGGGCGTGTTTCCATCTCAGGGTGAAGAATTTAAAGAAGGCGATACCGTC ATTATCCGCTCACATGGCATTCCGCCGGAAAAAGAAGAAGCGCTGCGCAAAA AAGGCCTGAAGGTGATTGACGCGACGTGCCCTTACGTGAAAGCGGTTCACGA AGCGGTGTGTCAACTGACGCGTGAAGGTTACTTTGTGGTCCTGGTCGGCGAG AAAAATCACCCGGAAGTGATCGGTACGCTGGGCTATCTGCGCGCGTGCAACG GCAAGGGTATTGTCGTTGAAACTCTGGAGGATATCGGTGAGGCACTGAAACA TGAACGTGTGGGTATCGTTGCGCAAACGACCCAGAATGAAGAATTTTTTAAG GAAGTGGTGGGTGAAATTGCCCTGTGGGTGAAAGAGGTTAAAGTTATCAATA CCATCTGTAACGCAACCTCGCTGCGCCAGGAATCTGTTAAAAAACTGGCCCC AGAGGTTGACGTCATGATTATTATTGGTGGCAAGAACAGTGGCAACACCCCGC CGTCTGTATTACATCTCAAAAGAACTGAATCCGAATACTTATCACATTGAAAC TGCCGAGGAGCTtCAGCCGGAATGGTTCCGCGGCGTGAAGCGTGTTGGCATTT CGGCAGGTGCGTCCACCCCTGATTGGATCATCGAACAGGTCAAAAGCCGTAT CCAGGAAATCTGCGAGGGTCAGCTGGTCAGCAGTagatct

The synthetic gene was cloned into the pQE60 vector (Qiagen) issuing a T5 promoter/lac operator element, using Nco I and Bgl II restriction sites. After this construct proved to be unstable in *E. coli* cells (presumably due to leaky expression), the gene was re-cloned into the tetracycline inducible pASK-IBA33-plus vector (IBA, Göttingen, Germany). The

coding sequence was amplified by polymerase chain reaction (PCR) using the oligonucleotides Aaeo\_LytBsynth\_pASK\_FP (5'-ATG GTA GGT CTC AAA TGG TGG ATA TCA TTA TTG CCG AAC ATG-3') and Aaeo\_LytBsynth\_pASK\_RP (5'-ATG GTA GGT CTC AGC GCT GCT GAC CAG CTG ACC CTC GC-3'). The PCR product was first ligated in the pCR2.1-TOPO-vector (Invitrogen) and then sub-cloned into pASK-IBA33-plus (IBA, Göttingen, Germany) using BsaI restriction sites, in-frame with the vector-derived C-terminal His<sub>6</sub> stretch. The resulting plasmid (pASK-AaeoLytB) provided stringent repression and was stably propagated in *E. coli* cells.

**Protein purification and Fe/S cluster reconstitution.** *E. coli* TOP 10 cells (Invitrogen) were transformed with pASK-AaeoLytB and grown in LB broth supplemented with 150  $\mu$ g ml<sup>-1</sup> ampicillin and 300  $\mu$ M FeCl<sub>3</sub> at 37 °C until an OD<sub>600</sub> of 0.6. Induction was achieved with 200  $\mu$ g l<sup>-1</sup> anhydrotetracycline for 15 h at 30 °C. The cells were harvested by centrifugation (17700 g, 15 min, 4 °C) and stored at -30 °C until use. All subsequent purification steps were carried out under oxygen exclusion. The cell pellet (15 g) was resuspended in 200 ml 100 mM NaCl, 30 mM Tris-HCl (pH 7.5), 10 mM imidazole, and disintegrated by ultrasonic treatment at 0 °C. After centrifugation (75600 g, 25 min, 4 °C) the supernatant was filtered through a 0.22  $\mu$ m filter (Millipore). Using a Pharmacia FPLC device equipped with a Waters 996 Photodiode Array Detector and a Waters 474 Scanning Fluorescence Detector, the His<sub>6</sub>-LytB fusion protein was loaded on a TALON superflow immobilized cobalt column (50 ml bed volume; BD Clonetech, Heidelberg, Germany) at a flow rate of 10 ml min<sup>-1</sup>. After two washing steps with 10 mM and 20 mM imidazole, respectively, each 15 min, the protein was eluted with 150 mM imidazole. The

LvtB peak fraction was subjected to in vitro reconstitution of the Fe/S cluster, basically as described<sup>1</sup>. The protein solution was first adjusted to 1.5 mM Na<sub>2</sub>S, 1.4 mM cysteine and 3.5 mM dithiothreitol (DTT). Then, FeCl<sub>3</sub> was added from a 150 mM stock solution to a concentration of 1.5 mM. The mixture was gently agitated, and the addition of  $FeCl_3$ repeated after 20 min and 40 min. In order to remove the precipitate that formed, the mixture was centrifuged (2440 g, 10 min) and the supernatant filtered through a 0.22 µm filter. The filtrate was diluted 1:10 with 30 mM Tris-HCl (pH 7.5) and loaded on a Source 15 Q strong anion exchange chromatography column (20 ml bed volume; Amersham) using a Waters 600S HPLC device. The column was developed with a linear gradient of 0 - 500 mM NaCl in 1h at a flow rate of 5 ml min<sup>-1</sup>. The homogeneity of the eluted LytB fractions was analyzed by size exclusion chromatography on a Superdex 200 analytical grade 10/300 column (Amersham) with 150 mM NaCl, 30 mM Tris-HCl (pH 7.5) as eluent, at a flow rate of 0.4 ml min<sup>-1</sup>. Fractions containing the LytB dimer with no apparent amounts of higher aggregates were combined and concentrated using Centricon ultrafiltration units with 30 kDa cut-off (Millipore). The concentration of the final LytB preparation was adjusted to 20 mg ml<sup>-1</sup> with 40 mM NaCl, 30 mM Tris-HCl (pH 7.5). Protein concentrations were determined with the BCA Protein Assay Kit (Pierce).

**Crystallization and data collection**. Crystallization was performed at a temperature of 18°C under exclusion of oxygen using the hanging drop vapor diffusion method. Initial screening experiments with the Hampton and Jena Bioscience crystallization kits resulted in a hit in drop C6 of the JBScreen Classic Nr. 4 kit. Best crystals grew by mixing 1.5  $\mu$ l enzyme solution and 1.5  $\mu$ l reservoir solution composed of 10 % (w/w) PEG 8000, 0.1 M

Tris-HCl (pH 8). Their space group is  $P2_1$  with unit cell parameters of 60.3 Å, 87.6 Å, 72.1 Å and 95.1°, best compatible with two monomers in the asymmetric unit (V<sub>M</sub>=2.3 Å<sup>3</sup>/Da). X-ray measurements were performed at the PXII beamline of the Swiss Light Source (Villigen, Switzerland). Native data were collected at 1.65 Å resolution. A peak, inflection and remote data set at 2.5 Å resolution was recorded at the iron edge to solve the phase problem by means of the multiple anomalous dispersion (MAD) method. Data processing was performed by using HKL<sup>2</sup> and XDS<sup>3</sup>.

Phase determination and refinement. The coordinates of the two [3Fe-4S] clusters in the asymmetric unit were calculated from the anomalous information of the peak data set using SHELXD<sup>4</sup>, and further refined using SHARP<sup>5</sup>. Phases were subsequently calculated with SHARP at 2.6 Å, resolution including the peak, inflection and remote data, and improved by solvent flattening assuming a solvent content of 52 %<sup>6</sup>. The quality of the electron density was sufficient to identify the individual iron atoms in the cluster, and to improve thereby the phases. Partial model building of the two molecules in the asymmetric unit allowed the definition of non-crystallographic symmetry operators. Twofold molecular averaging within DM resulted in a clearly interpretable electron density map of lobes A and  $B^7$  and the model could be built in automatically<sup>8</sup>. The more flexible and variable lobe C was modelled manually using O<sup>9</sup> and COOT<sup>10</sup>. Refinement was started with CNS<sup>11</sup> and brought to convergence with REFMAC5<sup>12</sup>. Except for residues 290 and 291 at the C-terminal end, the complete polypeptide chain was visible in the electron density. Moreover, a glycerol molecule was identified at the surface of lobe B at the same site in both monomers. The quality of the data was assessed by using the programs CNS and PROCHECK<sup>13</sup>. Figures were produced with PYMOL (DeLano Scientific).

**Ligand docking.** HMBPP was docked to LytB using the Glide  $program^{14}$ . The diphosphate was constrained to hydrogen bond to His42 in the imidazolium form, while the HMBPP 4-OH was modeled as the alkoxide, since this RO-group is formally analogous to the HO-group thought to bind to Fe(4) in aconitase. The fourth ion was positioned by using homology with the Fe<sub>4</sub>S<sub>4</sub> cluster in a HiPIP protein, PDB file 1HPI.

## Supporting x-ray crystallographic data

	Native		MAD					
Data set	high resolution	peak	Inflection	Remote				
Data collection								
Wavelength	0.9828	1.7374	1.7402	1.716				
Space group	$P2_1$	$P2_1$	$P2_1$	$P2_1$				
Resolution (Å)	30.0 - 1.65 (1.65-1.7)	30.0 - 2.1 (2.1-2.14)	30.0 - 2.5 (2.5-2.6)	30.0 - 2.8 (2.8-2.87)				
Cell axis (Å) (°)	60.4,87.8,72.4 95.1	60.3,87.6,72.1 95.1	60.4,87.5,72.1 95.0	60.0,87.0,71.7 94.9				
Completeness (%)	90.9 (58.3)	99.6 (97.9)	99.7 (100.0)	99.5 (99.8)				
$R_{sym}$ (%)	4.6 (34.5)	6.6 (37.5)	5.5 (20.7)	6.2 (18.9)				
I/sigI	15.3 (3.0)	13.2 (3.3)	19.1 (7.8)	17.0 (7.8)				
Redundancy	3.5(2.3)	3.6 (2.8)	3.6 (3.6)	3.5 (3.5)				
Refinement								
No. mon. a.u.	2							
Resolution (Å)	20.0 - 1.65							
No. reflections	77992							
$R_{working}, R_{free}$ (%)	19.4, 22.8							
No. atoms protein [3Fe-4S] clusters water + glycerol	4589 14 561							
B-factors protein [3Fe-4S] clusters Water+glycerol	35.1 28.2 44.2							
bond lengths (Å) bond angles (°)	0.017 1.45							

Table S1. Data acquisition and structure refinement statistics for LytB<sup>a</sup>

 $^a$  All data were measured under cryogenic conditions.  $R_{sym}$  and completeness for the last resolution shell are given in parentheses. 5% of the data were set aside for  $R_{free}$  calculation.

	MTOVIIANPRGE	
UniBef90 Q1B0B2	MOLKLANPRGE	
UniRef90 Q5H2D9	MYVLLANPRGF	CAGVDRAIEIVKRAIETLGAPIYVRHEV
UniRef90_UPI00006BB9BB	M K V <u>L L</u> A N P R G F	CAGVDRAIISIVERALDIFTAPIVVRHEV
UniRef90_UPI00006BECBC	MDIKLANPRGF	CAGVDRAIIDIVNRALEVHGAPLYVRHEV
UniRef90_Q9RBJ0	MELVLANPRGE	
UniRelau_Q607E5		
UniBef90_007Z38		
UniRef90 Q9KU44	MKILLANPRGF	CAGVDRAISIVERALELYQPPIYVRHEV
UniRef90_P44976	MKIILANPRGF	CAGVDRAISIVELALEIHGAPIYVRHEV
UniRef90_Q486R1	MEIILANPRGE	CAGVDRAISI VERALDLFGAPI VVRHEV
UniRef90_A1SZP0	MEULLANPRGE	
UniRef90_A1K4R4	FILLANPRGE	CAGVERALELVERALOREGAPLYVRHEV
UniRef90 Q2KXW8	ËV L L A Q P R G F	CĂĞÎVÎD RĂLÎ ÊLÎ VÊ RĂLÊÊLÎHĞĂ PÎ YVRHÊLÎ
UniRef90_A2RPU7	EILLAQPRGF	CAGVDRAIEIVERALAQFGAPIYVRHEI
UniRef90_Q2YCX3	MLKVLLANPRGF	CAGVDRAIEI VERALSVHGAPIYVRHEV
UniRef90_UPI00006BBDE0	MPRILLANPRGE	CAGVERALSIVEKALEAFGAPLIVVRHEV
UniReigu_Q4/BK8		
UniBef90_UPI0000686D26		
UniRef90 Q4J4S1	MHIKLANPRGF	CAGVDRAIEIVNRALEVFGPPIYVRHEV
UniRef90_Q0EYT0	TVTLAEPRGF	CAGVDRAIEIVERSLAVYGAPVYVRHEI
UniRef90_Q2G9E1	LIBL LIAAPBGE	A GIVID B ALLEL VE B ALLE B E G A PIVIVI B H ELL
UniRef90_OFO7P7		
UniRef90 Q4F0Y8	MOIYLANPRGE	
UniRef90 Q3SHS0	TVLLANPRGF	CAGVDRAIIAI VERALEKFGAPI VVRHEV
UniRef90_Q05N70	ELLMAQPRGF	CAGVDRAIINI VNEALTRFGPPI YVRHEI
UniRef90_A1GYN7	LTLLLASPRGF	CAGVDBALQI VELALEKYGPPVVVBHEL
UniRef90_A0KG42		
UniRef90_Q3JAD0	MKVTLAOPBGE	
UniRef90 Q3VYF6	MGRVLLAKPRGY	CAGVDRAVQTVEKALDLYGSPVYVRKQI
UniRef90_A0Z9J1	MDVLLANPRGF	CAGVDRAIDIVNRALEVFGRPIYVRHEV
UniRef90_Q9A345	LISL VLASPRGF	CAGVUBAUQU VEBAVEKEGAPVVVBHEU
UniRel90_01NC96	MTLILAPRGE	
UniRef90 Q6N3G0	FLAQPRGF	CAGVVRALEL VERALEKYGPVVVRHEL
UniRef90_Q0FIZ1	LTLYLAAPRGF	CAGVDRAIKIVEMALEKWGAPVYVRHEI
UniRef90_Q5NP61	MUKIILAQPRGF	
UniRef90_UPI0000697BA1		
UniRef90_Q0L9X1	BVILAKPBGY	
UniRef90_A2SJA8	DVLLAEPRGF	CAGVDRAIEIVERAIRKFGAPIYVRHEI
UniRef90_Q029M3	KIELLKPRGF	CAGVVRAIDVVKLALDLYGPVVVRKEI
UniRef90_A0LW20		
UniRef90_Q45085	KI I I A A P B G Y	
UniRef90_Q0BQX9	LRILLAGPRGF	CAĞVDRAI RVVEEALKRYĞAPVYVRHEI
UniRef90_Q1LFP0	MQVLLAQPRGF	CAGVVRAIEI VDRALVKHGAPVVVRHEI
UniRef90_A1WY36	MPKI HLANPRGE	CAGVDRAIAI VDRALAVYGSPVVVRHEV
UniRef90_A0NV95		CAGVDRAI AI VLKALEKFGPPI IVRIEI
UniRef90 Q0BYQ0	LTLRLAAPRGF	CAGVDRAIQIVEEALKKWGAPVYVRHEI
UniRef90_Q28V38	LTIYLAAPRGE	CAGVDRAIKI VEMALEKWGAPVFVRHEI
UniRef90_Q2DET9	VMKVVLAQPRGF	CAGVERALEI VERALAKEGPPI VVRHEU
UniRe190_0110W0		
UniRef90_Q0FD82	LELYLAAP RGF	CA GIV D RALI KI VE MALEK WGA PI FVRHEI
UniRef90_Q6AA89	K L Y L A A P R G Y	CAĞVDRAVVTVEKALEVYĞAPVYVRKQI
UniRef90_Q07J28		CAGVVRAUDTVERALSLYGAPVYVRHEI
		CAGVDRAVERALINTGAPVTVRRQI
UniRef90 A0JYU2	KVLLAAPRGY	CAĞVDRAVİAVEKALEHYĞPPVYVRKQI
UniRef90_Q7NS59	T I ML A N P R G F	CAGVDRAIALVERALELYGAPIYVRHEV
UniRef90_Q5PAE7	VEVILARPRGF	CAGVERAVRTLESVASRYTREVYAL HEI
UniRe190_Q49351	MOLLLANPRGE	CAGVDRAINIVEKIIQVYGIPIYVRHEL
UniRef90_Q47SQ8	RVLLAKPRGY	
UniRef90_Q92RG2	TIRLCGPRGF	CAGVDRAIQIVVLALKEFGAPVYVRHEI
UniRef90_Q1LSS7	MRILLANPRGF	CAGVERALNUVEKVIALYGPPLVVRHEL
UniRef90_084867	MRKIILCSPRGF	
UniRef90_UPI0000690A5D		
UniRef90_Q73FQ1	MEITLAEPRGF	CAGVKRAVDILADTLEKYERQVVVDHEI
UniRef90_A2VYT0	MRVILAEPRGF	CAGVVRAIDLVDRALEKYGAPVYVRHEI
UniRef90_Q7ULU1	MKIILAABBGE	CA GVN MAIL D SILDLITLQK F G P PVVVV H EI
UniRef90_Q0AlVII6		
UniRef90 Q3YRU3	VEVILANPRGF	
UniRef90_Q2GKW5	VEVLLAQPRGF	CAGVERAVALLDMVVDQYSKEVYVLHEI
UniRef90_Q0G170		CA GIVID B ALLQU V V LALK K Y G A P V Y V B H E I
UniRef90_Q/49Y8		
UniRef90_P0A5I3	VTVLLASPRSF	ĂĂĞÎVÊ RĂÎ ÊTÎVÎK RÛLDÛA ÊĞPÎVÎYÎVÎR KÖLÎ
UniRef90_Q83MR9	RVLLASPRGY	CAGVDRAVIAVEKALERHGPVVVRKO
UniRef90_Q9FBM1	RV LLAAPRGY	CA GIVID BAIVI AIVE KALE BY GA PIVIVIB HEI
OUIR6190_0F1000067EB50		

**Figure S1**: Full alignment of 224 LytB proteins obtained by using the JPRED3<sup>15</sup> program. The QUERY sequence (at the top of the output) is LytB from *Aquifex aeolicus*.

QUERY UniRef90_UP100006BEC83 UniRef90_Q0AAC9 UniRef90_Q1R0B2 UniRef90_Q5H2D9 UniRef90_UP100006BED80 UniRef90_Q9RJ0 UniRef90_Q9RJ0 UniRef90_Q1GY11 UniRef90_Q1GY11 UniRef90_Q1GY11 UniRef90_Q1GY11 UniRef90_Q1GY11 UniRef90_Q1A152P0 UniRef90_Q486R1 UniRef90_Q486R1 UniRef90_Q486R1 UniRef90_Q2KXW8 UniRef90_Q1A152P0 UniRef90_Q2KXW8 UniRef90_Q2KXW8 UniRef90_Q2KXW8 UniRef90_Q47K8 UniRef90_Q47K8 UniRef90_Q47K8 UniRef90_Q4FAF2 UniRef90_Q4FAF2 UniRef90_Q4S1 UniRef90_Q2C73 UniRef90_Q2C73 UniRef90_Q4S1 UniRef90_Q2C73 UniRef90_Q4S1 UniRef90_Q4S1 UniRef90_Q2C73 UniRef90_Q3SHS0 UniRef90_Q3SHS0 UniRef90_Q33AD0 UniRef90_Q33AD0 UniRef90_Q33AD0 UniRef90_Q3A35 UniRef90_Q13J33 UniRef90_Q1SD33 UniRef90_Q3VF6 UniRef90_Q4SQ2 UniRef90_Q3A35 UniRef90_Q4S02 UniRef90_Q5NC1 UniRef90_Q5NC2 UniRef90_Q5NC2 UniRef90_Q5NC3 UniRef90_Q5NC3 UniRef90_Q5NC4 UniRef90_Q5NC4 UniRef90_Q5NC4 UniRef90_Q5NC4 UniRef90_Q5NC4 UniRef90_Q5NC4 UniRef90_Q5NC4 UniRef90_Q5NC6 Uni	60       70       70         70       R S A H G V S Q A V         71       R S A H G V S Q A V         72       R S A H G V S Q A V         73       R G Q G V F V D D Q A V V F S A A H G V S Q A V         74       F S A H G V S Q A V         75       R S A H G V S Q A V         74       V F S A A H G V S Q A V         75       R G V F V D D Q A V V F F S A A H G V S Q A V         76       R G V F V U D D Q A V V F F S A A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         77       V F S A H G V S Q A V         78       A H G V S Q A V         79       V D D D N S V F V D D D N S V F F S A H G V S Q A V         79       V F S A H G V S Q A V
UniRef90_A0LW20           UniRef90_QALU85           UniRef90_QBCX9           UniRef90_QBCX9           UniRef90_QIEP0           UniRef90_A1UY36           UniRef90_A1UY36           UniRef90_Q21LPP0           UniRef90_Q20SX9           UniRef90_Q20SX9           UniRef90_Q20SX00           UniRef90_Q20SX38           UniRef90_Q20SX38           UniRef90_Q20SX38           UniRef90_Q20SX38           UniRef90_Q07J28           UniRef90_Q07J28           UniRef90_Q07J28           UniRef90_Q07J28           UniRef90_Q07J28           UniRef90_Q07J28           UniRef90_Q2W9A7           UniRef90_Q2W9A7           UniRef90_Q2W9A7           UniRef90_Q2PAE7           UniRef90_Q493S1           UniRef90_Q493S1           UniRef90_Q2RG2           UniR	V V V K T F V V V F S A H G V S Y S V V V F S A H G V S Y S V V V F S A H G V S Y S V V V V F S A H G V S Y S V V V V V S S A H G V S Y S V V V V F S A H G V S Y S V V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V S S A H G V S Y S Y V V V V V V V V V V V V S S A H G V S Y S Y V V V V V S S A H G V S Y S Y V V V V V V V V V V V V V V V

QUERY	90 100 110 120 E E ALBKK GLKVIDAT CPYVKAVHEAVCOLT BEGYEVVLVG
UniRef90_UPI00006BEC83	R K Q A D S R G L K V F D A T C P L V T K V H L E V A R Y S A E G R E C V L I G
UniRef90_QUAAC9	Q Q E A E R R GL RI F D A T C PL V T K V H MEV L R Y A R E G R E V V L T G
UniRef90_Q5H2D9	R Q E A E R R G L K V F D A T C P L V T K V H F E V A R H C R A G R D V V L I G
UniRef90_UPI00006BB9BB	RAEAKRRAL RVFDATOPLVTKVHIEVARYSREGMECILIG
UniRef90_Q9RBJ0	Q Q E A E H R GL K V F D A T C P L V T K V H I E V T K Y A R E G T E AI L I G
UniRef90_Q607E5	Q E E A R E R GL QVF D A T CPL VT KVHI EVH QH A S E G R EII VFI G
UniRef90_Q07Z38	R K E A K N R GL K V F D A T C P L V T K V H L Q V T R A S R K G L E C I L I G
UniRef90_Q9KU44	R Q E A K E R S L T V F D A T <mark>C</mark> P L V T K V H M E V A R A S R K H M E V V L I G
UniRef90_Q486R1	R Q E A K T R A L K V F D A T C P L V T K V H M Q V A R A S R K D L E C I L I G
UniRef90_A1SZP0	RAEAKRRDLKI FDAT <mark>C</mark> PLVTKVHMEVTRASRRGQE <mark>CILI</mark> G
UniRef90_A1K4R4	R E E A D K R GL R V F D A T C P L V T K V H I E V G R M R E Q G R E L V M I G
UniRef90_Q2KXW8	RAEAEBGU RVEDAT <mark>C</mark> PL VTKVHLEVARMRAAGREU I MUG
UniRef90 Q2YCX3	R R E A E A G Q F K V F D A T C P L V T K V H I E V A K M R D Q G R E I I M I G
UniRef90_UPI00006BBDE0	RAEAAQRGL RVF DAT CPL VT KVHI EVQKHAREGREVILIG
UniRef90_Q5FAF2	Q Q E A A E R G F R V F D A T C P L V T K V H K E V A R L D A Q D C E I I M I G
UniRef90_UPI0000686D26	PAEAERRNMVI V DAT <mark>C</mark> PLVSKVHRQAERQLEKGRHLIFIG
UniRef90_Q0EYT0	R É S A D R R GL RIVI D A T <mark>C</mark> P L V T K V H L E L L R H Y Q R G D Q V I L I G
UniRef90_Q2G9E1	P Q T A T E R G L D WL D A T C P L V S K V H R Q A E R Q V E A G R H L L F V G B E A A K O B N L K L E D A T C P L V T K V H M E V A B Y N B L G O E C L L L G
UniRef90_Q5QZR7	R Q E A K D R G L R V F D A T C P L V T K V H M E V T R A S R K G H E C I L I G
UniRef90_Q4FQY8	E D E A E R R D L T V F D A T C P L V T K V H I E V A K F A Q D G M D A V L I G
UniRef90_Q05N70	RVDAEERGLQVYDAT <mark>C</mark> PLVTKVHLEVIK <u>MC</u> KEGFTVLMIG
UniRef90_A1GYN7	PADAQSRELFYLDAT <mark>C</mark> PLVSKVHVEAERLYSRGHELLLIG BEMAKSBALKVEDATCPLVTKVHMEVHBASBKGSEAVLIG
UniRef90_Q13J33	ERDAEARGLDVLDATCPLVTKVHVQGRQYVGAGRTLILIG
UniRef90_Q3JAD0	VETAKKNDLQVIDATCPLVTKVHLQAKKYYRQGDELIIIG HEEASSBOUBTUDATCPLVTKVHSEABBEAKEDUDUUUG
UniRef90_A0Z9J1	Q E G A R Q R G L R V F D A T C P L V T K V H V E V A A F S D N G R E C V L I G
UniRef90_Q9A345	PAEAKARQMIYLDATCPLVSKVHVEAQKHYDAGREIVLIG
UniRef90_Q1NC96	P E R A Q E R G L D Y L D A T C P L V S K V H R Q A E R Q V A S G R H L L F I G
UniRef90_Q6N3G0 UniRef90_Q0FIZ1	E E E A A A R DL PVL N A T C PL V T K V H N Q G K R Y T S K G R T L I L I G P A E A A Q R E MVYV D A T C PL V S K V H L E A A R H H E N GL Q MI MI G
UniRef90_Q5NP61	QKEAEERGLPVVDATCPLVNKVHAQGRRYLSHGRTLILIG
UniRef90_UPI000069/BA1 UniRef90_UPI000066BBF9	P A E A A R R N ML YV D A T C PL V I K V HL E A L R F A K Q H Y I I FL I G P A E A A R R N ML YV D A T C PL V S K V HV E A Q R H H K A G Q E I L L I G
UniRef90_Q0L9X1	HEQARSRSLKALDATCPLVTKVHQEAKRFAAEDYDLLLIG
UniRef90_A2SJA8 UniRef90_Q029M3	R A Q A K E R N L EII I D A T C P L V T K V H L E A V R F A R D G F S I V L I G
UniRef90_A0LW20	Y E Q A B Q B B L K T L D A T C P L V T K V H Q E A B B F A E Q G L E L L L G
UniRef90_Q4JU85 UniRef90_Q8FQP0	K E E A A A K NL Q A I D A A C PL V T K V H N E V K R F D K Q G Y QI T L T G
UniRef90_Q0BQX9	PADAEARDL ŠYLDAT CPLVSKVHREAERHYAĞĞLHULMUĞ
UniRef90_Q1LFP0 UniRef90_A1WY36	A D E A E R R GL QVF D A T C PL V T K V H K EVR G H A R A G R H V V L I G
UniRef90_A0LD71	Q A E G E R R P L H L L D A T <mark>C</mark> P L V D K V H R E A E R L D H D H Y Q V L L I G
UniRef90_Q0BYQ0	P A E A G R R N MI Y V D A T C P L V S K V H V E A E R H F N A A R E L V L I G
UniRef90_Q28V38	P Q A A A A R Q MVYV D A T C PL V S K V H L E A Q R H S D N G Q M V M I G
UniRef90_UPI0000E87B84	KTDAKNRKLIAIDATCPLVTKVHREVNKMYGENYHIIMIG
UniRef90_Q1IQW0	REASKKRGLRVIDATCPLVTKVHVEALKFAKEGHSLVLIG
UniRef90_Q6AA89	K K E A T D R GL R T I D A T C P L V T K V H H E A K R F A N Q D T Q I L L I G
UniRef90_Q07J28	PEEAHRRKFFSLDATCPLVTKVHREAALHFKRGREILLIG
UniRef90_Q2W9A7	PĂ Ĕ Ă Ď Ř Ř ĠĽ T ŚĽ Ď Ă T <mark>Ċ</mark> PĽ VT KV H Ř Ě Ă ĚĽ H H A MG Ř ŎI Ť MI Ġ
UniRef90_A0JYU2 UniRef90_07NS59	VQSAEDRGLRTIDATCPLVTKVHREAVRFAKDDFDILLIG BAFAFALGITVEDATCPIVTKVHVEVKBMNKAGMELIMIG
UniRef90_Q5PAE7	K E E S R R K G L T V V D A T C P L V T K V H L E I Q R Y D K S G Y Q V I L V G
UniRef90_Q493S1 UniRef90_P62623	QEQSKIIKNLIIIDAT <mark>C</mark> PLVTKVHKEVSRANRNDMEVILIG BNEAKSBDITVEDATCPIVTKVHMEVABASBBGEESILIG
UniRef90_Q47SQ8	H K E A A E R K L R T I D A A C P L V T K V H K E A Q R F A A E D L D I L I G
UniRef90_Q92RG2 UniRef90_Q1LSS7	PADADERNI FYLDAT CPLVSKVHKQAMRHHRMGRHVVLTG RKEVQSRNI TI FDATCPLVTKVHMEVARASHKGI ETI LIG
UniRef90_084867	REEAEERGLIAIDATCGLVTKVHSAVKMYAKKGYHIILIG
UniRef90_A1TE06 UniRef90_UPI0000690A5D	REEAARHERIEDAT CPLVIKVHNEAKRFARDDYDILLVG REEAEHRGLKVFDAT CPLVIKVHLEVVRYSRDGMECVLIG
UniRef90_Q73FQ1	E D E A K R K G I Q V I D A T C P L V N K V H K E A K R Y É N S G K E L I L I G
UniRef90_Q7ULU1	R K A A Q A R K L H AL D A T C P L V T K V H L E A L K Y A K A G Y T I I L I G
UniRef90_Q0AMI6	PAEAKRBEM YVDAT CPLVSKVHVEAEBHFANGDEI ILIG
UniRef90_Q3YRU3	E H L A Q L R N L EI I N A T C P L V T K V H K E V Q S Y D R E G Y Q I I L I G
UniRef90_Q2GKW5	RAAAQERGLVVIDATCPLVTKVHLELHRYNKNGYKUILIG
UniRef90_Q749Y8	LE DAVR RQLEV VDATCPEVKKAQEHVKRLSHDGYTVVVVG
UniRef90_Q4JN42	T D L A K K K N L R I E D A T C P L V T K V H F E L H K Y A R E N V D V I L I G
UniRef90_Q83MR9	VH SANERGLQVIDATCPLVTKVHREVIRFSKAGYFILLIG
UniRef90_Q9FBM1	HEEAERGKLATIDAT CPLVTKVHKEAV RFANDDYDULLIG
	ΓΑΕΑΕΝΚΟΙ <u>Γ</u> ΙΙΟΑΙ <u>Γ</u> ΓΙ V δ ΚΙV Η Ε Σ Ο Κ Η Η Κ Ν G <mark>Ο</mark> Η ΙV L L I G

QUERY	130 EKNHPEVIGTLGYLRACNGKGIVVETLEDIGEALKHERVG HEGHPEVIGTLGYDHSGGDIVVETLEDIGEALKHERVG	
UniRef90_Q0AAC9	HAGHPEVEGT IGQYEGAGGDI YLVEKPEDVQAVRDPDSLA	
UniRef90_Q5H2D9	HAGHPEVEGTMGQWERGPGTI YLVEDLEQVADVRQPENLA	
UniRef90_UPI00006BECBC	H R G H P E V E G T M G Q Y D S K K G G I YL V E T A E D V I N V K D P S N L F H R G H P E V E G T M G Q Y D R S N G G I Y L V E A E A D AL Q V K H P D R L A	
UniRef90_Q9RBJ0 UniRef90_Q607E5	H E G H P E V E G T M G Q Y D K S G G H I Y L V E D E A D V E A L A H P E K L A H A G H P E V E G T M G Q Y D N P A G G II Y L V E S P E D V E Q V K N P D N L A	
UniRef90_Q1GYJ1	H K G H P E V E G T M G Q A E G G M Y L V E S P E D V A E V K D P S Q L A	
UniRef90_Q9KU44	HAGHPEVEGTMGQYASDTGGMYLVEKPEDVAKVKDPSNLH	
UniRef90_Q486R1	HAGHPEVEGTMGQYSSDSAGI YLVESPEDVASVKNPEKLY	
UniRef90_A1SZP0 UniRef90_P58677	H Q G H P E V V G T M G Q Y D N P Q G G I YL T E S P E D I K E V K N P N S L <mark>G</mark> H K G H P E V E G T M G Q A D D G <u>ML</u> L V E S V D D V A R V K D P A R L A	
UniRef90_A1K4R4 UniRef90_Q2KXW8	H K G H P E V E G T M G Q V K D H K G H P E V E G T L G Q A Q S G M Y L V E T V A D V E G L I D P D N L A	
UniRef90_A2RPU7	H A G H P E V E G T M G Q T E A G M H L V E T V E D V Q Q V A D P A L L A	
UniRef90_UPI00006BBDE0	H D G H P E V A G T M G Q Y E G K G G A M Y L V Q G P E D V E T V R N A D D L A	
UniRef90_Q5FAF2	HKGHAEVEGTMGQL APGKMLLVETVGDVAEVRNPDKLA	
UniRef90_UPI0000686D26 UniRef90_Q4J4S1	H Q G H P E V I G I M G Q V E P G Q M I L V E NI E D V D K L P F E E E L A H Q G H P E V V G T M G Q Y D T A N G G I Y L V E D E E D V A Q V R N P V S L A	
UniRef90_Q0EYT0 UniRef90_Q2G9E1	H A G H P E V E G T M G Q A P A G A V L L V A T P A D V E Q V K D P A R L A H K G H P E V I G T M G Q V P E G T I S L V E T V E D V A G L D F P E P L A	
UniRef90_UPI0000DAE860 UniRef90_050ZB7	H A D H P E V E G S L G H Y D N P R G G I Y L V E N L D D I A N V K N P S L L S H A G H P E V E G T M G O Y N N D E G G I Y L V E S P E D V A E V K D P G N I H	
UniRef90_Q4FQY8	HAGHPEVEGTMGRFNHHGGRUHLVENESDVEAVQDAEBLA	
UniRef90_Q05N70	HAGHPEVEGTMGQVKE GVFLIEKVSDVDTLTFPEKIA	
UniRef90_A1GYN7 UniRef90_A0KG42	HAGHPEVIGIMGQLPE GSVRLIEIAADAEQPQDPEKVA HAGHPEVIGTMGQYENREGGMYLVETPEDVAKVKNPDDL <mark>O</mark>	
UniRef90_Q13J33 UniRef90_Q3JAD0	H A G H P E V E G T V G Q I P G K V L L V Q S E A E V E N L D L P T P L A H A G H P E V E G T R G R V K G T V Y V L D S V A E V E N V K D P E H I A	
UniRef90_Q3VYF6	HEGHEEVVGTTGQAPDRIHLVDGPEDAAAVK VRDPKRVA	
UniRef90_Q9A345	HAGHPEVIGTMGQUPE GAVILLEDUKDAAEPKDAANVA	
UniRef90_Q1NC96	HKGHPEVUGTFGQVPD GSMTLIETVEDVERFIDPDNLA	
UniRef90_Q0FIZ1	HAGHPETLGTMGQUPE GPVLLVETVEDVAHVRDPEQLA	
UniRef90_Q5NP61 UniRef90_UPI0000697BA1	H A G H P E II E G T L G Q II D G P V H L V G S A E Q V D D II P S D T P V A H E G H D E V I G T M G E A P E A II L V E S A E D V P N V A D G S K L A	
UniRef90_UPI000066BBF9 UniRef90_Q0L9X1	HAGHPEVIGT MGQLPD GVMHLIET VEDAET FKDPSNVA HEGHEEVIGT AGEAPEHLOLVDGPODAEBVT VBDPNKVV	
UniRef90_A2SJA8	H K G H P E V E G T M G Q L S E G L Y L V E D V D D V A Q L R R P D R L A	
UniRef90_A0LW20	HANHEEVVGTTGEAPSS UTLVDGPEEAEHVKDPSRVA	
UniRef90_Q8FQP0	HEGHEEVEGTMGHSLDRTHLVDGIESUPGLPALADEPNLI	
UniRef90_Q0BQX9 UniRef90_Q1LFP0	HAGHPEVVIGTMGQLP PGAMTLVQNAEEAEAVQDPHKLA HAGHPEVEGTMGQLP GKVLLVQNEADVADLPNDAPVA	
UniRef90_A1WY36 UniRef90_A0LD71	H A G H P E  V E G T M G Q A P E G Q G G [L  Y L V Q N Q E E A A Q V R R P D D L A H A G H P E  V E G T M G Q L Q Q A R M K L I S H P D D V A Q L R N P Q K V A	
UniRef90_A0NV95 UniRef90_Q0BYQ0	HAGHPEVIGTMGQLPE GTVSLIETEDDARAFTPDRPLA HAGHPEVIGTMGOLPE GSVALIETVEDABOPRDHANLA	
UniRef90_Q28V38	H K G H P E TI G T M G Q L P D G E V L L VE TVE DVA T VE VR D P S R L A	
UniRef90_UPI0000E87B84	HT GHPEVEGTMGQLEKNDASLHLIENKEDVSNLTDPNRVS	
UniRef90_Q0FD82	HEGHPETLGTMGQLPK GEVLLVETPEDVTKITPREKLA	
UniRef90_Q6AA89 UniRef90_Q07J28	HAGHEEVEGIIGEAPEN IIILVQIPADVDALDRDRPVA HSHHPEVVGTLGQLPD GAVSLIETAADAYQPKDPDNLA	
UniRef90_UPI00006BC6F9 UniRef90_Q2W9A7	HEGHEEVEGTMGHAPERT ILVNSPADVPNVENTDNLV HAGHPEVIGTIGQVPE GTVLLVGTPEQAETVRDPSMLA	
UniRef90_A0JYU2 UniRef90_Q7NS59	H D G H E E V E G T A G E A P E HI QI I N G P H E V D K V R D P E K V I H A G H P E V E G T M G O V D A GI Y L V O T V D D V A T L B N E D O L S	
UniRef90_Q5PAE7	H K G H R E V E G S M G Q V S N P V V L V Q N V Q D V Q K I P S A A K L A	
UniRef90_P62623	HAGHPEVEGTMGQYSNPEGGMYLVESPDDVWKVKNEEKLS	
UniRef90_Q92RG2	HAGHPEVEGTSGHAPE GAVSLVETVEDADMPPDADNLG	
UniRef90_Q1LSS7 UniRef90_O84867	K R K HVEIIIGURGEAPD QITVVENLAEVEALPFSDPLF	
UniRef90_A1TE06 UniRef90_UPI0000690A5D	H E G H E E V V G T A G E A P D H V Q V V D N P D A V D K V R D P N K V I H D G H P E V E G T M G Q Y D Y S G G H I Y L V E S P E D V A K V K N P E K L A	
UniRef90_Q73FQ1 UniRef90_A2VYT0	HENHPEVKGLRGRV NNPLTLVQTLQDVYKVKDPDNLS HAGHPEVVGTLDOAPDAT VLVESKADVAALPEAADAP	
UniRef90_Q7ULU1	HEGHDEVLIGT MGEAPEA . IVLVEDEA DVD RLEFET QLA	
UniRef90_Q6MC97	HHNHVELLIGTAGEAPDVTTTVLSVEDVKNLNFSDKLF	
UniRef90_Q2GKW5	HKGHREVEGSMGQ LQSEVLLVQNVDDVYNLPAETKLA	
UniRef90_Q0G170 UniRef90_Q749Y8	H A G H P E V V G T L G Q L P E G T V T L I E T E E D V S E P A D P S A L G D A D H P E V Q G L V S Y A E G P V H V V G S G E E A A R L P N M K K V G	
UniRef90_Q4JN42 UniRef90_P0A5I3	H N G H P EVE G T M G Q Y K S K E G R I Y L V E N K S D V E T L T K N E K I S H A G H E E T E G T L G V A P R S T L L V Q T P A D V A A L N L P E O L S	
UniRef90_Q83MR9 UniBef90_Q9EBM1	HSGHEEVEGTSGHAPD HEGHEEVIGTSGEAPDHIOUVDGPEDVAKVE	
UniRef90_UPI000067EB50	HEGHPEVIGT MGQLPD GAMTLIETEEDAHRFAAERPVA	

		170	100 100	
OLIEBY				
UniBef90 UPI00006BEC83	YVT ÕTT	<b>SMDDTAB</b> V		
UniRef90 Q0AAC9	FVTQTT	LSMDDTANV	DALRERFPNI PRKNI	DI CYATONRO
UniRef90_Q1R0B2	FVTQTT	LSMDDTSRV	DALRAKFPQLPRKD	Ο Ι <mark>Ο</mark> ΥΑΤΩΝΒΩ
UniRef90_Q5H2D9	YTTQTT	LSVDDTMGI	EALRARYPAMPRHD	DI CYATQNRQ
UniRef90_UPI00006BB9BB	YCSQTT			
UniRef90_UPI00006BECBC				
UniBef90_Q9RB50		ISIDDIGAV		
UniRef90 Q1GYJ1	ŶŶŤQŤŤ	LSIDDAAAI	SALKAKFPEI PRSD	SI CYATQNRQ
UniRef90_Q07Z38	FVTQTT	LSVDDTLDI	TALQKRFPSIPRKD	DI CYATQNRQ
UniRef90_Q9KU44	YVSQTT	LSVDETADV	DELRRVFPKIPRKD	DI CYATQNRQ
UniRef90_P44976				
UniRef90_A1SZP0	FSSOTT			
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UniRef90_A1K4R4	YVTQTT	LSVDDAAAI	/ T A L R E R F P N I P K K D I	DI CYATQNRQ
UniRef90_Q2KXW8	FVTQTT		SRALKARFPGI PKKS	
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UniBef90_UPI00006BBDE0	Ý Ý Ś Ŏ Ť Ť	LSMDDAAOV		
UniRef90 Q47BK8	FVTQTT	LSVDDATVV	DALKORFPEIPKKD	I CYATQNRQ
UniRef90_Q5FAF2	YVSQTT	LSVDETKDI	AALNARFPNIPHKE	DI CYATTNRQ
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UniRel90_Q4J451				
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UniRef90_UPI0000DAE860	YVTQTT	LSLDDTQVI	KALKARFPKI PKKE	DI CYATQNRQ
UniRef90_Q5QZR7	YMSQTT	LSVDDTADV		
UniKet90_Q4FQY8	VVI QTT			
UniRef90_005N70	FVTOTT	LSVDETKEL		
UniRef90 A1GYN7	FVTÕTT	LSVDDTAAI	ALLRRRFPALPRKE	I CYATTNRQ
UniRef90_A0KG42	FVTQTT	LSVDETSDV	DALRAHFPKIPRKD	DI CYATQNRQ
UniRef90_Q13J33	YVTQTT		DALLSRFTDI VGPD	
UniRef90_Q3JAD0	FUSOTT			
UniRef90_A0Z9J1	YVTÕŤŤ	LSVDDTÄRV		
UniRef90_Q9A345	FLTQTT	LSVDDTADM	ALLRERFPGIPHKE	DI CYATTNRQ
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UniRef90_Q1NC96			VAL SKKELDIEGDD	
UniRef90_Q0FIZ1	FVTÖTT			
UniRef90_Q5NP61	FITQTT	LSVDDTRSV	AALRKKFTDVIGPD	ICYATQNRQ
UniRef90_UPI0000697BA1	YLTQTT	LSVDDANRI	GALKQRFPQVPPKE	O VATQNRQ
UniRef90_UPI000066BBF9				
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UniRef90 Q029M3	YLTQTT	LSLDETRDI	/ D R L K Q R F P M I P H S Q I	I CYATENRQ
UniRef90_A0LW20	WLSQTT	LSVDETLQT	/ E V L R R R F P Q L P P S D	O I CYATQNRQ
UniRef90_Q4JU85	WLSQII			
UniRef90_Q0FQF0	FITOTT			
UniRef90 Q1LFP0	Y I TQTT	LSVDDTRNI	AALGARFTNLVGPS	ICYATQNRQ
UniRef90_A1WY36	FVTQTT	LSVDDAAGL	I E A L Q R R F P A I P R K D	DI CYATQNRQ
UniRef90_A0LD/1	VIIIQII			
UniRef90_Q0BYQ0	FILTOTT			
UniRef90 Q28V38	FVTQTT	LSVDDTEE	EALTTRFPĂI PHKEI	I CYATTNRQ
UniRef90_Q2DET9	YITQTT	LSVDDTRGI	A A L VE R F P G V G P D	O I CYATQNRQ
UniRef90_UPI0000E87B84	Y V S Q I I			
UniRef90_Q0ED82	VIII OTT			
UniRef90 Q6AA89	WLŚQTT	LSVDETVET	/ D R I R D L H P Q L P P S D I	O I CYATQNRQ
UniRef90_Q07J28	FVTQTT		ISIL RKRFPNI PHKE	
UniKet90_UP100006BC6F9	WLSQTT VITOTT			
UniRef90 A0JYU2	WLSÕTT	LSVDETMET		
UniRef90_Q7NS59	YVŠQTT	LSVDETRDI	AALKARFPNIPKKD	I CYATQNRQ
UniRef90_Q5PAE7	YVTQTT		SALKLRFPRI VGPD	
UniRef90_Q493S1	EMTOTT			
UniRef90 Q47SQ8	WESOTT	LSVDETNAT		
UniRef90_Q92RG2	FVTQTT	LSVDDTAGV	KRLHERFPNLPAAD	S I CYATTNRQ
UniRef90_Q1LSS7	FUTQTT	FSVDKSSAI		
UniRef90_084867	WISOTT			
UniRef90 UPI0000690A5D	FVTQTT	LSMDDASVV	DSLREHFPLIPKKD	ÓI CYATONRO
UniRef90_Q73FQ1	YVTQTT	LSIDDTRDI	AALKLRFPGITGPD	DI CYATQNRQ
UniRef90_A2VYT0	Ϋ́́Ι II Q I I		YALKORYPGI VGPN	
UniRef90_Q/ULU1	FUTOT			
UniRef90 Q6MC97	Ý ľ H ã H	LSLDDVKEI	QALIVKYPHVEPSS	Ś I CYATTNRQ
UniRef90_Q3YRU3	YVTQTT	LSVDDTKEI	NKLKQKFPNIKGPDI	DI CYATQNRQ
UniRef90_Q2GKW5	Y V T Q T T			
UniRef90_0749V8				
UniRef90_Q4JN42	Ý V T Q T T	ĨŠVDDTQDI	DALKGRYPHIPKKSI	DICYATQNRQ
UniRef90_P0A5I3	YLTQTT	LALDETADV	DALRARFPTLPPSE	O I CYATTNRQ
UniRef90_Q83MR9	WLSQTT			
UniRef90_UPI00067EB50	YVTOTT	LSVDDTAR		
Figure S1 (contin				

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UniRef90_Q7ULU1	AVKELAEVOTVVGSKNSSNSNRLLEDLGTAAEQGRAAAL
UniRef90_Q0AMI6	MALRETTDLTDLVVVGSPNSSNSVRLVEVQRAGARAAAL
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UniRef90_Q3YRU3	MALRETTDLTDLVVVGSPNSSNSNRLKELAKSTRGFAAAAL
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UniRef90_Q2GKW5	DAVKKLAAPETDLFVVGGGFNSANTKRLVEVAKRFGARAML
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UniRef90_Q4JN42	EAVKKLAAPETDLFVVVGSONSSNSNRLKEIAQRSGTPAYL
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UniRef90_Q83MR9	EAVKKLAAPLSDLVVVGSANSSNSNSRLVEVAKGAGSTPAYL
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UniRef90_Q/ULU1 UniRef90_Q0AMI6	V D G P Q D L A V D Q F S D D D R V L I T A G A S A P E S V V Q S T I D WL K E V S <mark>C</mark> A D D V D W S S L G S I R T V G I T A G A S A P F D I V F G I I F A F R
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UniRef90_UPI000067EB50	I E D E T RII D WP A VE S PREI AL T A GASAPETIV VQ NV VD AFRE

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UniRei90 (AJU85K G Y G F DK G Y G F DK G F DV E E U DUniRei90 (AUD71)QAEQAY C D U NiRei90 (AUD71)Y G C F DC E P C P P E D V D NiRei90 (AUD71)C C F D D NiRei90 (AUD71)C C F D D NiRei90 (AUD71)UniRei90 UniRei90 (AUD71)C D D NiRei90 (AUD71)C C F P P D D D NiRei90 (AUD71)C C F P P F C D NiRei90 (AUD71)UniRei90 UniRei90 (AUD70) (AUD70	UniRef90_0029103	BGEDTVEE
UniRef90Q8FQP0Y G F D D V E EUniRef90Q1LFP0L G P VE VS TUniRef90Q1LFP0L G P VE VS TUniRef90AlWY36WG G E P P E EUniRef90AlWY36WG G E P P E EUniRef90Q0BYQ0R F E VT VE TUniRef90Q2BV38RUniRef90Q2DET9F G A E FUniRef90Q1DW00K G Y T N L K EUniRef90Q1DW00K G Y T N L K EUniRef90Q0FD82RUniRef90Q0FD82RUniRef90Q07J28Y Y D L K VE TUniRef90Q07J28Y Y D L K VE TUniRef90Q07J28Y Y G Y G T VE EUniRef90Q0J12W0Y G Y G T VE EUniRef90Q07J28Y D VT Q VT EUniRef90Q03S1L S T D H V VUniRef90Q47SQ8Y G G G E A IUniRef90Q1ES7L G V D V E EUniRef90Q1ES7H G Y D V Q EUniRef90Q1AS7L G V N E VUniRef90Q1AS467L G V N E VUniRef90Q1AS467L G V N E VUniRef90Q1AS457L G V N E <t< td=""><td>UniRef90 Q4JU85</td><td>KGYGEVEE</td></t<>	UniRef90 Q4JU85	KGYGEVEE
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	UniRef90 Q8FQP0	YGFDDVEE
UniRei90_A1UPY06LG P V E V S TUniRei90_A1WY36WG C P P E EUniRei90_A0LD71WG C P P E EUniRei90_A0LD71R F D V K V E TUniRei90_Q28V38RUniRei90_Q28V38RUniRei90_Q28V38RUniRei90_Q28V38RUniRei90_Q11QW0K G Y T N L K EUniRei90_Q6AA89K G Y T N L K EUniRei90_Q6AA89Y Y D L K V E TUniRei90_Q6AA89K G Y G D V S SUniRei90_Q7J28Y Y D L K V E TUniRei90_Q707J28Y G Y G T V E EUniRei90_Q299A7RUniRei90_Q299A7S T D H V YUniRei90_Q493S1L G G G E A IUniRei90_Q493S1L G G G E A IUniRei90_Q493S1L G Y D V Y QUniRei90_Q493S1L G Y D V Y QUniRei90_Q493S1L P D L S I EUniRei90_Q1LSS7H G Y D V Y QUniRei90_A1TE06H G Y D V Y QUniRei90_Q73FQ1Y T P L E I E TUniRei90_Q23YRU3UniRei90_Q3YRU3UniRei90_Q3YRU3UniRei90_Q3YRU3UniRei90_Q4JN42N G AUniRei90_Q4JN42N G AUniRei90_Q43N3Y A S T T V V EUniRei90_Q43N42N G AUniRei90_Q43N43Y A S T T V EUniRei90_Q43N43N G AUniRei90_Q43N43N G AUniRei90_Q43N43N G A E D VUniRei90_Q43N43N G A E D VUniRei90_Q43N43N G A E D VUniRei90_Q43N43N G A C T K V E SUniRei90_Q43N43N G A C T K V E SUniRei90_Q43N43 </td <td>UniRef90_Q0BQX9</td> <td>RYHLDIEE</td>	UniRef90_Q0BQX9	RYHLDIEE
UniRei90_A0LD71WG $\Box E P P E E$ UniRei90_A0LD71R F D $\bigvee K \lor E T$ UniRei90_C2BYQ0R F E $\bigvee T \lor E T$ UniRei90_Q2BV20R F E $\bigvee T \lor E T$ UniRei90_Q2BV20R F E $\bigvee T \lor E T$ UniRei90_Q2BV20R F E $\lor T \lor E T$ UniRei90_Q2DET9F G A $\models E \lor T \lor E T$ UniRei90_Q1QD000E87B84F N K $\models E \bot T E$ UniRei90_Q1QD000E87B84K G Y T N $\models K E$ UniRei90_Q1QD000E87B84K G Y T N $\models K E$ UniRei90_Q1Q000E87B84K G Y T N $\models K E$ UniRei90_Q07J28Y Y D $\models K \lor E T$ UniRei90_Q07J28Y Y D $\models K \lor E T$ UniRei90_Q2W9A7K G Y G T $\lor E E$ UniRei90_Q493S1L S T D H $\lor V$ UniRei90_Q47SQ8Y G F T D $\lor E E$ UniRei90_Q47SQ8Y G F T D $\lor E E$ UniRei90_Q47SQ8Y G T $\lor E E$ UniRei90_Q73FQ1Y T P $\models E   E T$ UniRei90_Q73FQ1Y T P $\models E   E T$ UniRei90_Q37RU3UniRei90_Q37RU3UniRei90_Q37RU3UniRei90_Q37RU3UniRei90_Q45X13Y A S $\_T \lor \lor E$ UniRei90_Q45X13Y A S $\_T \lor \lor E$ UniRei90_Q45X142N G AUniRei90_Q45X13Y A S $\_T \lor \lor E$ UniRei90_Q45X142N G AUniRei90_Q45X142N G A <td>UniRef90_Q1LFP0</td> <td>LGPVEVST</td>	UniRef90_Q1LFP0	LGPVEVST
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UniRei90_028V38       R       A       F       G       A       F       G       A       F       G       A       F       F       G       A       F       F       G       A       F       F       G       A       F       F       G       A       F       F       G       A       F       F       N       K       E       L       T       E       L       T       E       L       T       E       L       T       E       L       T       E       L       T       E       L       T       E       L       T       E       L       D       L       D       L       C       D       C       C       D       C       C       D       C       D       C       D	UniBef90_Q0BYQ0	BEEVITVET
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$\begin{array}{llllllllllllllllllllllllllllllllllll$	UniRef90_Q2DET9	FGALEL
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UniRe190_UP100006BC6F9       A G Y G D V S S         UniRe190_Q2W9A7       R         UniRe190_A0JYU2       Y G Y G T V E E         UniRe190_A0JYU2       Y G Y G T V E         UniRe190_Q479S9       F D V T Q V T E         UniRe190_Q493S1       L S T D H V V         UniRe190_Q493S1       L G G G E A I         UniRe190_Q47SQ8       Y G F T D V E E         UniRe190_Q1LSS7       UniRe190_Q1LSS7         UniRe190_Q1LSS7       L P D L S I E         UniRe190_Q1LSS7       L P D L S I E         UniRe190_Q3FQ1       Y T P L E V Q U         UniRe190_Q3FQ1       V T P L E E         UniRe190_Q3FQ1       V T P L E E T         UniRe190_Q3FQ1       V T P L E V         UniRe190_Q3FQ1       V T P L E V         UniRe190_Q3FQ1       N G A         UniRe190_Q3FQ1       Y T Y V E         UniRe190_Q3FQ1       Y A S T T V V E         UniRe190_Q4JN42       N G A         UniRe190_Q4SMP3       A G Y T K V E S <tr< td=""><td>UniBef90_007.128</td><td>YYDEKVET</td></tr<>	UniBef90_007.128	YYDEKVET
UniRef90_Q2W9A7       R         UniRef90_Q3VJU2       Y G Y G T V E E         UniRef90_Q7NS59       F D V T Q V T E         UniRef90_Q5PAE7       L S T D H V V         UniRef90_P62623       L G G G E Al         UniRef90_Q47SQ8       Y G F T D V E E         UniRef90_Q47SQ8       Y G F T D V E E         UniRef90_Q47SQ8       Y G F T D V E E         UniRef90_Q47SQ8       Y G F T D V E E         UniRef90_Q1LSS7       UniRef90_Q1LSS7         UniRef90_Q1LSS7       L P D L S I E         UniRef90_Q73FQ1       L T P D E I E T         UniRef90_Q73FQ1       Y T P E E I E T         UniRef90_Q73FQ1       N F D A S V         UniRef90_Q3YRU3       UniRef90_Q3YRU3         UniRef90_Q3YRU3       UniRef90_Q3YRU3         UniRef90_Q4JN42       N G A         UniRef90_Q4JN42       N G A         UniRef90_Q4JN42       N G A         UniRef90_Q83MR9       A G Y T K V E S         UniRef90_Q9FBM1       R G F E D V         UniRef90_UP1000067EB50       R M S V E V E E	UniRef90 UPI00006BC6F9	AGYGDVSS
$\begin{array}{llllllllllllllllllllllllllllllllllll$	UniRef90_Q2W9A7	R
UniRe190_QTNS59       F D\VT Q\VT E         UniRe190_Q5PAE7       L S T D H V V         UniRe190_Q493S1       L S T D H V V         UniRe190_Q493S1       L S T D H V V         UniRe190_Q47SQ8       Y G F T D V E E         UniRe190_Q47SQ8       Y G F T D V E E         UniRe190_Q47SQ8       Y A D T V E E N         UniRe190_Q47SQ8       E G G E All         UniRe190_Q47SQ8       E D V V Q         UniRe190_Q47SQ8       E G G E S P K E         UniRe190_Q73FQ1       Y T P L E F T         UniRe190_Q7UL01       N F D A S V         UniRe190_Q3YRU3       UniRe190_Q3YRU3         UniRe190_Q4JN42       N G A         UniRe190_Q4JN42       N G A S T T V V E         UniRe190_Q4JN42       N G A S T K V E S         UniRe190_Q4STB9       A G Y T K V E S         UniRe190_Q4STB9       A G Y T K V E S         UniRe190_Q4STB9       A G Y T K V E S         UniRe190_Q4STB9       A G Y T K V E S <td< td=""><td>UniRef90_A0JYU2</td><td>YGYGTVEE</td></td<>	UniRef90_A0JYU2	YGYGTVEE
UniRe190_Q493S1       L S T D H V V         UniRe190_Q493S1       L S T D H V V         UniRe190_Q47SQ8       Y G F T D V E E         UniRe190_Q32RG2       R Y A D T V E E         UniRe190_Q32RG2       R Y A D T V E E         UniRe190_Q47SQ8       Y G F T D V E E         UniRe190_Q32RG2       R Y A D T V E E         UniRe190_Q32RG2       R Y A D T V E E         UniRe190_Q32RG2       H G Y D V V Q         UniRe190_Q32RG2       H G Y D V V Q         UniRe190_Q1ESD       E G G E S P K E         UniRe190_Q73FQ1       Y T P L E F T         UniRe190_Q0AMI6       N F D A S V         UniRe190_Q3YRU3       UniRe190_Q3YRU3         UniRe190_Q3YRU3       UniRe190_Q3YRU3         UniRe190_Q3YRU3       UniRe190_Q4JN42         UniRe190_Q4JN42       N G A         UniRe190_Q4JN42       N G A         UniRe190_Q4JN42       N G A         UniRe190_Q68MR9       A G Y T K V E S         UniRe190_Q9FBM1       R G F E D V         UniRe190_UPI000067EB50       R M S V E V E E	UniRef90_Q/NS59	FDVIQVIE
UniRei90_P62623       L G G G E AI         UniRei90_Q47SQ8       Y G F T D V E E         UniRei90_Q1LSS7       T V E E N         UniRei90_Q1LSS7       P D L S I E         UniRei90_Q1LSS7       H G Y D V V Q         UniRei90_Q1LSS7       H G Y D V V Q         UniRei90_Q73FQ1       Y T P L E F T         UniRei90_Q73FQ1       Y T P L E F T         UniRei90_Q73FQ1       Y T P L E F T         UniRei90_Q7ULU1       N F D A S V         UniRei90_Q3YRU3       UniRei90_Q3YRU3         UniRei90_Q4JN42       N G A         UniRei90_Q4JN42       N G A         UniRei90_Q4JN42       N G A         UniRei90_Q9FBM1       R G F E D V         UniRei90_Q9FBM1       R G F E D V         UniRei90_UPI000067EB50       R M S V E V E E	UniRelau_QSPAE/	
UniRef90_047SQ8       Y G F T D V E E         UniRef90_0292RG2       R Y A D T V E E N         UniRef90_01LSS7       P D L S E         UniRef90_042RG2       H G Y D V V Q         UniRef90_041ES7       P D L S E         UniRef90_041ES7       F Q D V V Q         UniRef90_073FQ1       F D A S V         UniRef90_073FQ1       Y T P E E E T         UniRef90_072UU1       N F D A S V         UniRef90_072UU1       N F D A S V         UniRef90_03YRU3       UniRef90_03YRU3         UniRef90_074JN42       N G A         UniRef90_074JN42       N G A         UniRef90_083MR9       A G Y T K V E S         UniRef90_083MR9       R G F E D V         UniRef90_UPI000067EB50       R M S V E V E E	UniRef90_P62623	LGGGEAL
UniRef90_Q92RG2       R Y A D T V E E N         UniRef90_Q82RG2       R Y A D T V E E N         UniRef90_Q82RG2       F P D L S F         UniRef90_Q84867       F P D L S F         UniRef90_Q84867       H G Y D V VQ         UniRef90_Q73FQ1       Y T P L E F T         UniRef90_Q701U1       N F D A S V         UniRef90_Q7ULU1       N F D A S V         UniRef90_Q3YRU3       UniRef90_Q3YRU3         UniRef90_Q3YRU3       UniRef90_Q3YRU3         UniRef90_Q74PY8       F         UniRef90_Q4JN42       N G A         UniRef90_Q83MR9       A G Y T K V E S         UniRef90_Q9FBM1       R G F E D V         UniRef90_Q9FBM1       R M S V E V E E	UniRef90 Q47SQ8	YGFTDVEE
UniRef90_Q1LSS7         UniRef90_O1LSS7         UniRef90_A1TE06         H G Y D   V   Q         UniRef90_A1TE06         H G Y D   V   Q         UniRef90_A1TE06         H G Y D   V   Q         UniRef90_A1TE06         UniRef90_A1TE06         H G Y D   V   Q         UniRef90_A2VYT0         Y T P LE   E T         UniRef90_Q0AMI6         UniRef90_OGKWC57         UniRef90_Q0G170         UniRef90_Q0G170         UniRef90_Q0G170         UniRef90_Q4JN42         UniRef90_Q4JN42         UniRef90_Q83MR9         A G Y T K V E S         UniRef90_Q9FBM1         R G F E D V         UniRef90_UPI000067EB50	UniRef90_Q92RG2	RYADTVEEN
UniRe190_048867       L P DL SIE         UniRe190_11E06       H G Y D V VQ         UniRe190_073FQ1       E G G E S P K E         UniRe190_073FQ1       Y T P L E F T         UniRe190_074U1       N F D A S V         UniRe190_074U1       N F D A S V         UniRe190_024KW5       GV N E V         UniRe190_026KW5       UniRe190_026KW5         UniRe190_026170       UniRe190_0749Y8         UniRe190_04JN42       N G A         UniRe190_04JN42       N G A         UniRe190_04JN43       Y A S T V V E         UniRe190_083MR9       A G Y T K V E S         UniRe190_09FBM1       R G F E D V         UniRe190_UPI000067EB50       R M S V E V E E	UniRef90_Q1LSS7	
UniRef90_ATIE06       H G Y D V V Q         UniRef90_Q73FQ1       E G G E S P K E         UniRef90_Q73FQ1       Y T P E E E T         UniRef90_Q72LU1       Y T P E E E T         UniRef90_Q72LU1       N F D A S V         UniRef90_Q72LV1       N F D A S V         UniRef90_Q72GKW5       UniRef90_Q749Y8         UniRef90_Q749Y8       F         UniRef90_Q74JN42       N G A         UniRef90_Q83MR9       A G Y T K V E S         UniRef90_Q9FBM1       R G F E D V         UniRef90_UPI000067EB50       R M S V E V E E	UniRef90_084867	LIPDLSLE
UniRei90_073FQ1       Y T P LE   E T         UniRei90_072UT0       Y T P LE   E T         UniRei90_027UL01       N F D A S V         UniRei90_00AMB       UniRei90_00AMB         UniRei90_00AMB       UniRei90_023YRU3         UniRei90_023YRU3       UniRei90_023KW5         UniRei90_0749Y8       F         UniRei90_0749Y8       F         UniRei90_0749Y8       F         UniRei90_0749Y8       A S T V VE         UniRei90_083MR9       A G Y T K VES         UniRei90_083MR9       A G Y T K VE S         UniRei90_09FBM1       R G F E D V         UniRei90_UPI000067EB50       R M S VE VE E	Unikeigu_ATTEU6	H G Y D V V Q
UniRef90_A2VYT0       Y T P LE   E T         UniRef90_Q0AUL01       N F D A S V         UniRef90_Q0AMI6       UniRef90_Q0AMI6         UniRef90_Q0AMI6       LGVN E V         UniRef90_Q3YRU3       UniRef90_Q3YRU3         UniRef90_Q0G170       UniRef90_Q749Y8         UniRef90_Q4JN42       N G A         UniRef90_Q4JN42       N G A         UniRef90_Q4SMR9       A G Y T K V E S         UniRef90_Q9FBM1       R G F E D V         UniRef90_UPI000067EB50       R M S V E V E E	UniRef90_073F01	LUGESFRE
UniRef90_Q7ULU1 N F D A S V UniRef90_Q6MC97 G G N E V UniRef90_Q3YRU3 UniRef90_Q2GKW5 UniRef90_Q0G170 UniRef90_Q0G170 UniRef90_Q4JN42 N G A UniRef90_Q4JN42 N G A UniRef90_Q4JN42 N G A UniRef90_Q4JN42 N G A UniRef90_Q83MR9 A G Y T K V E S UniRef90_Q9FBM1 R G F E D V UniRef90_Q9FBM1 R G F E D V UniRef90_UPI000067EB50 R M S V E V E E	UniRef90 A2VYT0	YTPLEFET
UniRef90_Q0AMI6 UniRef90_Q3YRU3 UniRef90_Q3YRU3 UniRef90_Q2GKW5 UniRef90_Q2GKW5 UniRef90_Q749Y8 UniRef90_Q4JN42 UniRef90_Q4JN42 UniRef90_Q83MR9 A G Y T K V E S UniRef90_Q9FBM1 R G F E D V UniRef90_Q9FBM1 R G F E D V UniRef90_Q9FBM1 R G F E D V	UniRef90_Q7ULU1	NFDASV
UniRe190_06MC97 L_G_V_N E_V UniRe190_02GXW5 UniRe190_02GKW5 UniRe190_0749Y8 F UniRe190_0749Y8 F UniRe190_0749Y8 A G Y UniRe190_074513 Y A S_T_T_V_VE UniRe190_083MR9 A G Y T_K_V E S UniRe190_09FBM1 R G F E_D_V UniRe190_UP1000067EB50 R M S_VE_VE E	UniRef90_Q0AMI6	
Onimetry U3YH03           UniRe190_Q2GKW5           UniRe190_Q0G170           UniRe190_Q749Y8           F           UniRe190_Q4JN42           N G A           UniRe190_P0A513           Y A S T K V E           UniRe190_Q9FBM1           R G F E D V           UniRe190_Q9FBM1           R G F E D V           UniRe190_Q9FBM1           N G N S VE V E E	UniRef90_Q6MC97	LGVNEV
OfficeISD_QCGINV0           UniRe190_QOG170           UniRe190_QC4JN42         N G A	UniKet90_Q3YKU3	
UniRef90_Q749Y8 F UniRef90_Q4JN42 N G A UniRef90_Q4JN42 N G A UniRef90_Q83MR9 A G Y T K V E UniRef90_Q9FBM1 R G F E D V UniRef90_Q9FBM1 R G F E D V UniRef90_UPI000067EB50 R M S V E V E E	UniBef90_00G170	
UniRef90_Q4JN42 N G A UniRef90_P0A513 Y A S T V V E UniRef90_Q83MR9 A G Y T K V E S UniRef90_Q9FBM1 R G F E D V UniRef90_UPI000067EB50 R M S V E V E E	UniRef90 Q749Y8	F
UniRef90_P0A5I3         Y A S I T V V E           UniRef90_Q83MR9         A G Y T K V E S           UniRef90_Q9FBM1         R G F E D V           UniRef90_UPI000067EB50         R M S V E V E E	UniRef90 Q4JN42	N G A
UniRef90_Q83MR9 A G Y T K V E S UniRef90_Q9FBM1 R G F E D V UniRef90_UPI000067EB50 R M S V E V E E	UniRef90_P0A5I3	YASITVVE
UNIRE190_Q9FBM1 R G F E D V UNIRE190_UPI000067EB50 R M S V E V E E	UniRef90_Q83MR9	AGYTKVES
	UniKet90_Q9FBM1	KGFEDV BMSVEVEE

UniRef90_A1SFK8	1 10 20 30 40 V L L A A P R G Y C A GV D R A V I T V E K A L D L Y G A P V Y V R K G L T L R L G S P R G F C A GV D R A V I V L L A L K K Y G A P V Y V R H E L	J
UniRef90_Q3J5X0 UniRef90_A1AXS1	LT L Y L A A P R G F C A G V D R A I KI V E M A L E K W G A P V Y V R H E I MK V L L A N P R G F C A G V D R A I E I V E R A L KL H G A P V Y V R H E V	
UniRef90_Q5FFL5 UniRef90_Q2S9U2	VEVILATPRGFCAGVSRAIEIVKLAIEYYKKTIYVLHEI MKIKLANPRGFCAGVDRAIELVNRALDVFGAPIYVRHEV	
UniRef90_Q6NI36 UniRef90_Q5L5D3	R V L V A A P R G Y C A G V D R A V E T V E K A L E K Y G A P V Y V R K E I M R R V I L S N P R G F C A G V V R A I QV V E S A L E K W G A P I Y V K H E I	
UniRef90_P57247 UniRef90_A3DDC0	MNI I L T N P R G F C A G V K R A I L I V E N A L K V Y K K T I Y I R H E L MEI I V A K S A G F C F G V S N A V K T V N N L L E N Q K E P I Y T Y G P I	
UniRef90_Q26TT7 UniRef90_Q2DMA0	R G F C A G V V R A L D A V E Q A L K L Y G A P V Y V R H E I M K V L L A K Q A G F C F G V K R A T Q M A F E A A D K G G K T Y T L G P I	
UniRef90_Q2GDX3 UniRef90_A0XAV2	MQLFVACPRGFCAGVERALETVELALRRYEKKIFVYHEL RGFCAGVDRALRIVELTIEKYGPPVYVRHEL	
UniRef90_A0WA76 UniRef90_Q3CHQ0	MKVILAKRAGFCFGVKRATQMAFEAAGK DQKTFTLGPI MKILIAEYAGFCFGVKRAIETAYQEIEKGGKKIYTLGEI	
UniRef90_A1HTW2 UniRef90_Q6AL80	MKIILAEYRGFCYGVKRAIETAYACIGO GPVYTLGPI LEIRLASPRGFCAGVERAIETVKLALKEHGEPVYVLHEI	
UniRef90_Q8D2R2 UniRef90_Q1EXF2	MNIELANPRGFCAGVDRAINIVKNAIELYGPPIYVYNEV MKVVVADHSGFCFGVEKAIDTAFKELEYKDSKIYTLGPL	
UniRef90_Q0VSD8 UniRef90_A1A2C9	MQI RLANPRGFCAGVDRAI DI VNRALEVFGPPI HVRHEV RIVLADPRGFCAGVDRAI LTVRTI LKSADPPV YVRRQI	
UniRef90_Q8RA76 UniRef90_UPI0000382801	MEILIAEHAGFCFGVKRAIEIAYEELNKQDTRLYTLGEI BVLLAAPBGYCAGVDBAVVAVEKALEHYGAPVYVBKEI	
UniRef90_Q9Z6P2 UniRef90_Q4FPE1	MRKLILCNPRGFCSGVVRALOVVEVALEKWGAPIYVKHEI IKILLSAPRGFCAGVERALEIVKKSITKYGAPVYVRHEI	
UniRef90_Q4MZ17 UniRef90_Q11KC7	K V Y L V K P R G F C E G V S R A I R T V E E A L R V F G P P I Y V K H E I L T I R L C G P R G F C A G V D R A I O L V V L A L K K Y G P P V Y V R H E I	
UniRef90_Q3A3D3 UniRef90_Q8F3I3	MKIILADSAGFCFGVKRATNLAFDAAEQFEHICSLGPI KIYLANPRGFCAGVKYAISYVEQVQANSEEQIYVRKEI	
UniRef90_Q9RSG0 UniRef90_Q3AAU0	RIYLAK PRĞF <mark>Ç</mark> AĞVVMALIQAVEKĂĂVRĖDKPVTVYHSI MELIVAQNAGFCFGVKRALIETAQKAAENNN PVYSLGPL	
UniRef90_Q1K0U3 UniRef90_A0Q0L7	MEIILAKSAGFCFGVKRAVNMAYRAAEN SEHI <mark>C</mark> SLGPL MKKILLAEKAGFCFGVKRAVDTAINFSNEYKKPIYTLGPL	
UniRef90_A0RQC4 UniRef90_Q1Q304	MKIELAKSYGFCFGVKRALKIAENSKNAS LKVFVAKTAGFCMGVRRAMDILLDAAKNIGAKVYTDGPL	
UniRef90_Q2AHH9 UniRef90_Q3C6J0	VLEVYVADESGFCFGVKRAINLAMEAAGNNKEPVYTLGPL MELVIAKHAGFCFGVEKALNTAFKEIKNNQKNIYTLGPL	
UniRef90_Q187C6 UniRef90_Q30S81	MNIKIAKNAGFCFGVKRAMKMAWDEVEKNDSGLYALGPL MKIELAESYGFCFGVKRAIKIAED <u>NKNS</u> SYGPL	
UniRef90_Q2RYD1 UniRef90_Q2LUA5	L	
UniRef90_UPI0000DB0174 UniRef90_A1IAW9	M K II E L A S S Y G F C F G V K R A II K L A E N A G D A A T L G P L M K V S II A K T S G F C M G V R R A V D M V L D A S N R Y T E P II Y T F G P L	
UniRef90_Q9BJX6 UniRef90_Q8K9Z4	I YIL I N P R G F C K G V S R A I E T V E E C L K L F K P P I Y V K H K I MNI I L A K P R G F C A G V K R A L L I V E N A L K I Y K K T I Y V Q H E L	
UniRef90_UPI00006709F4 UniRef90_P54473	M D V I KI S P R G Y C A G V D A M V I A K N A S K S L P R P L Y I L G M I	
UniRef90_Q4HN50 UniRef90_Q7M8Y6	METELAKSYGFCFGVKRATKKAEQTKDAA MKVKLADKHGFCFGVKRATKLAE SHQGGTUTLGPL	
UniRef90_Q2D3W2 UniRef90_Q1NXJ4	MRIKLASKAGFOYGVRRAIDLALSTAKEKAGNIYTLGPL MKVILAKHAGFCMGVRRAVETTLELVEKSRGPIATFGPL	
UniRef90_Q9KD37 UniRef90_Q895G2	MNV V KITSPRGY GV GV VIDA MV LLAR GAAGNED FPT YTL G MI MST LLAK K SGF GY GV KRAVDT CLK K QNYPDKI YTL GPL	
UniRef90_Q8DK29	VTI RLAEAFGFGWGVERAVALAYETRTHFPERI WITNEI	
UniRef90_P65186	MEIKMAKDYGFCFGVKRAIQIAEKNQNSL FGSL	
UniRef90_007078	MELVIANSAGFCFGVNNAVKIVFELATKSDHKIYTLGPI	
UniRef90_Q3W867 UniRef90_Q55643	R L L L A E P R A F C A G V E R A I E V V E R A L E I H G A P V Y V R K Q I V T I L L A E A F G F C W G V E R A V A M A Y E T B O H F G D B L WI T N E I	
UniRef90_Q1KYM5 UniRef90_Q5KX24	V T V KLAEAYGFCWGVERAVQIAYEARKOFEERIWMTNEI MEVIKITPRGYCYGVVDAMVIARNAALDPSRPIYILGMI	
UniRef90_Q81LU9 UniRef90_A0YN97	MKI VKI SPRGYCYGVVDAMVIARNAATSLPRPIYILGMI VTI RLAEAFGFCWGVERAVAMAYETRQHFPERIWITNEI	
UniRef90_Q7V4T7 UniRef90_Q0AXA2	L Q V K L A E A F G F C WG V E R A V A M A Y E T R R H Y S E R I WI T N E I MY V L L A R N A G F C A G V R K A V K L A E E A A E E P D K WF S L G P L	
UniRef90_Q7VDS2 UniRef90_A2TGW4	L	
UniRef90_A0LJ95 UniRef90_A0ZJU9	MKIV L VA K T A G F C K G V R D A L E V T L G A L K N Q G E N I C T F G P L VTI I R L A Q A F G F C WG V E R A V A M A Y E T R Q H F P E R I WI T N E I	
UniRef90_Q41FR8 UniRef90_Q191X6	ML V K K II S P R G Y C Y G V V D A M K L A Q Q A A D N L P R P L H L G M I MK I I R A E K A G F C F G V K R A L D M A E R T V Q S S S T A S L G P L	
UniRef90_Q4C612 UniRef90_Q9X781	VIIIKLAESFGFCWGVERAVAAYEIGOHFOEKIWIINEI RVLLAEPRGYCAGVDRAVETVERSLRKYGPPVYVRHEI	
UniRef90_Q7VJV5 UniRef90_Q5NGK4	MKVKFAKKYGFCFGVKRAII RIAER MKILLIANPRGFCAGVSRAVETVEKVLEVEKSPVYVRHEV	
UniRef90_Q2RI07 UniRef90_Q72G65	L R V Y L A R P R G F C A G V V M A U E A V E R WA E K E K G E L V Y H E L	
UniRef90_A2BUP5		
UniRef90_Q2WJ12	MŠKVILAKNSGFCFGVQRAVNEALROKEHNSKLYTLGPL	
UniRef90_Q10WA8	VTEKLAKTFGFCWGVERSVAMAYEARKOFESKI WI SYEL	
UniRef90_Q2XTB5 UniRef90_P58676	VTVKLAESYĞFCWĞVERAVOTAYEARKTQORĞFWITNEL MELLIKUSPRGYCYĞVIDAMVIAKNASIDPNRFIHILIĞMI	
UniRef90_Q6W3K2 UniRef90_Q3ZYL6	M R I ELASSYGFCYGVKRAINIAEKH ENSITYGPL MKVECASNIGFCFGVRRAINILEKTASERGG VETLGAL	

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UniRef90_A1SFK8	V	HNK	U H	VA	DL	ES	R	GI	E V	E	ELL	DE	VP	EG	QT	v v	F S	AH	GVSP	EV
UniRef90_A1URX2 UniRef90_Q3J5X0	v	HNF	FV	VE	GL	Q C B D	M		FV	F	E   L   I	D E L D F		EG	BP	V V	FS		GVPK	SV
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UniRef90_Q5FFL5 UniRef90_Q2S9U2	v	HNK	FV	VE	GL	K T B T	R (		FV		K V I	DQ. DFÍ	A Q V P	DG			FS			SIV
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UniRef90_Q3CHQ0	1	HNF	QV	IS	D L	SK	K	GV	NV	E	E 🖵	DK(	LT	EG	DK	LI	I R	SH	GVSK	KL
UniRef90_Q6AL80	v	HNF	HV	iD	NL	RC	G	GV	FV	Ê	ÈLI	EQ		AG		Č i	FS	A	GVSL	
UniRef90_Q8D2R2	V		YV	VN	SL	KK		GI	FV	K	K		V P	EK	SI	LI	FS	AH	GVSK	SI
UniRef90_Q0VSD8	v	HNF	ŶŶŶ	VE	DL	RC	R	GV	FV	Ē	EL	ΗΕ	VP	DD	AI	_v i	FS	A	GVSK	AV
UniRef90_A1A2C9	V		HV	VE	DL		QQ		FV	Q	ĒĿ			DG	I P	L V	FS	AH	GVSP	AV
UniRef90_UPI0000382801	v	нŇк	FV	νĒ	ΤĽ	SE	R	Ğİ	FV	D	ĒŢ	DE	VP	EG	AR	V V	FS	Ă	GVSP	AV
UniRef90_Q9Z6P2	V	HNF	HV		AL	RA	K	GI	FV	E			VP	EG			Y S		GIPPK	SV
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UniRef90_Q8F3I3	V	HNF	RV	VE	DM	KK	NO	GL	FI	N	DLI	DE	AP	NG	AT	VI	FS	AH	GVSP	SV
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UniRef90_Q187C6 UniRef90_Q30S81		HNK	QA	VA	K Y B L	EE	K	GL VG	ΚV		E [[_]  D H I	DTL KS	Γ F A	NH	EN	AV		SH	G V P E	NE
UniRef90_Q2RYD1	v	HNK	ΗŪ	v D	SL	RA	R	GV	FΥ	]D	Ē	<u>D</u> Ĕ[	VP	H G	ĀV	ΤĺΫ	ES	À H	GVSK	AV
UniRef90_Q2LUA5 UniRef90_UPI0000DB0174			Q I I E E	V E	RL	R E A N	FI	GI NV	Г К Т	L		NE		Q N D E	KK	AI				SE
UniRef90_A1IAW9	I		QV			AE	KH	KI	SV	M	ΕĦ		EQ	GN	G	VL	L R	AH	GVPP	RT
UniRef90_Q8K9Z4	Ň	HNC	ŶŸV	ΪĒ	ΤĽ	RC	ĸ	Ğν	FV	Ē	БĽ	S D	ľ P	NN	sL	νν	FS	Â	GVS K	KI
UniRef90_UPI00006709F4 UniRef90_P54473	V	HNK	HV	V T T D	AF	EE	R C	G I G I	F V L T	E	E T I D G S	DEL SN	V P Q V	E G	GT	VI	FS		GVAP GVSP	EV
UniRef90_Q4HN50	Ì	HNN	EE	ĪŢ	RL	KN	YI	NV	ΚŢ	Ň	PŪ	S E	LS	Ť E	QK	A	ÎR	Ţŀ	GITK	QD
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UniRef90_A3ERP9 UniRef90_Q8DK29	V	HNT	H V S V	V K	DL BL	S E B C	ROM		K S	K		V K S GÍ	E V V R	D K	GT		I S	AF	GASV	
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UniRef90_A2TGW4	Ì	HNF	TV	NQ	RL	E D	M	D V	KN	U	P	<u>D</u> N		KG	<u>D</u> V	V V	LP	AF	GAAV	PE
UniRef90_A0ZJU9	i	HNF	S V	NQ	RM	QE	MI	NI	GF	ľ		SV	VE	TG	ιDV			AF	GASV	
UniRef90_Q41FR8	V		HV	TR	EF	ER	MO	GV	LT	V	DG	PE	ŢĹ	KE	GT	VI	ET	A	GISP	AV
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UniRef90_Q7V329	Ì	HNF	SV	ND	HĒ	RK	M	NV	Κİ	K	DF	SL	VS	D G	DV	VI	Ē	AF	GATV	QE
UniRef90_Q7NG74	ł	HNF	LV	NQ	HL	RA	M	GI	RF	ղէ ի	DEI	DE	VS	EK	DV	VI	ĽP	AF	GATV	QE
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UniRef90_Q013S6			ŦV	NE	RL	SD	MO	GV	NF		EE	SE[	V Q G K	SG		VI		AF	GASV	H E D F
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Underego ALAXS1 Underego CANAS2 Underego	UniRef90_Q3J5X0	Y L T Q T T L S I D D T A A I V A A L R E R F P A I P R K E D I	CYATTNRQ
Umrenego Gastago Umrenego Gas	UniRef90_A1AXS1	Y TT QT TL SI D D T K HI V D Y L K S K F P TI P K K D NI	CYATQNRQ
Universe Centres Universe Cent	UniRef90_QSFFL5	YVTOTTI SVDDTABVI DAI BOTEPEI PRKDDI	CYATONRO
Unnedeo G245D2 I VIL 0 T T L SL D D VIA SL VI CA L K A Y P HI J P S S 5 V V V A T O N R G Unnedeo G245D2 VIL 0 T T L SL D D VIA SL VI CA L K K Y P K HI J P S S 5 V V V A T N R G Unnedeo G26TT7 VIL 0 T T L SL D D T A SL D T A L K K Y P K L D V F K E D I C Y A T N R G Unnedeo G26TT7 VIL 0 T T L SL D D T A SL D T A L K K Y P K L D V F K E D I C Y A T N R G Unnedeo G26TT7 VIL 0 T T L SL D D T A SL D T K K K V P V L E V F K E D I C Y A T N R G Unnedeo G26TT7 VIL 0 T T L SL D D T A SL D T K K K V P V I C V L K K Y P V I D A T A SV R G Unnedeo G26TT7 VIL 0 T T L SL D D T A SL D T V L E V I K K Y P V I D A T K K G I C A T A SV R G Unnedeo G26TS2 VIL 0 T T L SL D D T K K K I V K Y P V I D A T K K K G I C A T A SV R G Unnedeo G26TS2 VIL 0 T T L S V D D T N SL D T V K K Y P V I D A T K K G I C A T A SV R G Unnedeo G26TS2 VIL 0 T T L S V D D T N SL I L SV L A K K Y P V I D A T K K G I C A T A SV R G Unnedeo G26TS2 VIL 0 T T L S V D D T N SL I L SV L A K K Y P V I D A T K K D I C A T A SV R G Unnedeo G26TS2 VIL 0 T T L SV D D T N SL I L SV L K K Y P V I D A T K K T D C A T A SV R G Unnedeo G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T A SV R G UNREEO G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R L I T A SV R G A T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R V N L I F A SV P S S S S D D C Y A T T N R G UNREEO G26TS2 VIL 0 T T L SV D D T X R V N I D T K R V P S S S S D D C Y A T T N R G UNREEO G26TS2 VIL 0 T T K SV R G T T S S S S S D C Y A T T N R G UNREEO G26TS2 VIL 0 T T K SV D T K K V N S S S D D C Y A T T N R G UNREEO G26TS2 VIL 0 T T K S S D F S S S S D C Y A T T N R G UNREEO G26TS2 VIL 0 T T K S S S	UniRef90_Q6NI36	WLSQTTLSVDETMTIVKKLHERFAHLPPSDDI	CYATQNRQ
Umrender Umrend	UniRef90_Q5L5D3	EVT QT TL SL D DVA EVT QAL KARY PHI LPSSSV	CYATQNRQ
Unineedo 2281T7 Unineedo 2381T7 UNINEEdo	UniRef90_P57247	V VA OT TILTNEK WLEVNTALKKKFKNILKFDTI	CSATSBRO
Undergeo 2020/A02 Undergeo 2020	UniRef90_Q26TT7	YVTQTTLSLDDTAEMIALLRERFPALPHKEDI	CYATTNRQ
Unimeter         Constraint         ELL is not the level by the leve	UniRef90_Q2DMA0	V V A Q T T Q S F E NL K NV V D A CL T K G G E II RV F H T II	CDATAVRQ
Unnered OAWA76 UV 4 O TT C S F D N LK S V VT E D L R G G E V RIVY N T I C D A T O K G G O UNNERED CALLS OF CONSTRUCT A VIE O D A T O K G G O A T O K G G O A T O K G G O A T O K G G O A T O K G O A T T O K G O A T T C K	UniRef90 A0XAV2	FLSQTTLSVDDTVEII GVLRRRFPQIPRSEDI	CYATSNRQ
Unimetery         Other and the set of the se	UniRef90_A0WA76	V V A Q T T Q S F D N L K S V V T E C L R R G G E V R V Y N T I	C D A T A V R Q
Uninergen CGALGO Uninergen CG	UniRef90_Q3CHQ0	AVAQIILIEKHWKDILEVIKLKVKDLIFFNII VVAOTTEASDOENTIVDIIKTKOBELEVSBTI	CTATDORO
UnRelegio G80282       Y = T G T T L IS YD D T N KI LF AIL IK K K Y S N'II P R K K DI G Y A T E N R G         UnRelegio G162763       F Y I T L IS YD D T N KI LF AIL K A R F P E W P N S D I G Y A T S N R G         UnRelegio A1A2G4       F Y I T L IS YD D T L LS YD D T A G I P A L K A R F P E W P N S D I G Y A T S N R G         UnRelegio A1A2G4       F Y I T L IS YD D T L IS YD D T A G I P A L K A R F P E W P N S D I G Y A T S N R G         UnRelegio A1A2G4       W I S O T T L IS YD D T M K I C X A L K A R F P E W P N S D I G Y A T S N R G         UnRelegio A1A2G4       W I S O T T L IS YD D T M K I C X A L K A R F P E W P N S D I G Y A T O N R G         UnRelegio G4M217       YV I T O T T LS I D D G K EI K E A L YK K Y F G I P N S D I G Y A T N R G         UnRelegio G4M217       YV I T O T T LS I D D G K EI K E A L YK K Y F G I F P S G S I G Y A T N R G         UnRelegio G4M217       YV I G O T T LS I D D G K EI K E A L YK K K Y F G I F P S G S I G Y A T N R G         UnRelegio G4M217       YV I G O T T LS I D D G K EI K E A L YK K K Y F G I F P S G S I G Y A T N R G         UnRelegio G3A303       Y A G O T T G S F N R W Y V I C S K K S G R F P A L YF R Y N R G I F N T I G D A T R Y F R G         UnRelegio G3A303       Y A O T T G S F N R W Y I Y I C F N T I G D A T R Y P R Y R N S G R N R L R P A V Y R S G R N R L R N R N R N R N R N R N R N R N	UniRef90_Q6AL80	FVTQTTLAENDLEQVLVLRRRFPLLQGKSNI	CFATQNRQ
UlmBedio 2007S66       E_V/T G T I L S/VD E T A BL/T R BL E G R P P AL PR F E D G V A T T N B G         UlmBedio 2007S67       AL V S G T I L S/VD E T A BL/T R AL LE G R P P AL PR F E D G G V A T G N B Q         UlmBedio 2007S68       AL V S G T I L S/VD E T A BL/T R AL LE R F P E MF D S D G V A T G N B Q         UlmBedio 2007S7       AL V S G T I L S/VD E T M E U/P R AL LE R F P E MF D S D G V A T N B Q         UlmBedio 2007S8201       V/V S G T T L S/VD E T M E U/P R AL LE R F P K M R F P E MF D S D G V A T N B Q         UlmBedio 2007S8201       V/V S G T T L S/VD E T M E U/P R AL LE R F D N I P A A E S I G V A T N B Q         UlmBedio 2007S8201       V/V S G T L S/LE D D G K E L E AL V/K K Y P G I E P F N T I G D A T V R Q         UlmBedio 2007S8201       V/V R G T L S/LE D D G K E L E AL V/K K K F P N I P A A E S I G V A T T N B Q         UlmBedio 2007S930       V/V R G T L S/LE D D G K E L E AL V/K K K G G E V P F N T I G D A T A V R G         UlmBedio 2007S930       V/V R G T T L S/VD D T R K V/VD V I L K A R F P A V/V P S E G S I G V A T T N B Q         UlmBedio 2007S930       V/V R G T T C S F D N F S E V VOE I L E N S K S C R V F N T I G D A T A V R G         UlmBedio 2007S940       V/V R G T T G S F P N S E I V W D T T S C D N T K T R G         UlmBedio 2007S941       V V R O T T G N F E F K R AL V R V R V R V R V N T G R A T T K R G         UlmBedio 2007S941       V V R O T T G N F E F K R AL V R V R V R V R V N R V R N T R R R P A A V R V R V R V R R R V R A V R R V R A V R R V R A V R R V R R V R R V R R V R R V	UniRef90_Q8D2R2	Y E T Q T T L S V D D T N K I L F A I K K K Y P Y I P R K K D I	CYATENRQ
Unnerson Zinzerson Unnerson br>Unnerson Unners	UniRef90 Q0VSD8	FVTQTTLSVDDTARVIDALRQRFPAI PKREDI	CYATTNRQ
Uninelso       Operation       A (V S O T I L L E (V M WE D L L E (V L K S K A K E F L V Y F N T I C N A T O K E O N A T O K A T T K E O O N A T O K E O N A T O K E O N A T O K E O N A T O K E O N A T O K E O N A T O K E O N A T O K E O N A T O K E O N A T O K E O N A T O K A T T E K O O U N A T E O O O T T K K V E O Y A T K K E P F V I O K E U A V K A T T N E O O N A T F E N O U N A T E O N A T C C O A T A X T E E O O U N A T E O O T T K K V E O Y A T K K E P K E O V O V E O Y K E U A Y A T T N E O O O T A K Y E O Y T T K K E P K E O V O Y Y E U Y E O Y E U Y E O Y E U Y E O Y E U Y E O Y E U Y E O Y E U Y E O Y E U Y E O Y A T Y E O O T Y Y Y Y Y O Y T O Y E U Y E V Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	UniRef90_A1A2C9	L L T Q T T L S V D E T A G T I T A L K A R F P E M P P N S D I	CYATSNRQ
Umineted Uminet	UniRef90_Q8RA76	AVSQTTLIEKHWEDILEVLKSKAKELVYFNTI WISOTTISVDETMETVBBIBEKEPTIPSDDI	CNATQKRQ
UmRef90 Q4FPE1 VIT QT TT LISVID DTL KALK KK F PKLK K F PKLK E P S G S I G V ATT N R Q UmRef90 Q4FPE1 VIT QT TT LISVID DTL KALK KK F PKLK F P S G S I G V ATT N R Q UmRef90 Q4FS3 VIT QT TT S F D N F S E I K D A L E R R F D N I P A F F D I G V ATT N R Q UmRef90 Q4FS3 VIT QT TT LISVID DT R K VI V I V F V F S K D D I G V ATT N R Q UmRef90 Q4FS3 VIT Q TT LISVID DT R K VI V I V I K R F P A V P S K D D I G V ATT N R Q UmRef90 Q4FS3 VIT Q TT LISVID DT R K VI V I V I L K A R F P A V P S K D D I G V ATT K R R Q UmRef90 Q4FS3 VIT Q TT LISVID DT R K VI V I V I L K A R F P A V P S K D D I G V ATT K R R Q UmRef90 Q4FS3 VIT Q TT LISVID T R K VI V I V I L K A R F P A V P S K D D I G V A T K R R Q UmRef90 Q4FS3 VIT Q T T LISVID T R K VI V I V I L R R Y P N S C S F T F F F V V I V I T G C A T K F R Q UmRef90 Q4FS4 VI X Q T T G D R H F S E I V Q E L E N S K E L R F Y P N S C S F T F F R V V R Q UmRef90 Q4FH9 VI A Q T T Q D R H F K R AI D E I K R R V P N S C S F T F F F V C A T K F R Q UmRef90 Q4FH9 VI A Q T T Q D R H F K R AI D E I K R R V P N S C S F V F F F R Q UmRef90 Q4FH9 VI A Q T T Q S F D R F S E I V Q F E I S T K S N Q V E Q F N T I G S AT K F R Q UmRef90 Q4FH9 VI A Q T T R S VI D T T K V I V V Y I V T T I G N AT K F R Q UMRef90 Q4FH9 VI A Q T T R S VI D T R E V V I V S V T T K K V I V V I V V I V I N D T G C A T K F R Q UMRef90 Q4FH9 VI A Q T T R S VI D T R E V V I V I N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI D T R E V V I V I N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI D T R E V I V K I V I N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI D T R E V V I K V I N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI D T R E V V I K N K P P I V V F N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI D T R K V I K K Y P D V I V V F N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI D T R K V I K K V V I N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI D T R K V I K K V V I N T I G N AT F E N Q UMREF90 Q4FH9 VI A Q T T R S VI R Q V I A Q T T R S V I	UniRef90 Q9Z6P2	YI T Q T T L S L D D V Q E I S S A L L K R Y P S I I P S S S I	CYATTNRQ
Ummended         Ummended	UniRef90_Q4FPE1	YVTQTTLSVDDTLLKALKKKFPKLKEPFKEDI	CYATTNRQ
Unimeteo         Casaba         Unimeteo         Unimeteo         Unimeteo         Unimeteo         Unimeteo	UniRef90 Q11KC7	YVSQTTLSLEDTAEI ISALERREDNI PAAESI	CYATTNRQ
Uninelso Geraids Uninelso Ger	UniRef90_Q3A3D3	U A Q T T Q S F K NLQQI A D I CLG K S K E V R F N T I	CDATSVRQ
Uminesio Casaduo VI L A OTT C X 5 E N F WO UV EVIEX F K G G E V N P F T I G A T F R T R G O T A G V R O A T A G Y R O A A T F F R O A A T F F R O A A T F R Y R O A A A T F R Y R O A A A T F R Y R O A A T F R Y R O A A T F R Y R O A A A T F R Y R O A A A A A A A A A A A A A A A A A A	UniRef90_Q8F3I3	Y L M Q T T L S V A D T K N L I D Q I S K T F P F V P S K D D I	CYATTERQ
UmRefe0 Q1K0U3 UV K Q T T Q S F D N F S E I V Q E L VE N S K E L R L F N T I C D A T A V R Q UmRefe0 A0RQC4 V V S Q T T K K L E K Q E N F N K V D K K R P V D K K L N F F N I C A T K T R Q UmRefe0 A0RQC4 V V S Q T T K K L E K Q E N F N K V D S V L M Q R V K E V R V F N I C R A T K T R Q UmRefe0 Q2AHH9 L V Q Q T T M P Q V C A C K R Q D S V L M Q R V K E V R V F N I C R A T K T R Q UmRefe0 Q3034 L V A Q T T Q R H L K K R R Q D S V L S V L M Q R V K E V R V F N I C R A T K T R Q UmRefe0 Q30381 L V A Q T T R K V E K F N V D K L D R Y K E V R V F N I C R A T K T R Q UmRefe0 Q30381 L V A Q T T R K V E K F N Q L A N V L D R Y K E V R V F N I C R A T K T R Q UmRefe0 Q30381 L V A Q T T Q N V E S Y N L M R N K K R Y P N K E V R V F N I C R A T K F R Q UmRefe0 Q30381 L V A Q T T Q N V E S Y N L M R N K K F R Y N K E V R V F N I C R A T F R N Q UmRefe0 Q40000DB014 U V A Q T T Q N V E Y A A I Y Q K K K R P P E T V V F N I C Q N X T F R N Q UmRefe0 Q4000DB014 U V A Q T T Q N V E Y A A I Y Q K K K F P N L V Q P Y I C Q N A T F R N R Q UmRefe0 Q4000DB014 U V A Q T T Q N V E Y A A I Y Q K K K F F N L V R P Y Q V F N I C Q N X T F N R Q UMREfe0 Q4000DB014 U V A Q T T Q S T R L F D E V Q A W A A A H P H Y Q V F N I I C Q A T T N R Q UMREfe0 Q4000DB017 U V N Q T T K K V E K F M E I V R V K K K F F N L P Y Q V F N I I C Q A T T N R Q UMREfe0 Q4000DB017 U V N Q T T K K K I E D F Q A U X S K V K E V R V R V N I C Q A T T N R Q UMREfe0 Q4000DB017 U V N Q T T K K K I E D F Q A U X S K V N E V R V N I L P R I C Q A T T N R Q UMREfe0 Q4000SB17 U V N Q T T K K K I E K F M E I V N I L M L K K K F F N I C Q A T T N R Q UMREfe0 Q40070F U V S Q T T K K I E K F M E I Q A X S K P Q A E V N N I C R T K R V R V N R C R V R V N I C R T K R Q UMREfe0 Q40070F U V S Q T T K K I E K F M E I Q A X S K P Q A E V N I I C A T S K N Q UMREfe0 Q400707 U N R Q T M Y X Y N T T T K K V K K Y N K K R R R P V Y Q A E V N I C R X Y N I C R X Y N Y K K R R Y R Q A T N T N C R X Y N Y X Y X Y N Y Y N Y Y X Y Y Y Y Y	UniRef90 Q3AAU0	VIAQTTQKSENFWQVVEVIKKKGGEVRPFNTI	CHATRTRQ
Umreide Advances in the second	UniRef90_Q1K0U3	L VAQTTQSFDNFSEU VQELLENSKELRUFNTU	C D A T A V R Q
Unineedo Colo364 Unineedo Col364 U V V V C T T C D F HELF Y R AL Unineedo Col364 U V V C T T R F V Q Y E E L S T L I S T K S N Q V E G F N T I G R A T K E R Q Unineedo Col364 U V V Q T T M P L V Q Y E E L S T L I S T K S N Q V E G F N T I G R A T K E R Q Unineedo Col364 U V R Q T T M P L V Q Y E E L S T L I S T K S N Q V E G F N T I G N A T F E N Q Unineedo Col364 U V R Q T T R K V E D Y L E L A N Y L P R Y K E V R Q Y F N T I G N A T F E N Q Unineedo Col364 U V R Q T T R K V E D Y L E L A N Y L P R Y K E V R V V F N T I G N A T F E N Q Unineedo Col364 U V R Q T T R K V E D Y L E L A N Y L P R Y K E V R V V F N T I G N A T F E N Q Unineedo Col364 U V R Q T T R K V E P Y L E L A N Y L P R Y K E V R V V F N T I G N S T E C R Q Unineedo Col364 U N A T F R Q Y R Q Y R Q Y R Y R Y R Y R Y R Y R	UniRef90_A0Q0L7	V V S O T T K KLEK F T KL V S YL MORVK EV RVENTL	
Uninetego 02AHH9       L I A O T T K S P A S F O K I VIS Y I LP EV K E LI Y N T I G A T K E R O         Uninetego 018706       L V A O T T I N P L Y V E L S T K S N O V E O F N T I G A T K T R O         Uninetego 018706       L V A O T T I N P L Y V E L S T K S N O V E O F N T I G A A T K T R O         Uninetego 02871       Y N O T T I N P L Y V E L S T K S N O V E O F N T I G A A T K T R O         Uninetego 02871       Y N O T T I S N D E Y A A V Y R I R D R P E T Y V P N T I G N A T F R N O I A N Y R N R D R P E T Y V P N T I G N A T F R N O I A N Y R N R D R P E T Y V P N T I G N A T F N O I A N Y R N R N N W E Y N V F N T I G N A T F N O I A N Y R N R N N W E Y N V F N T I G N A T F N O I A N Y M N R I R D R P E T Y V P N T I G N A T F N O I A N Y M N N M Y M Y N Y N N I G N A T F N O I A N Y M N N M Y M Y N Y N N I G N A T F N O I A N Y M N M Y M Y N Y N I G N A T F N O I A N Y M N N M Y M Y N Y N I G N A T F N O I A N Y M N N N M Y M Y N Y N N I G N A T F N O I A N Y M N N N N N N N N N N N N N N N N N	UniRef90_Q1Q304	I VAQTTQDRHLFKRAIDEIKRRYPNSESFETI	CSSTYKRQ
UniReigo 308768 U vi A G T T R VIE C VIE L ALVIE L ALVIE VIE VIE VIE VIE VIE VIE VIE VIE VIE	UniRef90_Q2AHH9	LIAQIIKSPASFQKIVSYILPEVKELKIYNII	CHATKERO
UniReigo_030S81       UV A Q T T T R, K V E D Y L E I A N Y L I P. R Y K E V W F P T I C N A T F E N Q         UniReigo_02RVD1       VV A Q T T C N V E E Y A A I V R P I R D R F P A L V Q P O I C Y A T Q N R Q         UniReigo_02R021       VV A Q T T R K V E E Y A A I V R P I R D R F P A L V Q F N T I C N A T F E N Q         UniReigo_02R024       V A Q T T Q N R Q D R E V E A WA A A H P H Y UV F N T I C N A T F E N Q         UniReigo_02R026       V A Q T T Q N R V E E Y A A I V R P I R V K E V V F N T I C N A T F E N Q         UniReigo_02R027079F4       V T N O T T L S M D G A L T V C K L K N K F P Q D P F S Q E I C Y A T T N R Q         UniReigo_02R027079F4       V T N O T T K K V E E K F M Q I A N Y L M L R K K F P Q D P F S Q E I C Q A T F K N Q U N R I M S Q M V S Q T T K K I E K F M Q I N R I M K K K F N Q D A R N T I C C A T F F N Q U N R F E Q Q Q Y E Y Q A R N T I C C A T F F N Q U N R F E Q Q Y A R N T I C C A T F K N Q U N R F E Q Q Y A R N T I C C A T F F N Q U N R F E Q Q Y A R N T I C C A T F F N Q U N R F E Q Q Q Y Q Y V A Q T T Q D E E M K K A M E K Y P Q A L V N I L M Y F N T I C C A T E K R Q U N R F E Q Q Y A R N T I C C A T E K R Q U N R F E Q Q Y A R N T I C C A T E K R Q U N R F E Q Q Y A R N T I C C A T E K R Q U N R F E Q Q Y A R N T I C C A T E K R Q U N R F E Q Q Y A R N T I C C A T E K R Q V N R Y F D E I L D L L L R R Y P Q L H N F I C C A T E K R Q V N R Q M V S Q T T K K V F D E I L D L L L R R Y P Q L F N T I C C A T E K R Q U N R F E Q Q Y A R N T I C C A T E K R Q V N R Q N N R Q N N R Q N N R Q N V Y R Q U T T N T K K V R A R W P Y T Q T T N C T T N C T T M L K K E T T N R Q Y N R Q N	UniRef90_Q187C6	L VÁQTTÍN PELYÍSÍ VNKLSDKLEEÍ VFNDTÍ	CSATKTRQ
Unineted       UP       VERTINE	UniRef90_Q30S81	L V A Q T T R K V E D Y L E I A N Y L I P R Y K E V R V F N T I	CNATFENQ
UniReigo_UP10000D80174       L       VIS Q T T R K VIE K F MQI       AN YL ML RIVK E VIE K F M T I C N A T F E N Q         UniReigo_QBUX6       VIX A Q T T Q S T R E F D E V G A WAA A H P H Y QV F N T I C N A T F E N Q         UniReigo_QBUX6       YV T Q T T L S I K N R Q         UniReigo_QBUX6       YV T N Q T T L S I K N R Q         UniReigo_QBV74       WI S Q T T L S I K N R Q         UniReigo_QBV747       WI N Q T T K K I E K F M E I VIR RLI R Q K F P Q P S D DI C Q A T Q N R Q         UniReigo_QAMMY6       V V N Q T T K K I E K F M E I VIR RLI R Q K F P Q G K VIF N T I C D A T F K N Q         UniReigo_QAMMY6       V V S Q T T K K I E K F M E I VIR F L MULK V K E V R VIF N T I C D A T F K N Q         UniReigo_QAM92       V V S Q T T K K I E K F M E I VIR F L QU L S R F Q G G K VIF N T I C D A T F K N Q         UniReigo_QAM032       V T N Q T T M S Q WD W E S I L QU N G G VIE VIF N T I C D A T G K R Q         UniReigo_QAM032       V T N Q T T M S Q WD W E S I L M K A M K K Y P G V I A N T I C D A T G K R Q         UniReigo_QAM032       V N Q T T M S Q WD W E S I L QU A S X I V P N T I C C A T Q K R Q         UniReigo_QAM040       V N S Q T T K K I E K F T W I V N L I V R R L N R E F VIE F N T I C C A T Q K R Q         UniReigo_QAM040       V N S Q T T K K I E K F W E V L L L L L R L K K Y R Q VIF N T I C C A T Q K R Q         UniReigo_QAM040       V N S Q T T M K K K E T P Q Q K K Y P N Y I K T N T C C A T Q K R Q         UniReigo_QAM040	UniRef90 Q2LUA5	V VA QTTQNVEEYAAI VRRIRDRFPETVVFNTI	CDSTEQRQ
Uninkergo       Delv       G       A       A       A       F       F       A       T       N       N       A       A       T       P       N       N       T       T       N       N       N       T       T       N       N       N       N       T       T       N <t< td=""><td>UniRef90_UPI0000DB0174</td><td>L V S Q T T R K V E K F M Q L A N Y L M L R V K E V R V F N T I</td><td>CNATFENQ</td></t<>	UniRef90_UPI0000DB0174	L V S Q T T R K V E K F M Q L A N Y L M L R V K E V R V F N T I	CNATFENQ
Uninergio       Diskipio       =""><td>UniRef90_Q9BJX6</td><td>YVTQTTLSMDDCALIVQKLKNKFPHIIPSGSI</td><td>CYATTNRQ</td></t<>	UniRef90_Q9BJX6	YVTQTTLSMDDCALIVQKLKNKFPHIIPSGSI	CYATTNRQ
Unineigo _DP100006/09F4	UniRef90_Q8K9Z4	F F T Q T T L S I K N T Q S L I L A L K K K F L N L P K K E D I	CYATTNRQ
Uninkeigo       Odahnšo       VÍŠ O T T K K I E K F M EL       VÍŘ PL MILK K V R V R F N TIL O A T F K N O         Uninkeigo       OzD3W2       V V A O T T O P L S N F O AL L E A L O N O GVA E V R J F N TIL O A T F E N O         Uninkeigo       OzD3W2       V V A O T T O P L S N F O AL L E A L O N O GVA E V R J F N TIL O A T F E N O         Uninkeigo       OzD3W2       V V A O T T O P L S N F O AL L E A L O N O GVA E V R J F N TIL O D S T H K K R O         Uninkeigo       OsK037       V N O T T O D E M F O L T A GVA M E K P O A E V H F N TIL O D A T E K R O         Uninkeigo       OsK047       V N O T T M K K W J S V L S K V N E O R E V A F N TIL O D A T E K R O         Uninkeigo       OsK0422       V V S O T T E K K Y F D E I DL K K M E K P P G A E V A F N TIL O D A T E K R O         Uninkeigo       OsK0423       I AN O T T M K K E T E N I G K L L E R N N F P M S F N TIL O D A T O E R O         Uninkeigo       OsK249       I AN O T T M K K S E T E A I G K L L K Y D H F L A F N TIL O N A T S Y N O         Uninkeigo       OsK249       I AN O T T M K K S E T E A I G K L K Y D H F L A F N TIL O N A T D K R O         Uninkeigo       OsK249       V A N O T T M L K G E T E D I G K L P E N N H F M S F N TIL C N A T S N R O         Uninkeigo       OsK249       V A N O T T M L K G E T E D I G K L P E N N H F M S F N TIL C N A T O K R O         Uninkeigo       OsK249       V A N O T T M L K G E T E D I G K L P E N V L K F N N F N N F N T I C D A	UniRef90_UPI00006709F4 UniRef90_P54473	WLSQTTLSVDETMETVRRLRQKFPQDPPSDDI VTNOTTMSOWDVHDLMELVKEKYPHVEYHOEI	C Y A T Q N R Q
UniReigo Q7M8Y6       L V S Q T T K K I E D F L G V A S F L V Q R Q E V I R L F N T I C A A T F D N Q         UniReigo Q203W2       V V A Q T T Q D E E M F Q L I T A G V L S F F Q G K V F N T I C D A T Q F R Q         UniReigo Q8K037       V N S Q T T Q D E E M F Q L I T A G V L S K F P G G K V F N T I C D A T Q F R Q         UniReigo Q8K037       V N S Q T T Q D E K F Q L I T A G V L S K V P Q A R N T I C D A T Q F R Q         UniReigo Q8K037       V N S Q T T E K K E H WL S V L S K V V N E G R E V V A F N T I C D A T Q F R Q         UniReigo Q8DK29       L A N Q T T M K G E T E Q I G K L F E R L M E H F M S F N T I C D A T Q F R Q         UniReigo Q8DK29       L A N Q T T M K G E T E Q I G K L F E R L M E H F M S F N T I C O A T Q F R Q         UniReigo Q80K29       L A N Q T T M K K E T T E A I M K V N N E T K Q T F K T N Q F R A N Q F T N Q M A T D K R Q         UniReigo Q67Q28       V N S Q T T K K K E T W N K V N N E V R A S K E V A F N T I C O A T Q F R Q         UniReigo Q80K67       V N A Q T T M L K S E T E A I G K L V K K Y D H F L A F N T I C D A T Q F R Q         UniReigo Q80K67       V N A Q T T M L K S E T E Q I G K L Y E K T N D H F M S F N T I C D A T Q F R Q         UniReigo Q80K67       V N A Q T T M L K S E T E Q I G K L Y E K T N D H F M S F N T I C D A T Q F R Q         UniReigo Q80K67       V A N Q T T M K K G E T E D I G K L Y E K T N D H F M S F N T I C D A T Q F R Q         UniReigo Q80K67       V A N Q T T M K K S E T E Q I G K L Y E K T N D H F M S F N T I C D A T Q F R R Q	UniRef90_Q4HN50	V VS QTTKKTEKFMEI VNFLMLKVKEV RVFNTI	CDATFKNQ
UninReigo       QINXA4       V	UniRef90_Q7M8Y6	L V S Q T T K K I E D F L G V A S F L V Q R C A E V R F N T I	CNATEDNQ
UniReigo_OgyKD37       I       N O T T MS Q WD VS EI       MK K A ME K Y P Q A EV N EI       C A T Q V R Q         UniReigo_OgySG2       V VIS O T T E K K E H WULS V LIS KIV V N E G R EV VA F N T I C D A T E K R Q         UniReigo_OgyKD29       I       A N O T T ML K G E T E Q I G K V V N E G R EV VA F N T I C D A T Q E R Q         UniReigo_OSDK29       I       A N O T T ML K G E T E Q I G K K V L N E I V R A S K E I VA F N T I C D A T Q E R Q         UniReigo_OSDK249       I       A N O T T ML K S E T E A I G K L L K K Y D H E L A F N T I C D A T Q E R Q         UniReigo_OSDK249       I       A N O T T ML K S E T E A I G K L L K K Y D H E L A F N T I C D A T Q E R Q         UniReigo_OSDK249       V A O T T T E I R E K WE K I L L R K K Y P O Z E V Y A F N T I C D A T Q E R Q         UniReigo_OSM249       V A O T T ML K S E T E A I G K L V E K N D H E I A T Q A T Q E R Q         UniReigo_OSM249       V A N O T T ML K S E T E A I G K L V E K N D H F M S F N T I C D A T Q E R Q         UniReigo_OSK242       V T N O T T M S Q WD V A I M A K V K E K Y P T A E F H K E I C L A T Q V R Q         UniReigo_OSKX24       V A N O T T ML K S E T E D I G K L V E K N D H E I S F N T I C D A T Q E R Q         UniReigo_OSKX24       V T N O T T M S Q WD V A I M A K V K E K Y P T A E F H K E I C L A T Q V R Q         UniReigo_OSKX24       V T N O T T M S Q WD V A I M A K V K E K Y P T A E F H K E I C A T Q E R Q         UniReigo Q AVH75       I A N Q T T M K S E T E E I G R L F E E L	UniRef90 Q1NXJ4	V V S Q T T Q D E E M F Q L I T A G V L S R F P G G K V F N T I	CDSTHKRQ
UniReigo_02895Q2       V VIS 0 T T Q X K E T WULS V LS V L E K V V K F K R C N T I C A T E V R Q         UniReigo_030K249       L A N O T T MLK G E T E O I G K L F E R L N E H F MS F N T I C A T O E R Q         UniReigo_758675       V VIS 0 T T K Q T P K L 10 I A S YL V E R Y P Q L E I N T I C A T O E R Q         UniReigo_76728       L VIS 0 T T K Q T P K L 10 I A S YL V E R T E V R I F N T I C A T O Y R Q         UniReigo_76728       V VIS 0 T T E K K F T W K V L N E I V R A S K E VIA F N T I C A T O Y R Q         UniReigo_76728       V VIA 0 T T F I R E K WE K I L R K Y D H F L A F N T I C A T O Y R Q         UniReigo_76728       V VIA 0 T T K Q T P K L 10 I A S YL V K R F E N V L K F D T I C A T O Z R Q         UniReigo_76728       V T N O T T M K S E T E D I G K L Y E K K T N D H F I S F N T I C D A T O E R Q         UniReigo_76728       V N N O T T M K S E T E D I G K L Y E K T N D H F M S F N T I C D A T O E R Q         UniReigo_76728       V N N O T T M K S E T E D I G K L Y E K T N D H F M S F N T I C D A T O E R Q         UniReigo_76728       V T N O T T M S Q W D V A D I M A K V K K K Y P H Y E H C I A T Q V R Q         UniReigo_76728       V T N O T T M K S E T E O I G K L Y E K T N D H F I S F N T I C D A T O E R Q         UniReigo_71477       V A N O T T M K K S E T E O I G K L F E E L N K Y P H K E I C A T Q V R Q         UniReigo_70782       V T N O T T M K S E T E O I G K L F E E L N K Y P H V E Y H K K N T I C D A T O E R Q         UniReigo_707477       V A N O T T M L K S E	UniRef90_Q9KD37	I TN QT T MS Q WDVS EI MK K A ME K Y P Q A EV H N EI	CLATQVRQ
Unimergio_03D/29       IAN Q T T MILK G E T E QI G K F F MIN E H F MS F N TI G D A T Q E R Q         Unimergio_056875       V S Q T T E K K E T WA K V L N E I V R A S K E V A F N TI G D A T Q E R Q         Unimergio_050249       I A N Q T T MILK S E T E A I G K L L Q K K Y D H F L A F N T I G N A T S Y N Q         Unimergio_050249       I A N Q T T MILK S E T E A I G K L L L K Y D H F L A F N T I G N A T Q E R Q         Unimergio_067028       V T N Q T T L S Q W D T Q A L ME Q V K A R WP Q T E I Y N E I C A T Q C R Q         Unimergio_067028       V T N Q T T MILK S E T E A I G K L V E K T N N H F M S F N T I C D A T Q E R Q         Unimergio_03W867       Y A N Q T T MILK S E T E D I G K L V E K T N N H F M S F N T I C D A T Q E R Q         Unimergio_045K44       V T N Q T T MILK S E T E D I G K L V E K T N N H F M S F N T I C D A T Q E R Q         Unimergio_05K24       V T N Q T T M S Q W D V A D I M A K V K E K Y P H Y E M H K E I C D A T Q E R Q         Unimergio_041KYM5       I A N Q T T M L K S E T E D I G K L F E Q L T E H F Q S F N T I C D A T Q E R Q         Unimergio_05K24       V T N Q T T M S Q W D V A D I M A K V K E K Y P H Y E M H K E I C D A T Q E R Q         Unimergio_07VN97       I A N Q T T M L K S E T E E I G R L F E Q L T E H F Q S F N T I C D A T Q E R Q         Unimergio_07VN97       I A N Q T T M L K S E T E E I G R L F E Q L O K K F F L A F N T I C D A T Q E R Q         Unimergio_07VN97       I A N Q T T M L K S E T E E I G R L F E Q L Q E F T I K C D A T Q E R Q         Unime	UniRef90_Q895G2	L V S Q T T Q S I K Y F D E I L D L L L E R Y P Q L E I H N T I	CDATEKRO
UniReigo P58675       V VIS Q T T E K K E T WN.K V LN E I VIR A S KE I VA F N T I C N A T S Y N Q         UniReigo C5N249       I A N Q T T M L K S E T E A I G K L LIK K Y D H E L A F N T I C D A T Q E R Q         UniReigo C6N28       V T N Q T T K L S E T E A I G K L LIK K Y D H E L A F N T I C D A T Q E R Q         UniReigo C6N28       V T N Q T T T L S Q WD T Q A L M E Q V K A R W P Q T E L N F N T I C D A T Q E R Q         UniReigo C6N28       V T N Q T T L A V D E A E E V V D A L M E Q V K A R W P Q T E L N F N T I C D A T Q E R Q         UniReigo C65K24       V A N Q T T M L K S E T E M I G K L F E E L N N H F M S F N T I C D A T Q E R Q         UniReigo C3KX24       V T N Q T T M L K S E T E M I G K L F E E L N N H F M S F N T I C D A T Q E R Q         UniReigo C3KX24       V T N Q T T M S Q WD V A D I M A K V K E K Y P H V E M K K E I C L A T Q V R Q         UniReigo C3KX24       V T N Q T T M S Q WD V A D I M A K V K E K Y P H V E M K K E I C L A T Q V R Q         UniReigo C7V417       V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R Q         UniReigo C7V417       V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R Q         UniReigo C7V417       V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R Q         UniReigo C7V417       V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R Q         UniReigo C7V417       V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R Q <t< td=""><td>UniRef90_Q8DK29</td><td>IANQTTMLKGETEQIGKLFERLNEHFMSFNTI</td><td>CDATQERQ</td></t<>	UniRef90_Q8DK29	IANQTTMLKGETEQIGKLFERLNEHFMSFNTI	CDATQERQ
UniRe190OSN249IANATTNRCRRCRCRRCRRCRRCRRCRRCRRCRRCRRCRRCLL<	UniRef90_P58675	V V S Q I I E K K E I WN K V L N E I V R A S K E I V A F N I I U V S O T T K O T P K L L O L A S Y L V E B C T E V B L E N T L	C S A I D V R Q
UniRef90_A0V1C5V VA Q T T FLI R E K WE KI I L RLIN K R F E NV L K F D T I C A T D K R QUniRef90_QGY0Z8VI N Q T T L Q Q D T Q A L ME Q V K A R W P Q T E I Y N E I C L A T Q Q R QUniRef90_Q3W867YL M Q T T ML K S E T E MI G K L F E E L N M F F N S F N T I C D A T Q E R QUniRef90_Q5K43V A N Q T T ML K S E T E MI G K L F E E L N M H F M S F N T I C D A T Q E R QUniRef90_Q5KX24V T N Q T T MS Q W D VA D I M A K V K E K Y P H V E M H K E I C L A T Q L R QUniRef90_Q61LU9V T N Q T T ML K S E T E Q I G K L F E Q L T E H F Q S F N T I C D A T Q E R QUniRef90_Q7V177V A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R QUniRef90_Q7V177V A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R QUniRef90_Q7V177V A N Q T T ML K S E T E E I G R L F E E L N E H F L A F N T I C D A T Q E R QUniRef90_Q7V175V A N Q T T ML K S E T E E I G R L F E E L N E H F L A F N T I C D A T Q E R QUniRef90_Q7V175V A N Q T T ML K S E T E E I G R L F E E L N Q H F Q S F N T I C D A T Q E R QUniRef90_Q7V175V A N Q T T ML K S E T E E I G R L F E E L N Q H F Q S F N T I C D A T Q E R QUniRef90_Q191X6V A Q T T Q P A A N F H G I V D E L K T H T H A L K V H N T I C D A T Q R QUniRef90_Q191X6V L A Q T T Q P A A N F H G I V D E L K T H T H A L K V H N T I C O A T Q E R QUniRef90_Q7VJ51U A Q T T Q P A A N F H G I V D E L K T H T H A L K V H N T I C A T Q R QUniRef90_Q7VJ53V A N Q T T ML K S E T E Q I G K L F E Q N Q F P S D D I C Y A T Q N R QUniRef90_Q7VJ54V A Q T T C P E S R L E E V A A A L R S N T D T L V V H N T V C Q A T Q N R QUniRef90_Q7XJ55 <td>UniRef90_Q5N249</td> <td>I ANQTTMLKSETEAI GKLLLKKYDHFLAFNTI</td> <td>CDATQERQ</td>	UniRef90_Q5N249	I ANQTTMLKSETEAI GKLLLKKYDHFLAFNTI	CDATQERQ
UniRe190_Q3W867 Y_L_M_Q_T_T_L_A_Q_D_E_A_E_E_V_D_A_L_R_D_R_F_P_A_V_P_G_S_N_D_L_G_A_T_Q_E_R_Q UniRe190_Q3K2643 UNIRe190_Q3K2643 UNIRe190_Q3K244 V_L_N_Q_T_T_ML_K_S_E_T_E_ML_G_K_L_F_E_E_L_N_N_H_F_M_S_F_N_T_L_G_D_A_T_Q_E_R_Q UNIRe190_Q3K2424 UT_N_Q_T_T_MS_Q_WD_VA_D_L_M_E_D_L_Q_K_K_F_P_T_A_E_F_H_K_E_L_G_L_A_T_Q_V_R_Q UNIRe190_Q3K2424 UT_N_Q_T_T_MS_Q_WD_VA_D_L_M_E_D_L_Q_K_K_F_P_T_A_E_F_H_K_E_L_G_L_A_T_Q_V_R_Q UNIRe190_Q3K2422 UNIRe190_Q7V477 U_A_N_Q_T_T_ML_K_S_E_T_E_E_L_G_K_L_F_E_E_L_N_K_H_F_L_S_F_N_T_L_G_D_A_T_Q_E_R_Q UNIRE190_Q0AXA22 UNIRE190_Q0AXA22 UNIRE190_QAXA22	UniRef90_A0V1C5	V V A Q T T F I R E K WE K I I L R L N K R F E N V L K F D T I	CNATDKRQ
UniRef90_Q55643V A N Q T T ML K G E T E MI G K L F E E N N H F M S F N T I G D A T Q E R QUniRef90_Q1KYM5I A N Q T T ML K G E T E D I G K L F E E N N H F M S F N T I G D A T Q E R QUniRef90_Q5KX24V T N Q T T M S Q WD V A D I M A K V K E K Y P H V E M K E I C L A T Q L R QUniRef90_Q7V17V A N Q T T ML K S E T E D I G K L F E E L N K H F L S F N T I G D A T Q E R QUniRef90_Q7V477V A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R QUniRef90_Q7V477V A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R QUniRef90_Q7V052V A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R QUniRef90_A2TGW4I A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R QUniRef90_A2TGW4I A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R QUniRef90_A2TGW4I A N Q T T ML K S E T E E I G R L F E E L N G H F L A F N T I C D A T Q E R QUniRef90_A2TGW4I A N Q T T ML K D E T E Q I G K F E E L N Q H F Q S F N T I C D A T Q E R QUniRef90_Q41FR8V N Q T T M S Q WD VQ A L M E H V R K Y P H V E V H N E I C N A T Q V R QUniRef90_Q426672V A N Q T T M K S Q D D Q A L M E H V R K K Y P N I P K K E D I C Y A T Q N R QUniRef90_Q77035V S Q T T K Q P E H F G K I A A L V S L V N E C R F N T I C D A T Q E R QUniRef90_Q7781W L S Q T T L S V D E T M R I V E R L R Q R F K T P N I P C A T Q N R QUniRef90_Q77834Y A T Q T T M K S P T L S V D E T M R I V E R L R Q R F K T N I C A A T Q N R QUniRef90_Q7844Y A T Q T T M K K S E T E E I G K F F E K N N H F L A F N T I C A A T Q N R QUniRef90_Q7844 <td>UniRef90 Q3W867</td> <td>YLMQTTLAVDEAEEVVDALRDRFPAVPGSADI</td> <td>CYATSNRQ</td>	UniRef90 Q3W867	YLMQTTLAVDEAEEVVDALRDRFPAVPGSADI	CYATSNRQ
UniRef90_Q5KX24 VT N Q T T M S Q WD VA D I M A K V V K F N D H F S F N T I C D A T Q E H Q UniRef90_Q5KX24 VT N Q T T M S Q WD VA D I M A K V K K K P H V E M H K E I C L A T Q V R Q UniRef90_Q7V4T7 V A N Q T T M L K S E T E Q I G K L F E Q L T E H F Q S F N T I C D A T Q E R Q UniRef90_Q7V4T7 V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R Q UniRef90_Q7V452 V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T Q E R Q UniRef90_Q7V452 V A N Q T T M L K S E T E E I G R L F E L N C H F L A F N T I C D A T Q E R Q UniRef90_Q7V452 V A N Q T T M L K S E T E E I G R L F E L N Q H F A S F N T I C D A T Q E R Q UniRef90_Q7V452 V A N Q T T M L K G E T E A I G K L M Q K Y N H F M S F N T I C D A T Q E R Q UniRef90_Q41548 V T N Q T T M L K S E T E Q I G K L F E Q N Q H F Q S F N T I C D A T Q E R Q UniRef90_Q41548 V T N Q T T M S Q WD VQ A L M E H V R K K Y P K G K V K N T I C D A T Q E R Q UniRef90_Q41548 V T N Q T T M S Q WD VQ A L M E H V R K K Y P H V E V H N E I C N A T Q R Q UniRef90_Q426512 V A N Q T T M S Q WD VQ A L M E H V R K K Y P H V E V H N T I C N A T Q R Q UniRef90_Q5NGK4 V A Q T T M K S E T E Q I G K L F E Q N Q H F M S F N T I C D A T Q E R Q UniRef90_Q5NGK4 Y A T Q T T Q P A A N F H G I V E R L R Q R F P K L P P S D D I C Y A T Q N R Q UniRef90_Q5NGK4 Y A T Q T T Q P E S R L E V A A A L V S L V N E C R I F N T I C D A T Q R Q UniRef90_Q7X329 V A N Q T T M L K S E T E E I G K V F E K L N S H F L A F N T I C D A T Q E R Q UniRef90_Q7X329 V A N Q T T M L K S E T E E I G K V F E K L N S H F L A F N T I C D A T Q E R Q UniRef90_Q7X329 V A N Q T T M L K S E T E E I G K V F E K L N S H F L A F N T I C D A T Q E R Q UniRef90_Q7X329 V A N Q T T M L K S E T E E I G K V F E K L N S H F L A F N T I C D A T Q E R Q UniRef90_Q7X329 V A N Q T T M L K S E T E E I G K V F E K L N S H F L A F N T I C D A T Q E R Q UniRef90_Q7X34 V A N Q T T M L K G E T E A I G K L F E Q N A H Y Q N F N T I C D A T Q E R Q UniRef90_Q7X345 V V A Q T T M L K G E T E A I G K L F E K N Y H F N Y	UniRef90_Q55643	VANQTTMLKSETEMIGKLEEELNNHEMSENTI	CDATQERQ
UniRef90_Q81LU9V T N Q T T M S Q W D Q H L M E D Q K K F P T A E F H K E IC L A T Q V R QUniRef90_A0YN97I A N Q T T M L K S E T E Q I G K L F E Q L T E H F Q S F N T I C D A T Q E R QUniRef90_Q7V477V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T E E R QUniRef90_Q7V022V A N Q T T M L K S E T E E I G R L F E E L N K H F L S F N T I C D A T E E R QUniRef90_A01022V A N Q T T M L K S E T E E I G R L F E E L N E H F L A F N T I C D A T Q E R QUniRef90_A01095L V A Q T T Q N E E V F Q E I Q E E F L K K Y P K G K V K N T I C D A T Q E R QUniRef90_A02JU9I A N Q T T M K G E T E A I G K L M M Q K Y N H F M S F N T I C D A T Q E R QUniRef90_Q42672V A N Q T T M K Q P A A N F H G I V D E L K T H T H A L K V H N T I C N A T Q R QUniRef90_Q191X6V T N Q T T M K Q P A A N F H G I V D E L K T H T H A L K V H N T I C N A T Q R QUniRef90_Q37X052V A N Q T T M K S E T E Q I G K L F E Q N Q H F M S F N T I C D A T Q E R QUniRef90_Q42672V A N Q T T M K S E T E Q I G K L F E Q N Q H F M S F N T I C D A T Q R QUniRef90_Q37X05V A N Q T T M K S E T E Q I G K L F E Q N Q H F M S F N T I C D A T Q R QUniRef90_Q37X05V A N Q T T M K S E T E E I G K V A A A L R V N F E K N N F H N T I C D A T Q R QUniRef90_Q37X05V A N Q T T M K S E T E E I G K V A A A L R S N T D T L V V H N T V C Q A T Q N R QUniRef90_Q37X05V A N Q T T M K K S E T E E I G K V F E K N S H F L A F N T I C D A T Q R R QUniRef90_Q37X05V A N Q T T M K K S E T E E I G K V F E K N S H F L A F N T I C D A T Q R R QUniRef90_Q37X05V A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T Q R R Q	UniRef90 Q5KX24	V T N Q T T M S Q W D V A D I M A K V K E K Y P H V E M H K E I	
UniRe190_A07V177I A N Q T T ML K S E T E QIG K L F E QL T E H F Q S F N T IG D A T Q E R QUniRe190_Q7VA77V A N Q T T ML K S E T E E I G R L F E E L N K H F L S F N T IG D A T E E R QUniRe190_Q7VDS2V A N Q T T ML K S E T E E I G R L F E E L N K H F L A F N T IG D A T E E R QUniRe190_A2TGW4I A N Q T T ML K S E T E E I G R L F E E L N K H F L A F N T I C D A T Q R QUniRe190_A02J95V A N Q T T ML K G E T E A I G K L M Q K Y N H F M S F N T I C D A T Q R QUniRe190_A02J95I V A Q T T Q N E E V F Q I G K L F E E N Q H F Q S F N T I C D A T Q R QUniRe190_A11F8V T N Q T T M K Q W D V Q A L M E H V R K K Y P K G K V K N T I C D A T Q E R QUniRe190_Q41672V A Q T T Q P A A N F H G I V D E L K T H T H A L K V H N T I C N A T Q R QUniRe190_Q426672V A N Q T T M K S E T E Q I G K L F E Q N Q H F Q S F N T I C D A T Q E R QUniRe190_Q5NGK4V L A Q T T Q P A A N F H G I V D E L K Y P N I P K K E D I G Y A T Q N R QUniRe190_Q5NGK4Y A T Q T T S V D E T M R I V E R L R Q R F P K V P S R K D L C Y A T Q N R QUniRe190_Q7V329V L A Q T T Q P E S R L E V A A A L R S N T D T L V V H N T V C Q A T H R QUniRe190_Q7V329V A N Q T T M L K S E T E E I G K F F E K T N D H F L A F N T I C D A T E E R QUniRe190_Q7V374V L A Q T T Q P E S R L E E V A A A L R S N T D T L V V H N T V C Q A T Q N R QUniRe190_Q7V374V L A Q T T M L K S E T E E I G K F F E K T N D H F L A F N T I C D A T Q E R QUniRe190_Q7V374V A N Q T T M L K S E T E E I G K F F E K T N D H F L A F N T I C D A T Q E R QUniRe190_Q7V374V L A Q T T M L K S E T E E I G K V F E K M D H F L A F N T I C D A T Q E	UniRef90_Q81LU9	VTNQTTMSQWDYQHLMEDIQKKFPTAEFHKEI	CLATQVRQ
UniRei90 000AX2L I S Q T T R D E K E F Q K V A G A L S N K G R E L K F N T I C D A T E E R Q UniRei90 Q A C T Y M L K S E T E E I G R L F E E L N E H F L A F N T I C D A T Q E R Q UniRei90 Q A L M A Q T T M L K S E T E A I G K L F E E L N E H F L A F N T I C D A T Q E R Q UniRei90 Q AUJ95UniRei90 UniRei90 Q AUJ95I A N Q T T Q N E E V F Q E I Q E E F L K K Y P K G K V K N T I C D A T Q E R Q UniRei90 Q AUJ95UniRei90 UniRei90 Q AUJ95I A N Q T T Q N E E V F Q E I Q E E F L K K Y P K G K V K N T I C D A T Q E R Q UniRei90 Q AUJ95UniRei90 UniRei90 Q AUJ95I A N Q T T Q N E E V F Q E I Q E E F L K K Y P K G K V K N T I C D A T Q E R Q UniRei90 Q AUJ95UniRei90 UniRei90 Q AUJ97V A Q T T Q P A A N F H G I V D E L K T H T H A L K V H N T I C D A T Q E R Q UniRei90 Q AUS781UniRei90 UniRei90 Q AUS781V A Q T T Q P A A N F H G I V D E L K T H T H A L K V H N T I C D A T Q E R Q UniRei90 Q AUS781UniRei90 UniRei90 Q AUS781V A Q T T Q P A A N F H G K I A A L L V S L V N H F N T I C D A T Q E R Q UniRei90 Q AUS781UniRei90 UniRei90 Q AUS781V A Q T T Q P E S R L E V A A A L R S N T D T L V V H N T V C Q A T H Q R Q UniRei90 Q AUJ7 T N L K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R Q UniRei90 Q AUJ7 T M L K S E T E E I G K V F E K K N S H F L A F N T I C D A T Q E R Q UniRei90 Q AUJ7 T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T Q E R Q UniRei90 Q AUJ7 Y V A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T Q E R Q UniRei90 Q AUJ12 UNIREi90 Q AUJ12 V A N Q T T M L K S E T E E I G K V F E K M N H F V S F N T I C D A T Q E R Q UniRei90 Q AUJ12 V A N Q T T M L K G E T E R I G K L F E E (L	UniRef90_A0YN97 UniRef90_O7V4T7	VANOTTMI KSETEEI GRIEEEI NKHEISENTI	CDATEERO
Uninkergo_Q/VDS2V A N Q T T ML K S E T E E I G R L F E E L N E H F A F N T I C D A T E E R QUniRergo_A2TGW4I A N Q T T ML K G E T E A I G K L M MQ K Y N H F M S F N T I C D A T Q E R QUniRergo_A0LJ95L V A Q T T Q N E E V F Q I Q E E F L K K Y P K G K V K N T I C D A T Q E R QUniRergo_A02LU9I A N Q T T ML K D E T E Q I Q E E F L K K Y P K G K V K N T I C D A T Q E R QUniRergo_A1FR8V T N Q T T M K D U Q A L M E H V R K K Y P H V E V H N E I C N A T Q P R QUniRergo_O40672V A N Q T T ML K S E T E Q I G K F E C N Q H F M S F N T I C D A T Q E R QUniRergo_O40672V A N Q T T ML K S E T E Q I G K L F E Q N Q H F M S F N T I C D A T Q E R QUniRergo_O7VJV5V S Q T T K Q P E H F G K I A A L V S L V N E C R F N T I C A T Q N R QUniRergo_O2N84Y A T Q T T L S V D E T Q G I I Q A L K D K Y P N I P K K E D I C Y A T Q N R QUniRergo_O2N731W L A Q T T Q P E S R L E E V Q A L A A L L V S L V N E C R F N T I C D A T Q R QUniRergo_O2N64Y A T Q T T L S V D E T Q G I I Q A L K D K Y P N I P K K E D I C Y A T Q N R QUniRergo_O2N739V A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R QUniRergo_O7N674V A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R QUniRergo_O2N7330V A N Q T T M L K G E T E R I G K F E R K T N D H F L A F N T I C D A T Q R R QUniRergo_O2N734V A N Q T T M L K G E T E R I G K F E R M A H Y O N F N T I C D A T Q R R QUniRergo_O2N74I A N Q T T M L K G E T E E I G K L F E Q N A H Y Q N F N T I C D A T Q E R QUniRergo_Q2XTB5V A N Q T T M K K Q D T R A V Y A A L R R Q Y P Q U Y Q P D T I C Y A V Q N R QUniRergo_Q2	UniRef90_Q0AXA2	LISQTTRDEKEFQKVAGALSNKCRELKVFNTI	CSATRSRQ
UniRei90_A0LJ95 L VA Q T T Q L E EVIF CALI Q E E FLIK K Y P K G K V K N T I CD A T Q E A Q UniRei90_A0LJ95 I A N Q T T Q L A C V Q A L ME H V B K K Y P K G K V K N T I CD A T Q E A Q UniRei90_A0LJ95 V T N Q T T M K D E T E Q I G K F E L N Q H F Q S F N T I CD A T Q F A Q UniRei90_Q191X6 V A N Q T T M K S E T E Q I G K F E Q N Q H F M S F N T I CD A T Q F A Q UniRei90_Q2781 WL S Q T T L S V D E T M R I V E R L R Q R F P K P P S D D I C Y A T Q N R Q UniRei90_Q2781 WL S Q T T L S V D E T Q G I I Q A L K D K Y P N P K E D I C Y A T Q N R Q UniRei90_Q2781 UniRei90_Q2783 V A N Q T T M K S E T E Q I G K F E K N T D T V V H N T V C Q A T A R Q UniRei90_Q2783 V A Q T T L S V D E T Q G I I Q A L K D K Y P N I P K K E D I C Y A T Q N R Q UniRei90_Q2783 V A N Q T T M K S E T E Q I G K V F E K N S H F L A F N T I C D A T E E R Q UniRei90_Q2783 V A N Q T T M K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R Q UniRei90_Q77839 V A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R Q UniRei90_Q7NG74 U A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R Q UniRei90_Q10000D73330 V A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R Q UniRei90_Q10000D73330 V A N Q T T M L K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R Q UniRei90_Q10000D73330 V A N Q T T M L K G E T E R L G K F F E K T N D H F L A F N T I C D A T Q E R Q UniRei90_Q100000D73330 V I T Q T T M L K G E T A D I G K L F E Q N A H Y Q N F N T I C D A T Q E R Q UniRei90_Q1000007 V V S Q T T E K M K N WE E T L K N L S Y A R E I L A F N T I C D A T Q E R Q UniRei90_Q2XTB5 I A N Q T T M L K G E T E A I G K L F M E K F Q H F V M D T I C D A T Q E R Q UniRei90_Q2XTB5 I A N Q T T M K K Q E T A D I G K L F M E K F Q H F V M D T I C D A T Q E R Q UniRei90_Q3XYL6 V V A Q T T M K K D V A Q I T M K K D V A Q I L M H Y I K G K F P K A I Q H Q E I C M A T Q F R Q UniRei90_Q3XYL6 V N A C T T R K P A D F L I V N S I I L K K K C Y F N T I C N A T F E N Q V N A	UniRef90_Q7VDS2	VANQITMLKSETEEIIGRLFEELNEHFLAFNTI IANOTTMIKGETEAIGKIMMOKYNHEMSENTI	CDATEERQ
UniRef90_A0ZJU9II A N Q T T ML K D E T E QI G K G K F E E N Q H F Q S F N T I C D A T Q F R QUniRef90_Q191X6V T N Q T T M S Q W D V Q A L M E H V R K K Y P H V E V H N E I C N A T Q F R QUniRef90_Q191X6V A Q T T ML K S E T E QI G K F E Q N Q H F M S F N T I C D A T Q F R QUniRef90_Q7X61WL A Q T T ML K S E T E QI G K L F E Q N Q H F M S F N T I C D A T Q R QUniRef90_Q7V375WL S Q T T L S V D E T M R I V E R L R Q R F P K P P S D D I C Y A T Q N R QUniRef90_Q7V375V A Q T T ML K S E T E QI G K L F E Q N Q H F M S F N T I C A T Q R R QUniRef90_Q7V375V S Q T T L S V D E T Q G I I Q A L K D K Y P N P K K E D I C Y A T Q N R QUniRef90_Q72057V L A Q T T Q P E S R L E E V A A A L R S N T D T L V V H N T V C Q A T H Q R QUniRef90_Q72665V L T Q T T S V D D T A T I A I A L K K R F P K V P S R K D L C Y A T Q N R QUniRef90_Q7V329V A N Q T T ML K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R QUniRef90_Q7V329V A N Q T T ML K S E T E E I G K V F E K N S H F L A F N T I C D A T E E R QUniRef90_Q7V329V A N Q T T ML K S E T E E I G K V F E K N S H F L A F N T I C D A T Q R R QUniRef90_Q7V329V A N Q T T ML K G E T E R L G K F E R A D H F M S H D T I C D A T Q R R QUniRef90_Q2WJ12V S Q T T E K M K N WE E T L K N L S Y A R E I L A F N T I C D A T Q R R QUniRef90_Q10WA8I A N Q T T ML K G E T E A I G K L F E Q N A H Y Q N F N T I C D A T Q E R QUniRef90_Q2XTB5I A N Q T T ML K G E T A D I G K L F M E K F Q H F V M D T I C D A T Q E R QUniRef90_Q3ZYL6V N A C T T M K W D V A D L M H Y I K G K F P K A I Q H Q E I C M A T Q F R QUniRef90_Q3ZYL6V A Q T T	UniRef90_A0LJ95	L VA Q T T QNE EVFQEI QEEFLKKYPKGKVKNTI	CDSTHERQ
UniRei90_Q191X6 UniRei90_Q191X6 UniRei90_Q204Cf2 UniRei90_Q207X11 UniRei90_Q9X781 UniRei90_Q7VJV5 UNIREi90_Q7VJV5 UNIREi90_Q7VJV5 UNIREi90_Q7VJV5 UNIREi90_Q7VJV5 UNIREi90_Q7VJV5 UNIREi90_Q7VJV5 UNIREi90_Q7VJ29 UNIREi90_Q7V330 UNIREi90_Q7V330 UNIREi90_Q7V330 UNIREi90_Q7V330 UNIREi90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V329 UNIREI90_Q7V	UniRef90_A0ZJU9	I A N Q T T MLK D E T E QI G K L F E E L N Q H F Q S F N T I	CDATQERQ
UniRef90_04C6T2VANQTTMLKSETEQIGKLFEQLNQHFMSFNTIGDATQERQUniRef90_09X781WLSQTTLSVDETMRIVERLRQRFPKLPPSDDIGYATQNRQUniRef90_07VJV5VSQTTKQPEHFGKIAALLVSLVNECRFPKLPPSDDIGYATQNRQUniRef90_07VJV5VSQTTLSVDETQGIIQALKDKYPNIPKKEDIGYATQNRQUniRef90_07VJ75VLAQTTQPESRLEEVAAALRSNTDTLVVERCAAALRSNTDTLVVAHNTVCQATHQRQUniRef90_07SNGK4YATQTTLSVDETCGIIQALKDKYPNIPKKEDIGYATQNRQUniRef90_072G65VLTQTTLSVDDTLATIAILKKRFPKVPSRKDLCYATQNRQUniRef90_07NG74VANQTTMLKSETEEIGKVFEKLNSHFLAFNTICDATEERQUniRef90_07NG74VANQTTMLKSETEEIGKFFERLADHFLAFNTICDATGERQUniRef90_020WJ12VSQTTEKMKNWEETLKNLSYAREILAFNTICAATDVRQUniRef90_01000D73303YITQTTESKMKNWEETLKNLSYAREILAFNTICAATDVRQUniRef90_021000A8IANQTTMLKGETEAIGKLFEQLNAHYQNFNTICDATQERQUniRef90_021356IANQTTMLKGETADIGKLFMCKFQHFVVMDTICDATQERQUniRef90_023X1B5IANQTTMLKGETADIGKLFKCKFPKALQHQEICMATQERQUniRef90_023X16VAQTTRKPADFELIVNSLIKKCKFPKALQHQEICMATQERQUniRef90_032YL6VAQTTRKPADFELIVNSLILKKDAEIRAADTLCHAFPRDR	UniRef90 Q191X6	V LAQTTQPAANFHGI VDELKTHTHALKVHNTI	CNATEERQ
UniReigo_Q3X/61WL S Q T T K Q P E H F GK I A ALL VS V P K L P S D D G Y A T Q N R QUniReigo_Q7VJV5V S Q T T K Q P E H F GK I A ALL VS V N E G R F N T I G S A T F E N QUniReigo_Q2NGK4Y A T Q T T L S V D E T Q GI   Q A L K D K Y P N   P K K E D I G Y A T Q N R QUniReigo_Q2NGK4Y A T Q T T L S V D E T Q GI   Q A L K D K Y P N   P K K E D I G Y A T Q N R QUniReigo_Q2NGK4Y L T Q T T L S V D D L A T   A   L K K R S N T D T L V V   H N T V C Q A T H Q R QUniReigo_Q7VG25V L T Q T T S V D D L A T   A   L K K R F P K V P S R K D L G Y A T Q N R QUniReigo_Q7V329V A N Q T T ML K S E T E E I G K V F E K L N S H F L A F N T I C D A T E E R QUniReigo_Q2NJ12V A N Q T T ML K S E T E E I G K F E K T N D H F L A F N T I C D A T Q R R QUniReigo_Q2WJ12V S Q T T E K M K N W E E T L K N L S Y A R E I L A F N T I C D A T Q R QUniReigo_Q10000D73303Y I T Q T T S M D D T R A V YA A L R Q R Y P Q I V Q P D T I C Y A V Q N R QUniReigo_Q100WA8I A N Q T T ML K G E T E E I G K L F E Q N A H Y Q N F N T I C D A T Q E R QUniReigo_Q100W36I A N Q T T ML K G E T A D I G K L F M E K F Q H F V V M D T I C D A T Q E R QUniReigo_Q2XTB5I A N Q T T ML K G E T A D I G K L F M E K F Q H F V V M D T I C D A T Q E R QUniReigo_Q3ZYL6V V A Q T T M K W D V A D L M H Y I K G K F P K A I Q H Q E I C M A T Q F R QUniReigo_Q3ZYL6V V A Q T T R K P A D F L E I V N S L I L K H K E V R V F N T I C N A T F E N Q	UniRef90_Q4C6T2	VANQTTMLKSETEQI GKLFEQLNQHFMSFNTI	CDATQERQ
UniRe190_Q5NGK4YATQTTLSVDETQGIQALKDKYPNTCUniRe190_Q72G65VLTQTTLSVDDTLATIALKDKYPNTCQATHQRQUniRe190_Q72G65VLTQTTLSVDDTLATIALKKKLNSHFLAFNTICQATERQUniRe190_Q72G65VLTQTTLSVDDTLATIALKKKLNSHFLAFNTICQATERQUniRe190_Q72329VANQTTMLKSETEEIGKVFEKLNSHFLAFNTICDATERQUniRe190_Q707074VANQTTMLKSETEEIGKFFEKTNDHFLAFNTICDATERQUniRe190_Q2WJ12VANQTTMLKSETEEIGKLFELAPNTICDATERQUniRe190_Q2WJ12VANQTTMLKGETERLGKLFERLADHFMSHDTICDATQERQUniRe190_Q2WJ12VISQTTEKMKNWEETLKNLSYAREILAFNTICAATDVRQUniRe190_Q2WJ12VISQTTEKKMKNWEETLKNLSYAREILAFNTICAATDVRQUniRe190_Q2WJ12VISQTTEKKMKNWEETLKNLSYAREILAFNTICAATDVRQUniRe190_Q1000057330YLTQTTKSMDDTRAVVAALERQKYPQLVQNFNTICAATQERQUniRe190_Q100086IANQTTMLKGETEAIGKLFEQLNAHYQNFNTICDATQERQUniRe190_Q2XTB5IANQTTMLKGETADIGKLMQKYNHFVSFNTICDATQERQUniRe190_Q3ZYL6VVAQTTRKPADFLEIVNSLIKKDKAALQHQEICMATQVRQUNIR190_Q3ZYL6VZQTTCQIPTGFKNVIDQFTGFKNVIDQALVKDAEIRADTCC	UniRef90_Q9X/81 UniRef90_Q7VJV5	USQTTKQPEHFGKIAALLVSLVNECRIFNTI	CSATEENO
UniRef90_Q2RU07V L A Q T T Q P E S R L E E VIA A A L R S N T D T L V VIH N T V C Q A T H Q R QUniRef90_Q72G65V L T Q T T L S V D D T L A T L A I L K K R F P K V P S R K D L G Y A T Q N R QUniRef90_Q7V329V A N Q T T M L K S E T E E I G K V F E K L N S H F L A F N T I C D A T E E R QUniRef90_Q7NG74I A N Q T T M L K S E T E E I G K V F E K L N S H F L A F N T I C D A T E E R QUniRef90_Q2WJ12V S Q T T E K M K N W E T L K N L S Y A R E I L A F N T I C D A T Q E R QUniRef90_Q10000D73330Y L T Q T T L S M D D T R A V VA A L R Q R Y P Q V Q P D T I C Y A VQ N R QUniRef90_Q10WA8I A N Q T T M L K G E T E E I G K L F E Q N A H Y Q N F N T I C D A T Q E R QUniRef90_Q103S6I A N Q T T M L K G E T A D I G K L F M E K P C H Y V M D T I C D A T Q E R QUniRef90_Q2XTB5I A N Q T T M L K G E T A D I G K L F M E K P C H F V V M D T I C D A T Q E R QUniRef90_Q3ZYL6V V A Q T T R K P A D F L E I V N S L I L K K H K E V R VF N T I C M A T Q F R QUniRef90_Q3ZYL6V V A Q T T R K P A D F L E I V N S L I L K H K E V R VF N T I C M A T F R D R Q	UniRef90_Q5NGK4	YATQTTLSVDETQGI DQALKDKYPN PKKEDI	CYATQNRQ
UniRef90_Q7V329V Å N Q T T ML K S E T E E I G K V F E K L N S H F L A F N T I C D A T E E R QUniRef90_A2BUP5V Å N Q T T ML K S E T E E I G K F F E K T N D H F L A F N T I C D A T E E R QUniRef90_Q2WJ12V S Q T T E K M K N W E T L K N L S Y A R E I L A F N T I C D A T Q E R QUniRef90_Q10000D73330VI T Q T T L S M D D T R A V VA A L R Q R Y P Q V Q P D T I C A A T D V R QUniRef90_Q10WA8I A N Q T T ML K G E T E E I G K L F E Q N A H Y Q N F N T I C D A T Q E R QUniRef90_Q103S6I A N Q T T ML K G E T A D I G K L F E Q N A H Y Q N F N T I C D A T Q E R QUniRef90_Q2XTB5I A N Q T T ML K G E T A D I G K L F M C K Y N H F V S F N T I C D A T Q E R QUniRef90_Q3ZYL6V V A Q T T R K P A D F L E I V N S L I L K H K E V R VI D Q A L V K D A E I R J A D T L C H D R D R Q	UniRef90_Q2RIU7	V L A Q T T Q P E S RIL E E VIA A AL R S N T D T L V V H N T V	CQATHQRQ
UniRef90_A2BUP5V A N Q T T ML K S E T E E I G K F F E K T N D H F A F N T I C D A T E E R QUniRef90_Q7NG74I A N Q T T ML K G E T E R I G K L F E R L A D H F M S H D T I C D A T Q E R QUniRef90_Q2WJ12V S Q T T E K M K N W E T L K N L S Y A R E I L A F N T I C A A T D V R QUniRef90_Q1000D73330YI T Q T T L S M D D T R A V V A A L R Q R Y P Q I V G P D T I C A A T D V R QUniRef90_Q10WA8I A N Q T T ML K G E T E A I G K L F E Q L N A H Y Q N F N T I C D A T Q E R QUniRef90_Q13S6I A N Q T T ML K G E T E A I G K L F ME K F Q H F V V M D T I C D A T Q E R QUniRef90_Q2XTB5I A N Q T T ML K G E T A D I G K L F ME K F Q H F V V M D T I C D A T Q E R QUniRef90_Q32X16V N Q T T M S K W D V A D L M H Y I K G K F P K A I Q H Q E I C M A T Q R QUniRef90_Q32YL6V V A Q T T R K P A D F L E I V N S L I L K H K E V R V F N T I C A A T F R D R Q	UniRef90_Q7V329	VÁNQTTMLKSETEEIGKVFEKLNSHFLAFNTI	CDATEERQ
UniReigo_Q2WJ12       V V S Q T T E K M K N WE T L K NLS Y A R E I L A F N T I C A A T D VR Q         UniReigo_Q2WJ12       V V S Q T T E K M K N WE T L K NLS Y A R E I L A F N T I C A A T D VR Q         UniReigo_Q10000D73330       Y I T Q T T L S M D D T R A V V A AL R Q R Y P Q I V Q P D T I C Y A VQ N R Q         UniReigo_Q10000D73330       Y I T Q T T L S M D D T R A V V A AL R Q R Y P Q I V Q P D T I C Y A VQ N R Q         UniReigo_Q013S6       I A N Q T T ML K T E T E E I G K L F E Q L N A H Y Q N F N T I C D A T Q E R Q         UniReigo_Q2XTB5       I A N Q T T ML K G E T E A I G K L F M E K F Q H F V V D A T Q E R Q         UniReigo_Q2XTB5       I A N Q T T ML K G E T A D I G K L MM Q K Y N H F V S F N T I C D A T Q E R Q         UniReigo_Q3XYL6       V T N Q T T M S K W D V A D L M H Y I K G K F P K A I Q H Q E I C M A T Q V R Q         UniReigo_Q3ZYL6       V L S Q T T Q P T G F K N V I D Q A L V K D A E I R I A D T L C H D R D R Q	UniRef90_A2BUP5	VANQTTMLKSETEEL GKEFEKTNDHELAFNT	CDATEERQ
UniRef90_UP10000D73330       YI T Q T T S M D D T R A V V A AL R Q R Y P QI V G P D T I G Y A V Q N R Q         UniRef90_Q100M8       I A N Q T T ML K T E T E E I G K L F E QL N A H Y Q N F N T I C D A T Q E R Q         UniRef90_Q01356       I A N Q T T ML K G E T E A I G K L F M E K F Q H F V V D T I C D A T Q E R Q         UniRef90_Q2XTB5       I A N Q T T ML K G E T A D I G K L M M Q K Y N H F V S F N T I C D A T Q E R Q         UniRef90_Q6W3K2       V T N Q T T M S K W D V A D L M H Y I K G K F P K A I Q H Q E I C M A T Q V R Q         UniRef90_Q3ZYL6       V V A Q T T R K P A D F L E I V N S L I L K H K E V R V F N T I C A T F E N Q	UniRef90_Q2WJ12	VVSQTTEKMKNWEETLKNLS YAREI LAFNTI	
UniReigo_Q013S6       I A N Q T T MIL K G E T E A I G K L F E Q L N A H Y Q N F N T I C D A T Q E R Q         UniReigo_Q013S6       I A N Q T T ML K G E T E A I G K L F ME K F Q H F V V M D T I C D A T Q E R Q         UniReigo_Q2XTB5       I A N Q T T ML K G E T A D I G K L M M Q K Y N H F V S F N T I C D A T Q E R Q         UniReigo_Q2XTB5       I A N Q T T ML K G E T A D I G K L M M Q K Y N H F V S F N T I C D A T Q E R Q         UniReigo_Q58676       V T N Q T T M S K W D V A D L M H Y I K G K F P K A I Q H Q E I C M A T Q V R Q         UniReigo_G6W3K2       V A Q T T R K P A D F L E I V N S L I L K H K E V R V F N I C N A T F E N Q         UniReigo_Q3ZYL6       V L S Q T T Q P T G F K N V I D Q A L V K D A E I R A D T L C H D R D R Q	UniRef90_UPI0000D73330	Y L T Q T T L S M D D T R A V VA A L R Q R Y P Q L V G P D T I	
UniRef90_Q2XTB5       I A N Q T T ML K G E T A D I G K L M M Q K Y N H F V S F N T I C D A T Q E R Q         UniRef90_P58676       V T N Q T T M S K W D V A D L M H Y I K G K F P K A I Q H Q E I C M A T Q V R Q         UniRef90_Q6W3K2       V V A Q T T R K P A D F L E I V N S L I L K H K E V R V F N T I C N A T F E N Q         UniRef90_Q3ZYL6       V L S Q T T Q I P T G F K N V I D Q A L V K D A E I R A D T L C H D I R D R Q	UniRef90 Q013S6	I ANQTTMLKGETEAI GKLFEQLNAHYQNFNI	CDATQERQ
UniRef90_Q6W3K2 UniRef90_Q3ZYL6 V L S Q T T Q L P T G F K N V I D Q A L V K D A E I R L A D T L C H D L R D R Q	UniRef90_Q2XTB5	LANQTTMLKGETADI GKLMMQKYNHFVSFNTI	CDATQERQ
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	UniRef90_Q3ZYL6	V L S Q T T Q P T G F K N V I D Q A L V K D A E I R A D T L	CHDERDRQ

	210 220 230 240
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UniRef90_Q3J5X0	GAVKATAGRODALLVIGAPNSSNSKRLVEVGRAAG <mark>C</mark> RAQL
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UniRef90_A0Q0L7	E S A E K L S Q K V D S M V V I G G Y H S S N T K L Y E I <mark>C</mark> K K N C E N T I H E A V B E I S S B A D V M V I I G G K N S S N T K O I Y I I S K N I C P D S Y I
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UniRef90_Q187C6	E S A K E L A K E V D <mark>C</mark> MI V I G G K H S S N T Q K L V K V <mark>C</mark> E D L V P T F A E A V B K L S K K A D L MI L L G G K N S S N T K Q L E S L S E D N C T D S Y H
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UniRef90_Q2RIU7	E A AVRLAR OV DVMV V V G G K E S A N T R H L A E L C R A T G T P T Y H
UniRef90_Q72G65 UniRef90_Q7V329	E A [V]K HI   <u>A</u> P K   V E <u>A F  </u> L V L   T S P H S S N G M R L L E   L A <u>Q</u> S <u>L</u> V <u>G</u> R A Y R D A M F S L V D E L D I L V V I <u>G</u> G Y N S S N T T H L Q E II A II N K N I S S F H
UniRef90_A2BUP5	DAMESLVNELDILVVIGGENSSNTTHLQEIAISNNIESFH
UniRef90_Q2WJ12	RSTNKI SKKTDAMI VIGGKNSSNTTKLYQIAKENCENTIH
UniRef90_UPI0000D73330 UniRef90_Q10WA8	LLA V K S L S K Q V Q L V L V V G G H N S A N S E T L R W V A E <mark>C</mark> E G I P S Y R D A L A G L F E K L D L M V V I G G F N S S N T T H L Q E M A L E N G I P S Y H
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UniRef90_Q6W3K2 UniRef90_Q3ZYL6	D A A E DIL A K K A DI I MI V I G G K H S S N I K QIL H SI T K K W C P D S Y L A A A L E L A G R V D L M L V I G G H N S A N T R H L L D L <mark>C</mark> K T V S N T H L

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UniRef90 Q8DK29	L
UniRef90_P58675	Ē
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UniRef90_UPI0000D73330 UniRef90_Q10WA8 UniRef90_Q013S6 UniRef90_Q2XTB5 UniRef90_P58676	WMPVEL MK LKREEALQ EDAADKTT
UniRef90_UP10000D73330 UniRef90_Q10WA8 UniRef90_Q013S6 UniRef90_Q2XTB5 UniRef90_Q2XTB5 UniRef90_Q6W3K2 UniRef90_Q6W3K2	WMPVEL MK EDAADKTT

UniRef90_Q97I09 UniRef90_Q2I11 UniRef90_Q2I11 UniRef90_Q2XLP6 UniRef90_Q3A625 UniRef90_Q3VW18 UniRef90_Q3VW18 UniRef90_Q3GFY7 UniRef90_Q3I5191 UniRef90_Q4R152 UniRef90_Q4R152 UniRef90_Q316F5 UniRef90_Q4JIR7 UniRef90_Q4JIR7 UniRef90_Q4JIR7 UniRef90_Q4JR7 UniRef90_Q4JR7 UniRef90_Q4BEWR9 UniRef90_Q4BEWR9 UniRef90_Q4BEWR9 UniRef90_Q4AMW0 UniRef90_Q4APB7 UniRef90_Q44PB7 UniRef90_Q44PB7 UniRef90_Q14F56 UniRef90_Q3VMF5 UniRef90_Q3VMF5 UniRef90_Q3VMF5	10 M K V K A G F M L A A E K A H G G F M L A A E K A H G G F M L A A E K A H G G F M L A A E V G S G G F M K V L A A E V G S G G F M K V E L L A K S S S G F M K V E L L A K S S S S S S S S S S S S S S S S S S	20 A V D K A V D L A V D K A  K	30 30 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	40 EL GG P QL GG P QL L T F G GG D C T T L T F G GG D C T T L T F C L G G C D C T T L T F C L C G G C D C T T L T F C L C G G C D C T T L T F C L C G C C D C T T L T F C C C C C C C C C C C C C C C C C C
UniRef90_Q1MQE5 UniRef90_Q2XKH6 UniRef90_Q3AT23 UniRef90_Q3AT23 UniRef90_Q2S1D9 UniRef90_A1GMA0 UniRef90_A1GMA0 UniRef90_A1ZJU0 UniRef90_A0HQ83 UniRef90_Q0PH57 UniRef90_Q4PKE9 UniRef90_Q4PKE9 UniRef90_Q83558	MQVI HAKIAGT MIIKVAKNAGF LTLRLADEFGF MKLHLDRTSGF VRFKIARHFGF MQIVVAEGIGF VQVFVPRHFGF LELIVGQ YGF	C WGV DLAL H K CF GV E RAV D Y C G GV D RAV D Y C G G V Q G T I NV CF G V E Q A I EL C F G V E N A V E C F G V D N A V R E C F G V D N A V R E		N I R FIVMY GLI DKSVKVY GML DR RI FLT GDM G QLYSYGDV DKRI FLLSEM GSVWTDDDI DDKI HLTNEL DKRVFLLSEM GENLFTDGEV GS PVYVKHSL B GSVYTLGPL
UniRef90_Q89AV1 UniRef90_Q7MUK6 lupas_21 lupas_14 lupas_28	MKLLËNPRSF	ĊŎĔŦĸŔĂĹSĔ	VNCACK TW	ĠĸĊĹŶŴŇĤĸĹ
sol25 sol5 sol0 jhmm jossm	9 7 5 8 9 8 1 6 8 8 8 5 B B B B B B B B B B B B B B B B B B B	4 5 0 6 8 9 9 9 9 9 9 B B B B B B B B B B B B B B	9 9 9 9 9 9 8 5 4 8 B B B B B B B	8 9 6 5 8 8 6 0 3 2 B B B B B B B B B B B B B B B B

Figure S1 (continued).

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lupas_21 lupas_14 lupas_28 jnet conf sol25 sol0 jhmm jpssm Figure S1 (continue	2 3 5 6 8 8 9 9 9 8 7 5 5 8 7 0 6 6 2 4 6 7 7 7 7 7 3 5 7 8 7 4 4 7 7 7 4 7 8 9 B B B B B B B B B B B B B B B B B B B

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JniRef90_P21864 JniRef90_Q3VMP5 JniRef90_Q7MWK6 JniRef90_Q2X1F7 JniRef90_Q2XH7 JniRef90_Q2XH6 JniRef90_Q2XH6 JniRef90_Q3AT23 JniRef90_Q2S1D9 JniRef90_A1GMA0 JniRef90_A1GMA0 JniRef90_A1GMA0 JniRef90_Q5K294 JniRef90_Q5K294 JniRef90_Q0PH57 JniRef90_Q0PH57 JniRef90_Q4PKE9 JniRef90_Q83S58 JniRef90_Q89AV1 JniRef90_Q89AV1 JniRef90_Q7MUK6	F V T Q T T L L S Q T T F L S Q T T F L S Q T T V V C V A N Q T T V V Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I A S Q T T I S Q T T I A S Q T T I S Q T T I A S Q T T I S Q T T I A S Q T T I S Q T T T I S Q T T I	LIS MD D MD V P G F MD V E G F S S L E T F S S L E T F MD A E E MD A E E MD A E E MD A E E MD A E E MS Y T D F MS Y K E E MS S L D D K L S V F D F L S K K H S F L S K K H S	$ \begin{array}{c} F N V V I D V F G Q I I D F G G Q I I D G Y F G Q I I D G Y G G G I I D G Y G G G I G G G G G G G G$	L E A T REK SI E A T REK M H H Q E E R P R M H H E E E E K F K K K K K K K K K K K K K K K K K K	F P S L F K D T $M Q T F E H H D T$ $F E Q P V I L N T$ $G L Q P V I L N T$ $Y K V F D T$ $Y E H F E L F D T$ $Y G E A K V F K D T$ $Y G E A K V S D T$ $G P H F M A L D T$ $G K E I K V T N T$ $F P E L P K K S T$ $F P E L P K K S T$ $F P G K D H K D T$	C C R QV S S R N C R QV A N R I C R QV A N R I C C R QV A N R E C C R QV T V N R E C C R QV T V N R E C C R QV S S R N C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C C S A T Q D R Q C S A T Q C S A T A R R Q C M W A A G R I
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Figure S1 (continued).

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sol25 sol5 sol0 jhmm jpssm Figure S1 (continued).

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