


sabA 26695: 1 EDNGFFVSSAGYQIGEAVQMVKNTGELKNLNEKYEQLSQYLNQVASLKQSIQNANNIELVNSSLNYLKSFTNN
 ELS37 1 MKKHILSLALGSLLVSAESAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Ka/Ks All
 Ka/Ks S. America

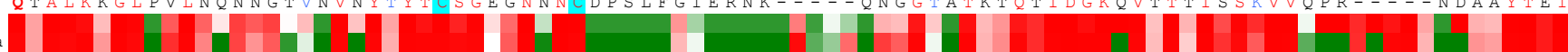
Nic03_A 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNTLIQLADPSAINNAAREN LGASAKN
 Nic16_A + C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNVAREN LGASAKN
 Nic04_C 1 - - - - - EDDGFYMSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNTLIQLADPSAINNSAREN LGASAKN
 Nic09_A 1 MKKHILSLTLGSLLVSTLSAEDDGFYVSAGYQIGEAAQMVKNTKGIQELSDNYEKLNLLNNYSTLNTLIKLSADPSAINNSAREN LGASAKN
 Nic09_C 1 MKKHILSLTLGSLLVSTLSAEDDGFYVSAGYQIGEAAQMVKNTKGIQELSDNYEKLNLLNNYSTLNTLIKLSADPSAINNSAREN LGASAKN
 Nic13_C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVSNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPNAIINLAREN LGASAKN
 Nic03_C 1 MKKHILSLALGSLLVSTLSAEDDGFYMSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Nic30_A 1 MKKHILSLALGSLLVSTLSAEDDGFYMSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAVIINNAAREN LGASAKN
 Nic21_A + C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Nic19_A + C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAVIINNAAREN LGASAKN
 Nic06_A + A 1 MKKHILSLALGSLLVSAESAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Nic15_A + C 1 MKKHILSLTLGSLLVSAESAEDDGFYTSVGYQIGEAQMVKNTKGIQELSDNYENLSKLLTRYSTLNTLIQLADPSAINNSAREN LGASAKN
 Nic27_A 1 - - - HILSLALGSLLVSAESAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAVIINNAAREN LGASAKN
 Nic18_A + C 1 MKKHILSLALGSLLVSAESAEDDGFYMSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLAADPSAINNAAREN LGASAKN
 Nic07_A + C 1 MKKHILSLTLGSLLVSTLSAEDDGFYMSAGYQIGEAAQMVKNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAVIINNAAREN LGASAKN
 Nic12_A 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNLIQLADPSAVIINNAAREN LGASAKN
 Nic12_C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNLIQLSTDPSAINNAAREN LGASAKN
 Nic10_A + C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Nic32_A 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAVIINNAAREN LGASAKN
 Nic01_A + C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Nic14_A 1 MKKHILSLALGSLLVSTLSAEDDGFYMSAGYQIGEAAQMVKNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Nic23_A 1 MKKHILSLALGSLLVSTLSAEDDGFYTSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNTLIQLADPSAINNSAREN LGASAKN
 Nic28_A 1 MKKHILSLTLGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNLIQLSSDPSAINNSAREN LGASAKN
 Nic25_A 1 MKKHILSLALGSLLVSAESAEDDGFYMSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNTLIQLADPSAINNSAREN LGASAKN
 Nic05_A + C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDRYESLNNLLTRYSTLNTLIKLSADPSAINNAAREN LGASAKN
 Nic29_A 1 MKKHILSLALGSLLVSTLSAEDDGFYMSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNLIQLADPSAINNSAREN LGASAKN
 Nic24_A 1 MKKYILSLALGSLLVSTLSAEDDGFYMSAGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPSAINNAAREN LGASAKN
 Nic13_A 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVSNTKGIQQ LSDNYENLSKLLTRYSTLNNFIQLADPNAIINLAREN LGASAKN
 Nic26_A 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDRYESLNNLLTRYSTLNNFIQLADPSAVIINNAAREN LGASAKN
 Nic04_A 1 - - - - - MLHAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYENLSKLLTRYSTLNTLIKLSADPSAINNAAREN LGASAKN
 Nic20_A 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVKNTKGIQELSDNYEKLNLLNRYSTLNTLIKLSADPSAINNSVREN LGASAKN
 Nic20_C 1 MKKHILSLTLGSLLVSTLSAEDDGFYMSAGYQIGEAAQMVKNTKGIQQ LSDRYESLNNLLTRYSTLNTLIKLSADPSAINNGVRND LGASAKN
 Nic11_A + C 1 MKKHILSLALGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVKNTKGIQELSDNYEKLNLLNRYSTLNTLIKLSADPSAINNSAREN LGASAKN
 Nic31_A 1 MKKHILSLTLGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYEKLNLLNRYSTLNTLIQLADPSAINNSAREN LGASAKN
 Nic22_A 1 MKKHILSLTLGSLLVSTLSAEDDGFYTSVGYQIGEAAQMVNTKGIQQ LSDNYEKLNLLNRYSTLNTLIQLADPSAINNSAREN LGASAKN
 consensus 1 MKK ILSL LGSLLVS L AEDDGFY S GYQIGEAA QMV NTKGIQ LSD YE L LL YSTLN I L DP IN R LGASAKN

sabA 26695: 72 N Y N S T T Q S P I F N A V Q A V I T S V L G F W S L Y A G N Y F T F F V G K K V G - D S G Q O A S V Q G N P F K T I I E N S C S - - G I E N C A M D Q T T Y D K M K K L A E D L Q A A
ELS37 93 L I G D K A N S P A Y Q A V L L A I N A A V G F W N V L G Y V T Q C G G N G N - Q R S T S S - T T V F N N E P G Y R S T S I T C N Y N N L N I G R E G V M S I D N M K K I N E A Y Q I L
Ka/Ks All
Ka/Ks S. America



Nic03_A 93 L I G D T K N S P A F Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y R S T S I T C S Y N N L G I G R E G V M S I D N M K K I N E A Y Q I L
Nic16_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N A N G Q K S T S S - T T I F N N E P G Y R S T S I T C D Y N N L N I G S Q G V M S I E N M K K I N E A Y Q I L
Nic04_C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N A N G T E S T S S - T T I F N N E P G Y R S T S I T C N Y N N L R I G V Q G V M S I D N M K K I N E A Y Q I L
Nic09_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V V G Y A T Q C G G N G N - Q K S T S S - T T I F N N E P G Y R S T S I T C S L N G Y A P G Y Y A P M S I E N F K K L N E A Y Q I L
Nic09_C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V V G Y A T Q C G G N G N - Q K S T S S - T T I F N N E P G Y R S T S I T C S L N G Y A P G Y Y G P M S I E N F K K L N E A Y Q I L
Nic13_C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V V G Y V S Q C G G N A D G Q K S T S S - T T I F N N E P G Y R S T S I T C S L N G Y A P G Y Y G P M S I E N F K K L N E A Y Q I L
Nic03_C 93 L I G D T K N S P A F Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y R S T S I T C S Y N N Y A P G V Q G P I S I K N F K K I N E A Y Q I L
Nic30_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G N - Q T S T S S - T T I F N N E P G Y R S T S I I C S Y N S L G I G R E G V M S I D N M K K L N E A Y Q I L
Nic21_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q R S T S S - I T I F N N E P G Y R S T S I T C S Y N N L K I G M E G V M S I D N M K K I N E A Y Q I L
Nic19_A + C 93 L I G D K A N S P T Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q R S T S S - R T I F N N E P G Y R S T S I T C S Y N N L G I G K E G V M S I D N M K K I N E A Y Q I L
Nic06_A + A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y R S T S I T C S Y N N L N I G K E A V M S I N N M K K I N E A Y Q I L
Nic15_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y Q S T S I T C N Y N N L G I G K E G V M S I D N M K K I N E A Y Q I L
Nic27_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - R R S A S S - T T I F N N E P G Y R S T S I T C N Y N N L G I G R E G V M S I D N M K K L N E A Y Q I L
Nic18_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y R S T S I T C S Y N N L G I G R E G V M S I D N M K K L N E A Y Q I L
Nic07_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y R S T S I T C S Y N N L G I G R E G V M S I D N M K K L N E A Y Q I L
Nic12_A 93 L I G D T K T S P A Y Q A V L L A I N A A V G F W N V V G Y V T Q C G G N G N - Q K S T S S - T T I F N N E P G Y R S T S I T C S L N G L G I G R E G V M S I D N M K K I N E A Y Q I L
Nic12_C 93 L I G D T K T S P A Y Q A V L L A I N A A V G F W N V V G Y V T Q C G G N G N - Q K S T S S - T T I F N N E P G Y R S T S I T C S L N G Y S P G Y Y A P M S I D N F K K L N E A Y Q I L
Nic10_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q E S T S S - T T I F N N E P G Y R S T S I T C G Y N N L G I G I E G V M S I N N M K K I N E A Y Q I L
Nic32_A 93 L I G D T K T S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y R S T S I T C S Y N N L G I G R E G V M S I D N M K K I N E A Y Q I L
Nic01_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G N - Q E S T S S - T T I F N N E P G Y R S T S I I C S Y N - L G I G K E A V M S I D N M K K I N E A Y Q I L
Nic14_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S T S S - T T I F N N E P G Y R S T S I T C D Y N N L G I G S Q G V M S I D N M K K L N E A Y Q I L
Nic23_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q Q S T S S - T T I F N N E P G Y R S T S I T C S Y N N L G I G R E G V M S I D N M K K I N E A Y Q I L
Nic28_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G S - Q K S T S S - T T V F N N E P G Y R S T S I T C S Y N N L G I G K E G V M S I D N M K K L N E A Y Q I L
Nic25_A 93 L I G D T K T S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G N - K E S T S S - T T I F N N E P G Y R S T S I I C N Y N N L G I G R E G V M S I D N M K K I N E A Y Q I L
Nic05_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G D - Q K S F S S - T T I F N N E P G Y R S T S I T C N Y N N L G I G R E G V M S I D N M K K L N E A Y Q I L
Nic29_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G N - Q K S T S S - T T I F N N E P G Y R S T S I T C G Y N N L N I G R E G V M S I D N M K K I N E A Y Q I L
Nic24_A 93 L I G D K A N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N A D G T K S T S S - T T I F N N E P G Y R S T S I T C S S N N L E I G R E G V M S I D N M K K I N E A Y Q I L
Nic13_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V V G Y V S Q C G G N A D G Q K S T S S - T T I F N N E P G Y R S T S I T C S F N R L V T G V Q G L I S I K N F K K I N E A Y Q I L
Nic26_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V L G Y A T Q C G G N G N - Q Q S T S S - M T I F N N E P G Y R S T S I T C N Y N N L G I G R E G V M S I D N M K K L N E A Y Q I L
Nic04_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V I G Y V T Q C G G Y N K G A Q S T P G I Q T N F N N E P G Y R S T Q I S C Q F G N L R A G V Q G P I P I E T F K K L N E A Y Q I L
Nic20_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V V G Y A T Q C G G N G N - Q K S T S S - T T I F N N E P G Y R S T S I T C S L N R Y T P G V Q G P M S I D N F K K L N E A Y Q I L
Nic20_C 93 L I G D K A N S P A Y Q A V L L A I N A A V G F W N V V G Y V T Q C G G N A N G T K S T S S - T T I F N N E P G Y R S T S I T C S L N G Y T P G Y Y G P M S I E N F K K L N E A Y Q I L
Nic11_A + C 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N I V G Y V T Q C G G Y N K D A S S T P G I Q T N F N N E P G Y R S T Q I S C Q F G N L P A G V Q G P M P I E T F K K L N E A Y Q I L
Nic31_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V V G Y V T Q C G G N A N G T A S T S S - T T I F N N E P G Y R S T S I T C S L N R Y T P G Y Y G P M S I E N F K K L N E A Y Q I L
Nic22_A 93 L I G D T K N S P A Y Q A V L L A I N A A V G F W N V V G Y V T Q C G G N A N G T A S T S S - T T I F N N E P G Y R S T S I T C S L N G Y T P G Y Y G P M S I E N F K K L N E A Y Q I L
consensus 93 L I G D S P Y Q A V L L A I N A A V G F W N v l G Y t Q C G G S T F N N E P G Y S T I C G g m I K K i N E A Y Q I L

sabA 26695: 162 Q T N S A - - - - - - - - - - - - T K G N N L C A L S G - - - C A - - A T D S - - - T S N P P N - - - - - - - - - -
ELS37 183 Q T A L K K G L P V L N Q N N G T V N V N Y T Y T C S G E G N N N C D P S L F G I E R N K - - - - - Q N G G T A T K T Q T I D G K Q V T T T I S S K V V Q P R - - - - - N D A A Y T E I
Ka/Ks All
Ka/Ks S. America




Nic03_A 183 Q T A L K K G L P A L K Q N D G T I N V N Y S Y T C S G E G N N N C D P S L F E I K N D E - - - - - R S G G T A T K T Q T I D G K T V T T T I S S K V V D W N A S G N T S R V S Y T E I
Nic16_A + C 184 Q T A L K K G L P A L K Q N N G K V D V T Y S Y T C S G N G N T N C N P S L F G I K G N E - - - - - Q N G G S V T K T Q T I D G K T V T T T I S S K V V D F G A S G N T S G V S Y T E I
Nic04_C 184 Q T A L K K G L G A L K E N N G K I D V T Y S Y T C S G K G N N N C N P S L F G I K D N E - - - - - R N G G S I T T T Q T I D G K Q V T T K I S S K V V D S T A S G N T S G V S Y T E I
Nic09_A 183 Q T A L K Q G L P A L K K S D G T I D V N Y S Y T C S G E G N N N C D A - - - - - L A N K - - - - - R N G G T K T E T Q T I D G K T V T T T I S S K V V D S T A S G N T S G V S Y T E I
Nic09_C 183 Q T A L K Q G L P A L K K S D G T I D V N Y S Y T C S G E G N N N C D A - - - - - L A N N - - - - - R N G G T K T E T Q T I D G K T V T T T I S S K V V D S T A S G N T S G V S Y T E I
Nic13_C 184 Q T A L K Q G L P A L K E N N G T I N V N Y S Y T C S G E G N N N C N P S L L G I K D G K - - - - - Q N G G T A T K T Q T I D G K Q V T T T I S S K V V D S N A S G N I L H V S Y T E I
Nic03_C 183 Q T A L K N G L P A L N N S N G K V N V T Y T Y T C S G E G N N N C S K E A T G V E - - - - - Q N G G T V T K T Q T I D G K T V S T T I S S K V V D S N A S G N T S H V S Y T E I
Nic30_A 183 Q A A L K K G L P A L K E N N G K V D V N Y S Y T C S G E G N T N C D P S L F G I K G K G - - - - - R N G G S I T K T Q I I D G K T V S T T I S S K V V D S G A S G N T S G V S Y T E I
Nic21_A + C 183 Q T A L K K G L G A L N Q N N G T V N V D Y S Y T C S G K G N T N C D P S L F G I T G N N E N G N G R N G G S I T K T Q T I D G K S V T T N I S S K V V D S T A A G N T T G V S Y T E I
Nic19_A + C 183 Q T A L K K G L P A L K E N N G T V N V T Y T Y T C S G E G N T N C D P S L L G I K D E K - - - - - R N G G S T T K T Q T I D G K T V T T K I N S K V V D S K A Q G N T T G V S Y T E I
Nic06_A + A 183 Q T A L K K G L P A L K Q N N G K V D V S Y T Y T C S G Q G N N N C D P S L F G I K D D K - - - - - R N G G T A T K T Q T I D G K T V I T T I S S R V V Y S G A S G N T S G V S Y T E I
Nic15_A + C 183 Q A A L K K G L P A L K Q N N G T I S V N Y S Y T C S G E G N N N C N P S L F G I N D A Q - - - - - R N G G S I T K T Q T I D G K Q V T T T I S S K V V D W N A Q G N T S H V S Y T E I
Nic27_A 183 Q T A L K K G L P A L K Q N D G T I N V N Y S Y T C S G K G N T N C D P S L L G I K D N E - - - - - R N G G T A T K T Q T I D G K T V T T T I S S K V V D S R A S G N T M G V S Y T E I
Nic18_A + C 183 Q T A L K K G L G A L K Q N D G K I D V K Y S Y T C S G E G N N N C N A V A T D - - - - - R N G G T K T E T Q T I D G K S V T T T I S S K V V D S N A Q G N T L G V S Y T E I
Nic07_A + C 183 Q A A L K Q G L P A L N N S N G K V N V T Y T Y T C S G K G N N N C D P S L F G I T S D K - - - - - R N G G T I T K T Q T I D G K Q V S T T I S S K V V Q P N - - - - - N G A A Y T E I
Nic12_A 183 Q T A L K K G L G A L K Q N D G T I N V N Y S Y T C S G K G N T N C D P S L F G I K G N T Q N G G R N G G T V T K T Q T I D G K T V T T T I S S K V V D S R A Q G N T L G V S Y T E I
Nic12_C 183 Q T A L K K G L G A L K Q N D G T I N V N Y S Y T C S G E G N T N C D P S L F G I K G N T Q N G G R N G G T V T K T Q T I D G K T V T T T I S S K V V D S G A Q G N T L G V S Y T E I
Nic10_A + C 183 Q T A L K K G L P A L K Q N D G T I N V N Y S Y T C S G E G N I N C N M S V T G A N Q - - - - - Q N G G T A T K T Q T I D G K T V T T R I S S R V V D S R A S G N T S R V S Y T E I
Nic32_A 183 Q T A L K K G L G A L K Q N D G T I N V S Y S Y T C S G E G N N N C D P S L L G I T N D K - - - - - R N G G T T T K T Q T I D G K T V T T T I S S K V V Q P S - - - - - N G A A Y T E I
Nic01_A + C 182 Q T A L K K G L P A L K E N N G A I E V K Y S Y T C S G E G N T N C D P S L F G I E D N K - - - - - R N G G S V T K T Q T I D G K Q V T T T I N S K V V D S G A S G N T S R V S Y T E I
Nic14_A 183 Q T A L K K G L P A L K Q N N G T I D V N Y T Y T C S G Q G N T N C N P S L F G I M G N D Q N G H G R N G G S I T K P Q T I D G K Q V S T T I S S K V V D S S A S G N T S G V S Y T E I
Nic23_A 183 Q T A L K K G L G A L K E N N G T I S V N Y S Y T C S G E R N N N C D P S L F G M K S N E - - - - - R N G G T A T K N Q T I D G K T V T T T I S S K V V D S G E Q G N T T G V S Y T E I
Nic28_A 183 Q T A L K K G L G A L K E N N G T V N V T Y T Y T C S G E G N T N C D P S L F G M K D E E - - - - - R N S G S I T K T Q T I D G K T V S T T I S S K V V R P - - - - - S G A A Y T E I
Nic25_A 183 Q T A L K K G L P A L K E N N E K V D V N Y S Y T C S G E G N T N C D K S V T G V T E - - - - - Q N G G T K T E T Q T I D G K Q V T T T I S S R V V D S S A S G N T S G V S Y T E I
Nic05_A + C 183 Q T A L K K G L S A L K E N N G T I N V N Y T Y T C S G E G N N N C N P S L F G I T G N A Q N S D R R N G G T A T K T Q T I D G K S V T T T I S S K V V D S G A S G N T S G V S Y T K I
Nic29_A 183 Q T A L K K G L G A L K Q N D G T I N V N Y S Y T C S G E R N N N C S Q Q V T G V D E - - - - - Q N G G T T T K T Q I I D G K T V T T T I S S K V V D S T A N G N T S H V S Y T E I
Nic24_A 184 Q T A L K T G L G A L K Q N N G T I S V N Y S Y T C S G E G N T N C N S G V T G V N K - - - - - Q N G G T A T K A Q T I D G K T V T T T I S S K V V D S T A A G N T S G V S Y T E I
Nic13_A 184 Q T A L K Q G L P A L K E N N G T I N V N Y S Y T C S G E G N N N C N P S L L G I K D G K - - - - - Q N G G T A T K T Q T I D G K Q V T T T I S S K V V D S S A S G N T L H V S Y T E I
Nic26_A 183 Q T A L K K G L G A L K E N N G T I N V N Y S Y T C S G E G N N N C S P L V T G V E N - - - - - Q N S G S T T K T Q T I D G K Q V T T M I S S K V V D S N A R G N T S H V S Y T E I
Nic04_A 185 Q T A L K K G L G A L K E N N G K I D V T Y S Y T C S G E G N N N C N P S L F G M K D D E - - - - - R N G G S T T T T Q T I D G K Q V T T K I S S K V V D S T A S G N T S G V S Y T E I
Nic20_A 183 Q T A L K K G L P A L K Q N N G T I D V N Y S Y T C S G E G N T N C S P E V T G V N N - - - - - Q S N G T T T K T Q T I D G K T V T T T I S S K V V D S K A Q G N T T G V S Y T E I
Nic20_C 184 Q T A L K N G L P A L K E N N G T V N V T Y T Y T C S G Q G N N N C D A L V S D G E N K - - - - - R N G G S K T E T Q T I D G K T V I T T I S S K V V Q P S - - - - - N G A A Y T E I
Nic11_A + C 185 Q T A L K K G L P A L K E N N G T V S V T Y T Y T C S G E G N N N C K - - I E G V E - - - - - Q V N G S K T K T Q T I D G K E V S T T I S S K V V D W N A S G N T S G V S Y T E I
Nic31_A 184 Q T A L K K G L P A L K E N N G T V N V T Y S Y T C S G E G N T N C N P S L F G I N G D R - - - - - R N G G T A T K T Q T I D G K Q V S T T I S S K V V D S I A S G N T S G V S Y T E I
Nic22_A 184 Q T A L K K G L P A L K E N N G T V N V T Y S Y T C S G E G N T N C N P S L F G I N G D G - - - - - Q N G G T A T K T Q T I D G K Q V S T T I S S K V V D S T A P G N T S G V S Y T E I
consensus 185 Q A L K G L L v V Y t Y T C S G N N C G t T Q I D G K V T I S k V V Y T I

sabA 26695: 194 --AL-----NLAQQQLMDL IANTKTA MMWKNIVISGVSNTS--GAITSTNYPTQYAV---FNNIKAMIPI LQQA VTL S QSNHTLSASLQ
ELS37 265 TNALNGVPD SAQALLAQA STL I NTINNA CPWF SVA--NKEGGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINTNEQTAP
Ka/Ks All
Ka/Ks S. America


Nic03_A 270 TNALSGVPD NAQALLAQA STL I NTINSA CPWFHVT--NQSNGPQ--MSPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQSAQ
Nic16_A + C 271 TNALSGVPD NAQALLAQA STL I NTINSA CPWFHVT--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQTAQ
Nic04_C 270 TNALNGVPD NAQALLAQA STL I NTINSA CPWF S V T--NKNSGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQTAP
Nic09_A 265 TNALNGVPD NAQALLAQA STL I NTINSA CPWF K V T--NKSGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ TTP
Nic09_C 265 TNALNGVPD NAQALLAQA STL I NTINSA CPWF N V T--NESGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ TTP
Nic13_C 271 NNQLDKVPD NAQALLAQA STL I NTINSA CPWF N A T T N S S P N A P Q W K W N P N S--GGLCGAFKDEISA IQKMI TDAQELV NQTSVINSNEQSAQ
Nic03_C 268 TNALSGVPD NAQALLAQA STL I NTINSA CPWF R V T--NHGGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQSAQ
Nic30_A 270 TNQLNGVPD SAQALLAQA STL I NTINSA CPWF R V T--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTNAINSNEQ TTP
Nic21_A + C 275 TNALNGVPD NAQALLAQA STL I NTINSA CPWF H V T--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ TAP
Nic19_A + C 270 TNL T L S G V P D N A Q A L L A Q A S T L I N T I N S A C P W F H V T--NHGGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINTNEQ TTP
Nic06_A + A 270 TNV L N G V P D N A Q A L L A Q A S T L I N T I N S A C P W F R V T--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN TNEQ TTP
Nic15_A + C 270 TNK L D G V P D S A Q A L L A Q A S T L I N T I N S A C P W F I V T--NKNNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINSNEQ TAP
Nic27_A 270 TNALSGVPD SAQALLAQA STL I NTINSA CPWF H V T--NQNNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINSNEQ SAS
Nic18_A + C 265 TNALNGVPD SAQALLAQA STL I NTINSA CPWF S V N--NKSGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINSHEQ TTP
Nic07_A + C 265 TNALSGVPD SAQALLAQA STL I NTINSA CPWF R V T--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ TAP
Nic12_A 275 TNALSRVPD NAQALLAQA STL I NTINSA C P H F S A N N S S E A N A P K--FSTTS--GKICGAFSEISA IQKMI TDAQELV NQTSVINEHEQ SAP
Nic12_C 275 TNALSGVPD NAQALLAQA STL I NTINSA C P Y F S A N N S S E A N A P K--FSTTN--GKICGAFSEISA IQKMI TDAQELV NQTSVINEHEQ SAP
Nic10_A + C 268 TNQLNGVPD SAQALLAQA STL I NTINSA CPWF H V T--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINTNEQ TAP
Nic32_A 275 TNALNGVPD SAQALLAQA STL I NTINSA CPWF H V T--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINSNEQ SAS
Nic01_A + C 269 TNALSGVPD SAQALLAQA STL I NTINSA CPWF R V T--NKSGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ SAP
Nic14_A 275 TNK L D G V P D N A Q A L L A Q A S T L I N T I N S A C P W F R V T--NQSNGPQ--MNPTS--GGLC-AFKDEISA IQKMI TDAQELV NQTSAIN TNEQ TAP
Nic23_A 270 TNL T L K G V P D N A Q A L L A Q A S T L I N T I N S A C P W F R V T--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ TAP
Nic28_A 264 TNALSGVPD NAQALLAQA STL I NTINSA CPWF R V T--NNNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQSAQ
Nic25_A 268 TNQLNGVPD SAQALLAQA STL I NTINSA CPWF S V V--NKSGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINTNEQ TTP
Nic05_A + C 275 TNL T L S G V P D N A Q A L L A Q A S T L I N T I N S A C P W F S V T--NQSNGPQ--MNPTS--GGLC-AFKDEISA IQKMI TDAQELV NQTSVINSNEQSAQ
Nic29_A 268 TNALSGVPD SAQALLAQA STL I NTINSA CPWF H V T--NRSSGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINNNEQ TTP
Nic24_A 269 TNE L K G V P D S A Q A L L A Q A S T L I N T I N S A C P W F H V T--NQHNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ TTP
Nic13_A 271 NNQLDKVPD NAQALLAQA STL I NTINSA CPWF N A T T N S S P N A P Q W K W N P N S--GGLCGAFKDEISA IQKMI TDAQELV NQTSVINSNEQSAQ
Nic26_A 268 TNALNGVPD SAQALLAQA STL I NTINSA CPWF H V T--NQHNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSAIN SNEQ SAP
Nic04_A 272 TNALNGVPD NAQALLAQA STL I NTINSA CPWF T E P--NSQSNGPQWQWNPNSGGGVC G A F K Q E I S A I Q K M I T D A Q E L V N Q T S A I N S N E Q T A P
Nic20_A 268 TNALNGVPD SAQALLAQA STL I NTINSA CPWF R V A--NQSNGPQ--MNPTS--GGLC-VFKDEISA IQKMI TDAQELV NQTSVINEHEQ STP
Nic20_C 265 TNALNGVPD SAQALLAQA STL I NTINSA C P F F H A P--NNKVGGPK--WEWPS--NKL C G A F S Q E I S A I Q K M I T D A Q E L V N Q T S V I N S N E Q S A Q
Nic11_A + C 267 TNALNGVPN NAQALLAQA STL I NTINSA CPWF T E P--SSQSNGPQWQWKPSSGGGVC G A F K Q E I S A I Q K M I T D A Q E L V N Q T S A I N T N E Q T A P
Nic31_A 271 TNQLNGVPD SAQALLAQA STL I NTINSA C P Y F T A P--SSRANGPK--WEWPS--NKL C G A F S D E I S A I Q K M I T D A Q E L V N Q T S V I N S H E Q T T P
Nic22_A 271 TNQLNGVPD SAQALLAQA STL I NTINSA C P Y F T A P--SSQANGPK--WEWPS--NKL C G A F S D E I S A I Q K M I T D A Q E L V N Q T S V I N S H E Q T T P
consensus 275 N L V P A Q A L L A Q A S T L I T I N A C P F g P l C F E I S A I Q K M I T D A Q E L V N Q T I N E Q t

sabA 26695: 272 A--TG---SQTNPKFAKDIYTF AQNKQV I SYAQDIFNLFNS-IPAEQYKYLEKAYLKIPNA-----GSTPT---NPYRQ-VVN
 ELS37 350 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPNNSLGNFKNFVVTGFLATCHNPNSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Ka/Ks All
 Ka/Ks S. America



Nic03_A 355 VGGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLANQVGGQTLNPSNLSGNFQNFVKNFLATCHNPNSTAGTSGTQGSAPGTVTTQTTFASGCAY
 Nic16_A + C 356 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLNLAHQVGGQAINPERLTGTFQNFVKNFLATCHNPNSTAGTSGTQGSAPGTVTTQTTFASGCAY
 Nic04_C 355 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLASHQVGGQTLNPDNLSGTFKNFVVTGFLATCHNPNSTSGANTTQGSAPGTVTTQTTFASGCAY
 Nic09_A 350 VGGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLADQVGGQAINPDRLTGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic09_C 350 VGGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLADQVGGQAINPDRLTGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic13_C 361 VGGNNGKPFNPF TDASFAQGMLDNASAAQAKMLDLAHQVGGQTLNPNNSLGNFQYFVKEYLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic03_C 353 VGGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPEKLSGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic30_A 355 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLNLAHQVGGQAINPNNLGNFKNFVVTGFLATCHNPNSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic21_A + C 360 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPDNLR E TFRS FVKNFLATCHNPNSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic19_A + C 355 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPNNSLGNFKNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic06_A + A 355 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLASHQVGGQTLNPSNLSGTFQNFVKNFLATCHNPNSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic15_A + C 355 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLTHQVGGQADPSNLSGNFKNFVIGFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic27_A 355 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLASHQVGGQTLNPNNSLGNFKNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic18_A + C 350 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPDNLSGTFKNFVVTGFLATCHNPNSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic07_A + C 350 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLASHQVGGQTLNPNNSLGNFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic12_A 363 VGGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPSNLSGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic12_C 363 VGGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPSNLSGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic10_A + C 353 MGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPNINLSGNFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic32_A 360 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPSNLSGNFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic01_A + C 354 VGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPDNLSGTFKNFVVTGFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic14_A 360 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPSNLTGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic23_A 355 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQAINPENLSGNFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic28_A 349 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLVH QVGGQAINPERLTGNFQDFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic25_A 353 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLNLAHQVGGQAINPDNLT RNFKNFVTDFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic05_A + C 360 VGGNNGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQAINPSNLSGNFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic29_A 353 VGGNNSKPFNPF TDASFAQGMLANASAAQAKMLNLAE QVGGQAINPDRLTGTFKNFVTDFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic24_A 354 VEGSQGKPFNPF TDASFAQSMLANASAAQAKMLDLASHQVGGQAINPNLN R T FQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic13_A 365 VGGNNGKPFNPF TDASFAQGMLDNASAAQAKMLDLAHQVGGQTLNPNNSLGNFQYFVKEYLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic26_A 353 VGGNNGKPFNPF TDASFAQSMLANAKAAQAEILNQAEQVVK-----NFEKIPKNFVSDSLGVCYE---VQGGERRGTNPGQVTSNTWAGGCAY
 Nic04_A 363 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLASHQVGGQTLNPDNLSGTFKNFVVTGFLATCNPSTSGANTTQGSAPGTVTTQTTFASGCAY
 Nic20_A 353 VGTNNGKPFNPF TDASFAQGMLANASAAQAKMLDLAHQVGGQTLNPNENLTGNFKNFVTDFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic20_C 352 VGGN--KPFNPF TDASFAQGMLANASAAQAKMLNLAE QVGGQAINPDRLSGTFKNFVVTGFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic11_A + C 358 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLTLANQVGGQTLNPDNLSGTFKNFVVTGFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic31_A 358 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLANQVGGQTLNPSNLSGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 Nic22_A 358 VGGSSGGKPFNPF TDASFAQGMLANASAAQAKMLDLANQVGGQTLNPSNLSGTFQNFVKNFLATCNPSTAGTG GTQGSAPGTVTTQTTFASGCAY
 consensus 365 v KPF PF TD FA ML NA QA mL QV FV La C Gs PG VTTQTTFa GCAY

sabA 26695: 342 LNQE VQT I K N N V S Y Y G N R - - V D A A L S V A R D V Y N L K S N Q A E I V T A Y N D A K T L S E E I S K L P H N Q V N T K D I V T L P Y D K N A P A A G Q S 423
ELS37 442 V E Q T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G S T Y N S I T T A L S N I P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q I 534
Ka/Ks All
Ka/Ks S. America



Nic03_A 447 V E D T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q I 527
Nic16_A + C 448 V E D T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S K I P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q V 527
Nic04_C 447 V G Q T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N A Y N Q I 522
Nic09_A 442 V E Q T I T N L N N S I A H F G T Q A Q Q I Q Q A E N I A D T L V H F K S R Y N E L G N T Y N S I T T A L S K V P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q N A Y N Q I 522
Nic09_C 442 V Q E T I T N L T N S I A H F G T Q A Q Q I Q Q A E N I A D T L V H F K S R Y N E L G N T Y N S I T T A L S K V P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q I 533
Nic13_C 453 V E D T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G S T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q V 525
Nic03_C 445 V E D T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N T Y N Q I 527
Nic30_A 447 V E Q T I T N L D N N I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q S A Y N Q I 532
Nic21_A + C 452 V E E T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q I 527
Nic19_A + C 447 V Q E T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y S E L G S T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q S A Y N Q V 527
Nic06_A + A 447 V E D T I T N L N N S I A H F G T Q E Q Q I Q Q A E N V A D T L V H F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q I 527
Nic15_A + C 447 V E Q T I T N L N N S I A H F G T E A G Q I Q Q A A D I A D T L V N F K S R Y N E L G N T Y N S I T T A L S N I P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N T Y N Q I 527
Nic27_A 447 V E Q T I T N L T N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y S E L G N T Y N S I T T A L S N I P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q S A Y N Q V 522
Nic18_A + C 442 V E Q T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N T Y N Q V 522
Nic07_A + C 442 V E D T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q S A Y N Q V 535
Nic12_A 455 V E D T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N T Y N Q I 535
Nic12_C 455 V E D T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y N E L G S T Y N S I T T A L S S I P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q V 525
Nic10_A + C 445 V E D T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N A V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q V 474
Nic32_A 452 V E Q T I T N L T N S I A H F G T Q E Q Q I 526
Nic01_A + C 446 V E Q T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S N L P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N A Y N Q I 532
Nic14_A 452 V E D T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q I 486
Nic23_A 447 V E Q T I T N L N N S I A H F G T R E Q Q I Q Q A E N I A D T L V H F K S R Y 521
Nic28_A 441 V K E T I T N L T N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S N I P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q V 524
Nic25_A 445 V K D T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y S E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E 531
Nic05_A + C 452 V E D T I T N L N N S I A H F G T E A G Q I Q Q A A D I A D T L V N F K S R Y N E L G N T Y N S I T T A L S N I P N A Q S L Q N A V S K K N N P Y S P Q G I E 462
Nic29_A 445 V Q E T I T N L T N S I A H F G T 486
Nic24_A 445 V E D T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y S E 537
Nic13_A 457 V E D T I T N L E N S I A H F G T Q E Q Q I Q Q A E N I A D T L V H F K S R Y S E L G S T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N S Y N Q V 517
Nic26_A 437 V Q E T I T N L T N S I A H F G T Q A Q Q I Q Q A E N I A D T L V N F K S K Y N E L G N T Y N S I T T A L S S I P N A Q S L Q N V V S K K N N P Y S P Q G I E T N Y Y L N Q N T Y N Q I 535
Nic04_A 455 V G Q T I T N L N N S I A H F G T Q E Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N T Y N S I T T A L S K V P N A Q S L Q N V V S K K N N P Y S P Q G I E T 519
Nic20_A 445 V Q E T I T N L T N S I A H F G T Q A Q Q I Q Q A E N I A D T L V H F K S R Y N E L G N T Y N S I T T A L S S I P N A Q S L Q N A V S K K N N P Y S 516
Nic20_C 442 V E Q T L T N L N N D I A H F G T R A Q Q I Q Q A A D I A D T L V N F K S R Y N E L G N T Y N S I T T A L S S I P N A Q S L Q N A V S K K N N P Y S 524
Nic11_A + C 450 V E Q T I T N L T N S I A H F G T Q A Q Q I Q Q A E N I A D T L V N F K S R Y N E L G N A Y N S I T T A L S N I P N A Q S L Q N A V S K K N N P Y S 464
Nic31_A 447 V Q E T I T N L T N S I A H F G T 464
Nic22_A 447 V Q E T I T N L T N S I A H F G T 537
consensus 457 V T i T N L N I A H F G T Q Q I Q Q A i A D T L V F K S r Y E L G Y N S I T T A L S i P N A Q S L Q N V S K K N N P Y S P Q G I E T N Y Y L N Q Y N Q