```
                1                  10                  20                  30                  40                  50                  60                  70                  80
Consensus       MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
1. 17v2|UL28   MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
2. F|UL28       MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
3. H129|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
4. KOS|UL28     MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
5. McKr|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
6. HF10|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
7. CR38|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
8. E03|UL28     MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
9. E06|UL28     MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
10. E07|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
11. E08|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
12. E10|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
13. E11|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
14. E12|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
15. E13|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
16. E14|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
17. E15|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
18. E19|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
19. E22|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
20. E23|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
21. E25|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
22. E35|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
23. R11|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
24. R62|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
25. S23|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW
26. S25|UL28    MAAPVSEPTVARQKLLALLGQVQTYVFQIELLRRCDPHIGRGKLPQLKLNALQVRALRRRLRPGLEAQAGAFLTPLSVTLELLLEYAW

                90                 100                 110                 120                 130                 140                 150                 160                 170
Consensus       REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
1. 17v2|UL28   REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
2. F|UL28       REGERLLGSLETFATAGDVAVFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
3. H129|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
4. KOS|UL28     REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
5. McKr|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
6. HF10|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
7. CR38|UL28    REGERLLGSLETFATAGDVAAFFTETMGLALPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
8. E03|UL28     REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
9. E06|UL28     REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
10. E07|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
11. E08|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
12. E10|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
13. E11|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
14. E12|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQQVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
15. E13|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
16. E14|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATTALERVREFM
17. E15|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
18. E19|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
19. E22|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNFCHLITPSRGATAALERVREFM
20. E23|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
21. E25|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
22. E35|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLETYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
23. R11|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
24. R62|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
25. S23|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM
26. S25|UL28    REGERLLGSLETFATAGDVAAFFTETMGLARPCPYHQRVRLDTYGGTVHMELCFLHDVENFLKQLNYCHLITPSRGATAALERVREFM

                180                190                 200                 210                 220                 230                 240                 250                 260
Consensus       VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
1. 17v2|UL28   VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
2. F|UL28       VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
3. H129|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
4. KOS|UL28     VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
5. McKr|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
6. HF10|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
7. CR38|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
8. E03|UL28     VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
9. E06|UL28     VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
10. E07|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
11. E08|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
12. E10|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
13. E11|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
14. E12|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
15. E13|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
16. E14|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
17. E15|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
18. E19|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
19. E22|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
20. E23|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
21. E25|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
22. E35|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
23. R11|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
24. R62|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
25. S23|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA
26. S25|UL28    VGAVGSGLIVPPELSDPSHPCAVCFEELCVTANQGATIARRLADRICNHVTQQAQVRLDANELRRYLPHAAGLSDADRARALSVLDHA

                270                280                 290                 300                 310                 320                 330                 340                 350
Consensus       LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
1. 17v2|UL28   LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
2. F|UL28       LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
3. H129|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
4. KOS|UL28     LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
5. McKr|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
6. HF10|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
7. CR38|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
8. E03|UL28     LARTSGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
9. E06|UL28     LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
10. E07|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
11. E08|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
12. E10|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
13. E11|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
14. E12|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
15. E13|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
16. E14|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
17. E15|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
18. E19|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
19. E22|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
20. E23|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
21. E25|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
22. E35|UL28    LARTAGGDGQPHPAPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
23. R11|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
24. R62|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
25. S23|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL
26. S25|UL28    LARTAGGDGQPHPSPENDSVRKEADALLEAHDVFQATTPGLYAISELRFWLASGDRAGQTTMDAFASNLTALARRELQQETAAVAVEL

                360                370                 380                 390                 400                 410                 420                 430                 440
Consensus       ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
1. 17v2|UL28   ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
2. F|UL28       ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
3. H129|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGATDAPK
4. KOS|UL28     ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
5. McKr|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
6. HF10|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
7. CR38|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
8. E03|UL28     ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
9. E06|UL28     ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
10. E07|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
11. E08|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
12. E10|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
13. E11|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
14. E12|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
15. E13|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
16. E14|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
17. E15|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
18. E19|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
19. E22|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
20. E23|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
21. E25|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
22. E35|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
23. R11|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
24. R62|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
25. S23|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK
26. S25|UL28    ALFGRRAEHFDRAFGSHLAALDMVDALIIGGQATSPDDQIEALIRACYDHHLTTPLLRRLVSPEQCDEEALRRVLARMGAGGAADAPK

                450                460                 470                 480                 490                 500                 510                 520
Consensus       GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
1. 17v2|UL28   GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
2. F|UL28       GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
3. H129|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
4. KOS|UL28     GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
5. McKr|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
6. HF10|UL28    GGAGPDDDGDRVAVEEGTRGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
7. CR38|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
8. E03|UL28     GGAGPDDDGDRGAVEEGTRGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
9. E06|UL28     GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
10. E07|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
11. E08|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
12. E10|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
13. E11|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
14. E12|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
15. E13|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
16. E14|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
17. E15|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
18. E19|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
19. E22|UL28    GGAGPDDDGDRGAVEEGTRGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
20. E23|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
21. E25|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
22. E35|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
23. R11|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
24. R62|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
25. S23|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK
26. S25|UL28    GGAGPDDDGDRVAVEEGARGLGAPGGGGEDEDRRRGPGGQGPETWGDIATQAAADVRERRRLYADRLTKRSLASLGRCVREQRGELEK

                530                540                 550                 560                 570                 580                 590                 600                 610
Consensus       MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
Identity        ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
1. 17v2|UL28   MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
2. F|UL28       MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
3. H129|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
4. KOS|UL28     MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
5. McKr|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
6. HF10|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
7. CR38|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
8. E03|UL28     MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
9. E06|UL28     MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
10. E07|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
11. E08|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
12. E10|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDHST
13. E11|UL28    MLRVSVHGEVLPATFAAVANGFAARARFCALTAGAGTVIDNRSAPGVFDAHRFMRASLLRHQVDPALLPSITHRFFELVNGPLFDH
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