

Results colour-coded for secondary structure

The current colourscheme of the alignment is for **secondary structure type**.

The 3-state (H, E C) secondary structure for each sequence is represented by a colour. If a sequence in the alignment has no colours assigned, this means that either there is no DSSP information available (if this was requested), or that no prediction was possible for that sequence (if this was requested).
The colour assignments are:

HELIX (H) **STRAND (E)** You have selected to perform secondary structure prediction using **DSSP** ([Kabsch and Sander, 1983](#)) and **PSIPRED** ([Jones, 1999](#)).

		..... 10	..... 20	..... 30	..... 40	..... 50
(PRED)	gi_13633932_sp_	-----	-----	-----	-----	-----
(PRED)	gi_118573879_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633915_sp_	-----	-----	-----	-----	-----
(PRED)	gi_341942042_sp_	-----	-----	-----	-----	-----
(PRED)	gi_82121811_sp_	-----	-----	-----	-----	-----
(PRED)	gi_21264062_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959533_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959566_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959559_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633872_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959539_sp_	-----	-----	-----	-----	-----
(PRED)	gi_21264049_sp_	-----	-----	-----	-----	-----
(PRED)	gi_66774168_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959527_sp_	-----	-----	-----	-----	-----
(PRED)	gi_51338669_sp_	-----	-----	-----	-----	-----
(PRED)	gi_60414603_sp_	-----	-----	-----	-----	-----
(PRED)	gi_117949830_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633871_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633914_sp_	-----	-----	-----	-----	-----
(PRED)	gi_75041393_sp_	-----	-----	-----	-----	-----
(PRED)	gi_110826300_sp_	-----	-----	-----	-----	-----
(PRED)	gi_21264050_sp_	-----	-----	-----	-----	-----
(PRED)	gi_341942043_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959528_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959561_sp_	-----	-----	-----	-----	-----
(PRED)	gi_116256078_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959531_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959540_sp_ MFRSK	RSGLV	RRLW	RSRVVP	DREEGSG-GG	GGVDEDGSLG SRAEPAPRAR
(PRED)	gi_115502451_sp MFRSK	RSGLV	RRLW	RSRVVP	DREEGSGGGG	GGGDEDGSLG SRAEPAPRAR
(PRED)	gi_13959573_sp_ MFRSK	RSGLV	RRLW	RSRVIP	ERDGGDGNGQ	SSERNATAVT AEG-----
(PRED)	gi_13959541_sp_ MFRTK	RSALV	RRLW	RSRAPG	GEDEEEGVGG	GGGG--GELR GEG-----
(PRED)	gi_13959538_sp_ MFRTK	RSALV	RRLW	RSRAPG	GEDEEEGAGG	GGGG--GELR GEG-----
(PRED)	gi_13959529_sp_ MFRTK	RSALV	RRLW	RSRAPG	GEDEEEGVGG	GGGG--GGLR GEG-----
		..... 60	..... 70	..... 80	..... 90	..... 100
(PRED)	gi_13633932_sp_	-----	-----	-----	-----	-----
(PRED)	gi_118573879_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633915_sp_	-----	-----	-----	-----	-----
(PRED)	gi_341942042_sp_	-----	-----	-----	-----	-----
(PRED)	gi_82121811_sp_	-----	-----	-----	-----	-----
(PRED)	gi_21264062_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959533_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959566_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959559_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633872_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959539_sp_	-----	-----	-----	-----	-----
(PRED)	gi_21264049_sp_	-----	-----	-----	-----	-----
(PRED)	gi_66774168_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959527_sp_	-----	-----	-----	-----	-----
(PRED)	gi_51338669_sp_	-----	-----	-----	-----	-----
(PRED)	gi_60414603_sp_	-----	-----	-----	-----	-----
(PRED)	gi_117949830_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633871_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13633914_sp_	-----	-----	-----	-----	-----
(PRED)	gi_75041393_sp_	-----	-----	-----	-----	-----
(PRED)	gi_110826300_sp_	-----	-----	-----	-----	-----
(PRED)	gi_21264050_sp_	-----	-----	-----	-----	-----
(PRED)	gi_341942043_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959528_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959561_sp_	-----	-----	-----	-----	-----
(PRED)	gi_116256078_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959531_sp_	-----	-----	-----	-----	-----
(PRED)	gi_13959540_sp_ EGGGC	SRSEV	RSVAPRRPRD	AVGPRGAAIA	GRRRRTGGLP	RPVSESGAGA

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(PRED) gi_115502451_sp EGGGCGRSEV RPVAPRRPRD AVGQ RGAQGA GRRRRAGGPP RPMSEPGAGA
(PRED) gi_13959573_sp -----
(PRED) gi_13959541_sp -----
(PRED) gi_13959538_sp -----
(PRED) gi_13959529_sp -----

          . . . . . 110. . . . . 120. . . . . 130. . . . . 140. . . . . 150
(PRED) gi_13633932_sp -----M---N VTSLFS-----
(PRED) gi_118573879_sp -----M---N VTSLFS-----
(PRED) gi_13633915_sp -----M---N VTSLFS-----
(PRED) gi_341942042_sp -----M---N VTSLFS-----
(PRED) gi_82121811_sp -----M--TS MASLFS-----
(PRED) gi_21264062_sp -----M--TS MSSLFS-----
(PRED) gi_13959533_sp -----M--TS MASLFS-----
(PRED) gi_13959566_sp -----M--TS MASLFS-----
(PRED) gi_13959559_sp -----M--TS MASLFS-----
(PRED) gi_13633872_sp -----M---N VTSLFS-----
(PRED) gi_13959539_sp -----MHST--TP ISSLFS-----
(PRED) gi_21264049_sp -----M---N VTSLFS-----
(PRED) gi_66774168_sp -----MHPS--TP ISSLFS-----
(PRED) gi_13959527_sp -----MHPS--TP ISSLFS-----
(PRED) gi_51338669_sp -----MSSILP-----
(PRED) gi_60414603_sp -----MSSILP-----
(PRED) gi_117949830_sp -----MSSILP-----
(PRED) gi_13633871_sp -----MSSILP-----
(PRED) gi_13633914_sp -----MSSILP-----
(PRED) gi_75041393_sp -----MSSILP-----
(PRED) gi_110826300_sp -----MSSILP-----
(PRED) gi_21264050_sp -----MSSILP-----
(PRED) gi_341942043_sp -----MDNMSITN TPTSND-----
(PRED) gi_13959528_sp -----MDNMSITN TPTSND-----
(PRED) gi_13959561_sp -----MDNMSITN TPTSND-----
(PRED) gi_116256078_sp -----MDNMSITN TPTSND-----
(PRED) gi_13959531_sp -----MDNMSITN TPTSND-----
(PRED) gi_13959540_sp GGSPLDVAEP GGPGWLPESD CETVTCCLFS ERDAAGAPRD SGDPQARQSP
(PRED) gi_115502451_sp GSSLLDVAEP GGPGWLPESD CETVTCCLFS ERDAAGAPRD ASDPLAGAAL
(PRED) gi_13959573_sp -----QRM AQPRAAQEGE GRPVRCCLEFA ERPGPELPPP PPPPPPPGG--
(PRED) gi_13959541_sp -----ATD GRAYGAGGGG AGRAGCCLGK AVRGAKE-----
(PRED) gi_13959538_sp -----ATD SRAHGAGGGG PGRAGCCLGK AVRGAKE-----
(PRED) gi_13959529_sp -----ATD GRAYGAGGGG AGRAGCCLGK AVRGAKE-----

          . . . . . 160. . . . . 170. . . . . 180. . . . . 190. . . . . 200
(PRED) gi_13633932_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_118573879_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_13633915_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_341942042_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_82121811_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_21264062_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_13959533_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_13959566_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_13959559_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_13633872_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_13959539_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDS
(PRED) gi_21264049_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDA
(PRED) gi_66774168_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDS
(PRED) gi_13959527_sp -----FT SPAVKRLLGW KQ-----GDEE EKWAEKAVDS
(PRED) gi_51338669_sp -----FT PPIVKRLLGW KK-----GEQNGQE EKWCEKAVKS
(PRED) gi_60414603_sp -----FT PPIVKRLLGW KK-----GEQNGQE EKWCEKAVKS
(PRED) gi_117949830_sp -----FT PPVVKRLLGW KKSAGGSG-G AGGGEQNGQE EKWCEKAVKS
(PRED) gi_13633871_sp -----FT PPVVKRLLGW KKSAGGSG-G AGGGEQNGQE EKWCEKAVKS
(PRED) gi_13633914_sp -----FT PPVVKRLLGW KKSAGGSG-G AGGGEQNGQE EKWCEKAVKS
(PRED) gi_75041393_sp -----FT PPVVKRLLGW KKSAGGSG-G AGGGEQNGQE EKWCEKAVKS
(PRED) gi_110826300_sp -----FT PPVVKRLLGW KKSAGGSG-G AGGGEQNGQE EKWCEKAVKS
(PRED) gi_21264050_sp -----FT PPVVKRLLGW KKSAGSSGA GGGGEQNGQE EKWCEKAVKS
(PRED) gi_341942043_sp -----AC LSIVHSLMCH RQ-----GGES ETFAKRAIES
(PRED) gi_13959528_sp -----AC LSIVHSLMCH RQ-----GGES ETFAKRAIES
(PRED) gi_13959561_sp -----AC LSIVHSLMCH RQ-----GGES ETFAKRAIES
(PRED) gi_116256078_sp -----AC LSIVHSLMCH RQ-----GGES ETFAKRAIES
(PRED) gi_13959531_sp -----AC LSIVHSLMCH RQ-----GGES ETFAKRAIES
(PRED) gi_13959540_sp EPEGGGPRS REARSRLLLL -----EQELKTVTYS
(PRED) gi_115502451_sp EP--AGGGRS REARSRLLLL -----EQELKTVTYS
(PRED) gi_13959573_sp -----AS PPGPGGGEAR SR-----LVLL ERELKAVTYA
(PRED) gi_13959541_sp -----GH HHPHPPTSGA GA-----AGGA EADLKALTHS
(PRED) gi_13959538_sp -----GH HHPHPPAAGA GA-----AGGA EADLKALTHS
(PRED) gi_13959529_sp -----GH HHPHPSSGA GA-----AGGA EADLKALTHS

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..... 210..... 220..... 230..... 240..... 250
(PRED) gi_13633932_sp LVKKLKKKKG AMEELEKALS CPG-QPSNCV TIP-----
(PRED) gi_118573879_sp LVKKLKKKKG AMEELEKALS CPG-QPSNCV TIP-----
(PRED) gi_13633915_sp LVKKLKKKKG AMEELEKALS CPG-QPSNCV TIP-----
(PRED) gi_341942042_sp LVKKLKKKKG AMEELEKALS CPG-QPSNCV TIP-----
(PRED) gi_82121811_sp LVKKLKKKKG AMEELEKALS SPG-QPSKCV TIP-----
(PRED) gi_21264062_sp LVKKLKKKKG AMEDLEKALS SPG-QPSKCV TIP-----
(PRED) gi_13959533_sp LVKKLKKKKG AMEELEKALS SPG-QPSKCV TIP-----
(PRED) gi_13959566_sp LVKKLKKKKG AMEELEKALS SPG-QPSKCV TIP-----
(PRED) gi_13959559_sp LVKKLKKKKG AMEELEKALS SPG-QPSKCV TIP-----
(PRED) gi_13633872_sp LVKKLKKKKG AMEELEKALS CPG-QPSNCV TIP-----
(PRED) gi_13959539_sp LVKKLKKKKG AMDELERALS CPG-QPSKCV TIP-----
(PRED) gi_21264049_sp LVKKLKKKKG AMEELERALS CPG-QPSNCV TIP-----
(PRED) gi_66774168_sp LVKKLKKKKG AMDELERALS CPG-QPSKCV TIP-----
(PRED) gi_13959527_sp LVKKLKKKKG AMDELERALS CPG-QPSKCV TIP-----
(PRED) gi_51338669_sp LVKKLKK-TG QLDELEKAIT TQN-VNTKCI TIP-----
(PRED) gi_60414603_sp LVKKLKK-TG QLDELEKAIT TQN-INTKCI TIP-----
(PRED) gi_117949830_sp LVKKLKK-TG RLDELEKAIT TQN-CNTKCV TIPSTCSEIW GLSTANTVDQ
(PRED) gi_13633871_sp LVKKLKK-TG RLDELEKAIT TQN-CNTKCV TIPSTCSEIW GLSTANTVDQ
(PRED) gi_13633914_sp LVKKLKK-TG RLDELEKAIT TQN-CNTKCV TIPSTCSEIW GLSTPNTIDQ
(PRED) gi_75041393_sp LVKKLKK-TG RLDELEKAIT TQN-CNTKCV TIPSTCSEIW GLSTPNTIDQ
(PRED) gi_110826300_sp LVKKLKK-TG RLDELEKAIT TQN-CNTKCV TIPSTCSEIW GLSTPNTIDQ
(PRED) gi_21264050_sp LVKKLKK-TG QLDELEKAIT TQN-RNTKCV TIPSNCSEIW GLSTPNTIEQ
(PRED) gi_341942043_sp LVKKLKEKKD ELDSLITAIT TNGAHP SKCV TIQ-----
(PRED) gi_13959528_sp LVKKLKEKKD ELDSLITAIT TNGAHP SKCV TIQ-----
(PRED) gi_13959561_sp LVKKLKEKKD ELDSLITAIT TNGAHP SKCV TIQ-----
(PRED) gi_116256078_sp LVKKLKEKKD ELDSLITAIT TNGAHP SKCV TIQ-----
(PRED) gi_13959531_sp LVKKLKEKKD ELDSLITAIT TNGAHP SKCV TIQ-----
(PRED) gi_13959540_sp LLKRLKE--R SLDTLLEAVE SRGGVPGGCV LVP-----
(PRED) gi_115502451_sp LLKRLKE--R SLDTLLEAVE SRGGVPGGCV LVP-----
(PRED) gi_13959573_sp LLKRLKE--R SLHSLLOAVE SRGGTPGGCV LVA-----
(PRED) gi_13959541_sp VLKKLKE--R QLELLLOAVE SRGGTRTACL LLP-----
(PRED) gi_13959538_sp VLKKLKE--R QLELLLOAVE SRGGTRTACL LLP-----
(PRED) gi_13959529_sp VLKKLKE--R QLELLLOAVE SRGGTRTACL LLP-----

..... 260..... 270..... 280..... 290..... 300
(PRED) gi_13633932_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_118573879_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13633915_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_341942042_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_82121811_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_21264062_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13959533_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13959566_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13959559_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13633872_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13959539_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_21264049_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_66774168_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13959527_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_51338669_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_60414603_sp -----RSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_117949830_sp WDTTGLYSFS EQTRSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13633871_sp WDTTGLYSFS EQTRSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_13633914_sp WDTTGLYSFS EQTRSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_75041393_sp WDTTGLYSFS EQTRSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_110826300_sp WDTTGLYSFS EQTRSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_21264050_sp WDTSGLYSYP DQTRSLDGRL -----QVS-HRKGL PH-----
(PRED) gi_341942043_sp -----RTL DGRL -----QVA-GRKGF PH-----
(PRED) gi_13959528_sp -----RTL DGRL -----QVA-GRKGF PH-----
(PRED) gi_13959561_sp -----RTL DGRL -----QVA-GRKGF PH-----
(PRED) gi_116256078_sp -----RTL DGRL -----QVA-GRKGF PH-----
(PRED) gi_13959531_sp -----RTL DGRL -----QVA-GRKGF PH-----
(PRED) gi_13959540_sp -----RADL -----RL-GGQPAP PQ-----
(PRED) gi_115502451_sp -----RADL -----RL-GGQPAP PQ-----
(PRED) gi_13959573_sp -----RGEL -----RLGAARRPP PH-----
(PRED) gi_13959541_sp -----GRLD CRL GPGAPASAQP AQP-PSSYSL P-----
(PRED) gi_13959538_sp -----GRLD CRL -----GP-GAPAGA QPAQPPSSYS
(PRED) gi_13959529_sp -----GRLD CRL GPGAPASAQP AQP-PSSYSL P-----

..... 310..... 320..... 330..... 340..... 350
(PRED) gi_13633932_sp --VIYCRVWR WPD LQS HHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_118573879_sp --VIYCRVWR WPD LQSHHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13633915_sp --VIYCRVWR WPD LQS HHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES

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(PRED) gi_341942042_sp --VIYCRVWR WPD LQS HHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_82121811_sp --VIYCRVWR WPD LQSHHEL KPLDICE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_21264062_sp --VIYCRVWR WPD LQSHHEL KPLEVCE-YP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13959533_sp --VIYCRVWR WPD LQSHHEL KPLDICE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13959566_sp --VIYCRVWR WPD LQSHHEL KPLDICE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13959559_sp --VIYCRVWR WPD LQSHHEL KPLDICE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13633872_sp --VIYCRVWR WPD LQS HHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13959539_sp --VIYCRVWR WPD LQSHHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_21264049_sp --VIYCRVWR WPD LQS HHEL KALECCE-FP FGSKQKDVCI NPYHYKRVD S
(PRED) gi_66774168_sp --VIYCRVWR WPD LQS HHEL KPLECCE-FP FGSKQKEVCI NPYHYKRRET
(PRED) gi_13959527_sp --VIYCRVWR WPD LQS HHEL KPLECCE-FP FGSKQKEVCI NPYHYKRRET
(PRED) gi_51338669_sp --VIYCRLWR WPD LQSHHEL RAMELCE-FA FNMKKDEV CV NPYHYQ RVET
(PRED) gi_60414603_sp --VIYCRLWR WPD LQSHHEL RAMEMCE-YA FNMKKDEV CV NPYHYQ RVET
(PRED) gi_117949830_sp --VIYCRLWR WPD LQSHHEL KAIENCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_13633871_sp --VIYCRLWR WPD LQSHHEL KAIENCE-YA FSLKKDEV CV NPYHYQ RVET
(PRED) gi_13633914_sp --VIYCRLWR WPD LQSHHEL KAIENCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_75041393_sp --VIYCRLWR WPD LQSHHEL KAIENCE-YA FNLKED EV CV NPYHYQ RVET
(PRED) gi_110826300_sp --VIYCRLWR WPD LQSHHEL KAIENCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_21264050_sp --VIYCRLWR WPD LQSHHEL RAIETCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_341942043_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCD SV CV NPYHYERVVS
(PRED) gi_13959528_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCD SV CV NPYHYERVVS
(PRED) gi_13959561_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCD SV CV NPYHYERVVS
(PRED) gi_116256078_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCD SV CV NPYHYERVVS
(PRED) gi_13959531_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCD SV CV NPYHYERVVS
(PRED) gi_13959540_sp --LLLGR LFR WPD LQH AVEL KPLCGCHSFT AAADGPTVCC NPYHFSRLCG
(PRED) gi_115502451_sp --LLLGR LFR WPD LQH AVEL KPLCGCHSFA AAADGPTVCC NPYHFSRLCG
(PRED) gi_13959573_sp --LLLGR LFR WPD LQH AVEL KALCECQ-SF GAADGPTVCC NPYHFSRLCG
(PRED) gi_13959541_sp --LLLCKVFR WPD LRHSSEV KRLCCCE-SY GKINPELVCC NPHHLSRLCE
(PRED) gi_13959538_sp LP LLLCKVFR WPD LRHSSEV KRLCCCE-SY GKINPELVCC NPHHLSRLCE
(PRED) gi_13959529_sp --LLLCKVFR WPD LRHSSEV KRLCCCE-SY GKINPELVCC NPHHLSRLCE

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..... 360..... 370..... 380..... 390..... 400

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(PRED) gi_13633932_sp PVLPPVLVPR HSEYNPQHSL LAQFRNL---G -QNEPHMPHN
(PRED) gi_118573879_sp PVLPPVLVPR HSEYNPQHSL LAQFRNL---G -QNEPHMPLN
(PRED) gi_13633915_sp PVLPPVLVPR HSEYNPQHSL LAQFRNL---G -QNEPHMPLN
(PRED) gi_341942042_sp PVLPPVLVPR HSEYNPQHSL LAQFRNL---G -QNEPHMPLN
(PRED) gi_82121811_sp PVLPPVLVPR HSEFNPQHSL LVQFRNL---S -HNEPHMPHN
(PRED) gi_21264062_sp PVLPPVLVPR HSEFNPQHSL LVQFRNL---S -HNEPHMPLN
(PRED) gi_13959533_sp PVLPPVLVPR HNEFNPQHSL LVQFRNL---S -HNEPHMPQN
(PRED) gi_13959566_sp PVLPPVLVPR HNEFNPQHSL LVQFRNL---S -HNEPHMPQN
(PRED) gi_13959559_sp PVLPPVLVPR HNEFNPQHSL LVQFRNL---S -HNEPHMPQN
(PRED) gi_13633872_sp PVLPPVLVPR HSEYNPQHSL LAQFRNL---G -QNEPHMPLN
(PRED) gi_13959539_sp PVLPPVLVPR HSEYNPQLSL LAKFRSA---S LHSEPLMPHN
(PRED) gi_21264049_sp PVLPPVLVPR NSEFNAKL SM LPRFRNP---L HQTEPPMPQN
(PRED) gi_66774168_sp PVLPPVLVPR HSEYNPQLSL LAKFRSA---S LHSEPLMPHN
(PRED) gi_13959527_sp PVLPPVLVPR HSEYNPQLSL LAKFRSA---S LHSEPLMPHN
(PRED) gi_51338669_sp PVLPPVLVPR HTEIPAEFPP LDDY----- ---SHSIPEN
(PRED) gi_60414603_sp PVLPPVLVPR HTEIPAEFPP LDDY----- ---SHSIPEN
(PRED) gi_117949830_sp PVLPPVLVPR HTEILTELPP LDDY----- ---THSIPEN
(PRED) gi_13633871_sp PVLPPVLVPR HTEILTELPP LDDY----- ---THSIPEN
(PRED) gi_13633914_sp PVLPPVLVPR HTEILTELPP LDDY----- ---THSIPEN
(PRED) gi_75041393_sp PVLPPVLVPR HTEILTELPP LDDY----- ---THSIPEN
(PRED) gi_110826300_sp PVLPPVLVPR HTEILTELPP LDDY----- ---THSIPEN
(PRED) gi_21264050_sp PVLPPVLVPR HTEILTELPP LDDY----- ---TNSIPEN
(PRED) gi_341942043_sp PGIDLSGLTL QSN-APSMLV KDEYVHDFEG QPSLPTEGHS IQTIQHPPSN
(PRED) gi_13959528_sp PGIDLSGLTL QSNAPPSMLV KDEYVHDFEG QPSLPTEGHS IQTIQHPPSN
(PRED) gi_13959561_sp PGIDLSGLTL QSNAPSSMMV KDEYVHDFEG QPSLSTEGHS IQTIQHPPSN
(PRED) gi_116256078_sp PGIDLSGLTL QSNAPPSMLV KDEYVHDFEG QPSLSTEGHS IQTIQHPPSN
(PRED) gi_13959531_sp PGIDLSGLTL QSNAPSGMLV KDEYVHDFEG QPSLATEGHS IQTIQHPPSN
(PRED) gi_13959540_sp PESPP---PP YSRLSPP--- ---DQYKP
(PRED) gi_115502451_sp PESPP---PP YSRLSPR--- ---DEYKP
(PRED) gi_13959573_sp PESPP---PP YSRLSPN--- ---DEQKP
(PRED) gi_13959541_sp LESPP---PP YSRYPM D--- ---FLKPT
(PRED) gi_13959538_sp LESPP---PP YSRYPM D--- ---FLKPT
(PRED) gi_13959529_sp LESPP---PP YSRYPM D--- ---FLKPT

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..... 410..... 420..... 430..... 440..... 450

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(PRED) gi_13633932_sp ATFPDSFQQP NSHPFP HSPN -----SSYP NSPGSSSSTY PHSPAS----
(PRED) gi_118573879_sp ATFPDSFQQP NSHPFP HSPN -----SSYP NSPGSSSSTY PHSPTS----
(PRED) gi_13633915_sp ATFPDSFQQP NSHPFP HSPN -----SSYP NSPGSSSSTY PHSPTS----
(PRED) gi_341942042_sp ATFPDSFQQP NSHPFP HSPN -----SSYP NSPGSSSSTY PHSPTS----
(PRED) gi_82121811_sp ATFPDSFQQP NSTPFSISP N-----SPYP PSPA--SSTY PSSPAS----
(PRED) gi_21264062_sp ATFPESFQQH SGGSSFPISP -----NSPY PPSPASSGTY PNSPAS----
(PRED) gi_13959533_sp ATFPDSFHQP NSTPFP LSPN -----SPYP PSPA--SSTY PNSPAS----
(PRED) gi_13959566_sp ATFPDSFHQP NNTPFP LSPN -----SPYP PSPA--SSTY PNSPAS----

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(PRED) gi_13959559_sp_ATFPDSFHQP NNAPFPPLSPN -----SPYP PSPA--SSTY PNSPAS----
(PRED) gi_13633872_sp_ATFPDSFQQP HSHPFQAQYPN -----SSYP NSPGSSSSSTY PHSPPTS----
(PRED) gi_13959539_sp_ATYPDSFQQP PCSALPPSPS -----HAFS QSPC--TASY PHSPGS----
(PRED) gi_21264049_sp_ATFPDSFPQQ PANALPFTPN SPTNSYPSSP NSGTGSTATF PHSPSS----
(PRED) gi_66774168_sp_ATYPDSFQQS LCPAP-----
(PRED) gi_13959527_sp_ATYPDSFQQS LGPAP-----
(PRED) gi_51338669_sp_TNFPAGI-EP QSNI-PETPP -----PGYL SEDG--ETSD HQMNHS----
(PRED) gi_60414603_sp_TNFPAGI-EP QSNYIPETPP -----PGYL SEDG--ETSD HQMNPS----
(PRED) gi_117949830_sp_TNFPAGI-EP QSNYIPETPP -----PGYI SEDG--ETSD QQLNQS----
(PRED) gi_13633871_sp_TNFPAGI-EP QSNYIPETPP -----PGYI SEDG--ETSD QQLNQS----
(PRED) gi_13633914_sp_TNFPAGI-EP QSNYIPETPP -----PGYI SEDG--ETSD QQLNQS----
(PRED) gi_75041393_sp_TNFPAGI-EP QSNYIPETPP -----PGYI SEDG--ETSD QQLNQS----
(PRED) gi_110826300_sp_TNFPAGI-EP QSNYIPETPP -----PGYI SEDG--ETSD QQLNQS----
(PRED) gi_21264050_sp_TNFPAGI-EP PNNYIPETPP -----PGYI SEDG--EASD QQMNQS----
(PRED) gi_341942043_sp_RASTETYSAP ALLAPAESNA TSTTNFPNIP VASTSQPASI LAGSHSEGLL
(PRED) gi_13959528_sp_RASTETYSAP ALLAPSESNA TSTTNFPNIP VASTSQPASI LAGSHSEGLL
(PRED) gi_13959561_sp_RASTETYSTP ALLAPSESNA TSTANFPNIP VASTSQPASI LGGSHSEGLL
(PRED) gi_116256078_sp_RASTETYSTP ALLAPSESNA TSTTNFPNIP VASTSQPASI LAGSHSEGLL
(PRED) gi_13959531_sp_RASTETYSTP ALLAPSESNA TSTTNFPNIP VASTSQPASI LAGSHSEGLL
(PRED) gi_13959540_sp_LDLSDSTLSY TETEATNSL-----
(PRED) gi_115502451_sp_LDLSDSTLSY TETEATNSL-----
(PRED) gi_13959573_sp_LDLSDSTLSY TETEATNSP-----
(PRED) gi_13959541_sp_AGCPDAVPSS AETGGTN----
(PRED) gi_13959538_sp_ADCPDAVPSS AETGGTN----
(PRED) gi_13959529_sp_ADCPDAVPSS DETGGTN----

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..... 460..... 470..... 480..... 490..... 500
(PRED) gi_13633932_sp_---SDPGSPF QMPADTPPPA YLPPEDQMT H DTSQPMDT-- -NMMAPGIHP
(PRED) gi_118573879_sp_---SDPGSPF QMPADTPPPA YLPPEDPMTQ DGSQPMDT-- -NMMAPSLPS
(PRED) gi_13633915_sp_---SDPGSPF QMPADTPPPA YLPPEDPMTQ DGSQPMDT-- -NMMAPPLPS
(PRED) gi_341942042_sp_---SDPGSPF QMPADTPPPA YLPPEDPMAQ DGSQPMDT-- -NMMAPPLPA
(PRED) gi_82121811_sp_---SGPSSPF QLPADTPPPA YMPPDDQMGQ DNSQSM DTS- -NTMIPQIMP
(PRED) gi_21264062_sp_---SGPSSPF QLPADTPPPA YMPPDEQMGQ DGSQSMETG- -SSLAPQ---
(PRED) gi_13959533_sp_---SGPGSPF QLPADTPPPA YMPPDDQMGQ DNSQPM DTS- -NNMIPQIMP
(PRED) gi_13959566_sp_---SGPGSPF QLPADTPPPA YMPPDDQMGQ DNSQPM DTS- -NNMIPQIMP
(PRED) gi_13959559_sp_---SGPGSPF QLPADTPPPA YMPPDDQMAP DNSQPM DTS- -SNMIPQTMP
(PRED) gi_13633872_sp_---SDPGSPF QMPADTPPPA YLPPEDPMAQ DGSQPM DTM TNMTAPTLP
(PRED) gi_13959539_sp_---PSEPESPY QHSVDTPPLP YHATEASETQ SG-QPVDA-- -TADRHVVL
(PRED) gi_21264049_sp_---SDPGSPF QMP-ETPPA YMPPEEPMTQ DCPQPM DTM -LLAPNLPLE
(PRED) gi_66774168_sp_-----PSSPG HVFPQSPCPT SYPHSPGSPS ESDSPYQH--
(PRED) gi_13959527_sp_-----PSSPG HVFPQSPCPT SYPQSPGSPS ESDSPYQH--
(PRED) gi_51338669_sp_---MDAGSPN -LSPNPMSPA HNN-----
(PRED) gi_60414603_sp_---MDAGSPN -LSPNPMSPA HNN-----
(PRED) gi_117949830_sp_---MDTGSPA ELSPTTLSPV NHS-----
(PRED) gi_13633871_sp_---MDTGSPA ELSPTTLSPV NHS-----
(PRED) gi_13633914_sp_---MDTGSPA ELSPTTLSPV NHS-----
(PRED) gi_75041393_sp_---MDTGSPA ELSPTTLSPV NHS-----
(PRED) gi_110826300_sp_---MDTGSPA ELSPTTLSPV NHS-----
(PRED) gi_21264050_sp_---MDTGSPA ELSPSTLSPV NHG-----
(PRED) gi_341942043_sp_QIASGPQPGQ QQNGFTAQPA TYHHNSTTTW TGSRTAPYTP NLPHHQNGHL
(PRED) gi_13959528_sp_QIASGPQPGQ QQNGFTAQPA TYHHNSTTTW TGSRTAPYTP NLPHHQNGHL
(PRED) gi_13959561_sp_QIASGPQPGQ QQNGFTGQPA TYHHNSTTTW TGSRTAPYTP NLPHHQNGHL
(PRED) gi_116256078_sp_QIASGPQPGQ QQNGFTGQPA TYHHNSTTTW TGGRTAPYTP NLPHHQNGHL
(PRED) gi_13959531_sp_QIASGPQPGQ QQNGFTGQPA TYHHNSTTTW TGSRTAPYPP NLPHHQNGHL
(PRED) gi_13959540_sp_-----ITAPG EFSDASMS--
(PRED) gi_115502451_sp_-----ITAPG EFSDASMS--
(PRED) gi_13959573_sp_-----NVTPG EFSDASTS--
(PRED) gi_13959541_sp_-----YLAPG GLSDSQLL--
(PRED) gi_13959538_sp_-----YLAPG GLSDSQLL--
(PRED) gi_13959529_sp_-----YLAPG GLSDSQLL--

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..... 510..... 520..... 530..... 540..... 550
(PRED) gi_13633932_sp_D----- IHR GDVQA--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_118573879_sp_E----- INR GDVQA--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_13633915_sp_E----- INR GDVQA--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_341942042_sp_E----- ISR GDVQA--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_82121811_sp_N----- IST RDVQP--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_21264062_sp_N----- MPR GDVQP--VEY QEP SHWC SIV YYELNNRVGE
(PRED) gi_13959533_sp_S----- ISS RDVQP--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_13959566_sp_S----- ISS RDVQP--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_13959559_sp_S----- ISS RDVQP--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_13633872_sp_E----- INR GDVQA--VAY EEPKHWC SIV YYELNNRVGE
(PRED) gi_13959539_sp_S----- IPN GDFRP--VCY EEPQHWC SVA YYELNNRVGE
(PRED) gi_21264049_sp_I----- SNR TDVHP--VAY QEPKHWC SIV YYELNNRVGE
(PRED) gi_66774168_sp_----- SDFRP--VCY EEPQHWC SVA YYELNNRVGE

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(PRED) gi_13959527_sp_-----SDFRP--VCY EEPLHWCSVA YYELNNRVGE
(PRED) gi_51338669_sp_-----LDLQP--VTY CEPAFWCSIS YYELNQRVGE
(PRED) gi_60414603_sp_-----LDLQP--VTY CEPAFWCSIS YYELNQRVGE
(PRED) gi_117949830_sp_-----LDLQP--VTY SEPAFWCSIA YYELNQRVGE
(PRED) gi_13633871_sp_-----LDLQP--VTY SEPAFWCSIA YYELNQRVGE
(PRED) gi_13633914_sp_-----LDLQP--VTY SEPAFWCSIA YYELNQRVGE
(PRED) gi_75041393_sp_-----LDLQP--VTY SEPAFWCSIA YYELNQRVGE
(PRED) gi_110826300_sp_-----LDLQP--VTY SEPAFWCSIA YYELNQRVGE
(PRED) gi_21264050_sp_-----MDLQP--VTY SEPAFWCSIA YYELNQRVGE
(PRED) gi_341942043_sp_QHHPPMPPHP GHYWPV-HNE LAFQPPISNH PAPEYWCSIA YFEMDVQVGE
(PRED) gi_13959528_sp_QHHPPMPPHP GHYWPV-HNE LAFQPPISNH PAPEYWCSIA YFEMDVQVGE
(PRED) gi_13959561_sp_QHHPPMPPHP GHYWPV-HNE LAFQPPISNH PAPEYWCSIA YFEMDVQVGE
(PRED) gi_116256078_sp_QHHPPMPPHP GHYWPV-HNE LAFQPPISNH PAPEYWCSIA YFEMDVQVGE
(PRED) gi_13959531_sp_QHHPPMPPHP GHYWPV-HNE LAFQPPISNH PAPEYWCSIA YFEMDVQVGE
(PRED) gi_13959540_sp_-----PDA TKPSHWCSVA YWEHRTRVGR
(PRED) gi_115502451_sp_-----PDA TKPSHWCSVA YWEHRTRVGR
(PRED) gi_13959573_sp_-----PDA VKRSHWCNVA YWEHRTRVGR
(PRED) gi_13959541_sp_-----LEP GDRSHWCVVA YWEEKTRVGR
(PRED) gi_13959538_sp_-----LEP GDRSHWCVVA YWEEKTRVGR
(PRED) gi_13959529_sp_-----LEP GDRSHWCVVA YWEEKTRVGR

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..... 560..... 570..... 580..... 590..... 600
(PRED) gi_13633932_sp_AFHASST--S ILVDGFTDPS NNKNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_118573879_sp_AFHASST--S VLVDGFTDPS NNKNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_13633915_sp_AFHASST--S VLVDGFTDPS NNKNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_341942042_sp_AFHASST--S VLVDGFTDPS NNKNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_82121811_sp_AFHASST--S VLVDGFTDPS NNKNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_21264062_sp_AYHASST--S VLVDGFTDPS NNKNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_13959533_sp_AFHASST--S VLVDGFTDPA NNKS RFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_13959566_sp_AFHASST--S VLVDGFTDPS NNKS RFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_13959559_sp_AFHASST--S VLVDGFTDPS NNKS RFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_13633872_sp_RFHASST--S VLVDGFTDPS NNKNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_13959539_sp_TFQASSR--S VLIDGFTDPS NNRNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_21264049_sp_AFLASST--S VLVDGFTDPS NNRNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_66774168_sp_TFQASSR--S VLIDGFTDPS NNRNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_13959527_sp_TFQASSR--S VLIDGFTDPS NNRNRFCLGL LSNVNRNSTI ENTRRHIGKG
(PRED) gi_51338669_sp_TFHASQP--S MTVDGFTDPS NS-ERFCLGL LSNVNRNAAV ELTRRHIGRG
(PRED) gi_60414603_sp_TFHASQP--S MTVDGFTDPS NS-ERFCLGL LSNVNRNAAV ELTRRHIGRG
(PRED) gi_117949830_sp_TFHASQP--S LTVDGFTDPS NS-ERFCLGL LSNVNRNATV EMTRRHIGRG
(PRED) gi_13633871_sp_TFHASQP--S LTVDGFTDPS NS-ERFCLGL LSNVNRNATV EMTRRHIGRG
(PRED) gi_13633914_sp_TFHASQP--S LTVDGFTDPS NS-ERFCLGL LSNVNRNATV EMTRRHIGRG
(PRED) gi_75041393_sp_TFHASQP--S LTVDGFTDPS NS-ERFCLGL LSNVNRNATV EMTRRHIGRG
(PRED) gi_110826300_sp_TFHASQP--S LTVDGFTDPS NS-ERFCLGL LSNVNRNATV EMTRRHIGRG
(PRED) gi_21264050_sp_TFHASQP--S LTVDGFTDPS NS-ERFCLGL LSNVNRNATV EMTRRHIGRG
(PRED) gi_341942043_sp_TFKVPSSCPV VTVDGYVDPS GG-DRFCLGQ LSNVHRTEAI ERARLHIGKG
(PRED) gi_13959528_sp_TFKVPSSCPI VTVDGYVDPS GG-DRFCLGQ LSNVHRTEAI ERARLHIGKG
(PRED) gi_13959561_sp_TFKVPSSCPI VTVDGYVDPS GG-DRFCLGQ LSNVHRTEAI ERARLHIGKG
(PRED) gi_116256078_sp_TFKVPSSCPI VTVDGYVDPS GG-DRFCLGQ LSNVHRTEAI ERARLHIGKG
(PRED) gi_13959531_sp_TFKVPSSCPI VTVDGYVDPS GG-DRFCLGQ LSNVHRTEAI ERARLHIGKG
(PRED) gi_13959540_sp_LYAVY----D QAVSIFYDLP QG-SGFCLGQ LNLEQRSESV RRTRSKI GFG
(PRED) gi_115502451_sp_LYAVY----D QAVSIFYDLP QG-SGFCLGQ LNLEQRSESV RRTRSKI GFG
(PRED) gi_13959573_sp_LYTVY----E QSVSIFYDLP QG-NGFCLGQ LNLENRSETV RRTRSKI GYG
(PRED) gi_13959541_sp_LYCVQ----E PSLDIFYDLP QG-NGFCLGQ LNSDNKSQLV QKVRSKI GCG
(PRED) gi_13959538_sp_LYCVQ----E PSLDIFYDLP QG-NGFCLGQ LNSDNKSQLV QKVRSKI GCG
(PRED) gi_13959529_sp_LYCVQ----E PSLDIFYDLP QG-NGFCLGQ LNSDNKSQLV QKVRSKI GCG

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..... 610..... 620..... 630..... 640..... 650
(PRED) gi_13633932_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNY HHGFHPT-TV CKIPSGCSLK
(PRED) gi_118573879_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNY HHGFHPT-TV CKIPSGCSLK
(PRED) gi_13633915_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNY HHGFHPT-TV CKIPSGCSLK
(PRED) gi_341942042_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNY HHGFHPT-TV CKIPSGCSLK
(PRED) gi_82121811_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNY HHGFHPT-TV CKIPSGCSLK
(PRED) gi_21264062_sp_VHLYYVG-GE VYAEC LSDTS IFVQSRNCNY HHGFHPT-TV CKIPSGCSLK
(PRED) gi_13959533_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNF HHGFHPT-TV CKIPSSCSLK
(PRED) gi_13959566_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNF HHGFHPT-TV CKIPSSCSLK
(PRED) gi_13959559_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNF HHGFHPT-TV CKIPSSCSLK
(PRED) gi_13633872_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNY HHGFHPT-TV CKIPSGCSLK
(PRED) gi_13959539_sp_VHLYYVG-GE VYAECVSDSS IFVQSRNCNY QHGFHPA-TV CKIPSGCSLK
(PRED) gi_21264049_sp_VHLYYVG-GE VYAEC LSDSS IFVQSRNCNY HHGFHPT-TV CKIPSRCSLK
(PRED) gi_66774168_sp_VHLYYVG-GE VYAECVSDSS IFVQSRNCNY QHGFHPA-TV CKIPSGCSLK
(PRED) gi_13959527_sp_VHLYYVG-GE VYAECVSDSS IFVQSRNCNY QHGFHPA-TV CKIPSGCSLK
(PRED) gi_51338669_sp_VRLYYIG-GE VFAEC LSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK
(PRED) gi_60414603_sp_VRLYYIG-GE VFAEC LSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK
(PRED) gi_117949830_sp_VRLYYIG-GE VFAEC LSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK
(PRED) gi_13633871_sp_VRLYYIG-GE VFAEC LSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK

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(PRED) gi_13633914_sp_VRLYYIG-GE VFAECLSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK
(PRED) gi_75041393_sp_VRLYYIG-GE VFAECLSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK
(PRED) gi_110826300_sp_VRLYYIG-GE VFAECLSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK
(PRED) gi_21264050_sp_VRLYYIG-GE VFAECLSDSA IFVQSPNCNQ RYGWHPA-TV CKIPPGCNLK
(PRED) gi_341942043_sp_VQLECKGEGD VWVRCLSDHA VFVQSYYLDR EAGRAPGDAV HKIYPSAYIK
(PRED) gi_13959528_sp_VQLECKGEGD VWVRCLSDHA VFVQSYYLDR EAGRAPGDAV HKIYPSAYIK
(PRED) gi_13959561_sp_VQLECKGEGD VWVRCLSDHA VFVQSYYLDR EAGRAPGDAV HKIYPSAYIK
(PRED) gi_116256078_sp_VQLECKGEGD VWVRCLSDHA VFVQSYYLDR EAGRAPGDAV HKIYPSAYIK
(PRED) gi_13959531_sp_VQLECKGEGD VWVRCLSDHA VFVQSYYLDR EAGRAPGDAV HKIYPSAYIK
(PRED) gi_13959540_sp_ILLSKEP-DG VWAYNRGEHP IFVNSPTLDA PGG-RAL-VV RKVPPGYSIK
(PRED) gi_115502451_sp_ILLSKEP-DG VWAYNRGEHP IFVNSPTLDA PGG-RAL-VV RKVPPGYSIK
(PRED) gi_13959573_sp_ILLSKEP-DG VWAYNRSEHP IFVNSPTLDI PNC-RTL-IV RKVMPGYSIK
(PRED) gi_13959541_sp_IQLTREV-DG VWVYNRSSYP IFIKSATLDN PDS-RTL-LV HKVFPGFSSIK
(PRED) gi_13959538_sp_IQLTREV-DG VWVYNRSSYP IFIKSATLDN PDS-RTL-LV HKVFPGFSSIK
(PRED) gi_13959529_sp_IQLTREV-DG VWVYNRSSYP IFIKSATLDN PDS-RTL-LV HKVFPGFSSIK

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..... 660..... 670..... 680..... 690..... 700
(PRED) gi_13633932_sp_IFNNQEFQAL ----LAQSVN HGFET-----
(PRED) gi_118573879_sp_IFNNQEFQAL ----LAQSVN HGFET-----
(PRED) gi_13633915_sp_IFNNQEFQAL ----LAQSVN HGFET-----
(PRED) gi_341942042_sp_IFNNQEFQAL ----LAQSVN HGFET-----
(PRED) gi_82121811_sp_IFNNQEFQAL ----LAQSVN HGFEA-----
(PRED) gi_21264062_sp_IFNNQEFQAL ----LAQSVN HGFEA-----
(PRED) gi_13959533_sp_IFNNQEFQAL ----LAQSVN HGFEA-----
(PRED) gi_13959566_sp_IFNNQEFQAL ----LAQSVN HGFEA-----
(PRED) gi_13959559_sp_IFNNQEFQAL ----LAQSVN HGFEA-----
(PRED) gi_13633872_sp_IFNNQEFQAL ----LAQSVN HGFET-----
(PRED) gi_13959539_sp_VFNNQLFAQL ----LAQSVH HGFEV-----
(PRED) gi_21264049_sp_IFNNQEFQAL ----LAQSVN HGFEA-----
(PRED) gi_66774168_sp_VFNNQLFAQL ----LAQSVH HGFEV-----
(PRED) gi_13959527_sp_VFNNQLFAQL LAQLLAQSVH HGFEV-----
(PRED) gi_51338669_sp_IFNNQEFQAL ----LAQSVN QGFEA-----
(PRED) gi_60414603_sp_IFNNQEFQAL ----LAQSVN QGFEA-----
(PRED) gi_117949830_sp_IFNNQEFQAL ----LAQSVN QGFEA-----
(PRED) gi_13633871_sp_IFNNQEFQAL ----LAQSVN QGFEA-----
(PRED) gi_13633914_sp_IFNNQEFQAL ----LAQSVN QGFEA-----
(PRED) gi_75041393_sp_IFNNQEFQAL ----LAQSVN QGFEA-----
(PRED) gi_110826300_sp_IFNNQGFQAL ----LAQSVN QGFEA-----
(PRED) gi_21264050_sp_IFNNQEFQAL ----LAQSVN QGFEA-----
(PRED) gi_341942043_sp_VFDLRQCHRQ ----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
(PRED) gi_13959528_sp_VFDLRQCHRQ ----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
(PRED) gi_13959561_sp_VFDLRQCHRQ ----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
(PRED) gi_116256078_sp_VFDLRQCHRQ ----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
(PRED) gi_13959531_sp_VFDLRQCHRQ ----MQQQAA TAQAAAAAQA AAVAGNIPGP GSVGGIAPAI
(PRED) gi_13959540_sp_VFDYERSGLL ----QHADA A HG-----
(PRED) gi_115502451_sp_VFDYERSGLL ----QHADA A DA-----
(PRED) gi_13959573_sp_VFDYERKSCLL ----QHTAEL DY-----
(PRED) gi_13959541_sp_AFDYERKAYSL ----QRPNDH EF-----
(PRED) gi_13959538_sp_AFDYERKAYSL ----QRPNDH EF-----
(PRED) gi_13959529_sp_AFDYERKAYSL ----QRPNDH EF-----

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..... 710..... 720..... 730..... 740..... 750
(PRED) gi_13633932_sp-----V YELTKMCTLR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_118573879_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13633915_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_341942042_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_82121811_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_21264062_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEVHLHGP
(PRED) gi_13959533_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959566_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959559_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13633872_sp-----E YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959539_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_21264049_sp-----V YELTKMCTIR MSFVKGWGAK YHRQDVTSTP CWIEIHLHGP
(PRED) gi_66774168_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959527_sp-----V YELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_51338669_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_60414603_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_117949830_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_13633871_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_13633914_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_75041393_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_110826300_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_21264050_sp-----V YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_341942043_sp_SLSAAAGIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA

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(PRED) gi_13959528_sp_SLS AAA GIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA
(PRED) gi_13959561_sp_SLS AAA GIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA
(PRED) gi_116256078_sp_SLS AAA GIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA
(PRED) gi_13959531_sp_SLS AAA GIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA
(PRED) gi_13959540_sp_-----P ---YDPHSVR ISFAKGWGPC YSRQFITSCP CWLEILLNNH
(PRED) gi_115502451_sp_-----A DGPYDPNSVR ISFAKGWGPC YSRQFITSCP CWLEILLNNP
(PRED) gi_13959573_sp_-----A DGPYDPNSVR ISFAKGWGPC YSRQFITSCP CWLEILLNN
(PRED) gi_13959541_sp_-----M QQPWTGFTVQ ISFVKGWGQC YTRQFISSCP CWLEVIFNSR
(PRED) gi_13959538_sp_-----M QQPWTGFTVQ ISFVKGWGQC YTRQFISSCP CWLEVIFNSR
(PRED) gi_13959529_sp_-----M QQPWTGFTVQ ISFVKGWGQC YTRQFISSCP CWLEVIFNSR

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..... 760..... 770..

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(PRED) gi_13633932_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_118573879_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_13633915_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_341942042_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_82121811_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_21264062_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_13959533_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_13959566_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_13959559_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_13633872_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_13959539_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_21264049_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_66774168_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_13959527_sp_LQWLDKVLTO MGSPHNPISS VS
(PRED) gi_51338669_sp_LQWLDKVLTO MGSPSIRCSS VS
(PRED) gi_60414603_sp_LQWLDKVLTO MGSPSIRCSS VS
(PRED) gi_117949830_sp_LQWLDKVLTO MGSPSVRCSS MS
(PRED) gi_13633871_sp_LQWLDKVLTO MGSPSVRCSS MS
(PRED) gi_13633914_sp_LQWLDKVLTO MGSPSVRCSS MS
(PRED) gi_75041393_sp_LQWLDKVLTO MGSPSVRCSS MS
(PRED) gi_110826300_sp_LQWLDKVLTO MGSPSVRCSS MS
(PRED) gi_21264050_sp_LQWLDKVLTO MGSPSVRCSS MS
(PRED) gi_341942043_sp_LQLLDEVLHT MPIA-DP-QP LD
(PRED) gi_13959528_sp_LQLLDEVLHT MPIA-DP-QP LD
(PRED) gi_13959561_sp_LQLLDEVLHT MPIA-DP-QP LD
(PRED) gi_116256078_sp_LQLLDEVLHT MPIA-DP-QP LD
(PRED) gi_13959531_sp_LQLLDEVLHT MPIA-DP-QP LD
(PRED) gi_13959540_sp_R----- --
(PRED) gi_115502451_sp_R----- --
(PRED) gi_13959573_sp_R----- --
(PRED) gi_13959541_sp_----- --
(PRED) gi_13959538_sp_----- --
(PRED) gi_13959529_sp_----- --

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