

1
NC_000964:1869011-1871071 EIMIQKDGKF QFDKDKEAVH SYFVDYINQN TVFFHNLKEK LDYLVENQYY
NC_CP01731:1840890-1842950 EIMIQKDGKF QFDKDKEAVH SYFVDYINQN TVFFHDLKEK LDYLVENQYY
NC_014976:4079508-4081568 EIMIQKDGKF QFDKDKEAVH SYFVDYINQN TVFFHDLKEK LDYLVENQYY
NC_022898:1832049-1834109 EIMIQKDGKF QFDKDKEAVH SYFVDYINQN TVFFHNLKEK LDYLVENQYY
NC_018520:1848510-1850570 EIMIQKDGKF QFDKDKEAVH SYFVDYINQN TVFFHNLKEK LDYLVENQYY
NC_017195:1843504-1845564 EIMIQKDGKF QFDKDKEAVH SYFVDYINQN TVYFHDLEKE LDYLIENQYY
NC_014479:1826454-1828514 EIMIQKDGKF QFDKDKEAVH SYFVDYINQN TVFFHDLKEK LDYLIENQYY

51
NC_000964:1869011-1871071 EEEFLSLYSF EDIKEVFKTA YAKKFRFPSP MSFAKFYNDY ALKTNDKKKI
NC_CP01731:1840890-1842950 EEEFLSLYSF EDIKEVFKTA YAKKFRFPSP MSFAKFYNDY ALKTNDKKKI
NC_014976:4079508-4081568 EEEFLSLYSF EDIKEVFKTA YAKKFRFPSP MSFAKFYNDY ALKTNDKKKI
NC_022898:1832049-1834109 EEEFLSLYSF EDIKEVFKTA YAKKFRFPSP MSFAKFYNDY ALKTNDKKKI
NC_018520:1848510-1850570 EEEFLSLYSF EDIKEVFKTA YAKKFRFPSP MSFAKFYNDY ALKTNDKKKI
NC_017195:1843504-1845564 EEEFLSLYSF EDIKEVFKTA YAKKFRFPSP MSFAKFYNDY ALKTNDKKRI
NC_014479:1826454-1828514 EEEFLSLYSF EDIKAVFKTA YAKKFRFPSP MSFAKFYNDY ALKTNDKKKI

101
NC_000964:1869011-1871071 LERYEDRISI VALFFANGDT EKAKEYVNLM INQEYQPSTP TFLNAGRKRR
NC_CP01731:1840890-1842950 LERYEDRISI VALFFANGDT EKAKEYVNLM INQEYQPSTP TFLNAGRKRR
NC_014976:4079508-4081568 LERYEDRISI VALFFANGDT EKAKEYVNLM INQEYQPSTP TFLNAGRKRR
NC_022898:1832049-1834109 LERYEDRISI VALFFANGDT EKAKEYVNLM INQEYQPSTP TFLNAGRKRR
NC_018520:1848510-1850570 LERYEDRISI VALFFANGDT EKAKEYVNLM INQEYQPSTP TFLNAGRKRR
NC_017195:1843504-1845564 LERYEDRISI VALFFANGDT EKAKEYVHLM INQEYQPSTP TFLNAGRKRR
NC_014479:1826454-1828514 LERYEDRISI VALFFANGDT EKAKEYVNLM INQEYQPSTP TFLNAGRKRR

151
NC_000964:1869011-1871071 GELVSCFLLE VNDSLNDISR AIDISMQLSK LGGGVSLNLS KLRAKGEAIK
NC_CP01731:1840890-1842950 GELVSCFLLE VNDSLNDISR AIDISMQLSK LGGGVSLNLS KLRAKGEAIK
NC_014976:4079508-4081568 GELVSCFLLE VNDSLNDISR AIDISMQLSK LGGGVSLNLS KLRAKGEAIK
NC_022898:1832049-1834109 GELVSCFLLE VNDSLNDISR AIDISMQLSK LGGGVSLNLS KLRAKGEAIK
NC_018520:1848510-1850570 GELVSCFLLE VNDSLNDISR AIDISMQLSK LGGGVSLNLS KLRAKGEAIK
NC_017195:1843504-1845564 GELVSCFLLE VNDSLNDISR AIDISMQLSK LGGGVSLNLS KLRAKGEAIK
NC_014479:1826454-1828514 GELVSCFLLE VNDSLNDISR AIDISMQLSK LGGGVSLNLS KLRAKGEAIK

201
NC_000964:1869011-1871071 DVENATKGVV GVMKLLDNAF RYADQMQRQ GSGAAYLNIF HRDINDFLDT
NC_CP01731:1840890-1842950 DVENATKGVV GVMKLLDNAF RYADQMQRQ GSGAAYLNIF HRDINDFLDT
NC_014976:4079508-4081568 DVENATKGVV GVMKLLDNAF RYADQMQRQ GSGAAYLNIF HRDINDFLDT
NC_022898:1832049-1834109 DVENATKGVV GVMKLLDNAF RYADQMQRQ GSGAAYLNIF HRDINDFLDT
NC_018520:1848510-1850570 DVENATKGVV GVMKLLDNAF RYADQMQRQ GSGAAYLNIF HRDINDFLDT
NC_017195:1843504-1845564 DVENATKGVV GVMKLLDNAF RYADQMQRQ GSGAAYLNIF HRDINDFLDT
NC_014479:1826454-1828514 DVENATKGVV GVMKLLDNAF RYADQMQRQ GSGAAYLNIF HRDINDFLDT

251
NC_000964:1869011-1871071 KKISADEDVR VKTLSIGVVI PDKFVELARE DKAAYVFYPH TIYKEYGQHM
NC_CP01731:1840890-1842950 KKISADEDVR VKTLSIGVVI PDKFVELARE DKAAYVFYPH TIYKEYGQHM
NC_014976:4079508-4081568 KKISADEDVR VKTLSIGVVI PDKFVELARE DKAAYVFYPH TIYKEYGQHM
NC_022898:1832049-1834109 KKISADEDVR VKTLSIGVVI PDKFVELARE DKAAYVFYPH TIYKEYGQHM
NC_018520:1848510-1850570 KKISADEDVR VKTLSIGVVI PDKFVELARE DKAAYVFYPH TIYKEYGQHM
NC_017195:1843504-1845564 KKISADEDVR VKTLSIGVVI PDKFVELARE DKAAYVFYPH TIYKEYGQHM
NC_014479:1826454-1828514 KKISADEDVR VKTLSIGVVI PDKFVELARE DKAAYVFYPH TIYKEYGQHM

301
NC_000964:1869011-1871071 DEMDMNEMYD KFVDNPRVKK EKINPRKLE KLAMLRSESG YPYIMFQDNV
NC_CP01731:1840890-1842950 DEMDMNEMYD KFVDNPRVKK EKINPRKLE KLAMLRSESG YPYIMFQDNV
NC_014976:4079508-4081568 DEMDMNEMYD KFVDNPRVKK EKINPRKLE KLAMLRSESG YPYIMFQDNV
NC_022898:1832049-1834109 DEMDMNEMYD KFVDNPRVKK EKINPRKLE KLAMLRSESG YPYIMFQDNV
NC_018520:1848510-1850570 DEMDMNEMYD KFVDNPRVKK EKINPRKLE KLAMLRSESG YPYIMFQDNV
NC_017195:1843504-1845564 DEMDMNEMYD KFVDNPRVKK EKINPRKLE KLAMLRSESG YPYIMFQDNV
NC_014479:1826454-1828514 DEMDMNEMYD KFVDNPRVKK EKINPRKLE KLAMLRSESG YPYIMFQDNV

351
NC_000964:1869011-1871071 NKVHANNHIS KVKFSNLCSE VLQASQVSSY TDYDEEDEIG LDISCNLGS
NC_CP01731:1840890-1842950 NKVHANNHIS KVKFSNLCSE VLQASQVSSY TDYDEEDEIG LDISCNLGS
NC_014976:4079508-4081568 NKVHANNHIS KVKFSNLCSE VLQASQVSSY TDYDEEDEIG LDISCNLGS
NC_022898:1832049-1834109 NKVHANNHIS KVKFSNLCSE VLQASQVSSY TDYDEEDEIG LDISCNLGS
NC_018520:1848510-1850570 NKVHANNHIS KVKFSNLCSE VLQASQVSSY TDYDEEDEIG LDISCNLGS
NC_017195:1843504-1845564 NKVHANNHIS KVKFSNLCSE VLQASQVSSY TDYDEEDEIG LDISCNLGS
NC_014479:1826454-1828514 NKVHANNHIS KVKFSNLCSE VLQASQVSSY TDYDVEDEIG LDISCNLGS

401

NC_000964:1869011-1871071	NILNVMEHKS	IEKTVKLATD	SLTHVSETTD	IRNAPAVRRA	NKAMKSIGLG
NC_CP01731:1840890-1842950	NILNVMEHKS	IEKTVKLATD	SLTHVSETTD	IRNAPAVRRA	NKAMKSIGLG
NC_014976:4079508-4081568	NILNVMEHKS	IEKTVKLATD	SLTHVSETTD	IRNAPAVRRA	NKAMKSIGLG
NC_022898:1832049-1834109	NILNVMEHKS	IEKTVKLATD	SLTHVSETTD	IRNAPAVRRA	NKAMKSIGLG
NC_018520:1848510-1850570	NILNVMEHKS	IEKTVKLATD	SLTHVSETTD	IRNAPAVRRA	NKAMKSIGLG
NC_017195:1843504-1845564	NILNVMEHKS	IEKTVKLATD	SLTHVSETTD	IRNAPAVRRA	NKAMKSIGLG
NC_014479:1826454-1828514	NILNVMEHKS	IEKTVKLATD	SLTHVSETTD	IRNAPAVRRA	NKAMKSIGLG

451

NC_000964:1869011-1871071	AMNLHGYLEAQ	NGIAYESPEA	RDFANTFFMM	VNFYSIQRSA	EIAKEKGETF
NC_CP01731:1840890-1842950	AMNLHGYLEAQ	NGIAYESPEA	RDFANTFFMM	VNFYSIQRSA	EIAKEKGETF
NC_014976:4079508-4081568	AMNLHGYLEAQ	NGIAYESPEA	RDFANTFFMM	VNFYSIQRSA	EIAKEKGETF
NC_022898:1832049-1834109	AMNLHGYLEAQ	NGIAYESPEA	RDFANTFFMM	VNFYSIQRSA	EIAKEKGETF
NC_018520:1848510-1850570	AMNLHGYLEAQ	NGIAYESPEA	RDFANTFFMM	VNFYSIQRSA	EIAKEKGETF
NC_017195:1843504-1845564	AMNLHGYLEAQ	NGIAYESPEA	RDFANTFFMM	VNFYSIQRSA	EIAKEKGETF
NC_014479:1826454-1828514	AMNLHGYLEAQ	NGIAYESPEA	RDFANTFFMM	VNFYSIQRSA	EIAKEKGETF

501

NC_000964:1869011-1871071	DQYEGSTYAT	GEYFDKYVST	DFSPKYEKIA	NLFEGMHIPT	TEDWKKLKAF
NC_CP01731:1840890-1842950	DQYEGSTYAT	GEYFDKYVST	DFSPKYEKIA	NLFEGMHIPT	TEDWKKLKAF
NC_014976:4079508-4081568	DQYEGSTYAT	GEYFDKYVST	DFSPKYEKIA	NLFEGMHIPT	TEDWKKLKAF
NC_022898:1832049-1834109	DQYEGSTYAT	GEYFDKYVST	DFSPKYEKIA	NLFEGMHIPT	TEDWKKLKAF
NC_018520:1848510-1850570	DQYEGSTYAT	GEYFDKYVST	DFSPKYEKIA	NLFEGMHIPT	TEDWKKLKAF
NC_017195:1843504-1845564	DQYEGSTYAT	GEYFDKYVST	DFSPKYEKIA	NLFEGMHIPT	TEDWKKLKAF
NC_014479:1826454-1828514	DQYEGSTYAT	GEYFDKYVST	DFSPKYEKIA	NLFEGMHIPT	TEDWQQLKAF

551

NC_000964:1869011-1871071	VAEHGMYHSY	RLCIAPTGSI	SYVQSSTASV	MPIMERIEER	TYGNSKTYYP
NC_CP01731:1840890-1842950	VAEHGMYHSY	RLCIAPTGSI	SYVQSSTASV	MPIMERIEER	TYGNSKTYYP
NC_014976:4079508-4081568	VAEHGMYHSY	RLCIAPTGSI	SYVQSSTASV	MPIMERIEER	TYGNSKTYYP
NC_022898:1832049-1834109	VAEHGMYHSY	RLCIAPTGSI	SYVQSSTASV	MPIMERIEER	TYGNSKTYYP
NC_018520:1848510-1850570	VAEHGMYHSY	RLCIAPTGSI	SYVQSSTASV	MPIMERIEER	TYGNSKTYYP
NC_017195:1843504-1845564	VAEHGMYHSY	RLCIAPTGSI	SYVQSSTASV	MPIMERIEER	TYGNSKTYYP
NC_014479:1826454-1828514	VAEHGMYHSY	RLCIAPTGSI	SYVQSSTASV	MPIMERIEER	TYGNSKTYYP

601

NC_000964:1869011-1871071	MPGLASNNWF	FYKEAYDMDM	FKVVDMIATI	QQHIDQGISE	TLFLKDTMTT
NC_CP01731:1840890-1842950	MPGLASNNWF	FYKEAYDMDM	FKVVDMIATI	QQHIDQGISE	TLFLKDTMTT
NC_014976:4079508-4081568	MPGLASNNWF	FYKEAYDMDM	FKVVDMIATI	QQHIDQGISE	TLFLKDTMTT
NC_022898:1832049-1834109	MPGLASNNWF	FYKEAYDMDM	FKVVDMIATI	QQHIDQGISE	TLFLKDTMTT
NC_018520:1848510-1850570	MPGLASNNWF	FYKEAYDMDM	FKVVDMIATI	QQHIDQGISE	TLFLKDTMTT
NC_017195:1843504-1845564	MPGLASNNWF	FYKEAYDMDM	FKVVDMIATI	QQHIDQGISE	TLFLKDTMTT
NC_014479:1826454-1828514	MPGLASNNWF	FYKEAYDMDM	FKVVDMIATI	QQHVDQGISE	TLFLKDTMTT

651

NC_000964:1869011-1871071	RDLNRIDLIA	HHRGIKTIYY	ARTKDTGQDS	CLSCVV*
NC_CP01731:1840890-1842950	RDLNRIDLIA	HHRGIKTIYY	ARTKDTGQDS	CLSCVV*
NC_014976:4079508-4081568	RDLNRIDLIA	HHRGIKTIYY	ARTKDTGQDS	CLSCVV*
NC_022898:1832049-1834109	RDLNRIDLIA	HHRGIKTIYY	ARTKDTGQDS	CLSCVV*
NC_018520:1848510-1850570	RDLNRIDLIA	HHRGIKTIYY	ARTKDTGQDS	CLSCVV*
NC_017195:1843504-1845564	RDLNRIDLIA	HHRGIKTIYY	ARTKDTGQDS	CLSCVV*
NC_014479:1826454-1828514	RDLNRIDLIA	HHRGIKTIYY	ARTKDTGQDS	CLSCVV*