

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_	----MNVTSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_118573879_sp_	----MNVTSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_13633915_sp_	----MNVTSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_341942042_sp_	----MNVTSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_13959533_sp_	---MTSMASL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_13959566_sp_	---MTSMASL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_13959559_sp_	---MTSMASL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_82121811_sp_	---MTSMASL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_21264062_sp_	---MTSMSSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_13633872_sp_	----MNVTSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_13959539_sp_	MHSTTPISSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_21264049_sp_	----MNVTSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_66774168_sp_	MHPSTPISSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_13959527_sp_	MHPSTPISSL	FSFTSPAVKR	LLGWKQ----	-----	GDEEEKWAEK
(PRED)	gi_51338669_sp_	-----MSSI	LPFTTPPIVKR	LLGWKK----	-----GEQ	NGQEEKWCEK
(PRED)	gi_60414603_sp_	-----MSSI	LPFTTPPIVKR	LLGWKK----	-----GEQ	NGQEEKWCEK
(PRED)	gi_117949830_sp_	-----MSSI	LPFTTPPVVKR	LLGWKKKSAGG	SG-GAGGGEQ	NGQEEKWCEK
(PRED)	gi_13633871_sp_	-----MSSI	LPFTTPPVVKR	LLGWKKKSAGG	SG-GAGGGEQ	NGQEEKWCEK
(PRED)	gi_13633914_sp_	-----MSSI	LPFTTPPVVKR	LLGWKKKSAGG	SG-GAGGGEQ	NGQEEKWCEK
(PRED)	gi_75041393_sp_	-----MSSI	LPFTTPPVVKR	LLGWKKKSAGG	SG-GAGGGEQ	NGQEEKWCEK
(PRED)	gi_110826300_sp_	-----MSSI	LPFTTPPVVKR	LLGWKKKSAGG	SG-GAGGGEQ	NGQEEKWCEK
(PRED)	gi_21264050_sp_	-----MSSI	LPFTTPPVVKR	LLGWKKKSASG	SSGAGGGEQ	NGQEEKWCEK
		..... 60	..... 70	..... 80	..... 90	..... 100
(PRED)	gi_13633932_sp_	AVDALVKKLK	KKKGAMEELE	KALSCPGQPS	NCVTIP----	-----
(PRED)	gi_118573879_sp_	AVDALVKKLK	KKKGAMEELE	KALSCPGQPS	NCVTIP----	-----
(PRED)	gi_13633915_sp_	AVDALVKKLK	KKKGAMEELE	KALSCPGQPS	NCVTIP----	-----
(PRED)	gi_341942042_sp_	AVDALVKKLK	KKKGAMEELE	KALSCPGQPS	NCVTIP----	-----
(PRED)	gi_13959533_sp_	AVDALVKKLK	KKKGAMEELE	KALSSPGQPS	KCVTIP----	-----
(PRED)	gi_13959566_sp_	AVDALVKKLK	KKKGAMEELE	KALSSPGQPS	KCVTIP----	-----
(PRED)	gi_13959559_sp_	AVDALVKKLK	KKKGAMEELE	KALSSPGQPS	KCVTIP----	-----
(PRED)	gi_82121811_sp_	AVDALVKKLK	KKKGAMEELE	KALSSPGQPS	KCVTIP----	-----
(PRED)	gi_21264062_sp_	AVDALVKKLK	KKKGAMEDLE	KALSSPGQPS	KCVTIP----	-----
(PRED)	gi_13633872_sp_	AVDALVKKLK	KKKGAMEELE	KALSCPGQPS	NCVTIP----	-----
(PRED)	gi_13959539_sp_	AVDSLKKLK	KKKGAMDELE	RALSCPGQPS	KCVTIP----	-----
(PRED)	gi_21264049_sp_	AVDALVKKLK	KKKGAMEELE	RALSCPGQPS	NCVTIP----	-----
(PRED)	gi_66774168_sp_	AVDSLKKLK	KKKGAMDELE	RALSCPGQPS	KCVTIP----	-----
(PRED)	gi_13959527_sp_	AVDSLKKLK	KKKGAMDELE	RALSCPGQPS	KCVTIP----	-----
(PRED)	gi_51338669_sp_	AVKSLVKKLK	K-TGQLDELE	KAITTQNVNT	KCITIP----	-----
(PRED)	gi_60414603_sp_	AVKSLVKKLK	K-TGQLDELE	KAITTQNINT	KCITIP----	-----
(PRED)	gi_117949830_sp_	AVKSLVKKLK	K-TGRLDELE	KAITTQNCNT	KCVTIPSTCS	EIWGLSTANT
(PRED)	gi_13633871_sp_	AVKSLVKKLK	K-TGRLDELE	KAITTQNCNT	KCVTIPSTCS	EIWGLSTANT
(PRED)	gi_13633914_sp_	AVKSLVKKLK	K-TGRLDELE	KAITTQNCNT	KCVTIPSTCS	EIWGLSTPNT
(PRED)	gi_75041393_sp_	AVKSLVKKLK	K-TGRLDELE	KAITTQNCNT	KCVTIPSTCS	EIWGLSTPNT
(PRED)	gi_110826300_sp_	AVKSLVKKLK	K-TGRLDELE	KAITTQNCNT	KCVTIPSTCS	EIWGLSTPNT
(PRED)	gi_21264050_sp_	AVKSLVKKLK	K-TGQLDELE	KAITTQNRNT	KCVTIPSNCS	EIWGLSTPNT
		..... 110	..... 120	..... 130	..... 140	..... 150
(PRED)	gi_13633932_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_118573879_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_13633915_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_341942042_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_13959533_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_13959566_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_13959559_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_82121811_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_21264062_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_13633872_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_13959539_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_21264049_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_66774168_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_13959527_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE
(PRED)	gi_51338669_sp_	-----	-----RSLD	GRLQVSHRKG	LPHVIYCRVW	RWPDQLQSHHE

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(PRED) gi_60414603_sp_-----RSLD GRLQVSHRKG LPHVVIYCRLW RWPDLHSHHE
(PRED) gi_117949830_spVDQWDTTGLY SFSEQTRSLD GRLQVSHRKG LPHVVIYCRLW RWPDLHSHHE
(PRED) gi_13633871_sp_VDQWDTTGLY SFSEQTRSLD GRLQVSHRKG LPHVVIYCRLW RWPDLHSHHE
(PRED) gi_13633914_sp_IDQWDTTGLY SFSEQTRSLD GRLQVSHRKG LPHVVIYCRLW RWPDLHSHHE
(PRED) gi_75041393_sp_IDQWDTTGLY SFSEQTRSLD GRLQVSHRKG LPHVVIYCRLW RWPDLHSHHE
(PRED) gi_110826300_spIDQWDTTGLY SFSEQTRSLD GRLQVSHRKG LPHVVIYCRLW RWPDLHSHHE
(PRED) gi_21264050_sp_IEQWDTSGLY SYPDQTRSLD GRLQVSHRKG LPHVVIYCRLW RWPDLHSHHE

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..... 160..... 170..... 180..... 190..... 200
(PRED) gi_13633932_sp_LKPLECCEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HSEYNPQHSL
(PRED) gi_118573879_sp_LKPLECCEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HSEYNPQHSL
(PRED) gi_13633915_sp_LKPLECCEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HSEYNPQHSL
(PRED) gi_341942042_sp_LKPLECCEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HSEYNPQHSL
(PRED) gi_13959533_sp_LKPLDICEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HNEFNPQHSL
(PRED) gi_13959566_sp_LKPLDICEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HNEFNPQHSL
(PRED) gi_13959559_sp_LKPLDICEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HNEFNPQHSL
(PRED) gi_82121811_sp_LKPLDICEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HSEFNPQHSL
(PRED) gi_21264062_sp_LKPLEVCEYP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HSEFNPQHSL
(PRED) gi_13633872_sp_LKPLECCEFP FGSKQKEVCI NPYHYKRVES PVLPPVLVPR HSEYNPQHSL
(PRED) gi_13959539_sp_LKPLECCEFP FGSKQKEVCI NPYHYRRVET PVLPPVLVPR HSEYNPQLSL
(PRED) gi_21264049_sp_LKALECCEFP FGSKQKDVCI NPYHYKRVD S PVLPPVLVPR NSEFNAKLSM
(PRED) gi_66774168_sp_LKPLECCEFP FGSKQKEVCI NPYHYRRVET PVLPPVLVPR HSEYNPQLSL
(PRED) gi_13959527_sp_LKPLECCEFP FGSKQKEVCI NPYHYRRVET PVLPPVLVPR HSEYNPQLSL
(PRED) gi_51338669_sp_LRAMELCEFA FNMKKDEV CV NPYHYQRVET PVLPPVLVPR HTEIPA EFPP
(PRED) gi_60414603_sp_LRAMEMCEYA FNMKKDEV CV NPYHYQRVET PVLPPVLVPR HTEIPA EFPP
(PRED) gi_117949830_sp_LKAIENCEYA FNLKKDEV CV NPYHYQRVET PVLPPVLVPR HTEILTELPP
(PRED) gi_13633871_sp_LKAIENCEYA FSLKKDEV CV NPYHYQRVET PVLPPVLVPR HTEILTELPP
(PRED) gi_13633914_sp_LKAIENCEYA FNLKKDEV CV NPYHYQRVET PVLPPVLVPR HTEILTELPP
(PRED) gi_75041393_sp_LKAIENCEYA FNLKEDEV CV NPYHYQRVET PVLPPVLVPR HTEILTELPP
(PRED) gi_110826300_sp_LKAIENCEYA FNLKKDEV CV NPYHYQRVET PVLPPVLVPR HTEILTELPP
(PRED) gi_21264050_sp_LRAIETCEYA FNLKKDEV CV NPYHYQRVET PVLPPVLVPR HTEILTELPP

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..... 210..... 220..... 230..... 240..... 250
(PRED) gi_13633932_sp_LAQFRNLG-Q NEPHMPHNAT FPD SFQQPNS HPFPHSPN-- ----SSYPNS
(PRED) gi_118573879_sp_LAQFRNLG-Q NEPHMPLNAT FPD SFQQPNS HPFPHSPN-- ----SSYPNS
(PRED) gi_13633915_sp_LAQFRNLG-Q NEPHMPLNAT FPD SFQQPNS HPFPHSPN-- ----SSYPNS
(PRED) gi_341942042_sp_LAQFRNLG-Q NEPHMPLNAT FPD SFQQPNS HPFPHSPN-- ----SSYPNS
(PRED) gi_13959533_sp_LVQFRNLS-H NEPHMPQNAT FPD SFHQPN S TPFP LSPN-- ----SPYPPS
(PRED) gi_13959566_sp_LVQFRNLS-H NEPHMPQNAT FPD SFHQPN S TPFP LSPN-- ----SPYPPS
(PRED) gi_13959559_sp_LVQFRNLS-H NEPHMPQNAT FPD SFHQPN S APFP LSPN-- ----SPYPPS
(PRED) gi_82121811_sp_LVQFRNLS-H NEPHMPHNAT FPD SFQQPNS TPFSISP N-- ----SPYPPS
(PRED) gi_21264062_sp_LVQFRNLS-H NEPHMPLNAT FPESFQQHSG GSSFPI SP-- ----NSPYPP
(PRED) gi_13633872_sp_LAQFRNLG-Q NEPHMPLNAT FPD SFQQPHS HPFAQYPN-- ----SSYPNS
(PRED) gi_13959539_sp_LAKFRSASLH SEPLMPHNAT YPD SFQQPPC SALPPSPS-- ----HAFS QS
(PRED) gi_21264049_sp_LPRFRNPLHQ TEPPMPQNAT FPD SFQQPA NALPFTPN SP TNSYPSSPN S
(PRED) gi_66774168_sp_LAKFRSASLH SEPLMPHNAT YPD SFQQSLC PAP-----
(PRED) gi_13959527_sp_LAKFRSASLH SEPLMPHNAT YPD SFQQSLG PAP-----
(PRED) gi_51338669_sp_LDDY----- -SHSIPENTN FPAGI-EPQS NI-PETP---
(PRED) gi_60414603_sp_LDDY----- -SHSIPENTN FPAGI-EPQS NYIPETP---
(PRED) gi_117949830_sp_LDDY----- -THSIPENTN FPAGI-EPQS NYIPETP---
(PRED) gi_13633871_sp_LDDY----- -THSIPENTN FPAGI-EPQS NYIPETP---
(PRED) gi_13633914_sp_LDDY----- -THSIPENTN FPAGI-EPQS NYIPETP---
(PRED) gi_75041393_sp_LDDY----- -THSIPENTN FPAGI-EPQS NYIPETP---
(PRED) gi_110826300_sp_LDDY----- -THSIPENTN FPAGI-EPQS NYIPETP---
(PRED) gi_21264050_sp_LDDY----- -TNSIPENTN FPTGI-EPPN NYIPETP---

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..... 260..... 270..... 280..... 290..... 300
(PRED) gi_13633932_sp_PGSSSSTYPH SPAS-SDPGS PFQMPADTPP PAYLPPEDQM THDTSQPM DT
(PRED) gi_118573879_sp_PGSSSSTYPH SPTS-SDPGS PFQMPADTPP PAYLPPEDPM TQDGSQPM DT
(PRED) gi_13633915_sp_PGSSSSTYPH SPTS-SDPGS PFQMPADTPP PAYLPPEDPM TQDGSQPM DT
(PRED) gi_341942042_sp_PGGSSSSTYPH SPTS-SDPGS PFQMPADTPP PAYLPPEDPM AQDGSQPM DT
(PRED) gi_13959533_sp_PA--SSTYPN SPAS-SGPGS PFQLPADTPP PAYMPPDDQM GQDNSQPM DT
(PRED) gi_13959566_sp_PA--SSTYPN SPAS-SGPGS PFQLPADTPP PAYMPPDDQM GQDNSQPM DT
(PRED) gi_13959559_sp_PA--SSTYPN SPAS-SGPGS PFQLPADTPP PAYMPPDDQM APDNSQPM DT
(PRED) gi_82121811_sp_PA--SSTYPS SPAS-SGPSS PFQLPADTPP PAYMPPDDQM GQDNSQSM DT
(PRED) gi_21264062_sp_SPASSGTYPN SPAS-SGPSS PFQLPADTPP PAYMPPDEQM GQDGSQSM ET
(PRED) gi_13633872_sp_PGSSSSTYPH SPTS-SDPGS PFQMPADTPP PAYLPPEDPM AQDGSQPM DT
(PRED) gi_13959539_sp_PC--TASYPH SPGSPSEPES PYQHSVDTPP LPYHATEASE TQSGQPV DAT
(PRED) gi_21264049_sp_GTGSTATFPH SPSS-SDPGS PFQMP-ETPP PAYMPPEEPM TQDCPQPM DT
(PRED) gi_66774168_sp_-----PSS PGHVFPQSPC PTSYPHSPGS PSESDSPYQH
(PRED) gi_13959527_sp_-----PSS PGHVFPQSPC PTSYPQSPGS PSESDSPYQH
(PRED) gi_51338669_sp_-----PPG YLSEGETSD HQMNHSMDAG SPN-LSPNP-
(PRED) gi_60414603_sp_-----PPG YLSEGETSD HQMNPSMDAG SPN-LSPNP-
(PRED) gi_117949830_sp_-----PPG YISEGETSD QQLNQSM DTG SPAELSP TT-
(PRED) gi_13633871_sp_-----PPG YISEGETSD QQLNQSM DTG SPAELSP TT-

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(PRED) gi_13633914_sp_-----PPG YISEDGETSD QQLNQSMDTG SPAELSPTT-
(PRED) gi_75041393_sp_-----PPG YISEDGETSD QQLNQSMDTG SPAELSPTT-
(PRED) gi_110826300_sp_-----PPG YISEDGETSD QQLNQSMDTG SPAELSPTT-
(PRED) gi_21264050_sp_-----PPG YISEEDGEASD QQMNQSMDTG SPAELSPST-

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..... 310..... 320..... 330..... 340..... 350
(PRED) gi_13633932_sp_N--M-MAPGI HPDIHRGDVQ AVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_118573879_sp_N--M-MAPSL PSEINRGDVQ AVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_13633915_sp_N--M-MAPPL PSEINRGDVQ AVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_341942042_sp_N--M-MAPPL PAEISRGDVQ AVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_13959533_sp_S--NNMIPQI MPSISSRDVQ PVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_13959566_sp_S--NNMIPQI MPSISSRDVQ PVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_13959559_sp_S--SNMIPQT MPSISSRDVQ PVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_82121811_sp_S--NTMIPQI MPNISTRDVQ PVAYEEPKHW CSIVYYELNN RVGEAFHASS
(PRED) gi_21264062_sp_G--SSLAPQ--NMPRGDVQ PVEYQEP SHW CSIVYYELNN RVGEAYHASS
(PRED) gi_13633872_sp_NMTNMTAPT PLAEINRGDVQ AVAYEEPKHW CSIVYYELNN RVGERFHASS
(PRED) gi_13959539_sp_-----ADRHV VLSIPNGDFR PVCYEEPQHW CSVAYYELNN RVGETFQASS
(PRED) gi_21264049_sp_N--LLAPNLP LEISNRTDVH PVAYQEPKHW CSIVYYELNN RVGEAFLASS
(PRED) gi_66774168_sp_-----SDFR PVCYEEPQHW CSVAYYELNN RVGETFQASS
(PRED) gi_13959527_sp_-----SDFR PVCYEEPLHW CSVAYYELNN RVGETFQASS
(PRED) gi_51338669_sp_-----M SPAHNNLDLQ PVTYCEPAFW CSISYYELNQ RVGETFHASQ
(PRED) gi_60414603_sp_-----M SPAHNNLDLQ PVTYCEPAFW CSISYYELNQ RVGETFHASQ
(PRED) gi_117949830_sp_-----L SPVNHSLDLQ PVTYSEPAFW CSIAYYELNQ RVGETFHASQ
(PRED) gi_13633871_sp_-----L SPVNHSLDLQ PVTYSEPAFW CSIAYYELNQ RVGETFHASQ
(PRED) gi_13633914_sp_-----L SPVNHSLDLQ PVTYSEPAFW CSIAYYELNQ RVGETFHASQ
(PRED) gi_75041393_sp_-----L SPVNHSLDLQ PVTYSEPAFW CSIAYYELNQ RVGETFHASQ
(PRED) gi_110826300_sp_-----L SPVNHSLDLQ PVTYSEPAFW CSIAYYELNQ RVGETFHASQ
(PRED) gi_21264050_sp_-----L SPVNHGMDLQ PVTYSEPAFW CSIAYYELNQ RVGETFHASQ

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..... 360..... 370..... 380..... 390..... 400
(PRED) gi_13633932_sp_TSILVDGFTD PSNNKNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_118573879_sp_TSILVDGFTD PSNNKNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_13633915_sp_TSILVDGFTD PSNNKNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_341942042_sp_TSILVDGFTD PSNNKNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_13959533_sp_TSILVDGFTD PANNKS RFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_13959566_sp_TSILVDGFTD PSNNKS RFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_13959559_sp_TSILVDGFTD PSNNKS RFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_82121811_sp_TSILVDGFTD PSNNKNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_21264062_sp_TSILVDGFTD PSNNKNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_13633872_sp_TSILVDGFTD PSNNKNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_13959539_sp_RSVLIDGFTD PSNNRNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_21264049_sp_TSILVDGFTD PSNNRNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_66774168_sp_RSVLIDGFTD PSNNRNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_13959527_sp_RSVLIDGFTD PSNNRNRFCL GLLSNVNRNS TIENTRRHIG KGVHLYYVGG
(PRED) gi_51338669_sp_PSM TVDGFTD PSNS-ERFCL GLLSNVNRNA AVELTRRHIG RGVRLYYIGG
(PRED) gi_60414603_sp_PSM TVDGFTD PSNS-ERFCL GLLSNVNRNA AVELTRRHIG RGVRLYYIGG
(PRED) gi_117949830_sp_PSLTVDGFTD PSNS-ERFCL GLLSNVNRNA TVEMTRRHIG RGVRLYYIGG
(PRED) gi_13633871_sp_PSLTVDGFTD PSNS-ERFCL GLLSNVNRNA TVEMTRRHIG RGVRLYYIGG
(PRED) gi_13633914_sp_PSLTVDGFTD PSNS-ERFCL GLLSNVNRNA TVEMTRRHIG RGVRLYYIGG
(PRED) gi_75041393_sp_PSLTVDGFTD PSNS-ERFCL GLLSNVNRNA TVEMTRRHIG RGVRLYYIGG
(PRED) gi_110826300_sp_PSLTVDGFTD PSNS-ERFCL GLLSNVNRNA TVEMTRRHIG RGVRLYYIGG
(PRED) gi_21264050_sp_PSLTVDGFTD PSNS-ERFCL GLLSNVNRNA TVEMTRRHIG RGVRLYYIGG

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..... 410..... 420..... 430..... 440..... 450
(PRED) gi_13633932_sp_EVYAECLSDS SIFVQSRNCN YHHGFHPTTV CKIPSGCSLK IFNNQEFACL
(PRED) gi_118573879_sp_EVYAECLSDS SIFVQSRNCN YHHGFHPTTV CKIPSGCSLK IFNNQEFACL
(PRED) gi_13633915_sp_EVYAECLSDS SIFVQSRNCN YHHGFHPTTV CKIPSGCSLK IFNNQEFACL
(PRED) gi_341942042_sp_EVYAECLSDS SIFVQSRNCN YHHGFHPTTV CKIPSGCSLK IFNNQEFACL
(PRED) gi_13959533_sp_EVYAECLSDS SIFVQSRNCN FHHGFHPTTV CKIPSSCSLK IFNNQEFACL
(PRED) gi_13959566_sp_EVYAECLSDS SIFVQSRNCN FHHGFHPTTV CKIPSSCSLK IFNNQEFACL
(PRED) gi_13959559_sp_EVYAECLSDS SIFVQSRNCN FHHGFHPTTV CKIPSSCSLK IFNNQEFACL
(PRED) gi_82121811_sp_EVYAECLSDS SIFVQSRNCN YHHGFHPTTV CKIPSGCSLK IFNNQEFACL
(PRED) gi_21264062_sp_EVYAECLSDT SIFVQSRNCN YHHGFHPTTV CKIPSGCSLK IFNNQEFACL
(PRED) gi_13633872_sp_EVYAECLSDS SIFVQSRNCN YHHGFHPTTV CKIPSGCSLK IFNNQEFACL
(PRED) gi_13959539_sp_EVYAECLSDS SIFVQSRNCN YQHGFHPATV CKIPSGCSLK VFNNQLFAQL
(PRED) gi_21264049_sp_EVYAECLSDS SIFVQSRNCN YHHGFHPTTV CKIPSRCSLK IFNNQEFACL
(PRED) gi_66774168_sp_EVYAECLSDS SIFVQSRNCN YQHGFHPATV CKIPSGCSLK VFNNQLFAQL
(PRED) gi_13959527_sp_EVYAECLSDS SIFVQSRNCN YQHGFHPATV CKIPSGCSLK VFNNQLFAQL
(PRED) gi_51338669_sp_EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEFACL
(PRED) gi_60414603_sp_EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEFACL
(PRED) gi_117949830_sp_EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEFACL
(PRED) gi_13633871_sp_EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEFACL
(PRED) gi_13633914_sp_EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEFACL
(PRED) gi_75041393_sp_EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEFACL
(PRED) gi_110826300_sp_EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEFACL

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(PRED) gi_21264050_sp EVFAECLSDS AIFVQSPNCN QRYGWHPATV CKIPPGCNLK IFNNQEF AAL
      . . . . . 460 . . . . . 470 . . . . . 480 . . . . . 490 . . . . . 500
(PRED) gi_13633932_sp ---- LAQSVN HGFETVYE LT KMCTLRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_118573879_sp ---- LAQSVN HGFETVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_13633915_sp ---- LAQSVN HGFETVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_341942042_sp ---- LAQSVN HGFETVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_13959533_sp ---- LAQSVN HGFEAVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_13959566_sp ---- LAQSVN HGFEAVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_13959559_sp ---- LAQSVN HGFEAVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_82121811_sp ---- LAQSVN HGFEAVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_21264062_sp ---- LAQSVN HGFEAVYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_13633872_sp ---- LAQSVN HGFETEYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_13959539_sp ---- LAQSVH HGFEVVEYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_21264049_sp ---- LAQSVN HGFEAVYE LT KMCTIRMSFV KGWGA KYHRQ DVTSTPCWIE
(PRED) gi_66774168_sp ---- LAQSVH HGFEVVEYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_13959527_sp LAQLLAQSVH HGFEVVEYE LT KMCTIRMSFV KGWGA EYHRQ DVTSTPCWIE
(PRED) gi_51338669_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
(PRED) gi_60414603_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
(PRED) gi_117949830_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
(PRED) gi_13633871_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
(PRED) gi_13633914_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
(PRED) gi_75041393_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
(PRED) gi_110826300_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
(PRED) gi_21264050_sp ---- LAQSVN QGFEAVYQLT RMCTIRMSFV KGWGA EYRRQ TVTSTPCWIE
      . . . . . 510 . . . . . 520 . . . . .
(PRED) gi_13633932_sp IHLHG PLQWL DKVLTQMGSP HNPIS SVS
(PRED) gi_118573879_sp IHLHG PLQWL DKVLTQMGSP HNPIS SVS
(PRED) gi_13633915_sp IHLHG PLQWL DKVLTQMGSP HNPIS SVS
(PRED) gi_341942042_sp IHLHG PLQWL DKVLTQMGSP HNPIS SVS
(PRED) gi_13959533_sp IHLHG PLQWL DKVLTQMGSP LNPIS SVS
(PRED) gi_13959566_sp IHLHG PLQWL DKVLTQMGSP LNPIS SVS
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(PRED) gi_21264062_sp VHLHG PLQWL DKVLTQMGSP LNPIS SVS
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(PRED) gi_13959539_sp IHLHG PLQWL DKVLTQMGSP HNPIS SVS
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(PRED) gi_13633914_sp LHLNG PLQWL DKVLTQMGSP SVRCSSMS
(PRED) gi_75041393_sp LHLNG PLQWL DKVLTQMGSP SVRCSSMS
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(PRED) gi_21264050_sp LHLNG PLQWL DKVLTQMGSP SVRCSSMS

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