

Results colour-coded for transmembrane structure

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

The transmembrane structure for each sequence is represented by a colour. If a sequence in the alignment has no colours assigned, this means that no prediction was possible for that sequence (if this was requested).
The colour assignment is:

TM SEGMENT (T) You have selected to perform transmembrane structure prediction using **PHOBIUS** ([Kall et. al. 2005](#)).

		..... 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_ MFRSKRSGLV	RRLWRSRVVP	DREEGSG-GG	GGVDEDGSLG	SRAEPAPRAR	
(PRED)	gi_115502451_sp MFRSKRSGLV	RRLWRSRVVP	DREEGSGGGG	GGGDEDGSLG	SRAEPAPRAR	
(PRED)	gi_13959573_sp_ MFRSKRSGLV	RRLWRSRVIP	ERDGGDGNGQ	SSERNATAVT	AEG-----	
(PRED)	gi_13959541_sp_ MFRTKRSALV	RRLWRSRAPG	GEDEEEGVGG	GGGG--GELR	GEG-----	
(PRED)	gi_13959538_sp_ MFRTKRSALV	RRLWRSRAPG	GEDEEEGAGG	GGGG--GELR	GEG-----	
(PRED)	gi_13959529_sp_ MFRTKRSALV	RRLWRSRAPG	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_ EGGGCSRSEV	RSVAPRRPRD	AVGPRGAAIA	GRRRRTGGLP	RPVSESGAGA	

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(PRED) gi_115502451_sp EGGGCGRSEV RPVAPRRPRD AVGQRGGAQGA GRRRRRAGGPP 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 AVRGAK-----
(PRED) gi_13959538_sp -----ATD SRAHGAGGGG PGRAGCCLGK AVRGAK-----
(PRED) gi_13959529_sp -----ATD GRAYGAGGGG AGRAGCCLGK AVRGAK-----

          . . . . . 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 EPEEGGGPRS REARSRLLLL -----EQELKTVTYS
(PRED) gi_115502451_sp EP--AGGGRS REARSRLLLL -----EQELKTVTYS
(PRED) gi_13959573_sp -----AS PPGGPGGEAR 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 TNGAHPSKCV TIQ-----
(PRED) gi_13959528_sp_LVKKLKEKKD ELDSLITAIT TNGAHPSKCV TIQ-----
(PRED) gi_13959561_sp_LVKKLKEKKD ELDSLITAIT TNGAHPSKCV TIQ-----
(PRED) gi_116256078_sp_LVKKLKEKKD ELDSLITAIT TNGAHPSKCV TIQ-----
(PRED) gi_13959531_sp_LVKKLKEKKD ELDSLITAIT TNGAHPSKCV 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_----- ---RTLDRGL ----- -QVA-GRKGF PH-----
(PRED) gi_13959528_sp_----- ---RTLDRGL ----- -QVA-GRKGF PH-----
(PRED) gi_13959561_sp_----- ---RTLDRGL ----- -QVA-GRKGF PH-----
(PRED) gi_116256078_sp_----- ---RTLDRGL ----- -QVA-GRKGF PH-----
(PRED) gi_13959531_sp_----- ---RTLDRGL ----- -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_----- ---GRLDCRL GPGAPASAQP AQP-PSSYSL P-----
(PRED) gi_13959538_sp_----- ---GRLDCRL ----- -GP-GAPAGA QPAQPPSSYS
(PRED) gi_13959529_sp_----- ---GRLDCRL GPGAPASAQP AQP-PSSYSL P-----

. . . . . 310. . . . . 320. . . . . 330. . . . . 340. . . . . 350
(PRED) gi_13633932_sp_--VIYCRVWR WPDLOSHHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_118573879_sp_--VIYCRVWR WPDLOSHHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13633915_sp_--VIYCRVWR WPDLOSHHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES

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(PRED) gi_341942042_sp --VIYCRVWR WPD LQSHHEL 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 LQSHHEL KPLECCE-FP FGSKQKEVCI NPYHYKRVES
(PRED) gi_13959539_sp --VIYCRVWR WPD LQSHHEL KPLECCE-FP FGSKQKEVCI NPYHYRRVET
(PRED) gi_21264049_sp --VIYCRVWR WPD LQSHHEL KALECCE-FP FGSKQKDVC I NPYHYKR VDS
(PRED) gi_66774168_sp --VIYCRVWR WPD LQSHHEL KPLECCE-FP FGSKQKEVCI NPYHYRRVET
(PRED) gi_13959527_sp --VIYCRVWR WPD LQSHHEL KPLECCE-FP FGSKQKEVCI NPYHYRRVET
(PRED) gi_51338669_sp --VIYCRLWR WPD LSHHHEL RAMELCE-FA FNMKKDEV CV NPYHYQ RVET
(PRED) gi_60414603_sp --VIYCRLWR WPD LSHHHEL RAMEMCE-YA FNMKKDEV CV NPYHYQ RVET
(PRED) gi_117949830_sp --VIYCRLWR WPD LSHHHEL KAIENCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_13633871_sp --VIYCRLWR WPD LSHHHEL KAIENCE-YA FSLKKDEV CV NPYHYQ RVET
(PRED) gi_13633914_sp --VIYCRLWR WPD LSHHHEL KAIENCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_75041393_sp --VIYCRLWR WPD LSHHHEL KAIENCE-YA FNLKEDEV CV NPYHYQ RVET
(PRED) gi_110826300_sp --VIYCRLWR WPD LSHHHEL KAIENCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_21264050_sp --VIYCRLWR WPD LSHHHEL RAIETCE-YA FNLKKDEV CV NPYHYQ RVET
(PRED) gi_341942043_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCDSVCV NPYHYERVVS
(PRED) gi_13959528_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCDSVCV NPYHYERVVS
(PRED) gi_13959561_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCDSVCV NPYHYERVVS
(PRED) gi_116256078_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCDSVCV NPYHYERVVS
(PRED) gi_13959531_sp --VIYARLWR WPD LH-KNEL KHVKYCQ-YA FDLKCDSVCV NPYHYERVVS
(PRED) gi_13959540_sp --LLLGRLFR WPD LQH AVEL KPLCGCHSFT AAADGPTVCC NPYHFSRLCG
(PRED) gi_115502451_sp --LLLGRLFR WPD LQH AVEL KPLCGCHSFA AAADGPTVCC NPYHFSRLCG
(PRED) gi_13959573_sp --LLLGKLF R WPD LQH PAEL KALCECQ-SF GAADGPTVCC NPYHFSRLCG
(PRED) gi_13959541_sp --LL LCKVFR WPD LRHSSEV KRLCCCE-SY GKINPELVCC NPHHLSRLCE
(PRED) gi_13959538_sp LPLLLCKVFR WPD LRHSSEV KRLCCCE-SY GKINPELVCC NPHHLSRLCE
(PRED) gi_13959529_sp --LL LCKVFR 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 YSRYPMD--- ---FLKPT
(PRED) gi_13959538_sp LESPP---PP YSRYPMD--- ---FLKPT
(PRED) gi_13959529_sp LESPP---PP YSRYPMD--- ---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 ATFPE SFQH SGGSSFPI SP -----NSPY PPSPASSGT Y 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 HSHPFAQYPN -----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 DNSQSMDTS- -NTMIPQIMP
(PRED) gi_21264062_sp_---SGPSSPF QLPADTPPPA YMPPDEQMGQ DGSQSMETG- -SSLAPQ---
(PRED) gi_13959533_sp_---SGPGSPF QLPADTPPPA YMPPDDQMGQ DNSQPMDTS- -NNMIPQIMP
(PRED) gi_13959566_sp_---SGPGSPF QLPADTPPPA YMPPDDQMGQ DNSQPMDTS- -NNMIPQIMP
(PRED) gi_13959559_sp_---SGPGSPF QLPADTPPPA YMPPDDQMAP DNSQPMDTS- -SNMIPQTMP
(PRED) gi_13633872_sp_---SDPGSPF QMPADTPPPA YLPPEDPMAQ DGSQPMDTNM TNMTAPTLP
(PRED) gi_13959539_sp_---PSEPESPY QHSVDTPPLP YHATEASETQ SG-QPVDA-- -TADRHVVL
(PRED) gi_21264049_sp_---SDPGSPF QMP-ETPPA YMPPEEPMTQ DCPQPMDTN- -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 ELSPTTTLSPV NHS-----
(PRED) gi_13633871_sp_---MDTGSPA ELSPTTTLSPV NHS-----
(PRED) gi_13633914_sp_---MDTGSPA ELSPTTTLSPV NHS-----
(PRED) gi_75041393_sp_---MDTGSPA ELSPTTTLSPV NHS-----
(PRED) gi_110826300_sp_---MDTGSPA ELSPTTTLSPV NHS-----
(PRED) gi_21264050_sp_---MDTGSPA ELSPTTTLSPV 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 EEPKHWCSIV YYELNNRVGE
(PRED) gi_118573879_sp_E----- INR GDVQA--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_13633915_sp_E----- INR GDVQA--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_341942042_sp_E----- ISR GDVQA--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_82121811_sp_N----- IST RDVQP--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_21264062_sp_N----- MPR GDVQP--VEY QEPSHWCSIV YYELNNRVGE
(PRED) gi_13959533_sp_S----- ISS RDVQP--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_13959566_sp_S----- ISS RDVQP--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_13959559_sp_S----- ISS RDVQP--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_13633872_sp_E----- INR GDVQA--VAY EEPKHWCSIV YYELNNRVGE
(PRED) gi_13959539_sp_S----- IPN GDFRP--VCY EEPQHWCSVA YYELNNRVGE
(PRED) gi_21264049_sp_I----- SNR TDVHP--VAY QEPKHWCSIV YYELNNRVGE
(PRED) gi_66774168_sp_----- SDFRP--VCY EEPQHWCSVA 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 RRTRSKIGFG
(PRED) gi_115502451_sp_LYAVY----D QAVSIFYDLP QG-SGFCLGQ LNLEQRSESV RRTRSKIGFG
(PRED) gi_13959573_sp_LYTVY----E QSVSIFYDLP QG-NGFCLGQ LNLENRSETV RRTRSKIGYG
(PRED) gi_13959541_sp_LYCVQ----E PSLDIFYDLP QG-NGFCLGQ LNSDNKSQLV QKVRSKIGCG
(PRED) gi_13959538_sp_LYCVQ----E PSLDIFYDLP QG-NGFCLGQ LNSDNKSQLV QKVRSKIGCG
(PRED) gi_13959529_sp_LYCVQ----E PSLDIFYDLP QG-NGFCLGQ LNSDNKSQLV QKVRSKIGCG

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

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(PRED) gi_13633932_sp_IFNNQEFACL ----LAQSVN HGFET-----
(PRED) gi_118573879_sp_IFNNQEFACL ----LAQSVN HGFET-----
(PRED) gi_13633915_sp_IFNNQEFACL ----LAQSVN HGFET-----
(PRED) gi_341942042_sp_IFNNQEFACL ----LAQSVN HGFET-----
(PRED) gi_82121811_sp_IFNNQEFACL ----LAQSVN HGFEA-----
(PRED) gi_21264062_sp_IFNNQEFACL ----LAQSVN HGFEA-----
(PRED) gi_13959533_sp_IFNNQEFACL ----LAQSVN HGFEA-----
(PRED) gi_13959566_sp_IFNNQEFACL ----LAQSVN HGFEA-----
(PRED) gi_13959559_sp_IFNNQEFACL ----LAQSVN HGFEA-----
(PRED) gi_13633872_sp_IFNNQEFACL ----LAQSVN HGFET-----
(PRED) gi_13959539_sp_VFNNQLFAQL ----LAQSVH HGFEV-----
(PRED) gi_21264049_sp_IFNNQEFACL ----LAQSVN HGFEA-----
(PRED) gi_66774168_sp_VFNNQLFAQL ----LAQSVH HGFEV-----
(PRED) gi_13959527_sp_VFNNQLFAQL LAQLLAQSVH HGFEV-----
(PRED) gi_51338669_sp_IFNNQEFACL ----LAQSVN QGFEA-----
(PRED) gi_60414603_sp_IFNNQEFACL ----LAQSVN QGFEA-----
(PRED) gi_117949830_sp_IFNNQEFACL ----LAQSVN QGFEA-----
(PRED) gi_13633871_sp_IFNNQEFACL ----LAQSVN QGFEA-----
(PRED) gi_13633914_sp_IFNNQEFACL ----LAQSVN QGFEA-----
(PRED) gi_75041393_sp_IFNNQEFACL ----LAQSVN QGFEA-----
(PRED) gi_110826300_sp_IFNNQGFACL ----LAQSVN QGFEA-----
(PRED) gi_21264050_sp_IFNNQEFACL ----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_VFDERSGLL ----QHADAA HG-----
(PRED) gi_115502451_sp_VF-DFERSGL ----QHAPEP DA-----
(PRED) gi_13959573_sp_VFDYEKSCLL ----QHTAEL DY-----
(PRED) gi_13959541_sp_AFDYEKAYSL ----QRPNDH EF-----
(PRED) gi_13959538_sp_AFDYEKAYSL ----QRPNDH EF-----
(PRED) gi_13959529_sp_AFDYEKAYSL ----QRPNDH EF-----

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..... 710..... 720..... 730..... 740..... 750

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(PRED) gi_13633932_sp_VELTKMCTLR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_118573879_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13633915_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_341942042_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_82121811_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_21264062_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEVHLHGP
(PRED) gi_13959533_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959566_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959559_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13633872_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959539_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_21264049_sp_VELTKMCTIR MSFVKGWGAK YHRQDVTSTP CWIEIHLHGP
(PRED) gi_66774168_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_13959527_sp_VELTKMCTIR MSFVKGWGAE YHRQDVTSTP CWIEIHLHGP
(PRED) gi_51338669_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_60414603_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_117949830_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_13633871_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_13633914_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_75041393_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_110826300_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_21264050_sp_YQLTRMCTIR MSFVKGWGAE YRRQTVTSTP CWIELHLNGP
(PRED) gi_341942043_sp_SLSAAAGIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA

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(PRED) gi_13959528_sp_SLSAAAGIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA
(PRED) gi_13959561_sp_SLSAAAGIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA
(PRED) gi_116256078_sp_SLSAAAGIGV DDLRRLCILR MSFVKGWGPD YPRQSIKETP CWIEIHLHRA
(PRED) gi_13959531_sp_SLSAAAGIGV 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 CWLEILLSNN
(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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